Agenda Date: 11/21/14
Agenda Item: 8C

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 PETITION OF THE PINE HILL SCHOOL DISTRICT REGARDING THE NOVEMBER 1, 2013 DENIAL OF INCENTIVES IN CONNECTION WITH ITS ENERGY SAVINGS PLAN	))))	ORDER DOCKET NO. QO14010020

Party of Record:

George M. Morris, Esq., of Parker McCay PA, for Pine Hills School District

BY THE BOARD[1]:

On January 16, 2014, the Pine Hill School District ("Petitioner" or "the District") filed a petition in the above-captioned matter requesting that the Board of Public Utilities ("Board") approve its Combined Heat and Power ("CHP") incentives, which were denied by TRC Energy Solutions ("TRC") and which denial was upheld by Applied Energy Group ("AEG"). For the reasons noted herein, the Board affirms the denial of the CHP incentives.

The Board administers the New Jersey Clean Energy Program ("NJCEP") pursuant to its authority under the Electric Discount and Energy Competition Act ("EDECA"), N.J.S.A. 48:3-49 to -109. NJCEP includes several programs that offer incentives to both residential and commercial and industrial ("C&I") customers of electric and natural gas utilities to invest in energy efficiency ("EE") and renewable energy ("RE") measures. TRC is the Market Manager for the C&I EE programs, including the CHP and Fuel Cell Program while AEG serves as the NJCEP Program Coordinator. TRC, as the Board's C&I EE Market Manager, reviews applications for large scale energy efficiency incentives offered by NJCEP, including applications under the CHP Program.

Provided the applicant meets program requirements, TRC may issue approval letters for NJCEP C&I EE rebates and financial incentives up to $500,000. For incentives exceeding $500,000, the Board must approve all NJCEP C&I EE rebates and financial incentives before TRC may issue an approval letter. 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 Docket No. EO07030203, Order dated May 3, 2013.

---

[1] Commissioner Dianne Solomon was not present at the 11/21/14 agenda meeting.

The Board is also authorized by law to implement and enforce the Energy Savings Improvement Program ("ESIP"). N.J.S.A. 48:3-109a. The ESIP legislation[2] allows qualifying public entities to leverage the future value of energy savings to pay for the upfront costs of implementing energy conservation measures ("ECMs"). An entity seeking to employ an ESIP submits the proposed ECMs in a document called the energy saving plan ("ESP"). N.J.S.A. 18A:18A-4.6(g). Consistent with the Board's authority to take such actions as it deems necessary and appropriate to implement the provisions of the ESIP statute, Staff reviews the financial viability of the ESIP project. See generally, N.J.S.A. 18A:18A-4.6 (h)(1). Depending on what is needed and what will work best for a given public entity, an ESP may include any of a variety of ECMs, one of which may be CHP.

As explained below, Petitioner submitted applications under both the ESIP and the CHP Program. TRC's denial of the District's CHP applications is the subject of the Petition to the Board.

PROCEDURAL BACKGROUND

On June 4, 2013, Petitioner submitted four applications to TRC under the CHP and Fuel Cells Program for CHP projects located in four District buildings. [3] Petition ¶ 17; Certification of Josh Costell ("Costell Cert.") ¶ 5, Exhibit 7.[4] Consistent with its obligations as the Market Manager, TRC reviewed the CHP applications to determine eligibility. On November 1, 2013, TRC advised the District that the CHP incentive applications did not meet the eligibility requirements of the CHP Program. Among other things, TRC determined that the projects would only operate between 2,900-4,700 hours per year, at part load operation, which would fall below the CHP Program's minimum annual system utilization requirements. TRC advised that because of the low annual system utilization, the projects were inconsistent with the CHP Program's objective of enhancing energy efficiencies through productive use of waste heat. TRC also noted that the United States Environmental Protection Agency uses a 5,000 minimum annual run hour eligibility requirement for its CHP programs. Accordingly, TRC advised that it was rejecting the District's four CHP applications. Petition ¶ 41; Costell Cert. ¶ 23, Exhibit 1.

On December 6, 2013, Petitioner appealed TRC's denial of the CHP applications to AEG in accordance with the Board's Informal Dispute Resolution Process. Costell Cert. ¶ 2, Exhibit 2. On December 18, 2013, AEG found that TRC properly denied the District's CHP applications. Ibid. The District then appealed to the Board. One of the central arguments raised by the District in its appeal to AEG, and later in its Petition to the Board is that "the Board" approved the CHP incentives in a Staff email dated September 13, 2013.

The context of Petitioner's applications for CHP incentives was Petitioner's pursuit of energy efficiency and the lower energy bills associated with energy efficiency. Petitioner applied for the

---

[2] N.J.S.A. 52:34-25 (ESIP by state contracting agencies); N.J.S.A. 40A:11-4.6 (ESIP by contracting units); N.J.S.A. 52:35A-1 (ESIP by public agencies); N.J.S.A. 18A:18A-4.6 (ESIP by boards of education); and N.J.S.A. 18A:65A-1 (ESIP by boards of trustees of public institutions).

[3] Petitioner also filed four applications for Pay For Performance ("P4P") incentives, a separate NJCEP Program. The P4P applications are at various stages of approval and are not relevant to the instant appeal.

[4] The Petition denotes references to certain documents as Exhibits A, B, C and D. Exhibit A is the Certification of Josh Costell. Costell's Certification annexes exhibits which are identified by Arabic numerals. To avoid confusion, the Board will denote references to these exhibits as Costell's Cert. followed by the Arabic numeral, e.g., Costell's Cert., Exhibit 1.
Exhibits to this Order will be referenced by Roman numerals, e.g. I, II.

CHP incentives with the hope of using those incentives to supplement financing of an ESIP, for which Petitioner had also applied. In furtherance of the ESIP, the District selected Tozour Energy Systems, Inc. ("Tozour") to prepare an ESP. Petition, Exhibit C. Tozour had prior knowledge of and experience with the ESIP process based on its previous submission of ESPs for other entities. Costell Cert., Exhibit 2 at 2. As alleged by Petitioner, Tozour prepared an ESP on April 20, 2012, which described the proposed ECMs for the ESIP. Petition ¶ 7, 8.

On August 3, 2012, the District adopted the ESP. Petition ¶ 12. On September 21, 2012, Governor Chris Christie signed P.L. 2012, c. 55 ("ESIP amendments") into law, further defining the ESIP process. The amendments authorize the Board to take such action as it deems necessary and appropriate to implement and enforce the ESIP law. N.J.S.A. 48:3-109(c)(3). Thereafter, on October 16, 2012, the Petitioner alleges that Tozour transmitted the ESP to Staff. Petition ¶ 13; Costell Cert., Exhibit 6. The District alleges that the ESP was posted on the Board's website. Petition ¶ 13.

In June 2013, the District submitted four CHP applications to NJCEP. Costell Cert., Exhibit 7. During the CHP application review process, TRC and Tozour exchanged a series of emails on technical matters regarding the CHP projects. Petitioner has included two of these emails in its Petition that document TRC's concerns regarding the sizing of the units and the system utilization. Costell Cert., Exhibits 9, 11.

On September 13, 2013, Staff sent an email to Tozour approving Petitioner's ESP. Specifically, the email reads,

> After reviewing your spread sheet analysis of the co-generation part of the project and the 15 year energy savings portion of the project, I [am] **happy to approve your Energy Saving Plan**. The analysis uses only four years of demand response payments for the co-generation portion and has the potential of nearly one million dollars in earnings for the school district after this four year period is over.
>
> [Costell Cert., Exhibit 12 (emphasis added).]

Meanwhile, in October 2013, while Petitioner's CHP applications were still pending, TRC, the CHP Program Manager, clarified the program's eligibility requirements to make clear that the required number of "full load equivalent run hours" which a CHP application must meet to qualify for incentives, is 5,000 hours.[5] Costell Cert., Exhibit 2 at 3-4; I/M/O the Clean Energy Programs & Budgets for Fiscal Year 2014 – Revised FY14 Programs and True Up Budget, BPU Docket No. EO13050376V at 8-9, 10, 15-16, 17-18, Order dated December 19, 2013. Prior to the clarified standard, TRC utilized a minimum annual system utilization factor of 6,000 run hour requirement as the standard for evaluating CHP applications. Costell Cert., Exhibit 2 at 4; I/M/O the Clean Energy Programs & Budgets for Fiscal Year 2014 – Revised FY14 Programs and True Up Budget, BPU Docket No. EO13050376V at 8-9, 10, 15-16, 17-18, Order dated December 19, 2013.

As stated earlier, TRC denied the District's application for CHP incentives on November 1, 2013. Costell Cert., Exhibit 1. On December 18, 2013, AEG denied Tozour's appeal of TRC's rejection of the four CHP applications. Costell Cert., Exhibit 2. On January 16, 2014, Petitioner filed a Petition with the Board, requesting the Board to overrule TRC and grant the incentives for which Petitioner had applied.

[5] "Full load equivalent run hours" means the hours that a CHP project runs at maximum output.

STAFF'S RECOMMENDATION

Staff recommends that the Petition be denied. Through its Petition and exhibits, Petitioner has failed to present a material dispute as to any of its allegations or to state a claim for the Board to adjudicate. Rather, Petitioner's own submissions support that its CHP applications were properly denied in accordance with NJCEP CHP Program guidelines.

Petitioner makes two basic arguments in support of its request that the Board overturn the decision of TRC to deny the CHP incentives: first, that Petitioner had relied upon an earlier approval by Staff of "the [ESIP] program," and second, that "the denial [of the CHP incentives] was based solely on a change in program criteria [the full load equivalent run hours], which did not exist at either the time of the application submission, or upon receipt by the District of the September 13, 2013 email from the Board approving the incentives." Petition ¶ 2. Neither argument is persuasive.

Turning to the first argument, Petitioner appears to conflate "the [ESIP] program" with the CHP incentives offered through the NJ Clean Energy Program. While Petitioner sought to use the receipt of CHP incentives to reduce the cost of the ESIP and thus improve the financial analysis of the ESIP project, it must separately qualify for CHP incentives in order to do so. Simply put, the CHP incentive and the ESIP are independent programs, with separate qualification requirements, applications and EE standards. While an approved entity may include CHP as an ECM in its ESP, and likewise, may include the receipt of CHP incentives to help leverage the future value of energy savings to pay for the upfront ESIP project costs, approval of one program does not guarantee approval of the other. In this instance, as detailed above, TRC determined that Petitioner did not meet the NJCEP CHP program minimum utilization requirement, and therefore, was not qualified to receive CHP incentives through the NJCEP. While that decision does not affect Petitioner's ability to use CHP as an ECM in its ESIP, it does eliminate the anticipated stream of income from those incentives that would have helped Petitioner pay for the upfront project costs, had Petitioner met the CHP program qualification requirements.

Contrary to the allegations in the Petition, the approval granted in Staff's September 13, 2013 email was expressly limited to the ESP and did not address the CHP incentives provided through the NJCEP. There was no reasonable basis for Petitioner to misconstrue an email from Staff, as administrator of the ESIP, citing approval of the ESP, as approval from TRC of its CHP application. Moreover, the CHP application instructions clearly provide:

> 6. Once the application has been reviewed and approved, the Market Manager will forward Applicant an Approval Letter with the committed incentive amount. To be eligible to receive a program incentive, **Applicant must receive an approval Letter from the Market Manager prior to equipment installation**. A pre-inspection will be conducted prior to issuance of the approval letter.
>
> [See, CHP Incentive Application for 1200 Turnerville Road, Pine Hill, NJ, which is annexed hereto as Exhibit I at 2 (emphasis added).]

Petitioner and Tozour's representatives signed the CHP applications, affirming that they had read and understood the application instructions, which include paragraph six. In addition, as a participant in the NJCEP programs, coupled with clear NJCEP Program guidelines and application instructions, Tozour should be well aware that a rebate approval letter from TRC is the only valid form of approval for a NJCEP CHP Program rebate of less than $500,000 and that

a Board order is required for CHP rebates that exceed $500,000. 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 Docket No. EO07030203, Order dated May 3, 2013.

Moreover, during the course of TRC's review, TRC reiterated to Petitioner the need for final written approval on at least two occasions. On June 10, 2013, in response to a request for a meeting due to "the complexity of the job," TRC sent an email to Tozour explaining what would constitute final approval of the NJCEP incentives. With reference to the CHP incentives this email included the following language: "**For CHP, the application approval letter must be issued before the systems are installed. They can purchase the equipment, but again this would be at their own risk until the application has been reviewed and approved/funds committed.**" Costell's Cert. ¶ 7, Exhibit 8 at 3 (emphasis added). On June 20, 2013, TRC sent Tozour and a representative of Petitioner an email which included the statement that "**Applications must be approved PRIOR to installation of eligible measures.**" Costell's Cert. ¶ 7, Exhibit 9 at 1 (emphasis in original).

Likewise, there was no reasonable basis for Petitioner to misconstrue Staff's September 13, 2013 email as a Board order approving an incentive which exceeds $500,000. In its communications with Petitioner's agent, TRC clearly advised that Board approval at an agenda meeting was necessary for incentives exceeding $500,000. Specifically, on June 19, 2013, TRC stated, " . . . . Approval will likely be 2-3 weeks after . . . [review of applications] assuming incentives for each school are below $500,000. **If they are higher, the applications will have to go to the board for approval on the first available board agenda.**" Costell's Cert., Exhibit 8 at 1 (emphasis added). Petitioner knew or should have known that at least one of the CHP rebates for which it had applied exceeded $500,000, as the CHP applications included the estimated incentive amounts which the District sought. Exhibit I at 10.

The application instructions, coupled with these follow up communications, clearly indicate that Petitioner was made aware of this condition precedent to CHP application approval for applications that both exceed and fall below the $500,000 threshold. That is, TRC may issue an approval letter for incentives under $500,000 but Board approval must precede TRC's approval letter for incentives exceeding $500,000.

Petitioner further alleges that Staff made statements indicating that it was reviewing and/or had approved the CHP rebate applications in question. In support of this claim, Petitioner attached an email exhibit to its Petition that reads, ". . . I [am] happy to approve your **energy savings plan.**" Costell's Cert., Exhibit 12 (emphasis added). However, Petitioner's supporting exhibit does not demonstrate that Staff had approved the CHP rebate applications. To the contrary, Petitioner's exhibit confirms that Staff had approved the ESP. Nor has Petitioner relied upon or presented any exhibit or evidence with its Petition reflecting that TRC, the Market Manager for the CHP program, approved the CHP rebate applications.

Furthermore, Petitioner's production of its September 13, 2013 email confirming its reliance on Staff's ESP approval email to purchase the CHP units, is of no consequence to this appeal. Costell's Cert., Exhibit 12. Petitioner has failed to show any reasonable basis for its reliance on Staff's September 13, 2013 email - which only concerned the ESP approval - as approval of its CHP incentive applications. Therefore, Petitioner's decision to purchase and install the CHP equipment was not justified under the circumstances.

Based on the above, Petitioner has provided no basis for the Board to approve its CHP applications.

Relative to Petitioner's claim that TRC reviewed Petitioner's applications under a changed eligibility standard which was not in effect at the time of its CHP applications, Staff recommends that this argument be rejected. Petition ¶ 2; Costell's Cert., ¶ 22. First, TRC's denial makes no reference to changed program eligibility requirements. Instead, TRC refers to language from the CHP application form that identifies two "minimum qualification requirements" by which "projects will be evaluated for funding . . ." "Annual System Utilization" and "General Programmatic Goals". Costell's Cert., Exhibit 1. TRC's letter concludes that the Pine Hill CHP projects do not meet minimum annual system utilization requirements and are not consistent with general programmatic goals. Ibid.

Secondly, Petitioner has provided no support for its claim that TRC used any annual system requirement during the pendency of its review of Petitioner's CHP applications, than the requirement that was in effect at the time of the applications review. Costell's Cert., Exhibit 2 at 4. Simply put, the effective annual system utilization requirement at the time Petitioner's CHP applications were reviewed was 6,000 full load hours equivalent standard. I/M/O the Clean Energy Programs & Budgets for Fiscal Year 2014 – Revised FY14 Programs and True Up Budget, BPU Docket No. EO13050376V at 8-9, Order dated December 19, 2013. Even assuming arguendo that TRC reviewed Petitioner's CHP applications under the new standard, the new standard relaxed the earlier informal 6,000 full load equivalent run hour standard used by TRC to a 5,000 hour standard. I/M/O the Clean Energy Programs & Budgets for Fiscal Year 2014 – Revised FY14 Programs and True Up Budget, BPU Docket No. EO13050376V at 15, Order dated December 19, 2013. Therefore, Petitioner's claim that the CHP incentives were rejected due to program eligibility changes is incorrect. The applications were rejected, in part, because the proposed Pine Hill systems all operate well below the system utilization standard applied by TRC. Costell's Cert., Exhibit 2 at 4. Moreover, the District's proposed CHP projects do not meet either the formerly implemented or the explicitly stated threshold.

During the pendency of its appeal to AEG, Tozour supplied an email containing its own estimate of the full load hours equivalent at each school:

Overlook HS:	2,462
Middle School:	2,460
Glenn Elementary	2,478
Bean Elementary	1,973

[Costell's Cert., Exhibit 2 at 5.]

These estimated full load run hours were calculated by Tozour using its preferred methodology, treating all CHP modules at each school collectively, as a single system. However, even applying that methodology, the numbers provided are still well below both the 6,000 full load run hours equivalent standard utilized by TRC to assess the Pine Hill applications as well as the new lower standard of 5,000 full load run hours equivalent that was implemented in October 2013. Thus, the District's CHP applications are not eligible for CHP incentives under either standard and Petitioner's claim that TRC reviewed Petitioner's applications under a changed eligibility standard which was not in effect at the time of its CHP applications also fails.

Although Petitioner asserts that it had addressed all utilization and sizing concerns raised during review of its incentive application to TRC's satisfaction, Petitioner has not provided support for

this claim. Petitioner has documented at least some of TRC's concerns in Costell's Cert., Exhibit 9. The emails which make up Exhibit 9 also contain Tozour's response to some of those concerns. However, based on documents supplied by Petitioner, Tozour did not respond to all concerns raised by TRC in its emails and has submitted nothing to show that TRC accepted the rationales that were provided.

Based on Staff's review of these items, Staff recommends that the Board uphold the denial of the CHP incentives.

DISCUSSION AND FINDINGS

Following a careful review of the Petition and its supporting documentation, and giving due consideration to Petitioner's arguments and Staff's recommendation, the Board sees no material facts in dispute. Petitioner makes a number of factual assertions but, as set out at length in Staff's recommendation and as further discussed below, none of these assertins suffices to raise an issue of material fact. TRC denied Petitioner's CHP applications because Petitioner's proposed projects did not meet the eligibility requirements of the NJCEP Program.

Petitioner's arguments to the contrary are specious. Petitioner alleges that it was subjected to a new run hour standard – albeit a lower threshold standard – that was not in effect at the time its applications were filed. As the record demonstrates, however, TRC reviewed Petitioner's CHP applications under the 6,000 full load equivalent run hour standard, and TRC found that the "proposed facilities will operate in the range of 2,900-4,700 hours per year, at part load operation, resulting in a very low annual system utilization. . . . When considering full load operation, the annual system utilization is even lower." Costell's Cert., Exhibit 1. More importantly, Petitioner does not claim that its applications demonstrated or that is projects will have a greater number of full load equivalent hours than the totals determined by TRC. Indeed, Petitioner's own calculations show full run hours that are between 1,973 and 2,462. Costell's Cert., Exhibit 2 at 5. Thus, whether Petitioner's CHP projects are reviewed under the 6,000 or 5,000 full load equivalent run hour standard, Petitioner's applications would still have been properly denied. The Board **FINDS** that Petitioner has not raised an issue of material fact regarding the basis for the denial of its CHP applications.

In similar fashion, Petitioner asserts that Staff made various statements regarding the approval of its CHP incentive applications and that Petitioner relied upon these statements. As amply documented in the record and discussed above, however, written approval from TRC - or in the case of an application seeking an incentive greater than $500,000, a Board order - is required. The Board **FINDS** that Petitioner has failed to raise an issue of material fact concerning the manner of the approval or denial of its CHP applications.

Because Petitioner has not raised an issue of material fact, the Board will decide this matter upon the papers that the District itself has provided. An agency must grant a plenary hearing only if material disputed adjudicative facts exist. Bally Mfg. Corp. v. Casino Control Com'n, 85 N.J. 325, 334 (1981).

The Board will also address the legal argument implicit in the Petition. In arguing that it relied upon a prior approval from Staff, the District raises the legal doctrine of equitable estoppel. In making such a claim against the Board, Petitioner bears a heavy burden. When seeking to invoke the doctrine of equitable estoppel against a public official or public entity, the party claiming the estoppel must demonstrate detrimental reliance on the action or inaction of the official or entity. "[T]he party seeking the benefit of estoppel has the burden of establishing that an officer of the State, conscious of the State's true interest and aware of the private [party's]

misapprehension, stood by while the private [party] acted in detrimental reliance." Newark v. Natural Resource Council in the Dept. of Environmental Protection, 82 N.J. 530, 545 (1980), cert. denied, 449 U.S. 983, 101 S.Ct. 400, 66 L.Ed.2d 245 (1980). Furthermore, equitable estoppel is rarely invoked against a governmental entity. Petition of Adamar of New Jersey, Inc., 222 N.J. Super. 464 (App. Div. 1988) (Casino Control Commission was not estopped from reversing certain approvals granted by staff members and previously ratified by the Commission). In Adamar, the court ruled that "[t]o the extent that the staffs of the Commission and Division, and the Commission in ratifying their actions, erred in permitting payment on outstanding counter checks at branch offices, the Commission properly exercised its authority to reopen and vacate the approvals." The court determined that the reversal of the erroneous approvals did not constitute the "manifest wrong and injustice" needed to support a claim of equitable estoppel against a government agency. Id. at 474-475.

The record in this matter does not support Petitioner's estoppel claims. Staff notified Petitioner that its ESP was approved, not the CHP incentives. Costell's Cert., Exhibit 12. Tozour then acted on approval of the ESP to initiate the installation of the CHP projects. Petitioner alleges that its agent, Tozour, subsequently discussed the "approval" of its CHP incentives with Staff, but Petitioner has not produced documentation of the alleged conversation. As Petitioner itself demonstrated in the documentation it provided, only the Market Manager can issue written approval for CHP incentives less than $500,000, and only the Board can approve CHP incentives greater than $500,000. Notably, the Board's policy regarding the approval process for EE incentives has been in place since 2007 and was last modified on May 3, 2013, when the Board required that incentives exceeding $500,000 required Board approval. 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 Docket No. EO07030203, Order dated May 3, 2013. Furthermore, the CHP incentives were properly denied because Petitioner's projects do not produce system utilization rates sufficient to meet either a 5,000 or a 6,000 full time equivalent run hour standard and because the projects are inconsistent with the CHP Programs objectives of energy efficiency to warrant financial incentives backed by ratepayers. Costell's Cert., Exhibit 8 at 1, 3, Exhibit 9 at 1, Exhibit 11.

Based on its review of the record in this matter, and its assessment of the arguments made by Petitioner and recommendations of Staff, the Board **FINDS** that Petitioner's CHP applications should be denied. Petitioner has failed to meet its burden that the applications should have been approved or that they were approved. Staff's September 13, 2013 email expressly discussed and approved the ESP and made no reference to the CHP incentives. Petitioner's reliance on the September 13, 2013 email as approval of its CHP incentives is neither reasonable nor sufficient to invoke the doctrine of equitable estoppel against the Board.

In addition, the Board **FINDS** that the Petitioner's CHP applications demonstrate that each of its CHP projects had less than 6,000 full time equivalent run hours. The Board **FINDS** that TRC has the responsibility, under its contract with the Board, to evaluate and approve applications for commercial and industrial energy efficiency incentives. The Board **FURTHER FINDS** that TRC properly applied program rules in effect at the time the Pine Hill School District's CHP applications were submitted and, therefore, properly denied the applications. Therefore, the Board **APPROVES** the decisions of TRC denying the CHP incentives and of AEG affirming the denial and **DENIES** this petition.

The effective date of this Order is December 1, 2014.

DATED: 11/21/14

BOARD OF PUBLIC UTILITIES
BY:

RICHARD S. MROZ
PRESIDENT

JOSEPH L. FIORDALISO
COMMISSIONER

MARY-ANNA HOLDEN
COMMISSIONER

UPENDRA J. CHIVUKULA
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 PETITION OF THE PINE HILL SCHOOL DISTRICT REGARDING THE NOVEMBER 1, 2013 DENIAL OF INCENTIVES IN CONNECTION WITH ITS ENERGY SAVINGS PLAN
DOCKET NO. QO14010020

SERVICE LIST

George M. Morris, Esq.
Parker McCay PA
9000 Midlantic Drive, Suite 300
Post Office Box 5054
Mount Laurel, NJ 08054

Dr. Kenneth P. Koczur, Superintendent
Pine Hill School District
1003 Turnerville Road
Pine Hill, NJ 08021

Elizabeth Ackerman, Director
Division Economic Development
and Energy Policy
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, NJ 08625-0350

Rachel Boylan, Esq.
Counsel's Office
Board of Public Utilities
44 South Clinton Avenue, 9th Floor
Post Office Box 350
Trenton, NJ 08625-0350

Caroline Vachier, DAG
Department of Law & Public Safety
Division of Law
124 Halsey Street
Post Office Box 45029
Newark, NJ 07101-45029

Carl Teter, Associate Vice President
TRC Energy Services
900 Route 9 North, Suite 404
Woodbridge, NJ 07095

Michael Ambrosio, Senior Vice President
Applied Energy Group, Inc.
317 George St., Suite 305
New Brunswick, NJ 08901

New Jersey's Clean Energy Program

n/cleanenergy.com

SmartStart Buildings

BPU

2013 COMBINED HEAT AND POWER APPLICATION PACKAGE

Before completing the forms and the related technical worksheets, please carefully read all of the information associated with 'Eligibility Requirements', 'Instructions', and 'Important Terms and Conditions' below.

Eligibility Requirements

1. CHP system must be less than or equal to 1 MW of installed capacity. For systems greater than 1 MW and seeking larger incentives, please refer to the BPU Large Scale CHP/Fuel Cells Program.

2. The CHP system must be installed in New Jersey.

3. The applicant must be a contributor to the Societal Benefits Charge fund.

4. Only stationary CHP equipment installed on the customer side of the meter is eligible.

5. Equipment must be sized to serve all or a portion of the electrical load at the customer site. The proposed generating system is sized to meet the customer's electrical loads (a) for demand-metered customers – no more than 100% of historical annual consumption or peak demand; b) for non-demand metered customers – no more than 125% of historical annual consumption. Historical annual consumption is for the most recent twelve (12) month period.

6. Equipment must be new, commercially available and permanently installed. The following are not eligible for incentives: renewable source-fueled systems*; portable and emergency backup power systems; used, refurbished, temporary, pilot, or demonstration equipment; systems that use diesel fuel, other types of oil or coal for continuous operation. **Renewable fueled projects must be submitted to the Renewable Energy Market Manager through the REIP Program under the NJCEP.*

7. Expansion of an existing facility with new equipment is also eligible for incentives, however only the incremental expansion would be eligible for the incentive. The combined capacity of the proposed expansion and existing generators are held to sizing requirements listed in item 5 above.

8. CHP systems with waste heat utilization must achieve annual system efficiency of at least 60%, based on total energy input and total utilized energy output. Mechanically-developed energy may be included in the efficiency evaluation.

9. CHP system must have a ten (10) year all-inclusive warranty. The warranty must cover the major components of the system eligible for the incentive, to protect against breakdown or degradation in electrical output of more than ten percent from the originally rated electrical output. The warranty shall cover the full cost of repair or replacement of defective components or systems, including coverage for labor costs to remove and reinstall defective components or systems. In the event the system warranty does not meet program

requirement, customer must purchase an extended warranty or a ten (10) year maintenance/service contract. The cost of the ten (10) year warranty or service contract may be considered as part of the cost of the project.

10. Third party ownership (or leased CHP equipment), such as those procured under Power Purchase Agreements, are permitted within the program with the following provisions:
    - Projects are subject to the same ten (10) year warranty requirements as stated in item 9 of Eligibility Requirements.
    - Additionally, in order to ensure the equipment remains on site and is in operation for the term of the agreement, a binding agreement is required between the parties. A copy of this agreement shall be provided to the Market Manager prior to commitment of incentives. The agreement should state that the equipment could be transferred to new owners should the property be sold or otherwise have a buyout provision so the equipment remains on site and stays operational so the projected energy savings can accrue. The intent is to provide incentives for generating equipment, which is installed and functioning for the duration of its useful life. Under the Program, only permanently installed equipment is eligible for incentives and this must be physically demonstrable to the Market Manager, upon inspection, prior to receiving an incentive. This can be demonstrated by electrical, thermal and fuel connections in accordance with industry practices for permanently installed equipment and be secured to a permanent surface (e.g. foundation). Any indication of portability, including but not limited to temporary structures, quick disconnects, unsecured equipment, wheels, carrying handles, dolly, trailer or platform will deem the system ineligible.
    - The customer/applicant will be allowed to sign over the CHP incentive to the third party owner.
    - All other program rules apply.

11. Projects meeting the minimum qualification requirements described above will be evaluated for funding according to the following criteria:
    - System efficiency
    - Environmental performance
    - Economic viability
    - Projected system startup date
    - Annual system utilization
    - General programmatic goals
    - Project clarity

    Also considered:
    - Local marginal pricing, as determined by the PJM interchange for the electric service area in which the project is located
    - Islanding capability
    - Smart Growth
    - Emergency Management Center

Application Instructions

1. Complete all sections of the Application Form.

2. Read Sections A ('Installation Requirements') and B ('Code Requirements').

3. Develop a detailed feasibility analysis in the form of a report and include, at minimum, the required information listed in Section C ('Feasibility Analysis')

4. Complete all sections of Technical Worksheets: Form 1, Form 2, Form 3, Form 3a, and Form 4, and fill out signature page.

5. Submit completed Application Form, Technical Worksheets, a detailed feasibility analysis, and a copy of the customer/developer contract to the Commercial/Industrial Market Manager. Retain a copy for your files. All information is necessary for processing applications and incentives. Illegible or incomplete Application Forms, Technical Worksheets, and/or Feasibility Analysis will be returned to the Applicant.

   E-mail all completed forms and questions to **CHP@NJCleanEnergy.com**

   Mail to:
   New Jersey's Clean Energy Program c/o TRC Energy Services
   900 Route 9 North, Suite 404
   Woodbridge, NJ 07095

6. Once the Application package has been reviewed and approved, the Market Manager will forward Applicant an Approval Letter with the committed incentive amount. To be eligible to receive a program incentive, Applicant must receive an Approval Letter from the Market Manager prior to equipment installation. A pre-inspection will be conducted prior to issuance of the approval letter.

7. Applicant must purchase a qualifying system and have it installed according to Program Requirements within 18 months of the date listed on the Approval Letter. Any changes between the initially proposed system and the installed system must be fully documented and are subject to Office of Clean Energy approval. Requests for extensions may be granted by the Market Manager for up to twelve (12) months so long as applicant can demonstrate proof of significant project advancement.

8. Incentives will be processed by the Market Manager and paid as follows: Twenty percent (20%) of the incentive upon proof of equipment purchase; Sixty percent (60%) upon project completion and verification of installation by Market Manager; Remainder twenty percent (20%) one year after project inspection and acceptance and confirmation the project is achieving the proposed and/or minimum efficiency threshold.

9. In order to receive the first installment of the incentive, the Applicant (or Contractor) must submit the following to the Market Manager: a) proof of purchase (invoice); b) and tax clearance certificate.

10. In order to receive the second installment of the incentive, the Applicant (or Contractor) must submit the following to the Market Manager: a) an updated Application Form with post-installation data; b) proof of additional purchases (invoice); c) proof of warranty; d) a copy of the Electrical Code Inspection Certificate; e) completed Interconnection Application approved by the utility company; f) and updated tax clearance certificate. A post-inspection will be conducted at this time.

11. In order to receive the final installment of the incentive, Applicant must provide to the Market Manager: a) 12 months of operational data demonstrating proposed and/or minimum efficiency was achieved. This shall be done by implementing appropriate metering as part of the system installation. Data collected should include, but is not limited to, fuel input (MMBtu), electrical output (kWh, MMBtu), recoverable and utilized thermal output (MMBtu). A detailed metering plan shall be included within the feasibility analysis; b) an updated tax clearance certificate. Requests for extensions may be granted by the Market Manager for up to twelve (12) months.

Important Terms and Conditions

1. To receive an incentive, Applicant must agree to an inspection by the Market Manager, or its representatives.

2. The New Jersey Board of Public Utilities reserves the right to modify or withdraw this program. Program procedures and incentive levels are subject to change or cancel without notice. Approved projects will be honored under the terms stated in the Approval Letter.

3. The Market Manager and Administrator do not warrant the performance of installed equipment, and/or services rendered as part of this program, either expressly or implicitly. No warranties or representations of any kind, whether statutory, expressed, or implied, including, without limitations, warranties of merchantability or fitness for a particular purpose regarding equipment or services provided by a manufacturer or vendor. Contact your vendor/services provided for details regarding performance and warranties.

4. The Program Manager and Administrator do not endorse, support or recommend any particular manufacturer, product or system design in promoting this Program.

5. The Market Manager will not be responsible for any tax liability that may be imposed on any Participating Customer as a result of the payment of Program Incentives. All Participating Customers must supply their Federal Tax Identification number or social security number on the application form in addition to providing a copy of their W-9 form as part of the application package in order to receive a Program Incentive.

6. By virtue of participating in this Program, Participating Customers agree to waive any and all claims or damages against the Program Manager or the Administrator, except the receipt of the Program Incentive. Participating Customers agree that the Program Manager's and Administrator's liability, in connection with this Program, is limited to paying the Program Incentive specified. Under no circumstances shall the Program Manager, its representatives, or subcontractors, or the Administrator, be liable for any lost profits, special, punitive, consequential or incidental damages or for any other damages or claims connected with or resulting from participation in this Program. Further, any liability attributed to the Program Manager under this Program shall be individual, and not joint and/or several.

CHP APPLICATION FORM

Customer Information

Electric Utility: ■ Atlantic City Electric ☐ JCP&L ☐ PSE&G ☐ Rockland Electric Company ☐ Other

Gas Utility: ☐ Elizabethtown Gas ☐ New Jersey Natural Gas ☐ PSE&G ■ South Jersey Gas ☐ Other

Electric Utility Account Number | Gas Utility Account Number | Federal ID/SSN

First Name	Last Name	Company
Tom	O'Donnell	Pine Hill School District

Phone Number	Email
(856) 783-6900	todonnell@pinehill.k12.nj.us

Installation Address	City	State	Zip
1200 Turnerville Road	Pine Hill	NJ	08021

Mailing Address (if different from above)	City	State	Zip
1003 Turnerville Road	Pine Hill	NJ	08021

Will the generating system be used as an Emergency Management Facility? (please check one, if YES please provide appropriate documentation): ☐ YES ■ NO

Incentive Recipient (if incentive check is to be issued to a company other than above, mail check to)*

First Name	Last Name	Company

Phone Number	Email

Mailing Address	City	State	Zip

Federal ID/SSN

Customers Signature

*Submit W9 form for this entity.

Contractor/Installer/Design Professional

First Name	Last Name	Company
Kevin	Keenan	Tozour Energy Systems

Phone Number	Email
(610) 962-1163	kkeenan@tozourenergy.com

Mailing Address	City	State	Zip
3606 Horizon Drive	King of Prussia	PA	19406

Federal ID/SSN

Equipment Information

CHP Type: ■ Gas Engines ☐ Gas Turbines ☐ Heat Recovery Equipment ☐ Other

Manufacturer	Model	Installed Capacity (kW)
Aegenco	Aegen ThermoPower 75kW	225

CHP TECHNICAL WORKSHEETS

Form 1: Proposed CHP System Performance

Table 1. Proposed System Overview (annual)		
Prime Mover Type	Natural Gas Engine	
Energy Input	(MMBtu)	4,671
Electric Output	(kWh)	369,310
	(MMBtu)	1,260
Recoverable Thermal Output	(MMBtu)	2,575
Utilized Thermal Output[1]	(MMBtu)	2,575
Annual System Efficiency[2]	(%)	82.10

Table 2. Rated System Information		
Prime Mover Model	Aegen ThermoPower 75	
Energy Input	(MMBtu/h)	2.8458
Rated Electric Output[4]	(kW)	225
	(MMBtu/h)	.7677
Total Thermal Output	(MMBtu/h)	1.569
Recoverable Thermal Output	(MMBtu/h)	1.569
Fuel Conversion Efficiency[3]	(%)	82.11

(1) Heat used from the CHP systems for the purpose of heating and cooling 1kWh = 0.003412 MMBtu

(2) Annual System Efficiency = (Electric output (MMBtu) + Utilized Thermal Output)/Energy Input

(3) Fuel Conversion Efficiency (FCE) = (Rated Electric Output (MMBtu/h) + Recoverable Thermal Output)/Energy Input
FCE is defined as the ratio (expressed as a percentage) of the total usable energy produced by a technology to the sum of all fuel or other energy inputs to the technology measured at each fuel's higher heating value.

(4) Rated output as published by the manufacturer.

Table 3.Proposed System Overview

Month	Anticipated Operating Hours[5]	Input Fuel (MMBtu)	Output Electricity (MMBtu)	Recoverable Thermal Output (MMBtu)	Utilized Thermal Output (MMBtu)	Electricity Efficiency (%)	Thermal Efficiency (%)	Annual Efficiency (%)
Jan	600	1051	283	579	579	26.98	55.12	82.10
Feb	600	987	266	544	544	26.98	55.12	82.10
Mar	600	690	186	380	380	26.98	55.12	82.10
Apr	550	356	96	196	196	26.98	55.12	82.10
May	450	256	69	141	141	26.98	55.12	82.10
Jun	100	101	27	56	56	26.98	55.12	82.10
Jul	5	14	4	8	8	26.98	55.12	82.10
Aug	5	14	4	8	8	26.98	55.12	82.10
Sep	100	57	15	31	31	26.98	55.12	82.10
Oct	500	180	49	99	99	26.98	55.12	82.10
Nov	600	311	84	171	171	26.98	55.12	82.10
Dec	600	653	176	360	360	26.98	55.12	82.10
Total	4710	4671	1260	2575	2575			

(5) Total hours shall not exceed 8,760.

Table 4. Breakdown of Recovered Thermal Output
(Indicate in the detailed feasibility analysis the fuels that are being displaced and the respective equipment efficiency)

Month	Process Heating (MMBtu)	Process Cooling (MMBtu)	Space Heating (MMBtu)	Space Cooling (MMBtu)	Domestic Hot Water (MMBtu)	Other (MMBtu)	Total (MMBtu)
Jan			551		28		579
Feb			518		26		544
Mar			352		28		380
Apr			168		28		196
May			117		24		141
Jun			32		24		56
Jul			0		8		8
Aug			0		8		8
Sep			7		24		31
Oct			71		28		99
Nov			143		28		171
Dec			332		28		360
Total			2333		266		2575

Table 5. Utility Unit Cost		
Unit Cost of Gas		.7788
Unit Cost of Electricity		.14818
Rate Schedule	Electricity	
	Gas	

Form 2: Air Emissions Data

This form reports anticipated annual emissions of the six (6) pollutants that may be due to the CHP System. The first table should include vendor supplied data on the emissions from the prime mover to be installed. The second two tables should show what fraction of those new emissions is displacing current system emissions.

Table 6. Supplied Electricity	
Yearly Grid Supplied Electricity (Pre-Installation) (MWh/year)	922
Yearly CHP System Supplied Electricity (MWh/year)	369
Yearly Grid Supplied Electricity (Post-Installation) (MWh/year)	553

Table 7. Vendor Supplied CHP System Emissions			
NOx	0.03 g/hp-hr per system	lbs/MWh	.0921 per system
SOx	N/A	lbs/MWh	N/A
PM-10	N/A	lbs/MWh	N/A
CO2	N/A	lbs/MWh	N/A
CO	.24 g/hp-hr per system	lbs/MWh	.7368 per system
VOC	.58 g/hp-hr per system	lbs/MWh	1.7806 per system

Estimates of Displaced Emissions

The following two tables should be completed if data or information exists. By reporting on the emissions of the facility both before and after installation of the CHP system, the net impact of the new system can be estimated. If insufficient data exists, leave the tables blank. For systems greater than 2 MW, both tables must be completed prior to the release of the committed incentive.

Table 8. Calculated Annual Boiler/Furnace Emissions (lbs)			
	Pre-CHP Installation	Post Installation	Difference
NOx			
SOx			
PM-10			
CO2			
CO			
VOC			

Table 9. Annual Site Emissions (lbs)			
	Pre-CHP Installation	Post Installation	Difference
NOx			
SOx			
PM-10			
CO2			
CO			
VOC			

Form 3: CHP System Cost Table

Please enter all CHP system capital costs in the table below. Break out costs should add up to total system turnkey cost. Turnkey line item costs should include any administrative and markup costs. Where a component or construction cost is not included in the CHP project design enter "N/A." Where a component or construction cost is provided within another line item, please enter "included."

Table 10. CHP System Component Cost ($)	
Prime Mover	324,000
Fuel Compressor	
Black Start Capability	
Generator	with Prime Mover
Heat Recovery	
Cooling Tower or other Heat Dump	
Absorption Chiller	
Desiccant	
Controls	252,500
Sound Attenuation	
Inlet Air Handling	
Vibration Isolation	
Emission Controls	
Other Back Up Boilers	88,640

Table 11. Design/Construction/Labor and Materials Cost ($)	
Engineering	217,649
Site Preparation	
Buildings	
Construction Labor	593,000
Materials	
Exhaust Stack	
Electrical Tie-in	
Mechanical Tie-in	
Grid Interconnection Devices	
Permitting Fees	
Contingency	
Other ESIP / P4P Administration	217,649

Total System Turnkey Cost ($)	1,693,438

CHP TECHNICAL WORKSHEETS

Form 3A: CHP System Service and Maintenance Costs

Table 12.	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Prime Mover /Heat Recovery										
Thermal Equipment										
Emissions Controls										
Remote Monitoring/Control										
Warranty/Service Contracts										
Other With Equipment Bid	120,720									
Total Service Maintenance Costs	120,720									

Form 4: Incentive Request Calculation

(1) Enter total system rated net continuous output (from Form 1, Table 2) or 1 Megawatt, whichever is less, in AC Watts..... 225

(2) Requested NJCEP Incentive (Enter the appropriate value using Table 13 below, e.g. Line 1 x $1.00/Watt)..... $ 225,000

(3) Requested NJCEP Pay for Performance Bonus Incentive (Enter appropriate value using Table 13 below or enter "0" if not applicable, e.g. Line 1 x $0.25/Watt) $ 56,250

(4) Requested Utility Match (Enter the appropriate value using table below, e.g. Line 1 x $1.00/Watt)..... $ 225,000

(5) Total Installed CHP System Turnkey Cost (from Form 3, Tables 10 & 11) including applicable interconnection costs, before New Jersey's Clean Energy Program incentive, less any other direct incentives..... $ 1,814,159

(6) Maximum allowable incentive (Multiply Line 5 by 'Maximum % of Project Cost') $ 558,947

(7) **Final incentive amount** (Input the lesser of: sum of Lines 2+3+4, or Line 6, or $2,000,000 [$2,250,000 if Pay for Performance bonus is included])..... $ 506,250

Table 13. Eligible Technology	Incentive ($/Watt) (Up to $2.0 Million)[1]	NJCEP Pay for Performance Bonus (up to additional $250,000)[2]	Maximum % of Project Cost
CHP Powered by Non-Renewable Fuel Source • Microturbines • Internal Combustion Engines • Combustion Turbines	System Size (kW) / Rebate (per Watt) ≤ 500 — $2.00 501-1,000 — $1.00	$0.25/Watt	30% or 40%[3]
CHP Powered by Class 1 Renewable Fuel Source[4] • Microturbines • Internal Combustion Engines • Combustion Turbines	System Size (kW) / Rebate (per Watt)[5] ≤ 500 — $3.00 501-1,000 — $2.00	N/A	40%[6]
Heat Recovery or Other Mechanical Recovery from Existing Equipment Utilizing New Electric Generation Equipment	$1.00/Watt	$0.25/Watt	30%

(1) The incentives shown above represent a combination of NJCEP and Utility incentives, up to a maximum of $2,000,000. The portion of incentive payable by NJCEP is dependent upon the amount of utility incentive offered. Utilities offer incentives for CHP and Fuel Cells ranging from $0 up to $1,000,000. NJCEP's incentive will bring the combined incentive up to the $/Watt amount shown in the table above, up to the maximum amount of $2,000,000. The "% of project cost" caps as listed in the table above will be maintained.

(2) Any facility that successfully participated in Pay for Performance (i.e. received an Energy Reduction Plan approval letter, and has begun or completed installation of recommended measures) prior to applying for CHP incentives will be eligible for an additional $0.25 per Watt from NJCEP, not to exceed —% of project cost caps listed in the table above, or a combined utility plus NJCEP incentive of $2.25 million, whichever is less.

(3) The maximum percentage of project cost will go to 40% where a cooling application is use or included with the CHP system.

(4) New Jersey's Renewable Energy Portfolio Standard N.J.A.C. 14:8 2.5 clearly defines what materials are considered to be Class 1 biomass materials; those materials which are not deemed Class 1 must go through sustainability determination by New Jersey Department of Environmental Protection (NJDEP) to qualify. All renewable fueled projects must be submitted to the Renewable Energy (RE) Market Manager through the REIP Program under the NJCEP. Please contact RE Market Manager for latest incentives and additional program forms.

(5) Rebates are tiered; for example for a 1,000 kW project the first 500 kW is paid at $3.00 per watt, and the second 500 kW at $2.00 per watt. Maximum rebate is $2.5 million or 40% of total project cost.

(6) Includes all capital equipment costs associated with: producing and refining biomass feedstock, generating electricity and heat recovery.

Section A. Feasibility Analysis

In addition to completing Forms 1 through 4 in their entirety, a detailed feasibility analysis must be completed. The feasibility analysis must be in report format, with cover and table of contents, and should include (but is not limited to) the following:

Executive Summary:

1. Site and project description.

2. Summary of energy savings/generation, cost savings, total project cost, implementation schedule, and any other pertinent information.

Project Team:

1. Include an organizational chart listing all team members, including the project manager and any subcontractors and other sponsors involved in the CHP Project, showing their roles and responsibilities.

2. Describe the qualifications of the Applicant and/or contractor's individual and combined expertise that will enable successful completion of the CHP Project.

3. Describe the proposing team's experience in developing and operating conventional or renewable energy plants, marketing power, and other relevant areas. List related projects that have been undertaken and successfully completed by the Applicant and/or contractors.

System Type and Mode of Operation:

Discuss proposed system type and mode of operation, such as:

1. Grid-connected operating mode (parallel/capable of synchronizing with the electric grid; capable of automatically reducing load to prevent backfeeding the meter).

2. Grid-connected/grid-independent operating mode (parallel/capable of synchronizing with the electric grid and capable of switching automatically to independent, load-following operation when the grid is unavailable; automatic operation and synchronization of multiple power plants connected in parallel).

3. Stand-alone load-following operation (system confined to an independent circuit, no utility backup).

4. Battery interactive capabilities, if applicable.

The on-site power system should have the ability to automatically island/disconnect from the utility in the event of substantial grid congestion or failure.

System Information:

1. Include the type and rating of the prime mover and an energy balance around the prime mover. The energy balance must be applied to a schematic of the system showing all major components, including the uses for the recovered heat. Annual totals for each energy input/output must be shown along with maximum, minimum, and average instantaneous values. Flow volumes, e.g., GPM, PPH, CFM including temperatures of each waste heat transfer fluid/exhaust gases, etc., and associated heat sink must also be indicated.

2. Fuel conversion efficiency (FCE) for the prime movers must be provided. FCE is defined as the ratio (expressed as a percentage) of the total usable energy produced by a technology to the sum of all fuel or other energy inputs to the technology measured at each fuel's higher heating value.

3. The description of the proposed system must include a floor plan indicating equipment location and tie-in to existing building systems. Any structural modifications must be included in the capital cost of the system. This document must indicate the location of the system, batteries (if any), lockable disconnect switch (unless otherwise approved by the electric utility, the disconnect switch shall be installed at the electric utility meter location), and point of connection with the utility system. The installation address, current account number at that address (gas and electric), and the installer's name and telephone number must also be included on the site map.

4. The pressure and availability of gas must be described in the study.

5. An operational sequence must be included that specifies the control system to be used along with a discussion of its integration with other on-site controls systems and who will have the responsibility for system operation.

6. A construction schedule that includes engineering, permitting, construction, start-up and commissioning must be provided.

Economic Evaluation:

1. CHP System Economic Evaluation Requirements: Simple payback, 10 year cash flow analyses, and IRR analysis are required for purposes of this application. Although the format of these analyses is at the discretion of the applicant, the following inputs must be considered and shown within these analyses:

   - Total CHP system capital cost (from Form 3)
   - CHP system operating hours, load factor, and availability factor
   - Total service and maintenance costs (from Form 3a)
   - CHP system heat rate/ fuel consumption

- Efficiency of current boiler plant, chiller plant, etc. for which recovered waste heat will supplement (if applicable)

- Clearly state energy savings or increased use of energy; and the demand savings. The savings, or the increase, should be stated in terms of KW, kWh and in MMBtu

- Fuel cost – commodity and delivery

- Cost of additional water consumption required by the system

- Offset electricity quantity and value – customer charge, demand charge, commodity charge, Time-of-Use where applicable, any unavoidable charges

- Offset thermal energy quantity and value – commodity and delivery (if applicable)

- Changes to tariffs due to CHP, including supplemental electricity tariffs, standby rates and exit fees

- Fuel and electricity escalation rates for cash flow analysis

- Financing options and assumptions, such as the discount rate and interest rate for cash flow analysis

- Any additional costs or credits, including incentives (utility matches, state funding, Federal funding, etc.), the value of reliability, emission credits, HVAC equipment offsets, etc.

Tariff Impacts and Interconnections:

1. In addition to inclusion in the economic analysis described above, a detailed description of the relationship between the proposed CHP system and the customer's existing energy tariffs must be included. Contract dates and dates of potential tariff rule changes must be included. In the case where such future changes would significantly impact the economics of the project, sensitivity analysis must be presented assuming the potential tariff or contract changes occurred.

2. Site-specific grid interconnection issues and costs must be discussed. A brief, clear plan for if and how the system will be properly interconnected to the grid and/or natural gas pipelines must be presented.

Permitting:

1. A brief description of the necessary environmental and building permits or certificates that the customer needs to obtain must be provided. The permit determination should be based on a detailed emissions inventory developed from the hourly spreadsheet based model. A schedule of realistic permit receipt dates must be included in the construction schedule described above.

System Reliability and Availability:

1. The reliability and availability of the CHP system must be quantified (e.g. number of hours the system would be available at less than full capacity).

Metering Plan

1. A detailed metering plan shall be included within the feasibility analysis outlining the steps that will be taken to measure system performance post-installation. After system is installed, applicant must provide 12 months of operational data demonstrating proposed and/or minimum efficiency was achieved. This shall be done by implementing appropriate metering as part of the system installation. Data collected should include, but is not limited to, fuel input (MMBtu), electrical output (kWh, MMBtu), recoverable and utilized thermal output (MMBtu).

Supporting Documentation:

1. Generation and waste heat recovery equipment specifications and manufacturers data sheets.

2. New and existing facility equipment (both thermal and electric) annual operating schedules.

3. At least twelve months of the most recent electric bill(s) for the facility served by the CHP system.

4. At least twelve months of the most recent bills for natural gas, fuel oil and/or other fuels used in the facility served by the CHP system.

If you plan to use an absorption chiller to offset cooling load, provide cooling load calculations.

Section B. Installation Requirements

In addition to the Eligibility Requirements listed at the beginning of this application package, the following Installation Requirements apply:

1. The applicant must provide an expected completion date. Due to program funding limitations, the expected completion date will be used as an award criterion. The Applicant should submit documentation from manufacturers and contractors which state the expected equipment delivery and installation dates.

2. Incentives are intended to enhance the affordability of clean energy generation systems. Systems should be installed according to manufacturer's instructions. For systems installed inconsistent with such requirements, the Rated System Output may be de-rated.

3. Installation must comply with the host utility's interconnection and protection requirements, which are available from the respective electric utility. These include Operation/Disconnection Procedures, Liability/Indemnity and Insurance Requirements according to the size of the project. For information on Net Metering, please contact your electric utility.

4. The installation must comply with provisions of the latest edition of these standards, as appropriate: NFPA 853 – Stationary Fuel Cell, and all codes governing the installation of Combined Heat and Power equipment; NFPA 70 National Electrical Code (NEC), Power Plants, IEEE 519 – Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems; ANSI Z21.83-1998 Fuel Cell Power Plants, and input and output protection functions should be in compliance with ANSI C37.2 Device Function Number specifications.

5. All drawing should be stamped and sealed by a New Jersey licensed professional engineer.

6. The system should be equipped with the following capabilities, indicators and/or controls:
   - On/off control on site
   - Operating mode setting indication - parallel vs. stand-alone
   - AC & DC overcurrent protection or equivalent
   - Operating status indication
   - Remote control and data acquisition capable
   - Electric load-following capable

7. Warning labels must be posted on the control panels and junction boxes indicating that the circuits are energized by an alternate power source independent of utility-provided power.

8. All interconnecting wires must be copper. (Some provisions may be made for aluminum wiring; approval must be received from electric utility engineering departments prior to acceptance.)

9. All wiring splices must be contained in UL-approved workboxes.

10. Operating instructions must be posted on or near the system, or on file with the facility's operation and maintenance documents.

Proposed changes to the requirements will be considered, but they must be documented by the Applicant or Installation Contractor and approved by the Office of Clean Energy. These requirements are not all-encompassing and are intended only to address certain minimum safety and efficiency standards.

Section C. Code Requirements

1. The installation must comply with the provisions of the latest edition of NFPA 70 National Electrical Code (NEC) and all other applicable local, state, and federal codes or practices.

2. All required permits must be properly obtained and posted.

3. All required inspections must be performed (i.e., Electrical/NEC, Local Building Codes Enforcement Office, etc.).

In order to ensure compliance with provisions of the NEC, an inspection by a state-licensed electrical inspector is mandatory.

[illegible]

✓ Application has been filled out in its entirety and signed by both customer and contractor.

✓ Technical Worksheets (Forms 1 through 4) have been filled out in their entirety.

Detailed feasibility analysis for the Fuel Cell system, per required information listed in Section A ('Feasibility Analysis'), has been completed and attached to the application.

Section B ('Installation Requirements') and Section C ('Code Requirements') have been read and acknowledged by both customer and contractor.

Copy of Customer-Developer contract has been attached to this application.

W-9 form for the payee is included.

✓ Check the box if an Energy Savings Improvement Program (ESIP) will be a source of funding. ESIP allows government agencies to pay for energy related improvements using the value of the resulting energy savings.

ACKNOWLEDGEMENT – The undersigned warrants, certifies and represents that as part of the design study requirement; 1) the information provided in this entire application is true and correct to the best of my knowledge; 2) the Contractor/ Installer will explain and provide manuals related to the system operation and maintenance to the customer (Applicant); and 3) the installation will meet all of New Jersey's Clean Energy Program requirements.

I have read, understood and am in compliance with all rules and regulations concerning this incentive program. I certify that all information provided is correct to the best of my knowledge, and I give the Market Manager permission to share my records with the New Jersey Board of Public Utilities, and contractors it selects to manage, coordinate or evaluate the Combined Heat and Power Program, including the release of electric and natural gas utility billing information, as well as make available to the public non-sensitive information. I allow reasonable access to my property to inspect the installation and performance of the technologies and installations that are eligible for incentives under the guidelines of New Jersey's Clean Energy Program. This arrangement supersedes all other communications and representations.

Customer (Applicant)	Contractor/Installer
Signature: [signature]	Signature: [signature]
Print Name: Thomas O'Donnell	Print Name: Kevin Kerner
Date: 6-3-13	Date: 6-13-13

Please e-mail all completed forms and questions to CHP@NJCleanEnergy.com or mail to the address below.

New Jersey's Clean Energy Program
c/o TRC Energy Services – CHP-FC
900 Route 9 North, Suite 404 • Woodbridge, NJ 07095
Phone: 866-657-6278 • Fax: 732-855-0422

[illegible]