

BQDM QUARTERLY
EXPENDITURES &
PROGRAM REPORT

Q4-2014



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1.0 Background

On December 12, 2014, the Commission issued its *Order Establishing Brooklyn/Queens Demand Management Program (“Order”)*.¹ The Order requires Consolidated Edison Company of New York, Inc. (“Con Edison” or the “Company”) to submit quarterly reports to the Commission on its “expenditures and program activity” that include project costs, project in-service dates, MAC recoveries, incremental costs incurred, operational savings, and other benefits. This is the first Brooklyn Queens Demand Management (“BQDM”) quarterly report and primarily covers expenditures and program activity for the fourth quarter (“Q4”) of 2014.

2.0 Executive Summary

2.1 Costs and Recovery

During the 4th quarter of 2014, the Company spent \$1.16 million (see Figure 1 and Table 1). Since the Order was not issued until late in the quarter and the costs only relate to customer-side solutions, the costs incurred during the quarter were treated as expenses related to the Company’s Targeted Demand-Side Management (“TDSM”) program and recovered through the Monthly Adjustment Clause (“MAC”).²

¹ Case 14-E-0302 – Order Establishing Brooklyn/Queens Demand Management Program, issued and effective December 12, 2014.

² See <http://www.coned.com/documents/elecPSC10/GR25-Forms.pdf>, Leaf 338, Section 26.1 and Leaf 341, Section 26.1.1 (22). Note that the Company may reassign the costs to the BQDM Program established after the issuance of the Order, consistent with Leaf 343.1, Section 26.1.1 (43).

BQDM Program Budget and Expenditures

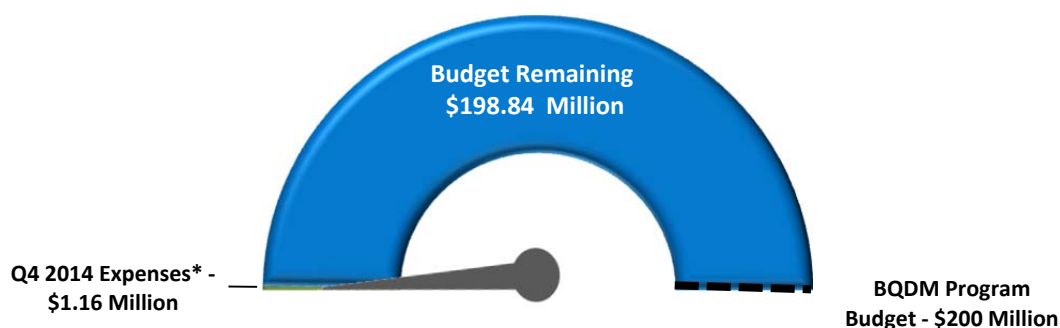


Figure 1: BQDM Program Budget and Expenditures

* - Note that the costs incurred during the quarter may include expenses related to services rendered prior to the quarter if the invoices were processed during the quarter. Further note that the costs incurred during the quarter may not include all expenses related to services rendered during the quarter, if the invoices related to such services were not processed during the quarter.

Programs/Projects	Oct-14	Nov-14	Dec-14	Q4 Total
Virtual Energy Audits			\$12,338	\$12,338
SBDI Incentives		\$65,855	\$809,520	\$875,375
NYCHA Opportunity Scoping			\$84,490	\$84,490
Analytical Tools and Technology	\$45,301	\$75,496	\$35,819	\$156,616
Miscellaneous		\$14,770	\$14,330	\$29,101
Total	\$45,301	\$156,121	\$956,497	\$1,157,919

Table 1: BQDM Program Fourth Quarter 2014 Expenditures

Company work to implement the energy efficiency adder programs (which are described in more detail in section 3 of this report), research new technologies, manage RFI and RFP activities, and develop foundational elements of the program (accounting protocols, regulatory reporting, marketing approaches and outreach) was primarily conducted by Con Edison employees paid via base rates. The Company has developed a General Accounting Procedure

("GAP")³ for treatment of costs and collections associated with the BQDM Program and has established internal billing accounts to properly manage program expenses.

2.2 Projects Summary

During the fourth quarter of 2014, the Company contracted for 5.5 MW⁴ of load relief from efficiency measures at 1,727 small business customers as illustrated in Figure 2.

BQDM Program Load Relief Progress*



Figure 2: BQDM Program Load Relief Progress

- * (i) "Operational" refers to the quantity of load relief the Company estimates the technologies and/or measures that have already been installed will contribute during some or all of the forecasted overload period;
- (ii) "Contracted" refers to the quantity of load relief the Company estimates the technologies and/or measures that have been sold, both installed and not yet installed, will contribute during some or all of the forecasted overload period.

³ The Company filed the initial GAP on February 10, 2015.

⁴ Given that this is the first activity report, the load relief quantity refers to the cumulative load relief, i.e., it includes load relief from activity prior to the quarter. The Company will report load relief on both quarterly and cumulative basis henceforth. Also note that costs included in this report do not directly relate to the load relief quantity, as explained in the footnote to Figure 1.



The Company began and/or continued to pursue other load relief opportunities on both the customer side and utility side as shown in Table 2. The Company efforts during the quarter are described in greater detail in section 3 of this report.

	Design Stage*	Deployment Stage*
<i>Customer-side Solutions</i>		
Small Business Direct Install		√
Multi-family Energy Efficiency	√	
Residential Energy Efficiency Program(s)	√	
NYSERDA CHP Program	√	
Virtual Building Audits		√
New York City Housing Authority Scoping		√
Direct Customer Activity	√	
<i>Utility-side Solutions</i>		
Distributed Energy Storage System	√	
DC Link Microgrid	√	
Voltage Optimization	√	
Community PV	√	
Fuel Cell	√	
<i>Foundational Elements</i>		
Distributed Energy Resource Evaluation Tool		√
Solutions Technology Validation		√
Community Engagement and Outreach		√

Table 2: BQDM Program Activity

*- “Design Stage” refers to early efforts initiated by the Company during the quarter to determine whether, and if yes, how to proceed to implementation in a manner consistent with the objectives of the BQDM program. “Deployment Stage” refers to implementation efforts either substantially complete or well underway that are serving to meet the objectives of the BQDM program.



2.3 Operational Savings and Other Benefits

The Company defines operational savings as reductions in costs incurred or expected to be incurred by the Company for the operation of the electric sub-transmission and distribution system supporting the BQDM target area. No operational savings have been identified as resulting from activities conducted in the fourth quarter of 2014.

The vast majority of the load relief the Company acquired during the fourth quarter of 2014 came from the Small Business Direct Install (“SBDI”) adder program. Under the SBDI adder program, more than 1,700 small businesses in the community have installed or agreed to install efficiency measures that will collectively reduce electricity demand by 5.5 MW, reduce electricity bills for these customers by an average \$3,100 per year, and result in approximately 27,700,000 kWh of annual consumption reduction. The outreach to these businesses, in an area that continues to under-go considerable change, has been a positive start for the BQDM project, delivering direct benefits to a very important segment of the community, and contributes to creating an environment of trust in the wider community as the project progresses.

Additionally, the SBDI Adder initiative outcomes are anticipated to displace peaking generation and reduce wholesale capacity needs. The Company has used an implementation contractor that has employed 96 employees to reach the targeted small businesses.



A very small portion of load relief was also secured during Q4 2014 from the Multi-Family Energy Efficiency (“MFEE”) Program. The MFEE Adder initiative was commenced on December 10, 2014. Results through December 31, 2014 include only the in-dwelling measures representing approximately 1.6 kW of load reduction.

3.0 Program Activity

3.1 Customer-side Solutions

In order to produce rapid results, the Company reviewed resources already in place and operating to produce load reduction within the Brooklyn-Queens Area (“BQDM Area” or “BQDM Target Area” or “Target Area”).⁵ While the process of approval of the BQDM program progressed, the Company looked to utilize the TDSM program to create early momentum in the BQDM Area. The Company focused on the tools provided under the TDSM program. This included a review of existing Energy Efficiency Portfolio Standard Programs (“EEPS Programs”) offered by New York State Energy Research and Development Authority (“NYSERDA”) and/or the Company. The ability of certain of these programs to respond quickly created an opportunity to gain immediate traction toward the first milestone goal. The SBDI Program and the MFEE Program, both direct installation programs, offer the best potential to provide an implementation vehicle with proven technologies, in order to respond with high confidence in their load reductions. These programs have been augmented with adders to produce

⁵ References to Brooklyn-Queens Area in this filing refer to north central and eastern Brooklyn neighborhoods, including parts of Greenpoint, East Williamsburg, Bushwick, Bedford-Stuyvesant, Crown Heights, East Flatbush, Brownsville, and East New York, and southwestern Queens neighborhoods, including parts of Richmond Hill, Howard Beach, Broad Channel, Ozone Park, South Ozone Park, Woodhaven and Kew Gardens.



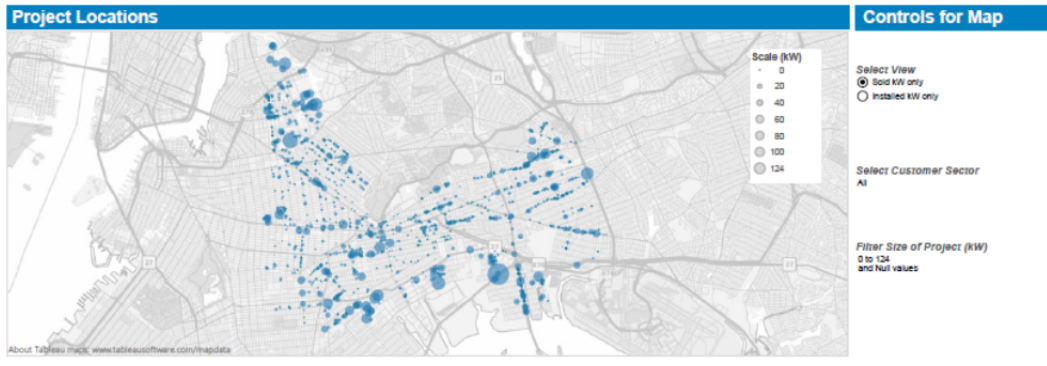
immediate results in the BQDM Area. These programs were also recognized to create engagement by important members of the targeted community.

Small Business Direct Install Program

The Company initiated the “SBDI Adder” program on August 1, 2014. The SBDI Adder program is open to commercial customers with a peak demand of 110 kW or less. Participating customers receive a walk-through survey identifying cost-effective electric efficiency measures. Customers may elect to have all or any of the recommended measures installed. Under EEPS, the SBDI Program provides a payment of 70 percent of costs for the selected measures and the customer is responsible for the remaining 30 percent. Under the SBDI Adder, customers in the covered networks will receive the remaining 30 percent so measures are installed at no cost to them. The Company delivers this program through an implementation contractor responsible for the sales and installation of measures.

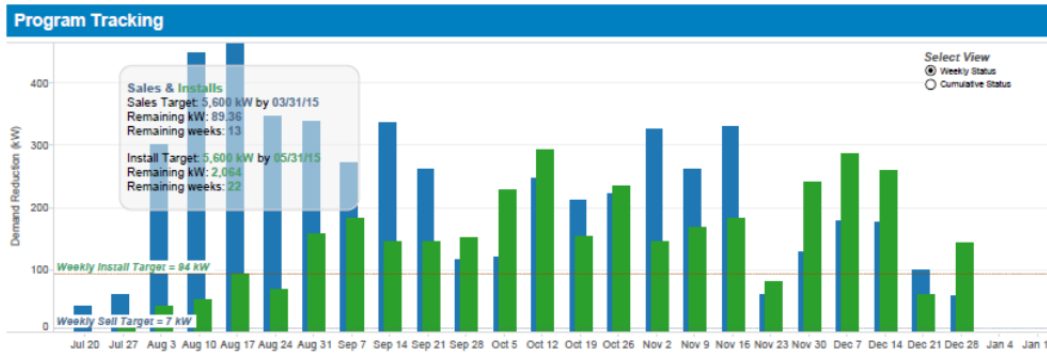
See below for the status of SBDI Adder initiative as of December 31, 2014:

BQDM SBDI - Traditional Targeted (Status as of 12/31/2014)



Status	Customer Count	Energy Reduction (kWh)	Demand Reduction (kW)	Reduction Goal (kW)	% of Goal
Sold	1,727	27,701,777	5,511	5,600	98.4%
Installed	1,016	17,593,524	3,536	5,600	63.1%

- Notes:**
1. All kW and kWh are reported in gross.
 2. Program commenced 07/15/2014.
 3. Goal of 5.6 MW installed by 05/31/2015.
 4. Milestone of 5.6 MW sold by 03/31/2015.



Response in the fourth quarter was strongly driven by a focused outreach to small businesses in the community. As of December 31, 2014, 5.511 MW of load reduction projects, involving 1,727 small business customers, have been committed. A total of 3.536 MW of that had been installed as of December 31, 2014, at 1,016 of these customer sites.



Multi-Family Energy Efficiency Program

The Company developed an adder initiative for the existing EEPS MFEE program that offers multi-family dwellings of 4-75 units a survey identifying potential load-reduction measures.

This program includes both measures installed within the dwelling units and measures installed within the common areas. Under the EEPS program, 100 percent of the cost of measures installed within the dwelling units is covered, but the program requires a landlord or building manager contribution for a percentage of the cost of measures installed in the common areas.

Under the BQDM MFEE Adder initiative, eligible buildings within the BQDM networks will have no out-of-pocket costs for measures installed in the buildings for both the customer in a dwelling unit, and for the landlord or building manager. The MFEE Adder initiative is delivered through a central implementation contractor that in-turn is utilizing four subcontractors within the BQDM area.

The MFEE Adder Initiative was kicked off on December 10, 2014. Results through December 31, 2014 include only the in-dwelling measures from the first few buildings, representing approximately 1.6 kW of load reduction. The program delivers approximately 75 percent of its load reduction contribution through the common area measures. As such, it is expected that the program's performance will ramp up quickly as the common area surveys are completed and customers agree to work scopes. The Company projects that this initiative will deliver around 1 MW by February 28, 2015.



Customer-side Solutions Pipeline Activities

Residential Energy Efficiency Program(s)

The Company has reviewed the existing residential energy efficiency programs offered by both NYSERDA and the Company. These programs tended to focus on measures which deliver kWh and heating fuel savings and are designed in a manner which does not correspond well with the specific objective of the BQDM program. At the time of the review in the fourth quarter of 2014, the opportunities were limited to what could be done via the TDSM program rules. With the greater flexibility enabled via the BQDM program the Company will seek new opportunities in this important space.

NYSERDA CHP Program

The Company worked closely with NYSERDA's combined heat and power ("CHP") program administrators as well as the natural gas provider in the area, National Grid ("NG") and its CHP team, to investigate the potential for CHP development. The Company conducted an initial review of typical CHP system costs and benefits, based upon preliminary and incomplete data of very site specific projects, and found positive potential for CHP projects. Not wishing to delay engagement while economic evaluation continued (as explained in more detail below), the Company began work to identify viable potential candidates for new CHP system installations. This has included working with NG to identify where high pressure natural gas is available or could be readily supplied. Forty customers in the Brooklyn-Queens area were identified based on their electric load and the likelihood of a sufficient thermal load to potentially justify CHP installations at their sites. These customers were sent letters jointly



branded by the Company, NYSERDA and NG that identified benefits and potential available incentives for a CHP installation. While there were no proactive responses from the customers to this initial approach the Company continues to pursue engagement with these customers.

Initial analysis of CHP systems in operation today, which are operated to follow the thermal load of the facility, has identified that a number shut down completely or reduce output in the summer. The Company is attempting to identify systems within the Brooklyn-Queens area that operate in this manner to explore the potential for the CHP systems to change their summer operations to provide peak load relief. The Company recognizes that gaining more output from existing systems is potentially a quicker outcome than installing new systems. Significant variation in the design and the application of the CHP system and the customer's operation and ability to respond is to be expected, so any initiative will potentially need to be tailored to each location individually. As each opportunity is identified and evaluated, it is expected that a "retro-commissioning" for such CHP systems may be considered. Such an initiative may also serve to inform analysis of alternative solutions such as fuel cells.

Virtual Building Audits

The Company initiated a project utilizing virtual building audits to prioritize and engage high potential commercial, institutional, and multi-family buildings with peak demand of 100 kW and above. The virtual building audits, provided by a contractor for the Company, are evaluations of buildings' energy profiles and their potential for energy savings using a combination of publicly available data and building specific consumption data. The audits identify specific



areas of opportunity (for example lighting, air conditioning, refrigeration). Using the audits allows the Company to engage and directly inform customers of beneficial energy efficiency and demand reduction opportunities. This analysis also helps to target resources to higher potential properties while avoiding the need to conduct time-consuming physical surveys of all of the properties in targeted areas.

The first phase of the project included the very complex task of compilation and quality validation of the various data inputs, creating the reports and dispatching the reports to customers. Customers were encouraged to proactively contact the Company or current contractors to pursue action in regard to the saving areas identified. Additionally, the Company's account representatives were trained to assist customers with acting upon the audit reports.

Approximately 300 audits have been mailed through the fourth quarter of 2014 to engage customers to adopt potentially highly beneficial energy measures. As an additional step of the virtual audit initiative the Company established a portal access point and provided training for NYPA staff to access audit reports for NYPA customers. The Company, in agreement with NYPA, also dispatched copies of the reports to key NYPA customers within the BQDM Program target area.



New York City Housing Authority

The Company identified that publicly administered housing buildings within the BQDM Program target area account for over 46 MW of demand, including over 60 complexes and over 29,000 housing units. The Company is working with the New York City Housing Authority (“NYCHA”) and a contracted partner to identify opportunities in such facilities. In addition to identifying the energy and demand savings opportunities, the Company is also working to identify existing funding opportunities which may be available but may not as yet be fully leveraged.

During the fourth quarter of 2014, the Company’s contractor met with facilities personnel at 37 NYCHA developments in the target area. An initial report of potential opportunities, detailing load reduction possibilities, as well as alternative funding sources, is expected during the first quarter of 2015.

Direct Customer Activity

The Company initiated exploration of opportunities with a large customer in Queens for load relief and other benefits. Preliminary discussions included the potential for installation of a natural gas behind-the-meter generator to both power a community micro-grid and conversation of an existing diesel generator to natural gas for potential use as a demand response resource. The Company also explored other possibilities, such as an on-site solar installation and the use of the location as a potential emergency staging area. This is a complex potential project and conversations with the customer and other stakeholders are on-going.



The Company has had initial conversations with other specific customers and expects such exploratory conversations to continue during the course of the BQDM program.

Request for Information ("RFI")

On July 15, 2014 the Company issued a very broad RFI. The RFI closed on September 15, 2014 and the Company received 78 proposals. It is important to note that this engagement method was an RFI and not an RFP. An RFI, by its nature, allows for broader responses but requires a greater level of scrutiny and validation of the information provided. The proposals presented via the RFI have provided the Company with valuable insight into potential solutions, including indicative pricing, operational needs and reliability, potential environmental impacts and, in a few cases, potential customer partners. As the quality of the RFI responses has ranged significantly, gaining confidence and insight has taken considerable work. Being able to develop a comparative analysis between the solutions presented has been a complex undertaking.⁶

The Company recognizes that the solutions presented in the RFI responses do not represent the complete universe of potential solutions for the BQDM Program. The Company intends to create the opportunity for other solutions to be presented, either via solution providers or customers. The Company will continue to utilize the RFI submissions to inform subsequent purchasing actions for the BQDM program.

⁶The Company's efforts in this regard are being conducted in a manner to provide the broadest benefit to future efforts by the Company in other targeted projects and to contribute to the Commission's REV initiative.



Distributed Energy Resource Evaluation Tool

The Company has built a tool, using both internal and external expertise, to comparably evaluate a diverse range of distributed energy resources (“DER”) while accounting for the duration of their availability (e.g., four-hour battery, eight-plus-hour energy efficiency, two-hour demand response), their risk, their maturity, their flexibility and their ability to meet the needs in the BQDM Area. The Company also developed a portfolio approach to identify a mix of resources that can meet the reliability need over the 12 hours on a design peak day. Using the evaluation tool, the Company is evaluating and rank-ordering proposed DER solutions using a combination of multiple criteria. The solutions that are deemed best based on these criteria will be considered for inclusion in the BQDM portfolio.

Solutions Technology Validation

The Company has validated potential DER solutions for both the quantity of load reduction and the length of the resource’s availability (or duration) based on technical judgment provided by internal and external subject matter experts. These assessments of the validated solutions have been incorporated into the evaluation tool criteria.

Community Engagement and Outreach

The BQDM program target area is home to a number of low and fixed income communities and is undergoing considerable change and, in some areas, revitalization. . The Company has been proactive in engaging with community stakeholders to understand the priorities in the community, including contact with elected officials and community organizations. The Company has also initiated conversations with stakeholders such as local chambers of



commerce, Business Improvement Districts (“BID”), local development corporations, community housing associations, community boards, and tenant associations.

In addition to direct community engagement, the Company developed and deployed a focused marketing campaign that include customized letters, street sweeps, direct mail, multi-lingual brochures, and digital advertising. The Company also used advanced communication strategies such as “geo-fencing,” a targeted digital advertising technique that displays banner advertisements on mobile devices within the targeted area.

3.2 Utility-side Solutions

Distributed Energy Storage System (DESS)

The Company issued a DESS RFP to eighteen vendors. The vendors selected for the RFP distribution include a diverse range of storage developers and solution integrators currently operating in the energy storage marketplace. Con Edison received nine vendor proposals by the RFP submittal due date. Proposal evaluation commenced November 2014, with three shortlisted proposals identified by late December.

During December the shortlisted vendors were invited to present their solutions to the Company during January 2015. Following the vendor presentations, Con Edison completed the technical evaluation of the proposals in January 2015, which will be discussed in the following quarterly report. The Company will also report on the financial evaluation(s) of any proposed vendor(s) and its solution. Following the evaluations, Con Edison intends to commence



contract negotiations. The target date to execute the contract is the end of the first quarter of 2015.

Brownsville DC Link (MPI) Micro-grid

Con Edison is investigating alternative, cost-effective methods of load reduction utilizing the latest in distributed generation technologies. One such solution being considered is the deployment of the Company's existing Mobile Power Interface ("MPI" or "DC Link") along with a Mobile Electric Generator ("MEG"). Together, they can provide additional power to a local area as the need arises. The MPI and MEG trailers can be deployed for Area Network Support regardless of the contingency. For the BQDM project, they will be deployed at a Company location to provide 1.5 MVA of area network load support even when all primary network feeders are in service (i.e., maximum possible available three-phase fault at the substation). In this application it is expected that the MPI-MEG will interconnect to the Richmond Hill network via a dedicated Pad-Mounted 13.8kV / 208V transformer.

In addition to providing area network load support, the DC link system will be examined to test its ability to provide a micro-grid type solution that could support local loads in times of emergency.

System design and cost estimation steps were completed during Q4 2014. The Company will move to appropriation and will issue required project RFPs through Q2 2015. The Company will also engage in community outreach in regard to this project through Q2 2015. The project will



be deployed in two phases; phase one will involve the implementation of the DC Link system and phase two will involve the required system and grid modifications to enable micro-grid isolated operation. Construction is expected to commence during Q3 2015 with the first phase of the system expected to be in service by the end of Q2 2016. The second phase of the project will be implemented during 2016 with an anticipated service date by the end of Q2 2017.

Non-Traditional Utility-side Solutions Pipeline Activities

Con Edison is investigating additional projects that fall under the non-traditional utility-sided solution category. As these projects evolve more details will be provided in future quarterly reports.

Voltage Optimization

This project will attempt to optimize the voltage on the Brownsville 27kV primary system including the 4kV overhead system by investigating enhanced, efficient voltage control on peak days. The Company estimates that approximately 7 MW of demand reduction could be achieved, but the project is still being evaluated. The project team is currently investigating the total cost of implementing this solution. Once the cost is determined, the project will be assessed for viability. This process is targeted for the first quarter 2015 and, assuming the project is assessed as viable, a pilot program is anticipated to begin in summer 2015; if successful the project is anticipated to enable 3 MW of load relief for 2016 and an additional 4 MW of load relief for 2017.



Brownsville Community PV Pilot

The Brownsville Community Photo-Voltaic (“PV”) project is in the pre-RFP early stages. It attempts to investigate utility operated large PV located on commercial premises adjacent to Brownsville No.1 substation. Four buildings have been identified as having the potential for a total combined PV deployment of approximately 2 MW.

The Company anticipates that this project will require a complex business arrangement between multiple customers, a third party operator and the Company. Challenges include engaging and incenting the building owners, determining the ownership and operation of the systems, and developing operating protocols. The Company, while recognizing the many challenges involved, has set an in-service target of Q2 2017.

Utility Sited Fuel Cell

Similar to storage solutions, the Company believes there are many benefits to utilizing fuel cell technology on the Company’s system and, through an RFP process, will attempt to analyze the potential for this technology, ultimately identifying applications having the greatest potential value from the Company’s perspective.

It is anticipated an RFP will be released during 2015 with a targeted project in service date of Q2 2017.