



Agenda Date: 6/30/17
Agenda Item: 9H

STATE OF NEW JERSEY
Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
Post Office Box 350
Trenton, New Jersey 08625-0350
www.nj.gov/bpu/

MISCELLANEOUS

IN THE MATTER OF THE TOWN CENTER DER) ORDER
MICROGRID INCENTIVE PROGRAM AUTHORIZATION)
OF INCENTIVE FUNDING TO THE TOWNSHIP OF)
MIDDLETOWN FOR PHASE I FEASIBILITY STUDY) DOCKET NO. QO17060636

Party of Record:

Anthony Mercantante, Township Administrator, Township Of Middletown

BY THE BOARD:

The 2015 New Jersey Energy Master Plan Update (EMP Update) established a new overarching goal to "Improve Energy Infrastructure Resiliency & Emergency Preparedness and Response" in response to several extreme weather events that left many people and businesses without power for extended periods of time. These new policy recommendations included the following:

1. Increase the use of microgrid technologies and applications for Distributed Energy Resources ("DER") to improve the grid's resiliency and reliability in the event of a major storm; and
2. The State should continue its work with the USDOE, the utilities, local and state governments and other strategic partners to identify, design and implement Town Center DER ("TC DER") microgrids to power critical facilities and services across the State.

At its November 30, 2016 agenda meeting Docket number QO16100967, the Board authorized the release of staff's Microgrid Report ("Report"). The following recommendations in the Report specifically address the development of a TC DER microgrid feasibility study incentive program and pilot:

1. Develop and implement a TC DER microgrid feasibility study incentive program as part of the current New Jersey Clean Energy Program ("NJCEP") budget. This TC DER microgrid feasibility study incentive program should provide funding for the upfront feasibility and engineering evaluation project development costs of

a Town Center TC DER microgrid at the local level. This incentive should be a phased approach beginning with an initial feasibility study, followed by detailed engineering design phase. Staff should implement a stakeholder process to determine the terms and conditions of the TC DER microgrid feasibility study incentive program. This incentive should be provided through an MOU structure.

2. Initiate a TC DER microgrid pilot within each electric distribution company ("EDC") service territory. This should initially be limited to the municipalities within the 9 Federal Emergency Management Agency ("FEMA") designated counties or municipalities that meet the same criteria identified in the New Jersey Institute of Technology ("NJIT") report. These pilots should include, at a minimum, an initial feasibility study of the TC DER microgrid. This process should assist in the development of a TC DER microgrid tariff.

On August 5, Board staff issued a TC DER microgrid feasibility study draft application for public comment. On August 23, 2016, a public meeting was held to discuss the draft application and written comments were received and considered in the final application. Board staff's responses to the comments were published as part of the release of final application.

At its January 25, 2017 agenda meeting Docket number QO16100967 the Board authorized the release of TC DER microgrid feasibility study application. Incentive funding was capped at \$200,000 per feasibility study. The Board directed staff to release the application and to open a 60-day application submission window. Applications submitted during that period would be reviewed by Staff and selected on a competitive basis. Any application submitted after this time period would be accepted on a first-come-first-served basis subject to available fund. The 60 day period ended on March 27, 2017

Prior to March 27, 2017, the Township of Middletown submitted an application to the Board.

The Township of Middletown – Microgrid Feasibility Study (Project) was submitted by the Township of Middletown. The Project core partners include the Township of Middletown, the Middletown School District, Middletown Sewage Authority, Monmouth County, NY Waterway and Earle Waterfront. The Project critical facilities include NWS Earle Waterfront Administrative Area, Township of Middletown Sewage Authority (TOMSA), NY Waterways Ferry Terminal, Middletown Public Works and CNG Fueling Facilities, Middletown Municipal Complex, Public Schools, Bayshore Middle School, Leonardo Elementary School, Bayview Elementary School, Monmouth County Highway Department, Middletown Fire Stations 3, 4 and 7, and Monmouth County Bayshore Outfall Authority. Based on the list of partners and proposed critical facilities there are seven FEMA category IV designated facilities and six FEMA category III facilities that can provide shelter in an emergency.

There are no existing DER facilities in the proposed Project buildings. The Project will evaluate new power capacity which is estimated to be between 30 to 50 MW. The estimated timeframe to complete the feasibility study is 12 months. JCP&L is the electric utility and New Jersey Natural Gas (NJNG) is the natural gas utility for the Township of Middletown and both JCP&L and NJNG provided letters of support (LOS) to participate in the feasibility study.

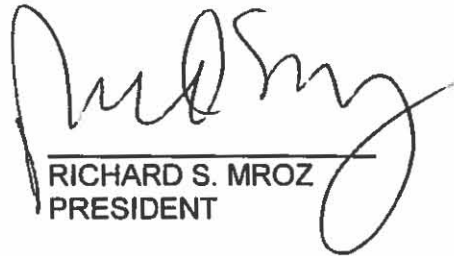
After review of the application Board Staff recommends that the Board approve the above-referenced application.

The Board **HEREBY ORDERS** the approval of the aforementioned application for the total incentive amount of \$150,000 for the Township of Middletown and **AUTHORIZES** the President of the Board to sign and execute the MOU attached hereto which sets forth the terms and conditions of the commitment of these funds.

This effective date of this order is July 10, 2017.

DATED: 6/30/17

BOARD OF PUBLIC UTILITIES
BY:


RICHARD S. MROZ
PRESIDENT

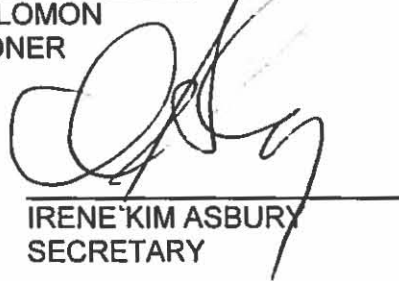

JOSEPH L. FIORDALISO
COMMISSIONER


MARY-ANNA HOLDEN
COMMISSIONER

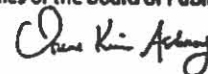

DIANNE SOLOMON
COMMISSIONER


UPENDRA J. CHIVUKULA
COMMISSIONER

ATTEST:


IRENE KIM ASBURY
SECRETARY

I HEREBY CERTIFY that the within document is a true copy of the original in the files of the Board of Public Utilities



IN THE MATTER OF THE TOWN CENTER DER MICROGRID INCENTIVE PROGRAM
AUTHORIZATION OF INCENTIVE FUNDING TO THE TOWNSHIP OF MIDDLETOWN FOR
PHASE I FEASIBILITY STUDY

SERVICE LIST

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Township of Middletown – Microgrid Feasibility Study Grant Application

1. Project Name: Township of Middletown Microgrid Feasibility Study

2. Project Description

The proposed Feasibility Study brings highly experienced and qualified architects and designers together adhering to the Leidos Engineering Smart Cities planning methodology. This approach has been used successfully in developing advanced microgrid solutions for both military and commercial applications. Rather than producing a single technology-specific design solution for the Middletown program, there will be alternative design approaches developed that include a mix of technologies and business models, whose attributes, costs, and implementation impacts will be directly contrasted in the study. This will yield the most valuable result for the NJ BPU staff and other agencies to develop comprehensive, data-driven regulatory reform.

a. Approximate Size of the Project in Energy (Electrical and Thermal):

Attached please find utility account summaries relating to the last 12 months for all referenced facilities within the project area. This information will be analyzed in depth as a part of Task 1.0 of the proposed project. The Township will work with all project partners and utility providers to determine the type and amount of generation that would be optimal to meet the resiliency and renewable energy requirements of customers served within the microgrid, as well as the utility requirements to optimize distribution grid efficiency. Based upon critical infrastructure located within the proposed microgrid service area, the Township believes that total generation will be around 30-50 MW. The exact sizing will be guided by the following considerations:

1. Include top priority mission critical Earle process load
2. Include top priority mission critical Middletown process load
3. Subtract current emergency generation capacity for critical facilities
4. Subtract current demand response capacity

b. Approximate Electric and Thermal Load of Each Building:

Attached please find Utility Account Summaries relating to the last 12 months for all referenced facilities within the project area. The requested information will be analyzed in depth as a part of Task 1.0 of the proposed project.

c. Estimated Square Footage of Each Building and the Total Project:

Attached please find Utility Account Summaries relating to the last 12 months for all referenced facilities within the project area. The requested information will be analyzed in depth as a part of Task 1.0 of the proposed project.

Township of Middletown – Microgrid Feasibility Study Grant Application

d. Overall Boundaries of the Proposed Project and Distance Between Critical Facilities:

The proposed project encompasses an area that is home to 19 public facilities, including 16 which are considered critical as per FEMA Categorical Classification Standards. The diameter of the project area is roughly 3.5 miles spanning from the NY Waterways Ferry Terminal to the Middletown Public Works and Fast Fill Natural Gas Station. The average distance between all 18 individual facilities is .49 miles, with 11 of them within .50 miles ranging from .05 to .45 miles. Enclosed please find a map of the project area which shows the location of all critical facilities.

e. FEMA Category Classification of Each Building:

1. NWS Earle Waterfront Administrative Area – Category IV
2. Township of Middletown Sewage Authority (TOMSA) – Category III
3. NY Waterways Ferry Terminal – Category III
4. Middletown Public Works and CNG Fueling Facilities– Category IV
5. Middletown Municipal Complex – Category IV
6. Public Schools (Bayshore Middle School, Leonardo Elementary School, Bayview Elementary School) – Category III
7. Monmouth County Highway Department – Category IV
8. Middletown Fire Stations 3, 4 and 7 – Category IV
9. Monmouth County Bayshore Outfall Authority – Category IV
10. State Route 35, 36 and Leonardville Road Traffic Signals – Category IV

3. Screening Criteria

a. Criticality Based on the FEMA Category Classification of Facilities:

NWS Earle Waterfront and Administrative Area - Category IV

The mission of the weapons station is to store and transport large quantities of ordnance for the Atlantic Fleet. Security of those shipments requires perimeter security as well as entry control. The Station is the main ordnance shipment point for the Navy and Marine Corps in this half of the world.

Township of Middletown Sewage Authority (TOMSA) - Category III

TOMSA provides wastewater treatment services for Middletown, Atlantic Highlands, and The Highlands. Failure would make most of these areas unlivable while posing a public health risk from the release of raw sewage.

NY Waterways Ferry Terminal - Category III

Township of Middletown – Microgrid Feasibility Study Grant Application

Provides a means of rapidly transporting people in and out of the flood zone (the ships hold up to 500 people each). This is a Monmouth County Owned facility which resides on the same site as the former Monmouth County Landfill. Future uses are under currently being considered in close proximity to the ferry terminal.

Middletown Public Works Facility and CNG Fueling Station - Category IV

Provides disaster recovery services with its own fuel supply with direct access to the restricted access Federal highway, Normandy Road. The Emergency Management Office is collocated at this facility.

Middletown Municipal Complex (Town Hall and PD) - Category IV

Township of Middletown police headquarters and municipal administration

Bayshore Middle School - Category III

Public School responsible for educating 643 students grades 6-8. Potential evacuation and triage center.

Leonardo Elementary School - Category III

Public School responsible for educating 233 students grades K-5. Potential evacuation and triage center.

Bayview Elementary School - Category III

Public School responsible for educating 404 students grades K-5. Potential evacuation and triage center.

Middletown North High School – Category III

Public School responsible for educating 1,488 students grades 9-12. Potential evacuation and triage center.

Monmouth County Highway Department, District #1 - Category IV

Provides snow plowing and emergency highway repair

Middletown Fire Department Stations 3, 4, and 7 - Category IV

Provides primary-response fire suppression services for the project area.

Township of Middletown – Microgrid Feasibility Study Grant Application

Monmouth County Bayshore Outfall Authority – Category IV

Facility that pumps treated effluent to the Atlantic Ocean that is collected from two regional sewerage authorities, BRSA and TOMSA, which serve the majority of communities along the Bayshore.

Traffic lights along Routes 36, 35, and Leonardville Road - Category IV

As ancillary structures allowing the safe and rapid evacuation of people during a major flood event as well as allowing emergency and relief vehicles to operate

b. Total Electric and Thermal Loads Based on Btu's Per Square Foot:

Attached please find Utility Account Summaries relating to the last 12 months for all referenced facilities within the project area. The requested information will be analyzed in depth as a part of Task 1.0 of the proposed project.

c. A Town Center should have at least two (2) Category III or IV facilities within 0.5 Miles and a Facility with an Energy Usage of Approximately 90 M BTUs Per Square Foot:

The following Category III and IV Facilities fall within .5 miles from each other within the project area:

1. Middletown Town Hall (IV) and Middletown North High School (III):
.38 miles
2. Bayview Elementary School (III) and Garrett Hill Water Tower (IV):
.43 miles
3. Garrett Hill Water Tower (IV) and NWS Earle Generator Site 1 (IV):
.25 miles
4. NWS Earle Generator Site 1 (IV) and NWS Earle Generator Site 2 (IV):
.35 miles
5. NWS Earle Generator Site 2 (IV) and Middletown Fire Station 4 (IV):
.23 miles
6. Middletown Fire Station 4 (IV) and Bayshore Middle School (III):
.42 miles
7. Middletown Fire Station 4 (IV) and Leonardo Elementary School (III):
.45 miles
8. Bayshore Middle School (III) and Leonardo Elementary School (III):

Township of Middletown – Microgrid Feasibility Study Grant Application

.05 miles

9. Middletown Fire Station 7 (IV) and Middletown Fire Stations 4, 3 (IV):

.18 miles

10. Middletown Sewage Treatment Plant (III) and NY Waterways Terminal (III):

.37 miles

11. NY Waterways Terminal (III) and NWS Earle Pier Complex (IV):

.50 miles

d. Potential Partners to be Included in the Town Center DER Microgrid MOU:

1. Jersey City Power and Light
2. New Jersey Natural Gas
3. US Navy - Naval Weapons Station Earle
4. Township of Middletown Sewerage Authority
5. NY Waterways Ferry Terminal
6. Township of Middletown
7. Middletown Board of Education
8. County of Monmouth
9. State of New Jersey Department of Transportation

e. General Description of the Technology to be Developed:

Five major components exist in a utility-connected microgrid: generation, controls (both for local stability control and economic dispatch of generation), monitoring and switches for islanding.

We endeavor to use the maximum amount of COTS products to minimize microgrid integration risk. Generation, automated switching and monitoring are completely mature components and are essentially commodities. Generation can include solar, natural gas modular reciprocating CHPs, waste to energy and energy storage. Switching includes standard utility automated switches, such as VBMs, reclosers and automatic padmount switchgear. Monitoring includes standard meters, SCADA and potential wireless applications.

Microgrid controls break into two realms: control for local electrical grid stability when islanded from JCP&L and controls for economic dispatch when paralleled and connected to JCP&L. Again, these controls are COTS. That said, the development of the control realm is how to efficiently, safely and reliably connect and interface with the JCP&L SCADA and local utility control schema. The team will work with JCP&L to ensure the microgrid operates as a benefit to the broader utility supply, with respect to safety, economics, reliability and customer satisfaction.

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f. General Description of the Overall Cost and Potential Financing that may be Available:

Below please find a chart which outlines the various tasks and their estimated costs:

| |
|---|
| Work elements envisioned leading to specific Feasibility Study deliverables and supporting data for recommendations. This table summarizes the work and the specific tasks are described in more detail at the end of Section g. |
| 1.0 Define Critical Loads and Participation Scenarios (\$10,000.00) |
| <ul style="list-style-type: none"> · Compile all critical-facility-specific energy consumption information · Define/prioritize facility operational characteristics |
| 2.0 Technology Evaluation (\$25,000.00) |
| <ul style="list-style-type: none"> · Research all candidate technology components. · Characterize suitability of each component for microgrid participation · Summarize cost/benefit attributes · Provide reference technology adoption cases and specific technology evolution trends. |
| 3.0 Codes and Standards Research (\$25,000.00) |
| <ul style="list-style-type: none"> · Summarize all relevant utility and municipal grid interconnection codes and standards. · Identify areas (States, Federal) where revision and reform are happening to address current microgrid technology advances. |
| 4.0 Stakeholder Input Collection (\$25,000.00) |
| <ul style="list-style-type: none"> · Develop collateral material for community outreach and education. · Organize and conduct (2-3) stakeholder engagement forums · Analyze and compile community needs assessment into design requirements. |
| 5.0 Microgrid Design and Financial Analysis (\$50,000.00) |
| <ul style="list-style-type: none"> · Establish primary mission requirements for microgrid · Describe (2-3) alternative system integration approaches · Evaluate (2-3) alternative business models for implementation |

Township of Middletown – Microgrid Feasibility Study Grant Application

| |
|--|
| · Identify key technical and regulatory barriers to implementation |
| 6.0 Report Preparation and Presentation (\$15,000.00) |
| · Organize, compile, and document all research and evaluation results |
| · Summarize recommendations and potential paths for proceeding with future work. |
| · Present findings to BPU in interim and final meeting. |

g. General Description of the Benefits and Need of the Proposed Project:

The proposed project will provide the following benefits to the project area:

1. The project will result in the development of a feasibility study in an area of Middletown Township which is home to countless critical facilities. The study will help to identify whether or not a microgrid is possible for a project area which includes tens of thousands of residents as well as private, municipal, county, state and federal resources.
2. The project will engage public and private partners, and develop new working relationships in the interest of reaching the following goals:
 - A. Improve Local Energy Delivery for the Project Area's population
 - B. Provide for Local and Regional Reliability During Emergency Response Scenarios
 - C. Save Money in the Long-Term Due to Increased Efficiency
 - D. Support Economic Growth in the Project Area
 - E. Generate Revenue by Supporting a Wider Grid Over Time
3. The project will present a plan that will help to protect the following public services during emergencies situations:
 - A. Water Distribution
 - B. Flood Control Infrastructure
 - C. Transportation Evacuation Routes
 - D. Local and Regional Emergency Response (Police, Fire, OEM)
 - E. Marine Transportation
 - F. Federal Defense Infrastructure

- G. Public Shelters
- H. Emergency Communications
- I. Public Sewer System

DETAILED DESCRIPTION OF EACH PROPOSED PROJECT TASK

1.0 – DEFINE CRITICAL LOADS AND PARTICIPATION SCENARIOS

This process will involve the acquisition of all critical-facility-specific energy consumption information, as well as the prioritization of facility operational characteristics. Several scenarios will be developed to describe the anticipated participation level of the load center in terms of critical load management and adjacent load coordination. Key activities will include:

1. Defining the size of the project in terms of electrical and thermal energy.
2. Defining the electric and thermal load of each critical facility.
3. Defining the square footage of the overall project.

2.0 – TECHNOLOGY EVALUATION

The technology evaluation process consists of a comprehensive review of components suitable for incorporation into the microgrid design. Based on the load and functionality requirements defined in Task 1.0, suitable technology components will be researched and evaluated based on a set of technical and economic criteria. This component-level review will then be incorporated into a system-level review to evaluate the system level impacts of component technology choices.

Key activities include:

1. Determine general microgrid system level architecture based upon the load and functionality requirements defined in Task 1.0
2. Research applicable technology components including different distributed energy resource (DER) technology types that can be incorporated into the system architecture.
3. Determine the economic attributes of these components to support business model development in Task 5.0
4. Evaluate the impacts to system level architecture of these components in a system level analysis

This initial evaluation will then be reviewed by the group of stakeholders for review and feedback. Gaps identified during the evaluation will be discussed and remediation options if available will be developed. This feedback will then be incorporated into a final evaluation deliverable that will inform the design efforts in Task 5.0.

3.0 CODES & STANDARDS EVALUATION PROGRAM (CSEP)

Fully understanding the environment that governs the specification, configuration, interconnection, and operation of Microgrid-embedded DER is critical to developing the most effective (aka most Feasible) program for the Bayshore regional microgrid solution.

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The Codes and Standards Evaluation Plan (CSEP) will include thorough research on all pertinent requirements that govern the design, build, and operation of the Microgrid and its underlying Distributed Energy Resources, including; Municipal Land Use ordinance, Building and Construction Codes, State Permit processes (site, environmental), National Electric Code, Industry standards and certifications, and Utility Interconnection agreements. The CSEP will produce a tabular file of all identified codes along with interpretations and impact assessment. The content and format of the table along with early findings will be presented in the Mid-Term report, and any feedback and adjustment for content and format will be incorporated along with the fully compiled findings for the Final Report.

Research efforts will focus on existing and pending legislation and code review, inspection process review, similar NJ reference project “as-built” installation document review, photographic information, and relevant news and research articles.

The goals of the CSEP research program are:

1. Present the context and sequence of all related approval/compliance processes that permits construction and operation of the Town Center Microgrid.
2. Create an easily referenced “inventory” of applicable codes and standards with hyper-link navigation to relevant underlying source material.

This information will be used to identify potential barriers to Microgrid adoption, and provide recommendations for NJ state agency staff consideration in developing possible mitigation approaches.

4.0 STAKEHOLDERS & COMMUNITY INVOLVEMENT PLAN (SCIP)

Engaging the Stakeholders and the Community as part of our project will enable problems and solutions to be assessed and developed with their input. Coordination early-on will provide an opportunity to obtain input on the project needs.

The Stakeholders & Community Involvement Plan (SCIP) will include strategies for communicating the project information and soliciting project feedback. The SCIP will maintain a database of known stakeholders and will outline anticipated meeting with local officials, stakeholders and the general public.

Outreach efforts, including meeting summaries, presentation materials, written and oral comments, recommendations, correspondence, and resolutions of support will be documented for the duration of the project.

The goals of the SCIP outreach program are:

1. Provide clear, concise information on how the Stakeholders/Community will be involved in the project process and where they can learn about its progress.
2. Collect and document concerns and interest from project inception throughout the project development and completion provide an effective mechanism for input and feedback
3. Obtain resolutions of support from Middletown and Naval Weapons Station Earle

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Stakeholders will be identified and will consist of utilities, off takers, special interest groups, residents and organizations that would have interest or use the microgrid:

- JCP&L
- NJNG
- NWS Earle
- TOMSA
- NY Waterways Ferry Terminal
- Middletown Public Works Facility and CNG Fueling Station
- Middletown Municipal Complex
- Bayshore Elementary School
- Bayview Elementary School
- Monmouth County Highway Department, District #1, 218 East Road, Belford, NJ
- Middletown Fire Department Stations 3, 4 and 7
- Route 36, 35 and Leonardville Road Infrastructure
- Middletown North High School and potentially Port Monmouth Pumping Station (to be build)
- Environmental and neighborhood associations
- Regulatory agencies

This information will be used to develop a mailing/contact list to keep stakeholders apprised of our project happenings and will be updated/changed as needed. Appropriate existing social media outlets will be utilized where practical.

Stakeholders and Community Involvement Plan meetings will be communicated through e-mail, newspapers and direct mailings that will include dates, times and locations. Agendas, sign-in sheets, project information handout, comment forms, meeting summary minutes and presentation materials will be prepared as appropriate for each meeting. A survey can be created in order to gain foundational knowledge of interested parties. Stakeholder meetings will be used to present the project and determine interests and concerns.

5.0 – MICROGRID DESIGN APPROACH AND FINANCIAL ANALYSIS

The microgrid design approach and financial analysis task will leverage the requirements and technology evaluation developed in previous Tasks to determine up to three (3) microgrid design approaches that achieve differing degrees of the following capabilities:

1. Grid Reliability
2. Load Site Resiliency
3. Flexible Energy Economics

Business models will then be developed from these design approaches to provide both a technical and economic view of potential microgrid implementations for the service territory.

Key activities include:

Township of Middletown – Microgrid Feasibility Study Grant Application

- Translating business and operational requirements, as well as business and operational opportunities into up to three (3) microgrid design approaches with requirements detailing the aspects of grid and customer integration.
- Create system architecture documentation providing an overview of the hardware, software, networking, engineering, procurement, and other requirements of the system, along with information aligning the business drivers to their respective system components.
- Using the HOMER software platform, develop business models around the microgrid design approaches.
- Develop a concept-of-operations for various stakeholders, outlining how business drivers and the system architecture will be mapped against operational procedures, including evolutions tied to resource adjustments, and other key changes to operational procedures to ensure that grid operational plans align to achieve the strategy goals, timelines, risk profiles, and economic model.
- Document any major gaps, variances, or other potential issues related to anticipated plan deliverables versus business/technical requirements.

These activities will be incorporated into a set of up to three microgrid feasibility reports that will be the deliverable for this Task. Early findings and modeling results will be presented at the Interim Report per Task 6.0 with the opportunity for BPU to evaluate key design parameters and provide feedback to help shape the refinement of the study.

6.0 – REPORT PREPARATION AND PRESENTATION

This task will involve the organization, compilation, and documentation of all research, as well as the evaluation of the project results in coordination with the project partners. Key activities will include:

1. Providing recommendations and potential paths for proceeding with future work.
2. Presenting findings to the project partners and Board of Public Utilities during regular meetings and through the submission of interim and final project reports.

h. Timeframe for the Completion of the Feasibility Study:

The proposed project will be complete within 12 months of award.

i. Specific Microgrid Modeling to be Used in the Overall Feasibility Study:

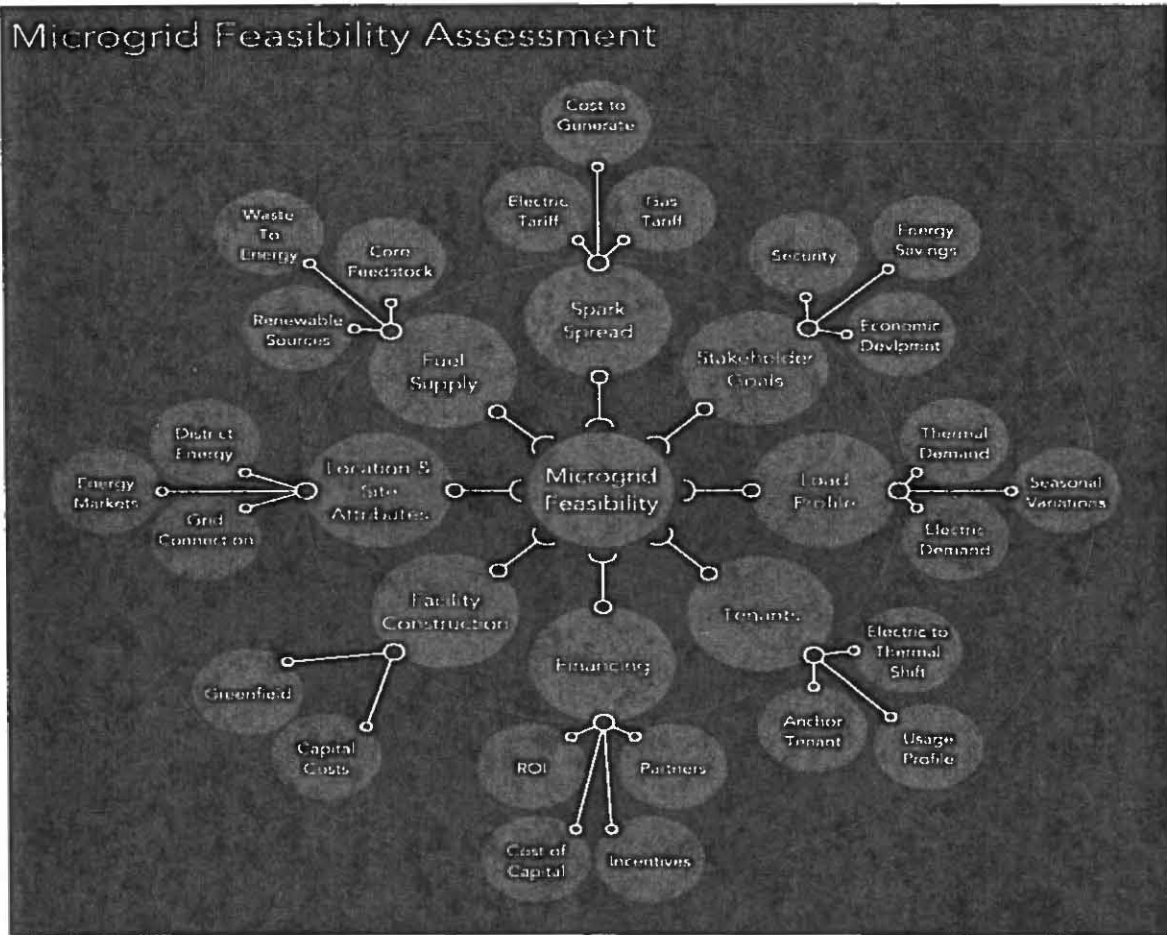
Modeling methodology:

1. Identify zones of islanding based upon critical load identification from stakeholder analysis and switching /islanding points based on utility feeder diagrams.
2. Determine required generation requirements per zone
3. Determine modular, distributed generation options for each zone's load needs

Township of Middletown – Microgrid Feasibility Study Grant Application

4. Ingest utility system impedance model into microgrid control schema to ensure the microgrid does not negatively impact system protection schemas, reliability restoration and other operational concerns
5. Determine economic generation dispatch parameters

The modeling will be in conjunction with JCP&L inputs and considerations. This is an initial, high-level model to determine gross microgrid viability. Assuming the output provides positive results, a second, more detailed feasibility study should be complete which addresses the points show in the attached diagram:



- j. Requested Funding Amount:** \$150,000.00
- k. Cost Share:** \$0.00
- l. Electric Distribution Company Letter of Support:** See attached.

March 24, 2017

Tony Mercantante
Borough Administrator
1 Kings Highway
Middletown, New Jersey 07748

Re: Township of Middletown Microgrid Feasibility Study

Dear Mr. Mercantante:

On January 25, 2017 the New Jersey Board of Public Utilities (“BPU” or the “Board”) approved the Town Center Distributed Energy Resource (“TC DER”) Microgrid Feasibility Study Incentive Program (“Program”). The BPU has recognized that significant information and data to evaluate and optimize the feasibility of a microgrid is needed from the utilities and has required as part of the application process¹ for the Program, that the applicants obtain a letter of support specifically for the feasibility study from the electric distribution company (“EDC”) and gas distribution company (“GDC”), in which service territory the proposed microgrid project will be located.

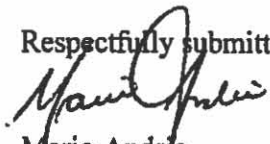
In satisfaction of this requirement, please accept this letter from Jersey Central Power & Light Company (“JCP&L”), a FirstEnergy Company, in regards to the Township of Middletown’s (“Applicant”) TC DER Microgrid Feasibility Study Application (“Application”). JCP&L agrees to provide all reasonable and relevant information regarding JCP&L’s distribution and transmission infrastructure, which exists and is available, to the Applicant that is necessary for the Applicant to complete a microgrid feasibility study, which information shall be returned to the

¹ There is a two-phase application process for the Program. The first phase is the feasibility study. The second phase is detailed engineering of the proposed microgrid project. The BPU must approve the applicant’s feasibility study in order for the applicant to move on to the second phase of the application process.

Company at any point in the process that the Application is withdrawn, rejected by the BPU or delayed for a period of greater than six (6) months. JCP&L will provide the above-described information pursuant to the Applicant executing all Company required forms and agreements, including, but not limited to, confidentiality and/or non-disclosure agreements.² Although JCP&L agrees to provide the above-mentioned information to the Applicant and, to the extent special studies are required, the Company maintains its right to bill the Applicant for these special studies, according to its tariff and/or customary practice. In addition and to the extent that interconnection applications are required for either the distribution utility, PJM Interconnection, LLC or both, the Applicant is responsible for all applications and associated fees. Nothing, herein, shall be interpreted as circumventing or accelerating well-established practices for processing interconnection applications. Furthermore, JCP&L has not verified the statements and data within the Applicant's Application and retains its right to review and comment, and take positions, on the Applicant's feasibility study throughout the Board's process including, but not limited to, any final report that may be issued by the Board as well as the remaining phases of the Program.

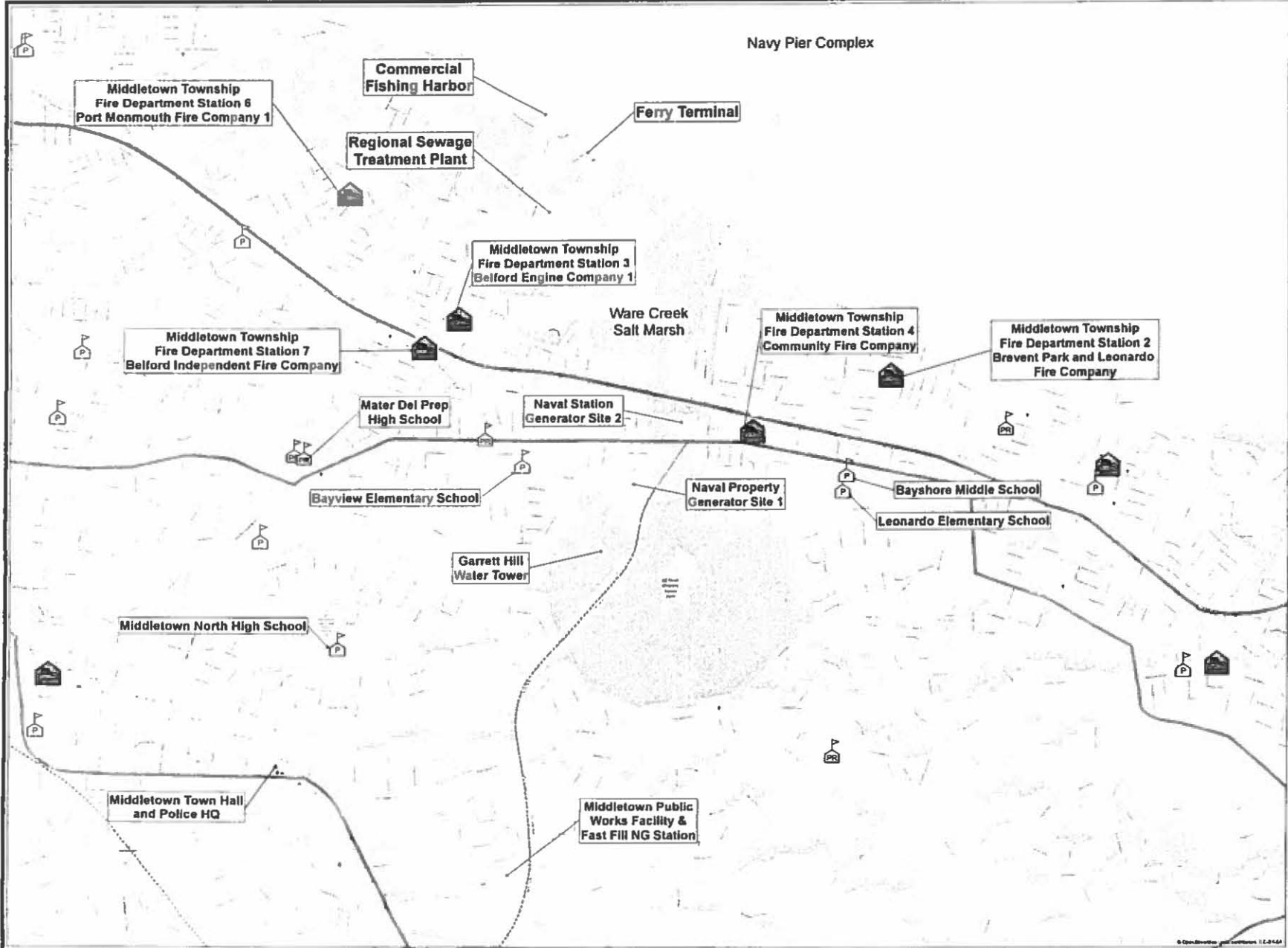
JCP&L looks forward to working with the Applicant and the Board throughout this application process.

Respectfully submitted,



Mario Andrie
Manager, Engineering Services
300 Madison Ave.
Morristown, NJ 07962-1911

² In accordance with N.J.A.C. §14:4-7.8, the Company will also require signed customer consent forms before any customer specific information will be released to the Applicants.



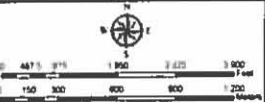
Navy Pier Complex

NWS Earle Microgrid

Access to GIS Data requires Internet Explorer 7.0 or higher, Microsoft Office Word 2003 or later, and Microsoft Office Excel 2003 or later. Data may change without notification.

Legend

- Public Schools
- Private Schools
- Fire Stations
- Hurricane Evacuation Routes
- Microgrid Distribution



Coord. System: WGS 1984 UTM Zone 18N
Projection: Transverse Mercator
Datum: WGS 1984

Print Date: 11/30/2011

NAVFAC
GeoReadiness Center

AM-GIS Mid-Atlantic
Norfolk, VA 23511
(757) 341-0270

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**MIDDLETOWN TWP BD OF ED
Billed Account Summary**

| | | | |
|-------------------------|---|---------------------------|--|
| Account Nbr | 100050178944 | Meter Read Unit | J755118 |
| Customer Nbr | 08011996140006289130 | Meter Constant | N/A |
| Customer Acct Id | | Voltage Level | Secondary, voltage unknown |
| Move in/out Date | 06/12/2002 - Active Account | Capacity Peak Load | 0.0000 Trans Peak Load 0.0000 |
| Service Address | BAYSHORE MIDDLE SCHOOL ST/LGTS LEONARDO NJ 07737 | Load Profile | OLM Rate JC_SVW_01D |
| | | Supplier Name | Constellation Energy Serv - 06/20/2015 |
| | | Supplier Dual Bill | No EDI Billing No |
| Meter Nbr(s) | No meter - Street Lights | | |

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | | 1,957 | 273.31 | 13.97 | Mar-16 | | | 1,957 | 255.40 | 13.05 |
| Feb-17 | | | 1,957 | 272.55 | 13.93 | Feb-16 | | | 1,957 | 255.40 | 13.05 |
| Jan-17 | | | 1,957 | 267.05 | 13.65 | Jan-16 | | | 1,957 | 255.40 | 13.05 |
| Dec-16 | | | 1,957 | 260.26 | 13.30 | Dec-15 | | | 1,957 | 255.40 | 13.05 |
| Nov-16 | | | 1,957 | 260.26 | 13.30 | Nov-15 | | | 1,957 | 255.40 | 13.05 |
| Oct-16 | | | 1,957 | 260.39 | 13.31 | Oct-15 | | | 1,957 | 255.27 | 13.04 |
| Sep-16 | | | 1,957 | 258.76 | 13.22 | Sep-15 | | | 1,957 | 254.96 | 13.03 |
| Aug-16 | | | 1,957 | 255.64 | 13.06 | Aug-15 | | | 1,957 | 254.96 | 13.03 |
| Jul-16 | | | 1,957 | 255.40 | 13.05 | Jul-15 | | | 1,957 | 254.96 | 13.03 |
| Jun-16 | | | 1,957 | 255.40 | 13.05 | Jun-15 | | | 1,957 | 265.85 | 13.58 |
| May-16 | | | 1,957 | 255.40 | 13.05 | May-15 | | | 1,957 | 246.26 | 12.58 |
| Apr-16 | | | 1,957 | 255.40 | 13.05 | Apr-15 | | | 1,957 | 249.38 | 12.74 |
| TOTAL | | | 23,484 | 3,129.82 | 13.33 | TOTAL | | | 23,484 | 3,058.64 | 13.02 |



A FirstEnergy Company

MIDDLETOWN TWP BD OF ED Billed Account Summary

Account Nbr 100013914666
 Customer Nbr 08011996140003022493
 Customer Acct Id
 Move in/out Date 02/27/1995 - Active Account
 Service Address BAYVIEW ELEMENTARY SIGN
 300 LEONARDVILLE RD
 BELFORD NJ 07718
 Meter Nbr(s) A86561605

Meter Read Unit J674487
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 0.1028 Trans Peak Load 0.0914
 Load Profile GSCS Rate JC_GS1_01D
 Supplier Name SOUTH JERSEY ENERGY - 05/12/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|-----|-------|-------|--------------------|------|--------|-----|--------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | | 39 | 9.56 | 24.51 | Mar-16 | | | 38 | 8.26 | 21.74 |
| Feb-17 | | | 13 | 5.39 | 41.46 | Feb-16 | | | 36 | 7.97 | 22.14 |
| Jan-17 | | | 14 | 5.07 | 36.21 | Jan-16 | | | 45 | 9.26 | 20.58 |
| Dec-16 | | | 41 | 8.94 | 21.80 | Dec-15 | | | 40 | 8.54 | 21.35 |
| Nov-16 | | | 42 | 9.11 | 21.69 | Nov-15 | | | 42 | 8.84 | 21.05 |
| Oct-16 | | | 40 | 8.81 | 22.03 | Oct-15 | | | 31 | 7.24 | 23.35 |
| Sep-16 | | | 42 | 9.19 | 21.88 | Sep-15 | | | 67 | 12.67 | 18.91 |
| Aug-16 | | | 35 | 8.09 | 23.11 | Aug-15 | | | 66 | 12.53 | 18.98 |
| Jul-16 | | | 40 | 8.85 | 22.13 | Jul-15 | | | 66 | 12.53 | 18.98 |
| Jun-16 | | | 37 | 8.26 | 22.32 | Jun-15 | | | 97 | 17.09 | 17.62 |
| May-16 | | | 42 | 8.85 | 21.07 | May-15 | | | 43 | 8.99 | 20.91 |
| Apr-16 | | | 39 | 8.39 | 21.51 | Apr-15 | | | 65 | 12.68 | 19.51 |
| TOTAL | | | 424 | 98.51 | 23.23 | TOTAL | | | 636 | 126.60 | 19.91 |



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MIDDLETOWN TWP BD OF ED Billed Account Summary

Account Nbr 100013914765
 Customer Nbr 08011996140000396033
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address
 300 LEONARDVILLE RD
 BELFORD NJ 07718
 Meter Nbr(s) G28083435

Meter Read Unit J674487
 Meter Constant 160
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 84.8802 Trans Peak Load 75.1027
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name SOUTH JERSEY ENERGY - 05/12/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------------|----------------|------------------|--------------|--------------------|------|--------------|----------------|------------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 102.4 | 29,920 | 3,850.56 | 12.87 | Mar-16 | | 102.4 | 28,960 | 3,412.31 | 11.78 |
| Feb-17 | | 92.5 | 29,760 | 3,744.92 | 12.58 | Feb-16 | | 93.1 | 28,160 | 3,281.74 | 11.65 |
| Jan-17 | | 95.7 | 30,240 | 3,723.25 | 12.31 | Jan-16 | | 97.9 | 28,800 | 3,371.38 | 11.71 |
| Dec-16 | | 112.5 | 32,000 | 3,970.40 | 12.41 | Dec-15 | | 95.5 | 28,000 | 3,279.51 | 11.71 |
| Nov-16 | | 99.4 | 23,520 | 3,011.83 | 12.81 | Nov-15 | | 99.4 | 24,320 | 2,940.71 | 12.09 |
| Oct-16 | | 153.3 | 33,280 | 4,337.66 | 13.03 | Oct-15 | | 143.4 | 26,560 | 3,402.98 | 12.81 |
| Sep-16 | | 114.6 | 32,800 | 4,054.77 | 12.36 | Sep-15 | | 152.3 | 25,120 | 3,371.17 | 13.42 |
| Aug-16 | | 93.9 | 27,840 | 3,400.28 | 12.21 | Aug-15 | | 157.8 | 21,120 | 2,528.26 | 11.97 |
| Jul-16 | | 139.4 | 31,520 | 4,048.67 | 12.84 | Jul-15 | | 145.9 | 21,280 | 2,957.17 | 13.90 |
| Jun-16 | | 141.8 | 30,400 | 3,839.03 | 12.63 | Jun-15 | | 134.9 | 29,920 | 3,735.93 | 12.49 |
| May-16 | | 100.5 | 28,160 | 3,330.49 | 11.83 | May-15 | | 102.2 | 32,320 | 3,740.61 | 11.57 |
| Apr-16 | | 92.8 | 24,800 | 2,950.74 | 11.90 | Apr-15 | | 95.5 | 24,480 | 2,964.38 | 12.11 |
| TOTAL | | 153.3 | 354,240 | 44,262.60 | 12.50 | TOTAL | | 157.8 | 319,040 | 38,986.15 | 12.22 |



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**MIDDLETOWN TWP BD OF ED
Billed Account Summary**

Account Nbr 100014069510
 Customer Nbr 08011996140000351978
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address LEONARDO ELEMENTARY SCHOOL
 14 HOSFORD AVE
 LEONARDO NJ 07737
 Meter Nbr(s) S310219419

Meter Read Unit J654469
 Meter Constant 80
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 29.7887 Trans Peak Load 26.9379
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name SOUTH JERSEY ENERGY - 05/07/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------------|----------------|------------------|--------------|--------------------|------|-------------|----------------|------------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 64.8 | 16,240 | 2,150.78 | 13.24 | Mar-16 | | 63.8 | 16,480 | 1,972.60 | 11.97 |
| Feb-17 | | 57.1 | 18,080 | 2,280.03 | 12.61 | Feb-16 | | 56.7 | 16,480 | 1,932.77 | 11.73 |
| Jan-17 | | 57.8 | 17,200 | 2,131.04 | 12.39 | Jan-16 | | 63.2 | 15,360 | 1,859.43 | 12.11 |
| Dec-16 | | 60.9 | 16,560 | 2,069.44 | 12.50 | Dec-15 | | 56.6 | 16,080 | 1,892.99 | 11.77 |
| Nov-16 | | 65.9 | 17,200 | 2,164.30 | 12.58 | Nov-15 | | 63.3 | 13,840 | 1,711.04 | 12.36 |
| Oct-16 | | 100.2 | 20,160 | 2,668.92 | 13.24 | Oct-15 | | 94.2 | 17,440 | 2,234.26 | 12.81 |
| Sep-16 | | 78.2 | 11,360 | 1,631.98 | 14.37 | Sep-15 | | 99.4 | 13,200 | 1,887.64 | 14.30 |
| Aug-16 | | 57.8 | 9,040 | 1,267.88 | 14.03 | Aug-15 | | 50.1 | 7,360 | 1,020.25 | 13.86 |
| Jul-16 | | 81.0 | 17,200 | 2,238.70 | 13.02 | Jul-15 | | 87.3 | 15,920 | 2,080.85 | 13.07 |
| Jun-16 | | 86.6 | 16,720 | 2,162.97 | 12.94 | Jun-15 | | 79.5 | 16,800 | 2,120.03 | 12.62 |
| May-16 | | 60.8 | 14,320 | 1,747.73 | 12.20 | May-15 | | 62.2 | 14,560 | 1,775.46 | 12.19 |
| Apr-16 | | 57.0 | 14,240 | 1,714.89 | 12.04 | Apr-15 | | 87.4 | 18,560 | 2,095.25 | 11.29 |
| TOTAL | | 100.2 | 188,320 | 24,228.66 | 12.87 | TOTAL | | 99.4 | 182,080 | 22,582.57 | 12.40 |



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**MIDDLETOWN TWP BD OF ED
Billed Account Summary**

Account Nbr 100035745924
 Customer Nbr 08011996140005118019
 Customer Acct Id
 Move in/out Date 10/03/2000 - Active Account
 Service Address BAYSHORE MIDDLE SCHOOL
 834 LEONARDVILLE RD
 LEONARDO NJ 07737
 Meter Nbr(s) L015753459

Meter Read Unit J654400
 Meter Constant 400
 Voltage Level 480Y/277 Volt 3 phase
 Capacity Peak Load 371.5169 Trans Peak Load 316.7691
 Load Profile GSIS Rate JC_GS3_02D
 Supplier Name SOUTH JERSEY ENERGY - 05/07/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|-----------|------------|-------|--------------------|------|--------|-----------|------------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 442.8 | 166,246 | 20,565.21 | 12.37 | Mar-16 | | 406.8 | 193,858 | 21,315.37 | 11.00 |
| Feb-17 | | 462.2 | 168,320 | 20,758.90 | 12.33 | Feb-16 | | 450.0 | 181,865 | 20,380.34 | 11.21 |
| Jan-17 | | 449.3 | 177,909 | 21,168.34 | 11.90 | Jan-16 | | 424.1 | 170,464 | 19,115.79 | 11.21 |
| Dec-16 | | 430.6 | 143,310 | 17,374.63 | 12.12 | Dec-15 | | 421.2 | 197,746 | 21,777.85 | 11.01 |
| Nov-16 | | 459.4 | 152,322 | 18,476.76 | 12.13 | Nov-15 | | 416.2 | 174,159 | 19,434.22 | 11.16 |
| Oct-16 | | 512.6 | 177,068 | 21,386.77 | 12.08 | Oct-15 | | 514.1 | 224,478 | 24,882.32 | 11.08 |
| Sep-16 | | 388.1 | 147,890 | 17,469.33 | 11.81 | Sep-15 | | 467.3 | 171,060 | 19,565.09 | 11.44 |
| Aug-16 | | 388.1 | 152,410 | 17,862.48 | 11.72 | Aug-15 | | 286.6 | 140,866 | 15,521.36 | 11.02 |
| Jul-16 | | 453.6 | 180,532 | 21,121.36 | 11.70 | Jul-15 | | 500.4 | 201,752 | 23,471.91 | 11.63 |
| Jun-16 | | 421.2 | 117,533 | 13,933.34 | 11.85 | Jun-15 | | 468.0 | 149,730 | 16,830.56 | 11.24 |
| May-16 | | 365.0 | 142,763 | 16,101.42 | 11.28 | May-15 | | 416.0 | 94,400 | 11,588.05 | 12.28 |
| Apr-16 | | 393.8 | 152,104 | 17,143.36 | 11.27 | Apr-15 | | 395.2 | 180,400 | 19,938.89 | 11.05 |
| TOTAL | | 512.6 | 1,878,407 | 223,361.90 | 11.89 | TOTAL | | 514.1 | 2,080,778 | 233,821.75 | 11.24 |



**MIDDLETOWN TWP BD OF ED
Billed Account Summary**

Account Nbr 100053961312, Multiple
 Customer Nbr 08011996140006322397
 Customer Acct Id
 Move in/out Date 01/18/2003 - Active Account
 Service Address HIGH SCHOOL NORTH
 63 TINDALL RD
 MIDDLETOWN NJ 07748
 Meter Nbr(s) S314128953

Meter Read Unit J685100
 Meter Constant 800
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 982.4486 Trans Peak Load 876.7964
 Load Profile GSIS Rate JC_GS3_02D
 Supplier Name SOUTH JERSEY ENERGY - 05/11/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|---------|-----------|------------|-------|--------------------|------|--------|-----------|------------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 914.4 | 355,190 | 43,783.05 | 12.33 | Mar-16 | | 783.4 | 404,666 | 44,123.58 | 10.90 |
| Feb-17 | | 914.4 | 375,676 | 45,680.20 | 12.16 | Feb-16 | | 769.0 | 388,941 | 42,499.06 | 10.93 |
| Jan-17 | | 963.4 | 412,524 | 48,877.52 | 11.85 | Jan-16 | | 714.2 | 343,226 | 37,703.69 | 10.99 |
| Dec-16 | | 884.2 | 327,901 | 39,237.81 | 11.97 | Dec-15 | | 617.8 | 293,787 | 32,309.34 | 11.00 |
| Nov-16 | | 1,006.6 | 351,284 | 42,368.72 | 12.06 | Nov-15 | | 718.6 | 315,396 | 34,996.24 | 11.10 |
| Oct-16 | | 1,130.4 | 379,159 | 46,030.50 | 12.14 | Oct-15 | | 865.4 | 375,791 | 41,698.24 | 11.10 |
| Sep-16 | | 1,067.0 | 415,248 | 49,184.31 | 11.84 | Sep-15 | | 469.4 | 113,062 | 13,896.96 | 12.29 |
| Aug-16 | | 838.1 | 370,351 | 42,839.06 | 11.57 | Aug-15 | | 617.8 | 85,316 | 10,077.46 | 11.81 |
| Jul-16 | | 951.8 | 354,635 | 41,911.04 | 11.82 | Jul-15 | | 610.6 | 211,898 | 24,425.85 | 11.53 |
| Jun-16 | | 927.4 | 341,283 | 39,167.60 | 11.48 | Jun-15 | | 604.8 | 267,433 | 29,830.37 | 11.15 |
| May-16 | | 809.3 | 318,883 | 35,929.26 | 11.27 | May-15 | | 544.3 | 248,388 | 27,440.76 | 11.05 |
| Apr-16 | | 734.4 | 352,480 | 38,725.48 | 10.99 | Apr-15 | | 506.9 | 254,711 | 27,869.71 | 10.94 |
| TOTAL | | 1,130.4 | 4,354,614 | 513,734.55 | 11.80 | TOTAL | | 865.4 | 3,302,615 | 366,871.26 | 11.11 |



A FirstEnergy Company

**MIDDLETOWN TWP BD OF ED
Billed Account Summary**

Account Nbr 100053961312, Multiple
 Customer Nbr 08011996140005007251
 Customer Acct Id
 Move in/out Date 10/13/2005 - Active Account
 Service Address MIDDLETOWN HIGH SCHOOL NORTH
 63 TINDALL RD
 MIDDLETOWN NJ 07748
 Meter Nbr(s) No meter - Outdoor Area Lights (POL'S)

Meter Read Unit J685124
 Meter Constant N/A
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 0.0000 Trans Peak Load 0.0000
 Load Profile OLS Rate JC_OLS_02D
 Supplier Name N/A
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | | 844 | 175.21 | 20.76 | Mar-16 | | | 844 | 158.94 | 18.83 |
| Feb-17 | | | 844 | 176.35 | 20.89 | Feb-16 | | | 844 | 158.52 | 18.78 |
| Jan-17 | | | 844 | 169.89 | 20.13 | Jan-16 | | | 844 | 158.52 | 18.78 |
| Dec-16 | | | 844 | 164.66 | 19.51 | Dec-15 | | | 844 | 158.31 | 18.76 |
| Nov-16 | | | 844 | 163.76 | 19.40 | Nov-15 | | | 844 | 158.18 | 18.74 |
| Oct-16 | | | 844 | 163.89 | 19.42 | Oct-15 | | | 844 | 158.06 | 18.73 |
| Sep-16 | | | 844 | 161.03 | 19.08 | Sep-15 | | | 844 | 159.45 | 18.89 |
| Aug-16 | | | 844 | 160.09 | 18.97 | Aug-15 | | | 844 | 160.16 | 18.98 |
| Jul-16 | | | 844 | 160.07 | 18.97 | Jul-15 | | | 844 | 160.16 | 18.98 |
| Jun-16 | | | 844 | 159.80 | 18.93 | Jun-15 | | | 844 | 158.64 | 18.80 |
| May-16 | | | 844 | 159.70 | 18.92 | May-15 | | | 844 | 157.69 | 18.68 |
| Apr-16 | | | 844 | 159.70 | 18.92 | Apr-15 | | | 844 | 164.15 | 19.45 |
| TOTAL | | | 10,128 | 1,974.15 | 19.49 | TOTAL | | | 10,128 | 1,910.78 | 18.87 |



A FirstEnergy Company

MIDDLETOWN TWP BD OF ED Billed Account Summary

Account Nbr 100013250038
 Customer Nbr 08011996140000564105
 Customer Acct Id
 Move in/out Date 04/03/1986 - Active Account
 Service Address HS NORTH BALLFIELD
 63 TINDALL RD
 MIDDLETOWN NJ 07748
 Meter Nbr(s) S313333911

Meter Read Unit J674483
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 4.5644 Trans Peak Load 4.0795
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name SOUTH JERSEY ENERGY - 05/09/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 32.2 | 630 | 184.04 | 29.21 | Mar-16 | | 26.2 | 813 | 170.96 | 21.03 |
| Feb-17 | | 32.2 | 638 | 184.85 | 28.97 | Feb-16 | | 26.2 | 854 | 176.85 | 20.71 |
| Jan-17 | | 32.2 | 647 | 173.18 | 26.77 | Jan-16 | | 36.8 | 1,094 | 235.94 | 21.57 |
| Dec-16 | | 32.2 | 1,218 | 307.21 | 25.22 | Dec-15 | | 40.4 | 1,144 | 250.65 | 21.91 |
| Nov-16 | | 27.3 | 1,325 | 290.87 | 21.95 | Nov-15 | | 40.4 | 1,661 | 301.33 | 18.14 |
| Oct-16 | | 26.0 | 1,650 | 317.74 | 19.26 | Oct-15 | | 40.4 | 1,973 | 331.59 | 16.81 |
| Sep-16 | | 16.3 | 1,744 | 276.63 | 15.86 | Sep-15 | | 40.4 | 1,907 | 329.04 | 17.25 |
| Aug-16 | | 16.7 | 1,738 | 276.93 | 15.93 | Aug-15 | | 40.4 | 1,968 | 334.99 | 17.02 |
| Jul-16 | | 16.7 | 1,870 | 290.35 | 15.53 | Jul-15 | | 40.4 | 1,870 | 325.40 | 17.40 |
| Jun-16 | | 19.2 | 1,504 | 262.65 | 17.46 | Jun-15 | | 40.4 | 2,029 | 340.94 | 16.80 |
| May-16 | | 18.6 | 1,316 | 233.11 | 17.71 | May-15 | | 40.4 | 5,368 | 664.68 | 12.38 |
| Apr-16 | | 23.7 | 911 | 178.17 | 19.56 | Apr-15 | | 26.2 | 327 | 159.96 | 48.92 |
| TOTAL | | 32.2 | 15,191 | 2,975.73 | 19.59 | TOTAL | | 40.4 | 21,008 | 3,622.33 | 17.24 |



A FirstEnergy Company

MIDDLETOWN TWP BD OF ED Billed Account Summary

Account Nbr 100041911247
 Customer Nbr 08011996140005953107
 Customer Acct Id
 Move in/out Date 06/14/2001 - Active Account
 Service Address MAINTENANCE BLDG
 4 SWARTZEL DR
 MIDDLETOWN NJ 07748
 Meter Nbr(s) S308525622

Meter Read Unit J674483
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 7.7455 Trans Peak Load 7.0411
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name SOUTH JERSEY ENERGY - 05/12/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 13.8 | 4,873 | 607.59 | 12.47 | Mar-16 | | 16.0 | 5,661 | 644.04 | 11.38 |
| Feb-17 | | 14.9 | 4,857 | 609.57 | 12.55 | Feb-16 | | 22.0 | 6,425 | 718.03 | 11.18 |
| Jan-17 | | 14.1 | 6,346 | 746.02 | 11.76 | Jan-16 | | 16.2 | 6,582 | 735.44 | 11.17 |
| Dec-16 | | 13.9 | 4,566 | 553.97 | 12.13 | Dec-15 | | 17.8 | 5,896 | 677.18 | 11.49 |
| Nov-16 | | 17.8 | 3,579 | 450.37 | 12.58 | Nov-15 | | 18.9 | 5,441 | 638.75 | 11.74 |
| Oct-16 | | 18.9 | 2,899 | 382.83 | 13.21 | Oct-15 | | 16.7 | 5,040 | 586.32 | 11.63 |
| Sep-16 | | 18.9 | 3,077 | 400.05 | 13.00 | Sep-15 | | 22.0 | 5,599 | 639.82 | 11.43 |
| Aug-16 | | 18.9 | 2,788 | 367.95 | 13.20 | Aug-15 | | 22.0 | 5,978 | 676.88 | 11.32 |
| Jul-16 | | 18.9 | 2,933 | 382.69 | 13.05 | Jul-15 | | 22.0 | 4,966 | 577.91 | 11.64 |
| Jun-16 | | 18.9 | 3,560 | 433.72 | 12.18 | Jun-15 | | 15.5 | 4,636 | 545.94 | 11.78 |
| May-16 | | 18.9 | 3,796 | 452.87 | 11.93 | May-15 | | 18.5 | 5,451 | 637.51 | 11.70 |
| Apr-16 | | 18.9 | 4,560 | 526.78 | 11.55 | Apr-15 | | 20.1 | 7,074 | 809.62 | 11.45 |
| TOTAL | | 18.9 | 47,834 | 5,914.41 | 12.36 | TOTAL | | 22.0 | 68,749 | 7,887.44 | 11.47 |



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**MIDDLETOWN TWP MUA
Billed Account Summary**

Account Nbr 100010566915 (200000054441)
 Customer Nbr 08008374630000837137
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address
 83 SLEEPY HOLLOW RD
 RED BANK NJ 07701
 Meter Nbr(s) G21300283

Meter Read Unit J664470
 Meter Constant 320
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 53.5257 Trans Peak Load 47.5505
 Load Profile GSIL Rate JC_GS3_02D
 Supplier Name Respond Power, LLC - 06/10/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|---------|-----------|-------|--------------------|------|--------|---------|-----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 52.2 | 24,320 | 2,816.43 | 11.58 | Mar-16 | | 154.2 | 31,040 | 3,469.82 | 11.18 |
| Feb-17 | | 71.7 | 25,920 | 3,087.92 | 11.91 | Feb-16 | | 84.2 | 28,480 | 3,243.48 | 11.39 |
| Jan-17 | | 61.1 | 30,080 | 3,366.75 | 11.19 | Jan-16 | | 154.2 | 28,160 | 3,189.78 | 11.33 |
| Dec-16 | | 64.3 | 24,960 | 2,851.57 | 11.42 | Dec-15 | | 154.2 | 24,000 | 2,785.27 | 11.61 |
| Nov-16 | | 84.2 | 22,080 | 2,462.32 | 11.15 | Nov-15 | | 154.2 | 27,200 | 3,511.72 | 12.91 |
| Oct-16 | | 154.2 | 24,640 | 2,912.60 | 11.82 | Oct-15 | | 144.3 | 20,160 | 2,381.59 | 11.81 |
| Sep-16 | | 154.2 | 21,120 | 2,519.27 | 11.93 | Sep-15 | | 144.3 | 21,120 | 2,477.46 | 11.73 |
| Aug-16 | | 154.2 | 21,440 | 2,540.35 | 11.85 | Aug-15 | | 144.3 | 24,320 | 2,787.90 | 11.46 |
| Jul-16 | | 154.2 | 24,640 | 2,851.53 | 11.57 | Jul-15 | | 144.3 | 22,720 | 2,632.68 | 11.59 |
| Jun-16 | | 154.2 | 26,560 | 3,038.20 | 11.44 | Jun-15 | | 144.3 | 24,320 | 2,990.60 | 12.30 |
| May-16 | | 154.2 | 25,920 | 2,971.96 | 11.47 | May-15 | | 144.3 | 30,400 | 3,619.69 | 11.91 |
| Apr-16 | | 154.2 | 27,840 | 3,158.67 | 11.35 | Apr-15 | | 90.6 | 41,920 | 4,923.83 | 11.75 |
| TOTAL | | 154.2 | 299,520 | 34,577.57 | 11.54 | TOTAL | | 154.2 | 323,840 | 38,013.82 | 11.74 |



MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100011116942 (200000054441)
 Customer Nbr 08008374630000301461
 Customer Acct Id
 Move in/out Date 12/08/1982 - Active Account
 Service Address
 1150 RT 36
 ATLANTIC HIGHLANDS NJ 07716
 Meter Nbr(s) G28657196

Meter Read Unit J654455
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 2.0399 Trans Peak Load 1.9060
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 06/09/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|------------|--------------|-----------------|--------------|--------------------|------|------------|--------------|-----------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 2.5 | 901 | 151.76 | 16.84 | Mar-16 | | 2.4 | 804 | 124.81 | 15.52 |
| Feb-17 | | 3.1 | 881 | 147.85 | 16.78 | Feb-16 | | 2.4 | 878 | 135.38 | 15.42 |
| Jan-17 | | 2.1 | 928 | 146.45 | 15.78 | Jan-16 | | 3.7 | 805 | 124.95 | 15.52 |
| Dec-16 | | 2.7 | 910 | 142.21 | 15.63 | Dec-15 | | 2.0 | 810 | 125.67 | 15.51 |
| Nov-16 | | 3.3 | 664 | 106.49 | 16.04 | Nov-15 | | 2.8 | 678 | 106.84 | 15.76 |
| Oct-16 | | 6.7 | 1,139 | 169.32 | 14.87 | Oct-15 | | 2.2 | 715 | 112.00 | 15.66 |
| Sep-16 | | 9.2 | 810 | 129.30 | 15.96 | Sep-15 | | 1.7 | 550 | 90.67 | 16.49 |
| Aug-16 | | 3.1 | 582 | 95.47 | 16.40 | Aug-15 | | 1.7 | 552 | 90.96 | 16.48 |
| Jul-16 | | 3.1 | 757 | 121.15 | 16.00 | Jul-15 | | 2.2 | 540 | 89.20 | 16.52 |
| Jun-16 | | 1.9 | 628 | 102.22 | 16.28 | Jun-15 | | 2.2 | 686 | 115.82 | 16.88 |
| May-16 | | 2.0 | 617 | 98.13 | 15.90 | May-15 | | 2.1 | 761 | 124.66 | 16.38 |
| Apr-16 | | 2.0 | 710 | 111.41 | 15.69 | Apr-15 | | 3.2 | 1,042 | 170.39 | 16.35 |
| TOTAL | | 9.2 | 9,527 | 1,521.76 | 15.97 | TOTAL | | 3.7 | 8,821 | 1,411.35 | 16.00 |



MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100011157789 (200000054441)
 Customer Nbr 08008374630000158727
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address
 LAKESIDE AVE
 NAVESINK NJ 07752
 Meter Nbr(s) S310475767

Meter Read Unit J654471
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 6.2700 Trans Peak Load 5.4325
 Load Profile GSCS Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 06/05/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 21.9 | 4,335 | 543.98 | 12.55 | Mar-16 | | 16.2 | 5,159 | 591.99 | 11.47 |
| Feb-17 | | 21.9 | 3,576 | 463.98 | 12.97 | Feb-16 | | 16.2 | 5,238 | 599.67 | 11.45 |
| Jan-17 | | 21.9 | 3,194 | 410.12 | 12.84 | Jan-16 | | 10.1 | 3,558 | 402.09 | 11.30 |
| Dec-16 | | 21.9 | 2,321 | 319.49 | 13.77 | Dec-15 | | 8.0 | 2,720 | 320.05 | 11.77 |
| Nov-16 | | 21.9 | 1,605 | 248.08 | 15.46 | Nov-15 | | 6.4 | 2,233 | 272.68 | 12.21 |
| Oct-16 | | 21.9 | 2,353 | 323.06 | 13.73 | Oct-15 | | 6.4 | 2,236 | 272.57 | 12.19 |
| Sep-16 | | 21.9 | 2,182 | 305.04 | 13.98 | Sep-15 | | 3.7 | 1,828 | 236.91 | 12.96 |
| Aug-16 | | 21.9 | 2,343 | 319.88 | 13.65 | Aug-15 | | 4.0 | 1,779 | 232.16 | 13.05 |
| Jul-16 | | 21.9 | 3,210 | 443.23 | 13.81 | Jul-15 | | 8.0 | 2,238 | 276.68 | 12.36 |
| Jun-16 | | 16.2 | 2,997 | 367.92 | 12.28 | Jun-15 | | 4.7 | 2,083 | 278.51 | 13.37 |
| May-16 | | 16.2 | 3,142 | 377.99 | 12.03 | May-15 | | 7.1 | 2,776 | 347.31 | 12.51 |
| Apr-16 | | 16.2 | 3,220 | 385.58 | 11.97 | Apr-15 | | 8.5 | 3,372 | 412.49 | 12.23 |
| TOTAL | | 21.9 | 34,478 | 4,508.35 | 13.08 | TOTAL | | 16.2 | 35,220 | 4,243.11 | 12.05 |



**MIDDLETOWN TWP MUA
Billed Account Summary**

Account Nbr 100011214739 (200000054441)
 Customer Nbr 08008374630000564459
 Customer Acct Id
 Move in/out Date 02/25/1985 - Active Account
 Service Address
 GREENWOOD PL
 MIDDLETOWN NJ 07748
 Meter Nbr(s) S69992834

Meter Read Unit J674469
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 1.5163 Trans Peak Load 1.3357
 Load Profile GSCS Rate JC_GS1_01D
 Supplier Name Respond Power, LLC - 06/11/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------------|-----------------|--------------|--------------------|------|--------|--------------|-----------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | | 1,160 | 174.75 | 15.06 | Mar-16 | | | 1,344 | 178.95 | 13.31 |
| Feb-17 | | | 949 | 149.89 | 15.79 | Feb-16 | | | 751 | 109.97 | 14.64 |
| Jan-17 | | | 1,050 | 155.79 | 14.84 | Jan-16 | | | 1,050 | 150.36 | 14.32 |
| Dec-16 | | | 610 | 91.37 | 14.98 | Dec-15 | | | 847 | 123.67 | 14.60 |
| Nov-16 | | | 569 | 85.39 | 15.01 | Nov-15 | | | 753 | 110.24 | 14.64 |
| Oct-16 | | | 636 | 95.24 | 14.97 | Oct-15 | | | 502 | 74.36 | 14.81 |
| Sep-16 | | | 588 | 89.58 | 15.23 | Sep-15 | | | 392 | 60.23 | 15.36 |
| Aug-16 | | | 631 | 95.37 | 15.11 | Aug-15 | | | 535 | 81.18 | 15.17 |
| Jul-16 | | | 574 | 87.02 | 15.16 | Jul-15 | | | 364 | 56.13 | 15.42 |
| Jun-16 | | | 860 | 128.97 | 15.00 | Jun-15 | | | 391 | 63.56 | 16.26 |
| May-16 | | | 993 | 144.49 | 14.55 | May-15 | | | 1,012 | 154.62 | 15.28 |
| Apr-16 | | | 748 | 109.53 | 14.64 | Apr-15 | | | 947 | 149.24 | 15.76 |
| TOTAL | | | 9,368 | 1,407.39 | 15.02 | TOTAL | | | 8,888 | 1,312.51 | 14.77 |



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MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100011615208 (200000054441)
 Customer Nbr 08008374630000707046
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address
 23 CHERRY ST
 RED BANK NJ 07701
 Meter Nbr(s) S313135476

Meter Read Unit J664472
 Meter Constant 120
 Voltage Level 480Y/277 Volt 3 phase
 Capacity Peak Load 63.7669 Trans Peak Load 56.3911
 Load Profile GSIL Rate JC_GS3_02D
 Supplier Name Respond Power, LLC - 06/10/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------------|----------------|------------------|--------------|--------------------|------|--------------|----------------|------------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 60.5 | 29,160 | 3,362.68 | 11.53 | Mar-16 | | 78.2 | 32,880 | 3,637.67 | 11.06 |
| Feb-17 | | 87.7 | 33,840 | 3,990.64 | 11.79 | Feb-16 | | 119.8 | 31,440 | 3,731.03 | 11.87 |
| Jan-17 | | 119.8 | 31,680 | 3,540.29 | 11.18 | Jan-16 | | 165.5 | 30,720 | 3,469.56 | 11.29 |
| Dec-16 | | 71.2 | 28,560 | 3,249.29 | 11.38 | Dec-15 | | 165.5 | 30,240 | 3,422.89 | 11.32 |
| Nov-16 | | 119.8 | 26,160 | 2,966.38 | 11.34 | Nov-15 | | 165.5 | 27,960 | 3,201.18 | 11.45 |
| Oct-16 | | 119.8 | 24,720 | 2,826.57 | 11.43 | Oct-15 | | 165.5 | 29,280 | 3,324.58 | 11.35 |
| Sep-16 | | 119.8 | 28,320 | 3,135.98 | 11.07 | Sep-15 | | 165.5 | 24,480 | 2,861.30 | 11.69 |
| Aug-16 | | 119.8 | 25,920 | 2,882.06 | 11.12 | Aug-15 | | 165.5 | 25,680 | 2,977.71 | 11.60 |
| Jul-16 | | 88.3 | 28,800 | 3,332.93 | 11.57 | Jul-15 | | 82.0 | 28,200 | 3,230.39 | 11.46 |
| Jun-16 | | 119.8 | 29,400 | 3,220.47 | 10.95 | Jun-15 | | 82.7 | 27,120 | 3,354.82 | 12.37 |
| May-16 | | 119.8 | 26,280 | 2,913.05 | 11.08 | May-15 | | 165.5 | 36,480 | 4,316.61 | 11.83 |
| Apr-16 | | 64.4 | 29,040 | 3,186.86 | 10.97 | Apr-15 | | 165.5 | 40,560 | 4,753.10 | 11.72 |
| TOTAL | | 119.8 | 341,880 | 38,607.20 | 11.29 | TOTAL | | 165.5 | 365,040 | 42,280.84 | 11.58 |



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MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100012068084 (200000054441)
 Customer Nbr 08008374630000709169
 Customer Acct Id
 Move in/out Date 09/27/1983 - Active Account
 Service Address
 BOXWOOD TER
 RED BANK NJ 07701
 Meter Nbr(s) G28639664

Meter Read Unit J664460
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 3.7367 Trans Peak Load 3.2340
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 06/09/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 13.0 | 1,459 | 223.38 | 15.31 | Mar-16 | | 14.6 | 1,645 | 241.30 | 14.67 |
| Feb-17 | | 14.6 | 1,496 | 231.05 | 15.44 | Feb-16 | | 14.9 | 1,902 | 253.88 | 13.35 |
| Jan-17 | | 14.6 | 1,508 | 221.12 | 14.66 | Jan-16 | | 14.9 | 2,055 | 268.74 | 13.08 |
| Dec-16 | | 14.6 | 1,575 | 225.16 | 14.30 | Dec-15 | | 13.7 | 1,767 | 248.14 | 14.04 |
| Nov-16 | | 14.6 | 1,595 | 227.16 | 14.24 | Nov-15 | | 14.9 | 1,259 | 191.35 | 15.20 |
| Oct-16 | | 14.6 | 1,340 | 201.93 | 15.07 | Oct-15 | | 14.9 | 1,252 | 190.46 | 15.21 |
| Sep-16 | | 14.6 | 1,415 | 210.72 | 14.89 | Sep-15 | | 14.9 | 1,307 | 199.74 | 15.28 |
| Aug-16 | | 14.6 | 1,377 | 206.03 | 14.96 | Aug-15 | | 14.9 | 1,274 | 196.55 | 15.43 |
| Jul-16 | | 14.6 | 1,363 | 204.66 | 15.02 | Jul-15 | | 14.9 | 1,235 | 192.75 | 15.61 |
| Jun-16 | | 13.0 | 1,306 | 204.58 | 15.66 | Jun-15 | | 14.9 | 1,490 | 229.22 | 15.38 |
| May-16 | | 14.6 | 1,279 | 192.47 | 15.05 | May-15 | | 15.2 | 1,697 | 248.10 | 14.62 |
| Apr-16 | | 14.6 | 1,357 | 200.06 | 14.74 | Apr-15 | | 15.2 | 2,267 | 313.21 | 13.82 |
| TOTAL | | 14.6 | 17,070 | 2,548.32 | 14.93 | TOTAL | | 15.2 | 19,150 | 2,773.44 | 14.48 |



A FirstEnergy Company

MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100012465868 (200000054441)
 Customer Nbr 08008374630000710272
 Customer Acct Id
 Move in/out Date 10/06/1971 - Active Account
 Service Address
 SWIMMING RIVER RD
 LINCROFT NJ 07738
 Meter Nbr(s) G16647671

Meter Read Unit J675133
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 1.0838 Trans Peak Load 0.9428
 Load Profile GSCS Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 06/10/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|------------|--------------|-----------------|--------------|--------------------|------|------------|--------------|-----------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 2.2 | 829 | 140.57 | 16.96 | Mar-16 | | 6.3 | 937 | 143.80 | 15.35 |
| Feb-17 | | 2.6 | 1,061 | 172.53 | 16.26 | Feb-16 | | 6.1 | 1,005 | 153.27 | 15.25 |
| Jan-17 | | 6.0 | 976 | 154.91 | 15.87 | Jan-16 | | 6.0 | 947 | 145.22 | 15.33 |
| Dec-16 | | 2.2 | 788 | 124.49 | 15.80 | Dec-15 | | 5.9 | 884 | 136.23 | 15.41 |
| Nov-16 | | 2.3 | 489 | 81.08 | 16.58 | Nov-15 | | 5.5 | 569 | 91.27 | 16.04 |
| Oct-16 | | 1.2 | 356 | 61.83 | 17.37 | Oct-15 | | 2.1 | 393 | 66.11 | 16.82 |
| Sep-16 | | 1.3 | 408 | 70.31 | 17.23 | Sep-15 | | 1.7 | 441 | 74.68 | 16.93 |
| Aug-16 | | 2.2 | 468 | 78.78 | 16.83 | Aug-15 | | 1.5 | 399 | 68.54 | 17.18 |
| Jul-16 | | 1.5 | 517 | 85.94 | 16.62 | Jul-15 | | 1.3 | 463 | 77.92 | 16.83 |
| Jun-16 | | 5.8 | 695 | 112.07 | 16.13 | Jun-15 | | 1.8 | 446 | 79.18 | 17.75 |
| May-16 | | 5.8 | 946 | 145.08 | 15.34 | May-15 | | 1.8 | 519 | 88.24 | 17.00 |
| Apr-16 | | 5.9 | 812 | 125.96 | 15.51 | Apr-15 | | 2.2 | 719 | 122.12 | 16.98 |
| TOTAL | | 6.0 | 8,345 | 1,353.55 | 16.22 | TOTAL | | 6.3 | 7,722 | 1,246.58 | 16.14 |



**MIDDLETOWN TWP MUA
Billed Account Summary**

Account Nbr 100012467377 (200000054441)
 Customer Nbr 08008374630000665159
 Customer Acct Id
 Move in/out Date 02/23/1972 - Active Account
 Service Address
 PARWAY PL OFF MEADOW
 LINCROFT NJ 07738
 Meter Nbr(s) S307522553

Meter Read Unit J665120
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 0.2882 Trans Peak Load 0.2541
 Load Profile GSCS Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 06/10/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|------------|--------------|---------------|--------------|--------------------|------|------------|--------------|---------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 1.2 | 452 | 82.08 | 18.16 | Mar-16 | | 0.8 | 120 | 27.22 | 22.68 |
| Feb-17 | | 1.3 | 527 | 93.31 | 17.71 | Feb-16 | | 0.7 | 94 | 23.52 | 25.02 |
| Jan-17 | | 1.3 | 631 | 103.69 | 16.43 | Jan-16 | | 0.7 | 176 | 35.21 | 20.01 |
| Dec-16 | | 4.8 | 446 | 74.83 | 16.78 | Dec-15 | | 0.7 | 133 | 29.08 | 21.86 |
| Nov-16 | | 4.8 | 202 | 39.43 | 19.52 | Nov-15 | | 0.6 | 120 | 27.22 | 22.68 |
| Oct-16 | | 3.6 | 124 | 28.12 | 22.68 | Oct-15 | | 3.8 | 114 | 26.35 | 23.11 |
| Sep-16 | | 0.7 | 112 | 26.63 | 23.78 | Sep-15 | | 0.7 | 123 | 28.11 | 22.85 |
| Aug-16 | | 1.1 | 124 | 28.30 | 22.82 | Aug-15 | | 0.6 | 111 | 26.36 | 23.75 |
| Jul-16 | | 0.6 | 121 | 27.87 | 23.03 | Jul-15 | | 0.6 | 115 | 26.94 | 23.43 |
| Jun-16 | | 0.6 | 132 | 29.47 | 22.33 | Jun-15 | | 0.6 | 132 | 30.58 | 23.17 |
| May-16 | | 0.7 | 131 | 28.81 | 21.99 | May-15 | | 1.3 | 238 | 45.92 | 19.29 |
| Apr-16 | | 0.7 | 122 | 27.52 | 22.56 | Apr-15 | | 0.6 | 111 | 28.44 | 25.62 |
| TOTAL | | 4.8 | 3,124 | 590.06 | 18.89 | TOTAL | | 3.8 | 1,587 | 354.95 | 22.37 |



**MIDDLETOWN TWP MUA
Billed Account Summary**

Account Nbr 100012497309 (200000054441)
 Customer Nbr 08008374630000615580
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address
 125 CENTER AVE
 BELFORD NJ 07718
 Meter Nbr(s) A020748039

Meter Read Unit J634400
 Meter Constant 400
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 462.5937 Trans Peak Load 505.0076
 Load Profile GSCL Rate JC_GS3_02D
 Supplier Name Respond Power, LLC - 06/04/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------------|------------------|-------------------|--------------|--------------------|------|--------------|------------------|-------------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 544.3 | 294,858 | 33,536.44 | 11.37 | Mar-16 | | 456.5 | 271,537 | 28,966.71 | 10.67 |
| Feb-17 | | 524.9 | 298,431 | 33,475.38 | 11.22 | Feb-16 | | 473.0 | 261,880 | 28,120.22 | 10.74 |
| Jan-17 | | 503.3 | 333,976 | 36,200.07 | 10.84 | Jan-16 | | 454.3 | 298,605 | 31,586.42 | 10.58 |
| Dec-16 | | 493.2 | 281,286 | 30,819.57 | 10.96 | Dec-15 | | 429.8 | 279,384 | 29,579.96 | 10.59 |
| Nov-16 | | 516.2 | 295,011 | 32,317.31 | 10.95 | Nov-15 | | 438.5 | 282,324 | 29,914.64 | 10.60 |
| Oct-16 | | 517.0 | 300,342 | 32,909.28 | 10.96 | Oct-15 | | 447.1 | 265,853 | 28,305.44 | 10.65 |
| Sep-16 | | 442.1 | 274,643 | 29,436.88 | 10.72 | Sep-15 | | 483.1 | 289,907 | 31,030.23 | 10.70 |
| Aug-16 | | 437.0 | 281,321 | 29,983.51 | 10.66 | Aug-15 | | 442.8 | 288,185 | 30,620.98 | 10.63 |
| Jul-16 | | 481.0 | 256,312 | 27,816.11 | 10.85 | Jul-15 | | 466.6 | 264,166 | 28,433.85 | 10.76 |
| Jun-16 | | 482.4 | 277,820 | 29,915.93 | 10.77 | Jun-15 | | 458.6 | 280,083 | 32,196.08 | 11.50 |
| May-16 | | 506.2 | 283,355 | 30,394.69 | 10.73 | May-15 | | 471.6 | 304,750 | 34,678.18 | 11.38 |
| Apr-16 | | 441.4 | 252,506 | 27,031.43 | 10.71 | Apr-15 | | 514.1 | 317,790 | 36,221.04 | 11.40 |
| TOTAL | | 544.3 | 3,429,861 | 373,836.60 | 10.90 | TOTAL | | 514.1 | 3,404,464 | 369,653.75 | 10.86 |



MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100012791628 (200000054441)
 Customer Nbr 08008374630000664820
 Customer Acct Id
 Move in/out Date 10/07/1971 - Active Account
 Service Address
 JUMPING BROOK RD
 LINCROFT NJ 07738
 Meter Nbr(s) G21139904

Meter Read Unit J675135
 Meter Constant 40
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 14.6176 Trans Peak Load 12.7172
 Load Profile GSCM Rate JC_GS3_02D
 Supplier Name Respond Power, LLC - 06/11/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|-------------|---------------|------------------|--------------|--------------------|------|-------------|----------------|------------------|--------------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 43.3 | 11,320 | 1,437.90 | 12.70 | Mar-16 | | 43.3 | 11,720 | 1,384.30 | 11.81 |
| Feb-17 | | 30.0 | 4,880 | 692.50 | 14.19 | Feb-16 | | 54.5 | 10,000 | 1,151.73 | 11.52 |
| Jan-17 | | 30.0 | 6,760 | 854.73 | 12.64 | Jan-16 | | 54.5 | 10,320 | 1,182.86 | 11.46 |
| Dec-16 | | 28.9 | 8,040 | 965.66 | 12.01 | Dec-15 | | 54.5 | 7,800 | 937.81 | 12.02 |
| Nov-16 | | 43.3 | 8,040 | 950.54 | 11.82 | Nov-15 | | 54.5 | 6,960 | 856.12 | 12.30 |
| Oct-16 | | 43.3 | 4,720 | 620.15 | 13.14 | Oct-15 | | 54.5 | 6,560 | 816.20 | 12.44 |
| Sep-16 | | 43.3 | 5,240 | 666.94 | 12.73 | Sep-15 | | 54.5 | 8,200 | 978.88 | 11.94 |
| Aug-16 | | 43.3 | 6,040 | 740.17 | 12.25 | Aug-15 | | 54.5 | 6,240 | 788.73 | 12.64 |
| Jul-16 | | 33.8 | 6,760 | 862.24 | 12.76 | Jul-15 | | 54.5 | 7,120 | 874.10 | 12.28 |
| Jun-16 | | 29.6 | 9,240 | 1,078.17 | 11.67 | Jun-15 | | 33.2 | 12,360 | 1,502.73 | 12.16 |
| May-16 | | 43.3 | 7,960 | 922.79 | 11.59 | May-15 | | 54.5 | 11,040 | 1,339.70 | 12.13 |
| Apr-16 | | 27.4 | 9,080 | 1,038.41 | 11.44 | Apr-15 | | 39.3 | 15,080 | 1,814.06 | 12.03 |
| TOTAL | | 43.3 | 88,080 | 10,830.20 | 12.30 | TOTAL | | 54.5 | 113,400 | 13,627.22 | 12.02 |



MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100012859177 (200000054441)
 Customer Nbr 08008374630000440900
 Customer Acct Id
 Move in/out Date 03/26/1975 - Active Account
 Service Address
 37 EMORY DR
 LINCROFT NJ 07738
 Meter Nbr(s) S315290101

Meter Read Unit J675129
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 11.9143 Trans Peak Load 12.5025
 Load Profile GSCM Rate JC_GS1_01D
 Supplier Name Respond Power, LLC - 06/10/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|--------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 34.1 | 4,315 | 654.55 | 15.17 | Mar-16 | | 26.9 | 6,570 | 752.14 | 11.45 |
| Feb-17 | | 29.3 | 5,238 | 646.97 | 12.35 | Feb-16 | | 26.9 | 4,177 | 500.57 | 11.98 |
| Jan-17 | | 29.3 | 4,896 | 595.65 | 12.17 | Jan-16 | | 26.9 | 4,608 | 542.47 | 11.77 |
| Dec-16 | | 29.3 | 3,778 | 477.69 | 12.64 | Dec-15 | | 26.9 | 3,756 | 459.64 | 12.24 |
| Nov-16 | | 29.3 | 3,692 | 524.70 | 14.21 | Nov-15 | | 26.9 | 3,533 | 437.94 | 12.40 |
| Oct-16 | | 29.3 | 3,262 | 482.28 | 14.78 | Oct-15 | | 26.9 | 3,466 | 430.88 | 12.43 |
| Sep-16 | | 16.1 | 6,393 | 716.18 | 11.20 | Sep-15 | | 26.9 | 3,673 | 454.75 | 12.38 |
| Aug-16 | | 22.6 | 2,010 | 282.15 | 14.04 | Aug-15 | | 26.9 | 3,302 | 418.76 | 12.68 |
| Jul-16 | | | 2,725 | 351.66 | 12.90 | Jul-15 | | 22.6 | 2,631 | 383.25 | 14.57 |
| Jun-16 | | | 13 | 39.20 | 301.54 | Jun-15 | | 22.6 | 5,619 | 719.68 | 12.81 |
| May-16 | | | 1,400 | 218.79 | 15.63 | May-15 | | 26.9 | 6,012 | 726.29 | 12.08 |
| Apr-16 | | | 3,636 | 414.16 | 11.39 | Apr-15 | | 26.9 | 11,126 | 1,315.25 | 11.82 |
| TOTAL | | 34.1 | 41,358 | 5,403.98 | 13.07 | TOTAL | | 26.9 | 58,473 | 7,141.62 | 12.21 |



A FirstEnergy Company

MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100013064900 (200000054441)
 Customer Nbr 08008374630000441344
 Customer Acct Id
 Move in/out Date 05/16/1977 - Active Account
 Service Address
 STAG PL
 LINCROFT NJ 07738
 Meter Nbr(s) S312995978

Meter Read Unit J675131
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 0.4396 Trans Peak Load 0.3906
 Load Profile GSCS Rate JC_GS1_01D
 Supplier Name Respond Power, LLC - 06/11/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|-------|--------|-------|--------------------|------|--------|-------|--------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 6.9 | 235 | 39.78 | 16.93 | Mar-16 | | 2.0 | 584 | 86.13 | 14.75 |
| Feb-17 | | 2.0 | 248 | 41.63 | 16.79 | Feb-16 | | 2.0 | 578 | 85.27 | 14.75 |
| Jan-17 | | 2.1 | 279 | 44.23 | 15.85 | Jan-16 | | 2.5 | 628 | 92.41 | 14.71 |
| Dec-16 | | 1.9 | 250 | 39.11 | 15.64 | Dec-15 | | 1.8 | 555 | 82.00 | 14.77 |
| Nov-16 | | 1.9 | 236 | 37.07 | 15.71 | Nov-15 | | 1.6 | 355 | 53.46 | 15.06 |
| Oct-16 | | 1.9 | 181 | 29.11 | 16.08 | Oct-15 | | 4.4 | 162 | 25.90 | 15.99 |
| Sep-16 | | 1.1 | 174 | 28.49 | 16.37 | Sep-15 | | 4.4 | 154 | 25.37 | 16.47 |
| Aug-16 | | 0.7 | 178 | 28.92 | 16.25 | Aug-15 | | 4.4 | 165 | 26.99 | 16.36 |
| Jul-16 | | 1.2 | 187 | 30.24 | 16.17 | Jul-15 | | 2.4 | 185 | 29.91 | 16.17 |
| Jun-16 | | 1.2 | 209 | 33.49 | 16.02 | Jun-15 | | 2.4 | 210 | 35.58 | 16.94 |
| May-16 | | 1.3 | 365 | 54.90 | 15.04 | May-15 | | 3.3 | 1,067 | 160.39 | 15.03 |
| Apr-16 | | 1.5 | 548 | 81.01 | 14.78 | Apr-15 | | 3.1 | 1,253 | 183.74 | 14.66 |
| TOTAL | | 6.9 | 3,090 | 487.98 | 15.79 | TOTAL | | 4.4 | 5,896 | 887.15 | 15.05 |



A FirstEnergy Company

MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100014061327 (200000054441)
 Customer Nbr 08008374630000351872
 Customer Acct Id
 Move in/out Date 02/28/1978 - Active Account
 Service Address
 HOSFORD AVE
 LEONARDO NJ 07737
 Meter Nbr(s) G28700757

Meter Read Unit J674467
 Meter Constant 1
 Voltage Level Secondary, voltage unknown
 Capacity Peak Load 2.2774 Trans Peak Load 1.9973
 Load Profile GSCM Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 06/10/2015
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|--------|--------|----------|-------|--------------------|------|--------|--------|----------|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | 6.3 | 2,663 | 335.95 | 12.62 | Mar-16 | | 6.3 | 3,389 | 385.10 | 11.36 |
| Feb-17 | | 6.2 | 3,484 | 416.71 | 11.96 | Feb-16 | | 6.2 | 3,484 | 394.32 | 11.32 |
| Jan-17 | | 6.0 | 3,508 | 409.12 | 11.66 | Jan-16 | | 6.0 | 3,405 | 386.64 | 11.36 |
| Dec-16 | | 5.8 | 2,352 | 290.08 | 12.33 | Dec-15 | | 6.6 | 2,320 | 281.15 | 12.12 |
| Nov-16 | | 5.8 | 1,711 | 226.17 | 13.22 | Nov-15 | | 5.2 | 878 | 135.38 | 15.42 |
| Oct-16 | | 9.6 | 1,245 | 179.88 | 14.45 | Oct-15 | | 9.6 | 1,374 | 188.96 | 13.75 |
| Sep-16 | | 2.0 | 889 | 141.24 | 15.89 | Sep-15 | | 2.9 | 1,104 | 166.68 | 15.10 |
| Aug-16 | | 3.5 | 801 | 127.60 | 15.93 | Aug-15 | | 1.9 | 849 | 134.47 | 15.84 |
| Jul-16 | | 2.4 | 940 | 148.00 | 15.74 | Jul-15 | | 2.4 | 906 | 142.80 | 15.76 |
| Jun-16 | | 2.4 | 900 | 142.13 | 15.79 | Jun-15 | | 7.2 | 831 | 138.78 | 16.70 |
| May-16 | | 6.2 | 1,235 | 175.63 | 14.22 | May-15 | | 5.7 | 752 | 123.31 | 16.40 |
| Apr-16 | | 6.2 | 1,155 | 167.85 | 14.53 | Apr-15 | | 6.7 | 4,775 | 557.98 | 11.69 |
| TOTAL | | 9.6 | 20,883 | 2,760.36 | 13.22 | TOTAL | | 9.6 | 24,067 | 3,035.57 | 12.61 |



A FirstEnergy Company

MIDDLETOWN TWP MUA Billed Account Summary

Account Nbr 100119350435
 Customer Nbr 08008374630007412417
 Customer Acct Id
 Move in/out Date 05/20/2016 - 11/09/2016
 Service Address ESTATES AT BAMB HOLLOW
 70 WINDERMERE RD BLK 1049 LT 51.94
 LINCROFT NJ 07738
 Meter Nbr(s) S313333686

Meter Read Unit J694411
 Meter Constant 1
 Voltage Level 208Y/120 Volt 3 phase
 Capacity Peak Load 0.5821 Trans Peak Load 0.5054
 Load Profile GSCS Rate JC_GS3_01D
 Supplier Name Respond Power, LLC - 10/11/2016
 Supplier Dual Bill No EDI Billing No

| CURRENT 12 MONTHS | | | | | | PREVIOUS 12 MONTHS | | | | | |
|-------------------|------|------------|--------------|---------------|--------------|--------------------|------|--------|-----|----|-------|
| DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH | DATE | KVAR | DEMAND | KWH | \$ | ¢/KWH |
| Mar-17 | | | | | | Mar-16 | | | | | |
| Feb-17 | | | | | | Feb-16 | | | | | |
| Jan-17 | | | | | | Jan-16 | | | | | |
| Dec-16 | | | | | | Dec-15 | | | | | |
| Nov-16 | | 5.5 | 1,636 | 218.69 | 13.37 | Nov-15 | | | | | |
| Oct-16 | | 1.4 | 356 | 68.48 | 19.24 | Oct-15 | | | | | |
| Sep-16 | | 1.4 | 208 | 44.92 | 21.60 | Sep-15 | | | | | |
| Aug-16 | | 2.5 | 228 | 47.99 | 21.05 | Aug-15 | | | | | |
| Jul-16 | | 1.3 | 225 | 47.48 | 21.10 | Jul-15 | | | | | |
| Jun-16 | | 1.2 | 174 | 36.43 | 20.94 | Jun-15 | | | | | |
| May-16 | | | | | | May-15 | | | | | |
| Apr-16 | | | | | | Apr-15 | | | | | |
| TOTAL | | 5.5 | 2,827 | 463.99 | 16.41 | TOTAL | | | | | |

Other Critical Infrastructure Energy Usage Information:

- **Estimated KWHRS for Traffic Signals along Route 36 and Route 35:**

375,000 per year

- **Total number of square feet for the NWS Earle Waterfront Area:**

247,123 square feet

- **Total number of Impacted Buildings/Structures at NWS Earle:**

40

(Given that the microgrid process will take at least a few years, some of these buildings will be demolished and new ones will be built. However, the overall power requirement is expected to be about the same.)

- **Facility Energy Use at NWS Earle:**

NWS Earle Waterfront Admin Area Annual Electric use:

1,445,733 KWH

(the Pier Complex itself is about the same demand, as it the annual ship demand but for at least 26 weeks there is no ship load. Also the piers have 34.5kV service.)

OHMSETT facility at Earle:

750,000 KWH and 900,000 KWH per year



State of New Jersey
BOARD OF PUBLIC UTILITIES
44 SO. CLINTON AVENUE
THIRD FLOOR, SUITE 314 - P.O. BOX 350
TRENTON, NEW JERSEY 08625-0350

CHRIS CHRISTIE
GOVERNOR

KIM GUADAGNO
LT. GOVERNOR

RICHARD S. MROZ
PRESIDENT
TEL: (609) 777-3310
FAX: (609) 292-2264

April 17, 2017

Tony Mercantante
Borough Administrator
1 Kings Highway
Middletown, NJ 07748

Dear Mr. Mercantante:

The NJBPU Town Center DER Microgrid Evaluation Team (Evaluation Team) has received your application for a TC DER microgrid feasibility study incentive. While this application was accepted for evaluation, there are a number of items that are required to be submitted in order to complete that evaluation. These items are listed below:

1. A general description of the overall cost
2. A letter of support from the local gas distribution utility

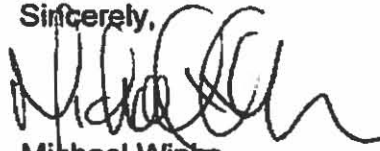
BPU has received 13 proposals for feasibility study incentives. The Board's approved DER microgrid line item budget is \$1 million. The 13 proposals significantly exceed that budget. The TC DER evaluation team is requiring that you submit a best and final offer (BAFO) for your proposal. This BAFO should include your estimated breakdown of the budget for the prime investigator and all subcontracts including any estimated fees to be paid to the EDC/GDC. The above noted items, the BAFO and the budget breakdown of the prime investigator and subcontractors should be submitted to TCDERmicrogrid@bpu.nj.gov by close of business (COB) 5:00 p.m. on May 1, 2017. Non-submittal of the additional items, the BAFO and budget breakdown will result in a non-completeness determination of the proposal.

April 17, 2017

Page 2

As noted in the TC DER microgrid feasibility study application, the Board has the sole discretion over the approval of projects and awards of incentives, and may change criteria or available funding at any point during the duration of the program.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Winka". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Winka
Senior Policy Advisor

TOWNSHIP OF MIDDLETOWN

Township Hall, One Kings Highway
Middletown, NJ 07748-2594

GERARD P. SCHARFENBERGER, Ph.D.
Mayor

STEPHANIE C. MURRAY
Deputy Mayor

ANTHONY P. FIORE
Committee Member

STEPHEN G. MASSELL
Committee Member

KEVIN M SETTEMBRINO, AIA, LEED AP
Committee Member



Organized December 14, 1887
"Pride in Middletown"

ANTHONY P. MERCANTANTE, P.P., AICP
Township Administrator

HEIDI R. BRUNT, CMR, RMC/ CMC
Township Clerk and Registrar

Tel: (732) 615-2000
Fax: (732) 957-9090

www.middletownnj.org

Mr. Michael Winka
Senior Policy Advisor
NJ Board of Public Utilities
Third Floor, Suite 314
Trenton, New Jersey 08625-0350

April 27, 2017

RE: Township of Middletown – TC DER Microgrid Feasibility Study Incentive Application


Dear Michael:

Please accept this response to your letter requesting additional information dated April 17, 2017. Attached to this email please find a letter of support from New Jersey Natural Gas and a more detailed description of the proposed scope of work for our project.

In addition, in connection with your request for a Best and Final Offer for the project, please note that the Township of Middletown is indeed open to amending the proposed scope of work and its associated budget which was included within our original application in order to better address the priorities of the BPU's program. At this time, the Township's original proposed budget serves as the most accurate and cost-effective approach to our project at this time. However, the Township is entirely committed to moving forward with this project if a lesser award is received.

On behalf of both the Township of Middletown, thank you in advance for your thoughtful review and consideration of our proposal and kindly contact this office if you require additional information.

Very truly yours,



Anthony P. Mercantante, P.P. AICP
Township Administrator

Many Neighborhoods. One Middletown!

Belford ◦ Chapel Hill ◦ Fairview ◦ Harmony ◦ Leonardo ◦ Lincroft ◦ Locust ◦ Middletown Village
Monmouth Hills ◦ Navesink ◦ New Monmouth ◦ North Middletown ◦ Nut Swamp ◦ Oak Hill ◦ Port Monmouth ◦ River Plaza

Town Center Distributed Energy Resources Microgrid Feasibility Study Report Requirements

As set forth in the MOU the Town Center (TC) Distributed Energy Resource (DER) Microgrid Feasibility Study Report should be of sufficient detail to demonstrate how the TC DER Microgrid's functional and technical requirements will be executed, the proposed approach to solve technical problems, and how project goals will be accomplished.

The TC DER Microgrid Feasibility Study Report should include an Executive Summary including all project definitions and special terms used in the Report.

The full report must include, but is not necessarily limited to, the following

1. Table of Contents
2. Project Name
3. Project Applicant – This should be the local government or state agency that is the MOU signatory.
4. Project Partners – This should include any agreements entered into by the partners.
5. Project location – This should include a detailed mapping of the boundaries on the TC DER microgrid within the municipality.
6. Project Description including a detailed description of all included critical facilities with a description of why they are critical facilities within the proposed TC DER Microgrid. The Project Description should include the following:¹
 - i. The electrical and thermal loads for each critical facility over the month and year. This should include a description and illustration of any variability in loads including daily, weekend or seasonal loads that impact on the peak, minimum and average loads.
 - ii. The electric and thermal load of the total microgrid project over the month and year. This should include a description and illustration of any variability in loads including daily, weekend and seasonal loads that impact on the peak, minimum and average loads as well as the coincident loads of the overall system.

¹ The energy data in this section and the full report should be provided through metered data were available but may also be provided through simulated data from models such as EnergyPlus. If the data is simulated the specific software and model should be identified and available.

- iii. The monthly and annual energy costs for each critical facility and the overall project including both energy and demand costs. This should include the monthly cost and any variations over the year that could impact demand costs.
- iv. The square footage of each building and the total project.
- v. The overall boundaries of the proposed project and distance between critical facilities should be provided. A map should be provided showing the locations of any Right of Way (ROW) crossings.
- vi. The size of the available emergency shelter facilities and for what periods they can serve during and after an emergency.
- vii. The specific FEMA Category Classification of each building and whether they are a state or federal designated critical or emergency facility.
- viii. A listing of all potential permits, permit issuing agency, and general timeframe for issuance.
- ix. Any previously installed EE or energy conservation measure (ECM) or currently implemented demand response (DR) measure.

6. A detailed description of the ownership/business model for the overall project including all procurement issues between the various local government and state government partners. This should include a detailed description of the statutory and regulatory provisions of proposed ownership models, EDC/GDC utility roles, as well as any billing systems for electricity and thermal energy.

7. A detailed description of the technology, business and operational protocol to be developed and/or utilized and the location within the TC DER Microgrid. This should include the following:

- i. A detailed description of the proposed connections (electric, gas and/or thermal) of the critical facilities and the DER technologies.
- ii. A one line diagram of the microgrid and location of the electrical connections to the EDC's facilities/equipment.
- iii. A detailed description of the type of distribution system the TC DER would be interconnecting into (radial or network) and the interconnection procedures and requirements.
- iv. A detailed description of how the TC DER will black start and operate and over what time period in island mode and in sync with the distribution system.

v. A detailed description of the NJBPU and EDC tariff requirements/issues including any smart grid or distribution automation upgrades proposed or under development by the EDC.

vi. A detailed description of the FERC and PJM tariff requirements/issues.

8. A detailed description of the overall cost including site prep, equipment and equipment installation, construction, operations and maintenance including a detailed construction schedule. This should include a detailed description of the overall energy costs for each critical facility and the overall project as well as any proposed ECM or DR measure to be constructed or operated within each critical facility and the overall project and its impact of the overall operation costs.

(Both 7 and 8 should be detailed through an available microgrid modeling efforts. Applicants must also demonstrate that their proposed project is consistent with the use of the Societal Benefit Charge as set forth in N.J.S.A. 48:3-60(a)(3)).

9. A detailed cash flow evaluation. This should also include a description of the potential revenue markets for any ancillary services, demand response including EE, capacity or energy markets and any available emission or energy certificate trading markets.

10. A detailed description of the potential financing of each location/critical facility and/or the overall project.

11. A detailed description of the benefits of the proposed Town Center DER Microgrid as well as the need for the proposed project. This should include an estimate of the value for reliability, resiliency, flexibility, sustainability including avoided environmental impacts such as air emissions, water usage, wastewater discharges, land use and waste generation, affordability and security.²

12. A general description of the communication system between the TC DER microgrid and the EDC's system. This should include a detailed description of distribution management systems and controls and all building controls.

13. The estimated timeframe for the completion of the construction and commencement of operations of the individual critical facilities and the overall project.

14. A description of the on-going work with the EDC and GDC.

The overall quality of the TC DER microgrid feasibility study report and the data provided will be one factor used by the Board to determine which projects proceed to a Phase 2 – Detailed Engineering Design and TC DER microgrid pilot.

² This valuation should follow the Grid Services and Technologies Valuation Framework developed by the USDOE in their Grid Modernization Initiative.

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MEMORANDUM OF UNDERSTANDING
BETWEEN AND AMONG
THE NEW JERSEY BOARD OF PUBLIC UTILITIES,
AND
TOWNSHIP OF MIDDLETOWN

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THIS MEMORANDUM OF UNDERSTANDING (“MOU”), is made this ____ day of _____, 2017, by and between The TOWNSHIP OF MIDDLETOWN (“Recipient”) and The NEW JERSEY BOARD OF PUBLIC UTILITIES (“BPU” in general or “Board” when referring to Board of Commissioners) (collectively the “Parties”) setting forth the roles and responsibilities of the Parties in connection with the Town Center Distributed Energy Resource (TCDER) Microgrid Feasibility Study Incentive Program (“Program”).¹

WHEREAS, the BPU is charged with the authority to ensure that safe, adequate, and proper utility services are provided at reasonable, non-discriminatory rates to all members of the public who desire such services and to develop and regulate a competitive, economically cost effective energy policy that promotes responsible growth and clean renewable energy sources while maintaining a high quality of life in New Jersey; and

WHEREAS, as set forth in N.J.S.A. 48:2-13, BPU is responsible for regulatory oversight of all necessary services for transmission and distribution of electricity and natural gas including but not limited to safety, reliability, metering, meter reading and billing; and

WHEREAS, the BPU is chair of the Energy Master Plan Committee and is responsible for the preparation, adoption and revisions of the Energy Master Plan (EMP) regarding the production, distribution, and conservation of energy in this State; and

WHEREAS, the BPU 2015 Energy Master Plan Update (EMP Update) established a new overarching goal to “Improve Energy Infrastructure Resiliency & Emergency Preparedness and Response” in response to several extreme weather events that left many people and businesses without power for extended periods of time. One “Plan for Action” policy

¹ Acronyms related to this program are referred to herein are as follows: Town Center (TC); Disributed Energy Resource (DER);

30 recommendation included in the EMP Update is to “Increase the use of microgrid technologies
31 and applications for Distributed Energy Resources (DER) to improve the grid’s resiliency and
32 reliability in the event of a major storm.”; and

33 **WHEREAS**, specifically, this new policy recommends that:
34
35 “The State [of New Jersey] should continue its work with the [United States Department of
36 Energy], the utilities, local and state governments and other strategic partners to identify, design
37 and implement Town Center DER microgrids to power critical facilities and services across the
38 State.”; and

39 **WHEREAS**, The Board approved the FY17 Clean Energy Program Budget
40 which established as part of the Office of Clean Energy Distributed Resources Program, the
41 Town Center DER Microgrid Program and budget.; and

42 **WHEREAS**, The BPU staff has, under the direction and approval of the Board,
43 issued a full report and recommendations regarding the utilization of TCDER Microgrids and
44 subsequently issued an application for this Program; and

45 **WHEREAS**, the Recipients who are Parties to this MOU freely and voluntarily,
46 in full consideration of the costs and benefits incident hereto, submitted an application to
47 participate in the Program; and

48 **WHEREAS**, BPU Staff issued a draft application for public comment regarding
49 this Program on August 5, 2016, a public meeting to discuss the draft application on August 23,
50 2016, and written comments were received and considered and staff responses were published;
51 and

52 **WHEREAS**, the Board, by virtue of proper procedure, and execution of this
53 MOU, has determined that the Recipient’s application is approved and incentive funds will be
54 awarded to the Recipient, pursuant to the terms included herein;

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NOW THEREFORE, in consideration of the promises and mutual representations, warranties, and covenants herein contained, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

I. INCORPORATION

All of the above recitals, the entirety of the TCDER Micrigrad Feasibility Study Incentive Program Application (attached hereto as Appendix A), the entirety of the Recipient's submitted application (Sumbittal letter which references recipient's application is attached hereto as Appendix B), The Best and Final Offer request letter and recipient's response thereto (attached hereto as Appendix C), and final Feasability Study Report Requirements (attache hereto as Appendic D) are hereby incorporated by reference into this MOU as if set forth at length herein.

II. SCOPE OF THE AGREEMENT

This MOU applies only to the Feasibility Study phase of the Program which encompasses the incentive award funding for the satisfactory completion and submission of the Recipient's TCDER Microgrid Feasibility Study only. Conformance to the terms of this MOU and timely completion of the Feasibility Study does not guarantee Recipient's future participation in this Program or any other related programs. Furthermore, the terms and conditions included herein represent the entire scope of this agreement and supersede all former representations whether written or verbally communicated.

III. DUTIES OF THE PARTIES

A. The Recipient will submit a complete and final TCDER Microgrid Feasibility Study (The Study) in accordance with the terms and conditions of this MOU and incorporated documents.

79 B. The Recipient shall have one (1) year from the date that this MOU is executed to
80 complete The Study, unless a timely request for extension is submitted by the recipient for good
81 cause and is granted by Board Staff.

82 C. Recipient shall include in the Feasibility Study a Conceptual Design that should
83 be of sufficient detail to demonstrate how the TCDER Microgrid functional and technical
84 requirements will be executed, the proposed approach to solve technical problems, and how
85 project goals will be accomplished. The Recipient's Conceptual Design shall include at a
86 minimum: (1) Design Analysis including design narrative and design calculations for all
87 disciplines, an intended specifications list, environmental permitting memorandum that identifies
88 any and all required permits and the detailed outline of process required to obtain the identified
89 permits; (2) Schematic or one-line concept drawings; (3) Conceptual cost estimate; (4)
90 Preliminary construction schedule in bar chart format; and, (5) Project definitions and special
91 conditions.

92 D. Recipient shall report to Board Staff regarding the status and progress of The
93 Study upon request.

94 E. The Recipient is solely responsible for fully complying with the terms and
95 conditions of this MOU, the above-referenced incorporated documents, and any and all duly
96 executed subsequent agreements between the Parties.

97 F. Effective upon execution of this MOU, BPU agrees to firmly commit the sum of
98 \$150,000, to cover costs to be incurred by the Recipient to administer, complete, and deliver the
99 Feasibility Study.

100 G. All requisitions, pay applications, and invoices submitted for costs or expenses
101 associated with the Feasibility Study shall be subject to review and approval by Recipient
102 according to its standard procedures. Upon approval, Recipient shall promptly submit to BPU for

103 payment all such requisitions, pay applications and invoices. In reviewing, approving, submitting
104 and paying such requisitions, pay applications, Recipient and BPU shall be cognizant of and
105 shall comply with the requirements of the New Jersey Prompt Payment Act, N.J.S.A. 2A:30A-1
106 et seq.

107 H. Recipient shall submit all final invoices of expenditures and a final draft of the
108 Study within one year of the execution of this MOU or at the end of an approved extension
109 pursuant to Section III B of this MOU.

110 I. Upon receipt of the Study and final invoices of expenditures, BPU Staff shall
111 determine if the Study meets the requirements of the program and the MOU at Section III C. If
112 BPU Staff determines that the Study does not meet any requirement(s), BPU Staff shall provide
113 to Recipient a list of requested revisions which recipient shall forward to the consultant that
114 completed the Study. The consultant shall then be afforded a reasonable period of time to make
115 the requested revisions and will then resubmit the Study. Final payment shall be made upon
116 BPU Staff approval of the Study.

117 J. Incentive funds for this program may not be diverted to pay for any work
118 conducted prior to the date of execution of this MOU. Furthermore, Incentive funds must only
119 be used in furtherance of the completion of the Feasibility Study specifically.

120 K. Recipient shall procure the services necessary to complete the Feasibility Study in
121 compliance with N.J.S.A. 52:32-2, N.J.S.A. 52:34-9.1, et seq., and N.J.S.A. 52:35-1, et seq.,
122 and any and all applicable State and local procurement laws, rules, and procedures.

123 L. The BPU reserves the right to withhold or deny incentive funding for any invoice
124 items submitted by Recipient that BPU determines to be unlawful or otherwise inappropriate for
125 this Program.

126

127 **IV. DESIGNATED REPRESENTATIVES**

128 Written communication between the Parties for the purpose of this MOU as defined
129 above shall be delivered to the following representatives.

130 New Jersey Board of Public Utilities
131 Attn: Michael Winka Sr Policy Advisor
132 44 S. Clinton Ave, Trenton, NJ 08625
133 Michael.Winka @bpu.nj.gov
134

135 Township of Middletown
136 Attn:
137 Addresss
138 XXXX.YYY@abc.gov
139

140 **V. MISCELLANEOUS**

141 A. No Personal Liability. No official or employee of BPU shall be charged
142 personally by Recipient, its employees, agents, contractors, or subcontractors with any liability
143 or held liable to Recipient, its employees, agents, contractors, or subcontractors under any term
144 or provision of this MOU or because of its execution or attempted execution or because of any
145 breach or attempted or alleged breach of this MOU.

146 No official or employee of Recipient shall be charged personally by BPU, its employees,
147 agents, contractors, or subcontractors with any liability or held liable to BPU, its employees,
148 agents, contractors, or subcontractors under any term or provision of this MOU or because of its
149 execution or attempted execution or because of any breach or attempted or alleged breach of this
150 MOU.

151 C. Captions. The captions appearing in this MOU are inserted and included solely
152 for convenience and shall not be considered or given effect in construing this MOU, or its
153 provisions, in connection with the duties, obligations, or liabilities of the Parties or in
154 ascertaining intent, if a question of intent arises. The preambles are incorporated into this
155 paragraph as though set forth in verbatim.

156 D. Entirety of Agreement. This MOU and its attachments represent the entire and
157 integrated agreement between the Parties and supersedes any and all prior agreements or
158 understandings (whether or not in writing). No modification or termination hereof shall be
159 effective, unless in writing and approved as required by law.

160 E. Amendments. This MOU may be amended by the written request of any Party
161 and with the consent of the other Party. Any proposed amendment of this MOU shall be
162 submitted by one Party to the other Party at least five (5) business days prior to formal discussion
163 or negotiation of the issue. Any agreed amendment of this MOU shall be set forth in writing and
164 signed by an authorized representative of each Party in order to become effective.

165 F. No Third-Party Beneficiaries. This MOU does not create in any individual or
166 entity the status of third-party beneficiary, and this MOU shall not be construed to create such
167 status. The rights, duties, and obligations contained in this MOU shall operate only between the
168 Parties and shall inure solely to the benefit of the Parties. The provisions of this MOU are
169 intended only to assist the Parties in determining and performing their obligations under this
170 MOU. The Parties intend and expressly agree that only the Parties shall have any legal or
171 equitable right to enforce this MOU, to seek any remedy arising out of a Party's performance or
172 failure to perform any term or condition of this MOU, or to bring any action for breach of this
173 MOU.

174 G. No Assignment. This MOU shall not be assignable, but shall bind and inure to
175 the benefit of the Parties hereto and their respective successors.

176 H. Governing Law. This MOU and the rights and obligations of the Parties shall be
177 interpreted, construed, and enforced in accordance with the laws of the State of New Jersey.

178 I. Authority. By execution of this MOU, the Parties represent that they are duly
179 authorized and empowered to enter into this MOU and to perform all duties and responsibilities
180 established in this MOU.

181 J. Term. This MOU shall be effective as of the date hereinabove written and, unless
182 terminated sooner as set forth below, shall remain in effect until the completion of the Feasibility
183 Study and payment of funds as set forth in Section III.

184 K. Termination. Board Staff and the Recipient may terminate this contract in whole,
185 or in part, when both parties agree that the continuation of the project would not produce
186 beneficial results commensurate with the expenditure of funds. The two parties shall agree upon
187 the termination conditions including the date on which the termination shall take effect, and, in
188 case of partial terminations, the portion to be terminated.

189 K. Counterparts. This MOU may be executed in duplicate parts, each of which shall
190 be an original, but all of which shall together constitute one (1) and the same instrument.

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[SIGNATURE PAGE FOLLOWS]

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IN WITNESS WHEREOF, the parties have signed this Memorandum of Understanding the date first written above.

Witness: Township of Middletown

By: _____
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Dated: _____

Witness: New Jersey Board of Public Utilities

By: _____
Richard S. Mroz, President

Dated: _____

APPROVED AS TO FORM:
Andrew Kuntz
Attorney General, State of New Jersey

By: _____