UTILITY COMMITTEE
AGENDA

JULY 13, 2015 - 5:00 P.M.

CITY HALL COUNCIL CHAMBERS
15 LOOCKERMAN PLAZA
DOVER, DELAWARE

PUBLIC COMMENTS ARE WELCOMED ON ANY ITEM AND WILL BE PERMITTED AT APPROPRIATE TIMES. WHEN POSSIBLE, PLEASE NOTIFY THE CITY CLERK (736-7008 OR E-MAIL AT CITYCLERK@DOVER.DE.US) SHOULD YOU WISH TO BE RECOGNIZED.

AGENDA ADDITIONS/DELETIONS

1. **NORTH AMERICAN ENERGY SERVICES (NAES) AMENDED AND RESTATED OPERATING AGREEMENT**

2. **ANNUAL ENGINEERING CONSULTANT'S REPORT ON THE OPERATION AND MAINTENANCE (O & M) OF THE ELECTRIC SYSTEM - FISCAL YEAR 2014**
   (STAFF RECOMMENDS ACCEPTANCE OF THE REPORT)

3. **TEA/NAES REPORT (*MAY*)**
   (STAFF RECOMMENDS ACCEPTANCE OF THE REPORT)

4. **UPDATES** (DEFERRED DURING THE MEETING OF JUNE 22, 2015)
   (COMMITTEE ACTION NOT REQUIRED ON THE BELOW ITEMS)
   - **A. GREEN ENERGY FUNDING AND PROGRAMMING**
   - **B. NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4) PERMIT**
   - **C. GARRISON OAK TECHNICAL PARK PROJECT UPDATES**
     - **C-1. CITY INFRASTRUCTURE**
     - **C-2. CALPINE ENERGY CENTER**
     - **C-3. DOVER SUN PARK**

5. **ADJOURNMENT BY 5:55 P.M.**

/TM
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THE AGENDA ITEMS AS LISTED MAY NOT BE CONSIDERED IN SEQUENCE. THIS AGENDA IS SUBJECT TO CHANGE TO INCLUDE THE ADDITION OR THE DELETION OF ITEMS, INCLUDING EXECUTIVE SESSIONS.

BURNS McDONNELL

Engineering Consultant's Report

on the
Operation and Maintenance
of the Electric System
Fiscal Year 2014

City of Dover, Delaware

Project No. 85685

06/18/2015

Engineering Consultant's Report

prepared for

City of Dover, Delaware
Dover, Delaware

Project No. 85685

06/18/2015

prepared by

Burns & McDonnell Engineering Company, Inc.
Kansas City, Missouri

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June 18, 2015

Ms. Donna S. Mitchell, CPA
Controller/Treasurer
City of Dover
5 East Reed Street
Weyandt Hall, Suite 300
Dover, Delaware 19901

Re: Engineering Consultant's Report
Project No. 85685

Dear Ms. Mitchell:

In compliance with the requirements of Section 705 and Section 504 of the City of Dover, Delaware Resolution Authorizing and Securing Electric Revenue Bonds, adopted December 23, 1985 (Resolution), Burns & McDonnell presents this Annual Engineering Consultant's Report on the Operation and Maintenance of the Electric System for the fiscal year ended 2014. This report summarizes our review and assessment of the City of Dover's (City) Electric System, its existing retail electric rates, its insurance coverage in effect, and its reserve funds. Financial, statistical, and operating data used in preparing the report were initially reported in the City's annual financial statements and accounting records. Additional information was furnished by City and Electric Division staff.

In the preparation of this Engineering Consultant's Report, Burns & McDonnell completed assessments of the electric generating stations and the transmission and distribution system of the City's Electric Division. Assessments involved interviews, observations, and review of fiscal year 2014 expenditures and fiscal year 2015 budgets. In addition, an analysis of the balances of the Improvement and Extension Fund as well as other funds supporting the Electric Division was performed. Burns & McDonnell also reviewed the adequacy of revenues provided by current retail rates in relation to the requirements of the Resolution. Finally, a high-level assessment of the City's insurance coverage related to the Electric Division was completed.

Based on these reviews and assessments, it is the opinion of Burns & McDonnell that the Electric System is being operated and maintained, including replacements and upgrades as appropriate, in a manner that is consistent with current electric utility practices. In addition, the current retail rates have provided sufficient revenues to satisfy the debt service coverage requirement in the Resolution. Further, it is the opinion of Burns & McDonnell that the balances in the various reserve funds maintained by the City for the Electric Division are sufficient for their intended purposes.

9400 Ward Parkway \ Kansas City, MO 64114
O 816-333-9400 \ F 816-333-3690 \ burnsmcd.com

We appreciate the cooperation and assistance provided by the City and the Electric Division staff in the preparation of this report. We will be happy to discuss the report with you at your convenience.

Sincerely,
Burns & McDonnell



Ted J. Kelly
Principal & Senior Project Manager
Business & Technology Services

TJK/glb

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LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
City	City of Dover, Delaware
DCS	distributed control system
EDQP	Employee Development and Qualification Program
EIA	U.S. Energy Information Administration
FY	Fiscal Year
GWh	gigawatt-hour
I&E Fund	Electric Improvement & Extension Fund
kV	kilovolt
kW	kilowatt
kWh	kilowatt-hour
LAN	local area network
McKee Run	McKee Run Generating Station
MW	megawatt
MWh	megawatt-hour
NAES	North American Energy Services Corporation
NERC	North American Electric Reliability Corporation
NRG	NRG Energy Center
Ohm	standard unit of electrical resistance
PJM	Pennsylvania New Jersey Maryland Interconnection
Report	2014 Engineering Consultant's Report on the Operation and Maintenance of the Electric System
Resolution	Resolution Authorizing and Securing Electric Revenue Bonds, adopted December 23, 1985

VanSant	VanSant Generating Station
TEA	The Energy Authority, Inc.

STATEMENT OF LIMITATIONS

In preparation of the Annual Engineering Consultant's Report on the Operation and Maintenance of the Electric System for the fiscal year ended 2014 (the Report), Burns & McDonnell relied upon information provided by the City of Dover, Delaware (the City). The information included various analyses, computer-generated information and reports, audited financial reports, and other financial and statistical information, as well as other documents such as operating budgets and current retail electric rate schedules. While Burns & McDonnell has no reason to believe that the information provided, and upon which Burns & McDonnell has relied, is inaccurate or incomplete in any material respect, Burns & McDonnell has not independently verified such information and cannot guarantee its accuracy or completeness. In addition, Burns & McDonnell has used the information provided to make certain assumptions with respect to conditions that may exist in the future. While Burns & McDonnell believes the assumptions made are reasonable for the purposes of the Report, it makes no representation that the conditions assumed will occur.

1.0 – EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

1.1 Introduction

The Fiscal Year 2014 Engineering Consultant's Report on the Operation and Maintenance of the Electric System (Report) has been prepared in compliance with the requirements of the City of Dover, Delaware Resolution Authorizing and Securing Electric Revenue Bonds, adopted December 23, 1985 (Resolution). Burns & McDonnell was retained as the Engineering Consultant by the City of Dover, Delaware (City) to complete an inspection of the Electric System and prepare a report on findings. The Resolution requires that the Engineering Consultant complete the following:

> *"The City covenants that it will cause the Engineering Consultants employed under the provisions of Section 705 of this Resolution . . . to make an inspection of the Electric System at least once each fiscal year and . . . to submit to the City Manager a report setting forth (a) their findings whether the properties of the Electric System have been maintained in good repair, working order and condition and whether they have been operated efficiently and economically and (b) their recommendation as to*
>
> *(i) the proper maintenance, repair and condition of the Electric System during the ensuing fiscal year and an estimate of the appropriations which should be made for such purposes,*
>
> *(ii) the insurance to be carried under the provisions of Article VII of this Resolution,*
>
> *(iii) the amount that should be deposited during the ensuing fiscal year to the credit of the Improvement and Extension Fund for the purposes set forth in Section 510 of this Article,*
>
> *(iv) the extensions, improvements, renewals and replacements which should be made during the ensuing fiscal year, and*
>
> *(v) any necessary or advisable revisions of the electric rates."*

This is the twelfth annual Engineering Consultant's Report prepared for the City by Burns & McDonnell.

1.2 Electric System Overview and Assessment

The Electric Division served a monthly average of 24,165 accounts in fiscal year (FY) 2014, approximately 19,000 of which were residential customers. Five of the Electric Division customers take service from the 69-kV transmission system. These customers include the Dover Air Force Base, Kraft, Proctor & Gamble, White Oak Solar and NRG Energy Center (NRG). NRG is an exempt wholesale

generator that sells power that must be transmitted through the City's transmission system to third party purchasers. When the NRG plant is not operational, the Electric Division provides power for the plant site.

1.2.1 General Plant

General plant facilities consist primarily of Electric Division administrative and operations facilities and pollution control related equipment on McKee Run Generating Station (McKee Run) and VanSant Generating Station (VanSant). Other types of general plant include office furniture and equipment, transportation and power-operated equipment, and communication equipment.

Effective July 1, 2011, the City entered into an Energy Management Agreement with The Energy Authority, Inc. (TEA) to assist the City with its energy procurement, energy sale, purchase of fuels, establishment and management of risk policies, and the development and management of hedging protocols and related energy procurement challenges. Headquartered in Jacksonville, Florida, TEA is a non-profit energy manager owned by seven public utility systems operating across the nation.

1.2.2 Production Plant

The City owns two generating plants, the McKee Run and VanSant generating stations. McKee Run consists of three steam turbine generating units with a total combined capacity of 136 megawatts (MW). VanSant is a 39 MW simple-cycle combustion turbine unit. NAES Corporation operates the generating plants. The agreement between the City and NAES Corporation has been in effect since July 1, 2006. The various systems and components of the generating plants reviewed by the Engineering Consultant are listed below:

Major Equipment

- Steam turbines/generators
- Boilers and auxiliaries
- Station cooling water systems
- Fuel handling systems
- Water treatment systems
- Station electrical systems
- Station control systems
- General facilities

Management and Organization

- Safety
- Training
- Staffing

Based on statements and information provided by the City, as well as the observations and reviews performed, it is the Engineering Consultant's opinion that the City's power generation facilities are being operated and maintained consistent with generally accepted electric utility practice in the United States. In general, the performance, operation, maintenance, staff, planning, and training aspects for the McKee Run and VanSant were found to be above average. Specifically, the generation facilities have demonstrated a high level of availability despite the dispatching of the units primarily for peak demand.

1.2.3 Transmission &Distribution Plant

The transmission and distribution network includes 44 miles of overhead transmission lines, 0.12 miles of underground transmission lines, 190 miles of overhead distribution lines and 271 miles of underground distribution lines. Five Electric Division customers take service off of the 69-kV transmission system. The following list includes areas of the transmission and distribution system that were considered and reviewed.

- System reliability
- Power quality
- Operations and maintenance
- Design standards and specifications
- Transmission and distribution improvements

It is the Engineering Consultant's opinion that the design, construction, operation, and maintenance of the City's electric transmission and distribution system and the associated facilities are consistent with current generally accepted electric utility standards. In recent years, the City has made appropriate upgrades and improvements which the Engineering Consultant has observed while conducting the reviews and assessments to complete the annual reports.

1.3 Financial Overview and Assessment

The level of revenues required from the retail electric rates for the Electric Division were determined through the analysis of the financial results and net income or net margins for FY 2014. The Resolution requires that the Electric Division maintain a debt service coverage ratio of 1.25.

Customers of the Electric Division of the City were charged for the electric service they received based on the City's rate schedules and contracts that were in place in FY 2014. A comprehensive cost-of-service and rate design study was completed in 2006 and subsequent rate analyses were completed in 2007, 2008, 2012, and 2013 to examine revenue requirements and revenue generation. Specifically, the 2006 rate study was conducted to address increased costs associated with a new power supply contract that became effective on July 1, 2006. The rate study recommended combining a number of rate classes and implementing rate increases on July 1, 2006. The 2006 rate study also recommended an additional increase be implemented on January 1, 2007 to cover increased costs associated with operating the generating station. The 2007 and 2008 rate analyses re-examined Electric Division revenues and expenses and recognized additional revisions to power supply costs. As a result of these analyses, additional rate increases were implemented on July 1, 2007, July 1, 2008, and July 2012. The July 2013 rate adjustments established the rate schedules utilized by the Electric Division today.

Total energy sales increased from 710.3 GWh in FY 2012 to 723.1 GWh in FY 2013, an increase of 1.8 percent. Total revenue from sales to electric customers in FY 2013 was $88.3 million, representing a decrease of $3.6 million from FY 2012 rate revenue of $91.9 million. In FY 2013, the average revenue per kWh for residential customers was 14.00 cents and the system-wide average price was 12.22 cents per kWh.

The Electric Division's largest cost in providing electric service to its customers is the wholesale cost of power purchased from the Pennsylvania New Jersey Maryland Interconnection (PJM) marketplace through its energy manager, TEA. From FY 2012 to FY 2013, the cost of power increased from $58.9 million to $65.4 million. Net income decreased from $8.5 million in FY 2012 to $6.2 million in FY 2013. The net income decrease in FY 2013 was due in large part to the increase in transfers out of the Electric Revenue Fund.

Following is an excerpt from Section 502(c) of the Resolution.

> *"(c) The total amount of the Revenues of the Electric System during the preceding fiscal year shall have been not less than the total of the following:*
>
> *The Current Expenses of the Electric System during the current fiscal years shown by the Annual Budget . . . for such fiscal year, and*

One hundred twenty-five percent (125%) of the maximum amount of the Principal and Interest Requirements for any fiscal year thereafter on account of all bonds then Outstanding under the provisions of this Resolution."

The Resolution requires that annual revenues of the Electric Division be no less than the total current expenses plus 125 percent of the greatest remaining annual debt service. The Electric Division achieved debt service coverage ratios for FY 2012, FY 2013, and FY 2014 of 6.64, 6.73, and 3.30, respectively. Therefore, the revenues generated by the current electric rates have been sufficient to meet the applicable covenant of the Resolution.

The City maintains a comprehensive insurance program to cover varying types of liabilities, as well as significant losses related to various Electric Division properties. It is the opinion of Burns & McDonnell as Engineering Consultant, and not as insurance counselor, the insurance in full force and affect appears to satisfy the requirements of Section 706 of the Resolution.

The City established the Electric Revenue Fund and the Electric Improvement & Extension (I&E) Fund to make moneys available for specific purposes when they are needed. The following is a list of these funds' respective cash accounts:

Electric Revenue Fund

- Insurance Reserve Account
- Contingency Reserve Account
- Electric Rate Stabilization Reserve Account
- Interest and Sinking Account

Electric Improvement and Extension Fund

- Depreciation Reserve Account
- Future Capacity Reserve Account

The Engineering Consultant reviewed activity information on the accounts listed above and found that the balances in those accounts as of June 30, 2014, were consistent with the required or target balances.

1.4 Conclusions

Based on the reviews and assessments completed, it is the opinion of Burns & McDonnell that:

1. The City's power generation facilities are being operated and maintained consistent with generally accepted electric utility practice in the United States.
2. The design, construction, operation, and maintenance of the City's electric transmission and distribution system and the associated facilities are consistent with current generally accepted electric utility standards and over the past few years, the system has been upgraded in order to improve operation and service to customers.
3. The Electric Division capital projects included in the City's Capital Investment Plan and the FY 2015 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.
4. The cash balances as of June 30, 2014 for the various accounts maintained by the City for the Electric Division appear to be sufficient for their defined purposes.
5. The insurance coverage in full force and effect as maintained by the City related to the various assets of the Electric Division appears to satisfy the requirements of Section 706 of the Resolution.
6. The electric revenues generated by the City's current retail rates are more than sufficient to fulfill the debt service coverage requirement (125 percent of current expenses) defined in Section 502(c) of the Resolution.

2.0 – INTRODUCTION

2.0 INTRODUCTION

The City of Dover, Delaware (City) operates a municipally-owned electric utility system that served 23,354 customers, excluding lighting, within the City and surrounding areas at the end of fiscal year (FY) 2014. The 68 square-mile service area of the electric utility is located in central Delaware; with the City itself located approximately 70 miles south of Philadelphia, Pennsylvania.

2.1 Purpose of Report

This FY 2014 Annual Engineering Consultant's Report (Report) has been prepared in compliance with the requirements adopted December 23, 1985 of the City of Dover Electric Bond Resolution (Resolution). Burns & McDonnell was retained by the City as the Engineering Consultant defined in Section 705 of the Resolution, as follows.

> *"The City covenants that it will, for the purpose of performing and carrying out the duties imposed on the Engineering Consultants under the provisions of this Resolution, employ an independent engineer or engineering firm or corporation having a nationwide and favorable repute for skill and experience in such work."*

The required scope of the Report is described in Section 504 of the Resolution, as follows.

> *"The City covenants that it will cause the Engineering Consultants employed under the provisions of Section 705 of this Resolution . . . to make an inspection of the Electric System at least once each fiscal year and . . . to submit to the City Manager a report setting forth (a) their findings whether the properties of the Electric System have been maintained in good repair, working order and condition and whether they have been operated efficiently and economically and (b) their recommendation as to*
>
> *(vi) the proper maintenance, repair and condition of the Electric System during the ensuing fiscal year and a estimate of the appropriations which should be made for such purposes,*
>
> *(vii) the insurance to be carried under the provisions of Article VII of this Resolution,*
>
> *(viii) the amount that should be deposited during the ensuing fiscal year to the credit of the Improvement and Extension Fund for the purposes set forth in Section 510 of this Article,*
>
> *(ix) the extensions, improvements, renewals and replacements which should be made during the ensuing fiscal year, and*

(x) any necessary or advisable revisions of the electric rates."

2.2 Organization

The Electric Utility Director is responsible for the overall management of the Electric Utility Division. Mr. Harry Maloney is the current Electric Utility Director for the Electric Division. The Electric Director oversees the day-to-day operations of the Electric Division and manages the Division's staff. The Director also provides oversight of the production plant budget, monitors the contracts of the energy coordinator and the power generation operator/manager, and is responsible for North American Energy Services Corporation (NAES Corporation) contracts and oversight. The Electric Division is organized into four separate operating sections. Descriptions of the current Electric Division sections are provided below.

Administration Section – Administration provides the overall management of the Electric Division's Engineering and Transmission & Distribution Sections. This section performs all planning and budgeting, monitors all construction projects, administers all power supply and generating station operations agreements, and coordinates with customer service and public relations for the Electric Division.

Electric Engineering Section – Electric Engineering provides design, specifications, construction management, and project inspection for all capital investment projects of the Electric Division. This section also develops and maintains maps, plans, and specifications, as well as engineering standards for construction and maintenance of the Electric System.

The group formerly known as the System Operations Section has been reorganized as part of the Electric Engineering Section. This group is responsible for the operation of a 24/7 system operations control center and is comprised of the System Operators Crew Leader and the Operators.

Transmission & Distribution Section – Transmission & Distribution constructs, operates, and maintains the overhead and underground electric systems and fiber optic communication facilities. This section installs and maintains all electric metering, as well as street and security lighting. This section also investigates and resolves customers' power supply problems and oversees the work of tree trimming contractors.

Figures 2-1 through 2-3 provide organizational charts illustrating the staffing hierarchies of the various sections in the Electric Division. The number of individuals in each position was indicated as appropriate. Electric Division staff totaled 37 at the time this report was issued.

Figure 2-1: Organization

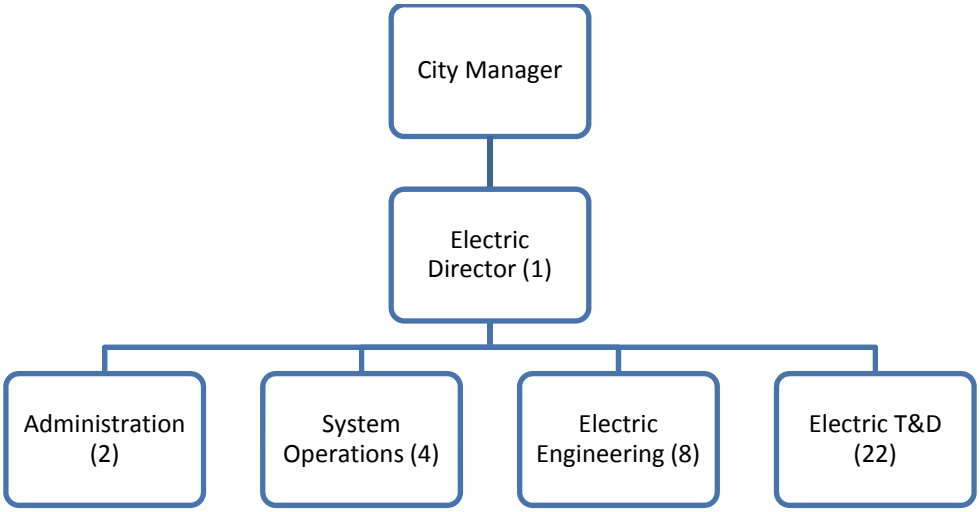


Figure 2-2: Administration Section



Figure 2-3: Electric Engineering Section

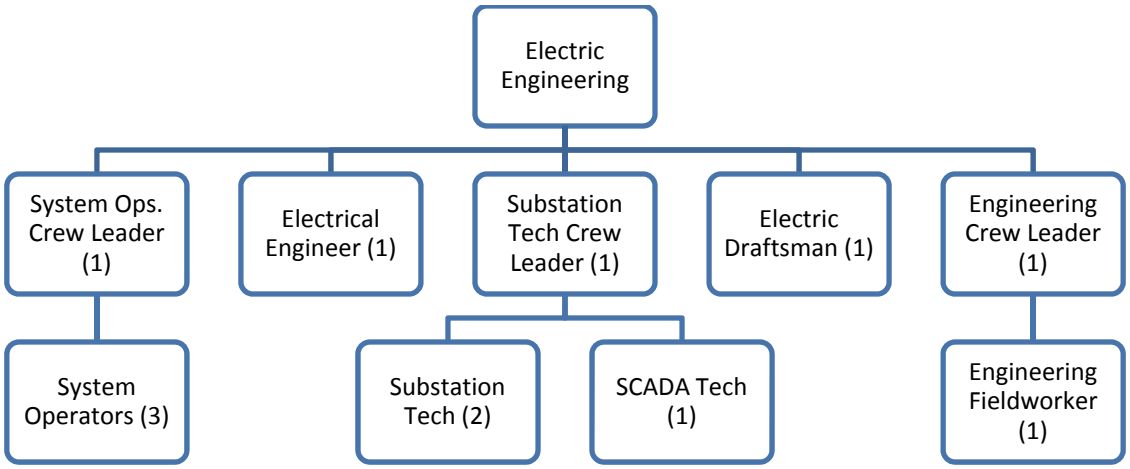
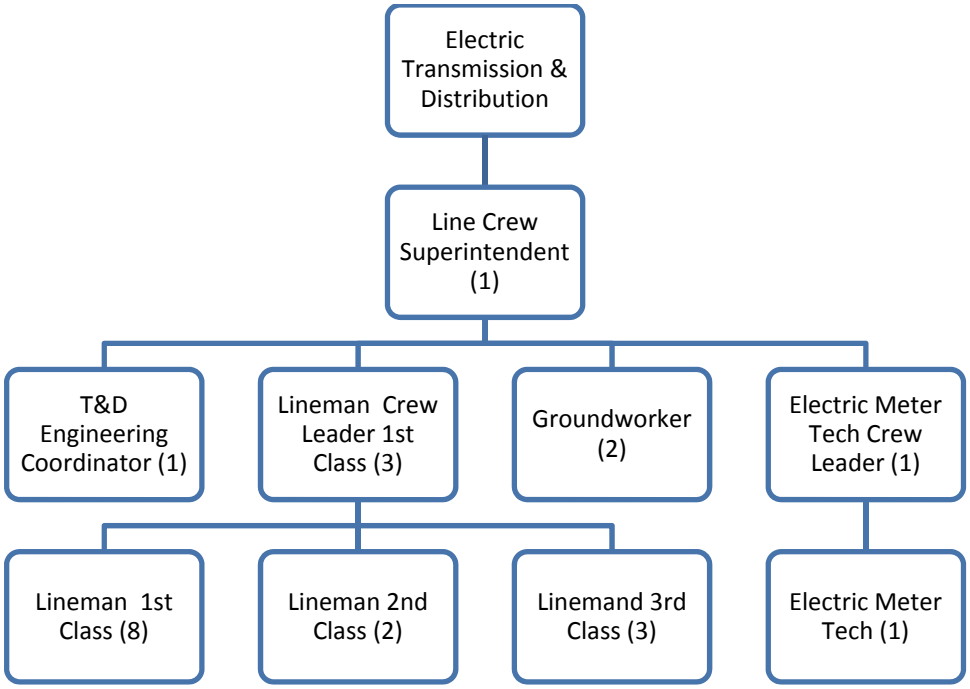


Figure 2-4: Electric Transmission & Distribution Section



The subsequent sections of the Report provide a discussion of the required reviews and inspections conducted pursuant to Section 504 of the Resolution. Section 3.0 describes the assessment of the Electric System and its condition. Section 4.0 presents the financial results for the Electric Division, including an analysis of the adequacy of revenues provided by the electric rates. Section 5.0 summarizes the conclusions of Burns & McDonnell regarding the operation and maintenance of the Dover Electric System.

3.0 – ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT

3.0 ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT

3.1 Electric System Overview

The Electric System owned by the City primarily consists of a production plant, transmission plant, distribution plant, general plant facilities, and construction work in progress. Table 3-1 displays the year-end balances of the various plant components for FY 2012 through FY 2014. Table 3-2 itemizes the specific capital investment plan projects and anticipated expenditures included in the FY 2015 budget.

Table 3-1: Year-End Plant in Service

	FY 2012	FY 2013	FY 2014
Capital assets, not being depreciated			
Land	$ 1,458,066	$ 1,458,066	$ 1,458,066
Construction in progress	789,014	1,338,909	1,690,462
Total capital assets, non-depreciable	$ 2,247,080	$ 2,796,975	$ 3,148,528
Capital assets, being depreciated			
Buildings	$ 17,456,628	$ 17,619,349	$ 17,666,269
Production	64,610,399	65,040,049	65,913,284
Transmission	33,106,748	34,010,686	35,084,087
Distribution	60,680,365	61,752,469	62,388,947
Administration	1,634,017	1,743,754	1,743,754
Vehicles	640,096	625,876	645,747
Total capital assets, being depreciated	$ 178,128,253	$ 180,792,183	$ 183,442,088
Less accumulated depreciation for:			
Buildings	$ (11,400,308)	$ (11,795,879)	$ (12,172,080)
Production	(41,416,622)	(42,682,428)	(44,002,794)
Transmission	(10,344,554)	(11,537,017)	(12,776,190)
Distribution	(25,322,267)	(26,832,246)	(28,382,673)
Administration	(1,196,545)	(1,316,532)	(1,427,205)
Vehicles	(464,219)	(481,527)	(517,428)
Total accumulated depreciation	$ (90,144,515)	$ (94,645,629)	$ (99,278,370)
Total capital assets, being depreciated, net	87,983,738	86,146,554	84,163,718
Total capital assets, net	$ 90,230,818	$ 88,943,529	$ 87,312,246

In FY 2014, the Electric System experienced a decrease in the annual system peak demand and a decrease in annual energy sales from the previous year. The Electric System experienced its peak at 4 p.m. on July 18, 2013 of 164.2 MW; a decrease of 7.4 MW from the previous year. For the year, 720.9 GWh of energy were sold; a decrease of 0.7 percent from the preceding year. The Electric Division projects energy sales in FY 2015 to total 712.2 GWh, a decrease of 1.2 percent. The Electric Division expects annual energy sales to grow moderately from FY 2016 through FY 2020.

Table 3-2: Fiscal Year 2015 On-going/Planned Capital Expenditures

Production		
McKee Run & VanSant Preservation of Structures	$	135,800
McKee Run High Energy Piping		26,500
Unit 3 Boiler Systems		138,000
Unit 3 Auxillary System Components		89,000
Unit 3 Turbine Outage - Inspections & Repairs		151,800
Unit 3 Cooling Tower Life Extension		1,091,200
VanSant Capacity Increase		901,900
Metering System Upgrades		90,000
Safety & Compliance Improvements		115,100
Subtotal Electric Generation Division	$	2,739,300
Transmission & Distribution		
New Developments - UG Transformers	$	87,400
New Developments - UG Conductors/Devices		105,100
West Dover Connector		250,000
Meadows at Jefferson Terrace		15,400
Chestnut Grove Development		299,000
Garrison Oak Technical Park		184,000
Uzin Utz Manufacturing		8,000
Playtex/Energizer System Upgrades		200,000
Clearview Meadows		81,200
Dover Downs Tower		51,600
Leander Lakes		73,000
Eden Hill Lights		17,000
Family Dollar Store		7,500
Meter Replacements & System upgrades		150,000
Vehicles, Trucks, & Equipment		275,000
Subtotal Electric Transmission Division	$	1,804,200
Electric Engineering		
Substation Battery Replacement	$	24,500
Capitol Park - Underground		27,500
Richardson Circle		400
Chandelle Airport URD		52,900
Townpoint Distribution Upgrades		250,000
Lighting Project and Rehabilitation		50,000
Horsepond Road Substation Reliability Upgrade		468,700
McKee Run & State College Road Feeder replacements		50,000
GOTP Transmission Line Relocation		550,000
Horsepond SS to Cartanza 69kv Rebuild		75,000
69kv Substation Cable Replacement North Street		85,000
General Scott Switchgear		1,137,600
Vehicles, Trucks, & Equipment		28,600
Subtotal Electric Engineering Division	$	2,800,200
Total Planned Capital Investment Projects	**$**	**7,343,700**

3.1.1 Production Plant

The City owns two plants, the McKee Run and VanSant generating stations. McKee Run consists of three steam turbine generating units with a total combined capacity of 136 megawatts (MW). VanSant is a 39-MW simple-cycle combustion turbine unit.

NAES Corporation operates the generating plants. The agreement between the City and NAES Corporation has been in effect since July 1, 2006. The Engineering Consultant's observations regarding the generating stations and units are described later in this section of the Report.

Effective July 1, 2011, the City entered into an Energy Management Agreement with The Energy Authority, Inc. (TEA) to manage the sales associated with the production plants; the Electric Division's first contract with TEA. TEA also assists the City with its energy procurement, energy sales, purchase of fuels, establishment and management of risk policies, the development and management of hedging protocols and related energy procurement challenges.

3.1.2 Transmission & Distribution Plant

The service area includes 44 miles of overhead transmission lines, 0.12 miles of underground transmission lines, 190 miles of overhead distribution lines and 271 miles of underground distribution lines. Five Electric Division customers take service off of the 69-kV transmission system. These customers include the Dover Air Force Base, Kraft, Proctor & Gamble, and NRG Energy Center (NRG). NRG is an exempt wholesale generator that sells power that must be transmitted through the City's transmission system to third party purchasers. When the NRG plant is not operating the Electric Division provides power for the plant site.

The Electric Division has two contracts for providing transmission service through the Electric System. The Electric Division provides transmission service to NRG for the output of its 16 MW electric generator. The Electric Division also has a point-to-point contract for the output of an NRG Combustion Turbine which ties directly to the Kent Substation and is not part of the Dover transmission system.

3.1.3 General Plant

The general plant category consists primarily of Electric Division administrative and operations facilities, and pollution control-related equipment at McKee Run and VanSant. The agreement with NAES Corporation stipulates NAES Corporation manage the operation and maintenance of the facilities while the City funds all replacements and upgrades required for maintaining the capability of the two generating stations. The City is also responsible for the costs of compliance with new regulations promulgated. Other types of items included in the general plant category include office furniture and equipment, computer-

related equipment, transportation and power-operated equipment, and communication equipment. Burns & McDonnell did not specifically assess the items in the general plant category for this Report.

3.2 Production Plant Assessment

Burns & McDonnell made observations and conducted assessments of the Electric System assets in support of the development of this annual Engineering Consultant's Report. On June 4, 2015, Mr. Ted Kelly of Burns & McDonnell met with representatives of NAES Corporation to discuss the condition of the McKee Run and VanSant generating stations. Mr. Kenneth Beard, the Plant O&M Manager, coordinated the visit along with Mr. Don Mordus, the Plant Manager. Mr. Harry Maloney, the Electric Utility Director, attended the meeting as well. The findings of Burns & McDonnell from the assessment of the City's production plant assets are documented herein.

3.2.1 Production Plant Operations

McKee Run consists of three units. Units 1 and 2 were originally coal-fired units, which began operations in 1961 and 1962, respectively. In 1972, these units were converted to burn No. 6 fuel oil. Units 1 and 2 each have rated capacities of 17 MW. Unit 3 began operations in 1975 and was designed to fire No. 6 fuel oil and natural gas. Unit 3 has a rated capacity of 102 MW. In FY 2008, the City began work to convert all three units at McKee Run to burn No. 2 fuel oil in order to reduce pollution from the plant. To date, the necessary upgrades and new equipment had been installed allowing each of the units to burn both natural gas and No. 2 fuel oil.

VanSant consists of a simple cycle combustion turbine with a rated capacity of 39 MW. This unit commenced operation in 1991. VanSant remains unmanned, except when it is dispatched into service. On the occasions when the unit is dispatched, personnel from McKee Run are transferred to VanSant to startup and operate the unit.

3.2.1.1 Management and Organization

Station management is well organized and knowledgeable. Personnel take a logical approach to the operation and maintenance of the generation facilities. Mr. Don Mordus serves as the Plant Manager. The management/leadership team consists of eight positions including Mr. Mordus' position. The Administrative Manager, O&M Manager, Compliance Coordinator, and Materials Coordinator, all report directly to Mr. Mordus. (Note: there will be retirements in the leadership team in the next couple of years.) One Operations Supervisor position and one Day Shift Operator position are currently open at the plant. The open Operations Supervisor position is part of the management/leadership team. (Note: Three new operators have been hired in calendar year 2015.)

The O&M Manager oversees a Maintenance Supervisor and four Operations Supervisors. When fully staffed, each operations team consists of a supervisor and three operators working 12-hour rotating shifts. Two operators work eight-hour flex time shifts Monday through Friday, and fill in as needed. The maintenance team consists of a supervisor and five employees working eight-hour shifts. The operations and maintenance personnel are all union employees. The relationship between the union and management was reported to be excellent. McKee Run is currently at a staff level of 29 employees, with 32 approved positions.

3.2.1.2 Major Equipment Operations and Maintenance

In general, the generation facilities appear to have been properly operated and maintained, and in good condition as evidenced by the high availability of the units. The generation facilities are dispatched sparingly and operate primarily as peaking units. As such, the individual units incur a low annual capacity factor. Table 3-3 summarizes the major FY 2014 operating statistics.

Table 3-3: FY 2014 Generating Plant Operating Statistics

Unit	Rated Capacity - MW	Net Production - kWh	Net Capacity Factor	Net Heat Rate Btu/kWh	Number of Starts
VanSant	39	2,836,509	0.83%	13,582	21
McKee Run					
Unit 1	17	895,980	0.60%	16,063	7
Unit 2	17	1,442,809	0.97%	14,593	8
Unit 3	102	23,304,093	2.61%	11,841	32
Total	175	28,479,391	1.86%		68

Unit	Forced Outage Hours	Operating Hours	Service Factor	Equivalent Availability Factor
VanSant	-	84.2	0.96%	60.29%
McKee Run				
Unit 1	80.0	135.7	1.55%	59.36%
Unit 2	-	228.1	2.60%	60.29%
Unit 3	2.0	423.7	4.84%	60.26%
Total	82.0	871.7	9.95%	60.04%

The large amount of time that units are not operating allows for maintenance and repair of the units. As a result, the FY 2014 overall equivalent availability factor for the generation facilities averaged 60.04 percent. Low net capacity factors are offset by PJM capacity credits. In FY 2014, $15.1 million of PJM capacity credits helped cover the entirety of purchased capacity costs. PJM capacity credits are expected to continue to offset significant portions of system capacity costs in FY 2015 and beyond.

3.2.1.3 O&M Management System

Maintenance activities are organized, planned, and managed using MP2[tm] by CMMS Data Group, a computer-based management system. All three major categories of maintenance activities (corrective, preventative, and predictive) are electronically managed by MP2[tm].

For corrective maintenance activities, any station operator or mechanic can enter a work order into the system at any terminal on the Station local area network (LAN). A supervisor reviews the request, turns it into a work order, and assigns a priority according to a predetermined categorization. The work order is planned, parts are ordered, and then the work order is assigned to an operator or maintenance technician for completion once the material has been received.

This system is also used to manage and track preventative maintenance activities that follow a schedule. Changing filters, and turning on and off heat tracing are examples of preventative maintenance. Predictive maintenance activities practiced include oil analyses, vibration testing, and infrared surveys. Portable vibration testing equipment is used at the Stations to improve the frequency of and capabilities to trouble-shoot rotating equipment. The technology allows personnel to identify problems and take corrective actions before equipment failure occurs.

3.2.1.4 Safety

"Safety First" is an overall theme and attitude of the Electric Division. Near-miss incidents are documented, reviewed, and corrective follow-up actions are taken as required with an employee-run safety committee actively in place. This committee conducts monthly safety meetings, completes safety equipment inspections, and defines and implements tasks to improve safety in all areas. Members of the safety committee complete periodic visual inspections of employee work activities utilizing an observation checklist to detail their findings. Recorded observations are discussed and infractions corrected. Safety is the first topic discussed at all meetings at the generating plant. An indoctrination video emphasizing safety is shown to all visitors when entering the Station.

Mr. Mike Benkert, Senior Project Manager – Safety, reported there were no restricted work days or lost time accidents reported in FY 2014. NAES ended the year with 54,420 man-hours worked with no OSHA recordable accidents.

3.2.1.5 Training

The required annual OSHA compliance training is completed and documented for each employee. A formal two-day employee orientation program is required for all new employees. This orientation covers a multitude of subjects from employee benefits to a review of the various Station operating manuals.

For operator training, the Employee Development and Qualification Program (EDQP) was established prior to 2002. EDQP is a formal program for training operators to progressively advance to positions with additional responsibilities. The training program is a combination of a self-paced and instructor-led learning. In addition to the above programs, cross training of various disciplines also occurs. An example of cross training would be plant operators training with maintenance staff. NAES has made some modifications to the program to make it more applicable to the specific utility.

Plant staff receive environmental and safety training online via the GPi Learning website. The training includes tutorials and exams to ensure comprehension of the subject matter. Plant manuals, meetings, etc. offer additional safety training.

Plant staff continues to receive appropriate operator certification training for the Pennsylvania New Jersey Maryland Interconnection (PJM) market. This training should continue in the future. The plant also completes planning and scheduling training on a regular basis for plant operators.

3.2.1.6 Capital Improvements

The following describes completed, on-going, and planned improvements to the City's generation assets:

Recently Completed (FY 2012- FY 2014):

- Industrial Wastewater Discharge System
- McKee Run Demineralizer Replacement
- McKee Run Natural Gas System Block/Bleed Valves
- Unit 3 Fire Protection System
- Unit 3 - Stack Repairs
- Unit 3 Boiler Air Heater
- Unit 3 - Gas Modification
- Unit 3 FD & ID Fan Controller Upgrade
- Unit 3 DCS Computers & Software Upgrades
- Unit 3 Air Heater Expansion Joint
- McKee Industrial WW Discharge system
- Unit 3 Generator Repairs
- Units 1 & 2 Life Extension
- Units 1 & 2 Cooling Tower Life Extension
- Units 1 & 2 Control Modifications
- Units 1 & 2 Stack Repairs

- Units 1 & 2 Component Repairs
- Unit 1 Gasket Leak Repair
- Unit 2 - Boiler Inspection & Repair

On-Going:

- McKee Run & VanSant Preservation of Structures
- McKee Run High Energy Piping
- Unit 3 Boiler Systems
- Unit 3 Auxiliary System Components
- Unit 3 Turbine Outage - Inspections & Repairs
- Unit 3 Cooling Tower Life Extension
- VanSant Capacity Increase
- Metering System Upgrades
- Safety & Compliance Improvements

Planned (through FY 2020):

- McKee Run Building Equipment Replacements
- Unit 3 Software & Computer Upgrades - CEMS
- Unit 3 - Stack Repairs
- Unit 3 Cooling Water Line Replacement/Repairs
- Unit 3 Hydrogen Purity Analyzers
- VanSant Software & Computer Upgrades - CEMS
- VanSant Major Overhaul & Inspection
- VanSant Component replacements

3.2.2 McKee Run Condition Assessment

The following is a summary of the condition assessment of major equipment at McKee Run as presented by the NAES corporation staff. Units 1 and 2 will be decommissioned in 2017; therefore, major maintenance and capital projects have been and will be limited for these units in the near future. Burns & McDonnell made no internal assessments of equipment during the facility tour.

XL Insurance completes inspections of the Electric Division production facilities on an annual basis. After each inspection the insurance provider issues a report detailing its risk reduction recommendations. No new recommendations were made this year.

3.2.2.1 Steam Turbines/Generators

The steam turbines and generators for VanSant and McKee Run Units 1 and 2 were reported to be in satisfactory condition with no major problems.

In FY 2012, Unit 1 conducted turbine generator checks and found a bearing steam seal leak. Steam seals were removed and sent out for refurbishment by Siemens Energy Services during the fall 2012 outage. Bearing was inspected and checked for wear. Bearing did have some wear and did not meet acceptable tolerance, so it was sent out for refurbishment by Fusion Babbiting. Turbine condition assessment was conducted during the fall outage and the Units were found to be in satisfactory working condition.

During the spring 2013 outage, an extensive inspection and testing was performed on Unit 3's turbine and generator. The inspection showed signs of seal oil, hydrogen, and busing box leakages. All issues were fixed and brought to acceptable operating standards. During the fall 2013 outage, NAES mechanics installed new hand wheel throttle valve mechanical parts. Thereafter, the IC&E installed a portable vacuum pump to the Unit 1 turbine to simulate vacuum. The turbine was reset and the throttle valve was closed. The throttle valve was then fully opened with no issues and the handle was freewheeling.

No inspections, planned maintenance or upgrades were completed on Units 1 and 2 during the 2014 outages. During the spring 2014 outage, Unit 3 was dismantled and inspected. Erosion was detected in some places and steps were taken to mitigate. The unit experienced vibration issues during the startup process, but no cause was found after multiple tests. Vibration issues were no longer experienced during the fall outage.

3.2.2.2 Boilers and Auxiliaries

Boiler inspections are conducted every year on each of the boilers. The annual inspections typically include the inspection and cleaning of the major boiler components, including the mud and steam drums, the forced draft and induced draft fans, the windbox, condenser water box, condenser tubes, hotwell, air preheater components, and safety valves.

Following its FY 2010 annual inspection of the production facilities, XL Insurance recommended the City implement a program that tracks annual hot and cold settings of hangers in the steam, reheat, feedwater and boiler systems. In FY 2011 and FY 2012, the City met the recommendation by implementing a program that will examine the high energy piping systems on a five-year basis, beginning in 2014.

In FY 2012, several principle changes were made on the generating system's boiler and auxiliary units at McKee Run. New Beck drives were installed on Unit 3 induced draft and forced draft fans. Also, sector

plates and seals were replaced in the Unit 3 air heater. A leak was detected in a Unit 3 boiler water wall tube due to caustic gouging in 2012. Ultrasonic testing of the boiler tubes is planned during the next major outage in 2018.

During FY 2013 inspections, no major issues were found within the Unit 1 or Unit 2 boiler. Unit 3 had an issue during the startup of the boiler while attempting to obtain a boiler purge. The issue was fixed by replacing a Gas Fuel Trip Relay. Waterwall tubing sections were replaced around Unit 3's A-2 burner throat.

During the spring 2014 outage, piping maintenance and replacements earned the most attention at Unit 1 in addition to typical planned inspections and maintenance on all units. Unit 2 repairs were primarily piping focused as well. Ash and debris was cleared from Unit 3 and a leak was found and repaired.

No adverse conditions, controls, or operational concerns were reported during the 2014 fall outage at Units 1 and 2. During that outage the neutralization pit liner was replaced, new insulation and lagging was installed on the high energy piping, and leaking tubes were replaced all on Unit 3.

3.2.2.3 Station Cooling Water Systems

The Station has split cooling water systems with one system serving Unit 1 and Unit 2 and a separate system serving Unit 3. Projectile tube cleaning was completed on the Unit 1 and Unit 2 condensers during the spring FY 2011 outage. All the tubes in each unit were cleaned utilizing the scraper blade plug method. Samples were taken from the tube cleanings and retained for inspection. No leaks were detected in the expansion joint or condenser tubes. Each condenser box was cleaned. A significant Unit 3 cooling tower project was completed in CY 2014. This project included the change out of a number of columns in the tower, work on the hot deck, and balancing of water flow. The cooling water systems are reported to be sufficiently sized and in satisfactory condition, with no major issues reported at the time of this Report.

3.2.2.4 Fuel Handling Systems

Natural gas is delivered to the Station via a 4-inch pipeline for Unit 1 and Unit 2 and in a 10-inch diameter pipeline for Unit 3. No. 2 fuel oil is delivered to the Station by truck and unloaded into tanks. Forwarding pumps deliver the fuel oil to each of the units. No major fuel projects were reported to be completed in FY 2014.

3.2.2.5 Water Treatment/Steam Purity

Quality control parameters for boiler feed-water, internal boiler water, cooling tower water, and steam purity are checked at a minimum of twice per day when systems are operating. Results are recorded and

graphically compared to control limits. Adjustments are then made as required. Boiler feed water is treated city water (well water from the City) using a regenerative ion resin demineralizer system, along with deaeration for oxygen control. Boilers 1 and 2 use a coordinated phosphate control for boiler internal purity control and Boiler 3 uses a balanced trisodium phosphate and disodium phosphate within a narrow pH range. A deep-bored water well was installed to provide water in addition to the City supplied water. City water has a high chlorine level which may exceed the Station permitted limits. By combining City water with the well water, the chlorine levels can be maintained at the permitted limits. Water for cooling tower makeup is also obtained from City water. The primary control parameter is silica concentration. Blow down is adjusted as required to maintain control. The City received an industrial waste water permit from Kent County to be able to discharge cooling water to the sewer system. No major water treatment issues were reported at the time of this Report.

Steam purity is not continuously monitored. Samples are taken at least twice daily and tested for pH, conductivity, and silica. There have not been any problems with steam purity. Annual inspections of the boiler drums and separation internals have verified that these systems are intact and operating properly.

Following its FY 2010 annual inspection of the production facilities, XL Insurance recommended the City implement lay-up procedures to protect water systems from corrosion. In FY 2011 and FY 2012, NAES worked to update plant procedures to conform to best practices/OSHA standards.

In FY 2014, the station did not experience any internal corrosion related failures, steam path deposits, or excessive condenser fouling. Condor Technologies provides water treatment consulting services and chemicals. A representative visits the Station periodically to review test data and check chemical usage rates. No major issues were reported at the time of this Report.

3.2.2.6 Station Electrical Systems

Overall, Station electrical systems and transformers are considered to be in satisfactory condition. A condition assessment of the generation facilities' transformers was conducted in 2014 by TJ/H2b Analytical Services. Oil inspections and analyses were conducted. The inspector recommended that normal operation continue for all the transformers at the plant; however, heating was indicated at two of the transformers. The City has a contract with an environmental consultant to check each substation for oil leaks and to provide instruction on cleaning up in the event of an oil spill.

Oil sampling is now completed twice per year on the generator step-up transformers (GSUs). Based on the 2012 XL Insurance annual inspection, there are still no sprinkler protection or blast walls for GSU's 1-3. In 2012, the city had blast walls installed between Units 1 and 2 auxiliary transformers as

recommended in the insurance report. This item has since been closed per the insurance company. All plant transformers are examined annually.

3.2.2.7 Station Control Systems

Unit 1 and Unit 2 controls are electro-pneumatic. Unit 3 controls are a distributed control system (DCS).

Following its 2007 annual inspection of the production facilities, XL Insurance recommended the City seal openings in fire barriers through which cables pass. The City has worked each year since to make progress on sealing openings in fire barriers. The City completed sealing the rest of the openings as part of its boiler controls and control room upgrades in 2013.

In general, the station control systems are considered to be in satisfactory condition. The Unit 1 and Unit 2 control systems are outdated but perform satisfactorily. All relays have recently been inspected at both McKee Run and VanSant for North American Electric Reliability Corporation, PJM Interconnection and Mid-Atlantic Area Council compliance. The electro hydraulic control system was modified to become a primary/primary system in 2013. In 2013 additional control wiring was installed to upgrade the Unit 1 and Unit 2 gas control system. No additional controls upgrades or issues to report for FY 2014.

3.2.2.8 General Facilities

No major projects or improvements were completed to the General Facilities in FY 2014 other than routine maintenance and repairs. In general, the station facilities appeared clean and well maintained during the site visit.

3.2.3 VanSant Condition Assessment

The following is a summary of the condition assessment of major equipment at VanSant as presented by the NAES corporation staff. Burns & McDonnell made no internal assessments of equipment during the facility tour.

In general, the unit is operated infrequently, but is well maintained. The VanSant unit has the capability of black starts. The unit is not permitted for remote control. Although the station is only manned when operating, an operator performs a twice daily walk through with a checklist of items to review and the results are logged.

XL Insurance completes inspections of the Electric Division production facilities on an annual basis. After each inspection the insurance provider issues a report detailing its risk reduction recommendations. The lone recommendation for VanSant following the FY 2012 inspection addressed safety. XL Insurance

recommended the installation of gas detection equipment at the plant. A gas detection system has been installed. The gas detectors will activate the fire suppression system and alarm to the central control system. No other major repairs or upgrades were made at VanSant in FY 2013.

A capital project was completed on the exhaust stack and the D1 water tank was cleaned in FY 2014. NAES Instrument, Control and Electrical (IC&E) Technicians completed four recommended General Electric Technical Information Letters (TIL) projects for VanSant Unit 11 in the spring 2014 outage as shown below:

1. Annual TIL 1004-2R1 (IGV's and first stage corrosion/pitting inspection)
2. Annual TIL 1068-2R1 (IGV's bushing inspection)
3. Annual TIL 1132-2 (IGV thrust washer corrosion inspection)

Spring 2014 inspections indicated normal wear on the unit and minor maintenance was completed. During the fall 2014 outage, several minor projects were identified and will be completed at the time of the next major project on the unit. No issues were reported.

Every five years, the fuel tanks are inspected for rust and corrosion for leak prevention. The next scheduled inspection is in FY 2015.

3.2.4 Production Plant Conclusion

Based on statements and information provided, as well as the observations and reviews performed, it is the opinion of Burns & McDonnell that the City's power generation facilities are being operated and maintained consistent with accepted electric utility practice in the United States. In general, the performance, operation, maintenance, staff, planning, and training aspects for the McKee Run and VanSant stations were found to be above average. Specifically, the generation facilities have demonstrated a high level of availability despite the dispatching of the units primarily for peak demand.

3.3 Transmission & Distribution Plant Assessment

On June 4, 2015, Mr. Ted Kelly visited the City to collect information and to observe the City transmission and distribution system, as operated and maintained by the Electric Division. Mr. Harry Maloney provided information related to the transmission and distribution system. Mr. Maloney also led a tour of the electric transmission and distribution system.

3.3.1 T&D Plant Operations

The Electric Division distributes power to its customers by a network of transmission lines, distribution substations, and distribution lines. The transmission lines are rated at 69 kV and are connected to fifteen distribution substations located throughout the service area. The distribution substations reduce the power from transmission voltages to the primary distribution voltages of 12 kV to facilitate distribution of electric power to customers.

3.3.1.1 Operations and Maintenance

The Electric Division has a SCADA system that is monitored continuously for any problems that may arise in the Electric System. The main control room has two system operator desks and a large screen where system operating information is displayed. System operators can monitor the Electric System operation, such as voltage levels, current flows, etc. and make necessary adjustments as problems arise. The systems operators have received some PJM training, but are not required to be certified as Delmarva Power is the controlling agency.

Loading on substation transformers used for an emergency, a switching operation, or maintenance is limited to 120 percent of the rated capacity, followed by a twelve-hour cool-down period. The Electric Division has eight line crews to work on the system. Four crews are responsible for overhead lines, four crews are responsible for underground lines, and one crew is responsible for maintenance. The primary responsibilities of the eight line crews are installation of new service connections and construction of new lines. The trouble crew maintains the street lights, repairs underground services and is the first responder to outages. Tree trimming is contracted out and is no longer performed by the Electrical Division; however, performance of the contractor is monitored by the Line Crew Superintendent.

The Substation/Relay Maintenance Division is responsible for operation and maintenance of the substations and associated equipment. Visual inspections of substations, associated equipment, trip counter checks and battery systems checks are performed regularly. The Substation/Relay Maintenance Division is also responsible for contractor oversight during annual transformer condition assessments.

TJ/H2b Analytical Services completed the annual transformer condition assessments in February 2011. No abnormal gas was indicated and since the oil condition was within acceptable parameters, TJ/H2b recommended the continuation of normal operation. The City has a contract with an environmental consultant to check each substation for oil leaks and to provide instruction on cleaning up in the event of an oil spill.

The City contracts with an outside firm to inspect and chemically treat each wood pole in the Electric System every ten years. This is accomplished by awarding a five-year contract to spread out the expenses. Pole treatments were completed in May of 2013. Dover treated and inspected over 760 poles during 2013, of which, only one pole was rejected resulting in a 99.9 percent pass rate.

3.3.1.2 Design Standards and Specifications

The Electric Division designs the transmission and distribution circuits and some substation upgrades in conformance with national safety standards. Other substation and transmission design is contracted to Pike Electric, Inc.

The underground distribution design utilizes road or alley front access construction. This design means the electrical equipment, such as transformers and underground cable, are installed beside the road instead of behind houses or buildings. The advantage of front access construction is the accessibility for maintenance and repairs to cable and electric equipment. The underground cables are installed in polymerized vinyl chloride pipe for added protection and for easy cable replacement. The Electric Division installs jacketed, concentric cable that is rated at 15 kV, with 133 percent ethylene propylene rubber insulation.

The standard overhead distribution design utilizes a flat construction with a single cross-arm and insulators on 45-foot class 2 poles. Typically all electrical equipment locations have ground rods installed with measured readings of 25 ohms or less.

The substation design is generally a low-profile rigid bus design. The circuit breakers are SF6 gas-filled and the relays are microprocessor based with SCADA control and monitoring.

3.3.1.3 System Reliability

The Electric Division provides for reliability of its distribution system by configuring a majority of its distribution circuits in primary open loop arrangements, improving existing circuits, and installing adequate substation transformer capacity. Normal transformer and line loading are limited to provide sufficient margin to convey firm power requirements during an emergency or a switching operation, or for maintenance.

3.3.1.4 Power Quality

The Electric Division does not have any significant power quality problems. The overall power factor for the Electric System is 99.9 percent. Power transformers are equipped with load tap changers that regulate bus voltages at the distribution substations. Distribution transformers are equipped with no-load taps to

make voltage adjustments. There are capacitors and voltage regulators on the Electric System that control voltage and vars on the portion of the system furthest away from the current source and generation. The system operators monitor the power factor closely and turn on capacitors or adjust the generation to compensate for low power factors.

3.3.1.5 Safety

Mr. Maloney reported to Burns & McDonnell the Electric Division had 94.5 hours of lost time in FY 2014 comprised of four incidents. Details of the incidents were not provided for this report.

3.3.1.6 Capital Improvements

The following describes completed, on-going, and planned improvements to the City's transmission and distribution assets:

Recently Completed (FY 2012-FY 2014):

- Wyoming Avenue - Underground
- Pleasonton Acres - Underground
- Morris Estates - Underground
- Royal Grant - New Underground Service
- Dover Downs Switchgear
- Lebanon 400 Feeder
- Bayside Drive (Persimmon to White Oak Rd)
- Distribution System Upgrades - Unidentified
- Substation Equipment & Fencing (Division St)
- SCADA Master Hardware Replacement
- Transmission Line Maintenance Program
- Distribution Feeder Replacement Program
- Distribution Capacitors - Overhead
- 69-kV Switch Replacement
- McKee Run Transformer/Substation Repairs
- Frazier Substation Reliability Upgrade (900 circuits)
- Substation PT & CT Replacement Program

On-Going:

- Substation Battery Replacement

- Capitol Park - Underground
- Richardson Circle
- Chandelle Airport URD
- Townpoint Distribution Upgrades
- Lighting Project and Rehabilitation
- Horsepond Road Substation Reliability Upgrade
- McKee Run & State College Road Feeder replacements
- GOTP Transmission Line Relocation
- Horsepond SS to Cartanza 69-kV Rebuild
- 69kv Substation Cable Replacement North Street
- General Scott Switchgear
- New Developments - UG Transformers
- New Developments - UG Conductors/Devices
- West Dover Connector
- Meadows at Jefferson Terrace
- Chestnut Grove Development
- Garrison Oak Technical Park
- Uzin Utz Manufacturing
- Playtex/Energizer System Upgrades
- Clearview Meadows
- Dover Downs Tower
- Leander Lakes
- Eden Hill Lights
- Family Dollar Store
- Meter Replacements & System upgrades

Planned (through FY 2020):

- Distribution System Upgrades - Unidentified
- Oak Grove Trailer Park Distribution Upgrade
- Lakeland Laurel Point - Distribution Upgrade
- Rt 8/ Mifflin Road Crossing - Distribution Upgrade
- Route 8/Taps - Distribution Upgrade
- Townsend Brothers - Distribution Upgrade

- Persimmon Tree Apartments - Distribution Upgrade
- North Street OH to UG (Governors to Queen)
- Dover East Estates - Distribution Upgrade
- Satellite Synchronized Substation Clocks
- Horsepond Road URD - Distribution Feeders
- Transmission Line Maintenance Program
- Distribution Capacitors - Overhead
- Distribution Capacitors - Underground
- Frazier Substation Reliability Upgrade (900 circuits)
- Dover Air Force Base Substation Relocation
- System Automation
- DNREC R & R Metering
- Public Works Wetland Project
- Washington Street Lights
- NBR Properties, LLC

3.3.2 T&D Plant Condition Assessment

The transmission and distribution system assessment included drive-by observations of a sample of the transmission circuits and distribution circuits. Each of the fifteen substations was physically observed during the tour.

- McKee Substation
- College Park Substation
- Dover Downs Substation
- Frazier Substation
- VanSant Substation
- General Scott Substation
- Division Street Substation
- Mid-City Substation
- Mayfair Substation
- St. Joan's Substation
- Cartanza Substation
- Horsepond Substation

- Danner Farm Substation
- Lebanon Substation
- North Street Substation

In general, the substations appeared to be in acceptable operating conditions. All battery set in the system substations are less than ten years of age. Mr. Harry Maloney, the Electric Department Director, provided a tour of the substations with Ted Kelly on June 4, 2015. The General Scott Substation has relatively new breakers, and the 12-kV switchgear and controls are scheduled to be upgraded in FY 2016. Horsepond Substation was recently rebuilt which included a three breaker 69-kV system for the 69-kV bus and the substation logic was reprogrammed. Work started in late February 2014 and was completed in November 2014. The Dover Downs Substation added a three breaker system for the 69-kV bus and a direct underground feed to Dover Downs. At the Cartanza Substation, Delmarva has expanded their side of the substation. In the near future, the Lebanon Substation will need work on the capacitor bank.

The City has recently completed the process of replacing conductor throughout the entire 69-kV system. In addition, the City has invested heavily in its undergrounding program to increase system reliability. Moving forward, the system will continue to be converted from overhead to underground distribution, but this process has slowed to allow for further evaluation.

3.3.3 T&D Plant Conclusion

It is the opinion of Burns & McDonnell that the design, construction, operation and maintenance of the City's electric transmission and distribution system and the associated facilities are consistent with current generally accepted electric utility standards. In completing Annual Engineering Consultant's Reports over the past several years, Burns & McDonnell has observed that the City has made appropriate system upgrades and improvements. The City and the Electric Division are proactive in preventative maintenance and expansion of the Electric System before problems arise.

4.0 – FINANCIAL OVERVIEW AND ASSESSMENT

4.0 FINANCIAL OVERVIEW AND ASSESSMENT

A review of the financial results of the Electric System for the fiscal year ended June 30, 2014, is provided herein.

4.1 Required Revenue

The level of revenues required from the retail electric rates for the Electric Division was determined through the analysis of the financial results and net income or net margins for the most recent fiscal year. The City of Dover, Delaware Resolution Authorizing and Securing Electric Revenue Bonds, adopted December 23, 1985 requires that the Electric Division maintain a debt service coverage ratio of 1.25. The following is an excerpt from Section 502(c) of the resolution.

> *"(c) The total amount of the Revenues of the Electric System during the preceding fiscal year shall have been not less than the total of the following:*
>
> *(3) The Current Expenses of the Electric System during the current fiscal years shown by the Annual Budget . . . for such fiscal year, and*
>
> *(4) One hundred twenty-five percent (125%) of the maximum amount of the Principal and Interest Requirements for any fiscal year thereafter on account of all bonds then Outstanding under the provisions of this Resolution.*
>
> *The City further covenants that, from time to time and as often as it shall appear necessary, it will adjust the electric rates as may be necessary or proper so that the revenues of the Electric System in each fiscal year will not be less than the total of the amounts set forth in subdivision (c) of this section."*

4.2 Electric Rates

Customers of the Electric Division are charged for the electric service based on rate schedules, tariffs, or contracts that reflect the costs to the Electric Division of providing that service. For purposes of setting electric rates, customers with similar load and service characteristics should be placed in the same rate classification.

A comprehensive cost-of-service and rate design study was completed in 2006 and subsequent rate analyses were completed in 2007 and 2008 to examine revenue requirements and revenue generation. Specifically, the 2006 rate study was conducted to address increased costs associated with a new power supply contract that became effective on July 1, 2006. The rate study recommended combining a number

of rate classes and implementing rate increases on July 1, 2006. The 2006 rate study also recommended an additional increase be implemented on January 1, 2007 to cover increased costs associated with operating the generating station. The 2007 and 2008 rate analyses re-examined Electric Division revenues and expenses and recognized additional revisions to power supply costs. As a result of these analyses, additional rate increases were implemented on July 1, 2007 and July 1, 2008.

The City retained Burns & McDonnell to conduct cost-of-service and rate design study in 2012 followed by an update in 2013. The 2012 study examined revenue adequacy, revenue responsibility, and revenue recovery for the Electric Division. It scrutinized customer classes and proposed adjustments for demand rate components and corresponding changes to energy charges. In May 2013, the City retained Burns & McDonnell to incorporate updated power supply cost projections, and other updates, into the model it developed as part of the 2012 Study. An update to the model and rates analysis was completed in early 2015 to reallocate costs and redesign rates in order to remain regionally competitive. Electric rates are approved by Council on an annual basis. The current rate classes are listed below.

- Residential
- Small Commercial (1 Phase, 3 Phase, 1 Phase Heating, Church, and Municipal)
- Medium Commercial (1 Phase & 3 Phase)
- Large Commercial (3 Phase with Reactive Metering)
- Primary
- Transmission
- Outdoor Development Lighting
- Private Outdoor Lighting

4.3 Operating Results

Table 4-1 presents a summary of the annual energy sales, the average monthly number of customer accounts, and the annual average kilowatt-hour (kWh) energy per customer of the Electric Division for FY 2012 through FY 2014. Annual energy sales were 729.8 GWh in FY 2013, an increase of 1.8 percent from FY 2012. Energy sales decreased to 720.9 GWh in FY 2014, a 1.2 percent decline from FY 2013.

Table 4-1: Annual Sales and Customer Accounts

	FY 2012	FY 2013	FY 2014
Energy Sales (kWh)			
Residential	196,388,942	204,759,680	205,302,701
Commercial	230,814,311	232,220,877	230,178,899
Primary	160,560,686	167,144,717	164,218,197
Transmission	122,563,783	119,003,804	114,470,558
Outdoor Lighting	6,681,804	6,704,350	6,724,400
Total Energy Sales	717,009,526	729,833,428	720,894,755
Average Number of Monthly Customers (accounts)			
Residential	19,910	19,990	19,900
Commercial	3,355	3,412	3,412
Primary	39	37	37
Transmission	4	4	5
Outdoor Lighting	811	811	811
Total Customers Accounts	24,119	24,254	24,165
Energy Usage Per Customer (kWh/cust./yr.)			
Residential	9,864	10,243	10,317
Commercial	68,797	68,060	67,462
Primary	4,116,941	4,517,425	4,438,330
Transmission	30,640,946	29,750,951	22,894,112
Outdoor Lighting	8,239	8,267	8,291
Average Usage Per Customer	29,728	30,091	29,832

Table 4-2 presents revenues from sales, revenue per kWh ratios, and average revenue per customer ratios for each revenue classification. Total revenue from sales to electric customers in FY 2014 was $78.2 million, representing a decrease of $10.1 million, or 11.5 percent from FY 2013. Total revenue from sales to electric customers includes utility tax revenue and power cost adjustment revenue.

In FY 2014, the average rate revenue per kWh for residential customers was 12.61 cents and the total average rate revenue was 10.85 cents per kWh. The 2014 national average retail prices of electricity to ultimate customers, as published by the US Energy Information Administration (EIA), were 12.50 and 10.45 cents per kWh for residential customers and across all sectors, respectively.[1] For a state-wide comparison, the EIA summarized the Delaware 2014 average monthly utility-level retail sales of

[1] US Energy Information Administration, Table 5.3. Average Retail Price of Electricity to Ultimate Customer, Data for March 2015, Release Date: May 26, 2015. http://www.eia.gov/electricity/monthly/xls/table_5_03.xlsx (June 11, 2015)

electricity and associated revenue per kWh to be 13.37 cents per kWh for residential customers and 11.33 cents per kWh across all sectors.[2]

Table 4-2: Annual Revenues and Sales Ratios

	FY 2012	FY 2013	FY 2014
Revenue			
Residential	$ 28,112,242	$ 28,200,423	$ 25,882,393
Commercial	31,767,838	29,642,803	25,852,554
Primary	18,056,475	17,809,562	15,619,663
Transmission	12,551,239	11,376,866	9,674,084
Outdoor Lighting	1,460,185	1,301,542	1,158,558
Total Revenue	$ 91,947,980	$ 88,331,196	$ 78,187,252
Revenue/kWh			
Residential	$ 0.1431	$ 0.1377	$ 0.1261
Commercial	0.1376	0.1276	0.1123
Primary	0.1125	0.1066	0.0951
Transmission	0.1024	0.0956	0.0845
Outdoor Lighting	0.2185	0.1941	0.1723
Total Revenue/kWh	$ 0.1282	$ 0.1210	$ 0.1085
Revenue Per Customer			
Residential	$ 1,412	$ 1,411	$ 1,301
Commercial	9,469	8,688	7,577
Primary	462,987	481,340	422,153
Transmission	3,137,810	2,844,216	1,934,817
Outdoor Lighting	1,800	1,605	1,429
Average Revenue Per Customer	$ 3,812	$ 3,642	$ 3,236

The Electric Division's largest cost in providing electric service to its customers in FY 2014 was the wholesale cost of power. The Electric Division purchased power from the PJM Interconnection marketplace through its Energy Manager, TEA. The cost of non-generated power includes energy and demand costs, power supply management expense, PJM charges and credits, generation fuels cost, and capacity charges and credits.

The significance of power supply cost to the Electric Division is illustrated in Table 4-3. The top portion of the Table shows net operating revenue as the difference between total revenues generated by the rates and the cost of power supply.[3] The ratios of power supply cost to sales revenues were calculated for FY

[2] US Energy Information Administration, Table 5.6.B. Average Retail Price of Electricity to Ultimate Customers by End-Use Sector by State, Year-to-Date through December 2014 and 2013, Data for December 2014, Release Date: February 2015. http://www.eia.gov/electricity/monthly/current_year/february2015.pdf (June 11, 2015)

[3] For the purposes of this Report, the phrase "Power Supply" refers to the sum of the costs of power purchased and power generated. This includes plant costs and the cost of fuel. Power Supply also includes any expenses in the CIP

2012 through FY 2014. As illustrated, the Electric Division's power supply cost as a percentage of rate revenue increased from 63.0 percent in FY 2013 to 73.2 percent in FY 2014.

Table 4-3: Revenue Margins and Unaccounted for Energy

	FY 2012	FY 2013	FY 2014
Net Revenue Margins ($)			
Sales Revenues	$ 91,947,980	$ 88,331,196	$ 78,187,252
Power Supply	58,929,133	55,681,251	57,233,726
Net Revenue Margin	$ 33,018,847	$ 32,649,945	$ 20,953,526
Net Revenue Ratio	64.1%	63.0%	73.2%
Unaccounted for Energy (kWh)			
Power Supply	738,190,000	752,869,000	762,254,000
Energy Sales	717,009,526	729,833,428	720,894,755
Unaccounted for Energy (Losses)	21,180,474	23,035,572	41,359,245
Percentage	2.9%	3.1%	5.4%

Table 4-3 also illustrates the ratio of the amount of energy purchased and delivered to the electric system to total energy sales. This relationship identifies the level of unaccounted for energy in the Electric System. This unaccounted for energy may include energy that was unmetered, metered inaccurately, stolen, lost, PJM transmission line losses, local system line/transformer losses, etc. The bottom portion of Table 4-3 presents these comparisons for the Electric Division for FY 2012 through FY 2014. As shown, the percentage ratio of the unaccounted for energy to the total energy purchased for FY 2014 was 5.4 percent. This is up from 3.1 percent in FY 2013. In previous Annual Engineering Consultant's Reports, Outdoor Lighting energy was recorded as losses. In this report, Outdoor Lighting customer accounts, energy sales, and revenues were recorded as a separate rate class. The impact this modification has on this Financial Overview and Assessment is most pronounced on the Table 4-3 Unaccounted for Energy analysis, as losses are shown to have decreased from corresponding years in previous reports.

Table 4-4 presents a re-creation of the Electric Division's Statement of Revenues, Expenses, and Changes in Unreserved Retained Earnings for the Electric Revenue Fund for FY 2012 through FY 2014. Net income decreased from FY 2013, totaling -$2.3 million in FY 2014. A decrease in Operating Transfers – Out was based on avoiding the $2.0 million transfer out from the previous year used to finance the Calpine Project which secured a Purchase Power Agreement and Capacity Agreement in light of the decommissioning Units 1 and 2.

Fund that are not capital expenses. The phrase "Purchased Power" refers only to the cost of power purchased from the market and other directly associated costs.

Table 4-4: Comparative Statement of Revenues, Expense, and Changes in Unreserved Retained Earnings

	FY 2012	FY 2013	FY 2014
Operating Revenues:			
Charges for Electric Service	$ 91,947,980	$ 88,331,196	$ 78,187,252
Miscellaneous Services/Incomes	1,581,421	2,354,497	1,287,501
Total Operating Revenues	$ 93,529,401	$ 90,685,693	$ 79,474,753
Operating Expenses:			
General Administration	$ 5,223,149	$ 4,470,795	$ 2,450,884
Power Supply	58,929,133	55,681,251	57,233,726
Transmission/Distribution	3,023,566	3,267,698	3,806,078
Engineering	1,163,379	1,107,231	1,331,909
Metering	205,791	219,010	284,229
System Operations	498,063	544,405	739,406
Utility Tax	1,548,208	1,443,853	1,258,957
Depreciation	4,783,444	4,621,501	4,748,120
Retirees Pension	-	1,115,765	975,700
Retiree Health Care	1,015,731	696,500	513,300
Total Operating Expenses	$ 76,390,464	$ 73,168,009	$ 73,342,309
Net Operating Income	$ 17,138,937	$ 17,517,684	$ 6,132,444
Non-operating Revenues (Expenses)			
Interest Earned			
Operating Fund	$ 120,876	$ 190,469	$ 2,112
Reserved Funds	348,640	506,771	216,010
Net Increase in Fair Value of Investments	45,200	(614,989)	426,399
Interest and Fiscal Charges	(1,283,174)	(1,432,779)	(1,138,739)
Bond Discount Amortized	-		
Gain/(Loss) on Sale of Assets	47,966	5,203	14,439
Total Non-operating Revenues(Expenses)	$ (720,492)	$ (1,345,325)	$ (479,779)
Net Income Before Operating Transfers	$ 16,418,445	$ 16,172,359	$ 5,652,665
Operating Transfers - In	-	8,282	
Operating Transfers - Out	(7,876,288)	(10,000,000)	(8,000,000)
Total Net Operating Transfers	$ (7,876,288)	$ (9,991,718)	$ (8,000,000)
Net Income	$ 8,542,157	$ 6,180,641	$ (2,347,335)

4.3.1 Adequacy of Electric Rates

The City's Bond Resolution requires annual revenues of the Electric Division be no less than the total current expenses plus 125 percent of the greatest remaining annual debt service. "Current expenses", as defined in the Resolution, includes all expenses necessary to maintain and repair the Electric System, all administrative expenses, and engineering, legal or other consultant fees. Transfers to reserve accounts and special purpose funds, and allowances for depreciation are specifically excluded from "current expenses."

In order to determine if the City and the Electric Division have met this requirement, the net income shown in Table 4-4 was adjusted to include the interest on bonds, depreciation expense, and other non-cash income and expenses. Table 4-5 summarizes net income adjustments and the calculation of the revenues available for debt service for FY 2012 though FY 2014.

Table 4-5: Debt Service Coverage

	FY 2012	FY 2013	FY 2014
Net Income	$ 8,542,157	$ 6,180,641	$ (2,347,335)
Plus Excluded Expenses:			
Operating Transfers - Out	$ 7,876,288	$ 10,000,000	$ 8,000,000
Depreciation	4,783,444	4,621,501	4,748,120
Interest and Fiscal Charges	1,283,174	1,432,779	1,138,739
Bond Discount Amortized	-	-	-
Gain/(Loss) on Sale of Assets	(47,966)	(5,203)	(14,439)
Less Excluded Income:			
Net Increase in Fair Value of Investments	(45,200)	614,989	(426,399)
Interest Earned - Reserve Funds	(348,640)	(506,771)	(216,010)
Revenues Available for Debt Service	$ 22,043,257	$ 22,329,654	$ 10,882,676
Maximum Principal and Interest in Any Year	$ 3,401,954	$ 3,401,954	$ 3,344,404
Debt Service Coverage	6.48	6.56	3.25
Minimum Required Debt Service Ratio	1.25	1.25	1.25

As Table 4-5 illustrates, the City and the Electric Division maintained a debt service coverage ratio each year that exceeded the required 125 percent plus current expenses. Therefore, the revenues generated by the current electric rates have been sufficient to meet the applicable covenants of the Resolution.

Section 502 of the Resolution requires that the annual debt service used in evaluating the revenues is to be the maximum amount for any fiscal year thereafter. Table 4-6 presents the annual totals of principal and interest amounts due on bonds currently outstanding. The calculation of the debt service coverage ratio in Table 4-5 is based on the total maximum debt service expense in any fiscal year. The FY 2014 calculation was based on the total FY 2015 debt service expense of $3,344,404.

4.4 Status of Revenue Bonds

At the end of FY 2014, the City had two series of outstanding electric revenue bonds that were issued pursuant to the Resolution. On July 1, 2008, the City issued $22,200,000 in Electric Revenue Bonds (2008 Bonds). The proceeds from the sale of the 2008 Bonds were used (i) to finance or reimburse the

City for improvements to the City's electric system; (ii) to fund a Debt Service Reserve Fund; and (iii) to pay the costs of issuance of the 2008 Bonds.

On November 17, 2010, the City issued $8,810,000 of Electric Revenue Refunding Bonds (Series 2010). The proceeds from the sale of the Series 2010 Bonds were used (i) to refund the Series 2004 Bonds, and (ii) to pay the costs of issuance of the Series 2010 Bonds. The non-taxable Series 2010 Bonds received an underlying rating of Aa2 by Moody's Investors Services and an underlying rating of A+ by Fitch Ratings.

Table 4-6 illustrates the debt service schedule for the Series 2008 and 2010 Bonds. The principal and interest and the annual total are shown for each series of bonds. At the time of issuance of the Series 2010 Bonds, the combined outstanding principal balance for both series of bonds was $23,940,000.

Table 4-6: Debt Service Schedule of Electric Revenue Bonds

	2008 Electric Revenue Bonds			2010 Electric Revenue Refunding Bonds			Total Annual
Period	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Debt Service
FY 2015	$ 450,000	$ 953,704	$ 1,403,704	$1,810,000	$ 130,700	$ 1,940,700	$ 3,344,404
FY 2016	475,000	930,579	1,405,579	1,890,000	47,250	1,937,250	3,342,829
FY 2017	695,000	901,329	1,596,329	-	-	-	1,596,329
FY 2018	730,000	865,704	1,595,704	-	-	-	1,595,704
FY 2019	765,000	831,580	1,596,580	-	-	-	1,596,580
FY 2020	800,000	798,706	1,598,706	-	-	-	1,598,706
FY 2021	840,000	763,856	1,603,856	-	-	-	1,603,856
FY 2022	880,000	726,756	1,606,756	-	-	-	1,606,756
FY 2023	925,000	686,694	1,611,694	-	-	-	1,611,694
FY 2024	970,000	644,056	1,614,056	-	-	-	1,614,056
FY25-34	12,710,000	3,405,972	16,115,972	-	-	-	16,115,972
Total	$20,240,000	$ 11,508,936	$31,748,936	$3,700,000	$ 177,950	$ 3,877,950	$35,626,886

4.5 Insurance

The City maintains a comprehensive insurance program to insure against varying types of liabilities and significant losses related to various Electric Division properties. Section 706 of the Resolution reads:

> *"The City covenants that it will maintain a practical insurance program, with reasonable terms, conditions, provisions and costs, which the City Manager determines, with the approval of the Engineering Consultants, will afford adequate protection against loss, including loss of Revenues, caused by damage to or destruction of the Electric System or any part thereof and also comprehensive public liability insurance on the Electric System for bodily injury and property damage in such amounts as may be approved by the Engineering Consultants."*

Table 4-7 summarizes itemized insurance coverage procured by the City for the period July 1, 2014, through June 30, 2015. Burns & McDonnell has reviewed this list of insurance, and in the opinion of Burns & McDonnell, as Engineering Consultant and not as insurance counselor, the insurance in full force and affect appears to satisfy the requirements of Section 706 of the Resolution.

Table 4-7: Schedule of Insurance Coverage in Effect

Starr Technical Risks Agency	July 1, 2014 - June 30, 2015 Coverage
Property	
Earth Movement -Per Occurrence and in the Annual Aggregate, except	$20,000,000
Earth Movement in High Hazard Earth Movement Zones;	EXCLUDED
Earth Movement in California;	EXCLUDED
Flood -Per Occurrence and in the Annual Aggregate;	10,000,000
Accounts Receivable;	100,000
Business Interruption;	EXCLUDED
Contingent Time Element Coverage;	EXCLUDED
Debris Removal (or 25% of Direct Property Loss, whichever the greater);	2,500,000
Demolition and Increased Cost of Construction;	10,000,000
EDP Media;	1,000,000
Errors and Omissions;	2,000,000
Expediting Expense;	1,000,000
Extra Expense, excluding replacement power or increased cost of generation, transmission and/or distribution of electricity, water or natural gas;	2,000,000
Fire Department Service Charges and Extinguishing Expenses;	500,000
Hazardous Substances -Per Occurrence and in the Annual Aggregate;	500,000
Inland Transit;	2,500,000
Newly Acquired Locations -90 Days reporting;	1,000,000
Personal Property Temporarily Off Premises;	100,000
Course of Construction;	EXCLUDED
Miscellaneous Unnamed Locations (except perils of Flood, Earth Movement and	500,000
Valuable Papers and Records;	100,000

Deductibles

All deductibles listed below are per occurrence except with respect to coverage provided under the Boiler & Machinery which shall be any One Accident.

In respect of Damage to Insured Property:

$750,000 per Occurrence, except;

$100,000 per Occurrence as respects Transit.

In respect of Time Element loss (Extra Expense):

45 days per Occurrence, except;

72 hours per Occurrence in respect of Service Interruption.

XL Insurance	July 1, 2014 - June 30, 2015 Coverage
Property	
per Occurrence and in the Annual Aggregate in respect of Flood;	$ 10,000,000
per Occurrence and in the Annual Aggregate in respect of Earth Movement, Excluded. per Occurrence and in the Annual Aggregate applicable in High Hazard Movement zones;	20,000,000
per Occurrence and in the Aggregate in respect Hazardous Substance;	500,000
per Occurrence in respect of Business Interruption;	EXCLUDED
per Occurrence in respect of Accounts Receivable;	100,000
per Occurrence in respect of scheduled, direct Contingent Time Element;	EXCLUDED
per Occurrence in respect of Incidental Course of Construction;	5,000,000
(or 25.00% of the direct physical loss, whichever greater) per Occurrence in respect of Debris Removal;	2,500,000
per Occurrence in respect of Demolition and Increased Cost of Construction;	10,000,000
per Occurrence in respect of Electronic Data Processing Media;	1,000,000
per Occurrence in respect of Errors and Omissions;	2,000,000
per Occurrence in respect of Expediting Expense;	1,000,000
per Occurrence in respect of Extra Expense excluding replacement power of increased cost of generation, transmission and/or distribution of electricity, water or natural gas;	2,000,000
per Occurrence in respect of Fire Department Service Charges and Extinguishing Expenses;	500,000
per Occurrence in respect of Newly Acquired Locations (ninety (90) days reporting);	1,000,000
per Occurrence in respect of property in Course of Inland Transit;	2,500,000
per Occurrence in respect of Miscellaneous Unnamed Locations, except:	500,000
Excluded. per Occurrence in respect of Flood;	
Excluded. per Occurrence in respect of Earth Movement;	
Excluded. per Occurrence in respect of Named Storm;	
per Occurrence in respect of Valuable Papers and Records;	100,000
per Occurrence in respect of Personal Property Temporarily Off Premise.	100,000

Deductibles / Retentions

Application of Deductibles as described in Policy form unless otherwise indicated in Policy Form Revisions Section, if applicable.

In respect of Damage to Insured Property:

$750,000, Per Occurrence, except;

$100,000, per Occurrence as respect Transit;

In respect of Time Element loss (Extra Expense):

45 days per Occurrence except;

72 hours Per Occurrence in respect of Service Interruption

4.6 Operating and Reserve Accounts

The Electric Revenue Fund and the Electric Improvement & Extension (I&E) Fund are the City's two funds devoted to the Electric Division. The funds are used to manage cash and transactions related to utility operations and capital expenditures, respectively. Each fund includes certain cash accounts established to make moneys available for specific purposes when they are needed. The accounts maintained within the Revenue and I&E Funds are listed herein.

Electric Revenue Fund

- Insurance Reserve Account
- Contingency Reserve Account
- Electric Rate Stabilization Reserve Account
- Interest and Sinking Account

Electric Improvement & Extension Fund

- Depreciation Reserve Account
- Future Capacity Reserve Account

The following are descriptions of each Fund, their respective accounts and their purposes.

4.6.1 Electric Revenue Fund

The Electric Revenue Fund was established in Section 503 of the Resolution. All revenues are to be deposited into the Electric Revenue Fund when received. Current expenses are to be paid and other accounts are to be maintained from the Electric Revenue Fund. Moneys are transferred from the Electric Revenue Fund to the Electric Rate Stabilization Reserve Account, the Interest and Sinking Account, the I&E Fund, the Depreciation Reserve Account, and the Future Capacity Reserve Account.

4.6.1.1 Insurance Reserve Account

The Insurance Reserve Account was established by the City to fund insurance deductibles in the event of loss(es) covered by the City's insurance policies then in effect. The target minimum balance in the Insurance Reserve is $350,000. The reserve balance at the end of FY 2014 was $737,543. In an effort to reduce insurance premiums, the City approved raising the minimum reserve balance to $750,000 in 2014. The new minimum balance will be in force in FY 2016; achieved by the accumulation of interest earnings and a $10,000 appropriation.

4.6.1.2 Contingency Reserve Account

The Contingency Reserve Account was established by the City in FY 2003 to provide for unplanned expenditures that may not be avoidable. The City's Financial Policies require that a minimum balance be maintained in the Contingency Reserve Account equal to 1.0 percent of the current year revenues for the Electric Revenue Fund. The FY 2014 year-end balance was $819,136, which is equal to 1.03 percent of the FY 2014 revenues for the Electric Revenue Fund.

4.6.1.3 Electric Rate Stabilization Account

The Electric Rate Stabilization Reserve Account was established in FY 2005 to offset the costs of the power cost adjustment to the customers of Dover. The account's target balance is a minimum of 3.0 percent, not to exceed 10.0 percent, of purchased power cost in any given year. Any excess of this amount will be refunded to customers in future years by reducing the rate of the power cost adjustment. The account's FY 2014 end-of-year balance was $10,465,824, which was 20.4 percent of the FY 2014 purchased power cost.

4.6.1.4 Interest and Sinking Account

The Interest and Sinking Account was established in Section 507 of the Resolution. This account consists of two restricted accounts: the Bond Service account and the Reserve Account. The Bond Service Account is funded with equal monthly transfers from the Electric Revenue Fund such that the balance, as of each payment date for interest or for principal and interest, will be equal to the amount of the payment due. The payments of principal and interest due on bonds are made from the Bond Service Account. The Reserve Account is funded by transfers from the Electric Revenue Fund, as necessary, to maintain a balance equal to the maximum combined principal and interest for any future fiscal year through the life of all bonds then outstanding. Moneys in the Reserve Account are used for paying interest on and principal of bonds when the balance in the Bond Service Account is insufficient for making those payments. Excess moneys in the Reserve Account are also used towards paying current interest payments. The total amount in the Restricted Accounts for the 2008 and 2010 bonds as of June 30, 2014, was $3,529,445.

4.6.2 Electric Improvement and Extension Fund

The I&E Fund was established in Section 507 of the Resolution. Funds are transferred to the I&E Fund from the Electric Revenue Fund to the extent that the amount of funds available from the Electric Revenue Fund exceeds the total of the amounts required to be added to the Interest and Sinking Account. The I&E Fund also receives additional funding from the Depreciation Reserve Account, the Future Capacity Reserve Account, and from development receipts. Section 510 of the Resolution indicates that,

except for certain situations, moneys held in the I&E Fund are to be used only for payment of costs of unusual maintenance or repairs, renewals or replacements, obtaining or replacing equipment, constructing extensions, additions, or improvements, and engineering expenses related to the foregoing activities.

4.6.2.1 Depreciation Reserve Account

The Depreciation Reserve Account represents moneys that have been set aside for the sole purpose of funding renewals and replacements of the Electric System as components or equipment wear out, deteriorate, or otherwise become unsuitable for the intended purpose. Transfers from the Electric Revenue Fund and investment earnings are the only sources of additional moneys for the Depreciation Reserve Account. Transfers to the I&E Fund are made as necessary to fund capital projects. The target appropriation for the Depreciation Reserve Account each year is the excess of depreciation expense for the year over the amount of principal included in debt service payments made during the year. The reserve balance at the end of FY 2014 was $9,915,104.

4.6.2.2 Future Capacity Reserve Account

The Future Capacity Reserve Account was established to set aside and accumulate funds from the Electric Revenue Fund for use in evaluating and pursuing activities related to the Electric Division's alternatives for power supply resources for future demand for electricity. The target balance for this reserve is $10,000,000. The reserve balance at the end of FY 2014 was $10,064,390.

Table 4-8 presents FY 2012 through FY 2014 year-end summaries of the activity within the cash accounts described above. The Insurance Reserve Account, the Contingency Reserve Account, the Electric Rate Stabilization Reserve Account, and the Interest and Sinking Account are accounts within the Electric Revenue Fund. The Depreciation Reserve Account and the Future Capacity Reserve Account are accounts within the I&E Fund.

Table 4-8: Reserve Account Activity and Balances

	Insurance Reserve Account	Contingency Reserve Account	Electric Rate Stabilization Account	Bond Reserve Account	Depreciation Reserve Account	Future Capacity Account
Year Ended June 30, 2012						
Balance in Account on July 1	$ 403,334	$1,056,788	$ 6,160,167	$3,519,376	$10,412,221	$ 9,178,771
Receipts						
Interest Earned	4,661	14,026	69,966	3,443	129,837	126,711
Appropriations	-	-	5,000,000	3,370,068	-	-
Total Funds Available	$ 407,995	$1,070,814	$11,230,133	$6,892,886	$10,542,058	$ 9,305,482
Disbursements						
Debt Service Payments	-	-	-	(3,370,054)	(500,000)	-
Transfer to Capital Projects/Ops.	(70,730)	-	(1,000,000)	-	(300,000)	500,000
Balance in Account on June 30	$ 337,265	$1,070,814	$10,230,133	$3,522,833	$ 9,742,058	$ 9,805,482
Year Ended June 30, 2013						
Balance in Account on July 1	$ 337,265	$1,070,814	$10,230,133	$3,522,833	$ 9,742,058	$ 9,805,482
Receipts						
Interest Earned	10,178	16,022	151,991	3,224	172,146	153,208
Appropriations	385,600	-	12,400,000	3,375,534	-	2,100,000
Total Funds Available	$ 733,043	$1,086,836	$22,782,124	$6,901,591	$ 9,914,204	$12,058,690
Disbursements						
Debt Service Payments	-	(272,600)	-	(3,375,534)	(58,500)	(54,500)
Transfer to Capital Projects/Ops.	-	-	(5,400,000)	-	-	(2,000,000)
Balance in Account on June 30	$ 733,043	$ 814,236	$17,382,124	$3,526,057	$ 9,855,704	$10,004,190
Year Ended June 30, 2014						
Balance in Account on July 1	$ 733,043	$ 814,236	$17,382,124	$3,526,057	$ 9,855,704	$10,004,190
Receipts						
Interest Earned	4,500	4,900	83,700	3,388	59,400	60,200
Appropriations	-	-	-	3,391,860	-	-
Total Funds Available	$ 737,543	$ 819,136	$17,465,824	$6,921,305	$ 9,915,104	$10,064,390
Disbursements						
Debt Service Payments	-	-	-	(3,391,860)	-	-
Transfer to Capital Projects/Ops.	-	-	(7,000,000)	-	-	-
Balance in Account on June 30	$ 737,543	$ 819,136	$10,465,824	$3,529,445	$ 9,915,104	$10,064,390

5.0 – CONCLUSIONS

5.0 CONCLUSIONS

In the preparation of this Engineering Consultant's Report, Burns & McDonnell completed assessments of the electric generating stations and the transmission and distribution system of the City Electric Division. The investigations included interviews, observations, and reviews of FY 2014 expenditures and FY 2015 budgets. In addition, an analysis of the balances of the Improvement and Extension Fund and other funds benefiting the Electric Division was performed. Burns & McDonnell also reviewed the adequacy of the revenues provided by the current retail rates in relation to the requirements of the City of Dover, Delaware Resolution Authorizing and Securing Electric Revenue Bonds, adopted December 23, 1985. A high level assessment of the City's insurance coverage related to the Electric Division was also completed. Based on these reviews and assessments, it is Burns & McDonnell's opinion that:

1. The City's power generation facilities are being operated and maintained consistent with accepted electric utility practice in the United States.
2. The design, construction, operation, and maintenance of the City's electric transmission and distribution system and the associated facilities are consistent with current generally accepted electric utility standards and over the past few years. The system has been upgraded in order to improve operation and service to customers.
3. The Electric Division capital projects included in the City's Capital Investment Plan and the FY 2015 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.
4. The balances as of June 30, 2014 for the various reserve funds maintained by the City for the Electric Division appear to be sufficient for their defined purposes.
5. The insurance coverage in full force and affect as maintained by the City related to the various assets of the Electric Division appears to satisfy the requirements of Section 706 of the Resolution.
6. The electric revenues generated by the City's current retail rates are more than sufficient to fulfill the debt service coverage requirement defined in Section 502(c) of the Resolution.

BURNS McDONNELL

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Burns & McDonnell World Headquarters
9400 Ward Parkway
Kansas City, MO 64114
O 816-333-9400
F 816-333-3690
www.burnsmcd.com

Monthly Management Committee Update – May 2015

June 25th 2015

Prepared by:

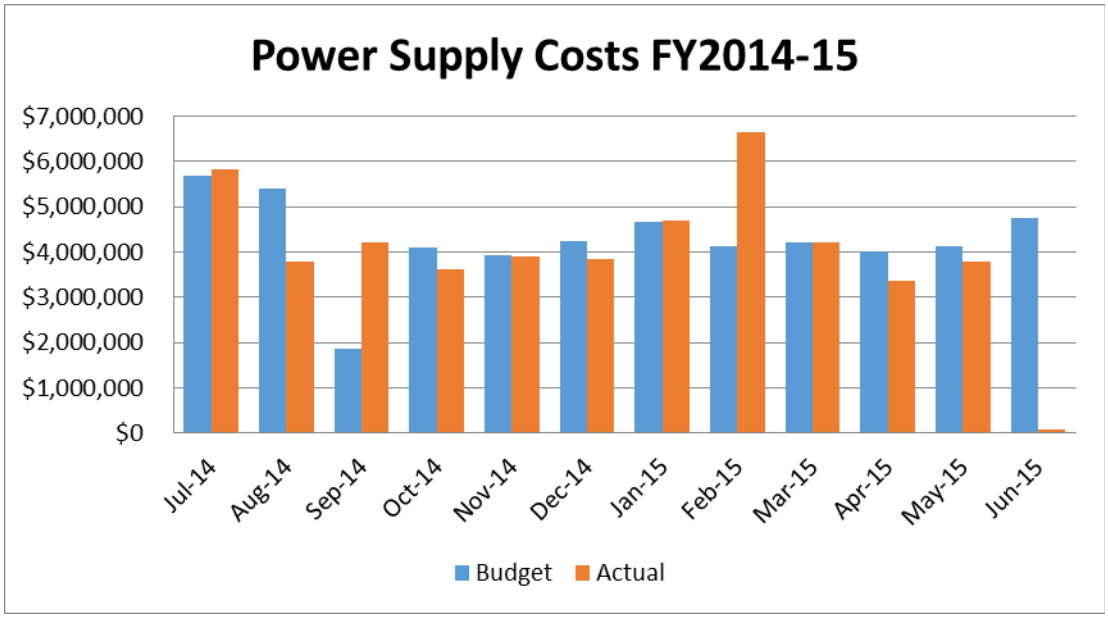
Arline Holloway
Client Services Manager
904.360.1347
aholloway@teainc.org

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I. Executive Summary

a. Power Supply Summary:



Overall Power Supply costs were $339,478 below budget predominantly driven by lower Energy, Congestion and Losses, and lower ARR, Transmission and Fees.

Dover's budgeted cost for all power supply (capacity AND energy) was $70.09/MWh. The actual cost of all power supply (capacity AND energy) was $60.93/MWh. There was a positive $9.17 budget variance despite the load variance.

The cost of energy alone was $41.86/MWh, versus a budgeted energy cost of $46.71.

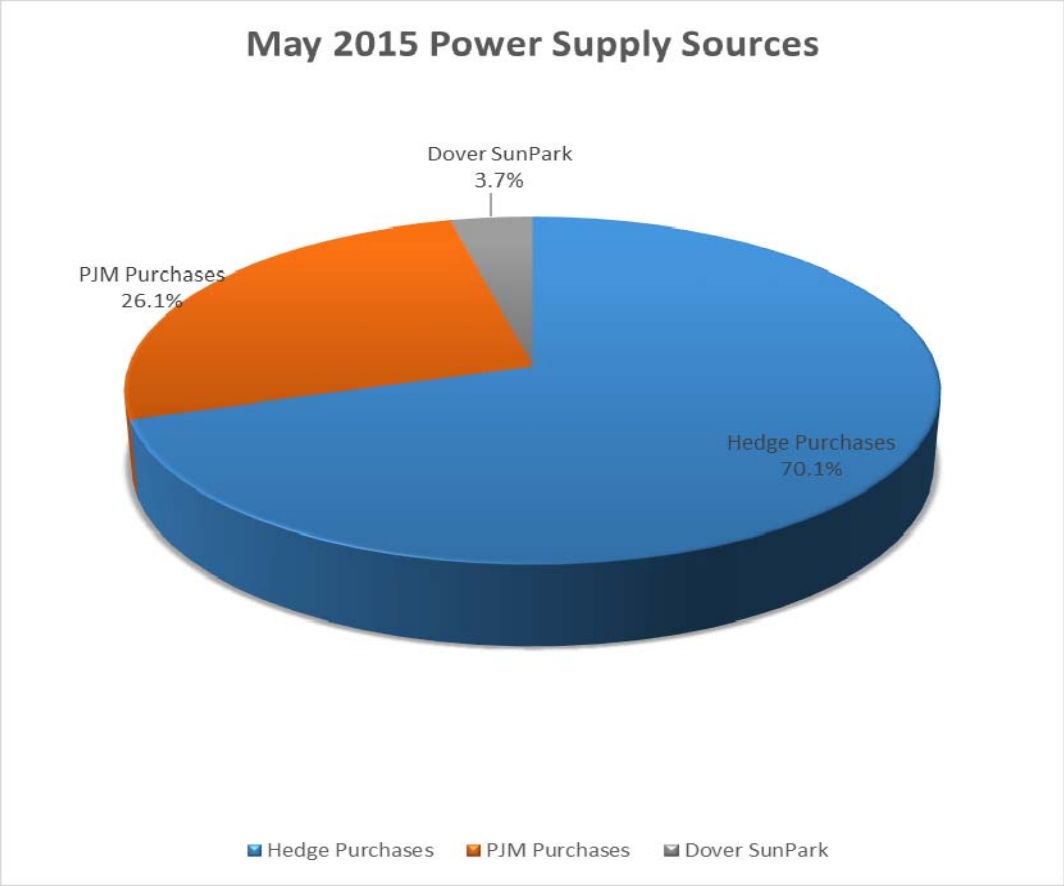
Dover's hedge purchases totaled 43,600 MWh, which was 70% of the actual load. The budgeted hedge purchase totaled 39,592 MWh which was 67% of the budgeted load.

Dover's power purchases from hedge transactions totaled $1,927,925. Purchases from PJM (energy and fees) totaled $1,468,592.00. This number includes DA spot market energy charges of $617,113.66 and Day-ahead Transmission Congestion credit of ($225,374.14)

Dover's total load was 62,154 MWh versus a forecasted load of 58,869 MWh.

Dover's planned energy purchase from the SunPark solar installation was 1,927 MWhs. Dover's actual energy purchase from the SunPark installation was 2,321 MWh.

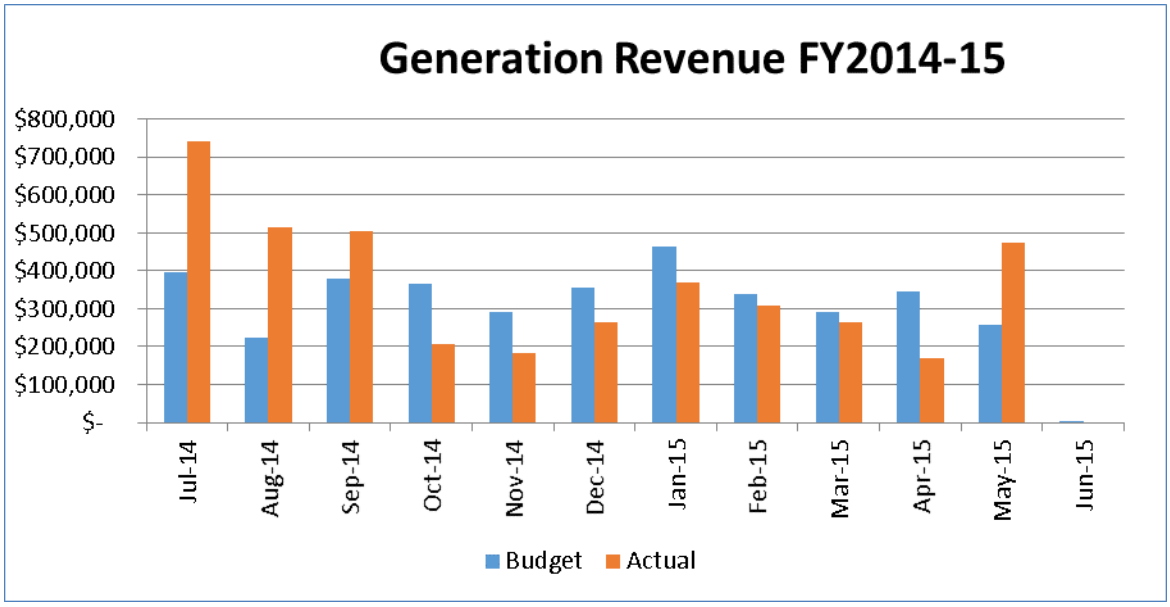
I. Supply Source Summary:



II. Supply Variance:

Purchased Power Variance Report:	May		
	Budget	Actual	Variance
Gross Load	58,869	62,154	(3,285)
Wholesale Load	56,942	59,833	(2,891)
Hedged Volume (MWh)	39,592	43,600	(4,008)
Unhedged Volume (MWh)	17,350	16,233	1,117
Dover SunPark Volume (MWh)	1,927	2,321	(394)
Renewable Energy Credits Volume	289	275	14
Hedged Cost ($/MWh)	$ 46.75	$ 44.22	$ 2.53
Unhedged Energy Cost ($/MWh)	$ 39.04	$ 24.92	$ 14.12
Solar Energy Cost ($/MWh)	$ 115.12	$ 115.97	$ (0.85)
Energy Costs ($/MWh)	**$46.71**	**$41.86**	**$4.86**
All-in Costs - Energy, Capacity and RECs ($/MWh)	**$70.09**	**$60.93**	**$9.17**

b. Generation Summary:



Net generation revenue for the month of May was $474,569 versus a budget of $258,314.

Generation Breakdown:

City of Dover

Monthly Wholesale Generation

May 2015

Net Generation

399.23

Production Margin

				Formula
PJM - Generation				
	Economic and Reliability Dispatch	$	12,374.79	A
Natural Gas & Oil Consumption				
	Purchases for Generation	$	(24,069.00)	
	Natural Gas Transport	$	-	
	Eastern Shore Cashout	$	(7,827.82)	
	Oil Consumption	$	-	
	Subtotal: Natural Gas & Oil Consumption	$	(31,896.82)	B
Gross Production Margin		$	(19,522.03)	C = (A + B)
$/MWh Generation Production Gross Margin		$	-	E = (C/D)
PJM - Capacity				
	Generation Capacity Credit	$	725,758.98	
	Reactive Supply and Transmission Losses	$	(78,644.59)	
	Subtotal: PJM - Capacity	$	647,114.39	F
All in Generation Margin				
	All in Generation Margin Total	$	627,592.36	(G = C + F)

c. *Emissions Summary:*

Emissions Allowance Summary through May 31, 2015

The reinstated Cross-State Air Pollution Rule (CSAPR) replaced the Clean Air Interstate Rule (CAIR) beginning January 1, 2015. The final CAIR true-ups for 2014 will occur in 2015, after which CAIR allowances will have no value.

The State of Delaware was included in the CAIR footprint but is not included in the CSAPR footprint. CAIR allowances cannot be used for CSAPR compliance, so Dover's CAIR allowances essentially became valueless when CSAPR was reinstated.

The separate Clean Air Act acid rain deposition control program (CAA Title IV) which governs SO_2 national allowance trading program will remain in effect, however the CAIR provisions for SO_2 are no longer applicable to Dover's generating units.

Market liquidity for Title IV SO_2 allowances is very low, with few transactions occurring. The following table shows estimated values for Dover's banked allowances, based on mid-point of bids and offers from Evolution Markets.

Beginning with the January 2015 report, TEA no longer includes a CAIR summary. It will continue to report on Dover's Clean Air Act Title IV SO_2 allowances.

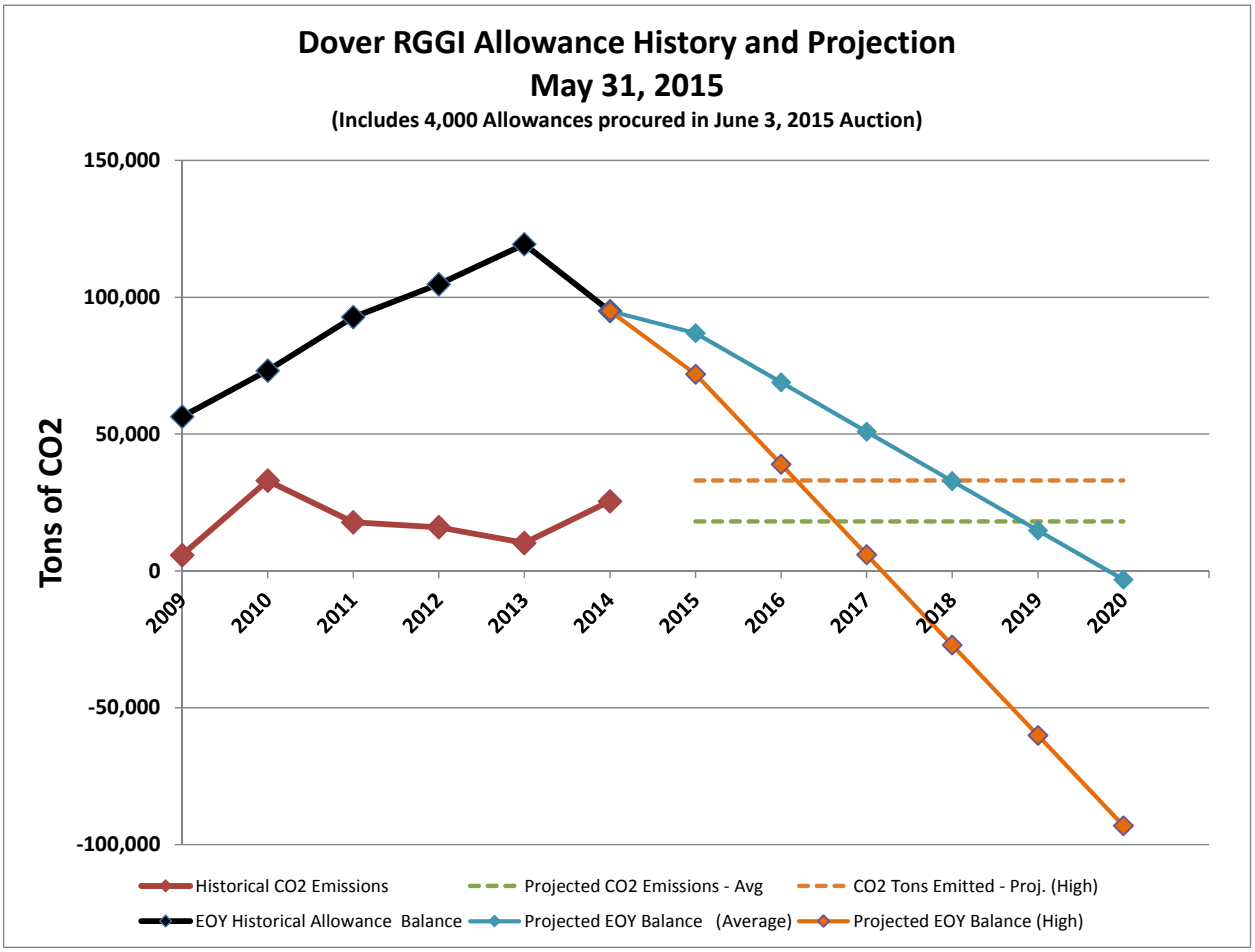
Market Value for Clean Air Act Title IV Allowances			
Commodity	**$/Ton ICE Settlement as of May**	**Tons**	**Market Value**
SO_2 Allowances – Title IV	$0.375	15,018	$ 5,632
TOTAL			**$ 5,632**

Regional Greenhouse Gas Initiative

The State of Delaware is a participant in the Regional Greenhouse Gas Initiative (RGGI). The City of Dover must comply with RGGI by surrendering carbon dioxide (CO_2) allowances pursuant to the State of Delaware's laws (Title 7, Chapter 60, Sub-Title II-A). Delaware adopted a combined emissions allowance allocation/auction mechanism for RGGI, in which 40% of CO_2 allowances were allocated to sources for 2009, declining by 8% per year so that by 2014, all CO_2 allowances are auctioned.

Dover had more than a sufficient number of RGGI allowances allocated to it to cover its requirements through the first compliance period (calendar years 2009-2011) and second compliance period (2012 – 2014). Any unused allowances are carried over ("banked") for subsequent years. The table below includes Dover's historical activities, and has been enhanced to include projections through 2020. Two projections are presented: (1) future annual emissions equal the average for 2009 – 2014, and (2) future annual emissions equal to the highest emissions for 2009 – 2014.

Dover, DE RGGI Allowance History and Forecast - May 31, 2015								
Compliance Year (CY)	CO2 Allowances Purchased	Allocated CO2 Allowances	CO2 Tons Emitted - Historical	EOY Historical Allowance Balance	CO2 Tons Emitted - Proj. (Avg)	CO2 Tons Emitted - Proj. (High)	Projected EOY Balance (Average)	Projected EOY Balance (High)
2009		62,184	5,796	56,388				
2010		49,747	32,971	73,164				
2011		37,311	17,763	92,712				
2012		27,983	15,957	104,738				
2013		24,818	10,213	119,343				
2014	1,000	N/A	25,426	94,917			94,917	94,917
2015	10,000	N/A	2,579	102,338	18,021	33,000	86,896	71,917
2016		N/A			18,021	33,000	68,875	38,917
2017		N/A			18,021	33,000	50,854	5,917
2018		N/A			18,021	33,000	32,833	-27,083
2019		N/A			18,021	33,000	14,812	-60,083
2020		N/A			18,021	33,000	-3,209	-93,083



The table and chart indicate that Dover could run out of banked allowances as early as the end of 2016 under the high emissions scenario and by the end of 2019 under the average scenario. Therefore, Dover has recently initiated a program to participate in RGGI's quarterly auctions to insure it has adequate allowances in the future.

In anticipation of needing additional RGGI allowances in the future, Dover participated in Auction 26 held on December 3, 2014, Auction 27 held on March 11, 2015 and Auction 28 held on June 3, 2015. It was awarded 1,000 allowances from its highest price bid, at the auction clearing price of $5.21/ton in Auction 26 and 6,000 allowances in Auction 27 at the auction clearing price of $5.41/ton and 4,000 allowances in Auction 28 at the auction clearing price of $5.50/ton.

The next quarterly RGGI auction will be held on September 9th, 2015.

Based on the June 18, 2015 ICE price for the July 2015 strip ($5.66/ton), the estimated market value of Dover's existing 102,338 ton[1] RGGI allowance bank is $579,233.

Renewable Energy Certificates

Dover owns two photovoltaic systems totaling 15 kW, consisting of (one 5 kW unit at the Utilities Administration Building and two 5 kW units at the McKee Run generating station. Dover also receives solar energy produced by the 10 MW Dover Sun Park which is owned by White Oak Solar Energy, LLC. In addition to the all of the physical energy produced by the Sun Park, Dover receives 15% of Sun Park's Solar Renewable Energy Credits (SRECS).

Dover participates in the Delaware Municipal Electric Corporation's (DEMEC) Renewable Portfolio Standard (RPS) for compliance with the State of Delaware's RPS laws applicable to municipal utilities. The first compliance period under DEMEC's RPS was for the 36 months ending May 2014.

Through the end of May, 2015, Dover had accumulated a total of 7,207 SRECS from these renewable energy resources, net of 2,941 SREC transferred to DEMEC for retirement on October 3, 2014 in accordance with the RPS requirement for the first compliance period.

Delaware periodically holds SRECs auctions, however these auctions are for size tiers N1 – N3, E1 and E2. The Dover Sun Park is in the N4 tier for very large facilities. State-wide carve outs for Tier 4 has been fully subscribed, so there is not a market for tier T4 SRECs in Delaware.

The nearest viable market for Dover's SRECs is Pennsylvania. Daily settlement prices from Flett Exchange Environmental Services and SREC Trade. The most recent settlement prices for Pennsylvania SRECS are used in the table below.

SREC Vintage (June 1 – May 31)	Market Clearing Price	SREC Balance	Market Value
2012/2013	$22.00	2,172	$47,850
2013/2014	$25.00	2,701	67,525
2014/2015	$28.00	2,334	65,352
TOTAL		**7,207**	**$180,727**

[1] May 2015 CO2 emissions were not deducted for this report. They will be included in future reports.

TEA continues to recommend to Dover to retain these allowances for compliance with its Renewable Portfolio Standard (RPS). Additionally, Dover will need to acquire additional SRECs in future years.

d. Operations Management Summary:

Executive Summary:

During the month of May, there were no reportable lost time accidents, although one of our employees was injured April 16th, while moving a waste oil drum into the used oil storage shed while awaiting shipment. The facility has gone 45 days without an OSHA recordable accident and 146 consecutive days without a lost time accident. There were no Environmental Notice of Violations or exceedances issued during the month and there was one Near Miss reported. All units are currently in a planned outage through May 29th at which time all will be made available with only optimization and commissioning testing remaining on unit 11, for the Inlet Fogging System that was installed during the spring outage.

Monthly Budget Variance – The actual expenses attributable to O&M of the two sites for the month of April are $310,313 against a budgeted amount of $628,031 for a favorable variance of $317,718 or 50.59%. The principal reasons for the favorable variance were due to; a favorable monthly variance of $218,540 was due to having a less than full complement of staff and only (2) payroll periods being invoiced against three (3) that were budgeted for May. As a result, this impacted three (3) labor accounts – Straight Time, Overtime, and Labor Burdens. A favorable monthly variance of $5,026 was due to lower water – sewer costs than anticipated and deferring a portion of buildings and grounds maintenance to June. A favorable monthly variance of $94,152 due to no monthly electricity bill. It was expensed in April. In addition, the expenses for safety valve testing were not included in May as anticipated. The testing should be completed in June. The forecasted expenses for this fiscal year are $5,950,306 expensed versus an approved budget of $6,141,100 thereby realizing a 96.89% expenditure rate.

e. Risk Management Summary:

Forward power prices in PJM have increased from last month.

The current projected cost of service is below:

PY	Hedge Ratio	Blended Cost ($/MWh)	Monthly Change ($/MWh)
2014-15	79%	$ 46.46	($0.21)
2015-16	70%	$ 43.56	($0.75)
2016-17	48%	$ 42.08	($0.74)
2017-18	37%	$ 41.79	($1.05)
2018-19	28%	$ 41.63	($1.25)

II. Budget Report

	Budget May-15	Actual May-15	Variance
Gross Load	**58,869**	**62,154**	**(3,285)**
Power Supply			
Hedged Energy	$1,850,748	$1,927,925	($77,177)
PJM - Energy, Congestion & Losses	$677,437	$404,563	$272,874
PJM - ARR, Transmission and Fees	$426,150	$255,737	$170,413
Dover SUN Park Energy	$221,829	$269,166	($47,337)
Dover SUN Park RECs	$43,600	$38,066	$5,535
Management Fees	$83,000	$83,000	$0
PJM - Capacity UCAP Obligated Purchased	$823,464	$808,292	$15,172
Subtotal - Power Supply	**$4,126,228**	**$3,786,749**	**$339,479**
Power Generation O&M			
Plant O&M	$628,031	$310,313	$317,718
Subtotal Generation O&M	**$628,031**	**$310,313**	**$317,718**
Power Generation Production Margin			
PJM - Economic and reliability dispatch	($446,560)	($12,375)	($434,185)
Fixed Fuel and Transport Charges	$322,150	$31,897	$290,253
Subtotal Generation Production Margin	**($124,410)**	**$19,522**	**($143,932)**
Power Generation Non-Production Revenue			
PJM - Generation Capacity Credit	($740,515)	($725,759)	($14,756)
Capacity Replacement Charge	$11,160	$0	$11,160
PJM - Reactive Supply & Transmission Losses	($32,580)	($78,645)	$46,065
Subtotal - Non-Production Revenue	**($761,935)**	**($804,404)**	**$42,469**
SubTotal - All Generation	**($258,314)**	**($474,569)**	**$216,255**
Total - Utilities Cost	**$3,867,914**	**$3,312,180**	**$555,734**
Unit Costs			
Total - Power Supply	$70.09	$60.93	$9.17
Total - Power Generation	($4.39)	($7.64)	$3.25
Final Cost of Service to City of Dover Ratepayers	$65.70	$53.29	$12.41

Variance Analysis:

Power Supply

- Dover consumed 3,285 MWh more than forecasted for the month.
- Dover experienced a favorable variance for budgeted PJM - Energy, Congestion & Losses of $272,874.
- This resulted in a net power supply cost of $60.93/MWh, $9.17/MWh below budget.
- The city realized a favorable variance of $339,478 for power supply vs. the monthly budget.
- Dover Sun Park generated 14 MWh less than forecast.

Generation

- Power generation had a favorable budget variance of $ 216,255 driven primarily by lower Plant O&M expenses which had a favorable budget variance of $317,718 for the month.

	Budget YTD	Actual YTD	Variance
Gross Load	**673,227**	**686,142**	**(12,915)**
Power Supply			
Hedged Energy	$19,892,368	$24,211,060	($4,318,692)
PJM - Energy, Congestion & Losses	$10,785,006	$8,178,516	$2,606,490
PJM - ARR, Transmission and Fees	$3,778,988	$3,790,698	($11,710)
Dover SUN Park Energy	$1,799,610	$1,752,551	$47,059
Dover SUN Park RECs	$338,595	$324,159	$14,436
Management Fees	$913,000	$913,000	$0
PJM - Capacity UCAP Obligated Purchased	$8,898,726	$8,755,928	$142,798
Subtotal - Power Supply	**$46,406,293**	**$47,925,912**	**($1,519,619)**
Power Generation O&M			
Plant O&M	$5,225,041	$5,312,107	($87,066)
Subtotal Generation O&M	**$5,225,041**	**$5,312,107**	**($87,066)**
Power Generation Production Margin			
PJM - Economic and reliability dispatch	($2,232,800)	($2,400,430)	$167,630
Fixed Fuel and Transport Charges	$1,611,100	$1,583,163	$27,937
Subtotal Generation Production Margin	**($621,700)**	**($817,267)**	**$195,567**
Power Generation Non-Production Revenue			
PJM - Generation Capacity Credit	($8,002,334)	($7,833,937)	($168,397)
Capacity Replacement Charge	$120,600	$0	$120,600
PJM - Reactive Supply & Transmission Losses	($432,785)	($660,118)	$227,333
Subtotal - Non-Production Revenue	**($8,314,519)**	**($8,494,054)**	**$179,535**
SubTotal - All Generation	**($3,711,178)**	**($3,999,214)**	**$288,036**
Total - Utilities Cost	**$42,695,115**	**$44,009,698**	**($1,314,583)**
Unit Costs			
Total - Power Supply	$68.93	$69.85	($0.92)
Total - Power Generation	($5.51)	($5.83)	$0.32
Final Cost of Service to City of Dover Ratepayers	$63.42	$64.02	($0.60)

III. Operations Management

Executive Summary:

During the month of May, there were no reportable lost time accidents, although one of our employees was injured April 16th, while moving a waste oil drum into the used oil storage shed while awaiting shipment. The facility has gone 45 days without an OSHA recordable accident and 146 consecutive days without a lost time accident. There were no Environmental Notice of Violations or exceedances issued during the month and there was one Near Miss reported. All units are currently in a planned outage through May 29th at which time all will be made available with only optimization and commissioning testing remaining on unit 11, for the Inlet Fogging System that was installed during the spring outage.

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NAES Corporation
Dover, Delaware

May 2015
Monthly Report



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2.0 Financial

3.0 Operations

4.0 Maintenance

5.0 CIP

6.0 General Plant Information

7.0 Summary of NAES Performance

1.0 Environmental, Health and Safety:

During the month of May, there were no recordable accidents, lost time accidents or environmental incidents. The facility has gone 45 days through May 31, 2015 without an OSHA Recordable Accident or a Lost Time reportable accident.

City of Dover transferred 3,975 CO2 allowances from the McKee Run account to the VanSant account as part of the annual control period true-up. Additionally, RGGI requires that a minimum of 50% of the allowances be in the account for this control period. City of Dover elected to transfer 4,000 allowances from the McKee run account to VanSant which equals 100% of the allowances needed for this control period.

One Near Miss was reported in May at McKee Run. The Operations staff was in the process of putting Demineralizer (water purification system) into service. Shortly after the rinsing down process began, an alarm was activated and IC&E technicians were immediately dispatched to troubleshoot and correct the cause of the alarm. As part of their troubleshooting efforts, the IC&E technicians installed a jumper wire lead from a control power terminal to the valve open solenoid L2 terminal pin. This action allowed the water inlet valve to open. While this action was taking place, the jumper lead came off of the L2 terminal and touched the side of the electrical panel cabinet causing a spark. This also resulted in the control power fuse to blow thus de-energizing the circuit.

During the month of May, there were five IWW discharges to the Kent County Public Works sewer system for a total of 145,505-gallons. A representative sample of the industrial discharge was taken on May 19, 2015. The May SIU Report was submitted to Kent County Public Works indicating no exceedances in May.

During the month of May, there were no sampling events at Outfall 001, 004, 005 and 006 and there was no discharges from Outfall 006. The May DMR was submitted to DNREC indicating no discharge for this month. No NPDES exceedances have been identified. All non-contact cooling tower blowdown water is being discharged directly to the Kent County Department of Public Works under the facilities Industrial Wastewater Discharge Permit #18.

The City of Dover-McKee Run Generating Station staff took the initiative to perform several improvements at storm water drain Outfall 004. The first improvement was to remove a damaged section of silt fencing from around Outfall 004 and the adjoining drain north of Outfall 004. The silt fencing was damaged from a recent rain event and high winds.

The second improvement was to installed new silt fencing around both drains to prevent any potential turbid storm water run-off from entering the drain. The new silt fencing was buried below grade in the anticipation of future rain events. The third improvement was to place a spill boom around the entire southernmost drain grate to prevent any rocks/gravel from entering the drain. The fourth and final improvement was the

installation of silt fence weir barriers prior to where storm water enters Outfall 004. These silt fence weirs will capture fugitive sediment/rocks/gravel from storm water prior to interfacing with the southernmost drain silt fence barrier. Additionally, the City of Dover graded the disturbed grounds around the Unit 3 cooling tower and McKee Run seeded and applied straw over the seed for sediment erosion control. McKee Run voluntarily submitted a continuous improvement letter along with pictures, to DNREC NPDES to document McKee Run's efforts in improving the quality of storm water entering nearby Outfall 005.

With authorization from the City of Dover, McKee Run shipped 1,878 lbs. of consumer electronic goods from the site on May 6, 2015 to an approved recycler named ECOvanta in Philadelphia through the Delaware Solid Waste Authority (DSWA).

On May 7, 2015, McKee Run shipped 300-gallons of used oil and 50-gallons of oily water off-site for recycling to Eldredge Inc. in West Chester, Pa.

Environmental, Health, and Safety Statistics		
	Month (May)	Fiscal Year to Date (7/1/14-6/30/15)
NOVs	0	0
Opacity Deviations	0	5
Environmental Deviations	0	0
OSHA Recordable	0	2
OSHA LTA's	0	1
First Aid cases	0	0
Restricted Workday Accident	0	0
Near Miss	1	16
Man Hours Worked	4,021	100,495.75
Date last OSHA Recordable		4/16/15
Date last Lost Time Accident		4/16/15
Days since last OSHA recordable		45
Days since last Lost Time Accident		45

SO_2 Allowances Summary					
SO_2 Allowance Vintage	SO_2 Allowances Sold - YTD	SO_2 Allowances Available (Per Unit, Prior to Sale & Reconciliation)		Total SO_2 Tons Emitted– U3 and U11 YTD	SO_2 Allowances Balance*
		Unit #3	Unit #11		
2013 and earlier	0	10,365	690	2	11,053
2014	0	1850	138	1	1,987
2015	0	1850	138	10	1,978
			Total SO2 Allowance Balance		15,018
*Note – Emissions allowances are deducted according to oldest vintage first, unless otherwise directed.					

CO2 Allowance Summary					
CO2 Allowance Vintage	CO2 Allowances Bought/Sold YTD	CO2 Allowances Available (Per Facility, Prior to Sale)*		Total CO2 Tons Emitted	CO2 Allowance Balance
		McKee Run	VanSant		
2014 and earlier	1,000	194,244	7,799	108,126	94,917
2015	6,000	2,176	403	2,579	3,421
			Total CO2 Allowance Balance		98,338
*Note: CO2 allowance values are provided by the RGGI CO2 Allowance Tracking System. **Note: 6,000 CO2 Tons Purchased in 2015 Auction					

NOx Summary – Ozone Season (May-Sep) Tons					
Year	Unit #1	Unit #2	Unit #3	Unit #11	TOTAL
2013	1.1	1.7	19.3	1.3	23.4
2014	0.4	0.6	35.0	0.8	36.8
2015	0.0	0.0	0.4	0.0	0.0
NOx Summary - Year (Jan-Dec) Tons					
Year	Unit #1	Unit #2	Unit #3	Unit #11	TOTAL
2013	1.1	1.7	19.4	1.3	23.5
2014	0.8	1.1	39.8	3.7	45.4
2015	0.0	0.0	2.5	1.2	3.3
SO_2 Summary - Year (Jan-Dec) Tons					
Year	Unit #1	Unit #2	Unit #3	Unit #11	TOTAL
2012	0.0	0.0	0.0	0.1	0.1
2014	0.0	0.0	0.4	0.6	1.0
2015	0.0	0.0	9.6	0.4	10.0

2.0 Financial

Financial – Current Month

Month – May			
	Actual	Budget	Variance
Personnel	231,560	450,100	218,540
Materials & Supplies	5,774	10,800	5,026
Administrative Expenses	72,979	167,131	94,152
Total	**$310,313**	**$628,031**	**$317,718**

Financial – Fiscal Year to Date

Number of Months 11			
	Actual	Budget	Variance
Personnel	2,813,066	3,248,500	435,434
Materials & Supplies	246,069	217,750	(28,319)
Administrative Expenses	1,977,670	1,758,791	(218,879)
Total	**$5,036,804**	**$5,225,041**	**$188,237**

2.1 Variance analysis:

The actual expenses for the month of May are $310,313 against a budgeted amount of $628,031 for a favorable variance of $317,718 or 50.59%. The variance was due to the following:

PERSONNEL EXPENSES – A favorable monthly variance of $218,540 was due to having a less than full complement of staff and only (2) payroll periods being invoiced against three (3) that were budgeted for May. As a result, this impacted three (3) labor accounts – Straight Time, Overtime, and Labor Burdens.

MATERIALS AND SUPPLIES EXPENSES- A favorable monthly variance of $5,026 was due to lower water – sewer costs than anticipated and deferring a portion of buildings and grounds maintenance to June.

ADMINISTRATIVE EXPENSES – A favorable monthly variance of $94,152 due to no monthly electricity bill. It was expensed in April. In addition, the expenses for safety valve testing were not included in May as anticipated. The testing should be completed in June.

The forecasted expenses for this fiscal year are $5,950,306 expensed versus an approved budget of $6,141,100 thereby realizing a 96.89% expenditure rate.

3.0 Operations

Unit Operations / Outages / Trips: Unit 3 ran for 8.350 hours for testing on May 13then returned back to planned outage. On May 29, the spring planned outage was cleared at 0700 and all units were made available. On May 30, at 0600 hours, Units 1, 2, and 3 went into forced outage (Outside Management Control) due to Chesapeake Utilities working on the main gas line in the Dover area. The work was completed on May 31 at 0030 hours and the forced outage was cleared at that time.

Month – May 2015							
		McKee Unit 1	McKee Unit 2	McKee Unit 3	MRS Facility	VanSant Unit 11	Total All Units
Capacity	MW	17	17	102	136	39	175
On Line Hours	Hrs	0.0	0.0	8.35	8.35	0.0	8.35
Starts	#	0	0	1	1	0	1
Gross Generation	MWh	0.0	0.0	441.985	441.985	0.0	441.985
Net Generation	MWh	0.0	0.0	403.328	403.328	0.0	403.328
Total Auxiliaries	MWh	0.0	0.0	190.824	190.824	0.0	190.824
Auxiliaries purchased	MWh	21.689	21.689	152.167	195.545	2.192	197.737
Fuel Gas Used#	MMBTU	0.0	0.0	5,151.506	5,151.506	0.0	5,151.506
Fuel Oil Used	MMBTU	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Oil Used	Gallons	0.0	0.0	0.0	0.0	0.0	0.0
Total Fuel	MMBTU	0.0	0.0	5,151.506	5,151.506	0.0	5,151.506
Net Heat Rate	BTU/KWh	0.0	0.0	12.772	12.772	0.0	12.772
Unit Trips	#	0	0	0	0	0	0
Capacity Factor	%	0.0	0.0	0.53	0.53	0.0	0.53
Availability Factor	%	6.25	6.25	7.37	6.62	8.74	7.15
Commercial Unavailability (CU)	%	0.0	0.0	0.0	0.0	0.0	0.0
Planned Outage Hours	Hours	679.000	679.000	670.650	2,028.650	679.000	2,707.650
Maintenance Outage Hours	Hours	0.0	0.0	0.0	0.0	0.0	0.0
Forced Outage Hours	Hours	18.50	18.50	18.50	55.50	0.0	55.50
Reserve Shutdown Hours	Hours	46.50	46.50	46.50	139.50	65.00	204.50
HW Boiler Gas Usage	MMBTU				0.0		0.0
Pilot Gas Usage	MMBTU	0.0	0.0		0.0		0.0

 # Note:

Does not include HWB or Pilot Gas. Fuel usage numbers are taken from fuel flow instruments.

2014-2015 Fiscal Year-to-Date (11 Months)							
		McKee Unit 1	McKee Unit 2	McKee Unit 3	MRS Facility	VanSant Unit 11	To All
Capacity	MW	17	17	102	136	39	1
On Line Hours	Hrs	30.966	35.134	499.782	565.882	27.700	593
Starts	#	3	5	37	45	6	5
Gross Generation	MWh	261.694	252.941	25,220.308	25,734.943	981.195	26,71
Net Generation	MWh	247.853	233.930	22,956.245	23,438.028	970.476	24,40
Total Auxiliaries	MWh	293.285	298.455	4,616.822	5,208.562	41.234	5,24
Auxiliaries purchased	MWh	312.777	312.777	2,402.879	3,028.433	48.791	3,07
Fuel Gas Used	MMBTU	3,780.381	3,255.417	248,377.986	255,413.784	7,544.726	262,9
Fuel Oil Used	MMBTU	0.0	0.0	20,793.918	20,793.918	5,209.202	26,00
Fuel Oil Used	Gallons	0.0	0.0	150,686	150,686	37,645	188
Total Fuel	MMBTU	3,780.381	3,255.417	269,171.904	276,207.702	12,753.928	288,9
Net Heat Rate	BTU/KWh	15.253	13.916	12.772	13.980	13.121	13.
Unit Trips	#	1	3	1	5	1	
Capacity Factor	%	0.18	0.17	2.80	2.11	0.31	1.
Availability Factor	%	52.4	51.42	49.2	51.03	54.93	52
Commercial Unavailability (CU)	%	2.53	3.51	3.50	3.18	0.0	2.
Planned Outage Hours	Hours	3,623.00	3,623.00	3,796.580	11,042.580	3,623.00	14,66
Maintenance Outage Hours	Hours	0.0	0.0	0.0	0.0	0.0	0
Forced Outage Hours	Hours	203.420	282.000	273.657	759.077	0.0	759
Reserve Shutdown Hours	Hours	4,181.614	4,098.866	3,446.314	11,726.794	4,388.300	16,11
HW Boiler Gas Usage	MMBTU				6,491.061		6,49
Pilot Gas Usage	MMBTU	527.631	623.391		1,151.022		1,15

Fuel Oil Inventory							
	Monthly Inventory (Start)	Monthly Inventory (End)	Fuel Purchases (Month)	Monthly Inventory (Change)	FY 14-15 Inventory (Start)	Fuel Purchases (FYTD)	FY 14-15 Inventory (Change)
McKee Run (#2 Fuel Oil)	733,644	736,725	0	3,081	452,963	451,198	283,762
VanSant (#2 Fuel Oil)	225,267	226,700	0	1,433	73,572	186,592	153,128

Note: As measured by tank level instruments. Tank levels may change due to oil temperature.

VanSant Lifetime through May 2015			
	Actual Starts	Factored Starts	Fired Hours
VanSant	1,375	2,352.75	4,344.6
Since HGP - Dec 2004	264	685.05	961.02

Team Report:

The Operations staff continues to support maintenance activities during the planned outage by serving as Confined Space Attendants for confined space areas as well as other support tasks. The Operations staff has also supported the outage by performing various LO/TO tasks needed to test or place equipment in or out or service.

Operations personnel continue to support maintenance by working on Preventative Maintenance (PM) work orders and other work orders that they have the skills to successfully complete the task. The Operations Department continues to utilize the Day Shift Workers in both the Operations and Maintenance areas to assist with maintenance of the plant.

The operators also use the GPi Learning courses to improve their knowledge and skills. The GPI online training which supports plant safety, OSHA, and environmental training requirements are being used by the teams to complete their training for the year. Along with the GPI OSHA training, the operators review the plant's safety procedures to follow up with the GPi Learn modules and knowledge.

4.0 Maintenance

During the month of May, the Plant Maintenance staff continued addressing the backlog of work orders. Back logged Work Orders are work orders that have been open for greater than 30 days. There were forty-one work orders issued with seventy work orders being completed during the month. There were no Safety Work Orders entered into the plant's Computerized Maintenance Management System (MP2) during the month. The table below summarizes the monthly work order activities based on MP2 records and will continue to improve with time. This table gives a clearer picture of outstanding work; PM's and back logged work items.

City of Dover – McKee Run Work Order Backlog									
Site	WO Type	Starting WO Backlog	Received WOs	Total WOs	Comp WOs	Completed Received WOs	Total Completed WOs	End Backlog	Total Open WO's
	ADM	28	0	28	6	0	6	22	22
	CIP	16	0	16	1	0	1	15	15
	CM	40	24	64	6	13	19	34	45
	EM	0	2	2	0	1	1	0	1
	EW	20	1	21	11	0	11	9	10
	PM	53	11	64	25	1	26	28	38
	PR	11	0	11	1	0	1	10	10
	RO	17	0	17	1	0	1	16	16
	SP	2	2	4	2	2	4	0	0
	SW	0	1	1	0	0	0	0	1
Site Totals		**187**	**41**	**228**	**53**	**17**	**70**	**134**	**158**

City of Dover - Van Sant Work Order Backlog									
Site Totals		187	41	228	53	17	70	134	158
VanSant	ADM	3	0	3	0	0	0	3	3
	CIP	3	0	3	0	0	0	3	3
	CM	8	3	11	1	0	1	7	10
	PM	16	0	16	8	0	8	8	8
	SP	1	0	1	1	0	1	0	0
	SW	0	0	0	0	0	0	0	0
Site Totals		31	3	34	10	0	10	21	24

Notable activities during the month include:

The NAES IC&E staff and APEX Piping completed the installation of new CEMS stack sampling line. The line was routed from the EMS building to the stack of Unit 3. The IC&E technicians made all the necessary connections on the stack and in the CEMS building. The lines were leak tested with no leaks. Calibrations were initiated to ensure that the analyzers were functioning correctly and in accordance with Delaware State regulations. This sample line is required to be change every five years and after the change out of the sample line a RATA in required to be performed. This RATA in scheduled for June 22, 2015.

The NAES Maintenance Staff and the IC&E Staff removed and replaced a bad lube oil pump motor on Unit 3. They were able to remove the motor and have it sent to the motor repair shop for repairs with minimal down time on the lube oil system. Once the motor was received the staff replaced the motor and had the lube oil system back running to a normal state. This quick turn-around was important with only having one AC motor running the system with on DC motor backup.

The NAES IC&E Staff and Maintenance Staff completed the installation of a submersible pump for the Industrial Waste Water System. This style of pump was chosen to replace a Gallagher pump with water cooled bearing. In the past the water cooled bearing have been an issues with high repair cost. The performance will be monitored on this pump to ensure proper operation. Once the performance of this new submersible unit is proven a replacement unit will be purchased and put in inventory along with identified spares to support the pump. The replacement pump will be for the eventual replacement of the older "A" pump in the industrial Waste Water System.

5.0 Capital Improvement Projects (CIP)

Project Number	Description	Update
EG1212	Unit 3 Turbine Repairs	Progress: Spring activities included the replacement of the turbine supervisory equipment probes and panel and performing balancing of the turbine thereafter. Contractors were onsite to complete the installation work. Schedule: Contractors were back onsite to remove bearings for modifications and to install vibration monitoring equipment. Unit was operated to check out system and to run vibration tests for balancing purposes. No balancing needed at this time.
EG1402	Unit #3 Cooling Tower Repairs	Progress: Work is complete and final report has been received. Schedule: Project is complete.
EG1406	McKee Run HEP Pipe Repairs	Progress: Work is complete and final report has been received. Schedule: Project is complete.
EG1407	Metering System Upgrades	Progress: Project on Hold. Schedule: Project is on Hold until next year when RFP process will begin again. Project would be slated to be completed once Units 1 and 2 are taken out of service.
EG1416	VanSant Capacity Increase	Progress: Mechanical work is complete in May and commissioning of system to occur in mid-June. Emission testing scheduled for late June. Schedule: PLC programming and commissioning of system to occur in mid-June. Emission testing scheduled for late June.
EG1503	Unit #3 Auxiliary System Component Replacement	Progress: Work is complete. Schedule: Work is complete.
EG1504	Unit#3 Boiler System Repairs	Progress: Tube samples have yet to be sent out for analysis. CEMS Sample line work was completed in April and tested out in May.. Schedule: Work is complete.
EG1505	VanSant Station Component Replacement	Progress: Project on Hold due to funding removed to support other CIPs. Schedule: Project on Hold due to funding removed to support other CIPs.
EG1506	McKee Run/VanSant Safety Improvements	Progress: Updated Drawings received and final work to be completed in June. Schedule: Project on schedule to completed this FY.
EG1507	McKee Run Units #1-#2 Component Replacement	Progress: Project on Hold Schedule: Project on Hold
EG1508	McKee Run/VanSant Structural Preservation	Progress: Project on Hold, however some funds were used to support transformer repair cost to preserve station integrity and reliability. Schedule: Project on Hold, however some funds were used to support transformer repair cost to preserve station integrity and reliability.

6.0 General Plant Information

Debro Curtis was welcomed as a new Operator with McKee Run. Debro is a 2014 Williamson graduate with an Associate's Degree in Power Plant Technology. Most recently, Debro has worked as a Contractor with TekSolv and has been involved with maintaining and monitoring plant equipment, chemistry analysis, LOTO, and high pressure equipment, among other duties. We look forward to working with Debro and incorporating him into our team.

The other Operator position was filled, with new employee Jesse Kummerer scheduled to start work on June 1, 2015. Jesse recently graduated from Williamson with an Associate's Degree in Power Plant Technology. Most recently Jesse had internships with Zeeco Burners and Powerhouse Boilers. At Zeeco Burners, he worked as a Field Service Technician and at Powerhouse Boilers he worked as a boiler technician. During his internships, he was able to learn how to install and design an industrial sized burner, measure air flow coming out of the burner, wire devices on Cleaver brooks boilers and work in the tool room, learning about pipe fittings and valves used on package boilers.

Training:

Plant employees continue with General Physics safety training and environmental courses to enhance their overall knowledge of the plant permit requirements and the NAES safety requirements.

Topics discussed during the monthly safety committee meeting were reviewed by the entire staff. The monthly safety topic was on "Everyone is Responsible for Safety" and therefore everyone is empowered to stop a job if they consider the work practice at hand to be unsafe or dangerous to the health and well-being of the employee(s) performing a given task. They are all aware that safety and safe performance of work and tasks is a team effort and making sure each of us is watching out for the safety of others is a core value for NAES Safe practices.

Calendar of Events	Date
Units 1, 2, and 3 Spring Outage	April 2, 2015 – May 29, 2015
Unit 11 Spring Outage	April 2, 2015 – May 29, 2015
Air Emission Inventory	April 30, 2015
NOx Ozone Season Starts	May 1, 2015
EIA-860 Reporting Due	May 4, 2015
EIA-923 Reporting Due	May 15, 2015
PJM Summer Capacity Test Period	June 1, 2015 – August 31, 2015
FY 2014-201454 Budget Year Begins	July 1, 2015
Toxic Release Inventory (TRI) Annual Report	July 1, 2015
Semi-Annual Title V Certification Due	July 31, 2015
NOx Ozone Season Ends	September 30, 2014
Annual VanSant Black Start Test	TBD
Units 1, 2, 3 and 11 Fall Outage Starts	TBD
Winter Capacity Period	December 1, 2015 to February 28, 2016
Title V Annual Certifications Due	January 31, 2016

7.0 Summary of NAES Performance to Date

Plant Performance FY 2014-2015						
Measure	**Month**		**Year to Date**		**YTD Incentive**	**FY Maximum Incentive**
Commercial Unavailability (CU)	0.0%		2.66%		$0	$96,875
Safety	0		1		$9,082	$18,163
Environmental	0		0		$18,163	$18,163
Capacity Tests Completed	Summer	Winter	Summer	Winter		
Unit 1	No	No	Yes	Yes*	$3,634	$3,634
Unit 2	No	No	Yes	Yes*	$3,634	$3,634
Unit 3	No	No	Yes	Yes	$21,797	$21,797
Unit 11	No	No	Yes	Yes	$7,266	$7,266
Total YTD Incentive %	37.50%		**Total YTD Incentive**		$63,576	$169,532

Note*: All units have successfully completed the Summer (FY 2014-2015) Testing for PJM and were entered in the PJM Winter Capacity Test Exemption Program. Unit 11 and Unit 3 successfully completed capacity testing for the Winter period. Units 1 and 2 did not come online so were included in the Winter Exemption Program.

Summer 2014 (June 1- Aug 31)			**Winter 2014-2015 (Dec 1- Feb 28)**		
Unit	Rated Net Capability (MW)	Reported Net Capability (MW)	Unit	Rated Net Capability (MW)	Reported Net Capability (MW)
1	17	17.4	1	17	17*
2	17	17.5	2	17	17*
3	102	103.99	3	102	102^
11	39	39.8#	11	39	39
Total	175	175	Total	175	175

Note: * Denotes Unit qualified for the PJM Winter Demonstration Period Exemption Program.
Note: # Depicts Net Corrected Capacity for Ambient Air Conditions – VanSant Unit only
Note: ^ Depicts Derated Capacity Test Results. Derate was for 66 MW. Full Capacity Test was performed on April 4, 2015.

IV. Appendix 1 – PJM Invoice

REPORT NAME:	Monthly Billing Statement - CSV and XML
CUSTOMER ACCOUNT:	City of Dover, Delaware
CUSTOMER CODE:	DOVDE
CUSTOMER ID:	76
FINAL BILLING STATEMENT ISSUED:	6/5/2015 12:24
BILLING PERIOD START DATE:	5/1/2015
BILLING PERIOD END DATE:	5/31/2015
INVOICE NUMBER:	20150531000076.000000
INVOICE DUE DATE:	6/12/2015 12:00

CHARGES		ADJ	BILLING LINE ITEM NAME	SOURCE BILLING PERIOD START	AMOUNT ($)
	1100.000000		Network Integration Transmission Service		397786.42
	1108.000000		Transmission Enhancement		66224.76
	1130.000000		Firm Point-to-Point Transmission Service		0.00
	1140.000000		Non-Firm Point-to-Point Transmission Service		0.00
	1200.000000		Day-ahead Spot Market Energy		617113.66
	1205.000000		Balancing Spot Market Energy		-21273.36
	1210.000000		Day-ahead Transmission Congestion		-225374.14
	1215.000000		Balancing Transmission Congestion		-2616.53
	1220.000000		Day-ahead Transmission Losses		31697.58
	1225.000000		Balancing Transmission Losses		757.21
	1230.000000		Inadvertent Interchange		218.82
	1242.000000		Day-Ahead Load Response Charge Allocation		46.27
	1243.000000		Real-Time Load Response Charge Allocation		57.41
	1250.000000		Meter Error Correction		-2508.44
	1301.000000		PJM Scheduling, System Control and Dispatch Service - Control Area Administration		10317.16
	1302.000000		PJM Scheduling, System Control and Dispatch Service - FTR Administration		0.00
	1303.000000		PJM Scheduling, System Control and Dispatch Service - Market Support		2375.79
	1304.000000		PJM Scheduling, System Control and Dispatch Service - Regulation Market Administration		88.07
	1305.000000		PJM Scheduling, System Control and Dispatch Service - Capacity Resource/Obligation Mgmt.		952.63
	1306.000000		PJM Scheduling, System Control and Dispatch Service - Advanced Second Control Center		1509.82
	1307.000000		PJM Scheduling, System Control and Dispatch Service - Market Support Offset		-270.04
	1313.000000		PJM Settlement, Inc.		270.04
	1314.000000		Market Monitoring Unit (MMU) Funding		245.30
	1315.000000		FERC Annual Recovery		4085.42
	1316.000000		Organization of PJM States, Inc. (OPSI) Funding		42.06
	1317.000000		North American Electric Reliability Corporation (NERC)		719.52
	1318.000000		Reliability First Corporation (RFC)		1170.74
	1320.000000		Transmission Owner Scheduling, System Control and Dispatch Service		4530.51
	1330.000000		Reactive Supply and Voltage Control from Generation and Other Sources Service		35979.17
	1340.000000		Regulation and Frequency Response Service		20999.10
	1360.000000		Synchronized Reserve		8124.33

1362.000000		Non-Synchronized Reserve		1219.05
1365.000000		Day-ahead Scheduling Reserve		9872.72
1370.000000		Day-ahead Operating Reserve		5299.10
1371.000000		Day-ahead Operating Reserve for Load Response		1.05
1375.000000		Balancing Operating Reserve		6880.75
1376.000000		Balancing Operating Reserve for Load Response		-0.74
1378.000000		Reactive Services		25104.71
1380.000000		Black Start Service		1929.86
1400.000000		Load Reconciliation for Spot Market Energy		-4106.02
1410.000000		Load Reconciliation for Transmission Congestion		-1393.55
1420.000000		Load Reconciliation for Transmission Losses		-240.91
1430.000000		Load Reconciliation for Inadvertent Interchange		2.94
1440.000000		Load Reconciliation for PJM Scheduling, System Control and Dispatch Service		-20.49
1442.000000		Load Reconciliation for Schedule 9-6 - Advanced Second Control Center		-2.57
1444.000000		Load Reconciliation for Market Monitoring Unit (MMU) Funding		-0.38
1445.000000		Load Reconciliation for FERC Annual Recovery		-6.65
1446.000000		Load Reconciliation for Organization of PJM States, Inc. (OPSI) Funding		-0.07
1447.000000		Load Reconciliation for North American Electric Reliability Corporation (NERC)		-1.17
1448.000000		Load Reconciliation for Reliability First Corporation (RFC)		-1.90
1450.000000		Load Reconciliation for Transmission Owner Scheduling, System Control and Dispatch Service		-7.37
1460.000000		Load Reconciliation for Regulation and Frequency Response Service		-39.86
1470.000000		Load Reconciliation for Synchronized Reserve		8.93
1472.000000		Load Reconciliation for Non-Synchronized Reserve		1.12
1475.000000		Load Reconciliation for Day-ahead Scheduling Reserve		-1.88
1478.000000		Load Reconciliation for Balancing Operating Reserve		-16.58
1490.000000		Load Reconciliation for Reactive Services		-0.07
1600.000000		RPM Auction		14753.52
1610.000000		Locational Reliability		814257.78
1932.000000		Generation Deactivation Refund		-595.24
1250.000000	A	Meter Error Correction	4/1/2015	-0.06
1340.000000	A	Regulation and Frequency Response Service	4/1/2015	-0.14
1360.000000	A	Synchronized Reserve	1/1/2014	-206953.52
1360.000000	A	Synchronized Reserve	2/1/2014	-3264.21
1360.000000	A	Synchronized Reserve	3/1/2014	-13185.51
1360.000000	A	Synchronized Reserve	4/1/2014	-4689.47
1360.000000	A	Synchronized Reserve	5/1/2014	-2895.06
1360.000000	A	Synchronized Reserve	6/1/2014	-509.56
1360.000000	A	Synchronized Reserve	1/1/2015	-0.64
1370.000000	A	Day-ahead Operating Reserve	1/1/2015	-0.24
1370.000000	A	Day-ahead Operating Reserve	2/1/2015	1.13
1370.000000	A	Day-ahead Operating Reserve	3/1/2015	0.45
1375.000000	A	Balancing Operating Reserve	1/1/2014	5.78
1375.000000	A	Balancing Operating Reserve	1/1/2015	0.03
1375.000000	A	Balancing Operating Reserve	2/1/2015	2.42
1375.000000	A	Balancing Operating Reserve	3/1/2015	0.24
1375.000000	A	Balancing Operating Reserve	4/1/2015	-51.55
1911.000000	A	Michigan - Ontario Interface Phase Angle Regulators	4/1/2015	174.81

	1980.000000	A	Miscellaneous Bilateral	4/1/2015	-43.87
			Total Charges		1594756.39
CREDITS		ADJ	BILLING LINE ITEM NAME	SOURCE BILLING PERIOD START	AMOUNT ($)
	2100.000000		Network Integration Transmission Service		0.00
	2108.000000		Transmission Enhancement		62029.95
	2130.000000		Firm Point-to-Point Transmission Service		0.00
	2140.000000		Non-Firm Point-to-Point Transmission Service		530.44
	2210.000000		Transmission Congestion		0.00
	2220.000000		Transmission Losses		17571.16
	2320.000000		Transmission Owner Scheduling, System Control and Dispatch Service		0.00
	2330.000000		Reactive Supply and Voltage Control from Generation and Other Sources Service		29467.58
	2340.000000		Regulation and Frequency Response Service		0.00
	2360.000000		Synchronized Reserve		0.00
	2365.000000		Day-ahead Scheduling Reserve		0.00
	2370.000000		Day-ahead Operating Reserve		0.00
	2375.000000		Balancing Operating Reserve		0.00
	2380.000000		Black Start Service		0.00
	2420.000000		Load Reconciliation for Transmission Losses		-50.22
	2510.000000		Auction Revenue Rights		54971.37
	2600.000000		RPM Auction		740512.50
	2630.000000		Capacity Transfer Rights		-60.76
	2661.000000		Capacity Resource Deficiency		6026.96
	2666.000000		Load Management Test Failure		279.93
	2140.000000	A	Non-Firm Point-to-Point Transmission Service	4/1/2015	57.99
	2220.000000	A	Transmission Losses	1/1/2015	0.15
	2220.000000	A	Transmission Losses	2/1/2015	-0.07
	2220.000000	A	Transmission Losses	3/1/2015	-0.15
	2360.000000	A	Synchronized Reserve	1/1/2014	-122510.05
	2360.000000	A	Synchronized Reserve	2/1/2014	-3157.56
	2360.000000	A	Synchronized Reserve	6/1/2014	-15.65
			Total Credits		785653.57
			Monthly Billing Net Total		809102.82
			Previous Weekly Billing Net Total		642988.80
			Total Due / Receivable		166114.02

FUND SUMMARY as of 05/15/2015

Total Collected	$ 1,145,099.76
DEMEC Admin Fee Paid	$ 67,703.86
State Admin Fee Paid	$ 26,675.07
Customer Grants Paid	$ 535,563.25
Customer Only Grants/Fees Reserved and Amount Owed	$ 63.75
Community Project Funds Requested - Dov. Lib - Requested	$ 1,970,000.00
Community Project Funds Paid - Dov. Lib	$ 298,908.32
Energy Depot Fees Paid	$ 56,901.77
Efficiency Program Dollars Paid	$ 37,268.34
Solar Electric Power Association (SEPA) Fee Paid	$ 6,476.41
Unencumbered Funds Available Grants	**$ 5,538.99**
Funds Available for Dover Library	**$ 110,000.00**
Current Grant Payment Delay (Months)	**0.0**

GRANTS PAID

Date Grant Paid	Applicant	Type	Grant Amount Paid	Review Fee Paid	Amount Owed
9/21/2007	Laura Drew Kelly	Geo-Res	$ 3,000.00	$ 225.00	$ -
12/5/2007	Domingo Reyes	PV-Res	$ 12,762.50	$ 750.00	$ -
4/16/2008	Lakeland Commercial Group	Geo-NonRes	$ 10,800.00	$ 750.00	$ -
6/19/2008 & 08/25/2008	L.D. Shank - Triad Farms	PV-NonRes	$ 30,000.00	$ 750.00	$ -
10/6/2008	City of Dover	PV-NonRes	$ 40,820.00	$ 750.00	$ -
10/21/2008	Robert & Cynthia Hartman	Geo-Res	$ 1,800.00	$ 135.00	$ -
10/21/2008	Robert Varipapa	Geo-Res	$ 2,400.00	$ 180.00	$ -
2/27/2009	David Jump	PV-Res	$ 15,000.00	$ 750.00	$ -
2/27/2009	Jakob Seren	PV-Res	$ 15,000.00	$ 750.00	$ -
2/27/2009	William Sweet	PV-Res	$ 15,000.00	$ 750.00	$ -
3/31/2009	LD Shank - Triad Farms	SHW-NonRes	$ 3,000.00	$ 225.00	$ -
3/31/2009	Warren & Joan Seaver	Geo-Res	$ 3,000.00	$ 225.00	$ -
4/22/2009	William Sweet	SHW-Res	$ 3,000.00	$ 225.00	$ -
4/28/2009	State of DE/DNREC - DE National	PV-NonRes	$ 30,000.00	$ 750.00	$ -
4/29/2009	Delaware Primary Care, LLC	PV-NonRes	$ 30,000.00	$ 750.00	$ -
9/11/2009	NCALL	PV-NonRes	$ 30,000.00	$ 750.00	$ -
9/11/2009	D.Brian Beckman	Geo-Res	$ 2,000.00	$ 150.00	$ -
9/21/2009	LSKC Dover, LLC - Kids Cottage	PV-NonRes	$ 29,925.00	$ 750.00	$ -
10/5/2009	Mark F. Boller	Geo-Res	$ 3,000.00	$ 225.00	$ -
10/5/2009	John Welgan	PV-Res	$ 15,000.00	$ 750.00	$ -
11/4/2009	LSKC LLC/ Kids Cottage	Geo-NonRes	$ 12,000.00	$ 750.00	$ -
3/25/2010	James G. McGiffin Jr. & Kathleen M.	Geo-Res	$ 3,000.000	$ 225.000	$ -
3/23/2010	Minaxi Patel	PV-Res	$ 15,000.000	$ 750.000	$ -
5/28/2010	Nancy Warner	Geo-Res	$ 1,200.000	$ 90.000	$ -
6/2/2010	David Teel	Geo-Res	$ 1,800.000	$ 135.000	$ -
6/2/2010	Dewey J. Barich	Geo-Res	$ 2,400.00	$ 180.000	$ -
7/12/2010	Mike & Sharon Laverty	PV-Res	$ 5,105.000	$ 382.880	$ -
8/19/2010	James Grilli	Geo-Res	$ 1,800.00	$ 135.000	$ -
8/19/2010	Michael Noble	PV-Res	$ 15,000.000	$ 750.000	$ -
9/17/2010	David Teel	PV-Res	$ 7,500.000	$ 562.500	$ -
3/8/2011	Michael & Carol Apgar	PV-Res	$ 7,500.000	$ 562.500	$ -
3/17/2011	Elizabeth Murphey School	Geo-NonRes	$ 9,200.000	$ 690.000	$ -
5/24/2011	Richard Avant	Geo-Res	$ 2,400.000	$ 180.000	$ -
6/23/2011	Charles Messina Plumbing &	SHW-NonRes	$ 10,000.000	$ 750.000	$ -
10/4/2011	Charles Bounds	Geo-Res	$ 1,800.000	$ 135.000	$ -
3/29/2011	Michael J Kopp	Geo-Res	$ 2,300.000	$ 135.000	$ 37.500
7/8/2011	Psychiatric Access of Central DE	PV-NonRes	$ 13,187.500	$ 750.000	$ -
3/7/2012	Ruth Ann Piper	Geo-Res	$ 1,200.000	$ 90.00	$ -
3/7/2012	Robert Hall	Geo-Res	$ 3,000.000	$ 225.00	$ -
3/7/2012	Elizabeth Murphey School (Bradford	Geo-NonRes	$ 13,800.000	$ 750.00	$ -
3/7/2012	Elizabeth Murphey School (Florence	Geo-NonRes	$ 12,000.000	$ 750.00	$ -
3/7/2012	Elizabeth Murphey School (Elizabeth	Geo-NonRes	$ 5,400.000	$ 405.00	$ -
3/7/2012	Elizabeth Murphey School (Garage &	Geo-NonRes	$ 1,800.000	$ 135.00	$ -
3/7/2012	Frank Daniels	Geo-Res	$ 4,400.000	$ 303.75	$ 26.25
3/7/2012	Elizabeth Murphey School (Sanford	Geo-NonRes	$ 10,200.00	$ 750.00	$ -
9/15/2012	Chong S. Tamburo-Lepage	Geo-Res	$ 2,300.00	$ 172.50	$ -
12/19/2012	Christopher W. Los	Geo-Res	$ 3,000.00	$ 225.00	$ -
1/30/2013	Matthew and Kimberly Chesser	Geo-Res	$ 3,000.00	$ 225.00	$ -
2/25/2013	Dennis Ho	PV-Res	$ 6,775.00	$ 508.13	$ -
6/28/2013	John DeMarie	Geo-Res	$ 3,000.00	$ 225.00	$ -
10/30/2013	James and Corinna Fritsch	PV-Res	$ 5,287.50	$ 396.56	$ -
10/30/2013	James and Deri Austin	PV-Res	$ 7,500.00	$ 562.50	$ -
2/28/2014	Calogero Guarraggi	PV-Res	$ 7,500.00	$ 562.50	$ -
2/28/2014	Elizabeth Murphey School	Geo-NonRes	$ 3,700.00	$ 277.50	$ -
2/21/2014	Mohammed Fuad	Geo-Res	$ 3,000.00	$ 225.00	$ -
4/8/2014	Holly Pfeifer	PV-Res	$ 5,750.00	$ 431.25	$ -
5/13/2014	Governors Avenue Animal Hospital	PV-NonRes	$13,550.75	$ 750.00	$ -
7/17/2014	Julia M. Pillsbury	Geo-Res	$ 3,000.00	$ 225.00	$ -
11/7/2014	Elizabeth Murphey School	Geo - NonRes	$ 3,700.00	$ 277.50	$ -
11/7/2014	Elizabeth Murphey School	Geo - NonRes	$ 3,700.00	$ 277.50	$ -
1/8/2015	Rex Bell	Geo - Res	$ 2,300.00	$ 172.50	$ -
Total			**$ 535,563.25**	**$ 26,675.07**	$ 63.75

ARRA RELIEF GRANTS PAID

Paid by State	Customer	System Type	Amount
6/10/2011	Arturo Sanchez	Solar - PV - Res	$ 7,500.00
10/19/2011	John Diamond Enterprise LLC	Solar - PV - Com	$ 30,000.00
10/19/2011	John Diamond Enterprise LLC	Geo HP - Com	$ 10,000.00
Total			**$ 47,500.00**

RECEIVED APPLICATIONS

Status	Applicant	Type	Grant Reservation Request	Review Fee
Total			$ -	$ -

ENERGY DEPOT FEES

Paid	Fee Period	Amount
3/3/2008	Start-up Fees	$ 5,872.50
4/15/2008	Start-up Fees	$ 1,957.50
4/15/2008	Mar, Apr, May 2008	$ 1,692.13
7/22/2008	June, July, Aug 2008	$ 1,692.13
10/10/2008	Sept, Oct, Nov 2008	$ 1,692.13
1/2/2009	Dec 08, Jan, Feb 2009	$ 1,692.13
4/3/2008	Mar, Apr, May 2009	$ 1,692.13
7/1/2009	June, July, Aug 2009	$ 1,692.13
9/11/2009	Sept, Oct, Nov 2009	$ 1,692.13

SEPA Fees

Date	Measure	
3/19/2012	2012 Annual Membership	$ 2,158.81
1/31/2013	2013 Annual Membership	$ 2,158.80
1/27/2014	2014 Annual Membership	$ 2,158.80

1/4/2010	Dec 09, Jan, Feb 2010	$ 1,692.13
3/29/2010	Mar, April, May 2010	$ 1,692.13
6/30/2010	June, July, Aug 2010	$ 1,692.13
10/4/2010	Sept, Oct, Nov 2010	$ 1,692.13
1/3/2011	Dec 2010, Jan, Feb 2011	$ 1,692.13
4/5/2011	Mar, Apr, May 2011	$ 1,692.13
7/8/2011	June, July, Aug 2011	$ 1,692.13
10/4/2011	Sept, Oct, Nov, 2011	$ 1,692.13
1/3/2012	Dec 2011; Jan, Feb 2012	$ 1,692.13
4/5/2012	Mar, Apr, May 2012	$ 1,692.13
7/2/2012	June, July, Aug 2012	$ 1,692.13
10/2/2012	Sept, Oct, Nov 2012	$ 1,692.13
11/30/2012	Dec 12, Jan, Feb 2013	$ 1,692.13
2/25/2013	Mar, Apr, May 2013	$ 1,692.13
7/22/2013	June, July, Aug 2013	$ 1,692.13
8/26/2013	Sept, Oct, Nov, 2013	$ 1,692.13
12/3/2013	Dec 13. Jan, Feb 2014	$ 1,692.13
3/4/2014	Mar, Apr, May 2014	$ 1,692.13
6/4/2014	June, July, Aug 2014	$ 1,692.13
9/4/2014	Sept, Oct, Nov 2014	$ 1,692.13
12/1/2014	Dec 14, Jan, Feb 2015	$ 1,692.13
3/9/2015	Mar, Apr, May 201	$ 1,692.13
Total Paid		**$ 56,901.77**

Total		**$ 6,476.41**

ENERGY EFFICIENCY CAMPAIGNS/EDUCATION PROGRAMS

Paid	Program Measure	Amount
10/21/2008	1,500 CFL Campaign & Educational	$ 5,012.29
12/11/2008	Reimbursement for Green Energy/Information Pamphlets	$ 3,459.12
3/31/2009	Thermal Imager for Home Audits Program	$ 5,581.12
1/4/2011	Eco @ Home Energy Conserve. Calendars	$ 20,015.81
1/14/2014	Presbyterian Church of Dover - Energy Efficiency Grant	$3,200.00
Total		**$ 37,268.34**

Dover Library Community Funds Collection - **$ 1,970,000.00** Allocation change from Dover

Collections	
$ 5,021.15	1/2 of Oct 2009 GEF Payment
$ 4,783.94	1/2 of Nov 2009 GEF Payment
$ 4,813.23	1/2 of Dec 2009 GEF Payment
$ 5,454.02	1/2 of Jan 2010 GEF Payment
$ 5,147.49	1/2 of Feb 2010 GEF Payment
$ 4,897.69	1/2 of March 2010 GEF Payment
$ 3,976.14	1/2 of April 2010 GEF Payment
$ 5,638.90	1/2 of May 2010 GEF Payment
$ 5,645.35	1/2 of June 2010 GEF Payment
$ 6,590.60	1/2 of July 2010 GEF Payment
$ 7,786.09	1/2 of August 2010 GEF Payment
$ 6,415.31	1/2 of Sept 2010 GEF Payment
$ 5,327.96	1/2 of Oct 2010 GEF Payment
$ 4,787.73	1/2 of Nov 2010 GEF Payment
$ 4,939.75	1/2 of Dec 2010 GEF Payment
$ 5,452.55	1/2 of Jan 2011 GEF Payment
$ 5,410.35	1/2 of Feb 2011 GEF Payment
$ 4,646.32	1/2 of March 2011 GEF Payment
$ 4,742.22	1/2 of April 2011 GEF Payment
$ 4,702.48	1/2 of May 2011 GEF Payment
$ 5,664.97	1/2 of June 2011 GEF Payment
$ 6,430.15	1/2 of July 2011 GEF Payment
$ 6,916.50	1/2 of Aug 2011 GEF Payment
$ 6,149.31	1/2 of Sept 2011 GEF Payment
$ 5,243.92	1/2 of Oct 2011 GEF Payment
$ 4,829.91	1/2 of Nov 2011 GEF Payment
$ 4,531.81	1/2 of Dec 2011 GEF Payment
$ 4,990.50	1/2 of Jan 2012 GEF Payment
$ 5,071.81	1/2 of Feb 2012 GEF Payment
$ 4,828.32	1/2 of March 2012 GEF Payment
$ 4,857.07	1/2 of April 2012 GEF Payment
$ 4,230.04	1/2 of May 2012 GEF Payment
$ 5,711.19	1/2 of June 2012 GEF Payment
$ 6,085.89	1/2 of July 2012 GEF Payment
$ 7,347.66	1/2 of Aug 2012 GEF Payment
$ 6,453.66	1/2 of Sept 2012 GEF Payment
$ 4,886.43	1/2 of Oct 2012 GEF Payment
$ 4,132.99	1/2 of Nov 2012 GEF Payment
$ 5,513.86	1/2 of Dec 2012 GEF Payment
$ 5,187.25	1/2 of Jan 2013 GEF Payment
$ 5,307.83	1/2 of Feb 2013 GEF Payment
$ 4,783.25	1/2 of March 2013 GEF Payment
$ 4,903.40	1/2 of April 2013 GEF Payment
$ 4,673.21	1/2 of May 2013 GEF Payment
$ 5,322.04	1/2 of June 2013 GEF Payment
$ 6,352.74	1/2 of July 2013 GEF Payment
$ 6,519.11	1/2 of Aug 2013 GEF Payment
$ 5,995.23	1/2 of Sept 2013 GEF Payment
$ 4,913.73	All of Oct 2013 GEF Payment
$ 8,589.16	All of Nov 2013 GEF Payment
$ 8,846.64	All of Dec 2013 GEF Payment
$ 9,286.45	All of Jan 2014 GEF Payment
$ 10,267.60	All of Feb 2014 GEF Payment
$ 8,950.89	All of March 2014 GEF Payment
$ 8,960.46	All of April 2014 GEF Payment
$ 8,069.10	All of May 2014 GEF Payment
$ 9,357.61	All of June 2014 GEF Payment
$ 10,776.24	All of July 2014 GEF Payment
$ 10,967.67	All of Aug 2014 GEF Payment
$ 10,883.75	All of Sept 2014 GEF Payment
$ 8,932.20	All of Oct 2014 GEF Payment
$ 8,549.42	All of Nov 2014 GEF Payment
$ 8,805.66	All of Dec 2014 GEF Payment
$ 9,524.94	All of Jan 2015 GEF Payment
$ 10,268.95	All of Feb 2015 GEF Payment
$ 9,387.70	All of March 2015 GEF Payment
	All of April 2015 GEF Payment
	All of May 2015 GEF Payment
	All of June 2015 GEF Payment
$ 424,437.37	**Total Collections**

Allocation Request from Dover 10/30/2013 - DEMEC to direct more money to library

10/30/2013 **Dover Library Community Grant Payment Schedule**

Payment Due Date	Requested Amount	Funds Paid to Date
10/17/2011	$ 48,267.00	$ 48,267.00
12/5/2012	$ 152,141.32	$ 152,141.32
June 1, 2014	$ 98,500	$ 98,500.00
June 1, 2015	$ 98,500	
June 1, 2016	$ 98,500	
June 1, 2017	$ 98,500	
June 1, 2018	$ 98,500	
June 1, 2019	$ 98,500	
June 1, 2020	$ 98,500	
June 1, 2021	$ 98,500	
June 1, 2022	$ 98,500	
June 1, 2023	$ 98,500	
June 1, 2024	$ 98,500	
June 1, 2025	$ 98,500	
June 1, 2026	$ 98,500	
June 1, 2027	$ 98,500	
June 1, 2028	$ 98,500	
June 1, 2029	$ 98,500	
June 1, 2030	$ 98,500	
June 1, 2031	$ 98,500	
June 1, 2032	$ 98,500	
June 1, 2033	$ 98,500	
Total	**$ 1,970,000.00**	**$ 298,908.32**

City of Dover
Electric Revenue Fund
FY15 - White Oak Solar Park Incremental Cost

	July	August	September	October	November	December	January	February	YTD	Original Budget
Power Supply & Generation										
Dover Sun Park - Energy	$ 227,139	$ 219,981	$ 185,885	$ 140,672	$ 96,640	$ 54,849	$ 80,597	$ 111,516	$ 1,117,277	$ 2,067,600
Dover Sun Park - REC's	47,469	42,307	33,221	25,192	17,303	9,828	14,396	-	189,716	378,600
Total Power Supply Cost	274,609	262,288	219,105	165,864	113,943	64,677	94,993	111,516	1,306,993	2,446,200
Non-Solar Power Supply Cost	(170,970)	(136,533)	(97,948)	(80,182)	(63,893)	(26,259)	(48,763)	(103,862)	(728,410)	(860,244)
Incremental Energy Cost	$ 103,639	$ 125,755	$ 121,157	$ 85,682	$ 50,050	$ 38,418	$ 46,229	$ 7,654	$ 578,583	$ 1,585,956
Revenues										
Customer Sales - Electricity	(9,870)	(8,024)	(7,893)	(7,840)	(8,061)	(8,135)	(8,448)	(8,367)	(66,638)	(84,600)
Rent Receipts	(14,807)	-	-	(14,807)	-	-	(15,177)	-	(44,792)	(101,400)
Total Revenues	(24,677)	(8,024)	(7,893)	(22,647)	(8,061)	(8,135)	(23,625)	(8,367)	(111,429)	(186,000)
Incremental Sun Park Cost	$ 78,962	$ 117,731	$ 113,264	$ 63,034	$ 41,989	$ 30,283	$ 22,604	$ (713)	$ 467,154	$ 1,399,956
MWh Purchased/Generated - Solar	2,217.724	2,006.392	1,602.868	1,213.000	833.320	472.956	694.980	961.592	10,002.832	18,159.000
MWh $ Solar Energy	$ 102.42	$ 109.64	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 111.70	$ 113.86
Solar REC's MWh	332.000	301.000	240.000	182.000	125.000	71.000	104.000	-	1,355.000	
MWh $ Solar REC (one month lag)*	142.98	140.56	138.42	138.42	138.42	138.42	138.42	-	$ -	
MWh $ Non-Solar Energy	$ 77.09	$ 68.05	$ 61.11	$ 66.10	$ 76.67	$ 55.52	$ 70.16	$ 108.01		

Note: Solar REC's are one month behind due to the time the invoice is received.

City of Dover
Electric Revenue Fund
FY15 - White Oak Solar Park Incremental Cost

	July	August	September	October	November	December	January	February	March	April	YTD	Original Budget
Power Supply & Generation												
Dover Sun Park - Energy	$ 227,139	$ 219,981	$ 185,885	$ 140,672	$ 96,640	$ 54,849	$ 80,597	$ 111,516	$ 153,863	$ 212,274	$ 1,483,415	$ 2,067,600
Dover Sun Park - REC's	47,469	42,307	33,221	25,192	17,303	9,828	14,396	19,932	27,546	-	237,194	378,600
Total Power Supply Cost	274,609	262,288	219,105	165,864	113,943	64,677	94,993	131,448	181,409	212,274	1,720,608	2,446,200
Non-Solar Power Supply Cost	(170,970)	(136,533)	(97,948)	(80,182)	(63,893)	(26,259)	(48,763)	(103,555)	(70,973)	(115,153)	(914,229)	(1,131,760)
Incremental Energy Cost	$ 103,639	$ 125,755	$ 121,157	$ 85,682	$ 50,050	$ 38,418	$ 46,229	$ 27,894	$ 110,436	$ 97,121	$ 806,380	$ 1,314,440
Revenues												
Customer Sales - Electricity	(9,870)	(8,024)	(7,893)	(7,840)	(8,061)	(8,135)	(8,448)	(8,367)	(8,186)	(7,849)	(82,673)	(84,600)
Rent Receipts	(14,807)	-	-	(14,807)	-	-	(15,177)	-	-	-	(44,792)	(101,400)
Total Revenues	(24,677)	(8,024)	(7,893)	(22,647)	(8,061)	(8,135)	(23,625)	(8,367)	(8,186)	(7,849)	(127,464)	(186,000)
Incremental Sun Park Cost	$ 78,962	$ 117,731	$ 113,264	$ 63,034	$ 41,989	$ 30,283	$ 22,604	$ 19,527	$ 102,250	$ 89,272	$ 678,915	$ 1,128,440
MWh Purchased/Generated - Solar	2,217.724	2,006.392	1,602.868	1,213.000	833.320	472.956	694.980	961.592	1,326.748	1,830.424	13,160.004	18,159.000
MWh $ Solar Energy	$ 102.42	$ 109.64	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 115.97	$ 112.72	$ 113.86
Solar REC's MWh	332.000	301.000	240.000	182.000	125.000	71.000	104.000	144.000	199.000	-	1,698.000	
MWh $ Solar REC (one month lag)*	142.98	140.56	138.42	138.42	138.42	138.42	138.42	138.42	138.42	-	$ -	
MWh $ Non-Solar Energy	$ 77.09	$ 68.05	$ 61.11	$ 66.10	$ 76.67	$ 55.52	$ 70.16	$ 107.69	$ 53.49	$ 62.91		

Note: Solar REC's are one month behind due to the time the invoice is received.