UTILITY COMMITTEE
A G E N D A

APRIL 22, 2013 - 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. **Annual Engineering Consultant's Report on the Operation and Maintenance of the Electric System - Fiscal Year 2012**
   (Staff Recommends Acceptance of the Report)

2. **Adjournment by 5:25 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.

Annual Engineering Consultant's Report

on the

Operation and Maintenance of the Electric System Fiscal Year 2012

Electric Division
City of Dover, Delaware

Annual Engineering Consultant's Report on the Operation and Maintenance of the Electric System Fiscal Year 2012

Prepared for the

Electric Division
City of Dover, Delaware

April 2013

Project No. 72167

Prepared by

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

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April 17, 2013

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

City of Dover
Annual Engineering Consultant's Report
Project No. 72167

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 submits this Annual Engineering Consultant's Report for the fiscal year ended June 30, 2012. 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 2012 expenditures and fiscal year 2013 budgets. In addition, an analysis of the balances of the Improvement and Extension Fund as well as 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 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.

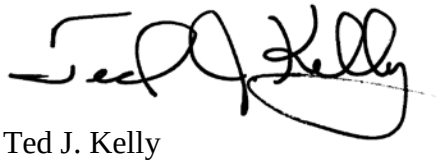
Further, it is the opinion of Burns & McDonnell that the balances in the various reserve funds maintained by the City for the Electric Division are sufficient for their intended purposes.

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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

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SECTION 1 - EXECUTIVE SUMMARY

1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The 2012 Annual Engineering Consultant's Report (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 has been retained as 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 tenth annual Engineering Consultant's Report prepared for the City by Burns & McDonnell.

1.2 ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT

The Electric System owned by the City primarily consists of production plant, transmission plant, distribution plant, and general plant facilities.

The City owns two power plants, the McKee Run Generating Station (McKee Run) and the VanSant Generating Station (VanSant). 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.

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.

North American Energy Services Corporation (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 in the Electric System Overview and Assessment section of the Report.

The Electric Division served approximately 22,953 customers at the end of FY 2012, 19,804 of which were residential customers. The distribution facilities include 190 miles of overhead lines and 268 miles of underground lines connected through fifteen substations. The Engineering Consultant's observations regarding the transmission and distribution systems are described in the Electric System Overview and Assessment section of the Report.

Four of the 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 operational, the Electric Division provides power for the plant site.

The Electric Division has one contract for providing transmission service through the Electric System. As previously stated, the Electric Division provides transmission service to NRG for the output of its 16-MW electric generator.

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

The various systems and components of the generating stations 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.

The Engineering Consultant's observations regarding the generating stations and units are described in the Electric System Overview and Assessment section of the Report. 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.

The Engineering Consultant's observations regarding the transmission and distribution systems are described in the Electric System Overview and Assessment section of the Report.

1.3 FINANCIAL 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 2012. The Resolution requires that the Electric Division maintain a debt service coverage ratio of 1.25. 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:*
>
> *(1) The Current Expenses of the Electric System during the current fiscal years shown by the Annual Budget . . . for such fiscal year, and*
>
> *(2) 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."*

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 2012. A comprehensive cost-of-service and rate design study was completed in 2006 and subsequent rate analyses were completed in 2007, 2008, and 2012 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 July 2012 rate adjustments established the rate schedules utilized by the Electric Division today.

Total energy sales decreased from 734.1 GWh in FY 2011 to 710.3 GWh in FY 2012, a decrease of 3.2 percent. Total revenue from sales to electric customers in FY 2012 was approximately $91.9 million, representing a decrease of $7.6 million from FY 2011 rate revenue of approximately $99.5 million. In FY 2012, the average revenue per kWh for residential customers was 14.29 cents and the system-wide average price was 12.94 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 by its energy manager, TEA. From FY 2011 to FY 2012, the cost of power decreased from $69.6 million to $58.9 million. Net income increased from $3.2 million in FY 2011 to $8.5 million in FY 2012. The net income increase in FY 2012 was due in large part to the decrease in power supply and generation costs.

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 2010, FY 2011, and FY 2012 of 4.24, 5.45, and 6.48 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 insure against 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 information on the accounts listed above and found that the balances in those accounts as of June 30, 2012, 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 2013 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.

4. The balances as of June 30, 2012 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 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.

* * * * *

SECTION 2 - INTRODUCTION

2.0 INTRODUCTION

The City of Dover, Delaware (City) operates a municipally-owned electric utility system that serves 22,953 customers within the City and surrounding areas at the end of FY 2012. The 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 2012 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 has been 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. 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 Power Plant budget, monitors the contracts of the energy coordinator and the power generation operator/manager and is responsible for NAES (Operator) contracts and oversight. The Electric Division is organized into three 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. Lastly, it is responsible for the operation of a 24/7 system operations control center, referred to as System Operations.

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 problems and oversees the work of tree trimming contractors.

Figures II-1 through II-4 provides 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 47 at the time the FY 2013 budget was issued.

Figure II-1: Organization

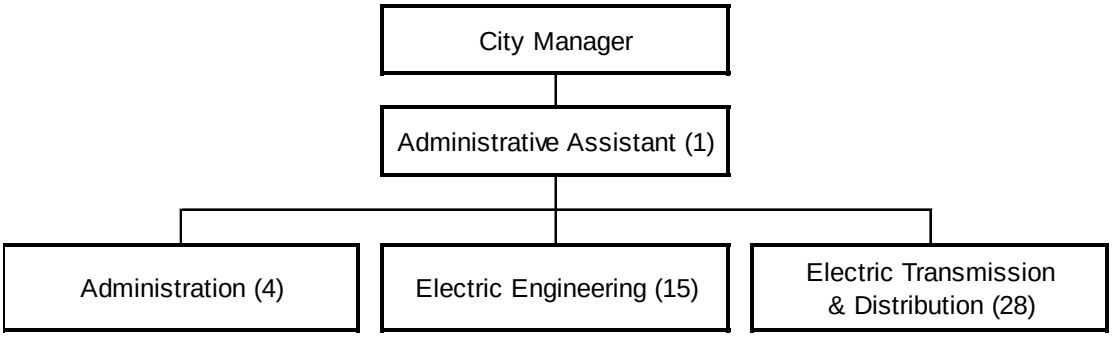


Figure II-2: Administration

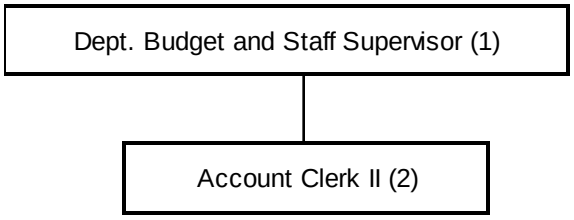


Figure II-3: Electric Engineering

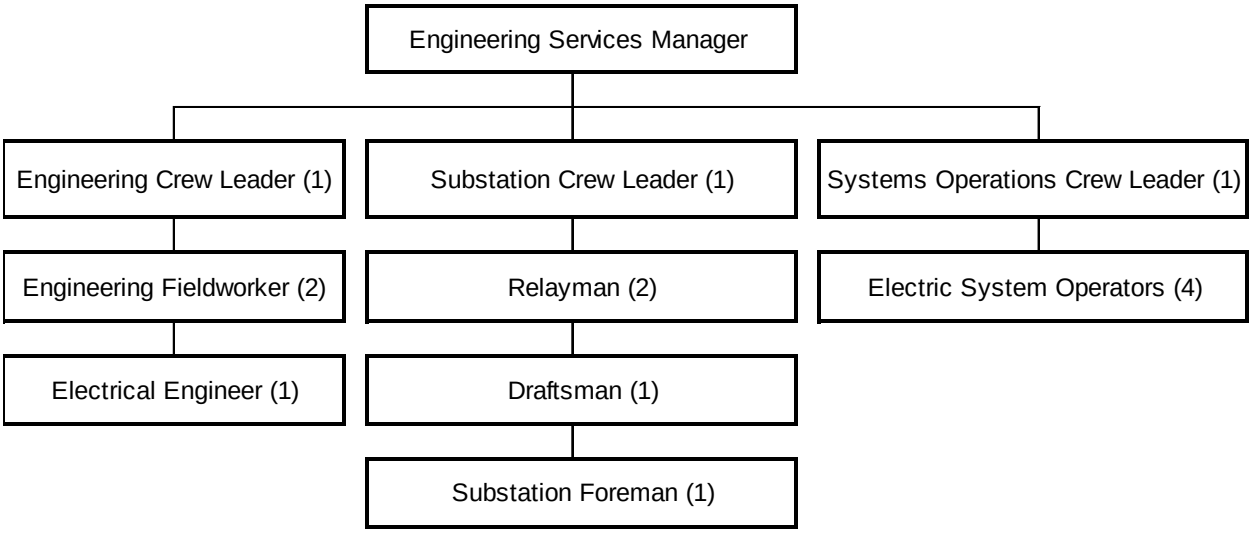
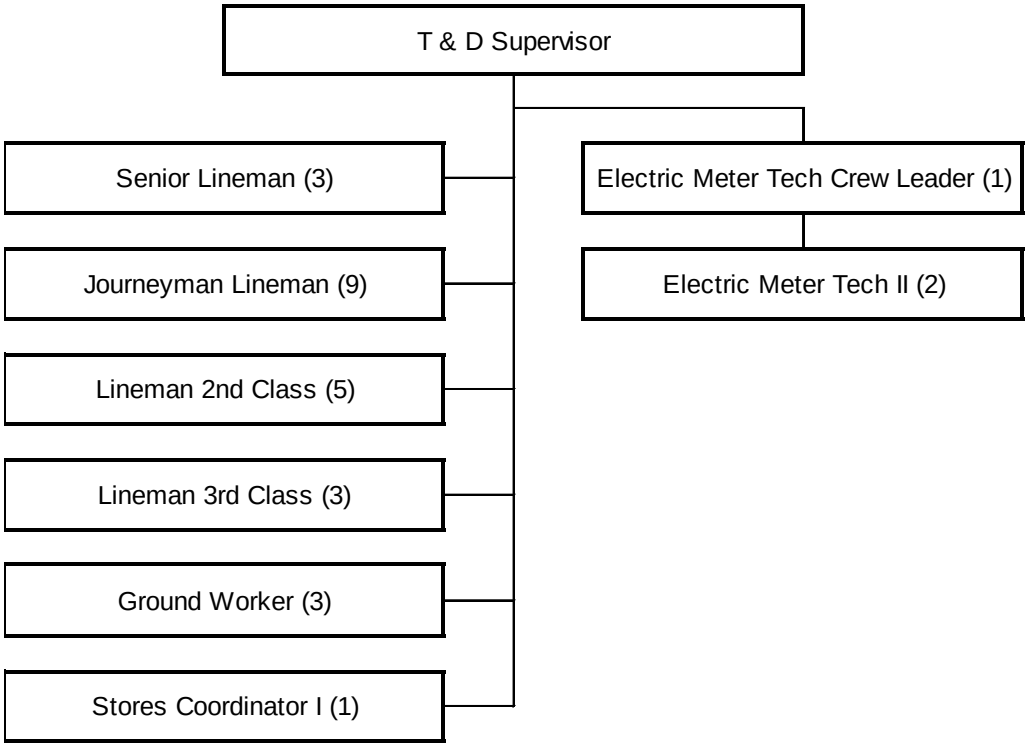


Figure II-4: Electric Transmission & Distribution



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 describes the assessment of the Electric System and its condition. Section 4 presents the financial results for the Electric Division, including an analysis of the adequacy of revenues provided by the electric rates. Section 5 summarizes the conclusions of Burns & McDonnell regarding the operation and maintenance of the Dover Electric System.

In the preparation of the Report, Burns & McDonnell reviewed and analyzed maintenance records, audited financial statements, and other data provided by the City. Burns & McDonnell has relied on the information provided without independent verification, 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.

* * * * *

SECTION 3 – ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT

3.0 ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT

3.1 ELECTRIC SYSTEM OVERVIEW

The Electric System owned by the City of Dover, Delaware (City) primarily consists of production plant, transmission plant, distribution plant, and general plant facilities, and construction work in progress. Table 4-1 displays the year-end balances of the various plant components for FY 2010 through FY 2012. Table 4-2 itemizes the specific capital investment plan projects and anticipated expenditures included in the FY 2013 budget.

Table III-1

YEAR-END PLANT IN SERVICE
City of Dover Electric Division

	FY 2010	FY 2011	FY 2012
Capital assets, not being depreciated			
Land	$ 1,458,066	$ 1,458,066	$ 1,458,066
Construction in progress	12,772,089	424,809	789,014
Total capital assets, non-depreciable	$ 14,230,155	$ 1,882,875	$ 2,247,080
Capital assets, being depreciated			
Buildings	$ 16,922,580	$ 17,383,566	$ 17,456,628
Production	62,442,716	63,408,937	64,610,399
Transmission	22,651,256	32,558,944	33,106,748
Distribution	55,811,945	59,824,248	60,680,365
Administration	1,530,413	1,551,280	1,634,017
Vehicles	624,428	622,236	640,096
Total capital assets, being depreciated	$ 159,983,338	$ 175,349,211	$ 178,128,253
Less accumulated depreciation for:			
Buildings	$ (10,574,839)	$ (10,992,065)	$ (11,400,308)
Production	(38,692,760)	(39,931,442)	(41,416,622)
Transmission	(8,052,226)	(9,206,982)	(10,344,554)
Distribution	(22,260,895)	(23,817,302)	(25,322,267)
Administration	(1,029,427)	(1,102,778)	(1,196,545)
Vehicles	(427,752)	(435,188)	(464,219)
Total accumulated depreciation	$ (81,037,899)	$ (85,485,757)	$ (90,144,515)
Total capital assets, being depreciated, net	78,945,439	89,863,454	87,983,738
Total capital assets, net	$ 93,175,594	$ 91,746,329	$ 90,230,818

In FY 2012, the Electric System experienced an increase 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 22, 2011 when demand reached 172.555 MW. For the year, approximately 710.3 GWh of energy were sold, a decrease of 3.2 percent from the preceding year. The Electric Division projects energy sales to increase in FY 2013 to 730.9 GWh, an increase of 2.9 percent. The Electric Division expects annual energy sales to remain relatively constant from FY 2013 through FY 2017.

Table III-2

FISCAL YEAR 2013 PLANNED CAPITAL EXPENDITURES
City of Dover Electric Division

Electric Engineering Projects:		
Distribution System Upgrades	$	400,000
Lighting Project and Rehabilitation		100,000
Horsepond Road Substation Reliability Upgrade		170,000
Substation Equipment & Fencing (Division St)		70,000
Transmission Line Maintenance Program		75,000
Distribution Feeder Replacement Program		277,500
Distribution Capacitors - Overhead		50,000
Distribution Capacitors - Underground		75,000
69kv Switch Replacement		55,000
Frazier Substation Reliability Upgrade		610,200
General Scott Switchgear		50,000
Subtotal Electric Engineering Division	$	1,932,700
Electric Transmission & Distribution Projects:		
New Developments - UG Transformers	$	450,000
Vehicles, Trucks, & Equipment		146,000
Subtotal Electric Transmission Division	$	596,000
Electric Generation Projects:		
McKee Run Turbine Level Window Modification	$	85,000
Unit 3 - Stack Repairs		27,000
Unit 3 Boiler Systems		129,000
Unit 3 Auxillary System Components		55,000
Unit 3 Turbine Outage/Inspections		115,000
Unit 3 Air Heater Expansion Joint		80,000
Unit 3 Generator Repairs		236,000
Units 1 & 2 Cooling Tower Life Extension		37,300
Units 1 & 2 Stack Repairs		75,000
Units 1 & 2 Component Repairs		52,000
VanSant Capacity Increase		550,000
Subtotal Electric Generation Division	$	1,441,300
Total Planned Capital Investment Projects	$	3,970,000

3.1.1 Production Plant

The City owns two power stations, the McKee Run Generating Station (McKee Run) and the VanSant Generating Station (VanSant). 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.

North American Energy Services Corporation (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 assist the City with its energy procurement, energy sale, 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 and 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 268 miles of underground distribution lines. Four 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 and the City funds all replacements and upgrades required to maintain 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 the Report.

3.2 ELECTRIC SYSTEM 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. The findings of Burns & McDonnell from the review of the City's Electric System are documented herein.

3.2.1 Electric Generating Stations

On March 8, 2013, 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. Vince Scire, the Plant Administration and Environmental Health & Safety Manager.

3.2.1.1 Description: 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.

3.2.1.2 Management and Organization: Station management is very well organized and knowledgeable. Personnel take a logical approach to the operation and maintenance of the generation facilities. Mr. Vince Scire serves as the Plant Manager. The management/leadership team consists of eight members including Mr. Scire. The Administrative & Employee Health and Safety Manager, Material Management Coordinator, and O&M Manager, all report directly to Mr. Scire. An Administrative Specialist position is currently open at the plant. This position is part of the management/leadership team as well.

The O&M Manager oversees a Maintenance Supervisor, a Compliance Specialist and four Operations teams. Each operations team consists of two supervisors 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 planner, 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 28 employees, with 32 approved positions.

3.2.1.3 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.

There were no restricted work days or lost time accidents reported in FY 2012. NAES ended the year with 51,786 man-hours worked with no OSHA recordable accidents.

3.2.1.4 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) has been established. EDQP is a formal program for training operators to progressively advance to positions with additional responsibilities. 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.

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 PJM market. This training should continue in the future. The plant also completed planning and scheduling training on a regular basis for plant operators.

3.2.1.5 Major Equipment Operation 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 relatively large number of starts per year and low annual capacity factor. Table 4-3 summarizes the major FY 2012 operating statistics.

The large amount of time that units are not operating allows for maintenance and repair of the units. As a result, the FY 2012 overall equivalent availability factor for the generation facilities averaged 66.91 percent. Low net capacity factors are partially offset by Pennsylvania New Jersey Maryland Interconnection (PJM) capacity credits. In FY 2012, approximately $7.4 million of PJM capacity credits helped cover the fixed operating and maintenance costs of the Electric System. PJM capacity credits are expected to continue to provide similar benefits in FY 2013 and beyond.

3.2.1.6 Electronic 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].

Table III-3

FISCAL YEAR 2012 OPERATING STATISTICS
City of Dover Electric Division

Unit Number	Rated Capacity - MW	Net Production - MWh	Net Capacity Factor	Net Heat Rate Btu/kWh	Number of Starts
VanSant	39	714.8	0.21%	11,662	26
McKee Run					
Unit 1	17	628.9	0.42%	14,866	3
Unit 2	17	541.7	0.37%	14,775	2
Unit 3	102	21,088.2	2.37%	11,403	29
Total	175	22,973.6	1.50%		60

Unit Number	Forced Outage Hours	Operating Hours	Service Factor	Equivalent Availability Factor
VanSant	-	23.0	0.26%	67.09%
McKee Run				
Unit 1	-	96.0	1.10%	66.03%
Unit 2	-	72.0	0.82%	65.99%
Unit 3	-	369.9	4.22%	65.99%
Total	-	560.9	6.40%	

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.

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

Recently Completed:

- DOE Grant - Photovoltaic Panels
- McKee Run & VanSant Arc Flash
- McKee Run Driveway Repaving
- Unit 3 Fire Protection System
- Unit 3 Cooling Tower Life Extension
- Unit 1 Outage FY 2011
- Unit 2 - Boiler Inspection & Repair
- VanSant CT Mark IV Upgrades
- Work Management Software Replacement
- Unit 3 - Gas Modification
- Unit 3 Air Heater Expansion Joint
- Units 1 and 2 Control Modifications
- Units 1 and 2 Stack Repairs Inspection
- Unit 3 - Stack Repairs Inspection
- Unit 3 Boiler Air Heater
- Unit 3 FD and ID Fan Controller Upgrade
- Unit 3 DCS Computers & Software Upgrades
- Units 1 and 2 Component Repairs
- VanSant Component Replacements
- Unit 3 Auxiliary System Components

On-Going:

- McKee Run Preservation of Structures
- Units 1 and 2 Component Repairs
- Units 1 and 2 Cooling Tower Component Repairs
- McKee Run Equipment Replacements
- Unit 3 Boiler Systems
- Industrial Wastewater Project – McKee Run

Planned:

- McKee Run Demineralizer Replacement
- McKee Run High Energy Piping
- Unit 3 Turbine Outage/Inspections
- Unit 3 Cooling Water Line Replacement
- Unit 3 Generator Repairs
- Units 1 and 2 Stack Repairs
- VanSant Capacity Increase
- Metering System Upgrades

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

3.2.1.9 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. McKee Run Unit 3 turning gear engagement problems were reported in the summer 2010 outage report and repairs were completed in FY 2012.

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. A recommendation following the FY 2011 inspection addressed safety. XL Insurance recommended the installation of a permanent fire protection system for the turbine generator bearings at McKee Run. The City completed the installation of the system in FY 2011 for Unit 3. The City and XL Insurance agree that portable foam generating carts are sufficient fire protection for Units 1 and 2, due to their light use.

For 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. Turbine condition assessment was conducted during the fall outage and the Units were found to be in satisfactory working condition. Repairs are scheduled for Unit 3 turbine and generator systems. The long lead material requirements are being developed for bid and will be procured in the spring of 2013.

3.2.1.10 Boilers and Auxiliaries: Boiler inspections are conducted every year on each of the boilers. Each fiscal year, the inspections on each boiler 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.

In FY 2010, McKee Run Unit 1 experienced a tube failure and excursion and consequently was shut down. The City hired a contractor to supply replacement parts and repair the tube by replacing a tube section. After an internal inspection, plant staff made the decision to replace six additional tubes in Unit 1. The City subsequently hired inspectors to examine the repaired unit and provide recommendations for additional repairs and inspections. These maintenance recommendations helped determine certain projects to be completed during future outages.

In FY 2011, the outlet duct expansion joint was replaced at Unit 3. Operations removed the appropriate insulation and lagging to prepare the duct. The Electric Division contracted Apex to complete the installation the equipment. A complete seam weld was utilized to seal the joint and the job site was cleaned. No additional problems with this joint developed in FY 2012.

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 for the Unit 3 air heater.

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.

3.2.1.11 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 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. Projectile tube cleaning was last

completed in the 1980's. 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.

3.2.1.12 Fuel Handling Systems: Natural gas comes into the Station in a 4-inch diameter 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 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 2012.

3.2.1.13 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 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 is currently undergoing the approval process with Kent County to obtain an integrated waste water permit to be able to discharge cooling water to the sewer system. No major issues were reported at the time of this Report.

Steam purity is not continuously monitored. Samples are taken 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 2012, the station did not experience any internal corrosion related failures, steam path deposits, or excessive condenser fouling. NALCO 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.

3.2.1.14 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 February 2011. Oil inspections and analyses were made. The inspector recommended that normal operation continue for all the transformers at the plant. Oil sampling is now completed twice per year on the GSUs. All plant transformers are examined annually.

Following its FY 2008 annual inspection of the production facilities, XL Insurance recommended the City build blast walls around transformers at the plant. In FY 2011, the City continued to research blast wall protection. Based on the 2012 XL Insurance annual inspection, there are still no concrete walls or sprinkler protection for GSU's 1-3. Fire barrier walls were installed between the Unit 1 and 2 auxiliary transformers and the Unit 3 start-up transformer.

3.2.1.15 Station Control Systems: Unit 1 and Unit 2 controls are electro-pneumatic and Unit 3 controls are a distributed control system (DCS). During the March FY 2011 spring outage, a controls upgrade was completed at McKee Run Units 1 and 2. The new devices will control igniters, pilots and shut down main fuel to protect the boiler. The project included the installation of new limit switches on main gas, pilot gas, and oil supply/return valves. The controls upgrades help the system meet national fire protection codes.

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 intends to seal the rest of the openings as part of its boiler controls and control room upgrades.

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 (NERC), Pennsylvania-New Jersey-Maryland (PJM) Interconnection and Mid-Atlantic Area Council (MAAC) compliance. The EHC system will be modified in the future to become a primary/primary system. No major issues were reported at the time of this Report.

3.2.1.16 General Facilities: No major projects or improvements were completed to the General Facilities in FY 2012 other than routine maintenance and repairs. In general, the station facilities appeared clean and well maintained during the site visit.

3.2.1.17 VanSant Generating Station: In general, the unit is operated infrequently, but is well maintained. 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. The annual overhaul and inspections were conducted at VanSant during FY 2012. No major problems were found.

The VanSant unit now has the capability of completing black starts. Upgrades have been made to provide the capability of remote control of the unit; however, complications have not made remote control possible.

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 2012.

3.3 TRANSMISSION AND DISTRIBUTION SYSTEMS

On March 7, 2013, 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. Steve Enss, the Engineering Services & System Operations Superintendent, provided information related to the transmission and distribution system. Mr. Enss also led a tour of the electric transmission and distribution system.

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 Safety Mr. Enss reported to Burns & McDonnell that there were no reportable injuries or lost workdays in FY 2012.

3.3.2 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.

3.3.3 Power Quality The Electric Division does not have any significant power quality problems. The overall power factor for the Electric System increased from approximately 98.43 percent in FY 2011 to 99.86 percent in FY 2012. 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.

3.3.4 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 nine 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, battery systems checks, and oversee annual transformer condition assessments are performed regularly.

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. No pole treatments were reported as completed in FY 2012.

3.3.5 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 PVC 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 (EPR) insulation.

The standard overhead distribution design utilizes a flat construction using 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.

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

Recently Completed:

- 69-kV Feeders 3 and 4
- Replacement of 69-kV Breakers & Design
- Governors Avenue Rebuild
- Mid City Substation Upgrades
- Substation PT and CT Replacement
- Transmission Relaying, Replacement and Calibrations
- Outage Management System

Planned:

- Replace Substation Equipment and Fencing
- McKee Run Yard Rebuild

- North Street 69-kV Cable Replacement
- System Automation & SCADA Equip.
- Horsepond Substation to Cartanza 69-kV Rebuild
- General Scott Switchgear

On-Going:

- Distribution System Upgrades
- Lighting Project and Rehabilitation
- New Developments – Underground Transformers
- 69-kV Substation Switch Replacement
- New Developments – Underground Conductors and Devices
- Single Phase Meters

- Horsepond Road Substation Reliability Upgrade
- Distribution Capacitors - Overhead
- Distribution Feeder Replacement Program
- Distribution Capacitors - Underground
- Frazier Substation Reliability Upgrade
- 69-kV Substation Switch Replacement

3.3.7 Condition Assessment: The transmission and distribution system assessment included drive-by observations of a sample of the transmission circuits, distribution circuits, and substations. Many of the fifteen substations were physically observed during the tour. The following substations were observed during the tour:

- Mid City Substation
- Frazier Substation
- North Street Substation
- General Scott Substation
- Lebanon Substation
- Division Street Substation
- St. Jones Substation
- Horsepond Substation
- Cartanza Substation

The first stop during the transmission and distribution system evaluation was the Mid City Substation. In FY 2011, breaker change outs were completed. The oil breakers were replaced with SF6 breakers at the substation. Routine maintenance was completed at the Frazier Substation in September 2010 and reliability upgrades are scheduled to begin in FY 2012. Switch replacement was completed at the North Street Substation and cable replacement is on

the Electric Division's five-year capital plan. Switches were replaced at the General Scott Substation and the 69-kV breakers were replaced. The switchgear is scheduled for replacement in FY 2015 at the General Scott Substation.

The Lebanon, Division Street, St. Jones, and Horsepond Substations appeared to be in good condition. Routine maintenance was completed in FY 2011 at these locations. There was little to no vegetation visible and the yards appeared to be well maintained.

The Cartanza Substation was observed during the system tour. Cartanza is a 230/69-kV substation, which serves as a tie with Delmarva. Delmarva maintains the 230-kV side of the station, while the City of Dover maintains the 69-kV side. In FY 2011, tap changer seals were replaced at the substation. The Electric Division works Delmarva Power on transformer testing. Cartanza currently has four 69-kV lines leaving the station. The four circuits leave the station on two diverse pole lines, each holding a double circuit, until the circuits split down the line. This configuration allows for two separate loops for the entire 69-kV system to minimize total system failure should one common pole be critically damaged.

Along the transmission and distribution system tour route, additional projects were detailed. The replacement of old underground circuits was completed in December 2011. Also, a number of insulators were replaced due to some breakdowns primarily due to age. Specifically, a transmission line near McKee Run was replaced because of the continual damage sustained by cooling tower exhaust. Another transmission line connecting a 10-MW Sun Power solar project was completed during the fall of FY 2011. Force labor completed the job. The transmission line featuring composition poles was completed in time to shave 6 MW from the system peak.

In addition, the tour included driving through several residential areas that are served by underground distribution lines. The pad mounted transformers observed along the way appeared to be in good condition.

3.4 CONCLUSIONS

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.

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.

* * * * *

SECTION 4 – FINANCIAL ASSESSMENT

4.0 FINANCIAL ASSESSMENT

A review of the financial results of the Electric System for the fiscal year (FY) ended June 30, 2012, is provided below.

4.1 FINANCIAL RESULTS

The total revenue of the Electric Division during FY 2012 included revenue from charges for electric service, as well as miscellaneous revenues from items such as rents, penalties, reconnection fees, and development fees. On the Comparative Statement of Revenues, Expenses, and Changes in Unreserved Retained Earnings Table, revenues were compared to the Electric Division's costs of providing services to its customers to determine whether the financial requirements of the Electric Division were met.

4.1.1 Required Revenue Level

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."*

4.1.2 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 complete a new cost-of-service and rate design study in fourth quarter FY 2012. The study examined revenue adequacy, revenue responsibility, and revenue recovery for the Electric Division. The FY 2012 study scrutinized customer classes and proposed adjustments for demand rate components and corresponding changes to energy charges. 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
- Water Pumping
- Supplemental for NRG

4.1.3 Operating Results

Table IV-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 2010 through FY 2012. After reaching a low in FY 2010 for the three-year period, annual energy sales increased to 734.1 GWh in FY 2011. On a percentage basis, the one-year increase equaled 3.6 percent. Annual energy sales decreased in FY 2012 to 710.3 GWh, a decrease of 3.2 percent.

Table IV-1

ANNUAL SALES AND CUSTOMERS
City of Dover Electric Division

	FY 2010	FY 2011	FY 2012
Energy Sales (kWh)			
Residential	193,911,702	208,092,047	196,388,942
Commercial	237,608,938	243,985,517	230,814,311
Primary	148,381,527	153,879,249	160,560,686
Transmission	128,628,155	128,146,159	122,563,783
Total Energy Sales	708,530,322	734,102,972	710,327,722
Average Number of Customers (bills)			
Residential	19,785	19,730	19,910
Commercial	3,371	3,140	3,355
Primary	36	42	39
Transmission	4	3	4
Total Customers	23,196	22,915	23,308
Energy Per Customer			
Residential	9,801	10,547	9,864
Commercial	70,493	77,702	68,797
Primary	4,102,715	3,663,792	4,116,941
Transmission	32,157,039	42,715,386	30,640,946
Average Energy Per Customer	30,546	32,036	30,476

Table IV-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 2012 was approximately $91.1 million, representing a decrease of $7.6 million, or 7.6 percent from FY 2011. Total revenue from sales to electric customers includes utility tax revenue and power cost adjustment revenue.

In FY 2012, the average rate revenue per kWh for residential customers was 14.29 cents and the total average rate revenue was 12.94 cents per kWh. The July 2011, through June 2012 national average monthly utility-level retail sales of electricity and associated revenue per kWh, as published by the US Energy Information Administration (EIA), were 11.85 and 9.86 cents per

kWh, respectively. For a state-wide comparison, the EIA summarized the Delaware July 2010, through June 2011 average monthly utility-level retail sales of electricity and associated revenue per kWh to be 13.57 cents per kWh for residential customers and 11.29 cents per kWh across all sectors.[1]

Table IV-2

ANNUAL REVENUES AND SALES RATIOS
City of Dover Electric Division

	FY 2010	FY 2011	FY 2012
Revenue			
Residential	$ 29,320,410	$ 30,774,462	$ 28,072,775
Commercial	36,856,716	36,572,134	33,381,554
Primary	18,025,548	18,450,238	17,986,987
Transmission	13,878,764	13,716,322	12,506,664
Total Revenue	$ 98,081,438	$ 99,513,156	$ 91,947,980
Revenue/kWh			
Residential	$ 0.1512	$ 0.1479	$ 0.1429
Commercial	0.1551	0.1499	0.1446
Primary	0.1215	0.1199	0.1120
Transmission	0.1079	0.1070	0.1020
Total Revenue/kWh	$ 0.1384	$ 0.1356	$ 0.1294
Revenue Per Customer			
Residential	$ 1,482	$ 1,560	$ 1,410
Commercial	10,935	11,647	9,950
Primary	498,402	439,291	461,205
Transmission	3,469,691	4,572,107	3,126,666
Average Revenue Per Customer	$ 4,228	$ 4,343	$ 3,945

The Electric Division's largest cost in providing electric service to its customers in FY 2012 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 IV-3. The top portion of the Table shows net operating revenue as the difference between total revenues

[1] US Energy Information Administration, Form EIA-826 Data Monthly Electric Utility Sales and Revenue Data, http://www.eia.gov/cneaf/electricity/page/sales_revenue.xls (Mar. 19, 2012)

generated by the rates and the cost of power supply.[2] The ratios of power supply cost to sales revenues were calculated for FY 2010 through FY 2012. As illustrated, the Electric Division's power supply cost as a percentage of rate revenue decreased from approximately 70.0 percent in FY 2011 to 64.1 percent in FY 2012.

Table IV-3

NET REVENUE MARGINS AND UNACCOUNTED FOR ENERGY
City of Dover Electric Division

	FY 2010	FY 2011	FY 2012
Net Revenue Margins ($)			
Sales Revenues	$ 98,081,438	$ 99,513,156	$ 91,947,980
Power Supply	72,695,602	69,616,076	58,929,133
Net Revenue Margin	$ 25,385,836	$ 29,897,080	$ 33,018,847
Net Revenue Ratio	74.1%	70.0%	64.1%
Unaccounted for Energy (kWh)			
Power Supply	751,250,000	768,254,000	738,190,000
Energy Sales	708,530,322	734,102,972	710,327,722
Unaccounted for Energy (Losses)	42,719,678	34,151,028	27,862,278
Percentage	5.7%	4.4%	3.8%

Table IV-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 IV-3 presents these comparisons for the Electric Division for FY 2010 through FY 2012. As shown, the percentage ratio of the unaccounted for energy to the total energy purchased for FY 2011 was 4.4 percent. This is down from 5.7 percent in FY 2010.

Table IV-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 2010

[2] 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 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.

through FY 2012. Net income increased from FY 2011, totaling $8.5 million in FY 2012. A reduction of $12.5 million in operating expenses allowed for a $4.1 million increase in net operating income for the year; however, operating transfers out resulted in an annual net income decrease. Annual operating transfers out totaled ($7.9) million.

Table IV-4

COMPARATIVE STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN UNRESERVED RETAINED EARNINGS
City of Dover Electric Division

	FY 2010	FY 2011	FY 2012
Operating Revenues:			
Charges for Electric Service	$ 98,081,438	$ 99,513,157	$ 91,947,980
Miscellaneous Services/Incomes	2,197,036	2,389,462	1,581,421
Total Operating Revenues	$100,278,474	$101,902,619	$ 93,529,401
Operating Expenses:			
General Administration	$ 5,529,887	$ 5,298,869	$ 5,223,149
Power Supply	72,695,602	69,616,076	58,929,133
Transmission/Distribution	3,146,123	3,083,714	3,023,566
Engineering	1,465,740	1,722,244	1,163,379
Metering	301,416	204,352	205,791
System Operations	496,195	486,894	498,063
Utility Tax	1,922,645	1,944,543	1,548,208
Depreciation	4,106,802	4,710,658	4,783,444
Retiree Health Care	531,843	1,839,110	1,015,731
Total Operating Expenses	$ 90,196,253	$ 88,906,460	$ 76,390,464
Net Operating Income	$ 10,082,221	$ 12,996,159	$ 17,138,937
Non-operating Revenues (Expenses)			
Interest Earned			
Operating Fund	$ 37,849	$ 832,145	$ 120,876
Reserved Funds	865,878	511,922	348,640
Net Increase in Fair Value of Investments	(168,775)	(861,216)	45,200
Interest and Fiscal Charges	(648,581)	(1,385,035)	(1,283,174)
Bond Discount Amortized	(113,206)	(21,579)	-
Gain/(Loss) on Sale of Assets	17,984	16,830	47,966
Total Non-operating Revenues(Expenses)	$ (8,851)	$ (906,933)	$ (720,492)
Net Income Before Operating Transfers	$ 10,073,370	$ 12,089,226	$ 16,418,445
Operating Transfers - Out	(6,758,100)	(8,856,000)	(7,876,288)
Total Net Operating Transfers	$ (6,758,100)	$ (8,856,000)	$ (7,876,288)
Net Income	$ 3,315,270	$ 3,233,226	$ 8,542,157

4.1.4 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 IV-4 was adjusted to include the interest on bonds, depreciation expense, and other non-cash income and expenses. Table IV-5 presents the adjustments to net income and the determination of the revenues available for debt service for FY 2010 though FY 2012.

Table IV-5

DEBT SERVICE COVERAGE CALCULATION
City of Dover Electric Division

	FY 2010	FY 2011	FY 2012
Net Income	$ 3,315,270	$ 3,233,226	$ 8,542,157
Plus Excluded Expenses:			
Operating Transfers - Out	$ 6,758,100	$ 8,856,000	$ 7,876,288
Depreciation	4,106,802	4,710,658	4,783,444
Interest and Fiscal Charges	648,581	1,385,035	1,283,174
Bond Discount Amortized	113,206	21,579	-
Gain/(Loss) on Sale of Assets	(17,984)	(16,830)	(47,966)
Less Excluded Income:			
Net Increase in Fair Value of Investments	168,775	861,216	(45,200)
Interest Earned - Reserve Funds	(865,878)	(511,922)	(348,640)
Revenues Available for Debt Service	$ 14,226,872	$ 18,538,962	$ 22,043,257
Maximum Principal and Interest in Any Year	$ 3,347,479	$ 3,401,954	$ 3,401,954
Debt Service Coverage	4.25	5.45	6.48
Minimum Required Debt Service Ratio	1.25	1.25	1.25

As Table IV-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 IV-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 IV-5 is based on the total maximum debt service expense in any fiscal year. The FY 2012 calculation was based on the total FY 2016 debt service expense of $3,401,954.

4.2 STATUS OF REVENUE BONDS

At the end of FY 2012, 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 (4) 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 IV-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 $30,280,000.

Table IV-6

DEBT SERVICE SCHEDULE OF ELECTRIC REVENUE BONDS
City of Dover Electric Division

	2008 Electric Revenue Bonds			2010 Electric Revenue Refunding Bonds			Total Annual
Period	Principal	Interest	Debt Service	Principal	Interest	Debt Service	Debt Service
FY 2013	410,000	1,006,954	1,416,954	1,700,000	253,100	1,953,100	3,370,054
FY 2014	430,000	986,454	1,416,454	1,740,000	219,100	1,959,100	3,375,554
FY 2015	450,000	964,954	1,414,954	1,810,000	166,900	1,976,900	3,391,854
FY 2016	475,000	942,454	1,417,454	1,890,000	94,500	1,984,500	3,401,954
FY 2017	695,000	918,704	1,613,704	-	-	-	1,613,704
FY 2018	730,000	883,954	1,613,954	-	-	-	1,613,954
FY 2019	765,000	847,454	1,612,454	-	-	-	1,612,454
FY 2020	800,000	815,706	1,615,706	-	-	-	1,615,706
FY21-34	16,325,000	6,618,185	22,943,185	-	-	-	22,943,185
Total	$21,470,000	$15,013,223	$36,483,223	$8,810,000	$ 911,867	$ 9,721,867	$46,205,090

4.3 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."*

Tables IV-7 and IV-8 summarize itemized insurance coverage procured by the City for the period July 1, 2012, through June 30, 2013. 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.

4.4 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

Table IV-7

SCHEDULE OF INSURANCE COVERAGE IN EFFECT
City of Dover Electric Division

Starr Technical Risks Agency	July 1, 2012 - June 30, 2013 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
Professional Fees;	250,000
Incidental Course of Construction;	5,000,000
Miscellaneous Unnamed Locations (except perils of Flood, Earth Movement and	500,000
Valuable Papers and Records;	100,000

Deductibles

For each Occurrence giving rise to a claim under this policy, the Insured agrees to retain for its own account an initial amount of:

In respect of Damage to Insured Property:
$350,000 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.

Table IV-8

SCHEDULE OF INSURANCE COVERAGE IN EFFECT
City of Dover Electric Division

XL Insurance	July 1, 2012 - June 30, 2013 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: Excluded. per Occurrence in respect of Flood; Excluded. per Occurrence in respect of Earth Movement; Excluded. per Occurrence in respect of Named Storm;	500,000
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	
For each Occurrence giving rise to a claim under this policy, the Insured agrees to retain for its own account an initial amount of:	
In respect of Damage to Insured Property:	
$350,000, Per Occurrence, except;	
$100,000, per Occurrence as respect Transit;	
In respect of Time Element loss (Extra Expe	
45 days per Occurrence except;	
72 hours Per Occurrence in respect of Service Interruption	

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

4.4.1 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.

4.4.1.1 Insurance Reserve Account: The Insurance Reserve Account was established by the City to provide for the funding of 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 2012 was $407,995**.**

4.4.1.2 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 2012 year-end balance was $1,070,814, which is equal to 1.13 percent of the FY 2012 revenues for the Electric Revenue Fund**.**

4.4.1.3 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 purchase 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 2012 end-of-year balance was $11,230,133, which was 14.5 percent of the FY 2012 purchased power cost.

4.4.1.4 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, 2012, was $3,522,833.

> ***Electric Improvement and Extension Fund:*** *The I&E Fund was established in Section 507 of the Resolution. Funds are added 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.*

4.4.1.5 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 2012 was $10,542,058.

4.4.1.6 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

SECTION 5 – 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 2012 expenditures and FY 2013 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 2013 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.
4. The balances as of June 30, 2012 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.

* * * * *

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