

**CITY OF DOVER**  
**UTILITY COMMITTEE**  
**May 26, 2009**  
**ENGINEER'S ANNUAL REPORT - ELECTRIC SYSTEM**

**INTRODUCTION**

The City of Dover Electric Bond Resolution requires that the City retain an independent engineering consultant to inspect the City's electric system and to review the electric budgets and insurance program. The City contracted with Burns & McDonnell to perform this year's analysis. The report provides the information related to their annual review for the Fiscal Year ended June 30, 2008. This report is posted on the city's website ([www.cityofdover.com/department/finance/documents](http://www.cityofdover.com/department/finance/documents)).

**THE REPORT**

Some of the highlights of the report are as follows, comparing FY2007 and FY 2008:

- Energy sales decreased from 734 million kWh in FY 2007 to 731 million kWh in FY 2008 for an annual decrease of .42%
- Revenues from sales in FY 2008 were \$94 million, representing an increase of \$10.9 million over FY 2007's \$83.1 million or an average annual increase of 13.1%
- FY 2008 price per kWh for residential customers was 14.06 cents, and system-wide 12.86 cents.
- Corresponding National rates for 2008 were 10.65 cents and 9.13 cents per kWh commercial
- Corresponding Delaware average rates for 2008 are 12.84 cents and 11.53 cents per kWh respectively
- FY 2008 -Purchased power cost decreased 2.7%, from \$70.7 million to \$68.8 million
- kWh's purchased decreased from 788.8 million FY 2007 to 770.9 million FY 2008 or (2.3)%.
- The Electric Divisions capital projects included in the City's Capital Investment Plan along with the FY 2009 Operating Budget provide for the operation and maintenance of the electric system according to sound utility practices.
- The transfers, beginning balance, and interest earnings in the Improvement and Extension Fund are adequate to cover the capital expenditures in fiscal year 2009
- Net income decreased to a loss of \$3.8 million in FY 2007 due primarily to the increased cost of purchased power. FY 2008 net income increased from a loss of 3.8 million to \$4.0 million net income. The increase is primarily due to the January 1, 2007 and July 1, 2007 rate increases.
- Debt service coverage ratios: FY 2006, FY 2007, and FY 2008 of 5.50, 1.74, and 3.96 respectively exceed the 1.25 requirement.
- The system has been maintained consistent with accepted electric utility practices in the United States

The consultant's conclusions and recommendations are outlined at the end of each section.

**REQUESTED ACTION**

The Committee to accept the Engineer's Annual Report on the Operation and Maintenance of the Electric System for Fiscal Year 2008.

# **Annual Engineering Consultant's Report**

**on the**

## **Operation and Maintenance of the Electric System Fiscal Year 2008**

**Prepared for the**

**Electric Division  
City of Dover, Delaware**



**Project Number 52810  
2009**



May 15, 2009

Mr. Anthony J. DePrima  
City Manager  
City of Dover  
15 E. Loockerman St.  
Dover, Delaware 19903

City of Dover  
Annual Engineering Consultant's Report  
Project Number 52180

---

Dear Mr. DePrima:

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, 2008. 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 taken from the City's annual financial statements and accounting records, as well as additional information 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 2008 expenditures and fiscal year 2009 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.



May 15, 2009  
Page 2

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

A handwritten signature in black ink that reads "Ted J. Kelly". The signature is written in a cursive style with a large, stylized "T" and "K".

Ted J. Kelly  
Project Manager  
Business & Technology Services

A handwritten signature in black ink that reads "Adam Young". The signature is written in a cursive style with a large, stylized "A" and "Y".

Adam Young  
Project Engineer  
Business & Technology Services

## TABLE OF CONTENTS

	<u>Page No.</u>
<b>EXECUTIVE SUMMARY</b>	
Introduction.....	ES-1
Electric System Overview and Assessment .....	ES-1
Financial Assessment.....	ES-4
Conclusions.....	ES-6
<b>PART I - INTRODUCTION</b>	
Purpose of Report .....	I-1
Organization.....	I-2
<b>PART II – ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT</b>	
Electric System Overview.....	II-1
Production Plant .....	II-1
Transmission and Distribution Plant .....	II-4
General Plant .....	II-4
Electric System Assessment.....	II-4
Electric Generating Stations .....	II-5
Description of Generating Stations .....	II-5
Management and Organization.....	II-5
Major Equipment Condition and Improvements .....	II-6
Transmission and Distribution Systems .....	II-10
System Reliability .....	II-11
Power Quality.....	II-11
Operations and Maintenance .....	II-11
Design Standards and Specifications.....	II-12
Transmission and Distribution Improvements.....	II-13
System Tour .....	II-14
Conclusions .....	II-14
<b>PART III – FINANCIAL ASSESSMENT</b>	
Financial Results.....	III-1
Required Revenue Level.....	III-1
Electric Rates .....	III-2
Operating Results.....	III-2
Adequacy of Electric Rates .....	III-9
Status of Revenue Bonds .....	III-12
Insurance.....	III-12
Operating and Reserve Funds .....	III-15
<b>PART IV – CONCLUSIONS</b>	

## LIST OF TABLES

<b><u>Table No.</u></b>		<b><u>Page No.</u></b>
II-1	Year-End Plant in Service Fiscal Years 2006 – 2008.....	II-2
II-2	Planned Capital Expenditures – Fiscal Year 2009.....	II-3
II-3	Fiscal Year 2008 Operating Results .....	II-6
III-1	Annual Sales and Customers Fiscal Years 2006 – 2008.....	III-3
III-2	Annual Revenues and Sales Ratios Fiscal Years 2006 – 2008.....	III-5
III-3	Net Revenue Margins and Unaccounted For Energy Fiscal Years 2006 – 2008.....	III-6
III-4	Comparative Statement of Revenues, Expenses, and Changes in Unreserved Retained Earnings Fiscal Years 2006 – 2008 .....	III-8
III-5	Debt Service Coverage Calculation Per Section 502 of Resolution Fiscal Years 2006 – 2008.....	III-10
III-6	Amortization Schedule of Electric Revenue Bonds Outstanding .....	III-11
III-7	Schedule of Insurance Coverage in Effect.....	III-13
III-8	Reserve Fund Activity and Balances Fiscal Years 2006 – 2008 .....	III-18

## LIST OF FIGURES

<b><u>Figure No.</u></b>		<b><u>Page No.</u></b>
I-1	Organization .....	I-4
I-2	Administration .....	I-4
I-3	Electric Engineering .....	I-5
I-4	Electric Transmission & Distribution.....	I-6

## **EXECUTIVE SUMMARY**

## EXECUTIVE SUMMARY

### INTRODUCTION

This Engineering Consultant's 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) for this purpose.

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 a 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 sixth annual Engineering Consultant's Report prepared for the City by Burns & McDonnell.

### 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 May 4, 2006 the City entered into a five year Energy Management Agreement with PACE Global Asset Management (PACE), LLC of Fairfax, Virginia 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. Effective July 1, 2006, North American Energy Services (NAES) began operating the plants. The Engineering Consultant's observations regarding the generating stations and units are described in the Electric System Overview and Assessment section of this report.

The Electric Division served 23,076 customers, approximately 19,388 of which were residential customers as of the end of FY 2008. The distribution facilities include 219.0 miles of overhead lines and 239.5 miles of underground lines connected through fifteen different substations. The Engineering Consultant's observations regarding the transmission and distribution systems are described in the Electric System Overview and Assessment section of this 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 mentioned above, 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:

#### Management and Organization

- Safety
- Training

#### Major Equipment Condition and Improvements

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

Based on statements and information provided, 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 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 this 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.

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

## **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 2008. 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 2008. A rate study was completed during the last portion of FY 2006. This study was necessary to address increased costs associated with the new power supply contract that became effective July 1, 2006. The rate study recommended combining a number of rate classes and increasing rates to provide for the necessary increase in revenues to meet increased costs. A second rate increase was recommended for January 1, 2007 in order to cover increased costs associated with operating the generating station.

Total energy sales decreased from 734.0 million kWh in FY 2007 to 731.0 million kWh in FY 2008, for a total decrease of about 0.42 percent. Total revenues from sales to electric customers in FY 2008 were approximately \$94.0 million, representing an increase of \$10.9 million over the FY 2007 rate revenue of approximately \$83.1 million. In FY 2008, the average price per kWh for residential customers was 14.06 cents and the system-wide average price was 12.86 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, PACE. From FY 2007 to FY 2008, the cost of power decreased from \$70.7 million to \$68.8 million.

Net income decreased from \$4.7 million in FY 2006 to a \$3.8 million loss in FY 2007. This loss was primarily due to the increased cost of purchased power. Net income has since increased from the loss of \$3.8 million to \$4.0 million in net income. This increase in net income is primarily due to the January 1, 2007 and July 1, 2007 rate increases.

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 2006, FY 2007 and FY 2008 of 5.50, 1.74, and 5.76, respectively; all of which were over the required 125 percent. 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 has established several funds and reserves to ensure that moneys are available for specific purposes when they are needed. Following is a list of these funds:

- Electric Revenue Fund
- Electric Improvement and Extension Fund
- Interest and Sinking Fund (Reserve Account)
- Depreciation Reserve Fund
- Future Capacity Fund
- Insurance Stabilization Fund
- Contingency Reserve Fund
- Electric Rate Revenue Fund

The Engineering Consultant reviewed the last five funds listed above and found that the balances in those funds as of June 30, 2008 were consistent with the required or target balances.

## 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 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.
3. The Electric Division capital projects included in the City's Capital Investment Plan and the FY 2009 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.
4. The balances as of June 30, 2008 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.

## **PART I - INTRODUCTION**

## PART I INTRODUCTION

The City of Dover, Delaware (City) operates a municipally-owned electric utility system that serves approximately 23,000 customers within the City and the surrounding areas. The service area of the electric utility is located in the middle portion of the state of Delaware, with the City itself located approximately 70 miles south of Philadelphia, Pennsylvania.

### PURPOSE OF REPORT

This report has been prepared in compliance with the requirements of the Resolution adopted December 23, 2005. Burns & McDonnell has been retained as Engineering Consultant by the City as 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 this 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*

- (i) 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,*
- (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.*”

## **ORGANIZATION**

The Public Utilities Director is responsible for the overall management of the Public Utilities Department. The Public Utilities Director oversees the day-to-day operations of the Electric, Water, and Wastewater Divisions and manages the Division's staff. The Director also provides oversight of the Power Plant budget and monitors the contracts with PACE Global Asset Management (PACE), the energy coordinator, and North American Energy Services (NAES), the power generation operator/manager. The Electric Division is organized into three separate operating sections. Descriptions of the current Electric Division sections are provided below.

Administration Section – The Administration Section provides the overall administration 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 - This Section 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 24x7 system operations control center which is referred to as System Operations.

Transmission & Distribution Section – The Transmission & Distribution Section 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 I-1 through I-4 present an organization charts showing the staffing of the various sections in the Electric Division, with the number of individuals in each position indicated. Total staffing at the time the FY 2009 budget was issued was 54.

The remaining sections of this report provide the information required pursuant to Section 504 of the Resolution. Part II describes the assessment of the Electric System and its condition. Part III presents the



financial results for the Electric Division, including an analysis of the adequacy of revenues provided by the electric rates.

In the preparation of this report, Burns & McDonnell used the City's 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 this report, it makes no representation that the conditions assumed will occur.

\* \* \* \* \*

Figure I-1

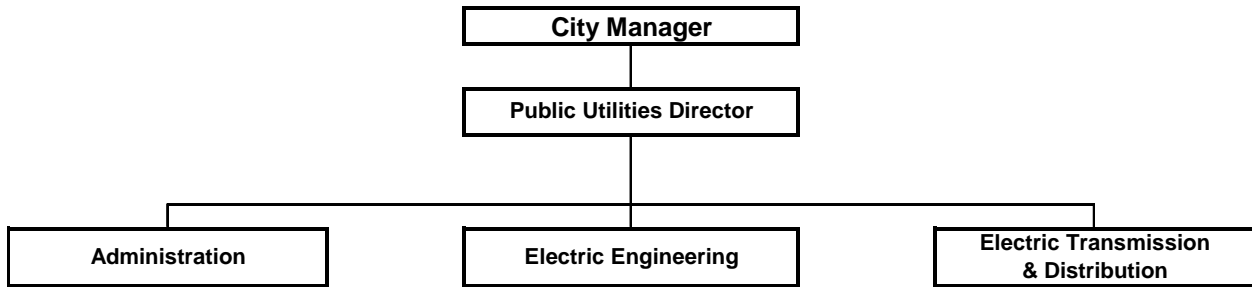


Figure I-2

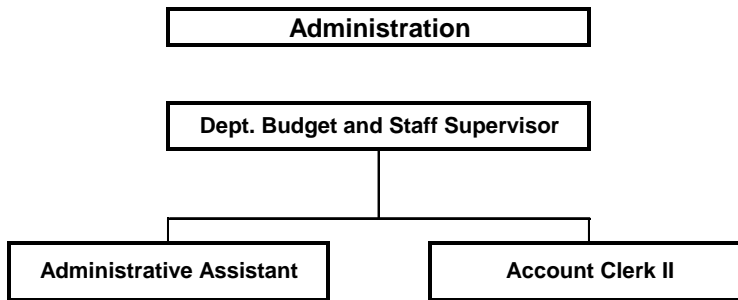


Figure I-3

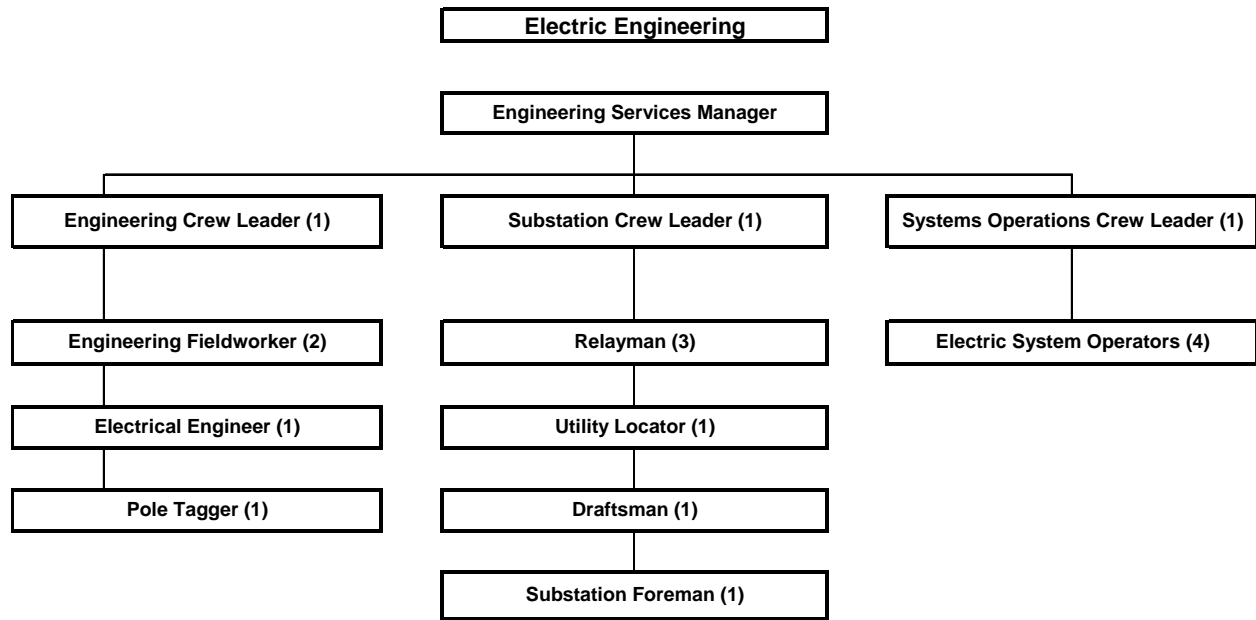
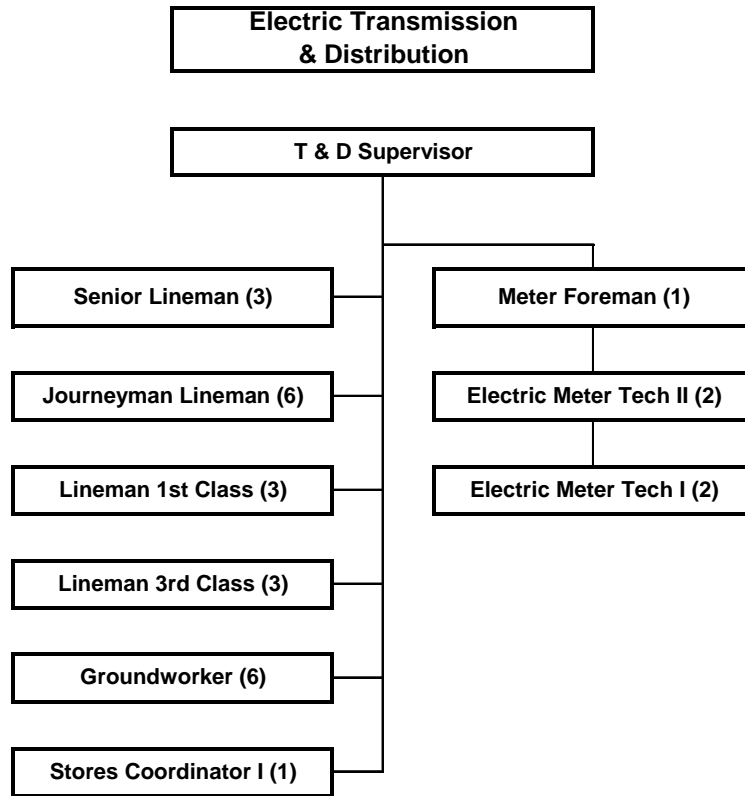


Figure I-4



## **PART II – ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT**

## **PART II**

### **ELECTRIC SYSTEM OVERVIEW AND ASSESSMENT**

#### **ELECTRIC SYSTEM OVERVIEW**

The Electric System owned by the City of Dover, Delaware (City), primarily consists of production plant, transmission plant, distribution plant, general plant facilities, and construction work in progress. Table II-1 shows the year-end balances of the various plant components within the above categories for FY 2006 through FY 2008. Table II-2 itemizes the specific capital investment plan projects and anticipated expenditures for FY 2009, as well as projections for other components included in the FY 2009 budget.

The highest system peak demand experienced on the Electric System occurred on June 10, 2008 when the total load reached 169.9 MW. For FY 2008, the Electric Division had total energy sales of approximately 731.0 gigawatt-hours (GWh). Annual energy sales are projected by the Electric Division to grow from FY 2009 through FY 2013 at an average annual rate of approximately 1.5 percent

#### **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 total combined capacity of 136 megawatts (MW). VanSant is a 39-MW simple-cycle combustion turbine unit.

Effective May 4, 2006 the City entered into a five year Energy Management Agreement with PACE Global Asset Management (PACE), LLC of Fairfax, Virginia 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. Effective July 1, 2006, North American Energy Services (NAES) began operating the plants. The Engineering Consultant's observations regarding the generating stations and units are described in the Electric System Assessment section below.

Table II-1

**YEAR-END PLANT IN SERVICE  
FISCAL YEARS 2006 - 2008  
City of Dover Electric Division**

	Plant in Service Year-End Balance		
	FY 2006	FY 2007	FY 2008
<b>Production</b>			
Land and land rights	\$1,488,382	\$1,488,382	\$1,488,385
Boiler plant equipment	15,259,321	15,259,321	15,259,321
Turbogenerator units	20,398,643	20,398,643	20,398,643
Accessory electric equipment	4,491,314	4,491,314	4,491,314
Miscellaneous steam plant equipment	17,985,283	17,985,283	18,115,691
Miscellaneous other plant equipment	791,284	791,284	791,284
<b>Total Production</b>	<b>\$60,414,227</b>	<b>\$60,414,227</b>	<b>\$60,544,637</b>
<b>Transmission</b>			
Station equipment	\$17,589,997	\$12,252,863	\$11,539,897
Overhead conductors and devices	6,213,279	7,011,175	7,479,154
Underground conductors and devices	2,731,251	2,731,250	3,407,314
<b>Total Transmission</b>	<b>\$26,534,527</b>	<b>\$21,995,288</b>	<b>\$22,426,365</b>
<b>Distribution</b>			
Station equipment	\$7,172,174	\$12,169,662	\$11,456,697
Overhead conductors and devices	4,995,894	4,979,196	5,071,954
Underground conductors and devices	10,822,210	11,587,196	11,953,611
Line transformers	8,237,677	9,037,744	9,180,936
Meters	3,497,876	3,546,546	3,598,458
Street lighting and signal systems	1,480,678	1,490,507	1,614,997
<b>Total Distribution</b>	<b>\$36,206,509</b>	<b>\$42,810,852</b>	<b>\$42,876,654</b>
<b>General Plant</b>			
Structures and improvements	\$14,435,009	\$14,530,780	\$14,824,400
Office furniture and equipment	497,870	483,750	478,828
Transportation equipment	480,795	695,348	662,873
Power operated equipment	20,000	20,000	20,000
Communication equipment	1,083,691	1,088,079	1,088,079
Miscellaneous equipment	4,933,079	4,585,942	4,657,721
<b>Total General Plant</b>	<b>\$21,450,444</b>	<b>\$21,403,899</b>	<b>\$21,731,902</b>
<b>Total Plant in Service</b>	<b>\$144,605,709</b>	<b>\$146,624,266</b>	<b>\$147,579,559</b>
<b>Construction Work in Progress</b>	<b>\$762,121</b>	<b>\$1,331,652</b>	<b>\$9,343,878</b>
<b>Total Plant</b>	<b>\$145,367,832</b>	<b>\$147,955,920</b>	<b>\$156,923,440</b>

**Table II-2**

**PLANNED CAPITAL EXPENDITURES - FISCAL YEAR 2009**  
**City of Dover Electric Division**

## Capital Investment Plan Projects

## Administration

DEMA Safety and Security Grant	\$75,000	<u>\$75,000</u>
--------------------------------	----------	-----------------

## Engineering

69 KV Feeders 3 and 4	\$3,956,820	
St. Jones Substation	4,028,122	
Horsepond Transformer	695,000	
Danner Farm Transformer	45,000	
Replacement of 69 kV Breakers	183,000	
Distribution Upgrades	500,000	
Lighting Project and Rehabilitation	<u>50,000</u>	<u>\$9,457,942</u>

## Transmission and Distribution

New Developments	\$865,000	<u>\$865,000</u>
------------------	-----------	------------------

## Power Plant

McKee Run Unit 3 SNCR	\$2,600,000	
McKee Run Unit 3 CEMS Software & Computer	\$30,000	
VanSant Unit 11 CEMS Software & Computer	\$30,000	
McKee Run Unit 3 COMS Replacement	\$30,000	
McKee Run & VanSant Arc Flash	<u>\$50,000</u>	<u>\$2,740,000</u>

## Total Capital Investment Plan Projects

	<u>\$13,137,942</u>
--	---------------------



## **Transmission and Distribution Plant**

The service area includes 219.0 miles of overhead lines and 239.5 miles of underground lines. The Engineering Consultant's observations regarding the transmission and distribution system are described in the Electric System Assessment section below.

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. As mentioned above, the Electric Division provides transmission service to NRG for the output of its 16-MW electric generator and it 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.

## **General Plant**

The general plant category consists primarily of Electric Division administrative and operations facilities and pollution control related equipment on McKee Run and VanSant. The agreement with NAES is that they manage the operation and maintenance of the facilities and the City is responsible for the costs of all replacements and upgrades required to maintain the capability of the two stations. The City is also responsible for the costs of compliance with new regulations promulgated. Other types of items included in general plant 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.

## **ELECTRIC SYSTEM ASSESSMENT**

Burns & McDonnell, Engineering Consultant to the City, performed observations and assessments of the Electric System assets in support of the development of this annual Engineering Consultant's Report. The findings from the review of the City's Electric System are documented in this section of the report.

## Electric Generating Stations

On March 24, 2008, Mr. Ted Kelly and Mr. Adam Young of Burns & McDonnell met with representatives of NAES to discuss the condition of McKee Run and VanSant, both of which are owned by the City. Mr. Kenneth Beard, the Plant O&M Manager, coordinated the visit.

**Description of Generating Stations:** McKee Run consists of three units. Unit 1 and Unit 2 were originally coal-fired units, which commenced operation in 1961 and 1962, respectively. In 1972, these units were converted to burn No. 6 fuel oil. These units are rated at 17 MW each. Unit 3 commenced operation in 1975 and was designed to fire No. 6 fuel oil and natural gas. Unit 3 is rated at 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. At the time of Burns & McDonnell's site visit, 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 rated at 39 MW in the summer and 40 MW in the winter. This unit commenced operation in 1991. VanSant is normally unmanned, except when it is dispatched into service. Personnel from McKee Run are sent to VanSant to startup and operate the unit.

**Management and Organization:** Station management are very well organized and knowledgeable, and presented a logical approach to operation and maintenance of the generation facilities. Mr. Vince Scire serves as the Plant Manager. The management/leadership team consists of Mr. Scire and eight other personnel. Reporting to Mr. Scire are the positions of Administrative & Employee Health and Safety Manager, Administrative Specialist, Material Management Coordinator, and O&M Manager. The O&M Manager oversees a Maintenance Supervisor, and four Operations teams. Each operations team consists of the supervisor and four operators working 12-hour rotating shifts. The maintenance team consists of a supervisor and six employees working 10-hour shifts. The operations and maintenance personnel are all union employees and the relationship between the union and management continues to be reported as excellent. McKee Run is currently at a staff level of 32 employees. There are currently two open positions for I,C/E Technicians.

**Safety:** Safety is of paramount importance to the entire Station staff. Plant management indicated that there was one reportable injury in FY 2008, however no lost time was incurred. "Safety First" is an overall theme and attitude. Near-miss incidents are documented, reviewed, and corrective follow-up actions are taken as required. An employee-run safety committee is actively in place. This committee

conducts monthly safety meetings, completes safety equipment inspections, and defines and implements tasks to improve safety in all areas. Safety is the first topic discussed at all meetings. Employees participated in creating an indoctrination video emphasizing safety that is shown to all visitors when entering the Station.

**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 having additional responsibilities. In addition to the above programs, cross training of various disciplines also occurs. An example is electricians cross training with instrumentation and control (I&C) craft and vice versa.

**Major Equipment Condition and Improvements:** In general, the generation facilities are properly maintained and operated and in very 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 II-3 summarizes the major FY 2008 Operating Results:

**Table II-3**  
**Fiscal Year 2008 Operating Results**

Unit Number	Rated MW Capacity	Operating Hours	Net MWh Production	Number of Starts	Net Capacity Factor [1]	Service Factor [2]
McKee Run						
1	17	138.0	1,058	6	0.71%	1.57%
2	17	145.7	1,194	4	0.80%	1.66%
3	102	425.3	21,759	27	2.43%	4.84%
VanSant [3]	39	140.0	4,532	42	1.32%	1.59%
Total	175	849.0	28,543	79	1.86%	2.42%

[1] Net Capacity Factor = [Net MWh Production / (Total Available Hours \* Rated MW Capacity)] \* 100

[2] Service Factor = (Operating Hours / Total Available Hours) \* 100

Total Available Hours = 365 days, 24 hours/day

[3] VanSant is rated at 40 MW in the winter and 39 MW in the summer

The large amount of time that units are not operating allows for maintenance and repair of the units. As a result, the overall equivalent availability factor for the generation facilities was well above 90 percent. It should be noted that the low net capacity factors are partially off set by the Pennsylvania New Jersey Maryland Interconnection (PJM) capacity credits. The capacity credits covered a portion of the fixed operating and maintenance costs in FY 2008 and are expected to continue to provide a similar benefit in FY 2009.

Maintenance activities are organized, planned, and managed using a computer based system, Maximo. Using this system, all three major categories of maintenance activities (corrective, preventative, and predictive) are managed.

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 then assigned to an operator or maintenance technician for completion.

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

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

**Steam Turbines/Generators:** The steam turbines and generators for Units 1, 2, and 3 were reported to be in satisfactory condition with no major problems. No major repairs or replacements were completed during FY 2008 and none are expected or required for the turbine/generators in FY 2009.

**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. Minor routine maintenance repairs and replacements were completed on Units 1 and 2 during the annual planned outage in October 2007. No planned outages were conducted on Unit 3 during FY 2008. The most recent planned outage occurred in October 2008.

In FY 2008, the City began work on the McKee Run Air Pollution Control Project which includes (1) converting all three units at McKee Run to burn No. 2 fuel oil and (2) boiler burner modifications to reduce the pollution output at the plant. This work was performed in order to comply with Delaware Pollution Regulations. The conversion reduces the NO<sub>x</sub> emissions from the flue gas going out the stack. The costs are divided into two years with partial engineering and design costs in FY 2008 and final design and construction in FY 2009. Total cost of the project is estimated at \$3.8 million with \$2.6 million budgeted for FY 2009. This project is funded by operating revenues and a bond sale. Failure to comply with Regulation 1146 would result in monetary fines from DNREC. At the time of this report, the project had been substantially completed and the plant had performed the necessary performance tests.

**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. 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.

**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. Two natural gas-fired boilers heat the fuel oil lines and storage tanks. Forwarding pumps deliver the fuel oil to each of the units.

**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. 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. The station has not experienced 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 once per week to review test data and check chemical usage rates. No major issues were reported at the time of this report.

**Station Electrical Systems:** Station electrical systems and transformers are considered to be in satisfactory condition. No major repairs or replacements are expected or required for the station electrical systems in the next fiscal year. A condition assessment of the generation facilities' transformers was conducted in FY 2007 and oil inspections and analyses were made. No major issues were reported at the time of this report.

**Station Control Systems:** Unit 1 and Unit 2 controls are electro-pneumatic and Unit 3 controls are a distributed control system (DCS). 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. Any long-term operation plans for these two units should include consideration of an upgrade of the control systems. All relays have recently been inspected at both McKee Run and VanSant for NERC, PJM and MAAC compliance. No major issues were reported at the time of this report.

**General Facilities:** No major projects or improvements were completed to the General Facilities in FY 2008 other than routine maintenance and repairs. In general, the station facilities appeared clean and well maintained during the site visit.

In FY 2009, both VanSant and McKee Run will be conducting an Arc Flash Analysis. It is currently only an OSHA recommendation that facilities perform an Arc Flash Analysis on their equipment. The engineering analysis identifies the risk of personal injury as the result of an arc flash event, provides information to employees about arc flashes and identifies personal protective equipment necessary to minimize injuries.

In FY 2009 a new computer and CEMS software will be installed at McKee Run Unit 3. The new equipment will replace the existing computer and software. The replacement of the CEMS equipment for McKee run is the direct result of a new EPA regulation. Compliance with the new regulation is required by January 1, 2009.

It is becoming more and more difficult to locate spare parts to repair the existing opacity analyzers on all three McKee Run units. In FY 2009 the existing monitors will be replaced, beginning with Unit 3. This replacement is necessary to keep Unit 3 operational. In accordance with the existing Title V permit continuous opacity monitors are necessary during all periods of boiler operation. The purchase and installation of a new opacity monitor will ensure compliance with this section of the regulation, the reliability of the unit and maximization of capacity payments. Potential for the unit to be unavailable for operation could result in forced outages and loss of capacity payments.

**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. No planned outages were conducted at VanSant during FY 2008. The most recent planned outage occurred in October 2008.

In FY 2009, a new computer and CEMS software will be installed at VanSant combustion turbine. The new equipment will replace the existing computer and software. The replacement of the CEMS equipment for VanSant is the direct result of a new EPA regulation. Compliance with the new regulation is required by January 1, 2009.

## **Transmission and Distribution Systems**

On March 23, 2008, Mr. Ted Kelly and Mr. Adam Young, 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 15 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. In FY 2008, the last of the 22 kV and 4 kV lines were converted to 69 kV and 12 kV to make the system uniform.

**System Reliability:** The Electric Division provides for reliability of its distribution system by configuring a majority of its distribution circuits in primary closed 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.

**Power Quality:** The Electric Division does not have any significant power quality problems. The overall power factor for the Electric System has increased from approximately 97.2 percent in FY 2007 to 99.1 percent in 2008. Power transformers equipped with load tap changers 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.

**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 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 12-hour cool-down period. The mobile substation is energized at least once a year to prevent moisture build-up in the transformer oil and to ensure the substation works properly.

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 now contracted out and is no longer performed by the Electrical Division; however, their performance is monitored by the Line Crew Superintendent.

The Substation/Relay Maintenance Division is responsible for operation and maintenance of the substations and associated equipment. They perform visual inspections of substations, associated equipment, trip counter checks, battery systems checks, and annual transformer oil tests.

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. The City also 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.

**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 out to The Shaw Group, Black & Veatch, and Wilson and Wilson Consultants.

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.

**Transmission and Distribution Improvements:** The following describes completed, on-going, and planned improvements to the City's Electric System:

Completed:

- Electric Radio Read Meter Change Outs
- Lebanon Transformer Replacement
- Mayfair Substation Rebuild
- Transmission Relaying Replacement and Calibration
- Blue Light Security Program

On-Going:

- College Road Substation
- Governor's Avenue Rebuild
- 69 kV Feeders 3 and 4
- St. Jones Substation
- Horsepond 600 Transformer
- Replacement of 69 kV Breakers
- Distribution Upgrades
- Lighting Project and Rehabilitation
- Distribution Capacitors
- New Development & Upgrades
- McKee Run Unit 3 Pollution Control Project

Planned:

- Danner Farm Transformer
- Mid City Substation
- Walker Road Distribution Upgrade
- Substation PT & CT Upgrade
- Distribution Feeder Replacement Program
- Frazier Substation Reliability Upgrade
- College Road to McKee Substation Feeders
- Horsepond Substation Reliability Upgrade
- McKee Run Unit 3 CEMS Software & Computer
- VanSant Unit 11 CEMS Software & Computer
- McKee Run Units 1, 2 & 3 COMS Replacement
- McKee Run & VanSant Arc Flash Analysis

- McKee Run Warehouse/Admin Smoke & Heat Detection System
- McKee Run Units 1 & 2 Stack Repairs
- McKee Run Unit 1 & 3 Turbine Outage

**System Tour:** The tour of the Electric System included drive-by observations of a sample of the transmission circuits, distribution circuits, and substations.

The Electric System was in good condition and appeared to be well maintained. The Cartanza Substation 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. Cartanza currently has two 69 kV lines leaving the station. There are plans for a total of four 69 kV lines at Cartanza. The two lines leave the station on one structure and remain a double circuit until the circuits split down the line.

Most of the fifteen substations were observed during the tour. Several of the major projects visited during the tour included the St. Jones Substation project, the 69 kV Feeders 3 and 4 projects, the Horsepond 600 Transformer project, the Lebanon Transformer Replacement project, and the Mayfair Substation Rebuild project. Overall, the substations appeared to be well maintained. Some older structures have corrosion on the steel, but much of this steel will be replaced by planned or ongoing projects and upgrades. There was little to no vegetation visible and the yards appeared to be well maintained. During the tour the 69 kV lines were observed and all appeared to be in good condition.

## 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. In addition, 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. The City and the Electric Division are proactive in preventative maintenance and expansion of the Electric System before problems arise.

\* \* \* \* \*

**PART III – FINANCIAL ASSESSMENT**

## PART III

### FINANCIAL ASSESSMENT

The financial results of the City of Dover, Delaware (City) Electric System for the fiscal year (FY) ended June 30, 2008 were generated through the management and operation of the Electric System by the Electric Division. The financial results are reviewed below.

#### FINANCIAL RESULTS

The revenues of the Electric Division during FY 2008 included charges for electric service, as well as miscellaneous revenues from items such as rents, pole connections, reconnect fees and emission credits. On the Comparative Statement of Revenues, Expenses, and Changes in Unreserved Retained Earnings, 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.

#### Required Revenue Level

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 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:*

- (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.*

*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.”*

## Electric Rates

Customers of the Electric Division of the City are charged for the electric service they receive 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 rate study was completed during the last portion of FY 2007. This study was necessary to address increased costs associated with power supply and additional debt service beginning in FY 2009. The rate study recommended increasing rates to provide for the necessary increase in revenues to meet increased costs. The various current rate classifications for the City are listed below.

- Residential
- Small Commercial (1 Phase, 3 Phase, & 1 Phase Heating)
- Medium Commercial (1 Phase & 3 Phase)
- Large Commercial (3 Phase with Reactive Metering)
- Primary
- Transmission
- Outdoor Development Lighting
- Private Outdoor Lighting
- Water Pump
- Water Pump 2
- Supplemental for NRG

## Operating Results

The Electric Division provided service to its customers under the rate schedules listed previously. Table III-1 presents summaries of the energy sales, the number of customers, and the average kilowatt-hour (kWh) energy per customer of the Electric Division for FY 2006 through FY 2008 by the City's revenue classifications and in total. Total energy sales decreased from 734.0 million kWh in FY 2007 to 731.0 million kWh in FY 2008, for a total decrease of about 0.42 percent.

Table III-1

**ANNUAL SALES AND CUSTOMERS**  
**FISCAL YEARS 2006 - 2008**  
**City of Dover Electric Division [1]**

	2006	2007	2008
Energy Sales (kWh)			
Residential	191,517,807	190,756,284	192,508,201
Commercial	239,762,026	253,281,301	255,809,667
Primary	160,146,270	159,025,303	157,439,535
Transmission	142,877,369	131,009,119	125,266,662
Municipal [2]	2,506,760	-	-
Total Energy Sales	736,810,231	734,072,007	731,024,065
Average Number of Customers (bills)			
Residential	18,224	18,578	19,137
Commercial	3,166	3,421	3,664
Primary	33	36	37
Transmission	4	4	4
Municipal	1	1	-
Total Customers	21,428	22,040	22,842
Energy Per Customer			
Residential	10,509	10,268	10,059
Commercial	75,722	74,037	69,819
Primary	4,852,917	4,427,619	4,255,123
Transmission	35,719,342	32,752,280	31,316,666
Municipal	2,506,760	-	-
Average Energy Per Customer	34,385	33,306	32,003

[1] From monthly electric billing summaries by revenue class.

[2] Municipal energy sales were reduced in FY2007 due to remaining Municipal customers moving into the Commercial customer class

Table III-2 shows the revenues resulting from those sales with ratios for revenue per kWh and average revenue per customer for each revenue classification and in total. Total revenues from sales to electric customers in FY 2008 were approximately \$94.0 million, representing an increase of \$10.9 million over the FY 2007 rate revenue of approximately \$83.1 million. This increase reflects the recommended rate increases that were implemented on January 1, 2007 and July 1, 2007.

In FY 2008, the average price per kWh for residential customers was 14.06 cents and the system-wide average price was 12.86 cents per kWh. These average prices compare to the corresponding 2008 national average rates of 10.65 and 9.13 cents per kWh, respectively. For a regional comparison, the averages within Delaware were 12.84 cents per kWh for residential customers and 11.53 cents per kWh system-wide.

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, PACE Global Energy Services (PACE). From FY 2007 to FY 2008, the cost of power decreased from \$70.7 million to \$68.8 million.

The significance of this data to the Electric Division is illustrated in Table III-3. The top portion of the table shows net operating revenue as the difference between total revenues generated by the rates and the cost of power. The ratios of purchased power expense to sales revenues are calculated for FY 2006 through FY 2008. As indicated, the Electric Division's cost of power supply as a percentage of rate revenue has decreased slightly from a high of approximately 85 percent in 2007 to 73.2 percent in 2008.



Table III-2

**ANNUAL REVENUES AND SALES RATIOS  
FISCAL YEARS 2006 - 2008  
City of Dover Electric Division**

	2006	2007	2008
Revenue			
Residential	\$20,135,081	23,659,349	27,063,840
Commercial	22,615,074	30,259,773	35,073,419
Primary	11,324,243	16,915,686	19,183,512
Transmission	8,992,335	11,907,244	12,716,441
Municipal [1]	777,620	367,761	-
Total Revenue	<u>\$63,844,353</u>	<u>\$83,109,813</u>	<u>\$94,037,212</u>
Revenue/kWh			
Residential	\$0.1051	\$0.1240	\$0.1406
Commercial	0.0943	0.1195	0.1371
Primary	0.0707	0.1064	0.1218
Transmission	0.0629	0.0909	0.1015
Municipal	0.1793	0.0000	0.0000
Total Revenue/kWh	<u>\$0.0866</u>	<u>\$0.1132</u>	<u>\$0.1286</u>
Revenue Per Customer			
Residential	\$1,105	\$1,273	\$1,414
Commercial	7,142	8,845	9,573
Primary	343,159	470,970	518,473
Transmission	2,248,084	2,976,811	3,179,110
Municipal	777,620	401,194	-
Average Revenue Per Customer	<u>\$2,979</u>	<u>\$3,771</u>	<u>\$4,117</u>

[1] Municipal revenues were reduced in FY2007 due to moving the remaining Municipal customers class into the commercial customer class.

Table III-3

**NET REVENUE MARGINS AND UNACCOUNTED FOR ENERGY  
FISCAL YEARS 2006 - 2008  
City of Dover Electric Division**

	2006	2007	2008
Net Revenue Margins (\$)			
Sales Revenues	\$63,844,353	\$83,109,813	\$94,037,212
Purchased Power Expense	42,293,895	70,725,844	68,831,697
Net Revenue Margin	\$21,550,458	\$12,383,969	\$25,205,515
Net Revenue Ratio	66.2%	85.1%	73.2%
Unaccounted for Energy (kWh)			
Purchased Power	781,466,220	788,824,000	770,997,000
Energy Sales	736,810,231	734,072,007	731,024,065
Unaccounted for Energy (Losses)	44,655,989	54,751,993	39,972,935
Percentage	5.7%	6.9%	5.2%

Another comparison that can be made from the previous data is the relationship of the amount of energy purchased and delivered to the electric system to the energy sales. This relationship identifies the level of unaccounted for energy in the Electric System. This unaccounted-for energy may include energy that was un-metered, metered inaccurately, stolen, lost, etc. The bottom portion of Table III-3 presents these comparisons for the Electric Division for FY 2006 through FY 2008. As shown, the percentage ratio of the unaccounted for energy to the total energy purchased for FY 2008 is 5.2 percent. This number is down from a high of 6.9 percent in 2007, and represents a three-year low over the 2006 – 2008 period.

Table III-4 presents a re-creation of the City's Statement of Revenues, Expenses, and Changes in Unreserved Retained Earnings for the Electric Revenue Fund for FY 2006 through FY 2008. Net income decreased from FY 2006 to FY 2007 to a \$3.8 million loss in FY 2007. This loss was primarily due to the increased cost of purchased power. Net income has since increased from the loss of \$3.8 million to \$4.0 million in net income. This increase in net income is primarily due to the January 1, 2007 and July 1, 2007 rate increases.

Effective May 4, 2006 the City entered into a five year Energy Management Agreement with PACE of Fairfax, Virginia to assist the City with its energy procurement, energy sale, purchase of fuels, establishment and management of risk policies, to develop and manage hedging protocols and related energy procurement challenges. Effective May 4, 2006 the City entered into an agreement with North American Energy Services Company of Issaquah Washington for generation asset management. The City bears all market risks, credit risks, and liability under the new contracts which is different from the previous agreement.

Table III-4

**COMPARATIVE STATEMENT OF REVENUES, EXPENSES, AND  
CHANGES IN UNRESERVED RETAINED EARNINGS  
FISCAL YEARS 2006 - 2008  
City of Dover Electric Division**

	FY 2006	FY 2007	FY 2008
Operating Revenues:			
Charges for Electric Service	\$ 63,844,353	\$ 83,109,811	\$ 94,037,212
Miscellaneous Services/Incomes	4,160,979	3,904,260	2,821,578
Total Operating Revenues	<u>\$ 68,005,332</u>	<u>\$ 87,014,071</u>	<u>\$ 96,858,790</u>
Operating Expenses:			
General Administration	\$ 4,751,390	\$ 4,370,066	\$ 4,660,334
Purchased Power	42,293,895	70,800,844	68,831,697
Transmission/Distribution	3,029,993	3,666,515	4,064,713
Engineering	1,906,273	1,927,648	1,589,584
Metering	303,029	281,728	309,805
Tree Trimming	-	-	518,871
Utility Tax	1,092,711	1,461,435	1,650,838
Depreciation	3,766,861	3,843,097	3,918,804
Retiree Health Care	462,655	498,269	506,518
Total Operating Expenses	<u>\$ 57,606,807</u>	<u>\$ 86,849,602</u>	<u>\$ 86,051,164</u>
Net Operating Income	\$ 10,398,525	\$ 164,469	\$ 10,807,626
Non-operating Revenues (Expenses)			
Interest Earned			
Operating Fund	\$ 372,560	\$ 592,787	\$ 496,201
Reserved Funds	881,657	1,370,291	1,500,064
Net Increase in Fair Value of Investments	(55,058)	294,734	197,389
Interest and Fiscal Charges	(913,615)	(859,730)	(797,104)
Bond Discount Amortized	(99,775)	(104,310)	(104,304)
Gain/(Loss) on Sale of Assets	(127,477)	(484,345)	(1,489,476)
Total Non-operating Revenues(Expenses)	<u>\$ 58,292</u>	<u>\$ 809,427</u>	<u>\$ (197,230)</u>
Net Income Before Operating Transfers	\$ 10,456,817	\$ 973,896	\$ 10,610,396
Operating Transfers - In	64,000	-	-
Operating Transfers - Out	(5,816,956)	(4,800,000)	(6,601,269)
Total Net Operating Transfers	<u>\$ (5,752,956)</u>	<u>\$ (4,800,000)</u>	<u>\$ (6,601,269)</u>
Net Income	<u>\$ 4,703,861</u>	<u>\$ (3,826,104)</u>	<u>\$ 4,009,127</u>

### **Adequacy of Electric Rates**

The City's Bond 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. Current expenses is a term defined in the Resolution to include 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 III-4 must be adjusted to add back the interest on bonds, depreciation expense, and other non-cash income and expenses. Table III-5 presents the adjustments to net income and the determination of the revenues available for debt service for FY 2006 through FY 2008.

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 III-6 presents the annual totals of principal and interest amounts due on bonds currently outstanding. The calculation of the debt service coverage ratio on Table III-5 is based on the total maximum debt service payment in any fiscal year. For FY 2008 the calculation is based on the annual debt service payment of \$2,644,620 in FY 2012.

Table III-5

**DEBT SERVICE COVERAGE CALCULATION  
PER SECTION 502 OF RESOLUTION  
FISCAL YEARS 2006 - 2008  
City of Dover Electric Division**

	FY 2006	FY 2007	FY 2008
Net Income	\$ 4,703,861	\$ (3,826,104)	\$ 4,009,127
Plus Excluded Expenses:			
Operating Transfers - In	\$ (64,000)	\$ -	\$ -
Operating Transfers - Out	5,816,956	4,800,000	6,601,269
Depreciation	3,766,861	3,843,097	3,918,804
Interest and Fiscal Charges	913,615	859,730	797,104
Bond Discount Amortized	99,775	104,310	104,304
Gain/(Loss) on Sale of Assets	127,477	484,345	1,489,476
Less Excluded Income:			
Net Increase in Fair Value of Investments	55,058	(294,734)	(197,389)
Interest Earned - Reserve Funds	(881,657)	(1,370,291)	(1,500,064)
Revenues Available for Debt Service	\$ 14,537,946	\$ 4,600,353	\$ 15,222,631
Maximum Principal and Interest in Any Year	\$ 2,644,620	\$ 2,644,620	\$ 2,644,620
Debt Service Coverage	5.50	1.74	5.76
Minimum Required Debt Service Ratio	1.25	1.25	1.25

Table III-6

**AMORITIZATION SCHEDULE OF ELECTRIC REVENUE BONDS OUTSTANDING**  
**2004 ELECTRIC REVENUE BONDS (TAXABLE ISSUE)**  
**City of Dover Electric Division**

Period Ending	Principal	Coupon	Interest	Debt Service	Annual Debt Service
1/1/2008			398,552	398,552	
7/1/2008	1,840,000	3.840%	398,552	2,238,552	2,637,104
1/1/2009			363,224	363,224	
7/1/2009	1,905,000	4.140%	363,224	2,268,224	2,631,448
1/1/2010			323,791	323,791	
7/1/2010	1,995,000	4.375%	323,791	2,318,791	2,642,581
1/1/2011			280,150	280,150	
7/1/2011	2,080,000	4.600%	280,150	2,360,150	2,640,300
1/1/2012			232,310	232,310	
7/1/2012	2,180,000	4.750%	232,310	2,412,310	2,644,620
1/1/2013			180,535	180,535	
7/1/2013	2,270,000	4.950%	180,535	2,450,535	2,631,070
1/1/2014			124,353	124,353	
7/1/2014	2,390,000	5.050%	124,353	2,514,353	2,638,705
1/1/2015			64,005	64,005	
7/1/2015	2,510,000	5.100%	64,005	2,574,005	2,638,010
Total	\$22,535,000		\$6,500,357	\$29,035,357	\$29,035,357

As Table III-5 indicates, the City and the Electric Division maintained a debt service coverage ratio each year that was over 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.

## **STATUS OF REVENUE BONDS**

At the end of FY 2008, the City had one series of electric revenue bonds outstanding that was issued pursuant to the Resolution. The 2004 Electric Revenue Bonds were issued in 2004, in the amount of \$22,535,000. These bonds were issued to refund the 1990 and 1993 bonds. On July 1, 2008, the City issued \$22,200,000 in Electric Revenue Bonds. The proceeds from the sale of the Bonds will be used (i) to finance or reimburse the City for improvements to the City's electric system; (ii) to fund a Debt Service Reserve Fund; and (iii) to pay the costs of issuance of the Bonds. The Non-taxable Series 2008 received an underlying rating of A1 by Moody's Investors Services and an underlying rating of A+ by Fitch Ratings. The insured rating was AAA.

Table III-6 sets forth the debt service schedule for the 2004 bonds. The amounts of principal and interest and the total due each year are shown for the bond issue. As of the creation of this report, the current total principal outstanding for the 2004 bonds, adjusted for the FY 2008 payments that have already been made, is \$15,330,000.

## **INSURANCE**

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. Section 706 of the Resolution, reads as follows.

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

Table III-7 lists the insurance coverage procured by the City for the period July 1, 2007 through June 30, 2008. Burns & McDonnell has reviewed this list of insurance, and in the opinion of Burns & McDonnell, as Engineering Consultant and not as insurance counselor, the insurance in full force and affect appears to satisfy the requirements of Section 706 of the Resolution.



Table III-7

**SCHEDULE OF INSURANCE COVERAGE IN EFFECT**  
**City of Dover Electric Division**

	July 1, 2008 - June 30, 2009		July 1, 2007 - June 30, 2008	
	Coverage	Deductible	Coverage	Deductible
<b><u>Commercial Package Policy</u></b>				
Property				
Building & Contents	\$86,454,148		\$86,443,349	\$10,000
Inland Marine				
Computer Equipment	500,000	1,000	500,000	1,000
Contractors Equipment				
Police Equipment	16,000	1,000		
Scheduled Equipment - Total Value			16,000	1,000
Unscheduled Equipment	100,000	1,000	100,000	1,000
Max Any One unscheduled Item			5,000	
Employee Tools Limit	62,500	250	62,500	250
Maximum any one item			1,000	
Catastrophic Limit			178,500	
Steel Towers & Antennas				
General Liability				
Each Event	1,000,000			
General Total Limit	3,000,000		3,000,000	
Products and Completed Work Total			3,000,000	
Personal Injury	1,000,000		1,000,000	
Advertising Injury	1,000,000		1,000,000	
Per Occurrence			1,000,000	
Sewer Back-up	1,000,000			
Failure to Supply Services - Water	1,000,000			
Automobile				
Liability	1,000,000			
Personal Injury	300,000		1,000,000	
Uninsured Motorist	1,000,000		1,000,000	
Underinsured Motorist	1,000,000		1,000,000	
Comprehensive		500		500
Collision		1,000		1,000
Non-Owned Liability				
Hired Auto Liability				
Employee Benefit Plans Administration Liability				
Total Limit	3,000,000		3,000,000	
Each Wrongful Act	1,000,000	1,000	1,000,000	1,000
Law Enforcement Liability				
Total Limit	3,000,000		3,000,000	
Each Wrongful Act	1,000,000	5,000	1,000,000	5,000
Public Officials Liability				
Total Limit	3,000,000		3,000,000	
Each Wrongful Act	1,000,000	25,000	1,000,000	25,000
Employment Practices Liability				
Total Limit	3,000,000		3,000,000	
Each Wrongful Offense	1,000,000	25,000	1,000,000	25,000
Errors & Omissions Liability				
Public Entity Management Liability			1,000,000	
Employee Benefit Liability			1,000,000	
Crime				
Employee Theft	1,000,000	500	1,000,000	500
Inside Theft of Money & Securities	25,000	500	25,000	500
Robbery or Burglary				
Outside Theft of Money & Securities.	25,000	500	25,000	500
Forgery or Alteration	100,000	1,000	100,000	1,000
Computer Fraud	100,000	1,000	100,000	1,000
Money Order & Counterfeit Paper Currency	100,000		100,000	1,000

**Commercial Package Policy (continued)**

sheet 2 of 2

<b>Boiler &amp; Machinery</b>			
Property Limit			\$5,000
Mediating Expenses		\$250,000	
Pollution Cleanup & Removal		250,000	
Spoilage		250,000	

<b>Umbrellas</b>			
General Total Limit	2,000,000	2,000,000	
Products & Work Limit	2,000,000	2,000,000	
Personal Injury	2,000,000	2,000,000	
Advertising Injury	2,000,000	2,000,000	
Law Enforcement Liability	2,000,000	2,000,000	
Each Event Limit	2,000,000	2,000,000	
Deductible Per Event		10,000	10,000

**Pollution Liability Policy**

Each Claim Limit		1,000,000	5,000
Aggregate Limit		1,000,000	

**Excess Worker's Comp**

Employer's Liability Limit		1,000,000	500,000
Specific Limit		Statutory	500,000
Aggregate Limit		1,000,000	

**Worker's Comp - TPA Services**

**Travel Accident Policy**

Principal Sum		100,000	
---------------	--	---------	--

**Bond - Self-Insured Worker's Comp - State of DE**

Limit		750,000	
-------	--	---------	--

**Bond - Janice Green - Public Official Bond**

Limit		100,000	
-------	--	---------	--

**Bond - Donna S. Mitchell - Public Official Bond**

Limit		100,000	
-------	--	---------	--

**Bond - Traci McDowell - Public Official Bond**

Limit		100,000	
-------	--	---------	--

**XL Insurance America, Inc.**

McKee Run and Van Sant Generating Stations			
Limit	252,100,000	50,000,000	

**Starr Technical Risks Agency, Inc.**

McKee Run and Van Sant Generating Stations			
Limit		50,000,000	

## OPERATING AND RESERVE FUNDS

The City has established several funds and reserves to ensure that moneys are available for specific purposes when they are needed. The following are descriptions of each fund and their purpose.

- **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 funds are to be maintained from the Electric Revenue Fund. Moneys are transferred from the Electric Revenue Fund to the Interest and Sinking Fund, Improvement and Extension Fund, the Depreciation Reserve Fund, Future Capacity Fund, and Electric Rate Stabilization Fund.
- **Electric Improvement and Extension Fund** – The Improvement and Extension Fund was established in Section 507 of the Resolution. Funds are added to the Improvement and Extension 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 Fund. The Improvement and Extension Fund also receives additional funding from the Depreciation Fund, the Future Capacity Fund, the Insurance Stabilization Fund, and from the State of Delaware. Section 510 of the Resolution indicates that, except for certain situations, moneys held in the Improvement and Extension 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.
- **Interest and Sinking Fund** – The Interest and Sinking Fund was established in Section 507 of the Resolution. This fund 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 2004 bonds as of June 30, 2008 was \$3,257,091. Principal and interest payments due on July

1, 2008 make up \$2,238,552 of the combined total of these restricted accounts. The remaining \$1,018,539 exceeds the maximum combined debt service for any future fiscal year, which is the \$2,644,620 in FY 2012.

- **Depreciation Reserve Fund** – The Depreciation Reserve Fund 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 Fund. Transfers to the Improvement and Extension Fund are made as necessary to fund capital projects. The target appropriation for the Depreciation Reserve Fund 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 2008 was \$9,451,663.
- **Future Capacity Fund** – The Future Capacity Fund was established to set aside and accumulate funds from the Electric Revenue Fund for use in evaluating and pursuing activities related to the Electric Division's alternatives for power supply resources for future demand for electricity. The original target balance for this reserve was \$5,000,000. The reserve balance as of June 30, 2008 was \$8,457,352.
- **Insurance Stabilization Fund** – The Insurance Stabilization Fund 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 balance in the Insurance Stabilization Reserve is \$350,000. The reserve balance as of June 30, 2008 was \$370,802.
- **Contingency Reserve Fund** – The Contingency Reserve Fund was established by the City 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 Fund equal to 1.0 percent of the current year revenues for the Electric Revenue Fund. This fund was initiated in FY 2003 and at June 30, 2008 had a balance of \$894,170 which is equal to 0.92 percent of the current year revenues for the Electric Revenue Fund.

Electric Rate Stabilization Fund – The Electric Rate Stabilization Fund was established in FY 2005 to offset the costs of the power cost adjustment to the customers of Dover. The fund'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 by reducing the rate of the power cost adjustment. The fund's balance as of June 30, 2008 was \$2,471,465 which 3.59 percent of the FY 2008 purchased power cost.

The Interest and Sinking Fund, the Insurance Stabilization Fund, the Contingency Reserve Fund, and the Electric Rate Stabilization Fund are within the Electric Revenue Fund. The Depreciation Fund and the Future Capacity Fund are within the Improvement and Extension Fund. Table III-8 presents the activity in the funds listed above, except the Electric Revenue Fund and the Improvement and Extension Fund.

\* \* \* \* \*

Table III-8

**RESERVE FUND ACTIVITY AND BALANCES**  
**FISCAL YEARS 2006 - 2008**  
**City of Dover, Delaware**

	Bond Reserve Account	Depreciation Reserve Fund	Future Capacity Fund	Insurance Stabilization Fund	Contingency Reserve Fund	Electric Rate Stabilization Fund
<u>Year Ended June 30, 2006</u>						
Balance in Account on July 1	\$666,867	\$15,319,320	\$8,386,381	\$218,518	\$1,123,647	\$2,615,646
Receipts						
Interest Earned	260,316	333,479	182,690	5,622	26,476	73,074
Appropriations	-	-	-	-	-	2,314,790
Total Funds Available	\$927,183	\$15,652,798	\$8,569,071	\$224,140	\$1,150,123	\$5,003,510
Disbursements						
Transfer to Operations	-	-	-	-	-	-
Balance in Account on June 30	\$927,183	\$15,652,798	\$8,569,071	\$224,140	\$1,150,123	\$5,003,510
<u>Year Ended June 30, 2007</u>						
Balance in Account on July 1	\$927,183	\$15,652,798	\$8,569,071	\$224,140	\$1,150,123	\$5,003,510
Receipts						
Interest Earned	292,150	604,483	389,722	10,755	37,380	35,802
Appropriations	-	-	-	116,360	-	-
Total Funds Available	\$1,219,333	\$16,257,281	\$8,958,793	\$351,255	\$1,187,503	\$5,039,313
Disbursements						
Transfer to Other Reserve Funds	-	-	-	-	(340,471)	340,471
Transfer to Operations	-	(2,722,098)	-	-	-	(5,000,000)
Balance in Account on June 30	\$1,219,333	\$13,535,183	\$8,958,793	\$351,255	\$847,032	\$379,784
<u>Year Ended June 30, 2008</u>						
Balance in Account on July 1	\$1,219,333	\$13,535,183	\$8,958,793	\$351,255	\$847,032	\$379,784
Receipts						
Interest Earned	257,758	616,059	498,559	19,547	47,138	61,003
Appropriations	-	-	-	-	-	2,030,679
Total Funds Available	\$1,477,091	\$14,151,242	\$9,457,352	\$370,802	\$894,170	\$2,471,465
Disbursements						
Monthly Debt Service	1,780,000					
Transfer to Other Reserve Funds	-	-	-	-	-	-
Transfer to Operations	-	(4,699,579)	(1,000,000)	-	-	-
Balance in Account on June 30	\$3,257,091	\$9,451,663	\$8,457,352	\$370,802	\$894,170	\$2,471,465

## **PART IV – CONCLUSIONS**

## PART IV 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, including interviews, observations, and reviews of FY 2008 expenditures and FY 2009 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.
3. The Electric Division capital projects included in the City's Capital Investment Plan and the FY 2009 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.
4. The balances as of June 30, 2008 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.

\* \* \* \* \*