Annual Engineering Consultant's Report

on the

Operation and Maintenance of the Electric System Fiscal Year 2009

Prepared for the

Electric Division City of Dover, Delaware

Project Number 56007
June 2010

Burns & McDonnell
SINCE 1898

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Prepared by

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

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SINCE 1898

June 22, 2010

Ms. Donna S. Mitchell, CPA
Finance Director
City of Dover
15 E. Loockerman St.
Dover, Delaware 19903

City of Dover
Annual Engineering Consultant's Report
Project Number 56007

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, 2009. 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 2009 expenditures and fiscal year 2010 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
Project Manager
Business & Technology Services

TJK

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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 seventh 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 approximately 23,000 customers, over 19,000 of which were residential customers as of the end of FY 2009. The distribution facilities include 217.27 miles of overhead lines and 261.66 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 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:

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 2009. 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 2009. 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 effective July 1, 2006, to provide for the necessary increase in revenues to meet increased costs. A second rate increase was implemented January 1, 2007, in order to cover increased costs associated with operating the generating station. Additional rate increases were implemented on July 1, 2007, and July 1, 2008.

Total energy sales decreased from 731.0 million kWh in FY 2008 to 720.0 million kWh in FY 2009; a total decrease of about 1.5 percent. Total revenue from sales to electric customers in FY 2009 was approximately $99.6 million, representing an increase of $5.6 million over the FY 2008 rate revenue of

approximately $94.0 million. In FY 2009, the average revenue per kWh for residential customers was 15.14 cents and the system-wide average price was 13.84 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 2008 to FY 2009, the cost of power increased from $68.8 million to $74.9 million.

Net income increased from a $3.8 million loss in FY 2007 to a $4.0 million gain in FY 2008. The FY 2007 loss was primarily due to the increased cost of purchased power. The increase in FY 2008 was due in large part to rate increases. For FY 2009, an 8.9 percent increase in the cost of power contributed to a 26.2 percent lower net income total of $2.9 million.

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 2007, FY 2008, and FY 2009 of 1.74, 5.76, and 2.88, 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 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, 2009, 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, 2009, 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 central 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*
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> *(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 24/7 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 represent 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 54 at the time the FY 2010 budget was issued.

Figure I-1

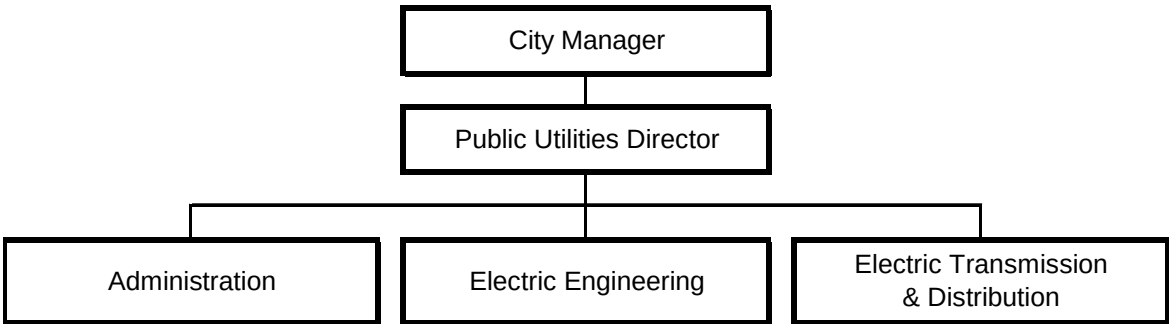


Figure I-2

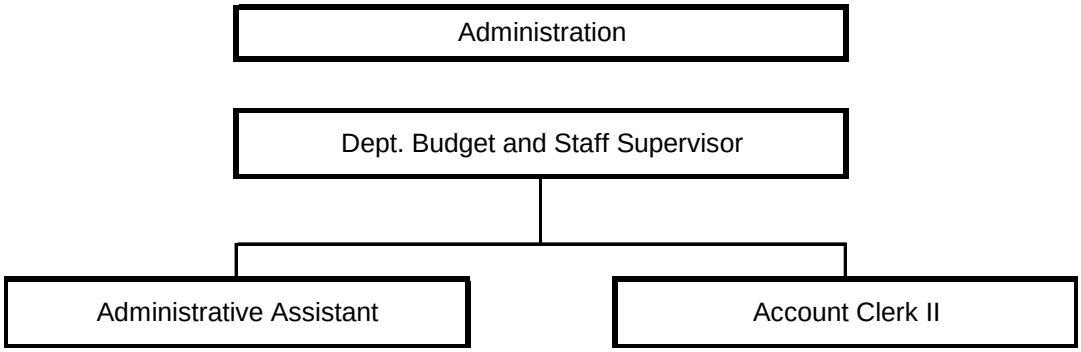


Figure I-3

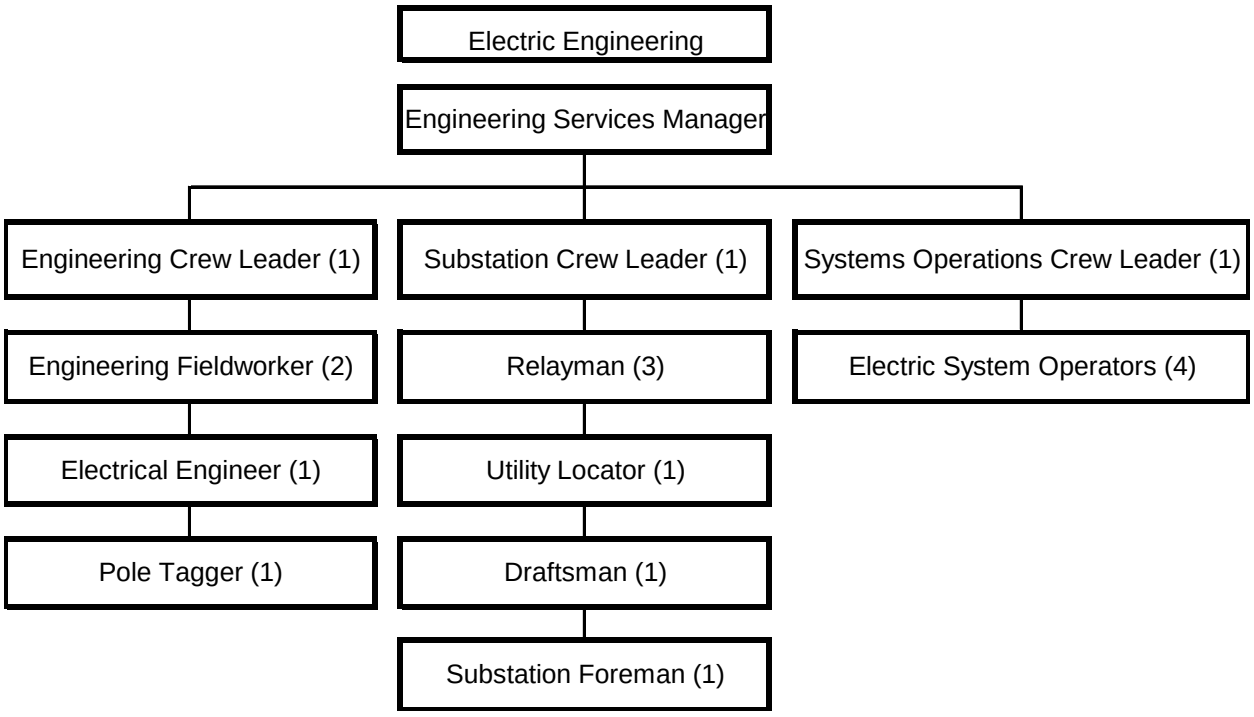
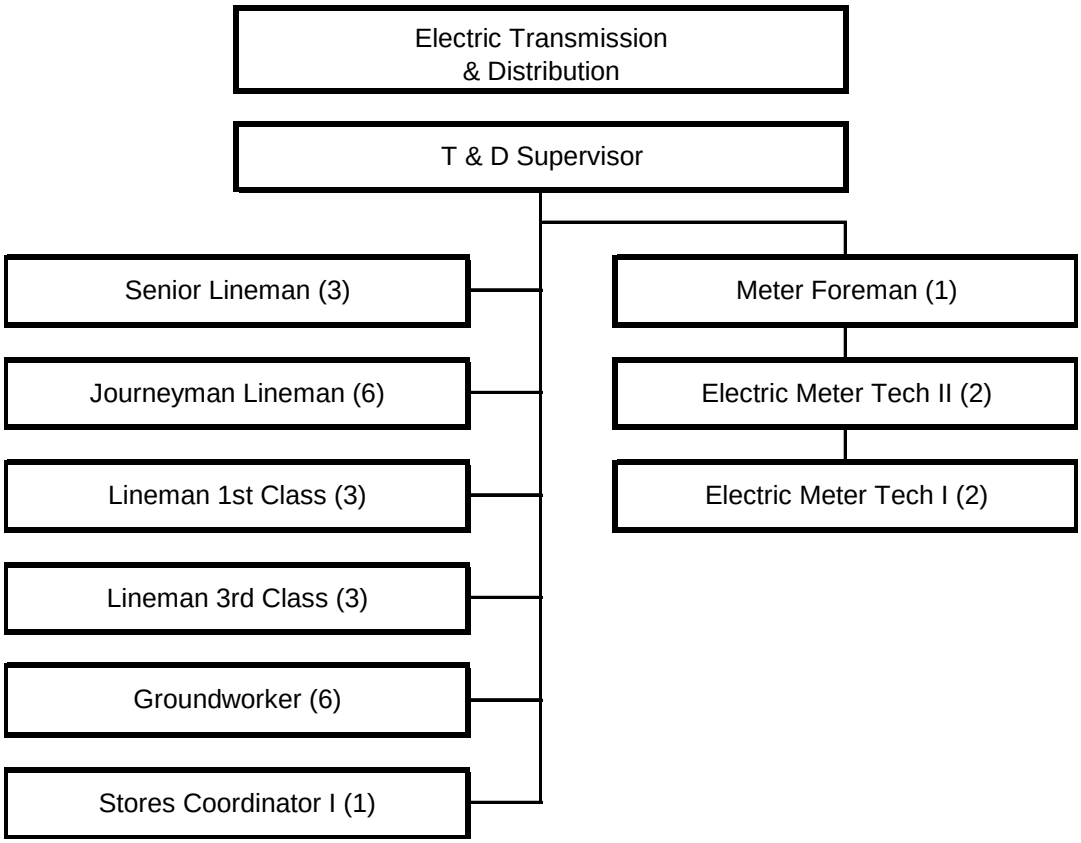


Figure I-4



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.

* * * * *

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, and general plant facilities, and construction work in progress. Table II-1 displays the year-end balances of the various plant components for FY 2007 through FY 2009. 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 2010 budget.

In FY 2009, the Electric System experienced declines from the preceding year in both system peak demand and annual energy sales. The Electric System experienced its peak demand for FY 2009 on July 21, 2008, when demand reached 155.6 MW. For the year, approximately 719.9 GWh of energy were sold. The Electric Division projects a decline in annual energy sales for FY 2010 of approximately 18.0 GWh, or 2.4 percent. The Electric Division projects energy sales to increase in FY 2011 to 707.5 GWh and it expects annual sales to remain relatively constant through FY 2013.

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.

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 of Part II.

Table II-1

YEAR-END PLANT IN SERVICE
City of Dover Electric Division

	FY 2007	FY 2008	FY 2009
Production			
Land and land rights	$ 1,488,382	$ 1,488,385	$ 1,488,385
Boiler plant equipment	15,259,321	15,259,321	15,080,326
Turbogenerator units	20,398,643	20,398,643	20,240,351
Accessory electric equipment	4,491,314	4,491,314	4,491,314
Miscellaneous steam plant equipment	17,985,283	18,115,691	18,891,708
Miscellaneous other plant equipment	791,284	791,284	791,284
Total Production	$ 60,414,227	$ 60,544,637	$ 60,983,367
Transmission			
Station equipment	$ 12,252,863	$ 11,539,897	$ 12,958,157
Overhead conductors and devices	7,011,175	7,479,154	7,601,104
Underground conductors and devices	2,731,250	3,407,314	3,947,267
Total Transmission	$ 21,995,288	$ 22,426,365	$ 24,506,528
Distribution			
Station equipment	$ 12,169,662	$ 11,456,697	$ 12,874,957
Overhead conductors and devices	4,979,196	5,071,954	4,979,444
Underground conductors and devices	11,587,196	11,953,611	12,390,822
Line transformers	9,037,744	9,180,936	9,314,890
Meters	3,546,546	3,598,458	2,509,971
Street lighting and signal systems	1,490,507	1,614,997	1,360,915
Total Distribution	$ 42,810,852	$ 42,876,654	$ 43,431,000
General Plant			
Structures and improvements	$ 14,530,780	$ 14,824,400	$ 14,824,400
Office furniture and equipment	483,750	478,828	533,543
Transportation equipment	695,348	662,873	654,610
Power operated equipment	20,000	20,000	20,000
Communication equipment	1,088,079	1,088,079	1,038,839
Miscellaneous equipment	4,585,942	4,657,721	4,617,702
Total General Plant	$ 21,403,899	$ 21,731,902	$ 21,689,095
Total Plant in Service	$ 146,624,266	$ 147,579,559	$ 150,609,990
Construction Work in Progress	$ 1,331,652	$ 9,343,878	$ 17,272,519
Total Plant	$ 147,955,920	$ 156,923,440	$ 167,882,509

Table II-2

FISCAL YEAR 2010 PLANNED CAPITAL EXPENDITURES
City of Dover Electric Division

Capital Investment Planned Projects	FY 2010
Electric Engineering Projects:	
Distribution Upgrades	$ 1,154,000
Distribution Capacitors and Controls	120,000
Lighting Project and Rehabilitation	50,000
Substation PT and CT Replacement	260,880
Replacement of 69 kV Breakers	183,000
Hot Spot Identification	26,400
Equipment Replacement	40,000
Relay Test Equipment	48,795
Mid City Substation	1,593,461
Transmission Line Maintenance Program	23,000
Subtotal Electric Engineering Division	$ 3,499,536
Electric Transmission & Distribution Projects:	
New Developments	$ 881,300
Subtotal Electric Transmission Division	$ 881,300
Electric Generation Projects:	
Miscellaneous Upgrades	$ 51,000
McKee Run Warehouse /Admin Smoke and Heat Detection System	55,000
VanSant CT Mark IV Upgrades	700,000
McKee Run Driveway Repaving	240,000
Work Management System Replacement	85,000
Unit 1 - Remove Cyclone Separators	36,000
Unit 2 - Remove Cyclone Separators	36,000
Unit 3 - Remove Cyclone Separators	51,000
Subtotal Electric Generation Division	$ 1,254,000
Electric Administration Projects:	
N/A	$ -
Subtotal Electric Administration Division	$ -
Total Planned Capital Investment Projects	$ 5,634,836

Transmission and Distribution Plant

The service area includes 217.27 miles of overhead lines and 261.66 miles of underground 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. As previously stated, 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.

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 stipulates NAES 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 this report.

ELECTRIC SYSTEM ASSESSMENT

Burns & McDonnell, the Engineering Consultant to the City, 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.

Electric Generating Stations

On June 8, 2010, Mr. Ted Kelly of Burns & McDonnell met with representatives of NAES to discuss the condition of the McKee Run and VanSant generating stations. Mr. Kenneth Beard, the Plant O&M Manager, coordinated the visit.

Description of Generating Stations: 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 in the summer and 40 MW in the winter. 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.

Management and Organization: Station management is very well organized and knowledgeable, and takes 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 nine members including Mr. Scire. The Administrative & Employee Health and Safety Manager, Administrative Specialist, Material Management Coordinator, and O&M Manager, all report directly to Mr. Scire.

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. The relationship between the union and management was reported to be excellent. McKee Run is currently at a staff level of 30 employees, with 31 approved positions.

"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. 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 reportedly 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 of cross training would be an electrician training with instrumentation and control.

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 II-3 summarizes the major FY 2009 operating statistics.

Table II-3
FISCAL YEAR 2009 OPERATING STATISTICS
City of Dover Electric Division

Unit Number	Rated Capacity - MW	Operating Hours	Net Production - MWh	Number of Starts	Net Capacity Factor [2]	Service Factor [3]
VanSant [1]	39	52.7	1,766	10	0.52%	0.60%
McKee Run						
Unit 1	17	55.2	487	2	0.33%	0.63%
Unit 2	17	44.7	441	3	0.30%	0.51%
Unit 3	102	318.3	17,547	24	1.96%	3.63%
Total	175	470.9	20,241	39	1.32%	5.38%

[1] VanSant is rated at 40 MW in the winter and 39 MW in the summer
[2] Net Capacity Factor = Net MWh Production / (Total Available Hours * Rated MW Capacity)
Total Available Hours = 365 days, 24 hours/day
[3] Service Factor = Operating Hours / Total Available Hours

The large amount of time that units are not operating allows for maintenance and repair of the units. As a result, the FY 2009 overall equivalent availability factor for the generation facilities was well above 90 percent. Low net capacity factors are partially offset by Pennsylvania New Jersey Maryland Interconnection (PJM) capacity credits. In FY 2009, approximately $9.3 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 2010 and beyond.

Electronic Management System: Maintenance activities are organized, planned, and managed using MAXIMO®, a computer-based management system. All three major categories of maintenance activities (corrective, preventative, and predictive) are electronically managed by MAXIMO®.

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. 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.

Condition Assessment: 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 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 2009 outage report. Plant staff developed a list of parts needed to complete the appropriate repairs. Plans were made to replace both mating clutch ends during the spring 2010 outage. No other major repairs or replacements were completed during FY 2009 and none are expected or required for the turbine/generators in FY 2010.

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 2009. Work completed at the generating facilities included ductwork repair, ID

fan outlet expansion joint replacement, air heater expansion joint replacement, and repairs of the boiler seal walls. Emission testing was conducted at Units 1, 2, and 3 in June 2009. Results of efficiency testing on cyclone separators allowed for their removal.

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. 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 August 2009. Oil inspections and analyses were made. Notes from the reports indicate that moisture is significantly reducing the dielectric of a minority of the transformers. However, no major issues were reported at the time of this report. Oil sampling is now completed twice per year.

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. All relays have recently been inspected at both McKee Run and VanSant for NERC, PJM and 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.

General Facilities: No major projects or improvements were completed to the General Facilities in FY 2009 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 conducted an Arc Flash Analysis. It is an OSHA recommendation that facilities perform an Arc Flash Analysis on their equipment. The engineering analysis identified the risk of personal injury as the result of an arc flash event, provided information to employees about arc flashes and identified personal protective equipment necessary to minimize injuries. Recommendations from the report were reported to be followed.

In FY 2009, a new computer and CEMS software was installed at McKee Run Unit 3. VIM was the vendor for the new system. The company will maintain the software and submit electronic data reports to the City on a quarterly basis. The replacement of the CEMS equipment for McKee run was 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 were replaced, beginning with Unit 3. This replacement was 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 ensured 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. Planned outages were conducted at VanSant during FY 2009 for the annual overhaul and inspection.

In FY 2009, a new computer and CEMS software was installed at the VanSant combustion turbine. The new equipment replaced the existing computer and software. As was the case at McKee Run, the replacement of the CEMS equipment at VanSant was the direct result of a new EPA regulation. Compliance with the new regulation is required by January 1, 2009.

Transmission and Distribution Systems

On June 8, 2010, 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 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.

Safety: Ronald Lunt, the Public Utilities Director for the City, reported to Burns & McDonnell that there were three reportable injuries in FY 2009. Two lost workdays were the result of these injuries.

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.

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 99.1 percent in FY 2008 to 99.24 percent in FY 2009. 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 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.

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:

- 69 kV Feeders 3 and 4
- College Road Substation
- Horsepond 600 Transformer
- St. Jones Substation
- Cyclone Removal

On-Going:

- Transmission Relays
- Distribution System Upgrades (OH to UG)
- McKee Run Pollution Remediation
- McKee Run Fire Protection

Planned:

- VanSant Controls Upgrades
- Generator Bearing Replacements
- CMMS Upgrades
- Scrap Metal Removal
- Cooling Tower Repairs

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 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.

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, 2009, were generated through the management and operation of the Electric System by the Electric Division. A review of the financial results was provided below.

FINANCIAL RESULTS

The total revenue of the Electric Division during FY 2009 included revenue from charges for electric service, as well as miscellaneous revenues from items such as rents, penalties, reconnect fees, and emission credits. 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.

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 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.

Burns & McDonnell completed a rate study for the City 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 effective July 1, 2006, to provide for the necessary increase in revenues to meet increased costs. A second rate increase was implemented January 1, 2007, in order to cover increased costs associated with operating the generating station. Additional rate increases were implemented on July 1, 2007, and July 1, 2008. The 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

Table III-1 presents a summary of the energy sales, the number of customers, and the average kilowatt-hour (kWh) energy per customer of the Electric Division for FY 2007 through FY 2009. Total energy sales decreased from 731.0 million kWh in FY 2008 to 720.0 million kWh in FY 2009, for a total decrease of 1.51 percent.

Table III-2 presents 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.

Table III-1

ANNUAL SALES AND CUSTOMERS
City of Dover Electric Division [1]

	FY 2007	FY 2008	FY 2009
Energy Sales (kWh)			
Residential	190,756,284	192,508,201	195,185,587
Commercial	253,281,301	255,809,667	248,757,087
Primary	159,025,303	157,439,535	156,096,547
Transmission	131,009,119	125,266,662	119,910,158
Municipal [2]	-	-	-
Total Energy Sales	734,072,007	731,024,065	719,949,379
Average Number of Customers (bills)			
Residential	18,578	19,137	19,685
Commercial	3,421	3,664	3,497
Primary	36	37	37
Transmission	4	4	4
Municipal	1	-	-
Total Customers	22,040	22,842	23,223
Energy Per Customer			
Residential	10,268	10,059	9,915
Commercial	74,037	69,819	71,131
Primary	4,427,619	4,255,123	4,209,345
Transmission	32,752,280	31,316,666	30,615,359
Municipal	-	-	-
Average Energy Per Customer	33,306	32,003	31,001

[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

In FY 2009, the average rate revenue per kWh for residential customers was 15.14 cents and the system-wide average rate revenue was 13.84 cents per kWh. The June 2009 national average retail rates, as published by the US Energy Information Administration (EIA), were 11.85 and 10.21 cents per kWh, respectively. For a state-wide comparison, the EIA calculated the June 2009 Delaware average retail electricity prices to be 14.88 cents per kWh for residential customers and 12.20 cents per kWh across all sectors.

The Electric Division's largest cost in providing electric service to its customers in FY 2009 was the wholesale cost of power. The Electric Division purchased power from the Pennsylvania New Jersey

Maryland Interconnection (PJM) marketplace through its Energy Manager, PACE Global Energy Services (PACE). From FY 2008 to FY 2009, the net cost of non-generated power increased from $63.0 million to $67.6 million.

Table III-2

ANNUAL REVENUES AND SALES RATIOS
City of Dover Electric Division

	FY 2007	FY 2008	FY 2009
Revenue			
Residential	$ 23,659,349	$ 27,063,840	$ 29,553,954
Commercial	30,259,773	35,073,419	37,547,855
Primary	16,915,686	19,183,512	18,988,842
Transmission	11,907,244	12,716,441	13,551,839
Municipal [1]	367,761	-	-
Total Revenue	$ 83,109,813	$ 94,037,212	$ 99,642,490
Revenue/kWh			
Residential	$ 0.1240	$ 0.1406	$ 0.1514
Commercial	0.1195	0.1371	0.1509
Primary	0.1064	0.1218	0.1216
Transmission	0.0909	0.1015	0.1130
Municipal	-	-	-
Total Revenue/kWh	$ 0.1132	$ 0.1286	$ 0.1384
Revenue Per Customer			
Residential	$ 1,273	$ 1,414	$ 1,501
Commercial	8,845	9,573	10,737
Primary	470,970	518,473	512,059
Transmission	2,976,811	3,179,110	3,460,044
Municipal	401,194	-	-
Average Revenue Per Customer	$ 3,771	$ 4,117	$ 4,291

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

The significance of power supply cost 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 supply.[1] The ratios of power supply cost to sales revenues were calculated for FY

[1] For the purposes of this Engineering Consultant's 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.

2007 through FY 2009. As illustrated, the Electric Division's power supply cost as a percentage of rate revenue increased from approximately 73.2 percent in FY 2008 to 75.2 percent in FY 2009.

Table III-3

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

	FY 2007	FY 2008	FY 2009
Net Revenue Margins ($)			
Sales Revenues	$ 83,109,813	$ 94,037,212	$ 99,642,490
Power Supply	70,725,844	68,831,697	74,928,897
Net Revenue Margin	$ 12,383,969	$ 25,205,515	$ 24,713,593
Net Revenue Ratio	85.1%	73.2%	75.2%
Unaccounted for Energy (kWh)			
Purchased Power	788,824,000	770,997,000	751,171,000
Energy Sales	734,072,007	731,024,065	719,949,379
Unaccounted for Energy (Losses)	54,751,993	39,972,935	31,221,621
Percentage	6.9%	5.2%	4.2%

Another comparison made in Table III-3 is the relationship 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, etc. The bottom portion of Table III-3 presents these comparisons for the Electric Division for FY 2007 through FY 2009. As shown, the percentage ratio of the unaccounted for energy to the total energy purchased for FY 2009 was 4.2 percent. This number was down from 5.2 percent in FY 2008, and represents a three-year low for the FY 2007 through 2009 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 2007 through FY 2009. Net income decreased from FY 2008, totaling $2.9 million in FY 2009. This loss was primarily due to the increased cost of purchased power.

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
City of Dover Electric Division

	FY 2007	FY 2008	FY 2009
Operating Revenues:			
Charges for Electric Service	$ 83,109,811	$ 94,037,212	$ 99,642,490
Miscellaneous Services/Incomes	3,904,260	2,821,578	1,778,492
Total Operating Revenues	$ 87,014,071	$ 96,858,790	$ 101,420,982
Operating Expenses:			
General Administration	$ 4,370,066	$ 4,660,334	$ 4,084,382
Power Supply	70,800,844	68,831,697	74,928,897
Transmission/Distribution	3,666,515	4,064,713	4,032,931
Engineering	1,927,648	1,589,584	2,393,416
Metering	281,728	309,805	285,118
System Operations	-	518,871	559,743
Utility Tax	1,461,435	1,650,838	1,738,059
Depreciation	3,843,097	3,918,804	3,898,475
Retiree Health Care	498,269	506,518	1,830,903
Total Operating Expenses	$ 86,849,602	$ 86,051,164	$ 93,751,924
Net Operating Income	$ 164,469	$ 10,807,626	$ 7,669,058
Non-operating Revenues (Expenses)			
Interest Earned			
Operating Fund	$ 592,787	$ 496,201	$ 141,310
Reserved Funds	1,370,291	1,500,064	1,041,655
Net Increase in Fair Value of Investments	294,734	197,389	239,624
Interest and Fiscal Charges	(859,730)	(797,104)	(726,448)
Bond Discount Amortized	(104,310)	(104,304)	(113,206)
Gain/(Loss) on Sale of Assets	(484,345)	(1,489,476)	115,638
Total Non-operating Revenues(Expenses)	$ 809,427	$ (197,230)	$ 698,573
Net Income Before Operating Transfers	$ 973,896	$ 10,610,396	$ 8,367,631
Operating Transfers - In	-	-	1,332,350
Operating Transfers - Out	(4,800,000)	(6,601,269)	(6,758,100)
Total Net Operating Transfers	$ (4,800,000)	$ (6,601,269)	$ (5,425,750)
Net Income	$ (3,826,104)	$ 4,009,127	$ 2,941,881

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 was adjusted to include 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 2007 though FY 2009.

Table III-5

DEBT SERVICE COVERAGE CALCULATION
City of Dover Electric Division

	FY 2007	FY 2008	FY 2009
Net Income	$ (3,826,104)	$ 4,009,127	$ 2,941,881
Plus Excluded Expenses:			
Operating Transfers - In	$ -	$ -	$ (1,332,350)
Operating Transfers - Out	4,800,000	6,601,269	6,758,100
Depreciation	3,843,097	3,918,804	3,898,475
Interest and Fiscal Charges	859,730	797,104	726,448
Bond Discount Amortized	104,310	104,304	113,206
Gain/(Loss) on Sale of Assets	484,345	1,489,476	(115,638)
Less Excluded Income:			
Net Increase in Fair Value of Investments	(294,734)	(197,389)	(239,624)
Interest Earned - Reserve Funds	(1,370,291)	(1,500,064)	(1,041,655)
Revenues Available for Debt Service	$ 4,600,353	$ 15,222,631	$ 11,708,843
Maximum Principal and Interest in Any Year	$ 2,644,620	$ 2,644,620	$ 4,058,704
Debt Service Coverage	1.74	5.76	2.88
Minimum Required Debt Service Ratio	1.25	1.25	1.25

As Table III-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 III-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 III-5 is based on the total maximum debt service expense in any fiscal year. For FY 2009 the calculation was based on the total FY 2011 debt service expense of $4,058,704.

STATUS OF REVENUE BONDS

At the end of FY 2009, the City had two series of outstanding electric revenue bonds that were issued pursuant to the Resolution. The 2004 Electric Revenue Bonds (2004 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 (2008 Bonds). The proceeds from the sale of the 2008 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 2008 Bonds. The Non-taxable Series 2008 Bonds 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 and 2008 Bonds through FY 2020. The amounts of principal and interest and the total due each year are shown for the each series of bonds. At the end of FY 2009, the combined outstanding principal balance for both series of bonds was $37,530,000.

Table III-6

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

Period	2004 Electric Revenue Bonds Principal	Interest	Debt Service	2008 Electric Revenue Bonds Principal	Interest	Debt Service	Total Annual Debt Service
FY 2009	$ 1,840,000	$ 726,448	$ 2,566,448	$ -	$ -	$ -	$ 2,566,448
FY 2010	1,905,000	647,600	2,552,600	355,000	1,049,028	1,404,028	3,956,628
FY 2011	2,080,000	560,300	2,640,300	390,000	1,028,404	1,418,404	4,058,704
FY 2012	2,080,000	464,600	2,544,600	390,000	1,006,953	1,396,953	3,941,553
FY 2013	2,180,000	361,100	2,541,100	410,000	986,453	1,396,453	3,937,553
FY 2014	2,270,000	248,700	2,518,700	430,000	964,953	1,394,953	3,913,653
FY 2015	2,390,000	128,000	2,518,000	450,000	942,453	1,392,453	3,910,453
FY 2016	2,510,000	-	2,510,000	475,000	918,703	1,393,703	3,903,703
FY 2017	-		-	695,000	883,953	1,578,953	1,578,953
FY 2018	-	-	-	730,000	847,453	1,577,453	1,577,453
FY 2019	-	-	-	765,000	815,706	1,580,706	1,580,706
FY 2020	-	-	-	800,000	781,706	1,581,706	1,581,706
Total	$17,255,000	$3,136,748	$20,391,748	$5,890,000	$10,225,765	$16,115,765	$36,507,513

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, 2009 - June 30, 2010		July 1, 2008 - June 30, 2009	
	Coverage	Deductible	Coverage	Deductible
Property				
Building & Contents	$136,542,391	$10,000		
Real and Personal Property	100,000,000		$86,454,148	$10,000
Flood	2,000,000	50,000	$2,000,000	$50,000
Blanket Business Earnings & Expense	100,000		$100,000	
Inland Marine				
Computer Equipment	1,674,830	1,000	500,000	1,000
Contractors Equipment				
Police Equipment			16,000	1,000
Scheduled Equipment - Total Value	162,500	1,000		
Unscheduled Equipment	100,000	1,000	100,000	1,000
Max Any One unscheduled Item				
Employee Tools Limit	62,500	250	62,500	250
Maximum any one item				
Catastrophic Limit				
Steel Towers & Antennas				
General Liability				
Each Event	1,000,000		1,000,000	
General Total Limit	3,000,000		3,000,000	
Products and Completed Work Total				
Personal Injury	1,000,000		1,000,000	
Advertising Injury	1,000,000		1,000,000	
Medical Expenses				
Sexual Abuse Coverage	1,000,000			

(Table III-7 Continued)

Per Occurrence				
Sewer Back-up	1,000,000		1,000,000	
Failure to Supply Services - Water	1,000,000		1,000,000	
Statutory Cap Limits of Coverage Endorsement				
Delaware Personal Injury	300,000			
Delaware Advertising Injury	300,000			
Delaware Bodily Injury & Property Damage	300,000			
Automobile				
Liability	1,000,000		1,000,000	
Personal Injury	300,000		300,000	
Uninsured Motorist	1,000,000		1,000,000	
Underinsured Motorist	1,000,000		1,000,000	
Comprehensive				500
Collision				1,000
Non-Owned Liability	1,000,000			
Hired Auto Liability	1,000,000			
Employees as Additional Insured				
Hire Auto Physical Damage	50,000			
Statutory Cap Limits of Coverage Endorsement				
Delaware Statutory Cap Limit	300,000			
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
Statutory Cap Limits of Coverage Endorsement				
Delaware Statutory Cap Limit	300,000			
Public Entity Management 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	5,000,000		3,000,000	
Each Wrongful Offense	5,000,000	25,000	1,000,000	25,000
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	
Boiler and Machinery (Excluding Power Plants)				
Coverage Limit	Property Limit	10,000	Property Limit	10,000
Expediting Expenses	250,000		250,000	
Pollution Cleanup & Removal	250,000		250,000	
Spoilage	250,000		250,000	
Umbrellas				
General Total Limit	4,000,000		4,000,000	
Products & Work Limit	4,000,000		4,000,000	
Personal Injury	4,000,000		4,000,000	
Advertising Injury	4,000,000		4,000,000	
Law Enforcement Liability	4,000,000		4,000,000	
Each Event Limit	4,000,000		4,000,000	
Deductible Per Event		10,000		10,000
Excess Error & Omissions				
Total Limit	4,000,000		4,000,000	
Public Entity Management	1,000,000		1,000,000	
Employee Benefit Plans Administration Liability	1,000,000		1,000,000	
Pollution Liability Policy				
Each Claim Limit	5,000,000	25,000		
Aggregate Limit	10,000,000			

(Table III-7 Continued)

Excess Worker's Comp				
Employer's Liability Limit	1,000,000		1,000,000	
Specific Limit	Statutory		Statutory	
Aggregate Limit	1,000,000		1,000,000	
Environmental Impairment Liability				
Retroactive Date 4/1/97				
Limit - Each Claim			5,000,000	
Limit - Aggregate			5,000,000	
McKee Run & VanSant Plant Deductibles			25,000	
Power Plants - Property & Boiler & Machinery				
Limit per occurrence	100,000,000	100,000	100,000,000	100,000
Travel Accident Policy				
Principal Sum	100,000		100,000	
Bond - Self-Insured Worker's Comp - State of DE				
Limit	750,000		750,000	
Bond Public Officials Bond				
Treasurer - Limit	100,000		100,000	
City Clerk - Assistant Treasurer - Limit	100,000		100,000	

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 and 2008 bonds as of June 30, 2009, was $7,604,913. Principal and interest payments due on July 1, 2009, make up $3,157,501 of the combined total of these restricted accounts. The remaining $4,417,412 exceeds the maximum combined debt service for any future fiscal year, which is the $4,058,704 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 2009 was $7,789,990.

- 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 at the end of FY 2009 was $8,763,863.

- 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 at the end of FY 2009 was $385,102.

- Contingency Reserve Fund – The Contingency Reserve Fund 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 Fund equal to 1.0 percent of the current year revenues for the Electric Revenue Fund. The FY 2009 end-of-year balance was $928,653, which is equal to 0.92 percent of the FY 2009 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 FY 2009 end-of-year balance was $4,652,527, which was 6.31 percent of the FY 2009 purchased power cost.

The Interest and Sinking Fund, the Insurance Stabilization Fund, the Contingency Reserve Fund, and the Electric Rate Stabilization Fund are accounts within the Electric Revenue Fund. The Depreciation Fund and the Future Capacity Fund are accounts within the Improvement and Extension Fund. Table III-8 presents FY 2007 through FY 2009 year-end summaries of the activity within the funds described above, excluding the Electric Revenue Fund and the Improvement and Extension Fund.

Table III-8

RESERVE FUND ACTIVITY AND BALANCES
City of Dover, Delaware

	Bond Reserve Account	Depreciation Reserve Fund	Future Capacity Fund	Insurance Stabilization Fund	Contingency Reserve Fund	Electric Rate Stabilization Fund
Year Ended June 30, 2007						
Balance in Account on July 1	$ 927,183	$ 15,652,798	$ 8,569,070	$ 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	$ 8,958,792	$ 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	$ 8,958,792	$ 351,255	$ 847,032	$ 379,784
Year Ended June 30, 2008						
Balance in Account on July 1	$ 1,219,333	$ 13,535,183	$ 8,958,792	$ 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	$ 9,457,351	$ 370,802	$ 894,170	$ 2,471,465
Disbursements						
Monthly Debt Service	1,780,000					
Transfer to Other Reserve Funds						
Transfer to Operations		(9,699,579)	(1,000,000)			
Balance in Account on June 30	$ 3,257,091	$ 4,451,663	$ 8,457,351	$ 370,802	$ 894,170	$ 2,471,465
Year Ended June 30, 2009						
Balance in Account on July 1	$ 3,257,091	$ 4,451,663	$ 8,457,351	$ 370,802	$ 894,170	$ 2,471,465
Receipts						
Interest Earned	252,718	338,327	306,512	14,300	34,484	95,314
Appropriations		5,000,000				2,085,748
Total Funds Available	$ 3,509,809	$ 9,789,990	$ 8,763,863	$ 385,102	$ 928,654	$ 4,652,527
Disbursements						
Transfer to Other Reserve Funds						
Transfer to Operations		(2,000,000)				
Balance in Account on June 30	$ 3,509,809	$ 7,789,990	$ 8,763,863	$ 385,102	$ 928,654	$ 4,652,527

* * * * *

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. The investigations included interviews, observations, and reviews of FY 2009 expenditures and FY 2010 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 2010 Operating Budget are necessary and should provide improved reliability and power quality for the Electric System.
4. The balances as of June 30, 2009 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.

* * * * *