

Final Report

# 2010 COMPREHENSIVE ENGINEERING REPORT

LAFAYETTE CONSOLIDATED  
GOVERNMENT, LOUISIANA  
LAFAYETTE UTILITIES SYSTEM

Year Ended October 31, 2010

April 28, 2011



An SAIC Company

April 29, 2011



Mr. Terry Huval  
Director of Utilities  
Lafayette Utilities System  
1314 Walker Road  
Lafayette, LA 70502

**Subject: 2010 Comprehensive Engineering Report - FINAL**

Dear Terry:

Enclosed please find R. W. Beck's final 2010 Comprehensive Engineering Report. This Report is based on field reviews and interviews conducted during early 2011.

It was a pleasure working with you and your staff on this project. If you have any questions, please feel free to contact me directly at (303) 299-5342.

Sincerely,

**R. W. BECK, INC.**

A handwritten signature in black ink, appearing to read "Scott H. Burnham". The signature is fluid and cursive, with the first name "Scott" being the most prominent.

Scott H. Burnham  
Project Manager

SHB/jg

c w/encl: Kerney Simoneaux, LCG



# LAFAYETTE UTILITIES SYSTEM 2010 COMPREHENSIVE ENGINEERING REPORT

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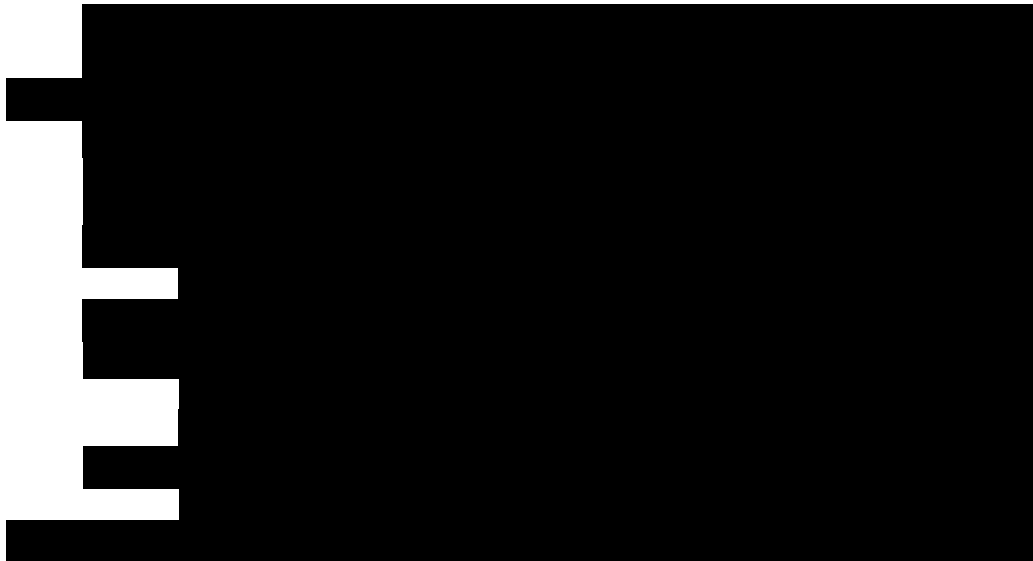
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This report has been prepared for the use of the client for the specific purposes identified in the report. The conclusions, observations and recommendations contained herein attributed to R. W. Beck, Inc. (R. W. Beck) constitute the opinions of R. W. Beck. To the extent that statements, information and opinions provided by the client or others have been used in the preparation of this report, R. W. Beck has relied upon the same to be accurate, and for which no assurances are intended and no representations or warranties are made. R. W. Beck makes no certification and gives no assurances except as explicitly set forth in this report.

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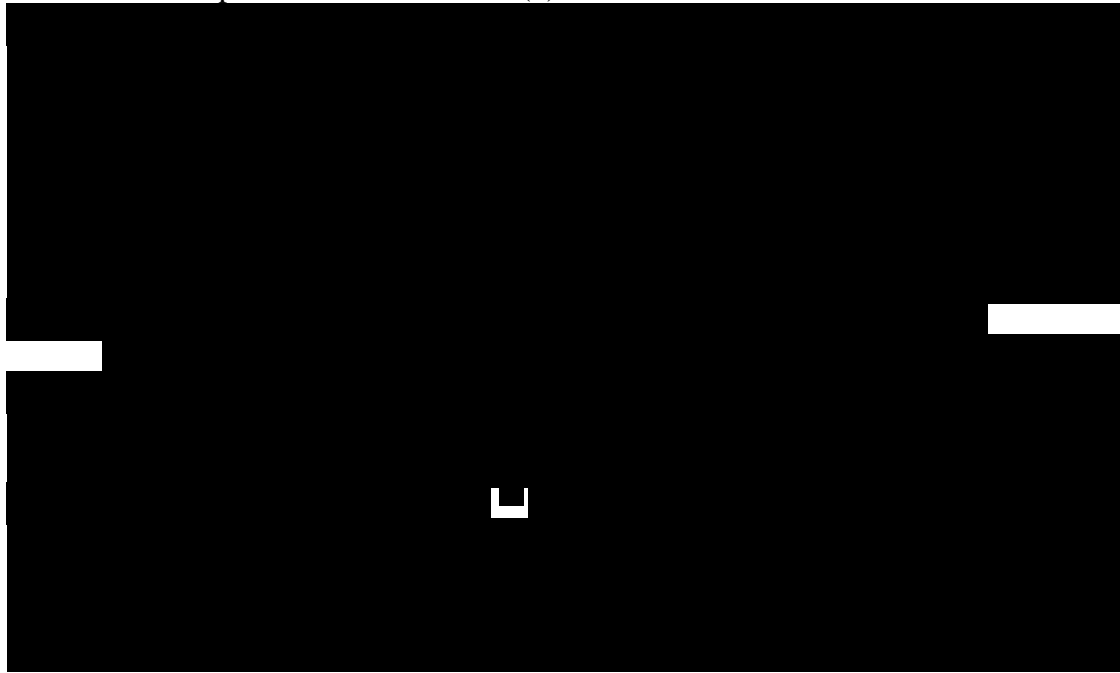


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# Section 1

## EXECUTIVE SUMMARY

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The City of Lafayette (the City) operates with Lafayette Parish Government (the Parish) as a consolidated government known as the Lafayette City-Parish Consolidated Government (referred to as Lafayette Consolidated Government or LCG). The Lafayette City-Parish Council (the Council) and Lafayette Public Utilities Authority (LPUA) are the governing authorities of the Lafayette Utilities System (LUS). The City issued the Utilities Revenue Bonds, Series 2004 and the Communications System Revenue Bonds, Series 2007. As required by the bond ordinances in each of these offerings, this 2010 Comprehensive Engineering Report (Report) has been prepared in accordance with the bond covenants of the General Bond Ordinance dated June 29, 2004 (the 2004 Bond Ordinance), and General Bond Ordinance dated June 12, 2007 (the 2007 Bond Ordinance) (collectively the Bond Ordinances). This Report covers the fiscal year 2010 (November 1, 2009 to October 31, 2010) period (the Report Period). Unless otherwise stated, financial data and operational data were reported on a fiscal year basis.

This Report has been prepared by R. W. Beck, Inc., an SAIC Company (R. W. Beck or the Consulting Engineer), and is intended to meet the requirements of the Bond Ordinances. The provisions of the Bond Ordinances are intended to provide engineering and management information to LUS, LCG, and Bondholders. Copies of this Report have been placed on file with the Bond Fund Trustee, LUS and others.

This Report summarizes the results of our studies and analyses, and those of others included herein, as of the dates of those studies or statements. Changed conditions occurring after such dates may not be reflected in this Report. Any such changed conditions could affect the material presented herein to the extent of such changed conditions and such changed conditions would not be reflected in this Report. R. W. Beck has not been retained to update this Report beyond the date hereof.

Field interviews were initiated as part of this Report during March 2011. The Consulting Engineer interviewed LUS staff regarding operations and performed analyses of operating statistics that are indicative of the general operating condition of LUS' facilities.

## Utilities Revenue Bonds, Series 2004 Bond Covenants

Article VII of the 2004 Bond Ordinance puts forward a number of covenants for LUS. The following discussion addresses compliance with each such covenant.

## Section 1

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**Table 1-1**  
**2004 Bond Covenant Opinions Pertaining to the Electric, Water, and Wastewater Utilities**

Section	Description	Opinion
7.1	Operations Covenant	The Utilities System <sup>(1)</sup> was operated in a business-like manner, was adequately maintained, and maintained the necessary staff to properly operate and protect the system.
7.2	Maintenance of Utilities System: Disposition	The Utilities System was maintained in accordance with Prudent Utility Practices.
7.3	No Competitive Facilities	No competitive facilities were constructed during the Report Period and there are no existing competitive franchises.
7.4	Obligation to Connect Sewerage Users	LUS has met the requirements of this covenant.
7.5	No Free Service	No free service was supplied by the Utilities System during the Report Period.
7.6	Operating Budget	An operating budget for fiscal year 2010 was adopted September 30, 2009.
7.7	Rate Covenant	LUS has reasonably complied with the elements of the rate covenant of the 2004 Bond Ordinance during the Report Period.
7.8	Books and Records	The basic accounting principles and requirements with respect to the Utilities System, as addressed in the 2004 Bond Ordinance, have been complied with by the City during the Report Period.
7.9	Reports and Annual Audits	The basic accounting principles and requirements with respect to the Utilities System, as addressed in the 2004 Bond Ordinance, have been complied with by the City during the Report Period.
7.10	Insurance and Condemnation Awards	The Utilities System has worked with their insurance consultants (not the Consulting Engineer) to identify risks to be addressed through self-insurance and industry standard policies. We are not aware of any unreasonable policies or gaps in their program.
7.11	Enforcement of Collections	The collection of fees and revenues associated with the use of the Utilities System has been reasonably enforced during the Report Period.
7.12	Additions to Utilities System	No significant additions to the Utilities System were identified during the Report Period.

(1) Utilities System includes the Electric, Water, and Wastewater Utilities of LUS.

## Summary

Based on R. W. Beck's review of the 2004 Bond Ordinance together with verbal and written reports provided by LCG and LUS staff, no events of material default were identified during the Report Period.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
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[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]



## Recommendations

In addition to the specific Bond Ordinance covenant opinions above, LUS has requested that R. W. Beck provide recommendations on specific categories as more fully described in the body of the Report.

## Section 2 INTRODUCTION

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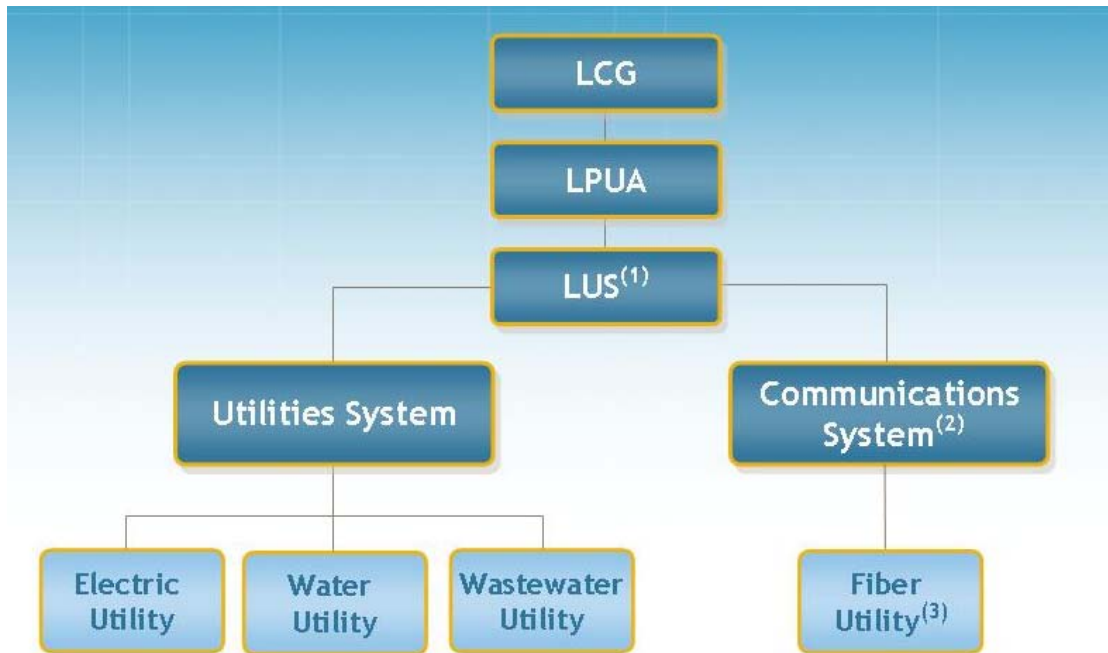
This Report is presented in nine Sections. Section 1 provides an Executive Summary of the Consulting Engineer's opinions regarding achievement of the covenants described in the bond ordinances. Section 2 provides a description of the governing authority for LUS, the Utilities Revenue Bonds, Series 2004 and the Communication System Revenue Bonds, Series 2007, respectively, and other high level information regarding LUS, LCG and the City. Section 3 provides a description of the organization and management of LUS and LCG, and includes a discussion of insurance requirements, staffing levels and pay scale. Section 4 provides detailed information regarding the financial data for the overall Utilities System. Sections 5, 6, and 7 provide a discussion of the Electric, Water, and Wastewater Utility operations, respectively. Section 8 provides a discussion of the Communications System operations and finances. Section 9 provides a discussion of the current status of major environmental permits and potentially significant environmental liabilities for the Utilities System.

This Report has been prepared by R. W. Beck and is intended to meet the requirements of the Bond Ordinances. The provisions of the Bond Ordinances are intended to provide engineering and management information to LUS, LCG, and Bondholders.

### Authority

The City operates with Lafayette Parish Government as a consolidated government known as the Lafayette City-Parish Consolidated Government. The Council and LPUA are the governing authorities of LUS.

LUS is a department of LCG and consists of the Utilities System and the Communications System. LUS' properties and assets, controlled and operated by the LCG, are designated by existing bond ordinances as the Utilities System and Communications System. The Communications System is also referred to as LUS Fiber, and for the purposes of this Report, the two terms are interchangeable. The Utilities System is comprised of (i) an electric system (including generation, transmission and distribution facilities), (ii) a water system (including supply, treatment, transmission, distribution and storage facilities), and (iii) a wastewater system (including wastewater collection and treatment facilities). The Communications System is comprised of a fiber optic loop that runs throughout the City. In 2008, the Communications System was expanded to provide retail telephone, cable television, and internet services to the City and was transferred from the Utilities System to the Communications System. The relationship among these entities is shown below in Figure 2-1.



- (1) From an operational perspective the Utilities System and the Communications System both fall under LUS.
- (2) From an accounting perspective, the Utilities System and Communications System are separate. Communications System is also referred to as LUS Fiber.
- (3) On November 1, 2007 the beginning of fiscal year 2008, the wholesale fiber services were transferred from the Utilities System to the Communications System.

Figure 2-1: LCG and LUS Structure

## Requirements of Report

The City issued the Utilities Revenue Bonds, Series 2004 (2004 Bonds) and the Communications System Revenue Bonds, Series 2007 (2007 Bonds). This Report has been prepared as provided for by each of the authorizing bond ordinances for the offerings mentioned above. This Report covers the fiscal year 2010 (November 1, 2009 to October 31, 2010) (the Report Period). Unless otherwise stated, financial data and operational data are reported on a fiscal year basis.

## 2004 and 2007 Bond Ordinances

This Report is prepared in accordance with the provisions of Sections 8.1 and 8.2 of the 2004 Bond Ordinance and Section 9.1 and 9.2 of the 2007 Bond Ordinance which collectively require:

*“The Consulting Engineer shall prepare within one hundred eighty (180) days after the close of each fiscal year a comprehensive report... upon the operations of the Communications System and the Utilities System during the preceding year, the maintenance of the properties, the efficiency of the management of the property, the proper and adequate keeping of books of account and record, the adherence to budget and budgetary control provisions, the adherence to all the*

*provisions of the Ordinance, and all other things having a bearing upon the efficient and profitable operations of the Communications System and the Utilities System, and shall include whatever criticism of any phase of the operation of the Communications System and the Utilities System the Consulting Engineer may deem proper, and such recommendation as to changes in operation and the making of repairs, renewals, replacements, extensions, betterments and improvements as the Consulting Engineer may deem proper including recommended changes in organization, pay scales and risk management practices...”*

## Report Purpose

In addition to the requirements of the bond covenants described above, this Report has several purposes. These include the following:

- Provide an annual review of the physical operations of the Utilities System and Communications System
- Provide an annual review of financial operation of the Utilities System and Communications System
- Provide a reference document for LUS, which includes historical analysis and data
- Provide recommendations to LUS concerning various aspects of its Utilities System and Communications System

## Consulting Engineer

The firm of R. W. Beck, Inc., an SAIC Company (R. W. Beck or the Consulting Engineer), is presently retained by LCG as its Consulting Engineer and has been so retained since the inception of the LUS revenue bond program.

The duties of the Consulting Engineer, which are specifically defined in the Bond Ordinances, include advising LUS on its appointment of Chief Operating Officer, providing continuous engineering counsel to LCG in connection with the operations of the Utilities System and Communications System, advising on rate revisions, and preparing an annual comprehensive report (specifically, this Report) on the operations of LUS after the close of each fiscal year.

This Report includes our opinions and suggestions on the following issues and is generally organized by utility system except for activities common to all systems:

- Operations of LUS
- Maintenance of the properties
- Efficiency of management of the properties
- Proper and adequate keeping of books of account and record
- Adherence to budget and budgetary control provisions

- Adherence to all the provisions of the Bond Ordinances
- Other items having a bearing on efficient and profitable operations

In addition, the Consulting Engineer may make recommendations regarding changes in operations, making of repairs, renewals, replacements, extension, betterments, improvements, organization, pay scales, and risk management practices.

Any statements in this Report involving matters of opinion or estimates, whether or not expressly so stated, are intended merely as such and not as representations of fact and are subject to being affected by fluctuating economic and regulatory conditions and the occurrence of other future events which cannot be assured. Therefore, actual results achieved may vary from projections and estimates, and such variations may be material. All capitalized terms used herein that are not conventionally capitalized are defined within the various Sections of this Report, or in the agreements or documents in which they appear.

R. W. Beck visited and made general field observations of the Utilities System and the Communications System, which were visual, above-ground examinations of selected areas which were deemed adequate to comment. Other than as expressly stated herein, the observations and examinations were not in the necessary detail to reveal conditions with respect to safety, the internal physical condition of any facilities, or conformance with agreements, codes, permits, rules, or regulations of any party having jurisdiction with respect to the operation and maintenance of the Utilities System and Communications System.

## Revenue Bond Program

Utilities Revenue Bonds have been an important source of capital for additions and improvements to the Utilities System. Bond authorization programs and associated expenditures of bond proceeds follow a predetermined plan of facility additions and improvements based upon an engineering planning and feasibility study. A summary of the issuance of authorized and issued revenue bonds as of October 31, 2010 is provided in Table 2-1 below.

**Table 2-1**  
**Utilities System Bonds Summary**

Date Issued	Authorized Amount (\$)	Application of Proceeds
1949 – 1958	18,000,000	Steam-electric generating plant and improvements and extensions to the electric, water and wastewater systems
1962 –1965	12,500,000	Improvements and extensions to the electric, water and wastewater systems
1966 – 1969	19,800,000	Addition to electric generation, water and wastewater treatment capacity, and extensions and improvements
1973 – 1976	39,000,000	Addition to electric generation capacity and extensions, additions and improvements to the electric, water and wastewater systems
1978 – 1981	26,000,000	Additions to the electric transmission system and extensions and improvements to the electric, water distribution and wastewater collection systems
1983 – 1996	40,400,000	Additions, extensions and improvements to the electric, water and wastewater system and acquisition of electric distribution customers
2004	183,990,000	Addition to electric generation capacity and extensions, and wastewater improvements
2007	110,405,000	Creation of the Communications System to provide retail telephone, cable television and internet service to the residents of the City

Source: Official Statements

## Utilities Revenue Bonds, Series 2004

Prior to the issuance of the 2004 Bonds, the proceeds from two prior bond issues remained outstanding. Specifically, the prior outstanding debt included \$6,020,000 from the Revenue Refunding Bond Series 1993 (the 1993 Bonds) and \$13,520,000 from the Utilities Revenue Bond Series 1996 (the 1996 Bonds). With the issuance of the 2004 Bonds, the City defeased the 1993 Bonds. The Louisiana Department of Environmental Quality (LDEQ), the sole holder of the 1996 Bonds, allowed that the 2004 Bonds could be issued on parity with the 1996 Bonds and will become Outstanding Parity Bonds.

The 2004 Bonds were issued for the purpose of financing the construction of the North and South Generation Projects (subsequently renamed the T. J. Labbé and Hargis-Hébert Electric Generation Station Projects, respectively), Electric Utility Transmission and Distribution Improvements, and Wastewater Utility Capital Improvement Projects. The total amount of the debt issued under the 2004 Bonds was approximately \$183,990,000.



## Financial and Statistical Data

Selected financial and statistical data provided by LCG for the City and Lafayette Parish has been included as Appendix A to this Report. This data was determined to be a requirement of this Report by LCG and LUS Bond Counsel and has not been independently verified by the Consulting Engineer.

## Section 3

# ORGANIZATION AND MANAGEMENT

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## LCG Organization and Management

The current form of government includes both the City and certain areas of the Parish and is referred to as LCG. This form of government includes the President and nine Council members who are elected by the citizens of the Lafayette Parish to four-year terms of office. Names of each official and offices held by each during the reporting period are shown in the Table 3-1.

**Table 3-1**  
**President and Council Members**

Office	Members
President	L. J. Durel, Jr.
District 1 Member	Mary Morrison
District 2 Member	Jay Castille
District 3 Member	Brandon Shelvin
District 4 Member	Kenneth P. Boudreaux
District 5 Member	Jared Bellard
District 6 Member	Sam Dore
District 7 Member	Donald L. Bertrand
District 8 Member	Keith Patin
District 9 Member	William G. Theriot

Source: LCG, 4/11

## Home Rule Charter

The President and his Chief Administrative Officer (CAO), Mr. Dee Stanley, direct and supervise the administration of all departments, offices, and agencies of LCG, except as may otherwise be provided by the Home Rule Charter (Charter) or by law. The LCG departments involved in day-to-day management and operation of LUS are the Department of Administrative Services, the Department of Finance and Management, the Department of Information Services Technology and the Legal Department.

In the fall of 1992, the electorate of the Parish, including the City, adopted a Charter establishing LCG for the purpose of consolidating the governmental functions of the City and the Parish. The new government became operative on June 3, 1996 when LCG officials took office pursuant to the Charter. The Charter set up the LCG



## Section 3

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departments and defined the responsibilities of each department. The following described departments provide services to LUS.

### Department of Finance and Management

Financial responsibilities are handled by the Department of Finance and Management. These duties as outlined on pages 20-21 in the Charter include:

- Collection (except where specifically otherwise provided for by law) and custody of all monies of LCG from whatever source
- Assistance to the President in the preparation of the annual operating budget and the capital improvement budget
- Maintenance of a record of indebtedness and payment of the principal and interest on such indebtedness
- Ascertaining that funds are available for payment of all contracts, purchase orders and any other documents which incur a financial obligation for LCG, and that such documents are in accordance with established LCG procedures
- Disbursement of LCG funds
- Administration of a uniform central accounting system for all LCG departments, offices and agencies, using nationally accepted standards where applicable
- Preparation of a monthly statement of revenues and expenditures, which shall be completed and made available for public inspection not later than 31 days after the end of each month
- Procurement of all personal property, materials, supplies, and services required by LCG under a central purchasing system for all departments, offices, and agencies in accordance with applicable state law, Council policy and administrative requirements
- Investment of idle funds, as permitted by law, so as to receive the maximum rate of return consistent with federal and state laws and regulations
- Maintenance of an inventory of all property, real and personal

Duties of utility billing and revenue collection are handled by the Department of Utilities.

Ms. Rebecca Lalumia serves as the Chief Financial Officer (CFO) for the Department of Finance and Management.

### Department of Administrative Services

As described on page 21 in the Charter, the Director of the Department of Administrative Services shall direct and be responsible for:

- Personnel matters for employees other than those under the jurisdiction of the civil service director and civil service board. Responsibilities shall include but not be limited to personnel policies, employee relations, employee counseling, and unemployment and worker's compensation reports and hearings

- Developing and implementing a communications system
- Risk management, insurance and safety programs
- The Division also provides printing and communications services to LUS

The Director of the Department of Administrative Services is Ms. Gail Smith. Ms. Smith oversees information systems (data processing), communication systems, and risk management.

### Department of Information Services Technology

In 2004, LCG created the Information Services and Technology Department (IS&T) and appointed Mr. Keith Thibodeaux as the Chief Information Officer (CIO). The IS&T Department is responsible for managing the coordinated development of an integrated information technology system for LCG and external organizations who contract with LCG for computer services.

### Legal Department

Mr. Patrick S. Ottinger is retained as LCG's Attorney to render legal opinions and to counsel and advise LCG and LUS. Various Assistant City Attorneys have also been appointed and serve under the direction, and at the discretion, of LCG's Attorney.

## LUS Organization and Management

The duties, responsibilities, management and organization of LUS under LCG are taken from the Charter.

### Lafayette Public Utilities Authority

The governing authority of LUS is the LPUA. LPUA consists of those members of the Council whose districts include 60 percent or more of persons residing within the boundaries of the City as they existed on the effective date of the Charter. Members may be added should the boundaries of the City change. The latest census reports of the United States Census Bureau were the basis for determining the council districts including 60 percent or more of persons residing within the City.

LPUA members for the period reported herein are provided in Table 3-2.

Table 3-2  
LPUA Members

Name	Office
Brandon Shelvin	Chair
Keith Patin	Vice Chair
Donald L. Bertrand	Member
Kenneth P. Boudreaux	Member
Sam Dore	Member

Source: LCG, 4/11

LPUA, subject to approval by the President and the Council by ordinance, may expand the area of end-user electric service only into areas authorized by R. S. 45:123, or other controlling State law, or into areas annexed into the City by LCG. Nevertheless, LPUA may enter into contracts with governmental bodies, exclusive of LCG, and other public or private utilities for other than end-user services.

LPUA must not sell, lease or, in any manner, dispose of the LUS, or any substantial part thereof, without approval by majority vote of the qualified electors residing within the boundaries of the City voting in an election called for that purpose. This may not be construed to prevent the disposal of property that has become obsolete, unserviceable and not necessary for the efficient operation of the LUS. The proceeds of the sale of such property must be used to purchase or construct other capital improvements for the LUS. In the event of the sale or lease of the entire LUS, the proceeds are to be used for capital improvements in the entire City.

A person residing in an area served by LUS may appeal to LPUA any proposed rate increases or issuance of bonds. The decision of LPUA is final, subject to appeal to the appropriate courts.

## Lafayette Public Power Authority

Lafayette Public Power Authority (LPPA) was created January 11, 1977 for the purpose of planning, financing, constructing, acquiring, improving, operating, maintaining, and managing public power projects or improvements singly or jointly with other public or private corporations, and for the purpose of purchasing and selling wholesale electric power to, or exchanging electric power with, the City and others.

The Council is the governing authority of the LPPA. The Chief Executive Officer of LPPA is the President of the LCG. The Director of Utilities is also the Managing Director of LPPA.

LPPA has a 50 percent ownership interest in a fossil-fuel steam-electric generating unit, Rodemacher Power Station Unit 2 (RPS2), located in northwest Rapides Parish near Boyce, Louisiana, approximately 100 miles northwest of Lafayette which is operated by Cleco. LPPA supplies a significant portion (from 50 to 70 percent) of LUS' electric energy production.

## Utilities Department

The Director of the Utilities Department is appointed by the President, subject to approval by LPUA, in accordance with provisions included in current or future bond resolutions and covenants. The Charter does not affect franchises and contracts in existence at the time the Charter became effective for the remaining life of these franchises and contracts.

The Utilities Department functions in accordance with conditions included in current bond resolutions and covenants. Funds paid by LUS to LCG for in-lieu-of-taxes (ILOT) must be used only for programs and services within the City. LPUA fixes rates, incurs indebtedness, approves the LUS budget, and approves proposals for the improvement and extension of LUS, subject to approval by the President and Council.

The Director of the Utilities Department is responsible for the operations of the LUS in all areas of activity not otherwise provided for by the Departments of Administrative Services, Finance, or Information Services Technology. As outlined in the Charter, the duties of the Director of Utilities are as follows:

- Production and distribution of electricity
- Water production, treatment and distribution
- Sewerage collection, treatment and disposal
- Utility engineering services
- Supervision of contract construction work for the Utilities System
- Maintaining utility equipment in cooperation with the central garage
- Reading of utility meters
- Other such activities as may be directed by the President as necessary or incidental to the operation of the Utilities System

The Managing Director of LPPA and the City's Director of Utilities is Mr. Terry Huval. Mr. Huval is a graduate of the University of Louisiana at Lafayette with a B.S. in Electrical Engineering. He has been employed in the utility industry throughout his career and has served in various management positions with Entergy-Gulf States Utilities, until his appointment as LUS' Director of Utilities on December 5, 1994.

The personnel serving as managers of the divisions within LUS are shown in Table 3-3.

**Table 3-3  
LUS Division Managers**

Division	Manager
<b>Utilities System</b>	
Engineering	Frank Ledoux
Water Operations	Don Broussard
Wastewater Operations	Craig Gautreaux
Electric Operations	Mike Boustany
Power Production	Frank Ledoux
Support Services	Andrew Duhon
Customer Service	Andrew Duhon
Environmental Compliance	Allyson Pellerin
<b>Communications System</b>	
Engineering	Frank Ledoux
Fiber Operations	Frank Ledoux
Support Services	Frank Ledoux

Source: LUS, 4/11

## Engineering Division

The Engineering Division is responsible for all engineering activities necessary to operate and maintain the Utilities System. The functional activities of this division include forecasting, system planning, system design, contract administration, construction management, and engineering analysis in support of other operating divisions. The Engineering Division manager is responsible for the four sections described below.

The **Civil Engineering Section** focuses on the Water and Wastewater Utilities. Services include design, planning and construction of major water and wastewater infrastructure projects that are scheduled and budgeted with a system of work orders.

The **Power Marketing Section** responsibilities include the following areas:

- Special contracts
- Wholesale electric purchases and sales contracts and negotiations (including the LUS involvement with The Energy Authority (TEA), as described in Section 5 of this Report)
- Fuel supply contract management (coal, gas and transportation)
- Transmission and interconnection contract management
- Federal Energy Regulatory Commission (FERC) related issues and compliance reporting
- Work with developers to meet special electric service expansion needs

- Wholesale water and contract administration
- LUS representative on Southwest Power Pool (SPP) Markets & Operation Policy Committee
- SPP participation on various working groups
- Electric distribution for commercial services, residential services, Street Lighting and Private Lighting

The **Systems Engineering Section** areas of focus include:

- Geographic Information Systems (GIS) development to provide infrastructure locations and system mapping
- Network Engineering
  - Design and installation of Ethernet and wireless networks
  - Oversight of the entire LUS information technology budget
  - Operation and maintenance of the computer network hardware for all LUS facilities
  - Installation and support for applications
  - Technical support for the Supervisory Control and Data Acquisition (SCADA) system and fiber networks
- Drafting functions
- Acquisition of real property rights including easements and property ownership required for infrastructure expansions
- Material specifications for Electric, Water, and Wastewater Utilities
- Annual material purchase contracts through warehouse for Electric, Water, and Wastewater Utilities
- Document management for records center and water distribution
- Special projects including generation plants, building expansion and remediation, and fiber build-out management

The **System Construction Section** responsibilities include:

- Electric substation design and planning
- Transmission line design
- Electric system planning
- Fiber construction and installation
- Electric system communications
- Electric system personnel training

### Water Operations Division

The Water Operations Division is responsible for the water supply, production, storage, and distribution facilities. This includes maintenance as well as operations and water quality.

### Wastewater Operations Division

The Wastewater Operations Division responsibilities include operation and maintenance (O&M) of the treatment and collection facilities. Also included is the management of wastewater discharge quality.

### Electric Operations Division

The Electric Operations Division is responsible for the field activities associated with operating and maintaining the electrical transmission and distribution facilities. The functional activities include service calls, system construction, system control, meter shop, security, and substation operations.

### Power Production Division

The Power Production Division is responsible for the O&M of the electric power production facilities. This division is also responsible for the project management, engineering, procurement and construction for its capital and O&M project budget.

### Utilities Support Services Division

The Utilities Support Services Division is responsible for certain administrative duties associated with operating the Utilities System. These activities include employee training and safety, public information, utility service rates, facilities management, financial planning, and meter reading.

The Meter Services Section uses an electronic meter reading system that consists of hand-held remote data collection devices carried by meter readers, as well as computer-based translation and processing equipment at the meter services office, to provide meter data for the customer billing function.

The Meter Services Section compiles monthly statistics related to meter reading accuracy, read rates, and customer connects and disconnects in a continuous effort to identify trends and evaluate opportunities to improve the section's effectiveness. The Customer Information System (CIS) provides tracking "re-reads" of customer accounts. Tracking the number of re-reads reflects the overall efficiency of a meter reader, of a crew, and of Meter Services in general. In 2010, the Meter Services Section was required to re-read approximately 7,500 electric and water meters. LUS is currently exploring opportunities for improving meter reading efficiency. Other technologies are being explored to assist with commercial and industrial (C&I) accounts that may need hourly profiling data or other value-added services available from LUS through the meter.

### Smart Grid & Advanced Metering Infrastructure

LUS was approved for \$11.6 million in stimulus funding from the Federal government for Smart Grid-related investment. This money is granted to LUS only if LUS can match with \$11.6 million in funds. LUS conducted an economic evaluation of Advanced Metering Infrastructure (AMI) systems in 2008 and LUS intends to pursue AMI in the future. With the inception of the Communications System, communication efficiencies can be realized.

### Customer Service Division

The Customer Service Division collects and processes utility customer deposits and bills daily. This division also provides utility customers with service and responses to billing questions. Customer bill paying and other business facilities, including a drive-up window, are located in the LCG building. The cashier function includes receiving all payments delivered by mail or by hand.

Revenue collection service is an important and financially critical function for any utility. It is the “cash register” of the business, as well as an excellent opportunity to communicate directly with customers. An effective customer-oriented, revenue collection division is essential to the success of LUS.

In 2005, LUS added the option for bill payments over the Internet. Approximately 10,000 customers were registered with the website to utilize this option during 2010. In 2007, LUS introduced an integrated voice response system (IVR) that allows automated handling of customer calls and customer payments. During 2010, approximately 4,500 bills were paid over the telephone per month.

### Environmental Compliance Division

The Environmental Compliance Division operates under the supervision of Ms. Allyson Pellerin. She is the Environmental Compliance Manager for water and wastewater. Ms. Gini Ingram is the Air Quality Compliance Administrator. Ms. Ingram is also responsible for all environmental compliance activities at the power generation facilities. The Environmental Compliance Division supports the Utilities System in the following areas:

- Regulatory compliance for the water and wastewater divisions
- Administration of the Industrial Pretreatment Program
- Analytical services relative to analyses of drinking water, wastewater analysis, and biosolids reuse

In 2010, the Environmental Compliance Division consisted of 19 full-time equivalent employees. Both Ms. Ingram and Ms. Pellerin indicated they are able to manage workload requirements with current staffing levels. It is also noted that due to recent internal and market changes, employee attraction and retention is not as much of a concern as in the past.

LUS has contracted with an environmental management system software supplier to help maintain and improve upon the existing programs under the Environmental



Compliance Division. Implementation of an environmental management system, primarily used for compliance task tracking, was completed in 2009.

### **Air Quality Compliance Division**

The Air Quality Compliance Division was created in 2008 to focus on the specific air quality related regulatory requirements as they relate to the power production activities of LUS.

### **Communications System**

The Communications System is responsible for O&M activities for the wholesale and retail fiber system throughout the City. The fiber system was built in 1999 and provides internal communications capabilities that are critical to the operation and reliability of LUS.

## **LUS Personnel**

### **Staffing Levels**

Approximately 9 percent of the LUS total budgeted positions were unfilled at the end of 2010 (46 vacancies out of 519 positions). The average annual vacancy rate was approximately 10 percent or 54 vacant positions per month. The employee turnover rate for 2010 was reported as approximately 12 percent (including departures, transfers, retirements, etc.). The number of people employed by LUS, as well as LUS Fiber, as of October 31, 2010 and the number of full-time employees authorized in the budget for the same fiscal year are shown in Table 3-4.

## ORGANIZATION AND MANAGEMENT

**Table 3-4  
LUS Budgeted and Actual Number of Employees**

Division	2009-2010 Budget	2010 Actual Full Time	Difference	Percent Vacancy
Director's Office	2	2	0	0%
Support Services				
Admin & Support	10	10	0	0%
Training	1	1	0	0%
Meter Services	<u>27</u>	<u>23</u>	<u>4</u>	15%
Total Support Services	40	36	4	10%
Customer Service	32	30	3	9%
Environmental Compliance	20	19	5	25%
Power Production	42	33	8	19%
Electric Operations				
Admin & Support	4	3	1	25%
Transmission & Distribution	49	46	3	6%
Energy Control	17	16	1	6%
Substation & Communication	7	7	0	0%
Facilities Management	<u>16</u>	<u>13</u>	<u>3</u>	19%
Total Electric Operations	93	85	8	9%
Water Operations				
Production	23	22	1	4%
Distribution	<u>40</u>	<u>38</u>	<u>2</u>	5%
Total Water Operations	63	60	3	5%
Wastewater Operations				
Treatment	61	60	1	2%
Collection	<u>39</u>	<u>34</u>	<u>5</u>	13%
Total Wastewater Operations	100	94	6	6%
Engineering				
Civil	18	16	2	11%
Administration	11	11	0	0%
Power Marketing	9	8	1	11%
System Engineering	24	23	1	4%
Electric System Construction	5	5	0	0%
Environmental Compliance	<u>4</u>	<u>3</u>	<u>1</u>	25%
Total Engineering	71	66	5	7%
LUS Fiber				
Administration	3	3	0	0%
Operations	18	16	2	12%
Warehouse	3	3	0	0%
Business Support	18	15	3	17%
Engineering	<u>17</u>	<u>12</u>	<u>5</u>	29%
Total LUS Fiber	<u>59</u>	<u>49</u>	<u>10</u>	17%
Total Staff	519	473	46	9%

Source: LUS, 'Personnel Strength Monthly Report,' 10/10

### Succession Planning

LUS has a large number of highly qualified staff approaching retirement or eligible to retire. LUS acknowledges the importance of training and hiring staff to replace those that have or will be retiring in the next few years. Although in the past, LUS has struggled to fill vacant positions with qualified personnel and has had difficulty retaining staff, LUS has been proactive within their pay scale constraints. LUS has been proactive by identifying key staff members to be mentored and working to fill vacant positions. LUS should continue these activities and maintain their proactive approach to succession planning. LUS' turnover rate remained consistent at 11 percent in 2009 to 12 percent in 2010.

### Intra Department Communication

In previous years, utility staff expressed issues related to communication between divisions within LUS. In some cases it was noted communication has improved as groups reached full staffing levels but in other cases a communication "gap" and ineffective communication were identified. Additionally, a lack of current accounting information on "projects and normal capital operating expenses and budgets" was identified as an issue. LUS should consider ways to facilitate efficient communication among the utilities and divisions.

### Pay Scale Review

The Bond Ordinances requires the Consulting Engineer to review and make necessary recommendations related to the pay scales of LUS employees.

### Employee Salary

The average LUS employee salary during 2010 and prior years is shown in Table 3-5. Changes in the average annual salary from year to year reflect salary administration and alterations to the total employee mix relating to both longevity and the proportion of senior and junior positions (supervisory employees, senior employees, and new hires). As noted previously, in 2008 LUS Fiber was created as a stand-alone system. The data in the table below includes the salaries associated with LUS Fiber.

Table 3-5  
LUS Average Annual Salaries

	2006	2007	2008	2009	2010
Average Salary (\$) <sup>(1)</sup>	35,899	37,789	37,224	43,274 <sup>(2)</sup>	43,539 <sup>(2)</sup>

(1) Beginning in 2008, salary data for LUS includes the Communications System salaries.

(2) The 6 percent increase is primarily a result of LCG implementing the market-based pay rate system.

Source: LUS, 10/10

Regional market data was collected to examine the pay ranges for numerous positions within LUS. The positions chosen were based on key positions at LUS, the

availability of data for positions comparable to those at LUS, and positions covering the Electric, Water, and Wastewater Utilities.

A comparison to market and utility-specific data for similar positions was performed. For this comparison, the following activities were conducted:

- LUS job descriptions were compared to the descriptions available from global data sources. Where an exact match in title or job description was not evident, R. W. Beck determined how to align the various positions. A general correlation was made between the positions based on job titles, education, and experience requirements.
- The salary comparison was based on annual median salary ranges for March 2011. The review includes minimum, midpoint, and maximum salary ranges from Louisiana. The salary data obtained from Salary.com and Salaryexperts.com is from March 2011 while the data from the remaining sources is from the fall of 2010.
- 2009 readily available data from the Bureau of Labor Statistics (BLS) was escalated to 2010 using a 1.6 percent factor. The 1.6 percent factor is based on the annual consumer price index (CPI) increase for the South Urban area of the nation as published by the BLS.

The comparative analysis between the LUS median salary ranges for the defined positions and the median salary obtained from market sources suggests that the LUS median salary ranges for the Electric Utility are on average 1 percent below market. For the Water and Wastewater Utilities, the median salary ranges are approximately 9 percent below market. LUS has made progress in some divisions by implementing market-based pay.

The pay scale review only includes the salaries of employees and does not consider the combination of employees' salaries and benefits. A full review of salaries and benefits is beyond the scope of this Report.

### Employment Practices and Employee Benefits

LCG employees, except for a few exempt employees and employees of the Police and Fire Departments, are under a Civil Service System. The result of the Civil Service System is that the ranges for wages and salaries of employees of LUS are often influenced by the overall financial position of LCG. This places restraints on LUS' ability to employ and retain well-qualified applicants for positions requiring special technical skills and experience.

In 2008, LCG investigated and passed a market-based rate system for positions across LCG. The market based rate system began during 2009. Based on our conversations with LUS management, the salary study has significantly improved LUS' ability to compensate its employees competitively. As shown in Table 3-5, the average LUS salary has increased significantly since 2008.

The procedure for filling personnel vacancies in LUS begins with a list of eligible applicants. The applicable appointing authority makes the final selection for the specific position. An applicant hired for a permanent position must then serve an

## Section 3

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initial probationary period of six months. The career advancement process includes an employee evaluation program, which is used to assist management in determining which employees have potential for promotion.

A group life and medical insurance program for employees is provided through the LCG self-insurance program. LCG pays approximately 91 percent of employee health insurance, 100 percent of life insurance premiums, and 70 percent of the cost for dependent medical coverage. The group life insurance plan provides coverage equal to two times the employees' annual salary, up to \$100,000.

Paid vacation (annual leave) up to a maximum of 24 working days per year is earned and provided to employees. The maximum annual level is reached after 20 years of service. Sick leave with pay is credited at the rate of one day per month of employment, with no limit to the amount of sick leave an employee may accumulate. Provisions are established for payment of accumulated unused sick leave upon retirement.

LCG employees are enrolled in the supplementary plan of either the Louisiana Municipal Employees' Retirement System (MERS) or the Louisiana Parochial Employees' Retirement System (PERS), although all new employees are enrolled into PERS. Disability and survivor benefits are also provided.

LUS has a drug-free workplace policy for the purpose of deterring or detecting illegal drugs and unauthorized substances in the workplace. It established a random testing program, as well as testing procedures, for reasonable suspicion or probable cause. It also provided employees with an employee assistance program comprised of counseling and rehabilitation programs.

LUS encourages its personnel to attend numerous technical short courses and seminars to keep abreast of changing technology and procedures in the utility industry. Examples of training courses taken by management include computer training; management training; and technical courses, such as water quality, wastewater treatment, electric relay, system protection, and electric distribution system design. Clerical staff skills are also enhanced with course topics such as office management and writing skills.

## Insurance

Insurance is handled by LCG's Risk Management Division. LCG maintains a self-insurance fund for property and casualty claims. LCG fully self-insures general liability, auto liability, fleet collision/fleet fire, and directors' and officers' liability. LCG also self-insures the group health plan and administers a flex-funded life insurance plan. Excess policies are carried for fire and extended coverage, boiler, machinery, and worker's compensation. Coverage values for existing generation assets are based on previous appraisals and conversations with appropriate LUS personnel.

According to LCG's financial report for 2010, LCG is in compliance with Governmental Accounting Standards Board 10, Reporting for Risk Financing and Related Issues, for public entities.

Insurance related expenditures and recoveries from the Risk Management Fund for LUS (Utilities System and Communications System) for 2010 and the previous five years are provided in Table 3-6. Separate LUS Fiber Insurance Transactions for 2010 are provided in Table 3-7.

Table 3-6  
LUS Insurance Transactions <sup>(1)</sup>

	2006	2007	2008	2009	2010
Payments (\$)	1,172,068	1,783,006	617,358	687,155	842,417
Recovery (\$)	<u>(159,023)</u>	<u>(612,087)</u>	<u>(26,796)</u>	<u>(19,300)</u>	<u>(105,977)</u>
Effective Payments (\$)	1,013,045	1,170,919	590,563	667,855	736,439

(1) Cash basis. Expenditures incurred, recoveries collected during year, not necessarily at time of claim.

Source: L. Shearer, LCG, 03/11

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Source: L. Shearer, LCG, 03/11

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## Security Issues

Following the terrorist attacks of September 11, 2001, increased emphasis has been placed on addressing security measures for the infrastructure systems and facilities in the United States. Terrorist activities aimed at the Utilities System could impact the operation of the Utilities System and interfere with the ability of LUS to provide service and generate revenues. Additionally, terrorist activities have the potential to affect organizations other than LUS, the continued performance of which is critical to continued operation of the Utilities System. These other organizations may support or depend on LUS.

Evaluation by the Consulting Engineer of the security of LUS, as well as other entities with which the LUS has business or operational relations, relative to security issues, is beyond the scope of this Report. We have not been engaged to conduct, and have not conducted, any independent evaluations or on-site review in any way to ascertain the effectiveness of the measures LUS has undertaken to address security issues for its Utilities System. In the event that currently unknown shortcomings in security should arise which lead to significant operational problems, such problems could have an adverse impact on LUS. We recommend that LUS conduct all necessary security studies to ensure employee security and asset preservation.

During March 2011, R. W. Beck interviewed LUS' Information Technology staff who indicated that LUS is aware of the importance of cyber security and has implemented certain safeguards to protect LUS and LUS Fiber from external threats. Details of R. W. Beck's investigation are not included in this Report due to the sensitivity of such information.

## LUS Organizational Goals

Minor changes were made to the LUS Strategic Plan in 2010 and LUS anticipates updating the plan on a tri-annual basis. Various employee committees developed

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<sup>1</sup> Based on the replacement value of LUS Fiber assets.

goals in five areas consistent with LUS’ vision, mission, values, and departments. Electric, Water, and Wastewater Utilities’ objectives include supporting the customer focus and include promotion of customer growth and creation of a customer-focused culture, in addition to the specific key areas listed in Table 3-8.

**Table 3-8  
Strategic Plan Goals**

Focus	Key Areas
Customer Focus (Main Focus)	Improve customer service. Retain and expand Customer base. Maintain community partnerships. Keep abreast of legal issues.
Employee Focus	Reinforce LUS core values. Develop appropriate training. Provide career development. Identify and respond to needs and concerns. Pursue performance-based compensation system.
Electric Focus	Ensure adequate self-generation capacity. Maintain supply of competitively-priced fuel. Operate and maintain generating and transmission and distribution facilities using best practices. Ensure adequate transmission system capacity with M-1 reliability criteria. Explore initiatives to promote customer sales growth. Create and nurture a customer focused culture.
Water Focus	Ensure adequate supply, treatment, and distribution capacity. Operate and maintain systems using best practices. Develop strategies and methodologies to extend service to our customers. Explore initiatives to promote customer growth. Create and nurture a customer focused culture.
Wastewater Focus	Ensure adequate treatment and collection capacity. Operate and maintain systems using best practices. Explore initiatives to promote customer growth. Create and nurture a customer focused culture.
Telecom Focus	Ensure adequate telecommunication facilities. Operate and maintain telecom facilities using best practices. Explore initiatives to promote customer sales growth. Create and nurture a customer focused culture. Develop strategies and methodologies to extend service to our customers.

Source: LUS, Strategic Plan 2010



## Section 3

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The plan sets measurable goals that LUS can use to determine how well LUS is progressing towards the goals of the Strategic Plan. In addition, LUS expects to use the plan in conjunction with its budgeting procedures. We recommend that LUS update and review its Strategic Plan on a consistent basis, including a review of measurable goals throughout the year.

## Recommendations

Recommendations and their status are provided in Table 3-9. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 3-9  
Recommendations**

Organization and Management	Priority	Status
LUS should continue its preparation for the succession of key management positions due to potential retirements in these areas in the next 3-5 years.	High	In Progress
LUS should consider mechanisms to facilitate efficient communication within its divisions and utilities	Normal	In Progress
LUS should continue to review necessary security actions to ensure employee security and asset preservation	High	In Progress
LUS should update and review its Strategic Plan consistently. LUS should review the measurable goals throughout the year to determine status with regards to the Strategic Plan	Normal	In Progress

## Section 4

# UTILITIES SYSTEM - FINANCE AND ACCOUNTING

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LUS is directed by the President and regulated by the Council with regard to utility service pricing and revenue bond financing. The Utilities System provides electric, water, and wastewater services to customers located both inside and outside the City limits.

Per the 2007 Bond Ordinance, accounting for the Communications System is maintained separately, including the budget and financial and operating statements. Therefore, the financial and accounting information for the Communications System is contained in Section 8. The following discussion summarizes the findings of the Consulting Engineer with respect to the financial condition of LUS based upon discussions with, and information supplied by LUS and LCG personnel.

## Accounting

The Bond Ordinances require that the City of Lafayette keep separate identifiable financial books, records, accounts, and data for the Utilities System and the Communications System.

The Home Rule Charter, Section 4-07, 'Utilities Department', states: *"The utility department shall function in accordance with conditions included in current or future bond resolutions and covenants except that reference to "city" therein shall refer to the Lafayette Public Utilities Authority."*

LCG currently prepares monthly financial statements that include important operating financial and managerial data. Except for a few months following the close of a fiscal year, these internal statements are scheduled to be issued by the 20th day of the month following the reporting period.

The audit for the fiscal year ending in October is not available until approximately April of the following year. The Consulting Engineer is particularly concerned about the delay in the availability of important financial information necessary for informed management of LUS Fiber. Additionally, the management of a new business venture, such as telecommunications, is extremely difficult when current financial initiatives may exist. Basic financial and operating results including costs, revenue and performance measurements should be available from two to four weeks after the end of a given month if the utility is to be responsive to the dynamics of the rapidly changing utility industry.

In 2010, LCG installed a new financial management system. The new accounting system will have many benefits including more timely and accurate reports to LUS and the ability to run queries on the data.

The Consulting Engineer is of the opinion that the basic accounting principles and requirements of LUS, as contained in the Bond Ordinances, have been complied with by the City for the period ended October 31, 2010.

## Utilities Revenue Bonds, Series 2004

The 2004 Bonds were issued for the purpose of financing the construction of the North and South Generation Projects (subsequently renamed the T. J. Labbé and Hargis-Hébert Electric Generation Station Projects, respectively), Electric Utility Transmission and Distribution Improvements, and Wastewater Utility Capital Improvement Projects. The total amount of the debt issued under the 2004 Bonds was approximately \$184.0 million.

Table 4-1 provides an estimate of the consolidated amortization schedule for the outstanding long-term debt for the Utilities System.

**Table 4-1**  
**Projected Lafayette Utility Revenue Bonds**  
**Bond Amortization Schedule**

Payment Date	Interest Payment (\$)	Principal Payment (\$)	Total Payment (\$)	Bonds Outstanding (\$)
2010	9,782,038	940,000	10,722,038	192,340,000
2011	9,754,308	970,000	10,724,308	191,400,000
2012	9,725,693	1,575,000	11,300,693	190,430,000
2013	9,673,140	8,625,000	18,298,140	188,855,000
2014	9,243,903	9,055,000	18,298,903	180,230,000
2015	8,792,780	9,510,000	18,302,780	171,175,000
2016	8,318,575	9,985,000	18,303,575	161,665,000
2017	7,820,123	10,485,000	18,305,123	151,680,000
2018	7,296,225	9,820,000	17,116,225	141,195,000
2019	6,780,675	10,335,000	17,115,675	131,375,000
2020	6,238,088	10,875,000	17,113,088	121,040,000
2021	5,667,150	11,445,000	17,112,150	110,165,000
2022	5,066,288	12,045,000	17,111,288	98,720,000
2023	4,433,925	12,680,000	17,113,925	86,675,000
2024	3,768,225	13,345,000	17,113,225	73,995,000
2025	3,067,613	14,045,000	17,112,613	60,650,000
2026	2,330,250	14,785,000	17,115,250	46,605,000
2027	1,591,000	15,520,000	17,111,000	31,820,000
2028	815,000	16,300,000	17,115,000	16,300,000

Source: 2004 Bonds, Official Statement. Amortization schedule includes 2004 Bonds and 1996 Bonds

Approximately 85.0 percent of the 2004 Bonds were used by the Electric Utility, 13.2 percent was used by the Wastewater Utility, and 1.8 percent was used by the Water Utility.

## Rate Revisions

The Council and LPUA have the exclusive right to regulate the Utilities System's rates and charges for services within and outside the corporate limits of the City. The

## UTILITIES SYSTEM - FINANCE AND ACCOUNTING

2004 Bond Ordinance, Section 8.3, states that it is the duty of the Consulting Engineer to advise on any revisions of rates and charges except fuel adjustment charges.

LUS has attempted to balance reasonable utility rates to its customers with the responsibility of providing adequate and reliable electric, water, and wastewater service and a reasonable amount of revenues in the form of ILOT payments to the LCG. The costs incurred by LUS and its Electric, Water, and Wastewater Systems in daily operation and in preparing for the future has increased over the years. Based upon factors such as (i) the covenants contained in the Bond Ordinance No. 0-122-2004 pertaining to the maintenance of rate levels, (ii) the changing customer usage and cost characteristics which are due to various factors such as growth and the conservation, (iii) an awareness of the need for payments ILOT to LCG, (iv) regulatory requirements, and (v) the issuance of indebtedness to fund major capital improvements, the LUS recognized the need for a cost-of-service study reflecting current and future costs.

During 2009, LUS conducted a comprehensive cost-of-service study to examine the adequacy and equity of existing rates for the Electric, Water, and Wastewater Utilities. This study was performed in accordance with generally accepted industry practices for municipal utilities. The analysis showed that rates for all three utilities were insufficient and rate changes were needed. As a result of this study, the Council passed Ordinance O-012-2010 on February 9, 2010. The first rate increase went into effect on February 1, 2010 and an additional rate increase went into effect on November 1, 2010 (the beginning of Fiscal Year 2011). With these rate increases, the Electric, Water, and Wastewater Utilities are anticipated to continue providing adequate and reliable service and a reasonable amount of revenues to LCG. Historical and approved rate changes are shown below in Table 4-2.

**Table 4-2  
Rate Changes Approved by LPUA**

	2006 <sup>(1)</sup>	2007 <sup>(1)</sup>	2008 <sup>(1)</sup>	2009 <sup>(1)</sup>	2010 <sup>(2)</sup>	2011 <sup>(2)</sup>
<b>Electric</b>						
Retail (%) <sup>(3)</sup>	7.0	0.0	0.0	0.0	11.0	10.0
<b>Water</b>						
Retail (%)	0.0	5.0	0.0	0.0	9.0	9.0
Wholesale (%)	0.0	0.0	0.0	0.0	9.0	9.0
<b>Wastewater</b>						
Retail (%)	25.0	12.5	0.0	0.0	18.0	18.0

(1) Rate changes took effect on November 1 of each year.

(2) Rate changes took effect on February 1 of 2010.

(3) Rate increase applied to base rate. Fuel adjustment charge not included in table.

LUS should review LCG's allocation of common costs to the Utilities System and Communications System. The Communications System is still in the start-up phase adding many customers per month. As the system grows, it is reasonable to expect the allocation of common costs to the Utilities and Communications System to change

significantly from year to year. As a result, the allocations should be reviewed annually and the allocation methods should be established in conjunction with LCG.

## In-Lieu-of-Tax

The ILOT payment to the general fund is based on the previous year’s revenues. As shown in Table 4-3, the amount paid in each year was calculated according to the Bond Resolution using the previous year’s revenues. The budgeted amount to be paid in 2010 is \$19.5 million, or approximately 9.2 percent of LUS 2010 revenues.

By comparison, American Public Power Association (APPA)’s survey (published April 2010 containing 2008 data) of 340 public power systems shows that the median payments and contributions to their community’s general fund were 4.7 percent of electric operating revenues. The Utilities System’s payments of 8.3 percent of electric operating revenues are approximately 77.0 percent higher than APPA’s median value.

**Table 4-3**  
**Historical ILOT Payments**

	2006	2007	2008	2009	2010	Average
LUS Operating Revenues (\$1,000)	209,501	206,987	231,788	205,522	212,213	
LUS Calculated ILOT (\$1,000)	<u>18,832</u>	<u>18,799</u>	<u>18,660</u>	<u>18,692</u>	<u>19,463</u>	
ILOT as a percent of Revenues (%)	8.99	9.08	8.05	9.09	9.17	8.86
Electric Operating Revenues (\$1,000)	175,050	169,696	195,627	169,717	172,484	
Electric Calculated ILOT (\$1,000)	<u>14,550</u>	<u>14,539</u>	<u>14,266</u>	<u>14,511</u>	<u>15,020</u>	
ILOT as a percent of Revenues (%)	8.31	8.57	7.29	8.55	8.71	8.26

Source: LCG Annual Budget Document 2010-2011

LUS Financial and Operating Statements 2006-2010 audited

Note: Beginning in fiscal year 2008 LUS Fiber wholesale is no longer included in with the Utilities System.

## Balance Sheet

To determine the extent and character of the changes in assets and liabilities for 2010, a Comparative Balance Sheet is shown on Table 4-4. The comparison shows a 2.2 percent decrease in Total Assets and 0.1 percent decrease in Retained Earnings.

## UTILITIES SYSTEM - FINANCE AND ACCOUNTING

**Table 4-4  
Comparative Balance Sheet**

	2006	2007	2008	2009	2010
<b>Assets &amp; Other Debits</b>					
Utility Plant (\$)					
Plant in Service	761,358,897	792,979,794	801,467,870	828,723,603	847,110,635
Less Accumulated Depreciation & Amortization	<u>(263,256,582)</u>	<u>(282,466,635)</u>	<u>(292,162,949)</u>	<u>(311,781,650)</u>	<u>(332,270,899)</u>
Net Plant in Service	498,102,316	510,513,160	509,304,920	516,941,953	514,839,736
Construction Work in Progress Accrued	<u>2,520,572</u>	<u>2,686,045</u>	<u>3,192,985</u>	<u>1,170,504</u>	<u>1,744,891</u>
Total Utility Plant (\$)	500,622,888	513,199,204	512,497,905	518,112,457	516,584,626
Current Assets (\$)					
Receipts Fund	56,282	548,920	435,240	558,094	1,021,971
O&M Fund (Cash & Temp. Cash Investment)	8,085,446	8,182,793	14,195,956	8,073,213	8,073,243
Accounts Receivable	21,750,101	21,615,806	27,970,201	24,612,625	24,004,860
Other	9,800	12,200	12,200	12,200	12,300
Notes Receivable	0	2,590,427	11,595,777	11,102,306	14,817,021
Inventories	<u>6,606,178</u>	<u>6,417,348</u>	<u>5,398,699</u>	<u>5,208,157</u>	<u>8,300,598</u>
Total Current Assets (\$)	36,507,808	39,367,493	59,608,072	49,566,594	56,229,993
Restricted Assets (\$)					
Capital Additions Fund	77,413,551	80,693,888	78,269,468	71,987,397	60,948,496
Bond Reserve	18,527,824	18,654,469	18,642,493	18,201,075	18,203,234
Security Deposits Fund					
Investments	5,129,150	5,497,347	5,989,670	5,997,628	6,479,084
2004 Construction Fund - Cash & Investment	30,388,115	20,904,201	14,124,322	9,154,206	1,061
Other	<u>4,974,269</u>	<u>5,705,162</u>	<u>767,469</u>	<u>721,987</u>	<u>311,094</u>
Total Restricted Assets (\$)	136,432,910	131,455,068	117,793,422	106,062,292	85,942,969
Deferred Debits (\$)					
Unamortized Debt Discount and Expense	2,942,172	2,806,855	2,664,684	2,515,311	2,358,373
Hurricanes	0	0	3,592,951	3,179,058	3,092,883
Other	<u>36,930</u>	<u>31,633</u>	<u>(369)</u>	<u>14,809</u>	<u>380</u>
Total Deferred Debits (\$)	<u>2,979,103</u>	<u>2,838,488</u>	<u>6,257,266</u>	<u>5,709,178</u>	<u>5,451,637</u>
<b>Total Assets &amp; Other Debits (\$)</b>	<b>676,542,708</b>	<b>686,860,254</b>	<b>696,156,665</b>	<b>679,450,521</b>	<b>664,209,224</b>

## Section 4

**Table 4-4  
Comparative Balance Sheet (continued)**

	2006	2007	2008	2009	2010
<b>Long Term Liabilities</b>					
Revenue Bonds (inclusive of current maturities)	195,005,000	194,145,000	193,255,000	192,340,000	191,400,000
Current Liabilities (payable from Current Assets)					
Accounts Payable	16,918,493	15,284,401	22,092,790	13,289,498	10,957,821
Other	<u>4,547,703</u>	<u>4,798,381</u>	<u>5,041,248</u>	<u>6,344,069</u>	<u>7,223,845</u>
Total Current Liabilities Payable from Current Assets	21,466,196	20,082,782	27,134,038	19,633,567	18,181,666
Other Liabilities (payable from Restricted Assets)					
Interest Accrued	4,767,856	4,767,856	0	0	0
Customer Deposits	5,110,117	5,475,595	5,986,815	5,992,263	6,468,117
Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Other Liabilities Payable from Restricted Assets	9,877,973	10,243,451	5,986,815	5,992,264	6,468,117
Long-Term Liabilities					
Unamortized Premium on 2004 Revenue Bonds	5,183,932	4,945,511	4,695,013	4,431,828	4,155,313
Total Long-Term Liabilities	5,183,932	4,945,511	4,695,013	4,431,828	4,155,313
Reserves					
Reserve for Revenue Bond Debt Service	18,527,824	18,654,469	18,642,493	18,201,075	18,203,234
Reserve for Capital Additions	77,413,551	80,693,888	78,269,468	71,987,397	60,948,496
Reserve for Security Deposits	5,129,150	5,497,347	5,989,670	5,997,628	6,479,084
Reserve for Risk Management	<u>337,977</u>	<u>426,329</u>	<u>0</u>	<u>(356,150)</u>	<u>0</u>
Total Reserves	101,408,502	105,272,034	102,901,631	95,829,949	85,630,814
Retained Earnings (not including reserves)	343,601,104	352,171,476	362,184,167	361,222,913	358,373,314
<b>Total Liabilities &amp; Other Credits</b>	<b><u>676,542,708</u></b>	<b><u>686,860,254</u></b>	<b><u>696,156,665</u></b>	<b><u>679,450,521</u></b>	<b><u>664,209,224</u></b>

Source: LUS Financial and Operating Statements 2006-2010 audited

## Restricted Asset Transactions and Fund Balances

The 2004 Bond Ordinance contains certain provisions and covenants pertaining to the separation and maintenance of funds. The 2004 Bond Ordinance established the following funds in Article V, Section 5.1:

- (i) Receipts Fund
- (ii) Operating Fund
- (iii) Sinking Fund
- (iv) Reserve Fund
- (v) Capital Additions Fund

The Receipts, Operating, Sinking, Reserve, and Capital Additions Fund transactions during the year are presented in Table 4-5.

Table 4-5  
Fund Balances (\$1,000)

	Receipts & Operating	Sinking	Reserve	Capital Additions	Total
Fund Balance as of November 1, 2009	6,233	0	18,603	72,150	96,986
Receipts during the Period:	211,487	10,722	0	46,622	268,831
Total Receipts and Cash Balance	217,720	10,722	18,603	118,772	365,817
Disbursements during the Period:	208,959	10,722	0	57,679	277,360
Fund Balance as of October 31, 2010	8,761	0	18,603	61,093	88,457

Source: LUS Funds Flow Statement 2009-2010

## 2004 Construction Fund

The Construction Fund, identified in Table 4-6, was established as a result of the Series 2004 bond financing for major Electric and Wastewater Utility construction projects. The beginning balance of this fund in 2009 was \$9.2 million. Subsequent interest earnings of \$7,000 and disbursements of \$9.1 million resulted in an ending balance of \$1,000 in 2010.



Table 4-6  
2004 Construction Fund (\$1,000)

Fund Balance as of November 1, 2009	9,154
Receipts during the Period:	7
Total Receipts and Cash Balance	9,161
Disbursements during the Period:	9,160
Fund Balance as of October 31, 2010	1

Source: LUS Funds Flow Statement 2009-2010

## 1996 LDEQ Construction Fund

A separate 1996 LDEQ Construction Fund was established for purposes of financing major wastewater construction projects. Bonds for these projects total \$18.4 million. Proceeds from these bonds are drawn down from LDEQ when needed by LUS. Interest is charged only on the cumulative amounts drawn. For this period, the 1996 LDEQ Construction Fund has a zero balance since the draw downs requested were all expended by the end of the reporting period.

## Income Statement Summary

LUS operating revenues have increased by 7.7 percent since 2009. LUS operating expenses have increased by 2.1 percent since 2009. Depreciation and amortization stayed relatively flat. Other income decreased from approximately \$4.7 million in 2009 to \$2.1 million in 2010 due to lower interest revenues and contribution in aid of construction. Income deductions stayed relatively flat.

Collectively, these changes had a positive impact on net income, which increased from a loss of \$8.0 million in 2009 to a gain of approximately \$0.7 million in 2010. As discussed earlier (Table 4-2), LCG approved rate changes for the Utilities System. This increase in revenues will help LUS pay for their operating expenses, debt service, and capital plan. These data are shown below in Table 4-7.

**Table 4-7  
Income Statement Summary**

	2006	2007	2008	2009	2010
Total Operating Revenues (\$)	209,501,392	206,987,370	231,787,922	205,522,289	221,304,052
Total Operating Expenses (\$)	153,561,453	156,329,581	187,626,202	169,450,165	173,002,757
Depreciation (\$)	15,672,641	18,023,133	18,112,349	18,521,599	18,637,254
Other Income (\$)	7,041,830	9,520,295	7,451,395	4,679,866	2,097,260
Income Deductions (\$)	9,922,772	10,889,052	10,286,318	11,551,848	11,586,362
Net before ILOT (\$)	37,386,356	31,265,898	23,214,448	10,678,543	20,174,939
ILOT (\$)	16,653,751	18,831,929	18,799,006	18,660,233	19,462,860
Net Income (\$)	20,732,605	12,433,969	4,415,442	(7,981,690)	712,079

Source: LUS Financial and Operating Statements 2006-2010 audited

## Cash Flow and Disposition of Unpledged Cash

Table 4-8 summarizes the Utilities System revenues and expenses for the Electric, Water, and Wastewater Utilities, over the most recent five years. Overall in 2010, the Utilities System total revenues (including retail sales, wholesale sales and other sources of income, and excluding Communications System totals) increased by nearly \$16.0 million (7.7 percent), and operating expenses increased by \$3.5 million (2.1 percent). This resulted in an increase in Net Operating Revenue of approximately 20.4 percent, or \$8.6 million.

The debt service payment for the 2004 Bonds increased to \$10.7 million in 2010 according to the 2004 Official Statement. Normal capital expenditures for additions to plant paid from cash, not including retained earnings, increased by 9.2 percent.

## Section 4

**Table 4-8**  
**Cash Flow and Disposition of Unpledged Cash**

	2006	2007	2008	2009	2010
Utilities System Operating Revenues (\$)	209,501,392	206,987,370	231,787,922	205,522,289	221,304,052
Utilities System Operating Expenses (\$)	153,561,453	156,329,581	187,626,202	169,450,165	173,002,757
Utilities System Other Revenues (Expenses) (\$)	<u>5,610,020</u>	<u>8,648,982</u>	<u>9,923,729</u>	<u>6,107,523</u>	<u>2,467,704</u>
Net Operating Revenues (\$)	61,549,959	59,306,771	54,085,449	42,179,647	50,768,999
Debt Service					
Interest (\$)	7,041,490	9,043,138	8,239,988	9,451,150	9,782,038
Principal (\$)	<u>840,000</u>	<u>860,000</u>	<u>890,000</u>	<u>915,000</u>	<u>940,000</u>
Total Debt Service(\$)	7,881,490	9,903,138	9,129,988	10,366,150	10,722,038
Balance After Debt Service (\$)	53,668,469	49,403,633	44,955,461	31,813,497	40,046,961
Less Normal Capital (\$)	6,486,719	9,136,459	14,300,895	10,150,440	11,081,943
Change in Cash due to Operations (\$)	47,181,750	40,267,174	30,654,566	21,663,056	28,965,018
	5,772,243	4,455,916	(1,238,776)	(13,071,571)	(9,735,128)
Change in 'Unpledged Cash' - Funds(\$)	52,953,992	44,723,090	29,415,789	8,591,486	19,229,890
Subtotal					
Less In-Lieu-of-Tax Payment (\$)	16,316,608	18,831,929	18,799,006	18,660,233	19,462,860
Changes in Balance Sheet Accounts affecting Cash (\$)	36,637,384	25,891,161	10,616,783	(10,068,747)	(232,970)

Source: LUS Financial and Operating Statements 2006-2010 audited

LUS Unofficial Status of Construction Work Orders, October 2010

NOTE: Beginning in fiscal year 2008 LUS Fiber wholesale is no longer included in with LUS Utilities System.

## Financial and Operating Ratio Comparison

Table 4-9 provides a comparison of LUS' Electric Utility with other large municipal electric power systems nationwide; however, not all ratios are based on the same number of power systems since some did not have data applicable to each ratio. The 2008 data for these systems was obtained from the APPA website<sup>1</sup>. This may significantly impact the comparisons that are based on fuel costs as fuel costs have changed dramatically in recent years.

<sup>1</sup> <http://www.appanet.org/files/PDFs/selectedratios.pdf>

**Table 4-9  
Financial & Operating Ratios - Public Power Systems**

<b>Financial Ratios – 2008 Median Values</b>	<b>20,000 to 50,000 Customers</b>	<b>50,000 to 100,000 Customers</b>	<b>Southwest</b>	<b>LUS 2008</b>	<b>LUS 2009</b>	<b>LUS 2010</b>
1. Revenue per kWh for Retail Customers (\$)	0.075	0.092	0.075	0.098	0.083	0.081
2. Debt to Total Assets	0.331	0.327	0.323	0.334	0.327	0.329
3. Operating Ratio (Electric only)	0.874	0.852	0.849	0.785	0.841	0.854
4. Current Ratio	1.99	2.47	2.73	1.213	1.501	0.000
5. Times Interest Earned	4.89	3.34	5.46	3.70	2.02	1.51
6. Debt Service Coverage	3.85	3.38	2.42	4.35	3.23	3.41
7. Net Income per Revenue Dollar (\$)	0.071	0.051	0.094	0.046	(0.035)	(0.062)
8. Uncollectible Accounts per Revenue Dollar (\$)	0.0022	0.0028	0.0029	0.0029	0.0050	0.0042

Source: Ratios from the 'Selected Financial and Operating Ratios of Public Power Systems' published in March 2010 by APPA, 2008 Data  
 For description on ratios, see glossary following this table  
 LUS Financial and Operating Statements 2008-2010 audited

LUS had 62,746 electric retail customers – hence data for two different sizes of utilities is displayed above. LUS has a lower current ratio than the average APPA utility indicating less short term liquidity (a lower than average ratio of current assets to current liabilities). LUS’ Times Interest Earned and Debt Service coverage have dropped over the last three years as LUS’ net revenues have decreased. Similarly, LUS’ net earnings per dollar of revenue in 2010 were much lower than the averages reported in the APPA study, as indicated above, these ratios were negative for 2009 and 2010. This is because net income for the electric utility was negative for these years.

### **Glossary for Electric Financial and Operating Ratios**

The following definitions and comments relate to the ratio input data and national ratio statistics and are excerpted from APPA’s *Selected Financial and Operating Ratios of Public Power Systems* shown in Table 4-9 above.

#### **Revenue per kWh (Line 1)**

The ratio of total electric operating revenues from sales to ultimate customers to total kilowatt-hour (kWh) sales measures the amount of revenue received for each kWh of electricity sold to all classes of customers, including residential, commercial, industrial, public street and highway lighting, and other customers.

#### **Debt to Total Assets (Line 2)**

The ratio of long-term debt, plus current and accrued liabilities, to total assets and other debits measures a utility’s ability to meet its current and long-term liabilities based on the availability of assets.

Long-term debt includes bonds, advances from the municipality, other long-term debt, any unamortized premium on long-term debt and any unamortized discount on

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long-term debt. Current and accrued liabilities include warrants, notes and accounts payable, payables to the municipality, customer deposits, taxes accrued, interest accrued, and miscellaneous current and accrued liabilities. Total assets and other debits include utility plant, investments, and current and accrued assets and deferred debits.

This ratio may be influenced by the extent to which its components include information applicable to the non-electric portion of the utility, if any (e.g., gas, water, or other). In addition, the ratio may be influenced by a utility's financial policies.

### Operating Ratio (Line 3)

The ratio of total electric O&M expenses to total electric operating revenues measures the proportion of revenues received from electricity sales, rate adjustments and other electric activities required to cover the O&M costs associated with producing and selling electricity.

O&M expenses include the costs of power production, purchased power, transmission, distribution, customer accounting, customer service, sales, and administrative and general expenses. This ratio may be influenced by the availability of alternative power options and the costs of purchased power.

### Current Ratio (Line 4)

The ratio of total current and accrued assets to total current and accrued liabilities is a measure of the utility's short-term liquidity (the ability to pay bills). The current ratio takes a snapshot of the utility's liquidity at a point in time and thus may vary considerably at other times of the year.

Total current and accrued assets include cash and working funds, temporary cash investments, notes and accounts receivable, receivables from the municipality, materials and supplies, prepayments and miscellaneous current and accrued assets. Total current and accrued liabilities include warrants, notes and accounts payable, payables to the municipality, customer deposits, taxes accrued, interest accrued and miscellaneous current and accrued liabilities.

### Times Interest Earned (Line 5)

The ratio of net electric utility income, plus interest paid on long-term debt, to interest on long-term debt, measures the ability of a utility to cover interest charges and is indicative of the safety margin to lenders. Utilities that do not report any long-term debt are excluded from this ratio. This ratio may be influenced by a utility's financial policies.

### Debt Service Charge (Line 6)

The ratio of net revenues available for debt service to total long-term debt service for the year measures the utility's ability to meet its annual long-term debt obligation.

Net revenues available for debt service equal net electric utility operating income (operating revenues minus operating expenses) plus net electric utility non-operating income, plus depreciation. Debt service includes principle and interest payments on long-term debt. This ratio may be influenced by a utility's financial policies.

**Net Income per Revenue Dollar (Line 7)**

The ratio of net electric utility income to total electric operating revenues measures the amount of income remaining—after accounting for O&M expenses, depreciation, taxes and tax equivalents—for every dollar received from sales of electricity.

The ratio may be influenced by the type and availability of power supply options and by the amount of taxes and tax equivalents that a utility transfers to the municipality or other governmental body. Financial policies and the amount of debt may also affect this ratio (e.g., how a utility finances capital investments).

**Uncollectible Accounts per Revenue Dollar (Line 8)**

The ratio of total uncollectible accounts to total electric utility operating revenues measures the portion of each revenue dollar that will not be collected by the utility. This ratio will be influenced by the financial and customer service policies of the utility.

**Operating Budget**

**2009-2010 Operating Budget**

The LCG’s fiscal year 2009-2010 budget (November 1, 2009 through October 31, 2010), including LUS’ budget, was submitted by the President to the Council and approved by the Council by Ordinance No. O-154-2009. A comparison of the projected operations in the Adopted Budget with actual operating results is shown in Table 4-10.

**Table 4-10  
Comparison of Actual Results to the Adopted Budget**

	2010 Actual Results	2010 Adopted Budget	Difference	%
				Difference
Receipts (\$1,000)	221,304	220,962	342	0.2
Non-Operating Revenues/Expenses (\$1,000)	2,468	(29,414)	31,882	-108.4
O&M (\$1,000)	<u>173,003</u>	<u>174,100</u>	<u>(1,097)</u>	<u>-0.6</u>
Balance Before Debt Service (\$1,000)	50,769	17,448	33,321	191.0
Debt Service (\$1,000)	<u>10,722</u>	<u>10,722</u>	<u>(0)</u>	<u>0.0</u>
Balance After Debt Service (\$1,000)	40,047	6,726	33,321	495.4
Capital Expenditures (\$1,000)	11,082	11,611	(529)	-4.6
In-Lieu-of-Tax (\$1,000)	<u>19,463</u>	<u>18,692</u>	<u>771</u>	<u>4.1</u>
Balance of Revenues (\$1,000)	9,502	(23,577)	33,079	-140.3

Source: LCG Annual Budget Document 2010-2011  
LUS Financial and Operating Statements 2008-2010 audited

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The budget estimated a loss of \$23.6 million and the actual results were a gain of \$9.5 million, as non-operating revenues were much higher than anticipated.

### 2010-2011 Operating Budget

The LCG's fiscal year 2010-2011 budget (November 1, 2010 through October 31, 2011), including LUS' budget, was submitted by the President to the Council and approved by the Council by Ordinance No. O-174-2010.

The end-of-year balance of all Utilities System Funds is budgeted at \$38.1 million. LUS continues to review and adjust the current budgeting system to increase financial and accounting controls and meet changing operating requirements.

### Five-Year Capital Outlay Program

LUS established a system capital outlay program (COP) in 1989. The program is a five-year "look ahead," and is revised annually to plan for, and manage, the major capital projects for the Utilities System. The Operating Budget for the year ended October 31, 2010 was adopted by Council. Included in the Ordinance is the five-year capital plan beginning in 2011.

The combined estimated requirements for capital improvements to the Electric, Water, and Wastewater Utilities through October 31, 2015 are summarized in Table 4-11. Each year, as the City revises its Five-Year COP for the Utilities System, the priorities for each of the work items are re-examined. This review process needs to be improved in order that priorities and costs are established which are more manageable.

Table 4-11  
Capital Outlay Program 2011 – 2015

Year Ending	2011	2012	2013	2014	2015	Total
<b>Revenues (\$)</b>						
Retained Earnings Capital	7,128,145	3,659,947	5,335,741	16,686,005	12,245,141	45,054,979
Bond Proceeds - Utilities Revenue	31,000,000	22,000,000	13,100,000	20,000,000	12,800,000	98,900,000
Proceeds - LDEQ	0	155,645	734,592	118,733	132,739	0
Prior Year Reserve Balance	38,128,145	25,815,592	19,170,333	36,804,738	25,177,880	143,954,980
Total Revenues (\$)						
<b>Appropriations (\$)</b>						
Electric	17,496,000	14,257,000	10,942,000	19,507,000	4,430,000	66,632,000
Water	5,039,000	3,972,000	1,885,000	610,000	860,000	12,366,000
Wastewater	12,771,500	4,960,000	5,098,000	14,835,000	18,265,000	55,929,500
Reserve Fund / Capitalized Interest	2,666,000	1,892,000	1,126,600	1,720,000	1,100,800	8,505,400
Balance Available	155,645	734,592	118,733	132,739	522,080	522,080
Total Appropriations (\$)	38,128,145	25,815,592	19,170,333	36,804,739	25,177,880	143,954,980

Source: LUS Five-Year Capital Outlay Program Summary, 2010-2011 Adopted Budget, Combined Summary Retained Earnings and Bond Capital

The current capital budgeting process requires LUS to fully appropriate a project before LUS can request bids. This process results in a skewing of projected capital

expenditures toward the first year of the capital forecast. This prematurely escalates the projected capital needs and makes for difficult decision planning such as projected service rate charges, bond financing and resource planning. We recommend that LUS consider implementing a capital budgeting process that includes some form of activity-based analysis and costing. Matching available resources with the requirements necessary for completion of these capital projects will add practical realism to the capital appropriations budget.

In the utility business, the COP is generally the largest financial requirement. LCG's budgeting and accounting system does not offer LUS the degree of information and control needed to manage construction. Comprehensive changes to the COP management process should consider the following questions:

- Does the process include a coherent, identifiable and relevant product useful to management of the construction activities and investment?
- Are the purposes and objectives of the process identified?
- Is the process clearly communicated to those responsible for carrying it out?
- Is the process supported by a reasonable activity-based allocation of resources?
- Is the process sufficiently detailed and scheduled?
- Does the process agree with mandated requirements and other administrative/management plans?
- Is the process improvement periodically reviewed?
- Is there clear accountability for process implementation?

Other criteria are more specific to the COP:

- Is it realistic; i.e., not a "wish list?"
- Does it extend over a sufficient period of time (normally, at least 10 years) with clearly identified and costed projects and does it contain detailed plans/schedules and costs for the short-term?
- Is it formulated and reviewed, particularly with input from the field and other concerned parties?
- Is it reviewed periodically (normally at least quarterly by a COP committee with broad utility representation)?
- Is it clearly and effectively presented annually to the LUS administration to promote a continuous "buy-in"?
- What are the consequences to LUS operations of project slippage?

Table 4-12 shows that many of the planned capital projects have not been accomplished within the scheduled timeframe. LUS should improve project budgeting and/or improve the accomplishment of the planned activities. The lack of precision in budgeting and scheduling affects cash flow planning, planning for the sale of bonds and service rate changes. To adjust for this difference between budget and actual expenditures, the total budget expenditure amounts for each utility are arbitrarily



## Section 4

reduced for cash flow planning. This reduction is based on the fact that historically the actual expenditures are significantly less than the budgeted expenditures.

Table 4-12 shows each year's adopted budget compared to each year's appropriations. Over the five-year period, the amount the Electric System budgeted and appropriated were different by approximately 18 percent, with appropriations exceeding the budget.

Over the five-year period, the Electric Utility appropriations amounted to approximately \$187.3 million compared with actual expenditures amounting to approximately \$49 million. Over the past five years, an average of 26.0 percent of the appropriations has actually been spent.

**Table 4-12**  
**Comparison of Budget and Actual Capital Expenditures – Electric (\$1,000)**

	2006	2007	2008	2009	2010	Total
Adopted Budget	14,840	10,594	9,250	15,639	12,426	62,749
Percent of Budget Appropriated (%)	63%	153%	191%	97%	125%	118%
Current Year Work Orders						
Appropriations	9,366	16,257	17,647	15,113	15,572	73,955
Expended	<u>5,268</u>	<u>10,295</u>	<u>5,494</u>	<u>5,687</u>	<u>2,611</u>	<u>29,356</u>
Unexpended	4,098	5,961	12,153	9,426	12,961	44,599
Percent Expended (%)	56%	63%	31%	38%	17%	40%
Prior Year Work Orders						
Appropriations	37,038	24,458	20,464	22,686	8,714	113,359
Expended	<u>3,216</u>	<u>2,723</u>	<u>4,402</u>	<u>5,942</u>	<u>3,335</u>	<u>19,618</u>
Unexpended	33,823	21,735	16,062	16,744	5,379	93,742
Percent Expended (%)	9%	11%	22%	26%	38%	17%
Current & Prior Year Work Orders						
Appropriations	46,404	40,714	38,111	37,799	24,286	187,314
Expended	<u>8,483</u>	<u>13,018</u>	<u>9,897</u>	<u>11,629</u>	<u>5,946</u>	<u>48,973</u>
Unexpended	37,921	27,696	28,214	26,170	18,340	138,341
Percent Expended (%)	18%	32%	26%	31%	24%	26%

Source: LCG Annual Budget Documents  
LUS Status of Construction Work Orders

Note: Electric, Water, and Wastewater Capital Expenditures exclude the 2004 Series Bond funds.

Table 4-13 shows each year's adopted budget compared to each year's appropriations for the Water Utility. Over the five-year period, the amount budgeted and appropriated were different by approximately 44.0 percent, with budget exceeding appropriations.

Over the five-year period, the Water Utility appropriations amounted to approximately \$76.5 million compared with actual expenditures amounting to approximately

## UTILITIES SYSTEM - FINANCE AND ACCOUNTING

\$14.1 million. Over the past five years, an average of 19.0 percent of the budget has actually been spent.

**Table 4-13**  
**Comparison of Budget and Actual Capital Expenditures - Water (\$1,000)**

	2006	2007	2008	2009	2010	Total
Adopted Budget	3,750	4,225	3,470	5,725	5,920	23,090
Percent of Budget Appropriated	61%	141%	68%	29%	10%	56%
Current Year Work Orders						
Appropriations	2,272	5,970	2,354	1,668	581	12,845
Expended	<u>1,224</u>	<u>1,938</u>	<u>1,246</u>	<u>872</u>	<u>206</u>	<u>5,487</u>
Unexpended	1,047	4,032	1,109	796	374	7,358
Percent Expended (%)	54%	32%	53%	52%	36%	43%
Prior Year Work Orders						
Appropriations	22,349	20,573	4,404	10,240	6,053	63,620
Expended	<u>1,662</u>	<u>1,033</u>	<u>1,434</u>	<u>4,084</u>	<u>471</u>	<u>8,684</u>
Unexpended	20,687	19,540	2,970	6,156	5,583	54,936
Percent Expended (%)	7%	5%	33%	40%	8%	14%
Current & Prior Year Work Orders						
Appropriations	24,621	26,543	6,758	11,909	6,634	76,465
Expended	<u>2,886</u>	<u>2,972</u>	<u>2,680</u>	<u>4,956</u>	<u>677</u>	<u>14,171</u>
Unexpended	21,734	23,572	4,078	6,953	5,957	62,294
Percent Expended (%)	12%	11%	40%	42%	10%	19%

Source: LCG Annual Budget Documents  
LUS Status of Construction Work Orders

Note: Electric, Water, and Wastewater Capital Expenditures exclude the 2004 Series Bond funds.

Table 4-14 shows each year's adopted budget compared to each year's appropriations for the Wastewater Utility. Over the five-year period, the amount budgeted and appropriated were significantly different, with budget exceeding appropriations.

Over the five-year period, the Wastewater Utility appropriations amounted to approximately \$161.3 million compared with actual expenditures amounting to approximately \$27.3 million. Over the past five years, an average of 17.0 percent of the budget has actually been spent.

**Table 4-14**  
**Comparison of Budget and Actual Capital Expenditures - Wastewater (\$1,000)**

	2006	2007	2008	2009	2010	Total
Adopted Budget	28,170	10,295	3,640	9,755	11,095	62,955
Percent of Budget Appropriated	8%	41%	97%	15%	13%	21%
Current Year Work Orders						
Appropriations	2,390	4,204	3,533	1,495	1,427	13,049
Expended	<u>1,248</u>	<u>1,994</u>	<u>1,562</u>	<u>1,025</u>	<u>676</u>	<u>6,504</u>
Unexpended	1,142	2,210	1,971	470	751	6,545
Percent Expended (%)	52%	47%	44%	69%	47%	50%
Prior Year Work Orders						
Appropriations	34,749	31,306	31,513	30,332	20,305	148,205
Expended	<u>3,109</u>	<u>4,002</u>	<u>4,063</u>	<u>6,821</u>	<u>2,843</u>	<u>20,839</u>
Unexpended	31,640	27,304	27,450	23,511	17,462	127,366
Percent Expended (%)	9%	13%	13%	22%	14%	14%
Current & Prior Year Work Orders						
Appropriations	37,140	35,510	35,045	31,827	21,732	161,254
Expended	<u>4,357</u>	<u>5,996</u>	<u>5,625</u>	<u>7,846</u>	<u>3,519</u>	<u>27,343</u>
Unexpended	32,782	29,514	29,420	23,980	18,213	133,910
Percent Expended (%)	12%	17%	16%	25%	16%	17%

Source: LCG Annual Budget Documents  
LUS Status of Construction Work Orders

Note: Electric, Water, and Wastewater Capital Expenditures exclude the 2004 Series Bond funds.

Combining the data contained in Table 4-12 through Table 4-14 shows that overall LUS appropriates approximately 67.0 percent of what it estimates in the adopted budgets. And of the appropriations, LUS spends approximately 21.0 percent of the money.

We recommend the current COP be reviewed and each project checked for correct priority, schedule, and estimate. We suggest the schedule address the start of engineering, approval of engineering, finalization of estimate, purchase of material, approval of purchase and contracting, the start of construction, and completion of project. The COP should indicate if the engineering will be accomplished by LUS engineering or if it will be outsourced.

## Recommendations

Based on our review of the LUS and LUS Fiber financial and accounting records, the Consulting Engineer makes the following recommendations, as shown in Table 4-15.

## UTILITIES SYSTEM - FINANCE AND ACCOUNTING

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Table 4-15  
Recommendations

Finance and Accounting	Priority	Status
LUS should continue to actively conduct financial planning, particularly as LUS increases Utilities System debt	Highest	In Progress
LUS should continue to explore ways of improving the timeliness of financial reporting, including the implementation of new financial management tools	Highest	In Progress
For each system, LUS should adopt financial guidelines or policies on metrics that provide constraints to the financial planning process such as debt service coverage, debt to equity ratio, reserve balances, etc.	High	New
LUS should continue to improve the five-year capital budgetary process (cash-needs capital budget). The process should include some form of activity-based analysis and costing. The current COP should be reviewed and each project checked for correct priority, schedule and estimate	High	No Progress Seen
LUS should continue its efforts to identify opportunities for wholesale power sales	High	In Progress

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## Section 5

# UTILITIES SYSTEM - ELECTRIC UTILITY

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During March 2011, the Consulting Engineer interviewed LUS staff regarding Electric Utility operations and performed analyses of operating statistics that are indicative of the general operating condition of LUS' Electric Utility facilities. The following discussion summarizes the findings of the Consulting Engineer with respect to the maintenance and management of the property based upon discussions with and information supplied by LUS' personnel.

This Section contains a discussion of the Electric Utility's organizational structure, historical capacity and energy requirements, load forecast projections, major contracts, generation, transmission and distribution (T&D) facilities, O&M statistics and practices, historical expenditures, historical and projected capital expenses, key issues, goals and achievements and the associated findings and recommendations of the Consulting Engineer. The information and findings of the Consulting Engineer are based upon general observations, discussions with utility supervisory personnel and information supplied by LUS personnel.

## Electric Utility Organization

The Electric Utility is supported primarily by the Power Production Division and the Electric Operations Division of LUS. Other LUS Divisions, including Engineering, Customer Service, Utilities Support Services and Environmental Compliance, provide services to the Electric Utility.

The Power Production Division is charged with power production along with O&M of the wholly owned generation facilities of LUS, including capital planning and implementation. The Power Production Division is also responsible for O&M of a 10-inch natural gas pipeline owned by LUS.

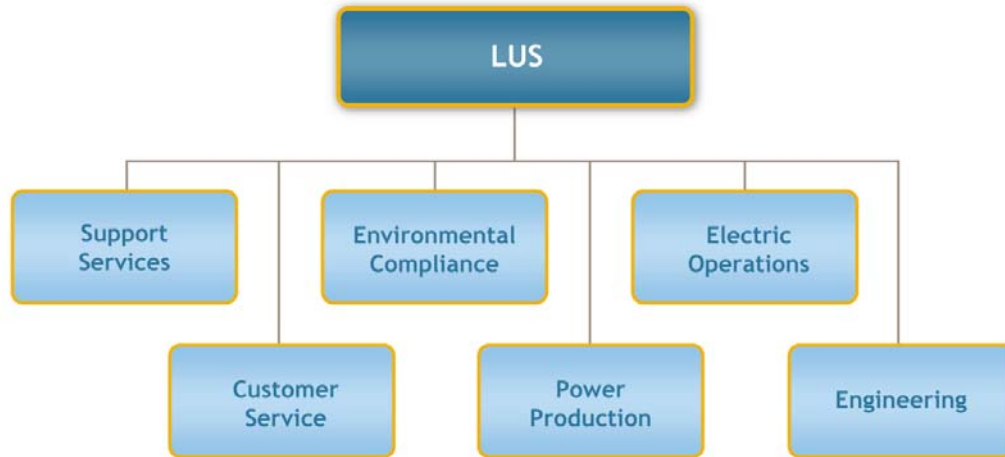
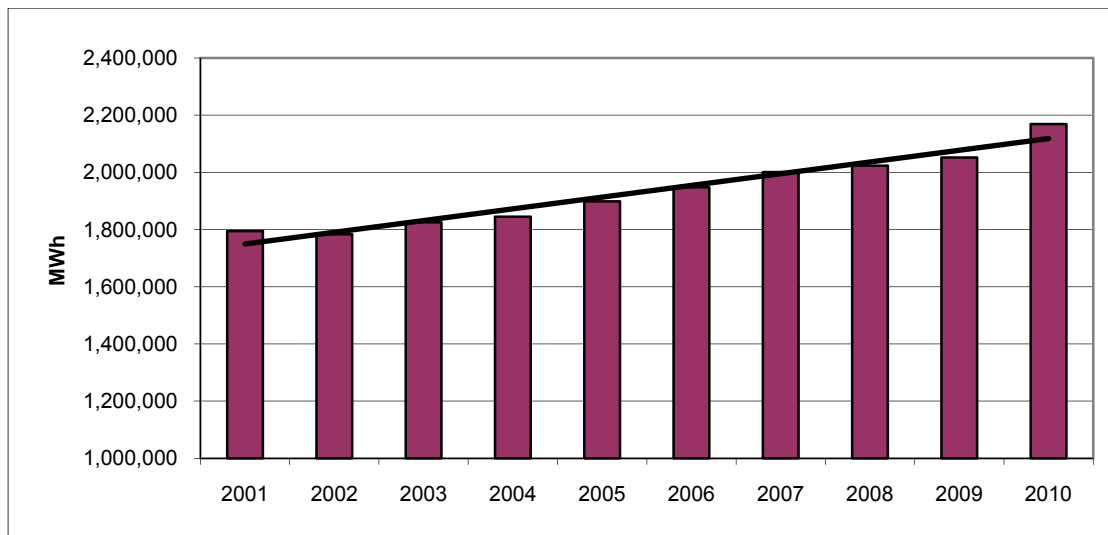


Figure 5-1: Electric Utility Organization Chart

## Historical Capacity and Energy Requirements

The Electric Utility has met customer demands for service, and provided its customers with adequate and reliable utility services during the period reported herein. The historical net power and energy requirements are presented in Figure 5-2 and Table 5-1. A linear regression line was included in Figure 5-2 for the period 2001 through 2010, which indicates a normalized growth rate for the period of approximately 2.2 percent.



Source: LUS Financial and Operating Statements 2000-2010 audited

Figure 5-2: Historical Energy Requirements

Table 5-1  
Historical Capacity and Energy Requirements

	2006	2007	2008	2009	2010	Average Annual Change (%)
Number of Customers	58,722	60,018	61,752	62,403	62,746	1.7
Peak Demand megawatts(MW) <sup>(1)</sup>	447	478	451	466	466	1.0
Energy Requirements gigawatt hours (GWh) <sup>(1)</sup>	2,001	2,023	2,052	2,080	2,169	2.0
Annual Load Factor (%)	51.1%	48.3%	51.8%	50.8	53.0%	

(1) Does not include sales to other utilities and associated losses.

Source: LUS Financial and Operating Statements 2006-2010 audited

Retail electric service has grown steadily over the period shown above. Customer growth has averaged 1.7 percent per year while average usage per customer has stayed relatively flat has increased moderately at 1.0 percent. These two influences have resulted in average annual energy growth of approximately 2.0 percent.

## Forecasted Capacity and Energy Requirements

Historical and forecasted demand and sales for 2010 through 2015 are shown in Table 5-2. Forecasts reflect LUS’ most recent assessment of expected load growth, as of the date of this Report.

Table 5-2  
Forecasted Demand and Energy Requirements

	Actual 2010	2011	2012	2013	2014	2015	Average Annual Change (%)
Peak Demand (MW) <sup>(1)</sup>	470	470	477	485	494	504	1.8
Energy Requirements (GWh) <sup>(1)</sup>	2,169	2,102	2,134	2,167	2,210	2,253	1.8

(1) Does not include sales to other utilities and associated losses.

Source: Karen Hoyt, LUS, 3/11

## Electric Utility Facilities

The production of power for the Electric Utility is primarily provided from three gas-fired generating facilities located in the City and one coal-fired generating facility (through purchases from LPPA). LPPA supplies a significant portion (from 50 to 70 percent) of LUS’ electric energy production. The discussion below provides a description of the facilities, the historical operating statistics for each facility, a summary of the O&M history and plans, and the condition of the facilities as observed by the Consulting Engineer.

### Gas-Fired Generation

The gas-fired generating facilities, which supply a portion of the demand and energy requirements of LUS, include the Doc Bonin Plant, the T. J. Labbé Electric Generation Station (T. J. Labbé Plant), and the Hargis-Hébert Electric Generation Station (Hargis-Hébert Plant). The Curtis A. Rodemacher Electric Generation Station (Rodemacher Station), also located in the City, has not operated since 1994 and LUS is in the process of decommissioning the plant. Construction and commissioning of the T. J. Labbé Plant was completed in 2005 and the Hargis-Hébert Plant in 2006.

#### Doc Bonin Plant

The Doc Bonin Plant, shown in Figure 5-3, is located in the northwest part of the City and consists of three natural gas-fired conventional utility boilers each with a dedicated steam turbine (ST). The units were installed in 1964, 1970, and 1976, respectively. Unit 1 generates steam at 1,250 pounds per square inch (psi) and includes a non-reheat, tandem compound, bottom exhaust ST. Unit 2 and Unit 3 generate steam at 1,800 psi and include tandem compound, bottom exhaust STs with reheat. Each unit has a dedicated cooling tower for heat rejection. Well water is utilized for cooling tower make-up and municipal potable water is supplied to the water treatment system. Each unit has a dedicated exhaust stack and none of the units have emission control equipment. Unit 1 and Unit 2 are electrically interconnected to the LUS system at the 69 kilovolt (kV) level and Unit 3 is connected at the 138 kV level.

In recent history, the typical dispatch of the Doc Bonin Plant has been to operate only one of the three active gas-fired generating units at a time. In this mode of operation, there were essentially two “spare” generating units to ensure system reliability. The units continue to be dispatched on the basis of load requirements and transmission system limitations. In 2010, the Doc Bonin Plant continued to operate with two units dispatched due to the transmission constraints.



Figure 5-3: Doc Bonin Plant



### T. J. Labbé and Hargis-Hébert Plants

The T. J. Labbé Plant, shown in Figure 5-4, is located toward the northern portion of the Parish, and consists of two natural gas-fired LM6000PC Sprint combustion turbines (CTs) with water injection for nitrogen oxides (NO<sub>x</sub>) control and chillers for inlet air cooling to enhance power production when operating at high ambient temperatures. The T. J. Labbé Plant is equipped with three 50 percent capacity gas compressors and is electrically connected by means of a looped 230-kV interconnect to the existing Pont des Mouton to Doc Bonin 230-kV line.



Figure 5-4: T. J. Labbé Plant

The Hargis-Hébert Plant is a similar configuration as the T. J. Labbé Plant and is located toward the southern portion of the City, and consists of two natural gas-fired LM6000PC Sprint CTs with water injection for NO<sub>x</sub> control and chillers for inlet air cooling to enhance power production when operating at high ambient temperatures. The Hargis-Hébert Plant has been designed with two 50 percent capacity natural gas heaters and is electrically connected to the existing Elks Substation by means of a new 1.2-mile 69-kV transmission line.

The T. J. Labbé and Hargis-Hébert Plants have quick start capability, allowing operation of the units in the event of the loss of power from the transmission grid. Also, these plants are equipped such that personnel at the Doc Bonin Plant can monitor, as well as control (start-up, shutdown, load adjustment, etc.) the CTs remotely; however, normally the CTs are operated locally with site personnel and

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monitored by personnel at the Doc Bonin Plant. Both CTs of the Hargis-Hébert Plant are equipped with synchronous condensers, or clutches, between the turbine and the generator to provide voltage support to the system.

General information including gross capacity for each unit at the Doc Bonin Plant, T. J. Labbé Plant, and Hargis-Hébert Plants are listed in Table 5-3.

**Table 5-3  
Gas-Fired Generation**

Unit	Gross Capacity (MW) <sup>(2)</sup>	Fuel	Boiler Manufacturer	Turbine Manufacturer
Doc Bonin Unit 1	43	Gas/Oil <sup>(1)</sup>	Babcock and Wilcox	Westinghouse
Doc Bonin Unit 2	76	Gas/Oil <sup>(1)</sup>	Combustion Engineering	General Electric
Doc Bonin Unit 3	<u>160</u>	Gas/Oil <sup>(1)</sup>	Babcock and Wilcox	General Electric
Doc Bonin Plant Total	279			
T. J. Labbé Unit 1	50	Gas	N/A	General Electric
T. J. Labbé Unit 2	<u>50</u>	Gas	N/A	General Electric
T. J. Labbé Plant Total	100			
Hargis-Hébert, Unit 1	50	Gas	N/A	General Electric
Hargis-Hébert, Unit 2	<u>50</u>	Gas	N/A	General Electric
Hargis-Hébert Plant Total	<u>100</u>			
Total	479			

(1) Natural gas is the fuel used for generation, with oil permitted as an alternative supply.

(2) Summer rating without Automatic Generation Control.

Source: Jamie Webb, LUS, 3/11

## Operating Statistics

The significant operating statistics for the gas-fired generating units detailed below were reported by LUS personnel.

Table 5-4 contains operating statistics for Doc Bonin Plant for the last five years. Annual generation at the Doc Bonin Plant has averaged approximately 202 GWh (net) between 2006 and 2010, the majority of which was provided by Units 2 and 3. Annual natural gas consumption averaged 2,140,417 million British thermal units (MMBtu) over the same period. The five-year annual average heat rate of the Doc Bonin Plant was approximately 12,653 Btu per kilowatt-hour (Btu/kWh).

**UTILITIES SYSTEM - ELECTRIC UTILITY**

**Table 5-4  
Doc Bonin Plant Gas-Fired Generation Operating Statistics**

	2006	2007	2008	2009	2010	5-Year Average
<b>Doc Bonin – 1</b>						
Gross Generation (MWh)	5,053	6,834	45,528	4,290	2	12,341
Gross Capacity Factor (%) <sup>(1)</sup>	1	2	10	1	0	3
Service Factor (%) <sup>(2)</sup>	3	3	17	2	0	5
Availability Factor (%) <sup>(3)</sup>	91	56	97	73	28	69
Forced Outage Rate (%) <sup>(4)</sup>	2.8	0.00	8.7	93.0	72	35
Number of Starts	2	3	4	2	1	2
<b>Doc Bonin – 2</b>						
Gross Generation (MWh)	90,823	53,984	90,797	160,244	251,461	129,462
Gross Capacity Factor (%) <sup>(1)</sup>	12	7	12	20	32	17
Service Factor (%) <sup>(2)</sup>	36	17	28	43	53	35
Availability Factor (%) <sup>(3)</sup>	89	96	97	93	86	92
Forced Outage Rate (%) <sup>(4)</sup>	4.6	12.8	10.8	7.6	3	8
Number of Starts	6	2	5	4	9	5
<b>Doc Bonin – 3</b>						
Gross Generation (MWh)	0	0	0	123,419	179,635	60,611
Gross Capacity Factor (%) <sup>(1)</sup>	0	0	0	8	11	4
Service Factor (%) <sup>(2)</sup>	0	0	0	17	25	8
Availability Factor (%) <sup>(3)</sup>	92	100	98.38	100	62	90
Forced Outage Rate (%) <sup>(4)</sup>	31.0	N/A	N/A	0.0	3	11
Number of Starts	0	0	0	1	3	1
<b>Doc Bonin Totals</b>						
Total Gross Generation (MWh)	95,876	60,818	136,325	287,953	431,097	202,414
Total Net Generation (MWh)	82,785	46,441	119,372	260,180	395,518	180,859
Total Gas Usage (MMBtu)	1,090,523	670,089	1,551,016	3,030,798	4,359,661	2,140,417
Net Heat Rate (Btu/kWh)	13,173	14,429	12,993	11,649	11,023	12,653

(1) Gross Capacity Factor is the actual electric generation divided by the maximum the unit is capable of generating.

(2) Service Factor reflects the percent of time the unit was electrically connected to the transmission system.

(3) Availability Factor reflects the percent of time the unit was capable of providing service.

(4) Forced Outage Rate reflects the percent of time the unit was removed from service due to an unplanned failure.

Source: Jamie Webb, LUS, 3/11

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Table 5-5 contains operating statistics for T. J. Labbé for the last five years. Annual generation at the T. J. Labbé Plant has averaged approximately 89.9 GWh (net) since 2006, with the electrical production generally even between Unit 1 and Unit 2. Annual natural gas consumption averaged 1,063,687 MMBtu over the same period. Since 2006 the annual average heat rate of the T. J. Labbé Plant has been approximately 12,315 Btu/kWh.

**Table 5-5  
T. J. Labbé Gas-Fired Generation Operating Statistics**

	2006	2007	2008	2009	2010	5-Year Average
<b>T. J. Labbé - 1</b>						
Gross Generation (MWh)	51,548	49,468	55,239	18,072	67,016	48,269
Gross Capacity Factor (%) <sup>(1)</sup>	12	11	13	4	15	11
Service Factor (%) <sup>(2)</sup>	22	25	26	8	36	23
Availability Factor (%) <sup>(3)</sup>	94	95	59	93	99	88
Forced Outage Rate (%) <sup>(4)</sup>	5.1	4.4	61.1	37.79	0	22
Number of Starts	122	60	34	66	34	63
<b>T. J. Labbé - 2</b>						
Gross Generation (MWh)	46,664	51,199	48,915	23,614	37,537	41,586
Gross Capacity Factor (%) <sup>(1)</sup>	11	12	11	5	9	10
Service Factor (%) <sup>(2)</sup>	19	25	23	11	20	20
Availability Factor (%) <sup>(3)</sup>	97	90	77	96	98	92
Forced Outage Rate (%) <sup>(4)</sup>	1.6	22.4	9.5	15.3	3	10
Number of Starts	114	60	57	65	49	69
<b>T. J. Labbé Totals</b>						
Total Gross Generation (MWh)	98,212	100,667	104,154	41,686	104,551	89,854
Total Net Generation (MWh)	92,501	94,209	101,531	38,926	102,745	85,982
Total Gas Usage (MMBtu)	1,051,884	1,202,723	1,224,845	468,323	1,370,659	1,063,687
Net Heat Rate (Btu/kWh)	11,372	12,767	12,064	12,031	13,340	12,315

(1) Gross Capacity Factor is the actual electric generation divided by the maximum the unit is capable of generating.

(2) Service Factor reflects the percent of time the unit was electrically connected to the transmission system.

(3) Availability Factor reflects the percent of time the unit was capable of providing service.

(4) Forced Outage Rate reflects the percent of time the unit was removed from service due to an unplanned failure.

Source: Jamie Webb, LUS, 3/11

## UTILITIES SYSTEM - ELECTRIC UTILITY

Table 5-6 contains operating statistics for Hargis-Hébert for the last five years. Annual generation at the Hargis-Hébert Plant has averaged approximately 145 GWh (net) since 2006, with the electrical production generally even between Unit 1 and Unit 2. Annual natural gas consumption averaged 1,571,950 MMBtu over the same period. Since 2006, the annual average heat rate of the Hargis-Hébert Plant has been approximately 11,365 Btu/kWh.

**Table 5-6  
Hargis-Hébert Gas-Fired Generation Operating Statistics**

	2006 <sup>(5)</sup>	2007	2008	2009	2010	5-Year Average
<b>Hargis-Hébert - 1</b>						
Gross Generation (MWh)	31,589	79,474	79,332	58,390	89,566	67,670
Gross Capacity Factor (%) <sup>(1)</sup>	7	18.1	18	13	20	15
Service Factor (%) <sup>(2)</sup>	13	36.91	34	14	24	24
Availability Factor (%) <sup>(3)</sup>	95	95.99	96	99	87	95
Forced Outage Rate (%) <sup>(4)</sup>	1.60	0.19	8.7	6.8	4	4
Number of Starts	38	72	109	123	89	86
<b>Hargis-Hébert - 2</b>						
Gross Generation (MWh)	27,418	71,263	98,825	105,277	81,757	76,908
Gross Capacity Factor (%) <sup>(1)</sup>	6	16.3	23	24	19	18
Service Factor (%) <sup>(2)</sup>	10	34.75	44	32	24	29
Availability Factor (%) <sup>(3)</sup>	95	94.14	97	99	94	96
Forced Outage Rate (%) <sup>(4)</sup>	1.10	5.3	5.1	1.6	3	3
Number of Starts	53	61	111	140	101	93
<b>Hargis-Hébert Totals</b>						
Total Gross Generation (MWh)	59,007	150,737	178,158	163,667	171,323	144,578
Total Net Generation (MWh)	55,573	142,547	170,328	158,193	168,074	138,943
Total Gas Usage (MMBtu)	640,913	1,769,260	2,050,158	1,658,598	1,740,821	1,571,950
Net Heat Rate (Btu/kWh)	11,533	12,412	12,037	10,485	10,358	11,365

(1) Gross Capacity Factor is the actual electric generation divided by the maximum the unit is capable of generating.

(2) Service Factor reflects the percent of time the unit was electrically connected to the transmission system.

(3) Availability Factor reflects the percent of time the unit was capable of providing service.

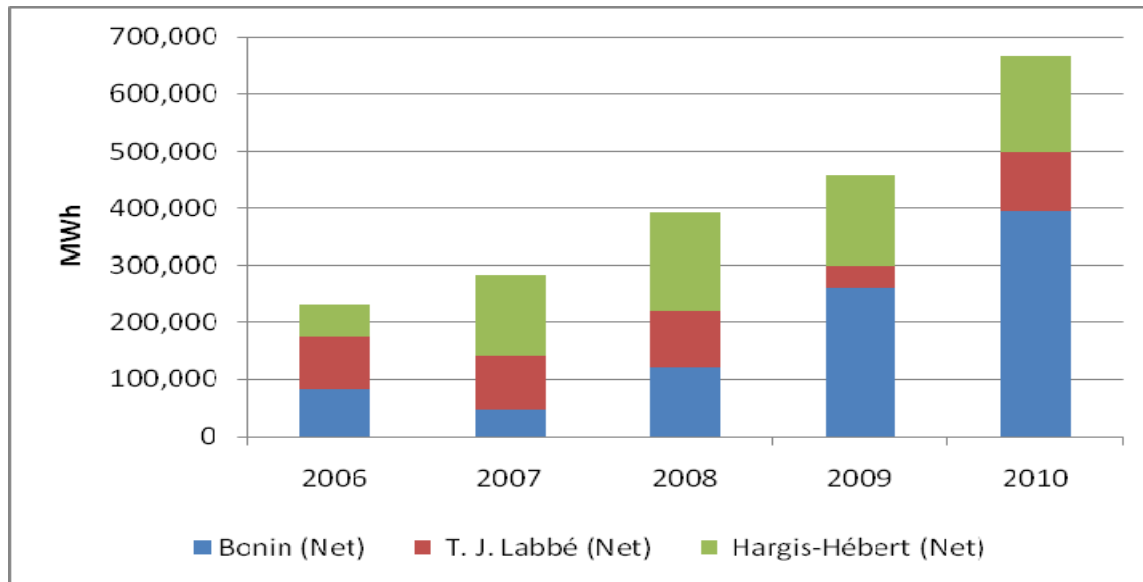
(4) Forced Outage Rate reflects the percent of time the unit was removed from service due to an unplanned failure.

(5) Hargis-Hébert achieved commercial operation June 9, 2006 and the data presented is for a partial year.

Source: Jamie Webb, LUS, 3/11

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Figure 5-5 below shows the total energy production from the gas-fired generation facilities and illustrates the energy contributed by each.



Source: Jamie Webb, LUS, 3/11

Figure 5-5: Generation Unit Contributions

LUS attempts to utilize their coal-fired capacity at RPS2 to provide as much energy as possible throughout the year. Delivery limitations from RPS2 due to transmission constraints can occur quickly and with limited warning. Therefore, in the past, because several hours are required to start up one of the Doc Bonin units, one or more of the Doc Bonin units were kept on-line. However, the addition of the T. J. Labbé Plant and the Hargis-Hébert Plant, which have much quicker start-up times and are more efficient than the Doc Bonin units, has significantly altered the operating profile of the Doc Bonin units and the energy production of the gas-fired generation resources in general. However, LUS reports that in 2010 the occurrence of transmission constraints continued which required an increase in operation of the Doc Bonin units. Figure 5-5 shows the overall trend of increasing gas-fired generation over the past five years. Additionally, the figure shows an increase in Doc Bonin Plant generation over the past five years.

The 2010 availability of the Doc Bonin Units 2 and 3 were higher than we would expect the long-term average availability to be for units of similar size, type, and age. The Doc Bonin Unit 1 experienced low availability due to continued control system problems and the associated extended forced outage. In 2010, the Doc Bonin Unit 2 and Unit 3 forced outage rate was within the range of expected values for forced outage rate for units of similar size, type, and age. We have noted in the past that LUS raised the minimum load level of the Doc Bonin Unit 3 to approximately 75 MW in order to mitigate excessive NO<sub>x</sub> emissions events relative to the air permit

In 2010, the availability factor and forced outage rate of the T. J. Labbé Plant and the Hargis-Hébert Plant were within the range of expected values for units of similar size,

type, and age. The availability factor of a unit can reflect higher performance if it is in reserve standby for a considerable amount of time during a review period, as is the case for Doc Bonin Unit 1 and to some extent each unit at the T. J. Labbé Plant and the Hargis-Hébert Plant.

## Fuel Infrastructure and Supply Contracts

LUS owns a ten mile, 10-inch gas supply pipeline, which connects to Texas Gas Transmission Corporation (Texas Gas) and Columbia Gulf Transmission Company (Columbia Gas) pipeline systems. LUS reports that the Texas Gas supply system has not been used in over 15 years and would require substantial work to put it into service. The LUS-owned gas pipeline is the primary means of supplying gas to the Doc Bonin Plant and the T. J. Labbé Plant. An alternative means of supplying gas to the Doc Bonin Plant and the T. J. Labbé Plant is via a Crosstex Gulf Coast Marketing, Ltd. (Crosstex) pipeline, which is operated at a lower pressure. The LUS-owned gas pipeline also crosses (but is not interconnected with) two other gas pipelines, Florida Gas Transmission, a subsidiary of CrossCountry Energy, LLC, and Gulf South Pipeline Company, LP. (Gulf South).

Fuel supply to the T. J. Labbé Plant is provided via a pipeline expansion branch from the LUS-owned 10-inch gas supply pipeline that connects the Doc Bonin Plant with Columbia Gulf and Texas Gas. The supply pipeline is a 10-inch line that follows a 2,250 foot westerly route parallel with Renaud Drive, then north for approximately 500 feet to the T. J. Labbé Plant.

Fuel supply for the Hargis-Hébert Plant is provided by interconnection with the east-west Gulf South system between Louisiana Highway 89 (Southpark Road) and Commission Boulevard, at the intersection of the Gulf South pipeline with American Boulevard. Gulf South owns, operates, and maintains a 10-inch, 2,500-foot supply lateral. Gulf South also operates and maintains a metering station at the Hargis-Hébert Plant site that is owned by LUS.

## Operations and Maintenance

### Gas-Fired Generation Stations

#### Staffing

Day-to-day O&M of the three LUS wholly owned generating facilities is accomplished with a plant staff of 49. As of the end of 2010, eight positions were vacant, but five contract employees were utilized to meet staffing needs in 2010. Some positions were filled in 2010 and some positions were also vacated. LUS currently staffs the Doc Bonin Plant and the T. J. Labbé and Hargis-Hébert Plants with at least one staff member 24 hours a day, seven days a week.

Day-to-day operational challenges include coordination of dispatch and generation requirements. The long term challenge facing operations is a shortage of qualified

labor. Power plant positions remain vacant, but the plant has overcome this by outsourcing and hiring contract labor. The labor shortage has not yet impacted plant reliability; however, the shortage along with the longevity of the present workforce may impact operations in the future.

### Training

LUS has a formal training program for operations personnel, consisting of industry specific plant science and process training. Also, LUS Operations utilizes power plant technician demonstration notebooks that require new operators to perform system checkouts with a Shift Foreman. The Power Plant Operator Apprentice program, ICE Technician Apprentice program, and Power Plant Machinist Apprentice program have been revised to include power plant specific knowledge along with industry standard components for fossil plant operator and maintenance technicians.

### Operations and Maintenance

Operations are accomplished through the use of operational procedures incorporated in Original Equipment Manufacturer (OEM) manuals. OEM manuals, drawings, operating procedures, and other equipment/plant specific information are available to employees via an electronic library (SharePoint). The Power Production Division staff reports on the practice of monitoring boiler chemistry, use of start-up/shutdown checklist, and on-going apprentice training for operations technicians. Other testing/inspections reported have included turbine over-speed trip tests, relief valve testing, piping hanger walkdowns, and the weekly functional test of the Doc Bonin Plant's diesel generator.

Predictive maintenance programs include vibration monitoring, lube oil analysis, meggar testing, ultrasonic leak detection (air systems), and boiler tube porosity and thickness testing. These programs can detect problems prior to catastrophic failure of the equipment. The repair of the equipment will typically have less of an adverse impact on operation, can be better planned, and may cost less to perform the repair. Preventative maintenance includes routine lubrication, cleaning, and general inspection of equipment.

Both predictive and preventative maintenance task work orders are generated and tracked by the existing maintenance management program, which employs the network version of the MP2 software package. LUS reports work orders associated with collection of data for environmental and North American Reliability Corporation (NERC) reporting are posted to SharePoint. Maintenance management systems such as the MP2 system are designed to track work orders from origination through completion. This allows plant personnel to monitor progress, identify backlog, and produce planning and scheduling information. The preventative maintenance backlog has increased mainly due to the increased Doc Bonin Plant operation; however, the LUS staff is managing the backlog and the increased staffing level, as positions are filled, will help reduce it. The number of repairs in backlog was reported to be similar to that of 2009.



The MP2 system also has the capability to maintain spare parts inventory control as well as cross-referencing parts inventory with maintenance tasks. This provides for more efficient job planning and scheduling, along with monitoring inventory levels and ordering replacements. Consumable and capital spares have been integrated in the MP2 system. Minimum and maximum levels have been established in the system for the consumable spares. LUS personnel have assembled the available capital and consumable spare parts at various locations in bins with assigned tag numbers. Maintenance and parts storage buildings have been constructed at the T. J. Labbé Plant and the Hargis-Hébert Plant.

In 2010, LUS Generation Plant had a Reliability Improvement Assessment performed by Synterprise. The assessment looked at the present state of the facilities operation and maintenance practices at the three generating facilities and developed strategies to address both the short term and long term unit reliability. Synterprise recommended the following improvement activities:

- Coaching (training) for the Planner / Scheduler
- Root cause analysis coaching
- Develop a change of management plan
- Establish “best practices” standards for programs and procedures
- Update operating procedures
- Reset maintenance program to a reliability centered maintenance approach
- Use a continuous improvement process for both operations and maintenance.

The LUS Staff reported that is has started to implement those recommendations and is using Synterprise to assist and coach the staff and hourly employees.

### **Maintenance and Condition of the Property**

Major maintenance work of the Doc Bonin Plant in past years has included steam turbine overhauls for Doc Bonin Unit 2 in 2005, Unit 3 in 2004, and Unit 1 in 2007. There were no major overhauls of the steam turbines at the Doc Bonin Plant in 2010.

CT major maintenance will be driven by the manufacturers’ recommended maintenance schedule, which is based on equivalent baseload operating hours. The T. J. Labbé Plant and the Hargis-Hébert Plant CTs had boroscope inspections in the fall of 2010. Each CT was found to be in serviceable condition and available for continued operation except Hargis-Hébert Unit 1 CT which had high-pressure compressor blade damage, which was subsequently repaired.

The units at the Doc Bonin Plant are generally well maintained and LUS has continued to make capital improvements. In 2001, LUS completed condenser tube replacement on Unit 3. In 2002, LUS replaced Unit 2’s turbine control system, installed a camera in Unit 1’s boiler, replaced Unit 2 boiler corner tubes around the burners, replaced two instrument air dryers, and upgraded plant lighting. In 2003, LUS replaced Unit 1’s generator step up transformer, and replaced Unit 1 and Unit 2 flame scanner system. In 2004, a reverse osmosis system was installed to increase the

period between regenerations for the existing demineralizer trains. Also in 2004, an additional emergency diesel generator was installed to provide increased emergency power and the fuel gas controls were upgraded. In 2005, LUS installed a boiler camera on Unit 2. In 2007, material projects included work to construct a new oil and chemical storage building. In 2008, capital improvements included a continuous emissions monitoring system (CEMS) replacement at the Doc Bonin Plant, as well as warehouse/office space additions at the T. J. Labbé and Hargis-Hébert Plants. In 2009, the 125-volt direct-current batteries for each Doc Bonin unit were replaced.

Capital project plans for the LUS generation are extensive in the upcoming years, including but not limited:

- Hargis-Herbert control system upgrade.
- Bonin 3 hydrogen panel replacement
- Bonin 3 expansion joint replacement
- Bonin 3 cooling tower improvements
- Bonin 2 LP turbine dogbone expansion joint replacement
- Bonin 3 boiler waterwall thermocouple additions

Major Project plans for the LUS generation are extensive in the upcoming years, including but not limited:

- Condition Assessment of Bonin 2 & 3 boiler and high energy piping.
- Chemical cleaning of Bonin 3
- Turbine valve inspection of Bonin 2
- Boiler feed pump inspection of Bonin 3
- Silencers work at both Labbe and Hargis-Herbert

We recommend proceeding with the project plans based on the transmission constraint issues and the resulting expectation for operation of LUS generation. The areas inside the three facilities are clean and well kept and the yard areas of the facilities are generally neat and well maintained.

## Coal-Fired Generation

LPPA supplies a significant portion (from 50 to 70 percent) of LUS' electric energy production. LPPA has a 50 percent ownership interest in a fossil-fuel steam-electric generating unit, RPS2, located in northwest Rapides Parish near Boyce, Louisiana, approximately 100 miles northwest of Lafayette. RPS2 (see Figure 5-6 below) is operated by Cleco and consists of a Foster-Wheeler steam boiler and a General Electric reheat steam turbine generator with a nominal rating of 510,828 kilowatt (kW).

The RPS2 is equipped with a hot-gas electrostatic precipitator to remove fly ash from the flue gas with a design collection efficiency of 99.5 percent when burning high sulfur coal, and 95 percent when burning oil. The boiler is rated at 3,800,000 pounds

of steam per hour. Design throttle pressure is 2,400 pounds per square inch gauge (psig) with five percent continuous over-pressure capability. Boiler main steam temperature is 1,005 degrees Fahrenheit (°F) with a reheat temperature of 1,005°F. The electric generator is rated at 620,000 kilovolt amperes (kVA) and operates at 3,600 revolutions per minute (rpm).

Circulating water for cooling and condensing the steam is supplied from Lake Rodemacher by circulating water pumps that are located in the screened water intake structure. Evaporation and water otherwise lost from the lake is replaced by rainfall runoff within the Lake Rodemacher's drainage area, which is approximately 34 square miles.



Figure 5-6: Rodemacher Power Station Unit No. 2 (RPS2)

### Transmission for RPS2

There are five 230-kV lines owned by Cleco out of the Rodemacher switching station. Four of the 230-kV lines extend to Clarence, Leesville, Rapides, and St. Landry (Cocodrie), while the fifth line from the Rodemacher Power Station extends to Sherwood. Two other 230-kV lines have been constructed from Sherwood to the Pineville-Rapides line, which was previously converted from 138 kV to 230 kV operation. Related substation facility additions were made by Cleco at the generating station and at Pineville, Rapides, Forest Hill and Sherwood Substations.

Through these Cleco transmission facilities, the Rodemacher switching station is interconnected with the area transmission grid. The City is interconnected with the

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area transmission grid through its 138-kV and 230-kV ties to Cleco and Entergy. Interconnection facilities provide capability for the City to receive power and energy at rates of delivery up to 500,000 kW.

### Coal for Rodemacher Unit No. 2

The principal fuel for RPS2 is coal and can be supplied by Rio Tinto Energy America (formerly known as Kennecott Energy Company), Coalsales, LLC and/or Arch Coal Sales Company, Inc., from coal properties in Campbell County, Wyoming. Purchases are made via master coal purchase agreements discussed later in this Report. The coal is transported via rail from Wyoming to the facility in Boyce, Louisiana.

LPPA owns two unit trains that are operated by Cleco in coordination with Cleco's unit trains to bring LPPA's coal to the facility. A portion of the proceeds from the Series 2007 LPPA Bonds was utilized by LPPA to replace the steel unit trains with higher capacity aluminum unit trains. An aluminum coal car is shown in Figure 5-7.



Figure 5-7: New Aluminum Rail Car purchased with proceeds of Series 2007 LPPA Bonds

We note that past rail transportation difficulties have resulted in the procurement of small amounts of coal from other mines to support the test burn of various coal blends in the event that coal deliveries become more problematic in the future. LUS indicates that the results of the test burn of the various coals were successful and certain small quantities of coal from other sources were procured to supplement the coal pile.

## Performance

In conjunction with our periodic report work for LPPA, we have reviewed certain unit performance measurements provided by Cleco, such as gross and net generation, station service, heat rate, and availability as indicators of plant performance. The heat rate is calculated by multiplying the average Btu content of the fuel (as reported from the mine's coal analysis) by fuel consumption, and dividing by the energy in MWhs generated and delivered to the transmission grid. These performance measurements are provided in Table 5-7. The generation statistics shown are for the entire RPS2 plant, not only LPPA's 50 percent ownership.

Table 5-7  
RPS2 Operating Statistics

	2006 <sup>(4)</sup>	2007	2008	2009	2010	5-Year Average
Gross Generation (MWh)	3,395,693	3,730,004	3,387,322	3,108,727	3,455,279	3,415,405
Station Service (MWh)	<u>234,014</u>	<u>253,045</u>	<u>228,966</u>	<u>216,251</u>	<u>239,105</u>	<u>234,276</u>
Net Generation (MWh)	3,161,679	3,476,959	3,158,356	2,892,476	3,216,174	3,181,129
Station Service (%)	6.9%	6.8%	6.8%	7.0%	6.9%	6.9%
Net Capacity Factor (%) <sup>(1)</sup>	69.0%	75.9%	68.8%	63.1%	70.2%	1459.4%
Hours Available	7,427	7,997	7,356	6,996	7,945	7,544
Net Unit Heat Rate (Btu/kWh)	11,043	10,928	10,975	10,923	10,975	10,969
Availability Factor (%) <sup>(2)</sup>	84.8%	91.3%	83.7%	79.9%	90.7%	86.1
Forced Outage Factor (%) <sup>(3)</sup>	1.3%	1.5%	2.6%	4.2%	4.9%	2.9
Scheduled Outage Factor (%)	13.9%	7.2%	13.7%	15.9%	4.4%	11.0

(1) Net Capacity Factor is the actual electric generation divided by the maximum the unit is capable of generating.

(2) Availability Factor reflects the percent of the time the unit was capable of providing service.

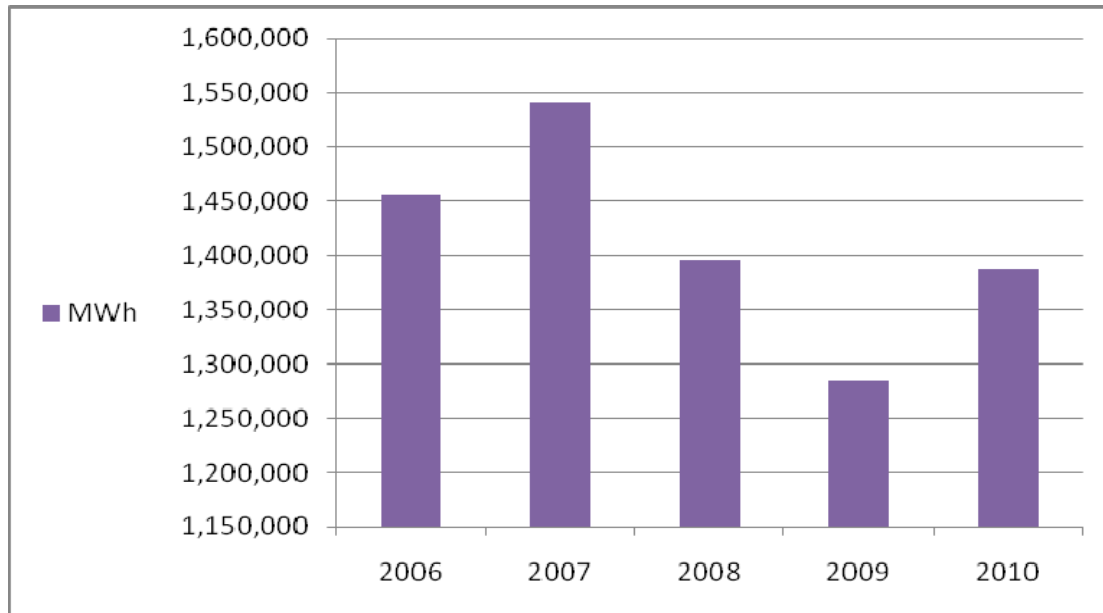
(3) Forced Outage Factor reflects the percent of time the unit was removed from service due to an unplanned failure.

(4) The October 2007 LPPA Managers Monthly Report contains revised data for fiscal year 2006.

Source: LPPA Manager's Monthly Reports

The five year average availability of the Rodemacher Plant is within the range of expected values for availability of coal-fired power plants of similar size, type and age.

Figure 5-8 shows the MWh delivered to LUS annually from RPS2.



Source: LPPA Manager's Monthly Reports

Figure 5-8: Annual RPS2 MWh Delivery to LUS

The reduction in generation delivered from RPS2 in 2009 was mainly due to the extent of scheduled outage work during the year, and in particular the length of the fall 2008 outage which began October 1, 2008 and lasted into early December 2008. We also note that in June 2009, Cleco reported that dispatch limits (sometimes required to reduce load to the unit's minimum rating) were imposed on RPS2's generation during periods of the day for several hours at a time due to transmission constraints.

## Electric Operations Division

The Electric Operations Division is responsible for transmission, distribution, metering and delivery of electrical power to consumers; inventory management of electric, water and wastewater materials, and LUS security. The Electric Operations Division is also responsible for the Energy Control System (ECS) section, which provides for the scheduling and dispatch of generating resources (including the purchase and sale of wholesale power), the operation of the SCADA system, and all line switching orders.

The Electric Operations Division consists of three operating sections: Transmission & Distribution, Energy Control-Substation/Communications-Metering, and Facilities Management. The Electric Operations Division is currently organized as provided in Figure 5-9 below.

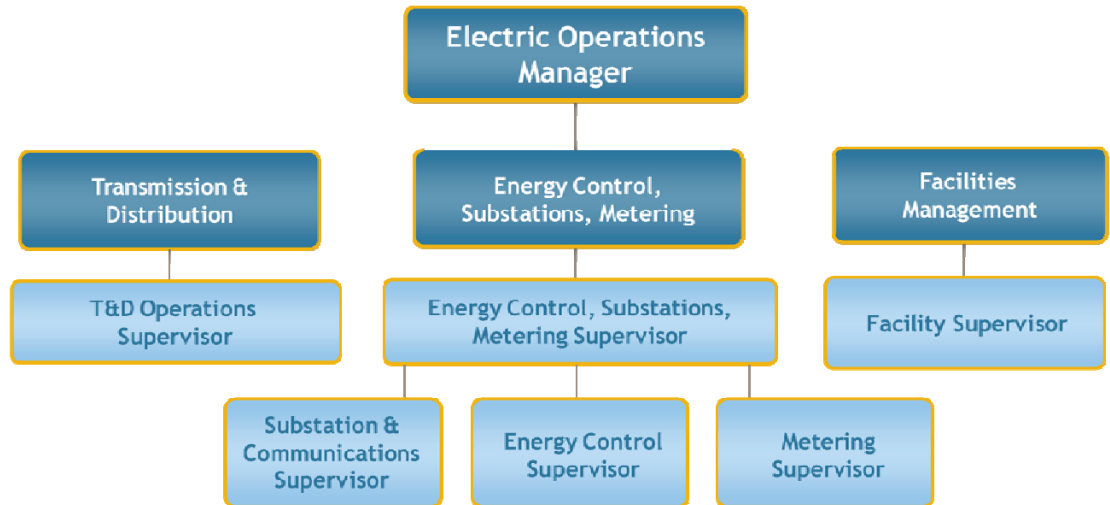


Figure 5-9: Electric Operations Organization Chart

## Transmission & Distribution

Scheduling and delivery of reliable energy to the Electric Utility customers is accomplished through a network of T&D lines monitored by an integrated communication system and the functions performed by the Electric Operations Division. The discussion below provides a description of the facilities, historical O&M statistics, a summary of O&M and capital plans and the condition of the facilities, as observed by the Consulting Engineer. Additionally, a summary of the major functions of the Electric Operations Division is provided, including energy control, SCADA, metering, transmission, substation, distribution O&M, inventory management, and facility security.

LCG’s electric transmission system includes 230-kV transmission facilities and a 69-kV loop. Step-down transformation provides the connection between the 230-kV, 138-kV and the 69-kV systems and from the 230-kV, 69-kV systems and the 13.8-kV distribution service voltage at 14 distribution substations located throughout the City. The system still has a small amount of 2,400-V service at Doc Bonin Plant that will remain in service for the life of the plant. The service area covers approximately 40 square miles and is primarily residential and commercial customers.

The 230-kV transmission system is comprised of 14.6 miles of line with the following interconnections to Cleco at Pont Des Mount Substation in the north, two 138-kV ties to Entergy at the Doc Bonin Plant Substation, one 230-kV tie to Cleco at the Flanders Substation in the southern part of the City, and one 69-kV radial tap from the Elks Substation to the Cleco Breaux Bridge Substation. The Elks Substation has an autotransformer connecting the 230-kV and 69-kV systems. The 69-kV system has 28.2 miles of line with multiple loops throughout the north and central parts of the City.

There are 14 distribution substations (typically consisting of two step-down transformers with three to four feeders each) and two new transmission/generation

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substations (T. J. Labbé and Hargis-Hébert Plants). The distribution system has 79 13.8-kV feeders with 466 miles of overhead lines and 461 miles of underground cable as reported from the updated GIS mapping system.

### Operating Statistics

The Electric Operations Manager monitors customer outage minutes and categorizes them by five primary groups: tree-related, animal-related, equipment failure-related, lightning, and unknown. Table 5-8 provides a summary of outages in the LUS System for 2007 through 2010.

Table 5-8  
Outage-Cause Summary

	2007	2008	2009	2010
Tree Outage Customer-Minutes	487,469	433,808	149,738	124,828
Animal Outage Customer-Minutes	892,457	486,293	322,249	590,970
Equipment Outage Customer-Minutes	1,000,563	780,813	358,805	3,162,230 <sup>(1)</sup>
Lightning Outage Customer-Minutes	416,161	537,894	352,915	586,662
Unknown Outage Customer-Minutes	<u>126,049</u>	<u>118,273</u>	<u>40,975</u>	<u>50,773</u>
Total Outage Customer-Minutes	2,922,699	2,357,081	1,224,682	4,515,463 <sup>(2)</sup>
Percent Change from Previous Year	N/A	(19)	(48)	269 <sup>(3)</sup>

\*Includes major event when outage that occurred on 11/27/2010 with T7 transmission transformer caused a wide spread outage. The following numbers do not include the T7 outage: (1) 31,627 (2) 1,384,860 (3) 13. The T7 outage occurred in FY 2011.

Source: Mike Boustany, Jr., LUS, 3/11

The 2010 storm season was relatively active, which attributed to the increase in lightning related outages and impacted customer outage minutes. The animal-related outages were also up from the previous year. Tree related outages continue to decrease which is attributed to LUS' consistent tree trimming program. Transmission lines are inspected and maintained yearly, per NERC compliance requirements. Distribution lines are inspected and maintained on approximately a four year cycle. All distribution lines are on their second pass in the four-year trimming cycle, as shown below in Table 5-9. LUS included tree trimming into its work management software, Cityworks<sup>®</sup>, which interfaces with its GIS mapping system. As historical data is gathered, the tree trimming program will be analyzed to prioritize trimming on the basis of areas that have faster growing vegetation. LUS maintains a tree trimming contractor for day-to-day tree trimming work and maintenance. LUS is scheduled to complete the second four-year cycle in 2011.

LUS has also overlaid its GIS map over the previous four years of tree trimming and has learned that it trims approximately 100 circuit miles per year. LUS verbally reported that it will continue to monitor tree-related outages to ensure that the tree trimming cycle is adequate.



Table 5-9  
Tree Trimming Summary

	2007	2008	2009	2010
Total Overhead Distribution (Miles)	459	461	465	466
Distribution Trimmed (Miles)	111.5	116.7	114.0	107.8
Percent of Total (%)	24.3	25.3	24.5	23.1

Source: Mike Boustany, Jr., LUS, 3/11

LUS employs an in-house written Outage Management program. The record keeping and database for this program is being maintained and updated by LUS personnel. The program generates standard utility outage and reliability indices. LUS previously planned to purchase and implement a vendor supported Outage Management System (OMS) system during 2008. However, this project has been delayed to FY2010-11 due to funding decisions. Continuous recording of outage data will allow staff to quickly identify changes in reliability.

Based on conversations between LUS staff and the Consulting Engineer, it appears that overall system reliability is improving. In the future, there may slight dips in the monitored indexes due to weather-related conditions, but the indices are all within acceptable parameters.

LUS collects outage data in order to compute several reliability indices, including the System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI). SAIDI provides the average number of minutes that each customer would be out of service per year. SAIFI provides the average number of service interruptions that each customer would experience each year.

LUS's approach to calculating SAIDI and SAIFI conforms to the Louisiana Public Service Commission's (LPSC) General Order (Docket No. U-22389, dated April 15, 1998). It should be noted that this Order predates the most recent approach found in the Institute of Electrical and Electronics Engineers' (IEEE) Standard No. 1366-2003. LPSC's General Order requires utilities to identify their worst performing circuit and make plans to address such circuits. During 2010, LUS continued work on the five distribution circuits that emanate from the Peck substation as being its worst performing circuits. LUS initiated the following improvements:

- Install new lightning arrestors
- Install squirrel guards on transformer bushings and lightning arrestors
- Insulate transformer jumpers
- Conduct additional tree trimming
- Review fuse coordination
- Install additional fuses

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The above work commenced during 2010 and is expected to be completed during 2011.

LUS and the LPSC have provided SAIDI and SAIFI data for a sample of 15 other electric systems in Louisiana. Based on these SAIDI and SAIFI data, LUS' electric system is more reliable than any of the other 15 utilities. It should also be noted that the reliability of LUS' electric system has also been improving during the past three years.

Reliability data for LUS and the sample set of other Louisiana utilities are summarized in Table 5-10, Figure 5-10, and Table 5-11 below.

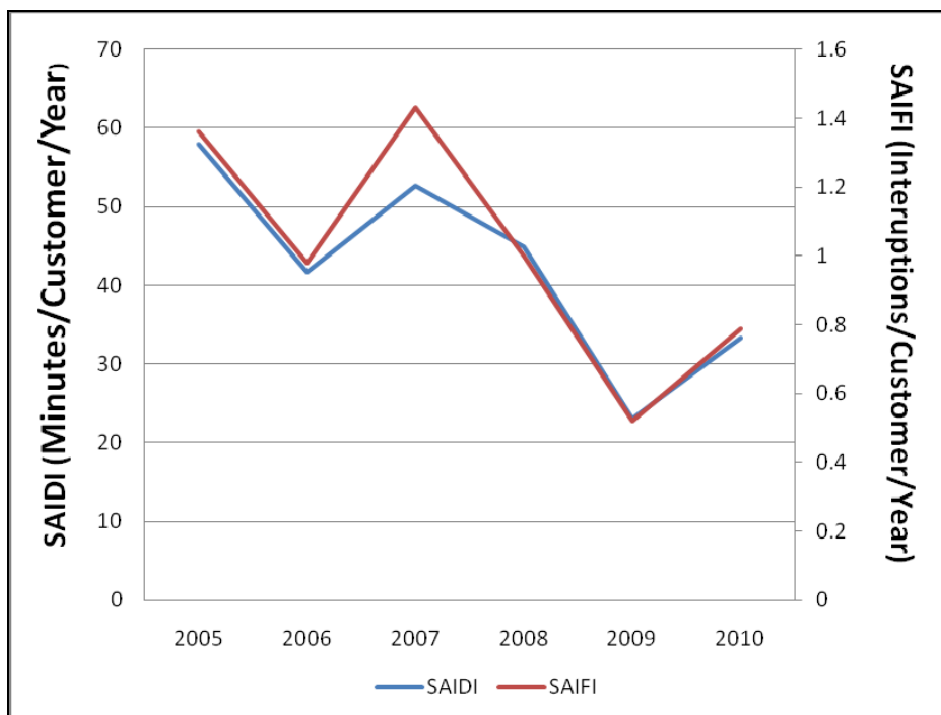
**Table 5-10  
LUS Reliability Summary**

	2006	2007	2008 <sup>(1)</sup>	2009 <sup>(1)</sup>	2010 <sup>(1)</sup>
SAIDI (Minutes/Customer/Year)	41.7	52.6	44.9	23.0	74.6 <sup>(2)</sup>
SAIFI (Interruptions/Customer/Year)	0.98	1.43	1.00	0.52	1.47 <sup>(2)</sup>

(1) The reliability indexes are calculated for the calendar year for 2008, 2009, and 2010, not the fiscal year as shown for previous years. This change was made to be consistent with the industry and other published reports.

(2) Includes major events that occurred in the transmission substation with T7 in November 2010 (FY 2010-11), which is beyond the scope of this report. The following numbers do not include the T7 outage: (2) 33.3 (3) 0.79.

Source: Mike Boustany, Jr., LUS, 3/11



**Figure 5-10: LUS SAIDI and SAIFI Reliability Data**

Note: 2010 data does not include major system outage T7 that occurred in November 2010.

Table 5-11  
2010 Reliability Indices for Similar Utilities

Energy Provider	SAIDI Minutes/Customer	SAIFI Interruptions/Customer
LUS	74.6 <sup>(1)</sup>	1.47 <sup>(1)</sup>
Entergy	121	1.16
Louisiana Valley Electric Cooperative	123	1.74
Claiborne Electric Cooperative	268	2.84

Note: The LPSC does not receive SAIDI and SAIFI data from municipally-owned utilities.

(1) Includes major events that occurred in the transmission substation with T7 in November 2010 (FY 2010-11 which is beyond the scope of this report. Indexes shown in [] are without the major event. The following numbers do not include the T7 outage: (1) 33.3 (2) 0.79.

Source: Brian McManus, Louisiana Public Service Commission, 3/11

In addition to the above reliability indices, LUS also monitors Crew Response Time and Trouble-shooter Response Time, which are defined below.

- Crew Response Time: The time recorded by crew dispatch, from the time the Trouble-shooter requests a crew to the time that a crew arrives on site (crew notifies crew dispatch of arrival on site).
- Trouble-shooter Response Time: The time recorded by crew dispatch from when an outage occurs (Trouble-shooter is notified) and the Trouble-shooter arrives at the outage site (Trouble-shooter notifies crew dispatch of their arrival on site).

Crews responded to 1,183 outage calls during 2010, which is an increase of approximately 3 percent from the 1,151 outage calls that crews responded to during 2009. LUS' data indicates that average Trouble-shooters Response Time increased slightly between 2009 and 2010. Crew Response Time still appears to be acceptable. On average, the distance from the LUS facility to the crew members' homes is increasing and may have contributed to Crew Response Time. Table 5-12 shows the response times for the past five years.

Table 5-12  
Crew Response Time and Trouble-shooter Response Time

	2006	2007	2008 <sup>(1)</sup>	2009 <sup>(1)</sup>	2010 <sup>(1)</sup>
Average Crew Response Time (Minutes)	21.5	18.6	20.2	22.6	20.9
Average Trouble-shooter Response Time (Minutes)	23.9	25.3	28.7	23.7	24.9

(1) The Crew Response Time and Trouble Shooter Response Time are calculated on the calendar year basis versus the past fiscal year comparison.

Source: Mike Boustany, Jr., LUS, 3/11

### Operations and Maintenance

#### General

Predictive and preventative maintenance on the system may contribute to improvements in the reliability of the electric system. One of the reasons that LUS has been able to demonstrate a high level of system reliability is due to its commitment to equipment monitoring. Infrared scanning, formal testing programs, and visual inspection continue to enhance the reliability of the electric system.

#### Substation and Communications

The Substation and Communications (S&C) Section uses a Computerized Maintenance Management System (CMMS) titled CASCADE (a propriety software system) for the scheduling and tracking of equipment maintenance. The NERC guidelines for protection and control (PRC-005) are used as the basis to create regular maintenance and testing intervals.

The results of oil analysis are also being utilized for maintenance scheduling of major power equipment. The results of oil analysis are also being utilized for maintenance scheduling of major power equipment (distribution and transmission transformers, 69-kV, 138-kV, and 230-kV oil circuit breakers). Maintenance may be initiated following a predetermined time interval or number of events that “trigger” the need, where triggers could be gas levels, breaker operations, or tap operations to name a few. A Breaker Oil Analysis and Tap Changer Signature Analysis are also used in the predictive maintenance program.

Annually, LUS uses a hand-held infrared device to identify system weaknesses or potential overload conditions on the following equipment:

- Transmission line 69 kV and higher
- Substation breakers
- Substation bus
- Substation transformer bushings
- Substation switches

Infrared testing was performed at all substations during 2010 and included testing of the following equipment:

- 180 breakers
- 65 transformers
- 18 batteries
- 18 substations

Tests discovered that two bushings, Breaker 1476 for generator #2 and T5 autotransformer, were deteriorating. The equipment was taken out of service and the bushings were replaced. In addition to infrared scanning, substation transformers are subjected to annual preventative maintenance and testing programs. Biannual tests on

all distribution breakers include oil filtering, oil dielectric tests, contact resistance tests, operational tests, and protective relaying tests.

Another type of reliability test is the visual inspection of all substations. LUS field crews visually inspect all substations on a weekly basis. This includes visual analyses of transformer bushings, the general substation environment, feeder voltages, battery water levels, alarms, and nitrogen bottle levels. All scheduled maintenance and testing for 2010 was completed on schedule and appropriate follow-up actions were completed in a timely manner.

Training was provided for substation maintenance crews in various areas of equipment testing and maintenance. Training is an on-going requirement to provide information on the new electronic relays and other equipment as the electric system is upgraded with more modern facilities.

### Transmission and Distribution Section

The T&D Section includes the T&D crews, service crews, and Dispatcher staff. The total staffing in this section was 50 full-time employees (FTE) as of November 1, 2010, including the Section Supervisor.

The T&D line crews are comprised of four overhead line crews, two underground crews, two streetlight crews (one LUS and one Contractor), and two service crews. These crew levels are sufficient to keep up with the service work load. The T&D crews are currently staffed with only a few vacancies. Competing with neighboring utilities for qualified linemen has made recruiting efforts a major concern. Keeping up with the local market pay for these types of workers will be required to fill the vacant positions and turnover.

The T&D Section conducts a variety of on-going training classes for its staff including Trouble-shooter training, underground systems training, technical training, and climbing labs.

During 2010, no poles were treated or tested due to budget restraints. However, 96 bad poles were replaced, as summarized in Table 5-13. The pole inspection contract was rebid and will begin a new ten-year cycle in 2011.

Table 5-13  
Wood Pole Test Summary

	2008	2009	2010
Total Wood Poles	N/A	20,414	20,414
Poles Inspected	1,790	2,307	0
Poles Inspected (%)	N/A	11	0
Poles Replaced	117	134	96
Poles Replaced (%)	7.5	5.8	4.7

Source: Mike Boustany, Jr., LUS, 3/11

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The LUS streetlight crews and service crews are organized into specific service districts within the City. Three of the crews handle connection orders, private lighting maintenance, troubleshooting, and service request. The fourth crew does most of the arterial lighting maintenance. These changes continue to increase the overall efficiency of the crews by reducing travel times. The result has been a reduction in the service request response time of one to three days for streetlights and typically next day for service connections. The method has worked well.

The conversion to City Works has been completed in the T&D Section in 2010. The following work orders are in City Works: streetlights, pole change outs, transformer change outs, meter change outs, service tickets, outages, and all engineered jobs. Once the outage management system is purchased, the outage tracking will be removed from City Works.

During 2010, T&D purchased one new 55-foot bucket trucks that are equipped with a Bohlinger battery pack system. This will permit the engine of the truck to be shut off at the work site and allow the aerial device to operate off the battery pack. This will result in a fuel savings. LUS plans on purchasing additional trucks with the Bohlinger battery system.

### Energy Control System

The ECS Section is responsible for generating unit commitment, dispatch, the purchase and sale of wholesale power, and the operation of the SCADA system for all LUS facilities. LUS uses an outside service, TEA, to perform the wholesale power negotiations and transactions. ECS provides TEA daily with capacity and load requirement data for a seven day resource plan. In addition, ECS is in continual communication with TEA regarding existing capacity and load requirements.

Presently, there are 16 FTE positions in the ECS group. Four operators run the ECS working 12-hour shifts. A fifth operator works a regular 40-hour week assisting shift operators with checkouts, switching orders, coordinating, and filling in while other ECS operators are in training. In addition, ECS has four electrical engineers (three are working primarily on electrical SCADA-related projects and the fourth working on water/wastewater SCADA-related projects) and two SCADA technicians. All ECS operators are NERC-certified as mandated by NERC. NERC-certified training for the ECS operators included emergency operations for 2010.

SPP/NERC conducted an on-site spot check of LUS' active Critical Infrastructure Protection (CIP) standards in effect during June 2010. Thirteen "auditable compliant" CIP requirements were noted during the spot check (both version 1 and 2 of the CIP standards); three requirements were determined to be compliant while ten requirements were identified as possible alleged minor violations. Mitigation plans were filed to correct possible alleged violations. LUS is scheduled for a SPP/NERC audit in 2011.

### SCADA System

The SCADA system maintains control of all electric T&D substation breakers, feeder circuit breakers, and other equipment on the electric system. The SCADA system collects a wide range of electric system operating data and information regarding

alarms, system energy flow, voltage, switch positions, protective equipment operations, and transmission interchange status. The availability of this data positively affects system reliability, as system status information is instantly available to operations and engineering staff. The LogRhythem tool LUS used is a Security Information and Event Management (SIEM) appliance. It automatically centralizes and archives logs for all cyber assets within the electronic security perimeter. In addition to just capturing logs, it provides for real-time monitoring of logs, alerting for suspicious activity, and automated reporting functionality.

The Energy Management System (EMS)/SCADA system was upgraded during 2009 by the manufacturer. ECS staff installed a patch management program and load management system for compliance with NERC standards. The patch management software developed by the EMS manufacturer, Open Systems International (OSI), tests all patches released for Windows, UNIX, Oracle, and verifies completed system functionality prior to installation of patches. The EMS system is assisting both the Doc Bonin Plant staff and ECS staff in strengthening their coordination, and helps them gain an understanding of operating costs to aid future opportunities for power sales and purchases. The EMS is also assisting in the refinement and verification of O&M costs, start-up costs, and real-time fuel monitoring data.

The SCADA system is designed for full redundancy including a back-up Master Station. The SCADA system uses a robust communication system built on LUS' fiber network using dedicated fibers and a ring configuration Ethernet network. This provides an isolated network enhancing the security and the integrity of the system. In addition, the SCADA network is constantly monitored for security issues and undergoes periodic maintenance to ensure the integrity of the EMS and SCADA system based on NERC requirements. The entire SCADA network is isolated from all other systems by using dedicated hardware and software. A connection to the outside world is made through dedicated network switches and firewall devices. In addition, all computers connected to the SCADA network have virus protection software installed that is routinely updated and monitored by a security server for intrusion.

The Back-up Control Center (BCC) houses all EMS/SCADA and associated equipment required to fully operate the electric system in the event of the loss of the main ECS. The BCC has its own emergency power and Uninterruptible Power Supply (UPS) systems. This BCC facility is exercised eight hours a month to test for functionality and is also used for training purposes.

The ECS system collects data from 14 electric substations, two water wells, five water towers and 36 lift stations in the wastewater system. LUS intends to eventually install remote terminal units (RTUs) at all 127 lift stations.

LUS utilizes Load Tap Changers (LTC) on each of the distribution power transformers that are served off the 230-kV transmission system. The 13.8-kV LTCs are required to maintain control of the distribution system voltage due to the load swings of the 230-kV system. The distribution power transformers served off the 69-kV transmission system are non LTC transformers, with the exception of the two transformers at the Warehouse substation, and voltage control is maintained by controlling the 69-kV voltage. The 69-kV transmission system voltage is controlled

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via three auto transformers with LTCs, two located on the north side of the system and one on the south side of the system. The 69-kV voltage is maintained such that the distribution system voltage is held within American National Standards Institute (ANSI) voltage.

The compactness of the LUS service area and general load characteristic has enabled LUS to avoid the use of down line regulators and individual feeder regulation and still maintain voltages with the ANSI standard of +/- five percent of nominal. The result is financial savings in material and maintenance cost that are typically incurred by most distribution systems. Load and phase balancing is performed on an on-going annual basis and Volt-Ampere Reactive (VAR) management is achieved by installing fixed and switched capacitors on the distribution feeders to achieve an overall system power factor of approximately 98 percent lagging on a per-circuit basis. Switched capacitors are operated on seasonal settings with voltage and time-of-day over-rides to control power factors. A higher power factor and balanced load reduces system losses and help achieve lower electrical rates.

### Metering

The Metering Section is staffed by three electric metering technicians and one electric metering supervisor. Salient accomplishments by the electric meter shop during 2010 include the Table 5-14.



Table 5-14  
Meter Test Summary

Test Performed	2009	2010
Pull and test for accuracy per customer complaint	154	195
Meter installs or change outs (residential, commercial, industrial)	1,240	993
New CT jobs wired and energized	40	48
Meters calibrated and returned to inventory	743	867
Meters programmed in the meter shop	1,344	960
Meters retired due to age, test results of physical conditions	1,176	1,220
Meters tested in the field (residential, commercial, industrial)	702	1,106
Meters pulled for electricians to do work	234	183
Primary metering sites tested (total 37)	37	0
Power quality monitors (installed, downloaded, analyzed)	82	77
Power line interference complaints investigated	24	27

Metering maintains high accuracy levels through a formal testing program. The program tests all commercial and industrial meters that fall under one of the following categories:

- For commercial and industrial customers, every meter is tested once every five years.
- All commercial, industrial, and residential meters that reflect a deviation of 30 percent or more from the same month, one year ago, are tested.
- Metering checks on all active accounts with little or no electric consumption are tested.
- Meters are tested whenever commercial, industrial, and residential customers express concern about the accuracy of their bills.

Previous random testing performed on residential meters has concluded that it would not be cost effective to extend the testing program as accuracy is maintained in single phase meters. The Meter Services Division employs an Energy Theft Investigator to track and log energy theft in all meters. Ring locks are used on meters that have been tampered with.

If a problem is detected through any of the aforementioned procedures, the meter is replaced and tested. If the meter is found to be out of tolerance, it is recalibrated and re-furnished for future use. The Meter Section and Customer Service determine if the customer's bill needs to be adjusted, based on the findings of the meter test report and historical electrical consumption. The Meter Services Section issues a monthly report of the top commercial and industrial users. This list aids the identification of meters that require testing. The Electric Meter Shop also keeps abreast of the latest technology available in the meter industry by replacing older obsolete meters with new microprocessor digital meters that provide more accurate readings, thus maximizing revenues.

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The Metering Section also provides power quality monitoring for LUS residential and commercial customers that have expressed concerns related to voltage, radio frequency interference (RFI), electric magnetic fields (EMF), and harmonics.

The Metering Section is participating in a task force, which includes outside consultants, to evaluate the possibilities of incorporating AMI in conjunction with LUS' Smart Grid efforts.

### Facilities Management

The Facilities Management Division is responsible for inventory control of electric, water, and wastewater. Additionally, the Facilities Management Division is responsible for security at all LUS facilities, maintenance of electrical and mechanical systems at the Walker Road complex, grounds keeping for 14 substations, and janitorial services for the Walker Road complex.

There are 18 full time positions assigned to the Facilities Management group, two positions of which are vacant. In addition, Facilities Management uses staff from other departments on a part time basis.

Facilities Management has reorganized materials using the storage facility at the Beadle Substation site and the seven 8'x40' self-contained storage units at the Walker Road complex.

The new inventory software system (LAWSON) was implemented throughout LCG in 2010 and will be in full use in FY2010-11. The inventory control portion of the system benefits the Utilities Warehouse by creating a much more effective way of controlling and tracking inventory.

The construction of a new roof system for the main warehouse and a fire suppression system is planned for 2011.

### Security

Security is composed of a combination of in-house and contracted security staffing with the Sheriff's department. Security staff includes two full-time employees. LUS has implemented motorized vehicle gates with cameras, voice box, and employee access card control at the Walker Road complex entrance. Similar systems are in place at other offsite LUS facilities (i.e., T. J. Labbé and Hargis-Hébert Generation Plants). LUS has access control on exterior doors on all buildings at the Walker Road complex and cameras that view different areas of the complex, which are monitored and recorded. Presently, all substations and switchyards require an employee access card to access the facilities and control buildings. In addition, all 14 substations are video monitored.

### Transmission System Construction & Planning

LUS staff reports that the T&D system has been prudently planned and designed. The capacity of the transmission system is reviewed annually using Siemens PTI PSS/E and ASPEN software analysis programs. These programs are updated through yearly maintenance updates/upgrades and the results are reported in LUS' Five-Year Planning Report and One-Year Contingency Report. The analysis concludes that with

all transmission components in service, there is sufficient capacity in the transmission system to meet existing and forecasted peak loading conditions through 2012 and that no system component is loaded above 80 percent of maximum rating. Power flow studies are performed for one through ten-year load forecasts and during summer peak, winter peak, and two intermediate loading scenarios. Such studies also examined all facilities in service, one facility out of service (single contingency), and two facilities out of service (double contingency) conditions. Facilities under consideration include transmission lines, auto transformers, and generator step-up transformers. These analyses are performed in accordance with policies, guidelines, and procedures (PGPs) to meet the requirements of the most current NERC TPL standards.

The last full stability study was conducted during 2009. It was a joint effort with Cleco and Entergy and focused on forecasted conditions for 2012, including all planned generation and transmission additions. The study found no significant adverse impacts to LUS. LUS verbally reported that it currently does not have adequate staff, training or computer models to independently conduct stability studies. Entergy is currently incorporating a model of LUS' system into its stability program and providing such information to the SPP. In light of anticipated changes to NERC's transmission planning requirements, LUS may need additional in-house stability capability.

LUS conducted its last full short circuit study in 2006. LUS has performed a sensitivity analysis on elements involved in the ALP transmission improvement projects. All elements studied showed to be within the required short circuit current interrupting requirements. LUS engineering plans to perform a complete short circuit study on the entire system in FY2010-11 which will include major system additions and upgrades planned for 2011 through 2012.

### Substations Construction & Planning

LUS staff verbally reported that substation equipment loading is forecasted to be well within maximum capabilities through the year 2012.

A dedicated fiber optic communications system links all substations. The fiber optic system allows LUS to keep pace with the increasing communication requirements of a sophisticated protection system. LUS purchases access to the fiber system from LUS Fiber. The microwave communication system is in place and functioning to communicate with the RPS2 unit, located at the Rodemacher Station.

LUS has also completed or initiated several substation projects to improve system reliability. The status of major projects in 2010 includes:

- Pont Des Mouton Substation – Installation of second 230kV/13.8kV 30MVA Distribution Power Transformer. This project had been identified for several years in the distribution contingency study as a means to mitigate low voltage and high loading for the loss of the existing transformer. This coupled with new load growth required the purchase and installation of a second distribution power transformer. The installation was completed in the fourth quarter of FY2009-10. Included in the scope of this project was the relocation of an existing 230kV oil

circuit breaker, the installation of a new 230kV Sulfur Hexafluoride (SF6) circuit breaker, a new 15kV vacuum bus tie circuit breaker, and several bus modifications to the 230kV and 15kV buses to accommodate this installation. Also included in the scope of the project were the removal of eight (8) electromechanical relays and their replacement with two (2) new microprocessor relays. In addition, three (3) new microprocessor relays were installed to protect the new transformer and bus tie breaker.

- Beadle Substation – Installation of second 230kV/13.8kV 41MVA Distribution Power Transformer. This project was identified in the distribution contingency study as a means to mitigate high loading on the existing power transformer and to accommodate future load growth in the area. The installation was completed in the second quarter of FY2009-10. This project also included the installation of a new 230kV SF6 circuit breaker and a new 15kV vacuum bus tie circuit breaker. As part of this new addition the scope also called for the addition of three (3) new microprocessor relays to protect the new transformer and bus tie breaker.
- Pinhook Substation – Distribution/Transformer Rehabilitation. This electrical distribution substation was the last to be upgraded from electromechanical relays to microprocessor relays for our distribution feeder protection. This project was completed in the first quarter of FY2009-10 and called for the removal of fifty-seven (57) electromechanical relay and replacing them with thirteen (13) new microprocessor relays. Also included in this project was the relocation of numerous relays from being housed within the circuit breaker to the substation control building.
- Doc Bonin Switchyard – Autotransformer T5 Bushing Replacement. This project was completed in the third quarter of FY2009-10 and called for the replacement of a 230kV bushing that had developed a hot spot. The transformer was removed from service and the oil was drained to allow for the replacement of the bushing. After replacement of the bushing, the oil was heat processed and the transformer was filled under a vacuum. The unit was then fully tested prior to returning the unit to service.

### Ongoing Major Projects:

- Doc Bonin Switchyard – Switchyard Reconfiguration (ALP). This project was identified as part of the Memorandum of Understanding (MOU) signed by LUS, Cleco Power, and Entergy Gulf States Louisiana and endorsed by Southwest Power Pool – Independent Coordinator of Transmission (SPP-ICT). As part of this project, LUS will significantly modify the Doc Bonin Switchyard to accommodate the addition of a new transmission line from Doc Bonin to T.J. Labbé, a 230kV/138kV autotransformer, and a 138kV/69kV autotransformer. Additionally, the reconfiguration included several improvements to allow for additional operational flexibility and anticipate future NERC TPL requirements. This project also includes the removal of fifty-six (56) electromechanical relays and their replacement with nineteen (19) new microprocessor relays. In addition, five (5) new microprocessor relays are to be installed to protect the new autotransformer

and transmission line. This project began in the third quarter of FY2009-10 and will not be completed until the first quarter of FY2011-12.

- T.J. Labbé Switchyard – Switchyard Reconfiguration (ALP). This project was identified as part of the Memorandum of Understanding (MOU) signed by LUS, Cleco Power, and Entergy Gulf States Louisiana and endorsed by Southwest Power Pool – Independent Coordinator of Transmission (SPP-ICT). It will more than double the size of the existing T.J. Labbé Switchyard in order to accommodate three new 230kV transmission lines. The transmission lines will connect to Doc Bonin Switchyard, Wells Switchyard, and Sellers Substation. The transmission lines will be owned by LUS, Cleco Power, and Entergy Gulf States Louisiana respectively. The new transmission lines will add two new interconnection points for LUS, one with Cleco Power and one with Entergy Gulf States Louisiana. This project began in the fourth quarter of FY2009-10 and will not be completed until the first quarter of FY2011-12.
- Doc Bonin – T.J. Labbé – New 230kV Transmission Line (ALP). This project was identified as part of the Memorandum of Understanding (MOU) signed by LUS, Cleco Power, and Entergy Gulf States Louisiana and endorsed by Southwest Power Pool – Independent Coordinator of Transmission (SPP-ICT). This project calls for the construction of a new 230kV transmission line from Doc Bonin Switchyard to T.J. Labbé Switchyard. Acquisition of all transmission servitudes was completed in the fourth quarter of FY2009-10. Construction is anticipated to begin near the end of the second or beginning of the third quarter of FY2010-11. Final construction is not anticipated until the fourth quarter of FY2010-11.

With the increased number of electronic relays and other electronic equipment, LUS' should consider configuring the communication system and necessary hardware and software for engineering and operations staff to access this electronic equipment from their offices. This will allow more information to be accessible without having to make field visits and will greatly aid in troubleshooting and restoration efforts. Considerations should also be given to train additional engineering and substation operations staff to program, maintain, and operate the electronic relays and equipment. Currently, LUS' has only two staff members who are familiar with this highly technical electronic equipment.

### Electric Distribution

The integrity of the distribution system has been reviewed annually using Siemens ADEPT software. The distribution system undergoes power flow analysis of capacities and voltages as part of this review. LUS verbally reported that when such studies identify distribution apparatus as being loaded at or above 70 percent of its continuous nameplate rating, then such apparatus is placed on a Project List. This list is used to initiate further investigations of remediation options and a planned course of action. A higher priority is placed on apparatus that is loaded at or above 80 percent.

LUS has selected a vendor for the replacement of its current ADEPT software. The selected vendor is CYME International and the new distribution software has been received and staff is beginning the implementation of its use into the distribution

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contingency study for FY2010-11. LUS staff verbally reported that contingency studies found no inadequacies in the distribution system. LUS has continued its efforts to standardize construction, material specifications and contract documents. LUS staff also verbally reported that the distribution system is designed and constructed in accordance with prudent industry practices.

During the FY2009-10 several improvements were made to the distribution system. Some of these projects were identified on the project list, some were the result of equipment failures, and others were made for load growth. The following is the list of projects:

<u>Project</u>	<u>Completion Date</u>
Beadle Feeder 5554 Line Extension	4 <sup>th</sup> Qtr FY2009-10
Peck Feeder 3054 U/G Getaway (2-350AL to 2-350CU)	1 <sup>st</sup> Qtr FY2009-10
Flanders Feeder 8551 U/G Getaway (2-350AL to 2-350CU)	2 <sup>nd</sup> Qtr FY2009-10
Pont Des Mouton Feeder 3551 U/G Getaway (2-350AL to 2-350CU)	2 <sup>nd</sup> Qtr FY2009-10

One of the largest improvements LUS made to the distribution system during the FY 2010 was the line extension to accommodate the relocation of Our Lady of Lourdes Regional Medical Center to their new location. Two of the previously mentioned upgrades were required to accommodate this additional loading. The hospital is anticipated to open for commercial operation in the third quarter of FY 2011.

### GIS

The Systems Engineering Group is responsible for GIS mapping and associated software, along with easement acquisitions.

LUS utilizes Cityworks software for work task assignments and asset management that interfaces with the GIS Map software by ESRI. All associated GIS Mapping data is accessible in the field. The existing 33 wireless points throughout the city allows approximately 65 field employees in electric, water, and wastewater to remotely access their work task information through Cityworks. An additional 37 wireless locations should be accessible by the spring of 2011.

The Cityworks process for addressing customer concerns have been documented via flowcharts for electric, water, and wastewater operations. In addition, the data dictionary for the water layer was recently completed. Currently, the wastewater data dictionary is being worked on with the electric data dictionary next.

The GIS group is also responsible for acquiring and maintaining easements for the electric, water, wastewater, and LUS Fiber utilities. An easement layer has been established on the GIS Map and is accessible by all users.

## Condition of the Property

LUS staff verbally reported that the electric transmission, substation and distribution facilities are in good condition and are being well maintained. Older equipment is continually being reviewed for replacement based on age, maintenance costs, and good utility practices. In general, capital projects are being approved and completed on a five-year cycle in LCG's Adopted Budget.

## Contracts & Agreements

LCG has many contracts and agreements in place related to the business of the Electric Utility. Principal Electric Utility contracts and agreements are summarized in the following paragraphs.

## Power and Fuel Marketing

### The Energy Authority

LUS signed a Resource Management Agreement (RMA) with TEA on November 28, 2000. The objective of this contract is for TEA to market LUS' electrical capacity and energy in excess of the requirements of its retail customers and to purchase power on behalf of LUS as needed. The TEA agreement was amended in 2007 to modify terms of compensation.

Contractually, LUS provides the following information to TEA on a daily basis for a seven-day period:

- Hourly electric demand
- Generating unit costs and availability
- Quantities of capacity and energy that LUS has determined it is willing to sell or purchase
- Hourly incremental and decremental costs

TEA is responsible for:

- Reservation and verification of transmission paths
- Confirmation of schedule with counterparties
- Creation of tags
- Timely and effective notification of all schedules
- Performance of daily checkouts
- Adhering to LUS' credit policy
- Execution of all transactions in the wholesale market within the forward year

On a day-to-day basis, LUS primarily uses their TEA arrangement to balance energy during the hours when LUS has surplus power or is deficient. In recent years, LUS

has purchased wholesale power to serve its native load when RPS2 was off-line and during the summer months (when demand is high). In 2010, LUS sold 138,425 MWh of energy to TEA and purchased 64,661 MWh of energy from TEA. Because of transmission constraints in the LUS region, buying and selling large amounts of wholesale power is not a viable alternative for most hours.

LUS signed Letter Agreement Number Two for Natural Gas Services, dated February 1, 2005 (the Letter Agreement) with TEA, which supersedes the previous agreements for natural gas services. The Letter Agreement authorizes TEA to provide resource management services, including but not limited to, purchasing natural gas and transportation on behalf of LUS, and marketing LUS' surplus natural gas and transportation. The Letter Agreement continues until either party provides 30-day written notice of termination to the other party.

TEA may also enter into financial transactions to manage risk associated with power and fuel for LUS. Financial transactions are not necessarily intended by the parties to go to physical delivery, but are used to manage risk exposure to market price volatility. Financial transactions include purchases or sales of futures, options, and swaps. While these activities are currently limited in nature, they should nevertheless be governed by a best practices-based Energy Risk Management Policy and associated procedures. LUS has not yet developed such policies and procedures.

LUS' electric power and energy requirements are met through purchases from power suppliers, through its contract with TEA, LPPA and the Southwestern Power Administration (SPA), as well as by the locally installed generating capacity.

## Power Purchases

### Lafayette Public Power Authority

LCG, through LPPA, acquired a 50 percent ownership interest in RPS2. The primary fuel supply to the RPS2 is low-sulfur Wyoming coal and the output is sold by LPPA to LCG in accordance with a long-term power sales contract.

The City and LPPA entered into the Power Sales Contract (PSC), whereby LPPA agreed to sell, and the City agreed to purchase, LPPA's share of the power and energy produced from the RPS2. The PSC expires on August 31, 2047.

Under the PSC, payments are specified to be sufficient to pay all costs of LPPA in connection with RPS2, including LPPA's share of operation and maintenance of the RPS2, debt service requirements, and all other financial obligations of LPPA's share of the RPS2. The PSC provides that the obligations of the City to make such payments in each contract year shall constitute obligations payable as an operating expense of the LUS and payable solely from the revenues of such utilities system. Such payments are to be made whether or not RPS2 is operating or operable.

### Southwestern Power Administration

LCG has a purchase agreement with SPA and a current capacity allocation of 18.6 MW and energy allocation of 1,200 kWh per kW per year. The contract with



SPA has a term of 15 years, which ends on May 31, 2018. Typically, the total annual energy under this contract represents approximately two percent of LUS' total annual energy requirement.

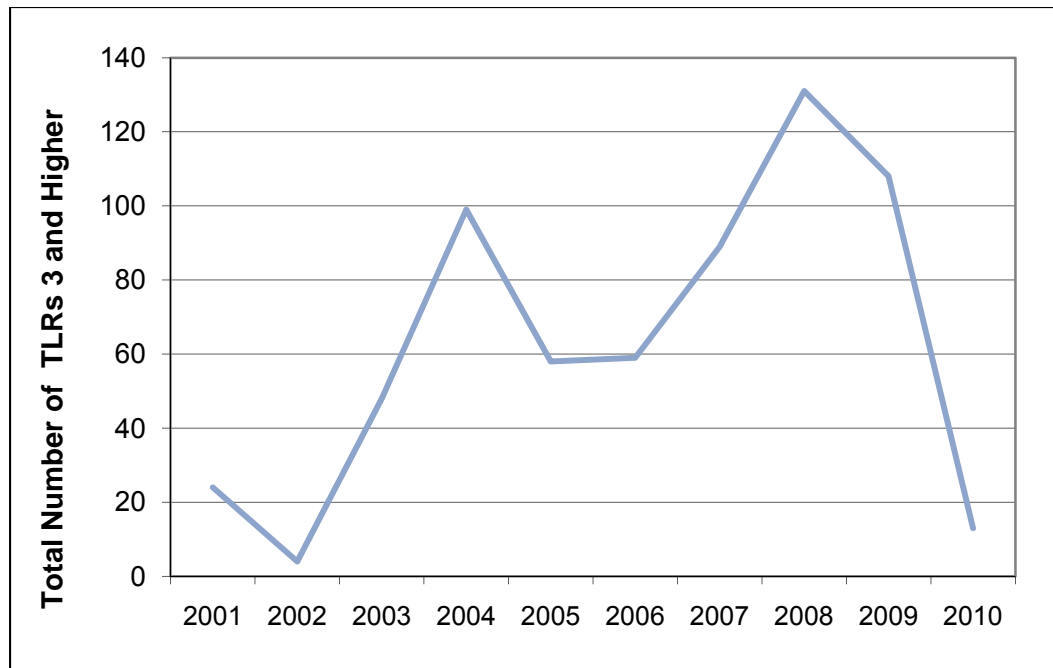
## Power Sales

### Electric Interconnection and Interchange

System interconnection refers to a connection between two electric systems permitting the transfer of electric energy in either direction. Interchange refers to kilowatt-hours delivered to, or received by, one electric utility or pooling system from another. Transmission access refers to the ability of third parties to make use of transmission facilities owned by others (wheeling utilities) to deliver power to another utility.

In addition to local energy resources, LUS utilizes electric capacity and energy from outside of its geographic boundaries in order to improve the reliability of supply and to capture available economic benefits. US staff verbally reported that transmission studies performed by the SPP have indicated that the system is nominally capable of importing such capacity, but is seasonally limited to 298 MW from May 1 through October 1 of each year. Normally, this seasonal limit does not adversely impact LUS' day-to-day operations. However, when certain elements of the transmission system are out of service (due to forced outage conditions that are caused by weather, equipment failures, etc.) or when energy market based dispatch causes additional stress on the transmission system, reductions in the import limit are required.

SPP has studied the conditions and impacts of import curtailments into the Acadiana Load Pocket and formalized a reaction plan that is based on a seven-tier Transmission Loading Relief (TLR, which is a part of NERC) program. It is LUS' opinion that TLR levels three through six are significant and generally have an adverse impact on economic dispatch and the reliability of electric service to customers. LUS tracks TLR events and the total number of TLR threes through sixes (per year) are shown in the following Figure 5-11.



Source: E. Rivera, LUS, 3/11

Figure 5-11: Total Number of TLR 3 and higher Per Year<sup>1</sup>

Figure 5-11 indicates that TLR events and associated impacts on import limits have been increasing during the 2001 through 2009 time-frame and exceeded 100 occurrences in calendar years 2008 and 2009. The reported TLR events for 2010 are much lower than in previous years due to LUS' agreeing to adjust LUS' system prior to a level 3 TLR event. LUS should monitor the impact of TLR events on LUS' operations and track the financial implications for TLR events as well as adjustments made to avoid TLR events.

The consequences of import limit reductions could include a reduction in electric reliability or an increase in the cost of capacity and energy. Regarding reliability, LUS staff verbally indicated that the SPP has, in limited circumstances, required LUS to operate the Doc Bonin or Hargis-Hébert power plants in order to remediate overloaded transmission lines. While this operational strategy is technically feasible, the Doc Bonin and Hargis-Hébert power plants are higher cost resources to LUS than other market-based alternatives. Consequently, LUS' cost of capacity and energy would increase during such conditions.

LUS staff verbally indicated that the Acadian Load Pocket utilities are aware of these conditions and have collectively budgeted approximately \$230 million for new transmission capital projects to address import limit reductions. LUS' share of this amount is approximately \$30 million. The scheduled completion date for such projects is 2013. The SPP is expected to continue to annually study import limitations and TLR.

<sup>1</sup> TLR data is recorded on the basis of a calendar year and not LUS' fiscal year (data is incomplete for 2010).

The various interconnection, interchange, and transmission agreements in effect between LCG and other electric utilities and agencies are with Entergy Gulf States, Cleco, Cajun Electric Cooperative Inc. (now Louisiana Generating LLC, Louisiana Generating), Entergy Louisiana (formerly Louisiana Power and Light), Southwestern Electric Power Company (SWEPCO), and SPA. These agreements provide various terms for the purchase and sale of emergency, replacement, and economic energy. The existing agreements appear to be working satisfactorily for LUS. Certain details of these agreements are presented below.

### Entergy Gulf States

The City signed a long-term (31 years) Interconnection Agreement (Interconnection Agreement) with Entergy Gulf States (formerly Gulf States Utilities) in October 1984, which expires in 2015. LCG is recognized as a supplier to total requirements customers connected to the Entergy Gulf States system, and Entergy Gulf States has agreed to provide transmission service for delivery of the RPS2 power from the Cleco System to LCG if Cleco’s System is unable to make direct deliveries to LCG. The Interconnection Agreement provides for certain service and rate schedules as applicable between the parties, or which may be negotiated and entered into by the parties in the future. Under the Interconnection Agreement with Entergy Gulf States, LCG provides for reserve capacity requirements consistent with the reserve capacity guide as adopted or recommended by the South Central Systems of the North American Power Systems Interconnection Committee, or any successor body. Reserves are to be consistent with the Utilities System’s load responsibilities taking into account any firm purchases and sales.

### Cleco

Cleco and LCG entered into an Electric System Interconnection Agreement (ESIA) in 1991. The term of the agreement is such that the ESIA shall not terminate sooner than August 29, 2016, and thereafter shall continue in effect for five-year periods unless terminated by written notice given by one party to the other. The agreement provides the following:

- Identification of the Unit – a point where power may flow into Cleco facilities from an LCG power source, or an LCG-contracted power source.
- Identification of the following power delivery points and associated capacity effective with agreement modifications are presented in Table 5-15.

**Table 5-15  
Power Delivery Points**

138 kV and Above	Contract Demand – MW
Lafayette	221
LEPA <sup>(1)</sup>	25

(1) Louisiana Energy and Power Authority (LEPA)

Source: Ron Gary, LUS, 3/11

### Interchange

LUS has entered into interchange agreements with Louisiana Generating, SWEPCO, Entergy Louisiana, and the SPA. The expiration and extensions provisions of each of these agreements are provided in Table 5-16; however, all of these agreements are still in effect.

**Table 5-16**  
**Interchange Agreements**

Entity	Term and Extension Provisions
Louisiana Generating	Any date after May 23, 1993 with three years notice
Entergy Louisiana	Automatically extends for three-year periods until terminated with 18 months notice
SWEPCO	January 1, 1996, or the first of any year following a four-year notice
SPA	May 2018

Source: Ron Gary, LUS, 3/11

### Joint Ownership/Use

The Amended and Restated Agreement for Joint Ownership, Construction and Operation of the RPS2 between LPPA, Cleco, and LEPA was entered into in November 1982 and is to remain in effect throughout the useful life of RPS2. This agreement was amended in 1986 to provide for the transmission of LPPA's ownership percentage of generation from RPS2 to points of delivery other than the point of interconnection with LCG.

### Fuel Supply

#### Coal for Rodemacher Unit No. 2

The principal fuel for the Rodemacher Plant is coal mined in Campbell County, Wyoming, which can be supplied to the plant by Rio Tinto Energy America, Coalsales, LLC and/or Arch Coal Sales Company, Inc., under master coal purchase agreements. The coal is purchased through confirmation notices. These master coal purchase agreements include provisions for adjustment of the coal price based on changes in law, sulfur content, and Btu of coal and provide LPPA with multiple options to purchase its coal needs. As operator of the RPS2, Cleco has the responsibility to represent the other Owners in connection with fuel supply and associated contracts.

The original contract was executed in 1973 by Cleco and since that time has been renegotiated several times. In November 2007, a second master coal purchase agreement was executed with Coalsales, LLC for purchase of coal in quantities as set forth in confirmation notices.

### **Crosstex Gulf Coast Marketing, Ltd**

Natural gas supply and delivery is provided from Crosstex for 1,000,000 MMBtu minimum annual requirement pursuant to a base contract between Crosstex and TEA dated September 1, 2002, which is backed by LUS, in conjunction with a confirmation between TEA and Crosstex dated January 1, 2007. The confirmation is set to expire on January 1, 2011. Contractually, there is a requirement for LUS to nominate daily requirements one week prior to the beginning of each month. Coupled with the nomination requirement is a daily true-up of the actual volumes purchased versus nominated volumes. In the event LUS purchased less than the nominated volume of gas, Crosstex would sell the difference into the market at the current sales price. Delivery is to the Doc Bonin Plant on pipelines owned by Crosstex and is considered firm.

### **ATMOS Energy Marketing, LLC**

Natural gas supply is also provided from ATMOS Energy Marketing, LLC (ATMOS) for up to 20,000 MMBtu per day pursuant to a base contract between ATMOS and TEA dated February 1, 2004, which is backed by LUS, in conjunction with a confirmation between TEA and ATMOS dated August 1, 2007. This confirmation was scheduled to expire on June 30, 2008 but continued on a month-to-month basis upon mutual agreement of the parties while a new confirmation was being negotiated. Confirmation No. 3 between TEA and ATMOS was executed on October 28, 2008 for deliveries to the Hargis-Hébert plant, which expired on October 31, 2010. Delivery to the Hargis-Hébert Plant is on pipelines owned by Gulf South. While delivery has not been curtailed the transportation is considered interruptible.

Confirmation No. 4 between TEA and ATMOS was executed on August 9, 2009 for deliveries to the T. J. Labbé and Doc Bonin plants over pipelines owned by Columbia Gulf Transmission Company. This confirmation will expire on October 31, 2012.

In addition to the “base” volumes purchased from Crosstex, TEA purchases natural gas on the spot market from Crosstex and multiple other suppliers for LUS in order to fulfill LUS’ annual gas requirements.

## **Other Agreements**

### **Southwestern Louisiana Electric Membership Co-op**

In 1987, LUS entered into a non-competitive agreement with Southwestern Louisiana Electric Membership Co-op (SLEMCO) for certain electric customers outside of the City limits. On September 10, 2004, LUS entered into a new 15-year, non-competitive agreement with SLEMCO. The agreement allows for an orderly acquisition of customers from SLEMCO at pricing specified in the agreement.

### **CT Parts Agreement**

LUS and TransCanada Turbines, Inc. entered into a combustion turbine Parts Agreement for the supply of parts for the CTs installed or being installed in the City.

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The CT Parts Agreement effective November 9, 2006 (executed on February 17, 2006) essentially gives LUS CT parts price certainty for a five-year term (expires February 16, 2011).

### CT Maintenance Agreement

LUS and GE Packaged Power, Inc. (GE) entered into a Services Agreement dated September 21, 2006 (executed on November 9, 2006) for maintenance activities relating to the four LM6000 CTs. Pursuant to the agreement, GE is to provide engineering, field supervision, and craft labor on an as needed basis at the request of LUS. The term of the agreement is through the later of completion of one major inspection on the covered units or six years.

### Major Contract Summary

A summary of the contracts and agreements is provided in Table 5-17.

**Table 5-17**  
**Contracts and Agreements**

Contracts & Agreements Between		Date Signed/Renewed	Termination Date	Provisions
LUS	TEA	November 28, 2000	Upon 30 days notice	Power and Fuel Marketing
LPPA	Cleco, LEPA	November 1, 1982	End of useful life	Joint ownership of RPS2
LCG	LPPA	May 1, 1997	End of useful life	Purchase of power from LPPA's 50 percent share in Rodemacher Unit 2
LCG	SPA	January 1, 2004	December 31, 2018	Purchase of Power
LCG	Entergy Gulf States	October 1, 1984	October 1, 2015	Interconnection agreement for delivery of power
LCG	Cleco	1991	August 29, 2016	Interconnection agreement for delivery of power
LUS	Louisiana Generating	May 23, 1983	Upon 3 year notice	Interchange agreement for electric transmission
LUS	Entergy Louisiana	October 6, 1988	Upon 18 month notice	Interchange agreement for electric transmission
LUS	SWEPCO	May 1, 1994	Upon 45 days notice	Interchange agreement for electric transmission.
LUS	Rio Tinto Energy America	December 11, 2002	Upon 180 days notice	Purchase of coal for RPS2
LUS	Coalsales, LLC	November 7, 2007	60 days written notice	Purchase of coal for RPS2
TEA	Crosstex	January 1, 2007	January 1, 2011	Supply of natural gas for LUS generating facilities
TEA	ATMOS	October 28, 2008	October 31, 2010	Supply of natural gas for Hargis-Hébert generating facilities
LUS	SLEMCO	September 10, 2004	September 10, 2019	Customer acquisition agreement
LUS	TransCanada	November 9, 2006	5 years	CT Parts
LUS	GE	November 9, 2006	6 years	CT Maintenance Services

Contracts & Agreements		Date	Termination	Provisions
Between		Signed/Renewed	Date	
LUS	TEA	February 7, 2007	Upon 30 days notice	Amended Section 9 – Compensation
LUS	Arch Coal Sales, Inc	August 4, 2009	Upon 30 days notice	Purchase of coal for RPS2
TEA	ATMOS	August 9, 2009	October 31, 2012	Supply of natural gas for T. J. Labbé & Doc Bonin generating facilities

Source: Ron Gary, Karen Hoyt, LUS, 3/11

## Regulatory & Environmental

LUS operates the Doc Bonin Plant, T. J. Labbé Plant, Hargis-Hébert Plant, and owns an interest in RPS2 in Boyce, Louisiana. Another LUS facility, the Curtis Rodemacher Station in Lafayette, is no longer in operation and is being decommissioned. Detailed information on regulatory and environmental permits for each facility is detailed in Section 9, Environmental Issues.

## Changing Electric Utility Environment

Deregulation of the electric utility industry at the retail level is currently not an issue of significance in Louisiana. Although retail deregulation is currently in place in neighboring Texas and in other states across the country, it apparently has an insignificant amount of influence in Louisiana. However, at the wholesale level, LUS could be facing new challenges resulting from increased competition in the wholesale power market. Part of this challenge is being met by LUS' newly installed generation resources. There may be significant future opportunities for LUS to take advantage of such change. Capitalizing on these opportunities will be extremely difficult if the decision-making process is not quick and efficient. Although the current process is consistent with other municipal utilities, it will not provide the flexibility to compete with other participants in the industry, such as independent power producers, investor-owned utilities, non-regulated subsidiaries of utility holding companies or power marketers.

## Enterprise Risk Management

LUS conducts a wide range of planning and coordination activities that serve to reduce operational and financial risk exposures. In keeping with current trends toward greater risk disclosure and control, LUS should establish a formalized Enterprise Risk Management Program. An Enterprise Risk Management Program incorporates such activities as electric power marketing, organizational and operational issues and other concerns that potentially impact the financial integrity of the LUS as a whole.

## Regional Reliability Councils

LUS is located in an area that is primarily served by two separate Investor-Owned Utilities, Cleco and Entergy Gulf States, Inc. (Entergy-GSU). Cleco and LUS are

members of the SPP, which is a FERC-approved Regional Transmission Organization (RTO) and a NERC region. As an RTO, SPP has 47 members across eight southwestern states that currently provide independent reliability coordination and tariff administration, planning, operating and reliability assessment studies. SPP provides regional transaction scheduling. On February 1, 2007, SPP launched its Energy Imbalance Services (EIS) Market. The wholesale energy market is to allow for more economically efficient deployment of wholesale electricity generation across the SPP region through the establishment of an offer-based market for energy imbalance services. SPP is an independent, non-profit organization, which operates the EIS Market under a tariff approved by FERC. The SPP tariff is consistent with the mandate of FERC Order No. 2000 and requires RTOs to provide Real-Time energy imbalance services and a market-based mechanism for congestion management. Entergy, the parent of Entergy-GSU, is a member of the NERC Southeastern Electric Reliability Council (SERC) which does not operate as an RTO.

Long-term firm sales or purchases of generating resources not utilizing existing firm transmission service arrangements may require substantial transmission upgrades to ensure firm delivery over either the SPP or Entergy systems. Currently, LUS uses the electric power market to purchase short-term energy when it is economically advantageous to do so. LUS will also sell into the market when it has excess generation and it is economical to do so. LUS has an agreement with TEA who performs the wholesale power negotiations and transactions.

### Energy Policy Act of 2005

The Energy Policy Act of 2005 (EPAAct 2005) may affect LUS and related energy markets in the future. This legislation addresses, among other things, energy efficiency, renewable energy, nuclear energy, and electricity-related reforms; it also provides incentives for oil and gas production and encourages the deployment of clean coal technology. Below is a summary of some of the bill's reforms relating to electricity and renewable energy and certain relevant FERC actions.

#### Electricity – Title XII

Title XII of EPAAct 2005 covers electricity, with the majority of the provisions requiring implementation by FERC, some of which have already been acted on or are in process as discussed below.

EPAAct 2005 creates a self-regulating reliability organization that is charged with developing electric reliability rules that are mandatory and subject to enforcement penalties for all market participants, including LUS, with FERC having oversight over the rules and their enforcement.

In March 2007, FERC issued Order No. 693 entitled “Mandatory Reliability Standards for the Bulk-Power System” or “Reliability Standards Order.” In this order, FERC approved reliability standards that were developed by the NERC which FERC has certified as the Electric Reliability Organization (ERO) responsible for developing and enforcing these mandatory reliability standards. The Reliability Standards Order applies to all users, owners and operators of the bulk-power system within the United States (other than Alaska or Hawaii), including LUS.



In February 2007, FERC issued Order No. 890 reforming its pro forma Open Access Transmission Tariff (OATT) adopted in 1996 pursuant to Order Nos. 888 and 889. Order No. 890's reforms include: (i) greater consistency and transparency in available transmission capacity calculations; (ii) open, coordinated and transparent planning; (iii) reforms of energy imbalance penalties; (iv) reform of rollover rights policy; (v) clarification of tariff ambiguities; and (vi) increased transparency and customer access to information. All public utilities, including RTOs (e.g., PJM and MISO) and Independent System Operators are required to file revisions to their OATT to conform to Order No. 890 pursuant to a compliance schedule established by FERC.

LUS' ECS Section is responsible for generating unit commitment, dispatch, the purchase and sale of wholesale power and the operation of the SCADA system for all LUS facilities. All shift operators are NERC certified as mandated by NERC. The ECS division was audited by NERC in 2009 for compliance with standards and operating procedures and LUS was found to be compliant in all areas reviewed.

### Time-Based Metering

EPA 2005 requires electric utilities with retail sales in excess of 500 million kWh per year to consider offering time-based rates and metering to their customers. With Time-of-Use (TOU) rates, the rates charged vary during different time periods and reflect any variance in the utility's costs of generating or of purchasing electricity at the wholesale level. The retail electric sales of LUS are over 500 million kWh per year, thus it appears that LUS is subject to the TOU rates requirements.

### Smart Grid

EPA 2005 Section 1252, prescribes policy directly related to Smart Grid and Demand Response, including:

- Requires the Department of Energy (DOE) to conduct a national assessment of Demand Response potential and submit a report on such to Congress (issued in January 2006).
- Requires FERC to undertake an annual assessment of Demand Response and issue a report that addresses the penetration rate of advanced (smart) metering and other related technologies that enable demand response.
- Contains a statement that pursuit of demand response is in the policy interest of the United States.
- Creates a new Standard under the Public Utilities Regulatory Policies Act (PURPA) that focuses on Demand Response and its enabling technologies. The new Standard calls for all utilities to offer time-based rates and for utilities to provide a suitable meter to any customer requesting such rate or demonstrate why compliance cannot be achieved. Based on the legislative construct of PURPA, however, utilities are not directly required to meet this Standard. Instead, state public utility commissions or other entities with jurisdiction over public/municipal and rural electric cooperative utilities are required to conduct an investigation as to whether this new Standard is appropriate for its particular jurisdiction or utility.

In August 2009, LUS made an application under the American Recovery and Reinvestment Act (ARRA) for funds to assist them in a proposed Smart Grid project. In October 2009, ARRA notified LUS that it had been awarded approximately \$11.3 million for Smart Grid. In February 2010, LUS' Council approved its financial participation in this project. LUS ARRA application indicates that key features of this project are expected to include the following:

- The project would include AMI including two-way communications down to customer appliances, dynamic pricing (time-of-use pricing), load control, and demand response applications.
- Smart Grid would be incorporated into LUS' existing fiber optic network infrastructure.
- The intent of the project would be to enhance electric delivery, reliability, enable customers to better manage energy costs and assist LUS in asset optimization and the reduction of environmental impact.
- Matching funds from ARRA would be used to accelerate the implementation of Smart Grid functions, deployment of smart meters, an Outage Management System (OMS) and Meter Data Management System (MDMS) and customer education.
- Smart Grid deployment is proposed to eventually cover LUS' entire service territory.
- While ARRA funds would be used solely for the Electric Utility, deployment of AMI water meters would also be a part of LUS' Smart Grid project.
- AMI meter proposals were solicited and received during 2010. Installation and integration into LUS' billing system is expected to occur in 2011.

## Financial

### Capital Outlay Program

#### Fiscal Year 2010

Table 5-18 provides the fixed plant and equipment expenditures made during 2010. LUS accounts for such expenditures by using a capital work order system. All extensions or improvements made to the Utilities System are considered to be necessary for the safe, reliable or economic operation of LUS.

Table 5-18  
Capital Work Order Expenditures

Source of Funds	2010
Normal Capital	
Bond Reserve & Capital Additions	\$2,516,643
Special Equipment	359,692
2004 Revenue Bonds	3,350,256
Retained Earnings	2,251,424
Total	\$8,478,016

Source: LUS Status of Construction Work Orders

### Five-Year Capital Outlay Program

We recommend that LUS review and continue to improve the management of the COP, including the cost and schedule estimation and control processes. Schedules and the estimated costs of each project should be refined as the project moves from conceptual design to detailed construction design. This will allow a detailed budget and schedule to be established two to six months prior to commencing the project.

The estimated requirements for improvements to the electric department for the 2011 to 2015 time-frame are summarized in Table 5-19 and were obtained from the Five-Year COP in the LCG Adopted Budget.

Table 5-19  
Capital Outlay Program 2011 – 2015 (\$000)

	2011	2012	2013	2014	2015	Total
Acquisitions	1,545	0	0	3,000	0	4,545
Production	8,450	6,330	3,900	4,080	4,300	27,060
Distribution	4,236	2,627	2,612	300	100	9,875
Substation	110	4,505	3,935	8,110	10	16,670
Transmission	1,732	735	485	4,007	10	6,969
General	<u>1,420</u>	<u>60</u>	<u>10</u>	<u>10</u>	<u>10</u>	<u>1,510</u>
Total	17,493	14,257	10,942	19,507	4,430	66,629

Source: LUS Five-Year Capital Outlay Program Summary, 2009-2010 Adopted Budget, Combined Summary Retained Earnings and Bond Capital

### Acquisitions

LUS has planned for the acquisition of utility customers from SLEMCO. LUS entered into a 15-year contract with SLEMCO, which allows LUS to serve an additional 3,104 customers from 2004 through 2019.

## Section 5

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LUS also acquired approximately 400 electric customers who reside within the annexed areas of the City and were previously served by Entergy. Electric service has been transferred to LUS for the majority of these customers. Plans are being designed to extend distribution circuit as required to serve the remaining customers.

The current COP does not include capital expenditures related to the Smart Grid/AMI project. A revised capital plan is currently being developed.

### Production

Production funds represent improvements to existing power plants, including improvements to boilers, turbines, control systems, fire protection and cooling towers.

### Distribution

LUS has plans for the re-conductoring of circuits, road widening, feeder extensions, new feeders and feeder ties to extend service to new areas of the City previously annexed, as identified from engineering and planning and to serve new customers and developments.

### Transmission

Transmission funds represent the planned construction and improvement of a new transmission line between the Hargis-Hebert Switchyard and the Southeast Substation (future), as well as a new transmission line between T. J. Labbé Switchyard and Doc Bonin Switchyard. Funds also include the expansion of T. J. Labbé Switchyard, the expansion of Doc Bonin Switchyard, two auto transformers, and one transmission capacitor bank.

### Substation

Substation funds represent improvements, oil spill containment, software, breakers and autotransformers improvements or additions. Certain improvement projects are in progress and were not completed during 2010. Such projects will be noted in future reports, including

- Southeast Substation: The previously planned completion date was 2011. However, delays in property acquisitions have delayed the planned completion date to FY2012-13.
- Peck Substation Rehabilitation: Planned completion date is FY2012-13.

The staff is concerned about the impact on the system from Rodemacher Unit 3, which came on line in February 2010. Although a system impact study was performed, staff questions whether or not the assumptions used in the transmission flow analysis represent current operating practices. Also of concern in the coming years are the reliability constraints of the transmission system in the area. The mitigation plan for these constraints is addressed in the agreement between LUS, Cleco and Entergy to fund, construct, own and operate a set of transmission facilities upgrades in the Acadiana Load Pocket (ALP).

## General

Video monitoring was installed at 12 substations during 2009. Two additional installations were completed in December 2009. All switchyards and substations are now equipped with access card requirements to access the facilities and control buildings. A new warehouse was construction in late 2009 to house the LUS Fiber materials and equipment.

General funds shown in the COP are mostly for the new Customer Service and Operations Facility. Smaller projects include software and a property purchase.

## Operating Results

Table 5-20 summarizes the Electric Utility revenues and expenses for the most recent five years. In 2010, the Electric Utility operating revenues remained relatively flat, increasing by 1.6 percent, or approximately \$2.8 million, from 2009. During 2010, Electric Utility total O&M expenses increased by 3.2 percent. The natural gas cost increased by 36.1 percent, or \$9.5 million, due to higher natural gas prices. The LPPA purchased power cost decreased 1.8 percent, or \$1.2 million, due to increased market purchases. Purchased Power cost (other than LPPA) decreased 31.4 percent, or \$5.5 million. Other O&M costs decreased by about 4.4 percent, or \$1.1 million, during 2010.

LUS passes fuel costs on to retail customers via a fuel adjustment factor. LUS reviews the fuel adjustment factor monthly and adjusts the calculation periodically in order to recover fuel and purchased power costs. In 2010, the Net Margin decreased by approximately 16.2 percent, or \$5.2 million from 2009 levels.

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**Table 5-20**  
**Electric Utility Operating Results**

	2006	2007	2008	2009	2010
<b>Electric Operating Revenues (\$)</b>					
Retail	166,022,707	166,149,829	189,513,152	162,840,592	164,430,120
Wholesale <sup>(1)</sup>	6,927,781	1,150,327	1,329,215	1,334,735	3,952,181
Other	<u>2,100,012</u>	<u>2,395,985</u>	<u>4,784,975</u>	<u>5,542,082</u>	<u>4,102,088</u>
Total Electric Operating Revenues (\$)	175,050,499	169,696,141	195,627,343	169,717,409	172,484,389
<b>Electric Operating Expenses (\$)</b>					
Operation Expenses	87,759,895	77,215,993	85,279,753	83,500,324	76,768,205
Fuel – Gas	19,521,843	27,863,787	46,286,299	26,187,503	35,639,036
Purchased Power – LPPA	56,789,937	62,412,389	61,874,524	65,840,205	64,653,777
Purchased Power – Other	30,969,958	14,803,604	23,405,229	17,660,119	12,114,427
Other	19,073,385	20,426,428	21,087,919	24,748,572	23,660,779
Maintenance Expenses	<u>5,759,089</u>	<u>7,470,080</u>	<u>7,725,129</u>	<u>8,311,946</u>	<u>11,267,443</u>
Total Operating Expenses (\$)	132,114,212	132,976,289	160,379,100	142,748,345	147,335,463
<b>Electric Non Operating Revenues (Expenses) (\$)</b>					
Interest Revenues	5,014,681	5,415,927	4,402,446	5,216,213	1,911,058
LUS Fiber Start –up Cost Reimbursement	0	1,059,598	0	0	\$0
Miscellaneous Non Operating Revenues	478	0	91,873	108,855	(56,504)
Fiber to the Home (FTTH) Start Up Project	(501,721)	0	(24,173)	(42,409)	0
Interest on Customer Deposits	(9,496)	(9,538)	(10,711)	(14,400)	(5,909)
Hurricanes Rita, Katrina and Gustav	(90,375)	0	(65,769)	0	0
Tax Collections/Non Operating	(140,481)	12,759	52,410	91,947	55,521
Miscellaneous Non Operating Expense	<u>0</u>	<u>0</u>	<u>(32,767)</u>	<u>(57,485)</u>	<u>0</u>
Total Non Operating Revenues (Expenses) (\$)	4,273,086	6,478,746	4,413,309	5,302,721	1,904,166
Net Margin (\$) <sup>(2)</sup>	47,209,373	43,198,599	39,661,552	32,271,785	27,053,091

(1) LUS provided wholesale sales to LEPA under a contract through December of 2005

(2) Before Depreciation and Debt Service.

Source: LUS Financial and Operating Statements 2006-2010 audited

## Statistical Data

The selected statistical data in this Section pertaining to the number of customers, customer usage, and revenues by class was obtained or developed from the LUS Financial and Operating Statements for years 2006 through 2010.

### Revenues

Table 5-21 shows the Electric Utility statistics for the most recent five years. The total sales MWh increased by 8.0 percent between 2009 and 2010. The number of electric accounts increased by 0.5 percent over the last fiscal year.

## UTILITIES SYSTEM - ELECTRIC UTILITY

In 2010, the average electric usage per retail customer increased by 3.0 percent, from 31,252 kWh to 32,196 kWh. The average electric revenue per retail customer, including fuel cost adjustment charges increased by 0.4 percent in 2010 compared to 2009. Table 5-24 shows the wholesale revenue on a per MWh basis increased by 18.8 percent from \$22.00 per MWh in 2009 to \$26.14 per MWh in 2010.

**Table 5-21**  
**Electric Sales Revenue and Statistics**

	2006	2007	2008	2009	2010
<b>Electric Sales Revenues (\$)</b>					
Retail - Rate Base	69,066,474	70,333,804	71,213,614	71,907,624	80,680,077
Retail - Fuel Adjustment	96,956,233	95,816,026	118,299,538	90,932,968	83,750,043
Wholesale <sup>(1)</sup>	6,927,781	1,150,327	1,329,215	1,334,735	3,952,181
Other	<u>2,100,012</u>	<u>2,395,985</u>	<u>4,784,975</u>	<u>5,542,082</u>	<u>4,102,088</u>
<b>Total Electric Sales Revenues (\$)</b>	<b>175,050,499</b>	<b>169,696,141</b>	<b>195,627,343</b>	<b>169,717,409</b>	<b>172,484,389</b>
<b>Electric Sales (MWh)</b>					
Retail	1,883,007	1,917,891	1,933,371	1,950,205	2,020,173
Wholesale	<u>101,846</u>	<u>34,661</u>	<u>33,071</u>	<u>60,673</u>	<u>151,215</u>
<b>Total Sales</b>	<b>1,984,853</b>	<b>1,952,552</b>	<b>1,966,442</b>	<b>2,010,878</b>	<b>2,171,388</b>
<b>Electric Number of Accounts (Average)</b>					
Retail	58,722	60,018	61,752	62,403	62,746
Wholesale	<u>12</u>	<u>13</u>	<u>13</u>	<u>13</u>	<u>13</u>
<b>Total Accounts</b>	<b>58,734</b>	<b>60,031</b>	<b>61,765</b>	<b>62,416</b>	<b>62,759</b>
<b>Electric Statistics – Retail</b>					
Usage per Account (kWh)	32,066	31,955	31,309	31,252	32,196
Revenue per Account (with fuel) (\$)	2,827	2,768	3,069	2,609	2,621
Revenue per Account (without fuel) (\$)	1,176	1,172	1,153	1,152	1,286
Revenue per MWh (with fuel) (\$)	88.17	86.63	98.02	83.50	81.39
Revenue per MWh (without fuel) (\$)	36.68	36.67	36.83	36.87	39.94
<b>Electric Statistics - Wholesale</b>					
Usage per Account (kWh)	8,487,167	2,666,231	2,543,923	4,667,154	11,631,923
Revenue per Account (with fuel) (\$)	577,315	88,487	102,247	102,672	304,014
Revenue per MWh (with fuel) (\$)	68.02	33.19	40.19	22.00	26.14

(1) LUS provided wholesale sales to LEPA under a contract through December of 2005

Source: LUS Financial and Operating Statements 2006-2010 audited

### Power Costs

Table 5-22 summarizes Electric Utility power costs for the most recent five years. As shown in this table, the total Electric Utility energy costs decreased overall by

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3.2 percent to \$52.75 per MWh in 2010. Self-generation costs decreased by 4.2 percent per MWh primarily due to the decrease in fuel prices. On a unit basis, total purchased power costs decreased by 7.0 percent per MWh from 2009 to 2010. LPPA purchased power costs decreased by 9.1 percent per MWh.

**Table 5-22**  
**Electric Utility Annual Power Costs**

	2006	2007	2008	2009	2010
<b>Expenses</b>					
Self Generation (\$)					
Fuel	19,521,843	27,863,787	46,286,299	26,187,503	35,639,036
Other	<u>3,877,304</u>	<u>5,685,003</u>	<u>6,495,265</u>	<u>6,642,118</u>	<u>10,191,250</u>
Total Self Generation (\$)	23,399,147	33,548,790	52,781,564	32,829,621	45,830,286
Purchases (\$)					
LPPA	56,789,937	62,412,389	61,874,524	65,840,205	64,653,777
Other Supplies	<u>30,969,958</u>	<u>14,803,604</u>	<u>23,405,229</u>	<u>17,660,119</u>	<u>12,114,427</u>
Total Purchased Power (\$)	<u>87,759,895</u>	<u>77,215,993</u>	<u>85,279,753</u>	<u>83,500,324</u>	<u>76,768,205</u>
Total Supply (\$)	111,159,042	110,764,782	138,061,317	116,329,945	122,598,491
<b>Energy (MWh)</b>					
Self Generation	230,855	283,191	388,408	457,295	666,337
Purchases					
LPPA	1,484,509	1,576,314	1,430,888	1,316,905	1,422,361
Other Supplies	<u>421,554</u>	<u>223,593</u>	<u>284,029</u>	<u>359,833</u>	<u>235,474</u>
Total Purchased Power	<u>1,906,063</u>	<u>1,799,907</u>	<u>1,714,917</u>	<u>1,676,738</u>	<u>1,657,835</u>
Total Supply	2,136,918	2,083,098	2,103,325	2,134,033	2,324,172
<b>Average Costs (\$/MWh)</b>					
Self Generation (\$)					
Fuel	84.56	98.39	119.17	57.27	53.49
Other	<u>16.80</u>	<u>20.07</u>	<u>16.72</u>	<u>14.52</u>	<u>15.29</u>
Total Self Generation (\$)	101.36	118.47	135.89	71.79	68.78
Purchases (\$)					
LPPA	38.26	39.59	43.24	50.00	45.46
Other Supplies	<u>73.47</u>	<u>66.21</u>	<u>82.40</u>	<u>49.08</u>	<u>51.45</u>
Total Purchased Power (\$)	<u>46.04</u>	<u>42.90</u>	<u>49.73</u>	<u>49.80</u>	<u>46.31</u>
Total Supply (\$)	52.02	53.17	65.64	54.51	52.75

Source: LUS Financial and Operating Statements 2006-2010 audited

## Expenses

As shown in Table 5-23, the compounded annual average changes in Electric Utility expenses over the last five years are as follows:



## UTILITIES SYSTEM - ELECTRIC UTILITY

- Production Expense – Non-Fuel – 27.30 percent increase
- Transmission Expense – 5.9 percent decrease
- Distribution Expense – 9.1 percent decrease
- Administrative Support – 0.9 percent decrease

Administrative Support expenses include Customer Operations, Customer Services, and Administrative and General (A&G) Expense. The Utilities System has experienced a significant growth in Administrative and General Expense. This significant growth is a result of changes in accounting practices, employee health insurance rates, and credits for Administrative Expenses transferred.

**Table 5-23  
Electric Utility Detailed Expenses**

	2006	2007	2008	2009	2010
Electric Production Expense (\$)					
Operation – Fuel	19,521,843	27,863,787	46,286,299	26,187,503	35,639,036
Operation – Non Fuel	1,955,089	2,135,202	2,552,478	2,754,221	3,158,473
Maintenance	1,922,215	3,549,801	3,942,787	3,887,897	7,032,777
Purchased Power – LPPA	56,789,937	62,412,389	61,874,524	65,840,205	64,653,777
Purchased Power – Other	30,969,958	14,803,604	23,405,229	17,660,119	12,114,427
Electric Transmission Expense (\$)					
Operation	4,264,403	4,017,349	4,094,431	5,393,998	5,316,005
Maintenance	94,166	153,215	122,595	101,969	165,393
Electric Distribution Expense (\$)					
Operation	1,652,025	3,160,416	3,156,114	3,739,038	3,584,827
Maintenance	3,742,709	3,767,064	3,659,747	4,322,081	4,069,273
Other Electric Expense (\$)					
Customer Operations	2,899,652	2,309,474	2,464,103	2,926,847	2,651,103
Customer Services	47,426	76,140	67,450	86,918	59,211
Administrative & General	<u>8,254,790</u>	<u>8,727,846</u>	<u>8,753,343</u>	<u>9,847,550</u>	<u>8,891,160</u>
					147,335,463
Total Electric Expense (\$)	132,114,212	132,976,289	160,379,100	142,748,345	35,639,036

Source: LUS Financial and Operating Statements 2006-2010 audited

### Comparative Operation and Maintenance Expenses

Table 5-24 compares LUS O&M expenses with other public power systems across the United States. The data in Table 5-27 for the other public power systems are from the APPA *Selected Financial and Operating Ratios of Public Power Systems* survey report published March 2010 (APPA Report). The survey included 213 public power systems. The APPA data represents 2008 operations.

**Table 5-24**  
**O&M Expense Comparison - Public Power Systems**

Operating Ratios – 2008 Median Values	20,000 to 50,000 Customers	50,000 to 100,000 Customers	Southwest	LUS 2008	LUS 2009	LUS 2010
1. Total O&M Expenses per kWh Sold (\$)	0.069	0.081	0.064	0.082	0.071	0.067
2. Total O&M Expense (excluding Power Supply) per Retail Customer (\$)	348	462	448	361	424	394
3. Total Power Supply Expense per kWh Sold (\$)	0.057	0.067	0.060	0.070	0.058	0.056
4. Purchased Power Cost per kWh (\$)	0.054	0.063	0.061	0.050	0.050	0.046
5. Retail Customers per Meter Reader	6,115	7,414	5,197	2,941	3,120	3,137
6. Distribution O&M Expense per Retail Customer (\$)	136	151	142	110	129	122
7. Distribution O&M Expense per Circuit Mile (\$)	4,897	9,539	6,507	7,609	8,743	8,302
8. Customer Accounting, Service and Sales Expense per Retail Customer (\$)	57	79	59	41	49	39
9. Administrative & General Expense per Retail Customer (\$)	124	165	168	142	158	145

Source: Ratios from 'Selected Financial and Operating Ratios of Public Power Systems' published by APPA in April 2010, 2008 Data For description on ratios, see glossary later in this Section  
LUS Financial and Operating Statements 2006-2010 audited

Because LUS had 62,746 electric retail customers in 2010, LUS would be comparable with utilities in the 20,000 to 50,000 customer range as well as utilities in the 50,000 to 100,000 customer range.

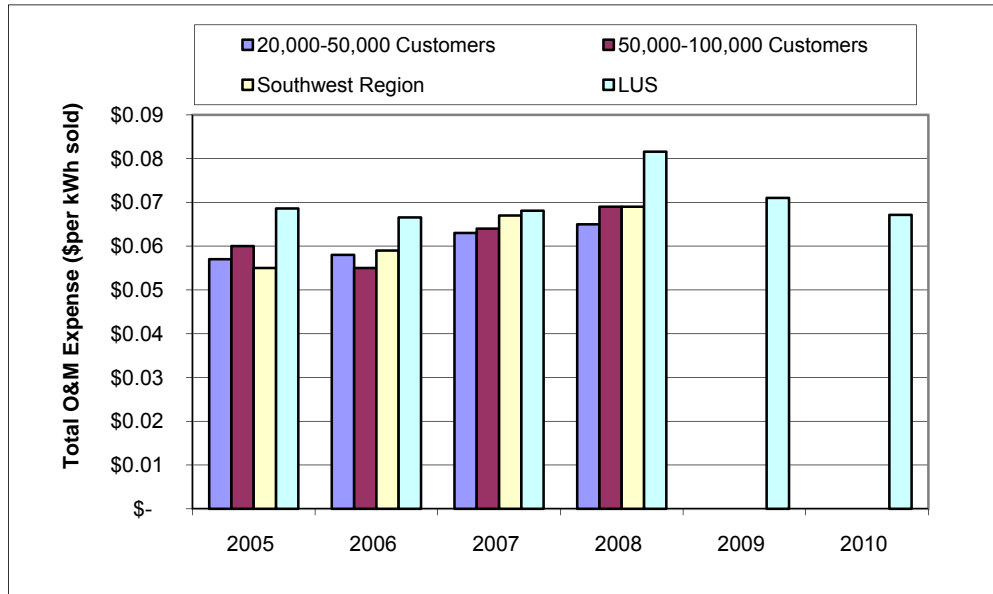


Figure 5-12: Total O&M Expense on a per kWh Basis

When comparing LUS’ Total O&M expense on a unit basis to utilities in the APPA report, LUS’ expenses appear to be higher in 2010 and average during other years as shown in Figure 5-12.

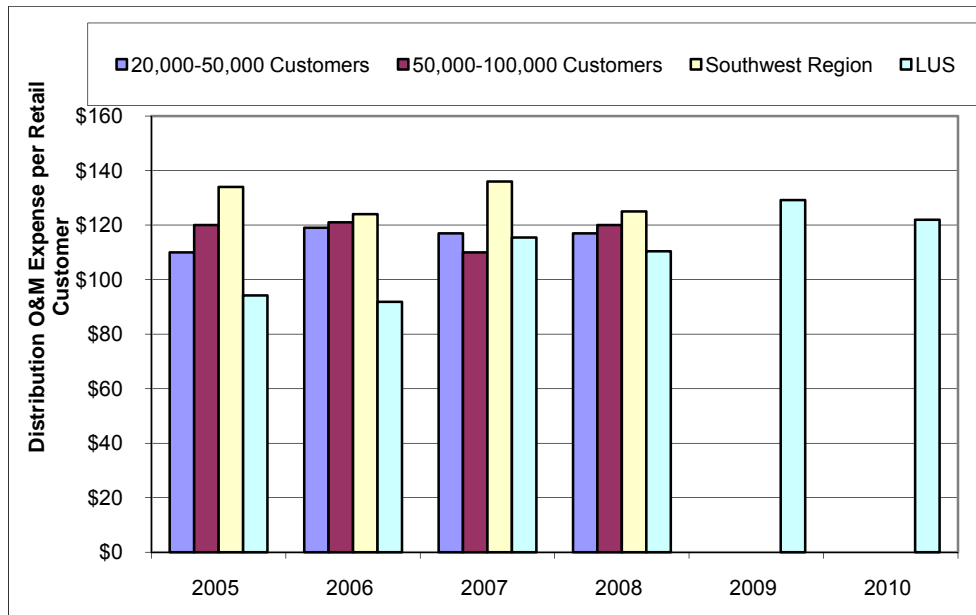


Figure 5-13: Distribution O&M Expense per Retail Customer

As shown in Figure 5-13, LUS’ Distribution O&M expense on a retail customer basis is average when compared with other utilities in the APPA report. This does not hold true when comparing Distribution O&M expense on a per circuit mile basis.

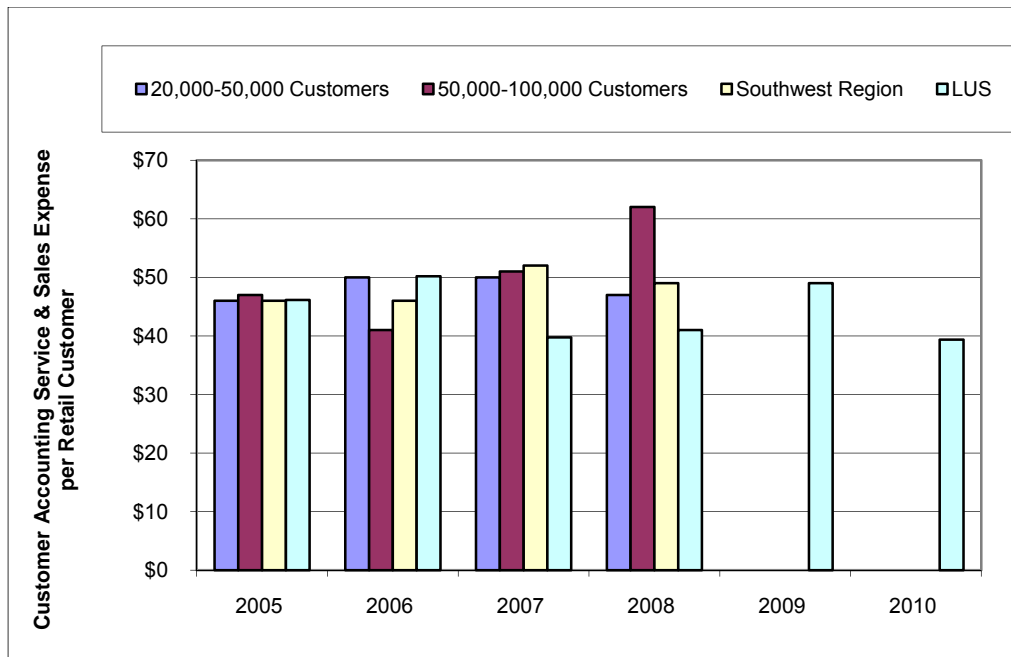


Figure 5-14: Customer Accounting Service & Sales Expense per Retail Customer

As shown in Figure 5-14, LUS’ customer-related expenses on a retail customer basis are average or slightly lower when compared with other utilities in the APPA report.

According to Table 5-27, LUS’ purchased power costs on a unit basis for 2008, 2009, and 2010 are slightly lower than the APPA averages. However, LUS’ retail customers per meter reader are much lower than the APPA averages. The 2008 through 2010 customer-related and A&G expenses also appear to be somewhat lower than average when compared to the APPA data.

### Glossary for Electric Operating Ratios

The following definitions and comments are excerpted from APPA’s report entitled *Selected Financial and Operating Ratios of Public Power Systems* and related to the ratio input data and national ratio statistics shown in Table 5-27.

#### Total Operation and Maintenance Expense per Kilowatt-Hour Sold (Line 1)

The ratio of total electric utility O&M expenses, including the cost of generated and purchased power, to total kWh sales to ultimate and resale customers includes the cost of generated and purchased power and measures average total O&M expenses associated with each kilowatt-hour of electricity sold, either for resale or to ultimate customers.

Included in O&M costs are the expenses associated with power supply (generation and purchased power), transmission, distribution, customer accounting, customer services, sales, and administrative and general functions of the electric utility. Because power supply expenses typically comprise the largest component of total O&M expenses, this ratio may be influenced by the proportion of power generated by a utility and the availability of alternative power supplies. Kilowatt-hours of electricity produced but

not sold (i.e., energy furnished without charge or energy used internally and energy losses) are not included in the denominator.

**Total Operation and Maintenance Expense (Excluding Power Supply Expense) per Retail Customer (Line 2)**

The ratio of total electric utility O&M expenses, excluding all costs of power supply, to the total number of ultimate customers, is the total O&M expense per retail customer.

O&M expenses include the costs of transmission, distribution, customer accounting, customer services, sales and administrative and general expenses. The cost of power supply (generation and purchased power) is excluded from the ratio. This ratio may be affected by population density and the mix of customers between various classes (residential, commercial, industrial or other). In addition, the extent that a utility services a large number of resale customers will influence the ratio.

**Total Power Supply Expense per Kilowatt-Hour Sold (Line 3)**

The ratio of the total costs of power supply to total sales to both ultimate and resale customers is the total power supply expense per kilowatt-hour sold. This ratio measures all power supply costs, including generation and purchased power, associated with the sale of each kilowatt-hour of electricity.

The ratio includes O&M costs arising from all generation types, including steam, nuclear, hydraulic and other types of generation. O&M expenses include the costs of fuel, labor, supervision, engineering, materials and supplies, and also include the cost of purchased power. The ratio may be influenced by the geographic location of the utility, the availability of alternative power supplies, the degree to which the utility can generate its own power, and access to transmission. The ratio does not include kilowatt-hours produced but not sold (i.e., energy used internally, energy furnished without charge, or energy losses).

**Purchased Power Cost per Kilowatt-Hour (Line 4)**

The ratio of the cost of purchased power to the amount of kilowatt-hours purchased measures the purchased power component of power supply costs.

Purchased power includes purchases from investor-owned utilities, municipalities, cooperatives or other public authorities for subsequent distribution and sale to ultimate customers. It does not include power exchanges. Adjustments to the cost data were made in a small number of cases to eliminate power exchanges. The cost reflects the amount billed, including adjustments and other charges.

The ratio may be influenced by the geographic location of the utility, availability of alternative power supplies, access to transmission, and the type of purchase agreement, such as firm power, economy power or surplus sales.

**Retail Customers per Meter Reader (Line 5)**

The ratio of retail customers to the number of meter readers employed by the utility measures the average number of retail customers served by each meter reader.

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The number of meter readers includes the total number of full-time meter readers plus half of all part-time meter readers. It is assumed that all part-time employees work half time (i.e., one full-time employee is equivalent to two part-time employees). Population density, frequency of meter readings, and the technology or method used to read meters will influence this ratio.

### **Distribution Operation and Maintenance Expenses per Retail Customer (Line 6)**

The ratio of total distribution O&M expenses to the total number of retail customers measures the average distribution expense associated with delivering power to each retail customer.

Distribution costs include expenses associated with labor, supervision, engineering, materials and supplies used in the operation and maintenance of the distribution system. The ratio will be influenced by population density and the mix of customer classes served by the utility.

### **Distribution Operation and Maintenance Expenses per Circuit Mile (Line 7)**

The ratio of total distribution O&M expenses to the total number of circuit miles of distribution line measures the total distribution costs associated with each circuit mile of distribution line used to deliver power to customers.

Distribution costs include expenses associated with labor, supervision, engineering, materials and supplies used in the O&M of the distribution system. The ratio will be affected by population density, the mix of customer classes served by the utility, the dispersion of customers within the utility's service territory, and the proportion of underground and overhead distribution lines.

### **Customer Accounting, Customer Service and Sales Expenses per Retail Customer (Line 8)**

The ratio of total customer accounting, service, and sales expenses to the total number of retail customers measures the average expenses incurred by the utility in handling each customer's account. This includes the costs of obtaining and servicing all retail customers. Uncollectible accounts and meter reading expenses are included in this ratio.

The ratio includes the cost of labor, materials, and other expenses associated with advertising, billing, collections, records and handling inquiries and complaints. It also includes the costs of promoting and providing customer service programs such as energy services or conservation programs. The ratio will be influenced by the degree to which the utility provides various energy services and other types of customer programs, and also by the mix of customer classes it serves.

### **Administrative and General Expenses per Retail Customer (Line 9)**

The ratio of total electric utility administrative and general expenses to the total number of retail customers measures the average administrative and general expenses incurred by the utility on behalf of each retail customer.

Administrative and general expenses are those electric O&M expenses not allocable to the costs of power production (generation and power purchases), transmission, distribution, or customer accounting, service and sales. Items which may be included are compensation of officers and executives, office supplies, professional fees, property insurance and claims, pensions and benefits, and other expenses not provided for elsewhere.

### Rate Revisions

During 2009, LUS performed a cost-of-service and rate design study for the Electric Utility. This study was performed in accordance with generally accepted industry practices for municipal utilities. Based on the study performed the following conclusions were presented:

- The Electric Utility current rates are not going to generate sufficient revenues to meet current costs.
- Under current rates, LUS will not be able to maintain a positive cash balance for its retained earnings account and will have difficulty funding future capital projects with current earnings that are integral to its long term financial planning strategies.
- Electric Utility rates need modification.

As a result of this study, the Council passed Ordinance O-012-2010 on February 9, 2010. An average base rate increase of 11 percent went into effect for Electric Utility customers on February 1, 2010 and an additional average base rate increase of 10 percent went into effect on November 1, 2010. With these rate increases, the Electric Utility is anticipated to be able to provide adequate and reliable service and a reasonable amount of revenues to LCG. Prior these rate adjustments in 2010, the base rate had last increased by seven percent on November 1, 2005.

As shown in Table 5-25, Electric Utility average Residential, Small Commercial and Large Commercial base rates remained generally flat from 2006 through 2009 and increased by less than ten percent in 2010. Since 2006, the average residential rates have increased by approximately 8.5 percent. The Small Commercial rates have increased by 9.8 percent since 2006, and the Large Commercial rates have increased by 8.4 percent. Minor fluctuations in base rates over the years can be attributable to changes in customer usage patterns, while more significant changes can be attributed to rate changes.

Table 5-25  
Electric Retail Base Rate Revenue

Class	2006 <sup>(1)</sup>	2007	2008	2009	2010 <sup>(2)</sup>
Residential (\$/kWh)	0.0364	0.0364	0.0365	0.0364	0.0395
Small Commercial-No Demand (\$/kWh)	0.0498	0.0498	0.0498	0.0499	0.0547
Large Commercial-Demand (\$/kWh)	0.0337	0.0336	0.0339	0.0339	0.0365

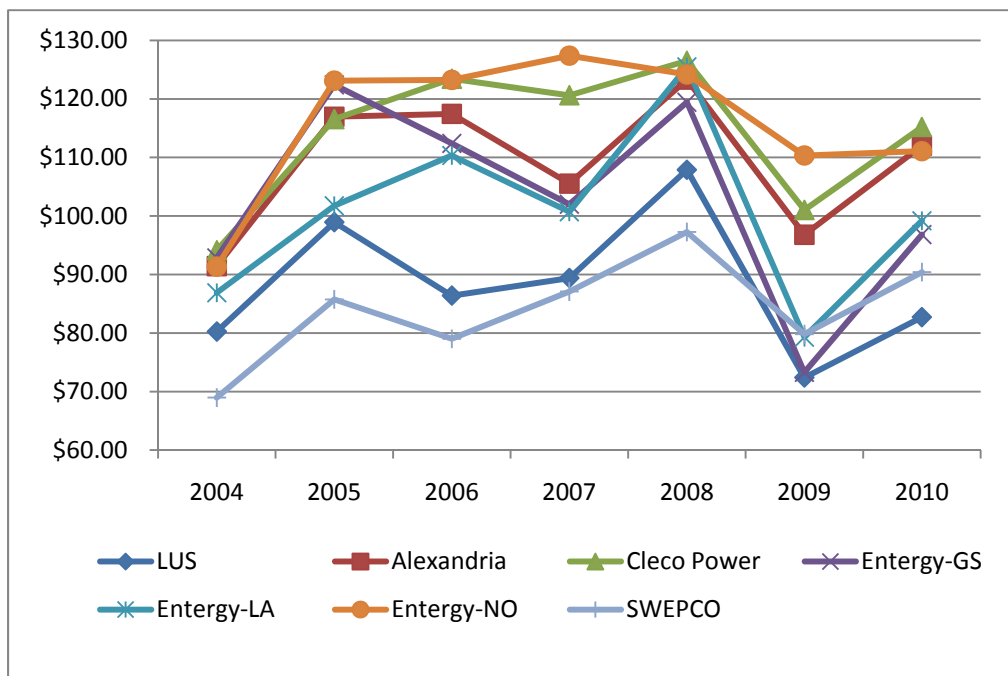
(1) The Electric Utility instituted a seven percent base rate increase on November 1, 2005 (FY 2006).

(2) The Electric Utility instituted an 11 percent base rate increase on February 1, 2010.

Source: LUS Financial and Operating Statements 2006-2010 audited

### Rate Comparison

Figures 5-15 graphically compare the average electric residential retail rates for LUS and other selected Louisiana utilities for years 2004 through 2010. The data shown was gathered from the Ventyx’s Velocity Suite database. Figure 5-15 displays LUS residential customers’ average costs compared to surrounding utilities in Louisiana. Overall, LUS’ residential rates are lower than the investor-owned utilities and higher than the cooperatives.



Source: Ventyx Velocity Suite

Figure 5-15: Residential Rates for LUS and Selected Louisiana Utilities



## Key Issues, Goals and Achievements

The following are some of the challenges or key issues that LUS and R. W. Beck have identified:

- Review system impacts from Rodemacher Unit 3, Acadia, and as well as other issues causing congestion issues that impact LUS.
- Monitor actions taken or requests of LUS to mitigate TLR's and the impact to LUS
- Limit impact of fuel price volatility.
- Improve staff resources.
- Improve the utilization of assets, facilities and properties.
- Enhance the communication and coordination between the power plant operations staff, ECS operations staff, neighboring utilities and SPP.

LUS continues working toward meeting these challenges by setting the following goals related to the Electric Utility:

- Attract and retain adequate staffing and experience levels.
- Balance staffing levels and workload by sharing staff between groups.
- Develop best practices-based Energy Risk Management Policy and associated procedures related to power and fuel transactions.
- Continue to update and enhance the GIS mapping system, Cityworks, and other advance applications to track issues and develop targeted solutions.
- Develop and maintain relationships with power marketers and other utilities in addition to LUS' traditional business associates in the wholesale power market.
- Continue to assess tree trimming program to target fast growth vegetation and maintain 4 year cycle to minimize expense and continue to improve reliability.
- Develop succession planning to replace retiring staff.
- Provide training to personnel as needed.
- Address all mandatory NERC standards.
- Hold monthly interdepartmental coordination meetings.
- Monitor statistical operational data and mapping of unit characteristics.
- Complete ALP transmission and substation capital expansion projects in order to reduce or alleviate regional TLR's that adversely impact LUS.
- Continue and accelerate, as required, program of capital improvement within Power Production to address equipment issues and meet any directives to operate LUS generation due to transmission constraints.

During the past year, LUS achieved the following:

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- Documented NERC Reliability requirements and addressed minor issues from NERC on-site spot check.
- Completed installation of a second 230kV/13.8kV 30MVA distribution power transformer at Pont Des Mouton Substation.
- Completed the installation of second 230kV/13.8kV 41MVA distribution power transformer at Beadle Substation.
- Completed the replacement of electro-mechanical relays with modern microprocessor relays at Pinhook Substation.
- Replaced the bushing on T5 autotransformer at Doc Bonin Switchyard.
- Replaced the bushing on Breaker 1476 for generator unit #2.
- Replaced 96 deteriorating poles
- Updated distribution and most of transmission construction standards

## Recommendations

Table 5-26 lists the priority and status of recommendations. Priorities are categorized as being highest, high or normal.

**Table 5-26  
Recommendations**

Electric Utility	Priority	Status
LUS should continue the development of a comprehensive operator training program for NERC certification	High	In Progress
LUS should monitor system impacts due to regional conditions that trigger TRL's	High	New
LUS should establish a formalized Enterprise Risk Management Program to reduce operational and financial risk exposure	High	In Progress
LUS should continue and accelerate as necessary capital improvement plans related to the ALP expansion in order to reduce TLR's	High	In Progress
LUS should expand the staff capabilities and number of personnel who can communicate with, program, and trouble shoot the newer micro-processor relays	High	New
LUS should continue T&D personnel training and establish training for substation relay maintenance and testing	Normal	In Progress
LUS should continue to install microprocessor relays for new construction and continue the replacement of existing electromechanical relays with microprocessor relays	Normal	In Progress
LUS should continue efforts to update and enhance the Cityworks and investigate ways to streamline the design, material ordering and construction process	Normal	In Progress

## UTILITIES SYSTEM - ELECTRIC UTILITY

Electric Utility	Priority	Status
LUS should continue efforts to update and enhance the GIS mapping system and integration with Cityworks	Normal	In Progress
LUS should continue testing generator relays and other equipment at the Doc Bonin Plant through coordination between plant personnel and the LUS T&D Section personnel	Normal	In Progress
LUS should continue the implementation and maintenance of a spare parts and inventory control system, with particular emphasis on the spare parts needs of the new generation projects and other major system components	Normal	In Progress
LUS should continue its implementation and expansion of the preventative and predictive maintenance programs currently in place	Normal	In Progress
LUS should determine the actual heat rate versus output relationship for each of its generating units	Normal	In Progress
In the T&D functions, LUS should continue to review Occupational Safety & Health Administration (OSHA) requirements and/or APPA safety guidelines and pursue on-going training programs for linemen and foremen	Normal	In Progress
LUS should expand the 5-Year Planning Report to include a 10-year planning horizon	Normal	Investigating
LUS should proceed with plans to repaint the externals of the Doc Bonin Plant Units 2-3	Normal	Investigating
LUS should investigate additional training and model development to support future stability studies, as required by NERC standards.	Normal	In Progress
LUS should schedule and complete an updated full short circuit study.	Normal	New

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# UTILITIES SYSTEM - WATER UTILITY

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The Consulting Engineer performed Water Utility facility site visits and interviewed LUS staff in March 2011 and performed analyses of operating statistics that are indicative of the general operating condition of LUS' Water Utility facilities. The following discussion summarizes the findings of the Consulting Engineer with respect to the maintenance and management of the property based upon discussions with, and information supplied by, LUS personnel.

## Water Utility Organization

The Water Utility is supported primarily by the Water Production Division and the Water Distribution Division of LUS. Other LUS Divisions, including Engineering, Customer Service, Utilities Support Services, and Environmental Compliance provide services to the Water Utility as well.

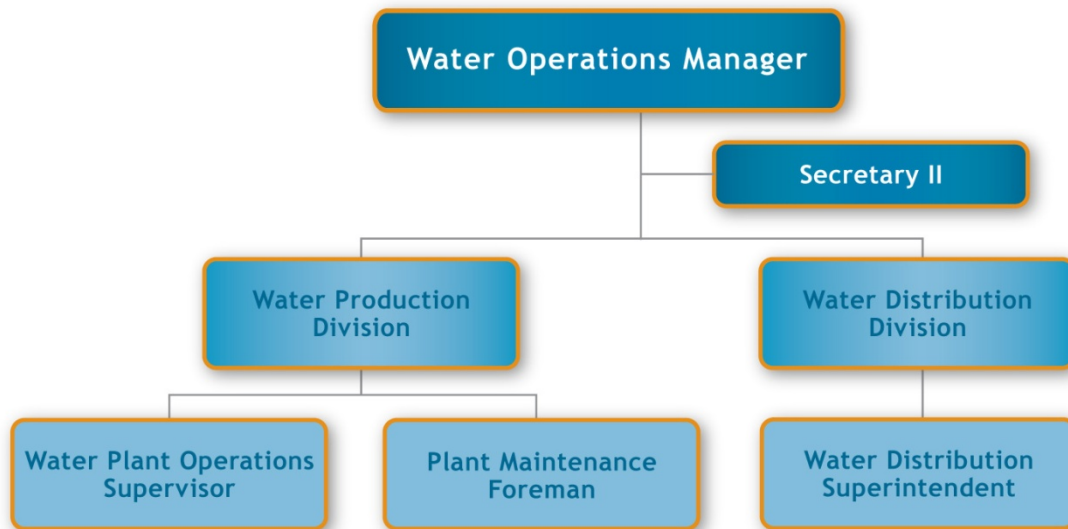


Figure 6-1: Water Utility Organization Chart

The Water Production Division is responsible for the supply of raw water and the production of potable water for distribution, including O&M responsibilities of its wells, pumps, and treatment facilities. The Water Distribution Division is responsible for the distribution of potable water to over 50,000 residential, retail, and industrial consumers, including O&M responsibilities of its distribution network infrastructure.

## Historical Water Production

The historical water production is presented in Table 6-1. The growth rate in water production has been (on average) approximately 0.2 percent per year since 2006 while

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annual growth in the number of customers has been approximately 1.6 percent per year. In addition to annual requirements, peak day production requirements are also provided in Table 6-1 and indicate an average annual increase of 0.25 percent. Recognizing 2006 was a dry year in terms of precipitation, the average annual increases appear to be skewed by an artificially high water usage in 2006. Looking at more recent years only, growth in customers and demand appear to be more in line with one another at approximately 0.8 percent per year. Peak day demand also appears to have leveled off from its earlier dramatic increase.

**Table 6-1**  
**Historical Water System Production**

	2006	2007	2008	2009	2010
Number of Customers <sup>(1)</sup>	48,617	49,622	51,134	51,276	51,960
Annual (million gallons) <sup>(2)</sup>	8,051	7,904	7,938	8,008	8,068
Annual (mgd) <sup>(2) (3)</sup>	22.1	21.7	21.7	21.9	22.3
Peak Day (million gallons)	28.8	25.5	25.8	29.5	29.1

(1) Number of meters in service.

(2) Based on water produced.

(3) mgd = million gallons per day.

Source: LUS Financial and Operating Statements 2006-2010 audited  
Water Production Division and Brian Guidry, LUS, 3/11

LCG adopted a water ordinance to assist in reducing the occurrence of low pressure in the water distribution system. The ordinance is directed at reducing peak system demand by restricting watering of lawns to the hours between midnight and 2 p.m. Enforcement of the ordinance began in August 2001. LCG's ordinance requires wholesale customers to enact similar restrictions or be subject to restrictions on supply of water by LUS during the period from May 1 to September 30 of each year. These efforts have not been as successful as hoped. In an effort to further promote conservation, an ordinance which established an increasing block rate structure was adopted in January 2008. However, it does not appear the above measures have had a significant impact on water usage based on increasing peak demands.

## Forecasted Water Production

The forecasts of water production and peak day usage for the five year period of 2011 through 2015 are presented below in Table 6-2. The forecasts reflect the current assessment of expected growth for the five-year period. A growth rate of 3.5 percent was assumed for the forecasted water production and peak day usage.

Table 6-2  
Water System Projected Requirements <sup>(1) (2)</sup>

	Actual 2010	2011	2012	2013	2014	2015
Daily mgd	22.3	23.5	24.3	25.1	26.0	26.9
Peak Day (million gallons)	29.1	31.6	32.7	33.9	35.0	36.2

(1) Includes unaccounted-for volumes.

(2) Projections do not account for effects of extreme weather conditions (i.e., drought and excessive rainfall) as these figures are heavily weather dependent.

Source: Water Production Division and Brian Guidry, 3/11

## Water Utility Facilities

The Water System includes 18 wells, two water treatment facilities, and a distribution system. The wells serve the system with a combined production capacity of 50.6 mgd.

The Water Utility provided its customers with adequate and reliable utility service during the reporting period. During 2010, very few complaints were received when the peak demand occurred on January 10, 2010. In the past during periods of high demand, low pressure complaints were received in isolated areas of the distribution system. The completion of the Gloria Switch Road and Fabacher Field facilities has reduced the number of complaints.

## Water Supply

The Chicot underground aquifer is the sole source of water supply for LUS. Groundwater from the Chicot aquifer provides LUS with a reliable and abundant source of good quality water and the Environmental Protection Agency (EPA) has designated the Chicot aquifer as a sole source aquifer, thereby requiring special consideration for federal permitting of projects that could adversely affect it. Furthermore, the Water Utility has partnered with the LDEQ to implement a wellhead protection program for the LUS water supply. Potential contamination sources within the wellhead protection areas have been identified by LUS and the LDEQ has authority to take appropriate action to assure contamination is prevented.

During 2002, LUS completed construction of Well No. 23 located in the southern portion of the Water System, with production beginning January 1, 2003. The 1,000 gallons per minute (gpm) well provides peak demand in the weakest portion of the distribution system and reduces the occurrence of low pressures in the area it serves. Minimal water treatment is provided, consisting of chlorination and phosphate addition. A relatively new facility in the northern portion of the water system, Well No. 24, similar in purpose, scope, production and treatment to Well No. 23, began operation in June 2006 but production was not fully realized until the addition of pressure filters during 2009. Well No. 25 came online during 2009, further bolstering the Water Utility's production capacity.

### Water Treatment

The Water System includes two water treatment facilities, the North Water Plant and the South Water Plant, which provide for removal of iron and manganese by coagulation, sedimentation, and filtration; hardness reduction by a lime-softening process, and chlorination.

Figure 6-2 shows the pipe gallery at the South Plant.



Figure 6-2: Pipe Gallery at South Plant

Well Nos. 23 and 25 serve the southern portion of the distribution system, where the majority of growth is occurring. Minimal water treatment is provided at Well No. 23, consisting of chlorination and phosphate addition. Due to water quality concerns, Well No. 24 had been used intermittently but is now in continuous operation with the addition of four pressure filters on site. The present system treatment capacity (both plants and Well Nos. 23, 24, and 25) is approximately 50.6 mgd.

The treatment capacities of the North Water Plant, South Water Plant, and Well Nos. 23, 24, and 25 are shown in Table 6-3. Although the two plants alone are each capable of producing over 20 mgd of treated water, the total amount of water that can effectively be delivered to customers is constrained by the capability of the distribution system to deliver the water at an acceptable pressure. The Five-Year COP includes approximately \$6.6 million (of \$12.4 million) of improvements to the distribution system to reduce this constraint. Currently, the preferred total production capability is estimated by LUS to be 25 mgd. While actual production capabilities

exceed this figure (2006 through 2010 peak day production all exceeded 25 mgd), pressure and delivery within some portions of the system may suffer upwards of 25 mgd. Once completed, the projects included in the Five-Year COP would increase the production capability to 30-32 mgd.

**Table 6-3**  
**Plant Treatment Capacity <sup>(1)</sup>**

	(mgd)
North Water Plant	21.5
South Water Plant	24.0
Well No. 23	1.4
Well No. 24	1.5
Well No. 25	<u>2.2</u>
Total Plant Capacity	50.6
Total Effective Plant Capacity	29.5 <sup>(2)</sup>

(1) Plant Treatment capacity is less than total well production capacity.

(2) Highest recorded production. At this production some location specific pressure issues exist within the distribution system.

Source: Water Production Division, 3/11

The water production facilities use chlorine for disinfection of water before it is introduced into the water distribution system. The chlorine used at each treatment plant is supplied in the form of a gas that is stored on site in several cylinders, each containing one ton of chlorine when full. LUS is also using sodium hypochlorite on a limited basis at certain wells.

The water production facilities have backup electric power generating facilities on site that are adequate to sustain a basic level of water production. The South Water Plant has full back up generation and the North Water Plant has enough back up generation to produce approximately 60 percent of its normal output.

### Treatment Plant Security

LUS has armed, uniformed Sheriff's Department personnel stationed at each water plant 12 hours per day between the hours of 6 a.m. and 6 p.m., seven days per week during 2010. Security cameras with recorders are also utilized at the treatment plants and LUS staff has been provided training in emergency planning and reaction that is integrated with ongoing programs for hurricane emergency response. Permanent standby generators have been installed at strategic locations within the production and treatment system and portable generators have also been purchased and are available to connect to wells as needed. LUS staff report that 70 percent of production capacity could be met for four days without refueling generators in the event of a system-wide power outage.

LUS staff and managers were also involved in several association and/or agency programs related to safety and terrorism during 2010. LUS' Water Operations Manager was the Chair of Water Sector Coordinating Council (WSCC), which is a



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policy, strategy and coordination mechanism that recommends actions to reduce and eliminate significant security vulnerabilities to the water sector through interactions with the Federal Government (primarily the Department of Homeland Security and the EPA) and other critical infrastructure sectors.

LUS is also involved in the Louisiana Water/Wastewater Agency Response Network (LaWARN), which is a statewide group of water agencies that have jointly created a mutual response network. This organization, one of approximately 37 active nationwide, is an outgrowth of cooperative efforts implemented in response to Hurricane Katrina. LUS staff assisted with those recovery efforts in 2005 and its involvement in these organizations and other national trade organizations brings positive notoriety to LUS and serves as a conduit for current security and industry information.

LUS is subject to the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Bioterrorism Act), which amended the Safe Drinking Water Act by adding Section 1433. Section 1433(a) requires that certain community water systems conduct Vulnerability Assessments, certify to the EPA that the Vulnerability Assessments were conducted, and submit a copy of the Vulnerability Assessments to the EPA. Section 1433(b) requires that certain community water systems prepare or revise Emergency Response Plans and certify to the EPA that an Emergency Response Plan has been completed.

LUS attained full compliance with the Bioterrorism Act early in 2003. LUS is using the results of its Vulnerability Assessment to plan for and implement improvements to its water system to enhance security.

### Water Storage

Treated water storage totals approximately 12.5 million gallons. This includes 4.3 million gallons of elevated storage and 8.2 million gallons of ground storage, including pumping station wet wells. Originally, the capital plans for Well No. 24 included on-site storage intended to provide for daily filter backwashing, ameliorate peak demands in this portion of the system, and reduce pump run time. However, due to budget cuts this storage was not constructed.

To address distribution concerns associated with remote portions of the LUS system and wholesale customer demands, LUS constructed the Fabacher Field facilities comprised of a 2.0 million gallon ground storage and booster pumping facilities to improve the pressure conditions. Construction of these facilities began in 2009 and was completed in 2010. LUS should continue to investigate the use of these facilities along with other distribution system improvements to reduce the peak demand concerns throughout the system as wholesale customer demands continue to increase and low pressure complaints are still experienced at certain times of the year. Figure 6-3 depicts the newly constructed ground storage tank at Fabacher Field.



Figure 6-3: Fabacher Field Ground Storage Tank

## Water Distribution

The Water System distribution network consists of 1,071 miles of pipe, most of which is in the 6-inch to 12-inch diameter range. The distribution system includes 21,412 valves and 6,146 fire hydrants. Table 6-4 illustrates the historical trends in key water distribution system statistics. Generally, the increase in miles of line, valves, and hydrants has paralleled or slightly lagged the increase in customers, potentially exacerbating the condition of the distribution system as the limiting factor in the Water Utility’s system.

Table 6-4  
Water Distribution System <sup>(1)</sup>

	2006	2007	2008	2009	2010
Miles of Main Lines	1,006	1,030	1,043	1,051	1,071
Number of Valves	19,732	20,314	20,745	20,909	21,412
Number of Hydrants	5,911	6,016	6,060	6,095	6,146

(1) Includes LUS contract service to Water District North.

Source: Bryan Guidry, LUS, 3/11

In 2003, LUS completed the last phase of construction of large diameter (16-inch and 24-inch pipe) water pipe from the South Water Plant to the southern portion of the distribution system, improving distribution capability and reliability to this area. The water main also serves as a connection point for wholesale water sales and other potential extensions. Additionally, a 12-inch line along LA Highway 93 was

constructed in 2009 which further enhances the distribution system's capacity. Despite these specific projects, LUS recognizes its plant treatment and distribution pumping is limited by restrictions of the water distribution network and the Five-Year COP continues to address this with additional transmission and distribution improvements.

The Property Insurance Association of Louisiana (PIAL) conducts periodic assessments of the City of Lafayette's fire protection system, including the Fire Department. In September 2008, the PIAL conducted a visit to LUS to review records and perform site investigations in support of its fire district rating program. Initial feedback from the PIAL indicated a rating of 3 (on a scale of 1 to 10 with 1 being the best possible rating and 10 representing no fire protection) representing a drop from the previous rating of 2. However, after subsequent discussions (extending into 2009) and re-flowing of fire hydrants, the PIAL awarded a rating of 2 based on the final evaluation.

### Unbilled Water Volumes

During the 2005 – 2006 timeframe the Water Utility embarked upon a citywide effort to repair/replace large meters. This initiative to repair or replace large (3-inch or greater) meters was completed in 2008. This results in more accurate measurements but also makes direct comparisons between years pre- and post-replacement difficult and potentially misleading.

Table 6-5 indicates that the annual percent of water volumes that are lost (not accounted for) was increasing annually from 2006 through 2009, but has declined significantly in 2010. Taking into account the meter replacement initiative and using 2006 as a baseline, the 2010 estimate represents a 17.2 percent decrease over the 5-year period and a 44.7 percent decrease from 2009. Even at its peak in 2009 the unaccounted for volumes were within the generally accepted range of 12-15 percent for similar water system.

Table 6-5  
Not Accounted For Water Volumes

	2006	2007	2008	2009	2010
Not Accounted For (%)	8.08	8.43	10.70	12.10	6.69

Source: LUS Financial and Operating Statements 2006-2010 audited

### System Development Plan

LUS has completed a System Development Plan intended to provide a basis for long term planning of the Water Utility system and has begun internal discussion regarding options for the future including possible consolidation of water districts, parish-wide water system service, and water system service beyond the parish boundaries. LUS has not approached external parties to date and anticipates many complexities involved with the above scenarios and significant opposition to such efforts.

One of the challenges LUS faced in the past was blocks of new customers being added to the system with little or no notice, causing a sudden increase in demand. Although this has not occurred recently, some staff see annexation becoming more likely within the Parish so there is a possibility that similar circumstances could occur in the future with similar results. Due to the potential impact on water demand, staff is sensitive to unplanned annexations.

## Contracts and Agreements

In addition to the facilities owned by LCG, LUS operates and maintains the water distribution facilities of certain water districts in accordance with contracts between LCG and the districts. Contractual arrangements between LCG and other entities (both water districts and municipalities) which own or operate water utility properties represent 19.0 percent of LUS’ annual water revenues. Features of these contracts are discussed below. LCG has executed agreements with two water districts: Water District North and South. Water service to Water District North customers is billed by LCG in the name of the Water District North consistent with the applicable rate schedules. The North and South Water Districts construct their own additions and extensions according to standards set by LUS. A summary of the contracts and agreements for the Water Utility is provided in Table 6-6 below.

**Table 6-6**  
**Contracts and Agreements for Wholesale Water Sales**

Contracts and Agreements	Date Signed/Renewed	Termination Date
Water District North Consolidated Contract	October 17, 2002	October 17, 2032
Water District South	August 21, 1995	August 21, 2035
City of Scott	May 27, 1997	May 27, 2022
Town of Youngsville	December 24, 1998	December 24, 2038
City of Broussard	March 5, 1998	March 5, 2038
Milton Water System	April 28, 1997	April 28, 2037

Source: Ron Gary, LUS, 3/11

## Water District North

The Water District North generally serves the northern portion of Lafayette Parish, which is neither incorporated as a municipality nor included in another water district. LCG and Lafayette Parish Water District North amended their existing water agreements by entering into a new water agreement (the Water District North Agreement) in October 2002 with a 30-year term of agreement and provisions for automatic five-year extensions upon concurrence by both parties. Water sales to Water District North amounted to 6.7 percent of total water sales revenue and 6.1 percent of total water sales volume for 2010.

The Water District North Agreement includes the following provisions:

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- LCG shall furnish potable water to the entire district and operate and maintain all district water distribution facilities except those specifically excluded by the Water District North Agreement.
- LCG shall construct a water production facility (Well No. 24) in the northwest region of Lafayette Parish and place it in operation within 12 months of purchasing the site. Well No. 24 was placed into operation in June 2006 but taken offline very shortly thereafter due to water quality concerns. As indicated above, pressure filters have been installed and the well is operational.
- Plans and specifications for District facilities that LCG is obligated to operate and maintain must be approved by LCG as conforming to LCG material and construction standards.
- LCG shall provide meter reading services and customer billing services for all Water District North retail and wholesale meters in accordance with the rate schedule adopted by the Water District North.
- In the event that an area within the Water District North is annexed to LCG, the District properties within the new corporate boundaries shall be sold to LCG by the Water District North upon request by LCG. Calculation of the payment for acquiring the Water District North's properties is described in the Water District North Agreement.

### Water District South

The Water District South serves the southern portion of Lafayette Parish. The LUS water sales to the Water District South represent approximately 3.1 percent of the total LUS water revenues and 4.3 percent of the total water volume for 2010.

The wholesale service agreement with Water District South was signed in August 1995 and terminates in August 2035. The agreement provides for delivery of wholesale water to the Water District South's distribution system. Revenues for water service are billed and collected by the Water District South. LUS provides operational assistance.

Due to mechanical issues with its production facility, Water District South discontinued production operations in 2006. LUS is currently providing Water District South with sufficient water volume to meet its customer demand with the long term plan for Water District South to convert its existing production facility into a booster station.

### City of Scott

LCG sells water to the City of Scott, Louisiana, for distribution and resale under a 25-year contract, which terminates May 27, 2022. Water is delivered to the City of Scott at several interconnection points. Water sales to the City of Scott represent approximately 3.2 percent of total LUS water sales revenues and 4.4 percent of water sales volume for 2010.

## Town of Youngsville

Under the provisions of a contract effective on December 24, 1998 with a term of 40 years, LCG may sell water to the Town of Youngsville, Louisiana, for distribution and resale. Water sales to the Town of Youngsville first occurred in 2003 and represent 2.0 percent of LUS water sales revenues and 2.5 percent of water sales volume for 2010. Engineering staff indicated Youngsville has expressed a desire to purchase more water.

## City of Broussard

LCG and the City of Broussard, Louisiana, signed a 40-year water supply contract which expires on March 5, 2038. Water sales to the City of Broussard represent approximately 1.2 percent of the total LUS water sales revenues and 1.7 percent of water sales volume for 2010.

## Milton Water System

LCG serves the Milton Water System under a 40-year contract signed April 28, 1997. Water sales to Milton represent approximately 2.0 percent of the total LUS water sales revenues and 2.8 percent of water sales volume for 2010. In addition to the water supplied by LUS, Milton operates a water treatment plant for additional supply. However, around the end of 2009 Milton inquired as to the potential for LUS to provide 100 percent of its supply (i.e., discontinue use of its treatment facility). Preliminary evaluations by LUS indicated fulfilling this request may pose an appreciable impact to the LUS system and may require additional capital improvements.

It is believed Milton ceased operation of its treatment plant, without permission from LUS, in early 2010 and a meeting was held in late summer 2010 at which time LUS instructed Milton to resume operations of its plant. However, by the end of FY2010 it had not done so. At the time of this report it is not known definitively the status of the plant's operational capacity. Minor impacts to the South Plant system may have already been seen in terms of reduced pressure within the system and further impacts are expected during the peak demand months of summer if the plant is not operational.

## Wholesale Water Sales Summary

During 2010, water delivered to wholesale customers amounted to 20.1 percent of the revenue and 24.7 percent of the water sold by LUS. The difference is attributed to the difference between water rates for wholesale and retail service.

Table 6-7 shows wholesale water sales by year for the last five years. Table 6-8 shows wholesale water revenue for the same years. Figure 6-4 shows this same data graphically.

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**Table 6-7**  
**Wholesale Water Sales Volumes (1,000 gallons)**

Customer	2006 <sup>(1)</sup>	2007	2008	2009	2010
City of Scott	238,149	298,098	320,467	336,237	327,053
Water District North	327,149	352,441	348,351	359,916	452,802
City of Broussard	103,501	99,734	108,392	112,842	122,721
Water District South	270,856	310,003	292,176	315,653	322,702
Milton Water System	92,743	106,946	141,517	146,083	210,133
Town of Youngsville	116,032	123,665	133,450	146,472	186,898
Water District North – Wholesale	<u>178,164</u>	<u>174,731</u>	<u>200,922</u>	<u>186,150</u>	<u>211,725</u>
Total Wholesale Water Sales	<u>1,326,594</u>	<u>1,465,618</u>	<u>1,545,275</u>	<u>1,603,353</u>	<u>1,834,034</u>
Total Water Sales (Wholesale and Retail)	7,400,526	7,222,823	7,038,250	6,987,117	7,433,414
Percent of Total Water Sales from Wholesale Sales (%)	17.9	20.3	22.0	22.8	24.7

(1) New meters installed in 2005-2006 period and transient population associated with Hurricane Katrina in 2005 contributed to fluctuations in this timeframe

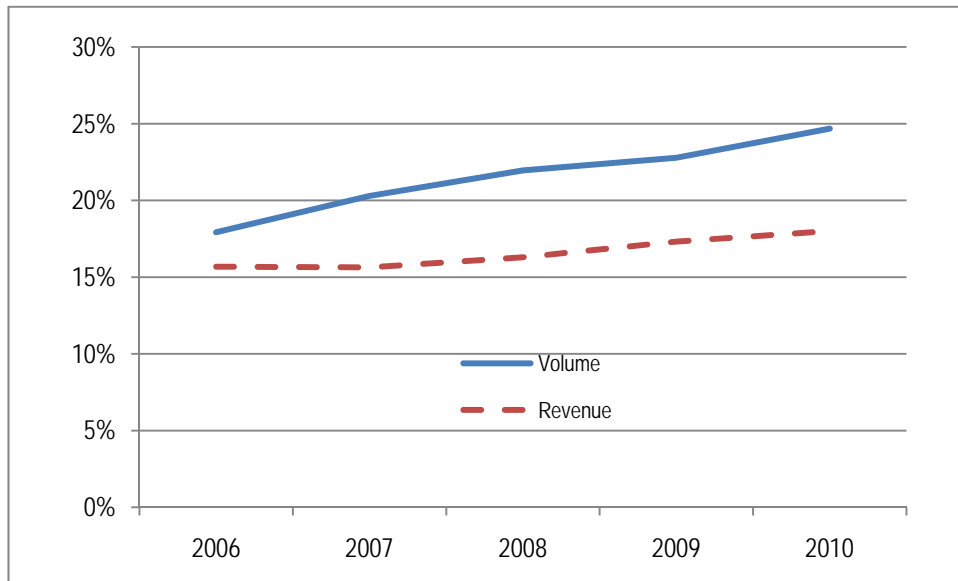
Source: LUS Financial and Operating Statements 2006-2010 audited

**Table 6-8**  
**Wholesale Water Sales Revenue**

Customer	2006 <sup>(1)</sup>	2007	2008	2009	2010
City of Scott (\$)	307,210	384,549	440,801	470,734	489,468
Water District North (\$)	677,721	673,156	763,594	797,688	1,005,829
City of Broussard (\$)	129,378	124,666	145,715	153,463	178,253
Water District South (\$)	338,569	387,504	391,993	429,288	468,716
Milton Water System (\$)	115,926	133,684	190,719	198,675	307,658
Town of Youngsville (\$)	145,044	154,582	180,170	199,202	307,707
Water District North-Wholesale (\$)	<u>224,260</u>	<u>220,843</u>	<u>270,742</u>	<u>253,163</u>	<u>272,507</u>
Total Wholesale Water Sales (\$)	<u>1,938,108</u>	<u>2,078,985</u>	<u>2,383,734</u>	<u>2,502,213</u>	<u>3,030,138</u>
Total Water Sales (\$)	12,393,422	12,756,232	13,762,805	13,901,932	15,107,093
Percent of Total Water Sales from Wholesale Sales (%)	15.6	16.3	17.3	18.0	20.1

(1) New meters installed in 2005-2006 period and transient population associated with Hurricane Katrina in 2005 contributed to fluctuations in this timeframe

Source: LUS Financial and Operating Statements 2006-2010 audited



Source: LUS Financial and Operating Statements 2006-2010 audited

Figure 6-4: Percent of Total Water Sales from Wholesale Sales

Total retail water sales volume (represented as the difference between total production and wholesale sales) has increased approximately 0.4 percent since 2006. Total water production has increased approximately 1.3 percent during this time; however, wholesale sales have increased at a rate about four times that of total production (approximately 5.3 percent). It is clear wholesale customers are requiring an increasing percentage of the total water produced and this trend is expected to continue. This will place continued pressure on the distribution system and could adversely affect LUS retail customers. Figure 6-4 also illustrates the widening gap between volume of wholesale sales (volume) and revenue generated (i.e., wholesale customers are placing a disproportionate demand on the system as compare to their revenue generation). Therefore, coordination with wholesale customers and adequate planning for improvements to the LUS system and the wholesale customers' systems is necessary to protect the interests of retail customers.

LUS has recently completed construction of facilities to address increasing demand pressures but complicating this condition is a lack of projected demographics and demand information from the wholesale customers with which LUS could better plan for future needs. This coupled with the behavior described above with regard to Milton creates unforeseeable, and therefore unaccounted for, conditions within the Utility. LUS should consider insisting that adequate planning data be provided by those wholesale customers (who are supposed to provide this information).



## Water Utility Operations

### Staffing Levels

While the overall staffing situation has improved in recent years, there remain a number of current and anticipated vacancies within the Water Utility. This situation may be worsened by the recent market-based pay adjustments in which both maintenance and production division entry level positions pay scales were decreased slightly. Staff noted staffing levels are barely sufficient to deal with day-to-day needs and that any loss of personnel (i.e., sickness, vacations, etc.) often results in a need for other personnel to work overtime. This will be exacerbated by implementation of any new facilities. In general, there is concern about overdependence on overtime in order to run the Water Utility.

The November 2008 pay adjustments included pay increases in many instances and Water Utility staff believes this may postpone the retirement of some senior level staff (in an effort to achieve a higher three-year average salary level for pension purposes). However, this will not remedy the situation and may worsen it by resulting in more retirements occurring simultaneously in 2011 rather than gradually over a longer period.

Given the conditions explained above, a succession plan should be implemented to identify key staff approaching retirement age/experience, identify possible successors and develop and implement a knowledge transfer process. Aware of this need for some time, the Utility has begun to more actively address it through cross training of staff for example.

### Regulatory & Environmental

LUS reports that the North, South, and Gloria Switch Water Treatment Plants are currently complying with their operating permits and meeting all applicable drinking water standards of the SDWA. Detailed information on regulatory and environmental permits for the drinking water system is provided in Section 9, Environmental Issues.

## Financial

### Capital Outlay Program

#### Fiscal Year 2009

The expenditures for fixed plant and equipment made during 2010 are presented in Table 6-9. LUS accounts for such expenditures by using a capital work order system. All extensions or improvements made to the water system are considered economically sound or otherwise necessary for the profitable operation of LUS.

Table 6-9  
Capital Work Order Expenditures

Source of Funds	Water (\$)
Normal Capital	
Bond Reserve & Capital Additions	796,702.09
Special Equipment	150,266.35
2004 Revenue Bonds	2,734,124
Retained Earnings	<u>56,161</u>
Total	3,737,253

Source: Status of Construction Work Orders, LCG, 3/11

### Five-Year Capital Outlay Program

The estimated annual capital budget requirement amounts are presented in Table 6-10 and were obtained from the Five-Year COP in the LCG Adopted Budget for fiscal year 2010-2011. While a Five-Year COP is very helpful in planning for near term system needs, LUS should consider longer planning horizons (at least 20 years) allowing for improved financial planning to mitigate any major effects on water rates.

Table 6-10  
Capital Outlay Program 2011 – 2015 (\$)

	2011	2012	2013	2014	2015	Total
Production	1,473,000	2,997,000	1,210,000	10,000	10,000	5,700,000
Distribution	<u>3,566,000</u>	<u>975,000</u>	<u>675,000</u>	<u>600,000</u>	<u>850,000</u>	<u>6,666,000</u>
Totals	5,039,000	3,972,000	1,885,000	610,000	860,000	12,366,000

Source: LUS Five-Year Capital Outlay Program Summary 2010-2011 Adopted Budget

### Production Improvements

Water production funds include increased treatment capabilities primarily through improvements to South Plant treatment unit No. 1. The Utility has budgeted in FY 2011 for a complete rehabilitation of the aging treatment unit salvaging only the basin structure. Other typical renewals and replacements are also included in the COP.

### Distribution Improvements

Plans for water distribution funds include the construction of a 500,000 gallon ground storage facility at Well No. 24 as well as typical renewals and replacements. Specifically, the plan includes approximately \$6.6 million worth of improvements to the distribution system, anticipated to increase overall system capacity to 30-32 mgd when completed.

## Operating Results

Table 6-11 summarizes the Water Utility revenues and expenses for the most recent five years. In 2010, the Water Utility operating revenues increased by approximately 72 percent over 2009 largely due to the influx of bond monies. Retail water revenues increased by 5.9 percent over the previous year. The wholesale revenues increased by 140 percent namely due to the increased demands from Milton, Water District North and Youngsville. The Water Utility operating expenses decreased approximately 3.3 percent over 2009. The increase in margin of 315 percent is artificially high due to the significant increase in revenues driven by the bond sales.

**Table 6-11**  
**Water Utility Operating Results**

	2006	2007	2008	2009	2010
<b>Water Operating Revenues (\$)</b>					
Retail	10,455,314	10,677,248	11,379,071	11,399,719	12,076,955
Wholesale	1,938,108	2,078,985	2,383,734	2,502,213	5,992,979
Other	<u>385,660</u>	<u>496,203</u>	<u>376,342</u>	<u>366,248</u>	<u>6,515,551</u>
Total Water Operating Revenues (\$)	12,779,083	13,252,435	14,139,148	14,268,180	24,585,485
<b>Water Operating Expenses (\$)</b>					
Operation Expenses	3,997,746	3,454,424	4,330,083	4,720,348	4,878,949
Maintenance Expenses	1,239,624	1,092,949	1,104,849	1,635,069	1,534,098
Other Expenses	<u>3,543,744</u>	<u>4,675,183</u>	<u>4,385,407</u>	<u>4,898,308</u>	<u>4,472,875</u>
Total Operating & Maintenance Expenses (\$)	8,781,114	9,222,556	9,820,340	11,253,724	10,885,922
<b>Water Non Operating Revenues (Expenses) (\$)</b>					
Interest Revenues	366,083	422,957	318,191	234,438	171,668
Water Tapping Fees	160,700	141,100	140,500	112,000	97,800
LUS Fiber Start-up Reimbursement	0	359,507	0	0	0
Miscellaneous Non Operating Revenues	35	0	6,640	33,512	(5,076)
FTTH Start Up Project <sup>(1)</sup>	(133,792)	0	(7,634)	0	0
Interest on Customer Deposits	(884)	(1,047)	(1,312)	(1,243)	(1,083)
Tax Collections/Non Operating	(37,462)	4,329	16,550	15,114	17,533
Miscellaneous Non Operating Expense	<u>0</u>	<u>0</u>	<u>(10,347)</u>	<u>0</u>	<u>0</u>
Total Non Operating Revenues (Expenses) (\$)	354,680	926,846	462,588	393,821	280,842
<b>Net Margin (\$)</b> <sup>(2)</sup>	<b>4,352,648</b>	<b>4,956,726</b>	<b>4,781,396</b>	<b>3,408,277</b>	<b>13,980,406</b>

(1) Water allocation of FTTH project start up cost. Allocation pursuant to LUS proposed Cost Allocation Manual.

(2) Before Depreciation and Debt Service.

Source: LUS Financial and Operating Statements 2006-2010 audited

## Statistical Data

The selected statistical data in this Section pertains to the number of customers, customer usage, and revenues by class. It was obtained or developed from the LUS Financial and Operating Statements for years 2006 through 2010.

### Revenues

Table 6-12 shows the Water Utility retail statistics for the most recent five years. During 2010, the total revenues increased 72.3 percent, the total volume sales increased by 6.4 percent, and the number of accounts increased by 1.3 percent.

Compared to the prior year, the average water usage per retail account increased by 3.4 percent from 117,000 gallons to 121,000 gallons. Retail water sales increased in total volume by 4.0 percent. The average water usage per retail account has decreased by 12.3 percent from 2006 levels. The average water revenue per retail account increased by 4.8 percent in 2010. The retail water revenue on a per gallon basis increased by 1.9 percent.

Compared to the prior year, the average water usage per wholesale account increased by 8.2 percent from 304,000 gallons to 329,000 gallons. Wholesale water sales increased in total volume by 14.4 percent during 2010. The water revenue on a per gallon basis increased by 109.6 percent during 2010. Since 2006, the wholesale water sales have increased by 38.3 percent and the wholesale revenues have increased by 209.2 percent for an overall revenue per thousand gallons increase of 124 percent over the same period.

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**Table 6-12**  
**Water Sales Revenue and Statistics**

	2006	2007	2008	2009	2010
<b>Water Sales Revenues (\$)</b>					
Retail	10,455,314	10,677,248	11,379,071	11,399,719	12,076,955
Wholesale	1,938,108	2,078,985	2,383,734	2,502,213	5,992,979
Other	<u>385,660</u>	<u>496,203</u>	<u>376,342</u>	<u>366,248</u>	<u>6,515,551</u>
Total Water Sales Revenues (\$)	12,779,083	13,252,435	14,139,148	14,268,180	24,585,485
<b>Water Sales (1,000 gallons)</b>					
Retail	6,075,782	5,757,205	5,492,975	5,383,764	5,599,380
Wholesale	<u>1,326,594</u>	<u>1,465,618</u>	<u>1,545,275</u>	<u>1,603,353</u>	<u>1,834,034</u>
Total Sales (1,000 gallons)	7,402,376	7,222,823	7,038,250	6,987,117	7,433,414
<b>Water Number of Accounts</b>					
Retail	44,081	44,809	45,983	45,994	46,387
Wholesale	<u>4,536</u>	<u>4,813</u>	<u>5,151</u>	<u>5,281</u>	<u>5,573</u>
Total Accounts	48,617	49,622	51,134	51,276	51,960
<b>Water Statistics Retail</b>					
Usage per Account (1,000 gallons)	138	128	119	117	121
Revenue per Account (\$)	237	238	247	248	260
Revenue per 1,000 gallons (\$)	1.72	1.85	2.07	2.12	2.16
<b>Water Statistics - Wholesale</b>					
Usage per Account (1,000 gallons)	292	305	300	304	329
Revenue per Account (\$)	427	432	463	474	1,075
Revenue per 1,000 gallons (\$)	1.46	1.42	1.54	1.56	3.27

Source: LUS Financial and Operating Statements 2006-2010 audited

## Expenses

As shown in Table 6-13, the compounded annual average changes in Water Utility expenses over the last five years are as follows:

- Supply Expense – 2.2 percent increase
- Power and Pumping Expense – 3.3 percent decrease
- Purification Expense – 6.2 percent increase
- Distribution Expense – 7.5 percent increase
- Administrative Support – 6.0 percent increase

Table 6-13  
Water Utility Detailed Expenses

	2006	2007	2008	2009	2010
Water Source of Supply Expense (\$)					
Operation	13,830	2,970	148	81	53
Maintenance	15,063	499	433	8,391	31,490
Water Power & Pumping Expense (\$)					
Operation	847,321	1,008,639	862,714	873,502	771,235
Maintenance	34,000	0	0	0	0
Water Purification Expense (\$)					
Operation	2,236,692	1,653,192	2,638,385	2,940,672	3,023,788
Maintenance	530,149	453,006	348,244	595,479	500,837
Water Distribution Expense (\$)					
Operation	899,904	789,623	828,837	906,093	1,083,873
Maintenance	660,411	639,443	756,171	1,031,199	1,001,770
Other Water Expense (\$)					
Customer Operations	908,250	976,245	1,038,942	1,233,473	1,155,959
Customer Services	99,910	85,717	72,899	44,270	33,196
Administrative & General	<u>2,535,583</u>	<u>3,613,222</u>	<u>3,273,567</u>	<u>3,620,565</u>	<u>3,283,720</u>
Total Water Expense (\$)	8,781,114	9,222,556	9,820,340	11,253,724	10,885,922

Source: LUS Financial and Operating Statements 2006-2010 audited

## Rate Revisions

Water rates were modified in 2008 to create a two-tiered rate structure. Historically, the Water Utility has been partially subsidized by Electric Utility revenues due to capital and operating requirements of the Water Utility.

During 2009, LUS performed a cost-of-service and rate design study for the Water Utility. This study was performed in accordance with generally accepted industry practices for municipal utilities. Based on the study performed the following conclusions were presented:

- The Water Utility current rates are not going to generate sufficient revenues to meet current costs.
- Under current rates, LUS will not be able to maintain a positive cash balance for its retained earnings account and will have difficulty funding future capital projects with current earnings that are integral to its long term financial planning strategies.
- Water System rates need modification.

As a result of this study, the Council passed Ordinance O-012-2010 on February 9, 2010. An average rate increase of 9.0 percent went into effect for Water Utility customers on February 1, 2010, and an additional average rate increase of 9.0 percent went into effect on November 1, 2010. With these rate increases, the Water Utility is

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anticipated to continue providing adequate and reliable service and a reasonable amount of revenues to LCG.

The wholesale rates were adjusted based on the approved cost-of-service model in accordance with the wholesale contracts. The rate increase for the wholesale customers was similar to the rate increase for the retail customers.

As shown in Table 6-14, the Water Utility average residential revenues per 1,000 gallons decreased by 1.7 percent from 2009 to 2010. Commercial revenues per 1,000 gallons increased by 4.6 percent during 2010. Since 2006, the average residential revenues per 1,000 gallons have increased 28.2 percent and commercial revenues per 1,000 gallons have increased 19.6 percent. For years 2005 through 2009, changes in average revenue per thousand gallons may be attributable to water usage levels reflecting fluctuating rainfall levels each year, as well as the rate restructuring in January 2008.

**Table 6-14**  
**Water Retail Rates (Revenue/1,000 gallons)**

Class	2006	2007 <sup>(1)</sup>	2008 <sup>(2)</sup>	2009	2010 <sup>(3)</sup>
Residential (\$)	1.85	2.04	2.29	2.36	2.32
Commercial (\$)	1.46	1.54	1.73	1.75	1.83

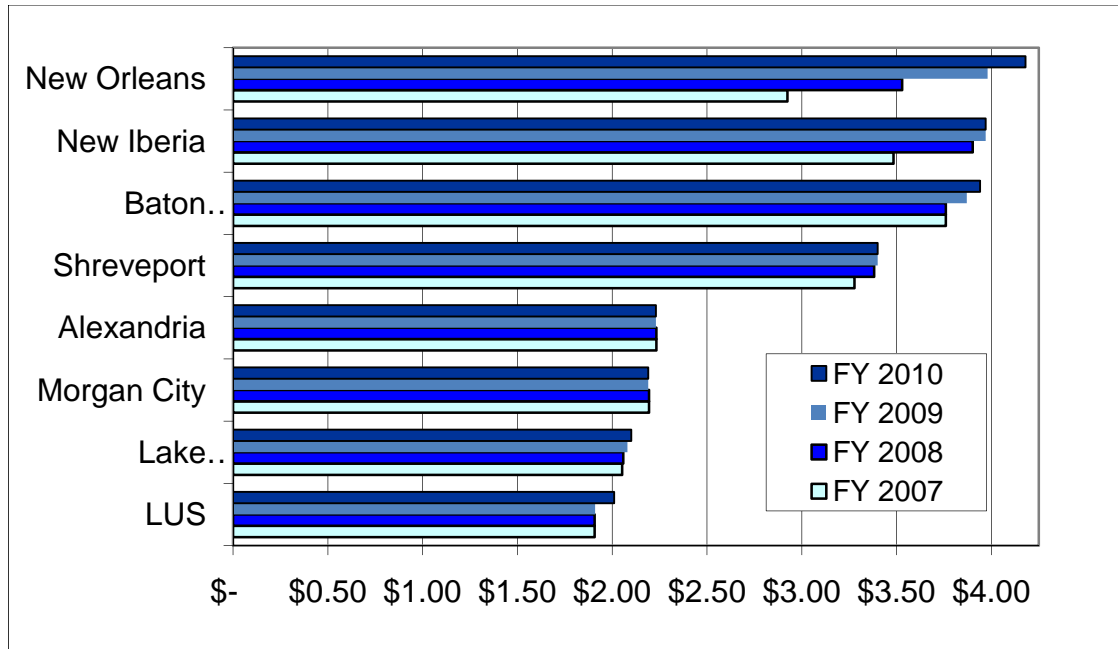
(1) Water retail customers experienced a rate increase of 5 percent on November 1, 2006.

(2) Water retail customers experienced a rate increase and change in rate structure during 2008.

(3) Water retail customers experienced a rate increase of 9 percent on February 1, 2010

Source: Source: LUS Financial and Operating Statements 2006-2010 audited

Figure 6-5 displays the rate benefit LUS water customers experience compared to surrounding utilities in Louisiana. LUS' water rates were the lowest among the utilities reviewed.



Source: LUS, Based on a monthly bill with 7,000 gallons consumption. Includes customer charge, if applicable

Figure 6-5: Water Rates for LUS and Selected Louisiana Utilities (\$/1,000 gallons)

## Key Challenges, Issues and Goals

Challenges and key issues that LUS has identified for the Water Utility include: succession planning and employee hiring and retention issues, distribution system capacity, integration of SCADA and plant controls, backflow prevention, capital planning, and security.

The Water Utility has staff members throughout the organization that are approaching retirement. In addition, the utility struggles to fill vacant positions with qualified personnel and has difficulty retaining staff.

The capacity of the production and treatment facilities far exceeds the capacity that can be distributed to water customers. This is due to constraints within the water distribution system.

The main issue relating to the new certification requirements is that candidates applying for Water Plant Operator vacancies must attain full certification within six years of appointment. A careful review of the certification requirements suggests applicants must have two full years of college to meet this six year deadline. The current pay scale at LUS appears to be unattractive to candidates with this level of education, a condition exacerbated by the recent market based pay adjustments in which the entry level operator pay scale was lowered. The LUS pay rate for new Water Plant Operators may need to be re-adjusted to attract and retain skilled and certified operators.

Currently water utility operators have no direct operational control access to the distribution system SCADA system. If the SCADA system was fully integrated into the plant controls (Wonderware) system, it would allow for real-time monitoring and



control of the distribution system by on-site Water Utility staff rather than the personnel located at Walker Road facility (who are also responsible for operation of the electric utility SCADA system), as is currently the situation. R. W. Beck recommends the water distribution system SCADA system be integrated in the water treatment plant control system for increased system operational efficiency. A proposed SCADA improvement project to connect the Fabacher Field Facilities and Well Nos. 23, 24, and 25 into the existing system was postponed due to insufficient funding but has been reinstated following the rate increases and bond issuance. This project, to begin in 2011, will give Water Utility staff operational control of those facilities.

Additional pressure monitoring capabilities within the distribution system should be considered for improved system performance monitoring, also. This capital work has been identified in a future budget cycle, but preliminary work, including identifying potential new monitoring site locations within the system has already been performed.

The first step in implementing a backflow prevention program (BPP) is field inventory and surveying via global positioning satellite technology. LUS began assessing and documenting backflow prevention facilities of its customers in 2006 and completed the effort in 2009. Devices already located have been integrated into the geographic information system and the Water Utility is working with the codes department to track and global positioning system (GPS) newly installed units to always maintain a current inventory. Subsequent steps in fully implementing a BPP are training of certified testers, testing units, and educating customers. Despite having a contract in place to provide these services, LUS had not moved forward with these steps due to disagreement concerning where a BPP should reside within the organization and to what degree LUS needs such a program. However, at the end of FY10 the Department of Health and Hospitals, which has jurisdiction over public water utilities in the state, conducted a Sanitary Survey and cited LUS as having a ‘significant deficiency’ for not having a BPP. It should be noted LUS has already begun addressing the citation at the time of this report.

The full implementation of a working hydraulic model of the water distribution system and a long-range capital planning process is increasing the ability of the Water Utility to plan for development and to maximize the existing water distribution system. For example, the Engineering staff used the water model to evaluate improvement scenarios indicating overall system capacity will be increased to 30-32 mgd as part of the currently proposed capital improvements. Furthermore, the water system model has been used to evaluate potential impacts associated with increasing system demands (i.e., new hospital under construction and request by Milton Water System for additional supplies).

LUS has improved the security and reliability of its water production, treatment and distribution systems in recent years but security and more efficient operational control (via SCADA system improvements) of the system remain high priorities for the utility.

## Recommendations

Recommendations and their status are provided in Table 6-15 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 6-15  
Recommendations**

Water Utility	Priority	Status
LUS should give priority to constructing ground storage and booster pumping systems in low pressure areas of system to improve system pressure	Highest	In Progress
LUS should continue to develop in-house expertise with use of the water system model and acquire a system capable of modeling time of travel and concentration of introduced pollutants	Highest	In Progress
LUS should integrate the distribution SCADA system within the plant control system	Highest	In Progress
LUS should implement a backflow prevention program including documentation of backflow preventers and testing requirements	Highest	In Progress
LUS should coordinate planning and operations of water improvements with wholesale water customers	High	In Progress
LUS should implement a certification/recertification training program for Water Plant Operation staff	High	Investigating
LUS, in coordination with neighboring wholesale suppliers, should develop a long term plan that projects the water requirements of the Parish, how that water will be supplied, and how the cost of providing the water will be distributed.	High	Investigating
LUS should develop a long-term capital planning process (20-50 years) for improvements to the water system	Normal	Investigating
LUS should continue to evaluate and update its environmental plans to ensure that they include the latest changes to the respective regulations and facility infrastructure.	Normal	In Progress

## Section 7

# UTILITIES SYSTEM - WASTEWATER UTILITY

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The Consulting Engineer performed Wastewater Utility facility site visits and interviewed LUS staff in March 2011 regarding wastewater operations and performed analyses of operating statistics that are indicative of the general operating condition of LUS' Wastewater Utility facilities. The following discussion summarizes the findings of the Consulting Engineer with respect to the maintenance and management of the property based upon discussions with and information supplied by LUS' personnel.

## Wastewater Utility Organization

The Wastewater Utility is composed of three Sections: (1) Plant Operations, (2) Wastewater Collection, and (3) Plant Maintenance, responsible for treatment of raw wastewater, collection and delivery of wastewater to the treatment facilities, and O&M responsibilities, respectively. Figure 7-1 provides an organizational chart of the Wastewater Utility.

Other LUS Divisions, including Engineering, Customer Service, Utilities Support Services, and Environmental Compliance provide services to the Wastewater Utility as well.



Figure 7-1: Wastewater Utility Organization Chart

## Historical Wastewater Flows

Wastewater flows are measured (as effluent) of the treatment facility and vary annually depending on rainfall events. Total retail wastewater flows increased at a rate of approximately 1.5 percent per year on average between 2006 and 2010. Since the available figures include additional flows attributable to inflow/infiltration, rainfall patterns can noticeably affect these estimates, thus skewing trends in true wastewater (versus stormwater) flows. Precipitation in 2010 was considerably less than the previous three years' rainfall totals but flows increased over 2009 values. This

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coupled with an increase in retail connections indicates wastewater flows have increased and suggests the average annual increase noted above can be considered a valid estimate of the Utility's trend. Despite the trending, the permitted capacity is more than adequate at this time to accommodate the wastewater flows. The historical loads as served by the Wastewater Utility in million gallons per day (mgd) are presented in Table 7-1.

**Table 7-1**  
**Wastewater Utility Average Day Hydraulic Loads (mgd) <sup>(1)</sup>**

	2006	2007	2008	2009	2010	Permitted Capacity
South Plant	6.3	6.7	5.8	5.0	5.2	7.0
East Plant	2.8	3.1	3.3	3.3	3.3	4.0
Ambassador Caffery Plant	4.6	4.7	5.2	5.8	6.0	6.0 <sup>(2)</sup>
Northeast Plant	<u>1.0</u>	<u>1.2</u>	<u>1.2</u>	<u>1.2</u>	<u>1.1</u>	<u>1.5</u>
Totals	14.7	15.7	15.5	15.3	15.6	18.5

(1) Average day hydraulic loads are not adjusted to dry weather conditions and therefore include infiltration.

(2) Permitted capacity remains at 6.0 mgd but plant capacity is 9.25 mgd.

Source: Craig Gautreaux, LUS, 3/10/11

## Forecasted Wastewater Flows

Based on projected growth in the number of customers, with intake per customer remaining steady, LUS expects an average annual growth rate of approximately one percent in terms of projected retail wastewater flows through 2015.

Load forecasts for the average daily flow to each of the wastewater treatment plants for the five-year period of 2011 through 2015 are presented in Table 7-2. The forecasts reflect the current assessment of expected load growth for the period alongside recorded 2010 values for comparison.

**Table 7-2**  
**Wastewater Utility**  
**Projected Average Day Hydraulic Loads (mgd) <sup>(1)</sup>**

	Actual 2010	2011	2012	2013	2014	2015	Permitted Capacity
South Plant	5.2	5.3	5.3	5.4	5.4	5.5	7.0
East Plant	3.3	3.4	3.4	3.4	3.4	3.4	4.0
Ambassador Caffery Plant	6.0	5.9	5.9	5.9	6.0	6.0	6.0 <sup>(2)</sup>
Northeast Plant	<u>1.1</u>	<u>1.2</u>	<u>1.2</u>	<u>1.3</u>	<u>1.3</u>	<u>1.3</u>	<u>1.5</u>
Totals	15.6	15.6	15.8	15.9	16.0	16.2	18.5

(1) Average day hydraulic loads are not adjusted to dry weather conditions and therefore include infiltration.

(2) Permitted capacity remains at 6.0 mgd but plant treatment capacity is 9.25 mgd.

Source: Craig Gautreaux, LUS, 3/11

The above forecast of wastewater treatment flows is based upon recent historical trends for each wastewater plant and taking into account the capability to shift flow between treatment plants. These projections are subject to change depending upon the success of the inflow and infiltration program in controlling or reducing rain-related effects. It should be noted that there are a number of small package type treatment plants scattered throughout Lafayette Parish serving as many as 6,000 customers. Of these, it is estimated 2,500 to 3,000 customers could, if emergency circumstances dictate, be quickly connected to the LUS system resulting in a sudden increase in wastewater inflow. However, this amount of additional flow would not place a burden on the existing system. LUS plans to re-route wastewater flows among the Ambassador Caffery Plant and the South Plant to avoid overloads and to accommodate the recently completed construction at Ambassador Caffery Plant. As discussed above, LUS has begun engineering design of improvements and expansions to the South Plant, and is investigating methods for reallocating flows where treatment capacity is available and/or alternative treatment locations.

LUS is also discussing expanding wastewater service within Lafayette Parish and a committee has been formed to investigate the possibilities and ramifications related to the expansion of the Wastewater Utility. Additionally, the wastewater master planning process also considered expansion of the Wastewater Utility into other areas of Lafayette Parish. In the meantime LUS is proposing an ordinance requiring developments within the Parish greater than 15 homes to install “community based systems” (rather than individual septic systems) constructed to LUS standards with the intent they are set up as “operating arms of sewer districts.” These entities will be operated and maintained by LUS Wastewater Utility staff. The new ordinance is expected to go before the Parish Council in mid-2011.

## Wastewater Utility Facilities

The Wastewater System includes four treatment plants and a collection system consisting of nearly 564 miles of pipe (excluding service lines), 11,276 manholes and 146 lift stations. This system reliably serves 41,522 retail connections with a total permitted treatment capacity of 18.5 mgd.

## Wastewater Treatment

The four wastewater treatment plants are the South Plant, the East Plant, the Ambassador Caffery Plant, and the Northeast Plant. The total permitted capacity for these plants is 18.5 mgd. The South Plant is an activated sludge facility with a permitted capacity of 7.0 mgd. The East Plant and Northeast Plant are oxidation ditch facilities with permitted capacities of 4.0 and 1.5 mgd, respectively. The Ambassador Caffery Plant treatment system formerly included a rotating biological contactor (RBC) and oxidation ditch but has undergone improvements to replace the RBC with sequencing batch reactors (SBR). Although the treatment capacity has been significantly increased, the permitted capacity will effectively remain at 6.0 mgd. The permitted plant capacities are shown in Table 7-1 above.

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The LUS wastewater facilities have met customer demands for service, and provided LUS' customers with adequate and reliable utility services during the period reported herein.

Figures 7-2 through 7-5 provide a view of each treatment plant.



Figure 7-2: South Plant



Figure 7-3: East Plant





Figure 7-4: Ambassador Caffery Plant



Figure 7-5: Northeast Plant

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Each year, LUS must prepare an annual municipal water pollution prevention audit report for each wastewater plant and submit these reports to the Council and the LDEQ. These reports, among other things, compare the design hydraulic and biological treatment capacity of each plant with the actual conditions and use point value systems to assess status of the plants. Included in these reports are design capacity exceedences. Table 7-3 outlines the number of months during which the design capacity of each plant was exceeded.

**Table 7-3  
Wastewater Number of Months During Which  
Design Capacity was Exceeded**

	2006	2007	2008	2009	2010
Flow					
South Plant	1	2	1	0	1
East Plant	0	1	2	1	2
Ambassador Caffery Plant	0	1	1	3	3
Northeast Plant	0	0	0	0	0
Biological Loading					
South Plant	0	0	0	0	0
East Plant	0	0	0	0	0
Ambassador Caffery Plant	6	12 <sup>(1)</sup>	3	0	0
Northeast Plant	0	0	0	0	0

(1) Increase in biological loading exceedance due to limited treatment capacity during conversion to SBRs at Ambassador Caffery Plant.  
Source: Craig Gautreaux, LUS, 3/11

Design is underway for plans to expand the South Plant from 7 mgd to 12 mgd. Improvements included in the expansion are the construction of SBR, additional aerobic digestion capacity, sludge thickening and dewatering, and a new headworks facility to treat a portion of the incoming flow. The design engineering consultant estimates the plans remain at 40 percent complete as the design process has been placed on hold while LUS pursues funding options for construction. It is expected that upon completion in 2016, these improvements will provide sufficient capacity for the foreseeable future. It should be noted that the Council approved a rate increase, partially implemented in FY2010, necessary to fund a proposed bond program intended to finance these, and other, improvements. At the time of this report the bonds have been issued and the South Plant design efforts have been resumed.

LUS recently completed construction of additional storage capacity and replacement of the RBC with SBR at the Ambassador Caffery Plant. Construction, started in 2005, was completed and the improvements formally accepted by LUS in November 2008, thereby achieving permit compliance. The completed upgrades also include construction of a 7 million gallon retention /equalization basin.

A long-term plan for sludge stabilization and disposal is needed and an investigation of this issue is included in the wastewater master planning activities completed in



2010 and include land acquisition and treating to Class A standards. Basic concepts to consider as part of developing a long-term approach should include evaluation of economics, potential regulatory constraints and central versus distributed treatment facilities.

### Treatment Plant Security

All four treatment plants are gated requiring the use of a key pad to enter. Additionally, the Ambassador Caffery, South and East Plants have video surveillance capabilities. LUS staff was reported to have been trained in emergency planning and appropriate response that is integrated with on-going programs for hurricane emergency response.

### Wastewater Collection

The wastewater collection system consists of gravity sewers, interceptors, manholes, pumping stations and force mains, as tabulated in Table 7-4.

Table 7-4  
Wastewater Collection System

	2006	2007	2008	2009	2010
Number of Connections	39,815	40,353	41,273	41,185	41,522
Miles of Pipe <sup>(1)</sup>	546	556	561	563	564
Number of Manholes	10,805	11,041	11,213	11,252	11,276
Number of Lift Stations <sup>(2)</sup>	145	147	148	149	146

(1) Not including service lines.

(2) Includes three lift stations from Holiday Utilities bankruptcy.

Source: Craig Gautreaux, LUS, 3/11

The above statistics show that the total pipe in the wastewater collection system has increased at a slightly lower rate than the number of customers, while the number of manholes has increased at the same rate as customers. Generally, these metrics appear to be in line with the growth in customers.

The flat topography of the service area means that additional lift stations will be needed as the system expands unless major interceptors are constructed. LUS is making efforts to slow the increase in the number of lift stations and the wastewater master plan (and associated hydraulic modeling) includes consideration of alternatives for eliminating existing lift stations. To date, the Wastewater Utility has successfully eliminated several lift stations and is working with developers on alternatives to adding lift stations as development occurs, in order to further limit the number of new lift stations. The number of lift stations has been reduced during the reporting period and is now back to 2006-2007 levels.

LUS has also taken over several pond/lift station systems previously operated by Holiday Utilities and other private entities, and is constructing improvements to eliminate most of those facilities and to tie those systems into the Wastewater Utility

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System. Significant progress has been made including elimination of one pond and five lift stations leaving two ponds and three lift stations of the originally inherited facilities.

They Heyman Park Wastewater Lift Station Facility is pictured in Figure 7-6.



Figure 7-6: Heyman Park Wastewater Lift Station Facility

## Sanitary Sewer Evaluation Survey Program

### Inflow and Infiltration

The wastewater collection system has in the past experienced excessive wastewater flow, resulting in treatment plant bypasses and overflows of the wastewater collection system. The excess flows are due to infiltration and inflow of surface and groundwater into the wastewater collection system during and after rainfall events. As a result of these continuing events, the EPA issued administrative orders (AO) requiring treatment plant upgrades and expansions. The AO issued by the EPA requires LUS to submit quarterly progress reports as construction of new facilities and repair of existing facilities proceeds. LUS previously completed requirements for the South Plant, East Plant and Northeast Plant and completed the treatment facility related requirements for the Ambassador Caffery Plant in 2008. In June 2001, the EPA officially transferred permitting authority for the NPDES to the LDEQ for the South, East and Northeast Plants but the Permitting Authority of the Ambassador Caffery Plant remained with the EPA through 2010. It should be noted that around the

time of this report, LUS received official notification that the Ambassador Caffery Plant file has been transferred to LDEQ. It is assumed that this action will mark the closure of the AO as well.

The wastewater collection division recorded the number and type of overflows that have occurred in the system. The information is summarized in Table 7-5. LUS staff actively seeks to correct rain-related problems during periods of rainfall when normal work assignments are interrupted.

Table 7-5  
Wastewater Collection System Overflows

	2006	2007	2008	2009	2010
Rain Related	21	51	43	66	56
Lift Station Equipment Failure	2	9	0	1	6
Main Line Stoppage	13	12	16	6	7
Broken Pipe	4	5	6	18	5
Total	40	77	75 <sup>(1)</sup>	91	74
Total Annual Precipitation (inches)	55	67	67	67	54

(1) Does not include overflows caused by electrical outages due to Hurricane Gustav.

Source: Craig Gautreaux, LUS, 3/11

The number of lift station equipment failures, which spiked in 2007 and subsided in 2008, increased again in 2010. The lift station failure phenomenon experienced in 2007 was attributed to the transition to electronic controls and is no longer an issue. However, power failures and breakers in control panels contributed to the uptick in lift stations failures in 2010. The number of main line stoppages essentially remained the same between 2009 and 2010 as the isolated incidences of 2008 associated with the local prison (prisoners flushing jumpsuits, bed sheets and other materials) and a 21-inch line break were not repeated. Moreover, the number of broken pipes decreased dramatically as the fiber network installation activities slowed from previous years. Overall the number of occurrences decreased significantly returning to 2007-2008 levels after spiking in 2009.

In an effort to combat inflow/infiltration (I/I) issues within the collection system, LUS has implemented a Sewer System Evaluation Survey (SSES) Program to identify I/I problems within the service area and currently budgets \$300,000 per year for these activities. (Note: this annual budget line item is intended for the recurring activities associated with the SSES Program and does not necessarily include funds for repairs and other capital needs stemming from the survey.) An I/I reduction program is ongoing and includes manhole repair, pipe point repair, smoke testing, television inspection, and pipe lining. Some of these activities began in response to AOs but the program will continue as a normal maintenance activity. Additional activities being implemented are Capacity, Management, Operations and Maintenance (CMOM), Fats, Oils and Greases (FOG), and Sewer Overflow Reporting (SORP) programs. The EPA

staff has been very complimentary of efforts undertaken and accomplishments by the Wastewater Utility.

Specifically, the LUS SSES program has been active since 1994 and has evaluated 90 percent of the Northeast Plant service area, 80 percent of the East Plant service area, 50 percent of the South Plant service area, and 70 percent of the Ambassador Caffery Plant service area. Overall, this equates to approximately one-third of the LUS service area remaining to be evaluated.

## Contracts and Agreements

In August 1995, LUS entered into a wastewater operation and maintenance agreement with an area known as the Grossie Avenue Area via a U.S. Department of Housing and Urban Development grant. This area is served by a separately-owned collection system serving a very small number of customers (approximately 50) and flows are treated at the East Treatment Plant. The 40-year agreement expires in August 2035.

## Wastewater Utility Operations

### Staffing Levels

During 2010, LUS did not indicate any staffing level or succession planning concerns but recognizes there are still challenges in these areas of the Utility. The Utility has seen mixed results from the recent efforts to address staff resource concerns via its certification/training program and the market-based pay adjustments. Management does not foresee any significant change with regard to staffing in the near term.

### Regulatory & Environmental

The wastewater discharge permits for each of the four LUS wastewater treatment plants (Ambassador Caffery, East, South, and Northeast) require LUS to regularly test for compliance with permit conditions and report any violations or exceedances of permit limits, including bypass or overflow of wastewater. Detailed information on regulatory and environmental permits for the wastewater system is detailed in Section 9, Environmental Issues.

## Financial

### Capital Outlay Program

#### Fiscal Year 2010

Table 7-6 provides expenditures for fixed plant and equipment that were made during 2010. LUS accounts for such expenditures by using a capital work order system. All extensions or improvements made to the Wastewater Utility are considered economically sound or otherwise necessary for the profitable operation of LUS.

Table 7-6  
Capital Work Order Expenditures

Source of Funds	Wastewater Utility (\$)
Normal Capital	
Bond Reserve & Capital Additions	757,038
Special Equipment	155,494
2004 Revenue Bonds	2,395,148
Retained Earnings	<u>520,497</u>
Total	3,828,176

Source: Status of Construction Work Orders, LCG, 3/11

### Five-Year Capital Outlay Program

The estimated annual capital budget requirement amounts are presented in the following Table 7-7 and were obtained from the Five-Year COP in the LCG Adopted Budget for fiscal year 2010-2011. The bulk of the capital dollars associated with *Treatment* represent the proposed South Plant improvements. Given the size and scope of this initiative, LUS has broken out the various components into multiple smaller projects to be completed over a several-year period. Currently, the estimated cost of these improvements is \$27 million (up from an original estimate of \$20 million) in order to account for the start date and longer period of construction now planned. South Plant improvements represent the last anticipated major plant upgrades in the foreseeable future.

**Table 7-7**  
**Capital Outlay Program 2011 – 2015 (\$)**

	2011	2012	2013	2014	2015	Total
Collection	2,537,000	830,000	2,560,000	12,363,000	16,740,000	35,030,000
Treatment	<u>10,234,500</u>	<u>4,130,000</u>	<u>2,538,000</u>	<u>2,472,000</u>	<u>1,525,000</u>	<u>20,899,500</u>
Total	12,771,500	4,960,000	5,098,000	14,835,000	18,265,000	55,929,500

Source: LUS Five-Year Capital Outlay Program Summary, 2010-11 Adopted Budget, Combined Summary Retained Earnings and Bond Capital

### Wastewater Treatment Plant Improvements

Proposed South Plant improvements include construction of a sludge treatment facility with the previous intent of treating sludge from all of the plants centrally at South Plant. This is no longer the intent and the wastewater master plan considered other distributed sludge treatment alternatives. Other improvements for the South Plant include facilities that will allow diversion of wet weather inflows from the Ambassador Caffery Plant to the South Plant, thereby reducing risk of bypass and overflow. The vast majority of the *Treatment* capital dollars presented above represents the anticipated South Plant improvements which are mostly slated to occur in years 2014 and 2015. However, clarifier rehabilitation and Phase I of the improvements at South Plant are slated to occur in earlier years.

### Wastewater Collection System Improvements

Proposed improvements to the wastewater collection system include 1) installation of a new sewer interceptor, 2) improvements to the existing interceptors located in the Pont des Mouton corridor and those located parallel to Ambassador Caffery Parkway and Kaliste Saloom Road, 3) completion of the installation of emergency power generators for use at lift stations, and 4) telemetry equipment and odor control. Several of the larger capital projects mentioned are scheduled in year 2011, as evidenced by the significantly larger capital dollar value presented above. After these capital improvements, staff anticipates a slowdown in growth in the coming years, resulting in a shift towards O&M rather than capital expenditures.

### Wastewater Master Plan

Wastewater system master planning concluded in 2010 and considers current and future needs, including capital and operational aspects of the Utility. Proposed improvements are delineated into three planning horizons, 5-year, 10-year, and 20-year based on the timeframe of anticipated system needs. The intent is that 5-year capital outlays identified in the Master Plan will be incorporated into the LUS COP and needs initially identified in the 10- and 20-year periods will be incorporated into the COP as they become more immediate needs (i.e., shift to 5-year planning horizon).

## Operating Results

Table 7-8 summarizes the Wastewater Utility revenues and expenses for the most recent five years. The Wastewater Utility operating revenues increased approximately 12.5 percent, or approximately \$2.7 million. Wastewater Utility operating expenses decreased approximately 3.9 percent or approximately \$610,000 from 2009. Overall the Wastewater Utility operating margin increased by approximately 48.7 percent due to the higher revenues and decreased expenses.

**Table 7-8**  
**Wastewater Utility Operating Results**

	2006	2007	2008	2009	2010
<b>Wastewater Operating Revenues (\$)</b>					
Retail Service	19,663,521	21,479,609	21,893,058	21,320,392	23,982,152
Other	<u>264,150</u>	<u>692,444</u>	<u>128,374</u>	<u>215,893</u>	<u>252,026</u>
Total Wastewater Operating Revenues (\$)	19,927,672	22,172,054	22,021,432	21,536,286	24,234,178
<b>Wastewater Operating Expenses (\$)</b>					
Operation	6,095,764	6,324,360	6,904,585	6,787,270	6,766,795
Maintenance	1,661,598	1,930,553	2,020,107	2,442,184	2,304,508
Other	<u>4,249,505</u>	<u>4,978,554</u>	<u>5,273,723</u>	<u>6,212,916</u>	<u>5,761,126</u>
Total Operating Expenses (\$)	12,006,867	13,233,467	14,198,414	15,442,369	14,832,429
<b>Wastewater Non Operating Revenues (Expenses) (\$)</b>					
Interest Revenues	570,869	707,631	495,576	357,408	268,505
LUS Fiber Start-up Reimbursement	0	454,114	0	0	0
Miscellaneous Non Operating Revenues	54	0	10,342	78,921	(7,939)
FTTH Start Up Project <sup>(1)</sup>	(192,326)	0	(10,602)	0	0
Interest on Customer Deposits	(1,752)	(2,322)	(2,377)	(2,784)	(2,221)
Tax Collections/Non Operating	(53,851)	5,468	22,987	20,922	24,351
Miscellaneous Non Operating Expense	<u>0</u>	<u>0</u>	<u>(14,371)</u>	<u>0</u>	<u>0</u>
Total Non Operating Revenues (Expenses) (\$)	322,994	1,164,891	501,555	454,467	282,696
<b>Net Margin (\$)</b> <sup>(2)</sup>	<b>8,243,799</b>	<b>10,103,478</b>	<b>8,324,572</b>	<b>6,548,383</b>	<b>9,735,501</b>

(1) Wastewater allocation of FTTH project start up cost. Allocation pursuant to LUS Cost Allocation Manual.

(2) Before Depreciation and Debt Service.

Source: LUS Financial and Operating Statements 2006-2010 audited

## Statistical Data

The selected statistical data in this Section pertaining to the number of customers, customer usage, and revenues by class was obtained or developed from the LUS Financial and Operating Statements for years 2006 through 2010.

## Revenues

Table 7-9 shows the Wastewater Utility statistics for the most recent five years. Compared to the prior year, the average wastewater usage per account in 2010 increased by approximately 2.2 percent, from 135,000 gallons to 138,000 gallons. Estimated wastewater usage per account has increased by 3 percent from 2006 levels. The average wastewater revenue per customer increased 11.6 percent in 2010 as compared to 2009.

**Table 7-9  
Wastewater Sales Revenue and Statistics**

	2006	2007	2008	2009	2010
Wastewater Sales Revenues (\$)					
Retail Service	19,663,521	21,479,609	21,893,058	21,320,392	23,982,152
Other	<u>264,150</u>	<u>692,444</u>	<u>128,374</u>	<u>215,893</u>	<u>252,026</u>
Total Wastewater Sales Revenues (\$)	19,927,672	22,172,054	22,021,432	21,536,286	24,234,178
Wastewater Intake (1,000 gallons)	5,319,763	5,711,781	5,669,875	5,570,825	5,715,794
Wastewater Number of Accounts	39,815	40,353	41,043	41,185	41,522
Wastewater Statistics					
Intake per Account (1,000 gallons)	134	142	138	135	138
Revenue per Account (\$)	500.51	549.45	536.55	522.92	583.65
Revenue per 1,000 gallons (\$)	3.75	3.88	3.88	3.87	4.24

Source: LUS Financial and Operating Statements 2006-2010 audited

## Expenses

As shown in Table 7-10, the compounded annual average increases in Wastewater Utility expenses over the past five years are as follows:

- Collection Expense – 8.5 percent increase
- Treatment Expense – 1.4 percent increase
- Administrative Support – 0.7 percent increase



**Table 7-10  
Wastewater Utility Detailed Expenses**

	2006	2007	2008	2009	2010
Wastewater Collection Expense (\$)					
Operation	1,115,262	1,229,554	1,457,596	1,339,497	1,496,394
Maintenance	1,513,286	1,757,778	1,850,105	2,273,449	2,146,923
Wastewater Treatment Expense (\$)					
Operation	4,980,502	5,094,806	5,446,989	5,447,773	5,270,401
Maintenance	148,313	172,775	170,002	168,735	157,585
Other Wastewater Expense (\$)					
Customer Operations	580,581	680,712	732,283	931,239	860,777
Customer Services (\$)	342,385	361,978	304,243	365,997	345,861
Administrative & General	<u>3,326,539</u>	<u>3,935,864</u>	<u>4,237,197</u>	<u>4,915,681</u>	<u>4,503,392</u>
Total Wastewater Expense (\$)	12,006,867	13,233,467	14,198,414	15,442,369	14,781,373

Source: LUS Financial and Operating Statements 2006-2010 audited

## Rate Revisions

During 2009, LUS performed a cost-of-service and rate design study for the Wastewater Utility. This study was performed in accordance with generally accepted industry practices for municipal utilities. Based on the study performed, the following conclusions were presented:

- The Wastewater Utility current rates are not going to generate sufficient revenues to meet current costs.
- Under current rates, LUS will not be able to maintain a positive cash balance for its retained earnings account and will have difficulty funding future capital projects with current earnings that are integral to its long-term financial planning strategies.
- Wastewater System rates need modification.

As a result of this study, the Council passed Ordinance O-012-2010 on February 9, 2010. An average rate increase of 18 percent went into effect for Wastewater Utility customers on February 1, 2010 and an additional average rate increase of 18 percent went into effect on November 1, 2010. With these rate increases, the Wastewater Utility is anticipated to continue to provide adequate and reliable service and a reasonable amount of revenues to LCG.

Since 2006, the average residential rates for the Wastewater Utility have increased by 18.4 percent. The Wastewater Utility average residential rates increased by 10.1 percent during 2010, as shown in Table 7-11. The Wastewater Utility average commercial rates increased 10.8 percent during 2010; and increased by 12.2 percent from 2006. The overall Wastewater Utility rate increases are consistent with what we expect to see due to capital requirements.

**Table 7-11  
Wastewater Retail Rates (Revenue/Account)**

Class	2006 <sup>(1)</sup>	2007 <sup>(2)</sup>	2008	2009	2010 <sup>(3)</sup>
Residential (\$)	307.50	327.53	332.41	330.51	363.96
Commercial (\$)	1,681.82	1,855.70	1,809.92	1,702.95	1,887.20

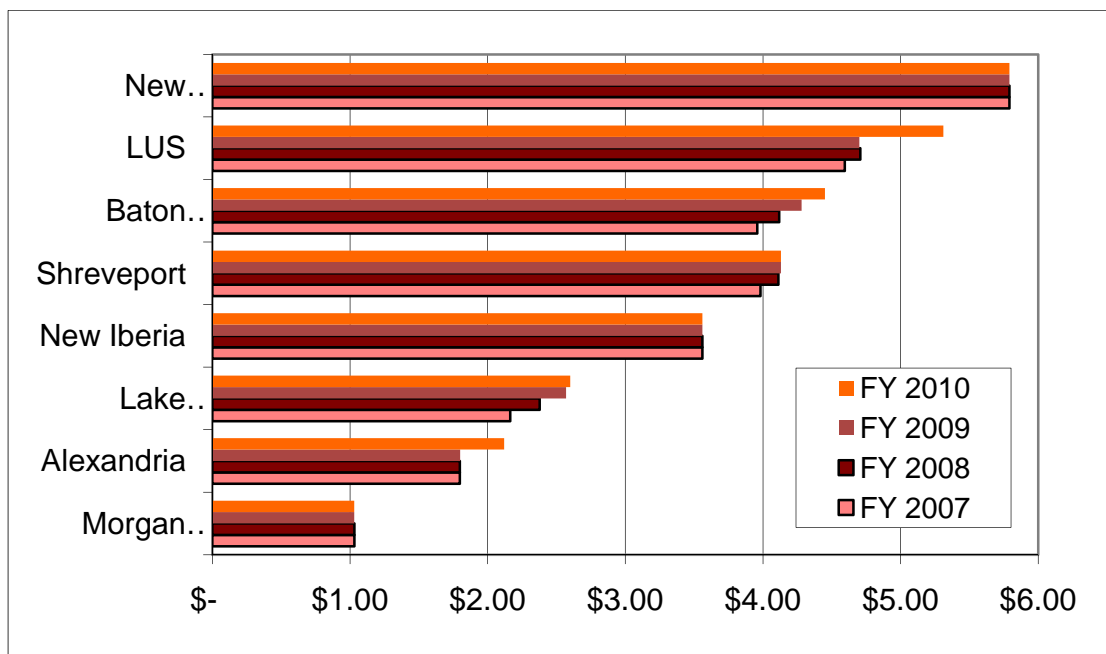
(1) The Wastewater Utility customers experienced a rate increase of 25 percent on November 1, 2005.

(2) The Wastewater Utility customers experienced a rate increase of 12.5 percent on November 1, 2006.

(3) The Wastewater Utility customers experienced a rate increase of 18 percent on February 1, 2010.

Source: LUS Financial and Operating Statements 2006-2010 audited

Figure 7-7 displays the wastewater rates for LUS and surrounding utilities in Louisiana. Wastewater rates are difficult to compare because many cities and towns subsidize wastewater systems with local taxes. The extent to which other cities and towns have subsidized their systems is unknown. Figure 7-7 shows LUS wastewater rates as the second highest of the utilities reviewed.



Source: LUS, Based on a monthly bill with 7,000 gallons consumption. Includes customer charge, if applicable

Figure 7-7: Wastewater Rates for LUS and Selected Louisiana Utilities (\$/1000 gallons)

## Recommendations

Recommendations and their status are provided in Table 7-12 below. We have indicated the priority of the recommendation as either highest, high or normal.

## UTILITIES SYSTEM - WASTEWATER UTILITY

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Table 7-12  
Recommendations

Wastewater Utility	Priority	Status
LUS should continue to utilize the wastewater hydraulic model of the system and implement recommendations of the wastewater master plan	Highest	In Progress
LUS should continue evaluating alternatives for reallocating flows from existing treatment facilities to other treatment facilities	High	In Progress
LUS should complete final strategy for sludge processing (Class A/B) and disposal	High	In Progress
LUS should develop a strategy for reducing the number of lift stations within the wastewater collection system	High	In Progress
LUS should develop policy/strategy for implementing wastewater service Parish-wide	High	In Progress
LUS should continue its (re-)certification training program including offering outside training for staff	Normal	In Progress
LUS should develop and implement CMOM program to meet anticipated permit requirements	Normal	In Progress
LUS should evaluate treatment plant processes for future nitrogen and phosphorus effluent discharge limits	Normal	In Progress

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# Section 9

## ENVIRONMENTAL ISSUES

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### Introduction

The LUS Electric, Water and Wastewater Utilities, as well as the Communications System, are subject to various environmental permits, approvals, laws, rules, and regulations. This section provides a discussion of the current status of major environmental permits and potentially significant environmental liabilities for the Utilities System. This section is not meant to provide a comprehensive environmental compliance assessment of the system. The intent is to provide a description of our understanding of the status of the Utilities System with respect to requirements set forth in its permits and approvals, and applicable environmental laws and regulations. The information provided is based on review of documents provided by, and discussions with, persons providing information on behalf of the Utilities System and primarily addresses the major requirements that affect the electric, water and wastewater systems including: the Clean Air Act and the Clean Air Act Amendments of 1990 (CAA), the Clean Water Act (CWA), and the SDWA. Requirements of the CAA are addressed through a permit program administered by LDEQ and USEPA. Requirements of the CWA are administered through a permit process whereby any discharge into surface waters requires an NPDES permit (administered by the LDEQ under the Louisiana Pollutant Discharge Elimination System (LPDES) permit program). The SDWA establishes standards for public water systems, whereby tap water must meet certain quality standards for different chemicals as established by the USEPA.

In addition to the regulations discussed above, LUS facilities, operations and associated activities are subject to regulations that cover the following areas: waste storage and disposal, superfund liability, groundwater, underground and aboveground petroleum storage tanks, oil spills, emergency planning and community right-to-know, management of polychlorinated biphenyl compounds (PCB or PCBs), used oil, pesticides, wood poles, and asbestos.

### Environmental Compliance Division

The Environmental Compliance Division operates under the supervision of Frank Ledoux, Engineering and Power Production Manager. Ms. Allyson Pellerin is the Environmental Compliance Manager for water and wastewater and Ms. Gini Ingram is the Air Quality Compliance Administrator. However, Ms. Ingram is responsible for all environmental compliance activities at the power generation facilities. The Environmental Compliance Division supports the Utilities System in the following areas:

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- Regulatory compliance for the electric, water, and wastewater divisions
- Administration of the Industrial Pretreatment Program
- Analytical services relative to analyses of drinking water, wastewater analysis and biosolids reuse

### Electric Generating Stations

LUS operates the Doc Bonin Plant, T. J. Labbé Plant, Hargis-Hébert Plant, and owns an interest in RPS2 in Boyce, Louisiana. Another LUS facility, the Curtis Rodemacher Station in Lafayette, is no longer in operation and is being decommissioned. A brief discussion of environmental compliance and environmental issues at each facility is provided in the sections below and a list of the major permits for each of the plants operated by LUS is provided in Table 9-1.

**Table 9-1  
List of Major Permits for LUS Electric Generating Stations**

Permit	Responsible Agency	Expiration Date	Comments/Description
<b>Doc Bonin Electric Generating Station</b>			
Part 70 Operating Permit Number 1520-00002-V1 (Title V Air Permit)	LDEQ	March 24, 2011	Allows for the discharge of air pollutants from the turbine stacks and other emissions sources located at the site. Sets forth monitoring, recordkeeping, and reporting requirements.
Acid Rain Program Permit Number 1520-00002-IV1 (Title IV Air Permit)	USEPA	March 24, 2011	Allows for discharge of acid rain constituents from the turbine stacks and requires the owner to hold annual emissions allowances equal to applicable emissions.
Louisiana Pollution Discharge Elimination System Permit Number LA0005711	LDEQ	February 1, 2014	Issued January 9, 2009 with effective date February 1, 2009. Allows for the discharge of boiler blowdown, cooling tower blowdown, low volume wastewater, and stormwater runoff to the Vermillion River via local drainage. Sets forth monitoring, recordkeeping, and reporting requirements.
Clean Air Interstate Rule Permit	LDEQ	Permit not yet issued.	Not yet issued. LDEQ review in progress. Required for compliance with Clean Air Interstate Rule requirements.
<b>T. J. Labbé Electric Generating Station</b>			
Part 70 Operating Permit Number 1520-00128-V2 (Title V Air Permit)	LDEQ	October 8, 2013	Issued April 16, 2009. Allows for the discharge of air pollutants from the turbine stacks and other emissions sources located at the site. Sets forth monitoring, recordkeeping, and reporting requirements.
Acid Rain Program Permit Number 1520-00128-IV1 (Title IV Air Permit)	USEPA	October 8, 2013	Allows for discharge of acid rain constituents from the turbine stacks and requires the owner to hold annual emissions allowances equal to applicable emissions.
Clean Air Interstate Rule Permit No. 1520-00128-IR0	LDEQ	October 8, 2013	Issued October 8, 2008. Required for compliance with Clean Air Interstate Rule requirements.
<b>Hargis-Hébert Electric Generating Station</b>			
Part 70 Operating Permit Number 1520-00131-V1 (Title V Air Permit)	LDEQ	January 8, 2014	Issued January 8, 2009. Allows for the discharge of air pollutants from the turbine stacks and other emissions sources located at the site. Sets forth monitoring, recordkeeping, and reporting requirements.
Acid Rain Program Permit Number 1520-00131-IV1 (Title IV Air Permit)	USEPA	January 8, 2014	Allows for discharge of acid rain constituents from the turbine stacks and requires the owner to hold annual emissions allowances equal to applicable emissions.
Clean Air Interstate Rule Permit No. 1520-00131-IR0	LDEQ	January 8, 2014	Issued January 8, 2009. Required for compliance with Clean Air Interstate Rule requirements.

Source: LDEQ Permits

### Doc Bonin Electric Generating Station

The Doc Bonin Plant is comprised of three steam electric generating units capable of firing natural gas and No. 2 fuel oil. Permits issued to the Doc Bonin Plant generally include all activities of the Walker Road Complex, which encompasses the Doc Bonin Plant, LUS administrative offices, warehouses, an automobile service station, and a waste collection facility.

#### NPDES Permit

As indicated in Table 9-1, the Doc Bonin Plant is subject to the requirements of an LPDES permit. LUS received a new permit in January 2009. The permit includes minor changes to discharge limits and the relaxation of monitoring frequencies for some compounds. Overall there are no concerns related to the new permit and LUS appears able to operate in compliance with permit requirements.

A Stormwater Pollution Prevention Plan has been prepared and implemented pursuant to LPDES requirements. Discharge Monitoring Reports (DMR) for 2010 indicate material compliance with LPDES permit limits.

#### Air Permit

A final Part 70 Operating Permit was received during March 2006 for the Doc Bonin Plant. The permit allows for Unit 1 and Unit 2 to fire either natural gas or No. 2 fuel oil with little restrictions on emissions levels. For Unit 3, the permit allows for unlimited use of natural gas and continued restricted use of No. 2 fuel oil for periods when the natural gas supply is interrupted (not to exceed 150 hours per year). Historically, the units at the Doc Bonin Plant have rarely operated on No. 2 fuel oil. The Operating Permit expires March 24, 2011 and renewal application was submitted to LDEQ in a timely manner as required by regulations.

The Part 70 Operating Permit contained a provision to perform emissions testing on each of the boiler units within 180 days of the issuance of the permit. Due to the infrequent operations of the units at the Doc Bonin Plant, LUS requested, and LDEQ approved, certain amendments to the Part 70 Operating Permit allowing LUS to perform these emissions tests at a later date. LUS successfully tested and demonstrated compliance for boiler Unit 2 in 2006. Testing on Unit 1 was performed in 2007 and testing on Unit 3 was conducted in 2009.

Results of the emissions testing for carbon monoxide on Units 1 and 3 indicate the units were not in compliance with air permit emission limits. As a result, a Consolidated Compliance Order and Notice of Environmental Penalty (“Order”) was issued by the LDEQ on January 14, 2010. LUS is operating the units in accordance with the Order and submitted a permit application to modify emission limits accordingly. A modified Operating Permit was issued by LDEQ on March 23, 2010 and this permit expires March 24, 2011. LUS has received an extension for emissions testing on Unit 3 and will complete the required testing by June 1, 2011. LUS submitted a timely renewal application for the Operating permit and reports that LDEQ is awaiting Unit 3 testing before finalizing the new permit. Operation under the

existing permit continues until a new permit is issued. LUS reports that recent meetings and discussions with LDEQ indicate this matter will be resolved to the satisfaction of both parties. The amount of any resulting penalty, if any, is not known at the present time.

Due to the construction date and size of Unit 3, emissions must also meet the requirements of the New Source Performance Standards (NSPS) under the CAA. During 2005, it was observed that the NO<sub>x</sub> emissions from Unit 3 were not consistently meeting NSPS requirements. LUS is currently in the process of making repairs to the unit that will allow operation at design capacity and it is expected this will allow the unit to meet NSPS NO<sub>x</sub> limits. It is recommended that a legal counsel be consulted to confirm that repairs will not trigger New Source Review permit requirements.

Pursuant to the requirements of Acid Rain Program under the CAA, all three units at the Doc Bonin Plant were equipped with a CEMS prior to 1996. LUS personnel report that during 2010 the CEMS complied with the applicable performance specifications for relative accuracy test audit ("RATA") and quality assurance, the required quarterly CEMS reports were submitted to USEPA, and the applicable emissions allowance accounts were covered as necessary. The exception to this is that RATA testing was not completed on Units 1 and 3 in 2010 due to limited operation of the units. These two units are in the grace period for the RATA and the testing will need to be performed during the next operational quarter. The RATA was successfully completed on Unit 2 September 7 and 8, 2010.

In accordance with state requirements, an annual emissions inventory for the Doc Bonin Plant was submitted to LDEQ during 2010. Additionally, all necessary quarterly, semi-annual, and annual emissions compliance reports were submitted during 2010. During 2010, the requirement to submit quarterly CEMS/Excess Emission reports was changed to a semi-annual frequency. In accordance with new federal regulations, monitoring of CO<sub>2</sub> has been initiated at the facility.

## **Oil Storage**

The Doc Bonin Plant includes four large fuel storage tanks, which currently contain limited quantities of fuel oil sludge, as shown in Table 9-2 below.



**Table 9-2  
Fuel Oil Storage Tanks**

Tank	Type	Capacity (Gallons)	Contents (Gallons)
Tank No. 1	No. 2 Fuel Oil	440,000	6,700 <sup>(1)</sup>
Tank No. 2	No. 2 Fuel Oil	<u>1,443,000</u>	<u>50,000<sup>(1)</sup></u>
No. 2 Fuel Oil Total		1,883,000	0
Tank No. 3	No. 6 Fuel Oil	2,538,000	6,000 <sup>(2)</sup>
Tank No. 4	No. 6 Fuel Oil	<u>2,538,000</u>	<u>85,000<sup>(2)</sup></u>
No. 6 Fuel Oil Total		5,076,000	188,000 <sup>(2)</sup>

(1) No. 2 Fuel Oil Sludge.

(2) No. 6 Fuel Oil Sludge.

Source: Gin Ingram, LUS, 3/16/09, confirmed as accurate by Jamie Webb 3/16/11.

Due to the condition of the tanks and associated piping, the tanks must be cleaned, inspected, and likely retrofitted with new piping and other associated peripheral equipment prior to future use.

The contents of Tank Nos. 3 and 4 were sold in 1999 (all that remains is sludge), and the Part 70 Operating Permit does not allow for the use of No. 6 fuel oil. LUS is in the process of removing the sludge and decommissioning of these tanks. However, no action was taken during 2010.

LUS has prepared and implemented a Spill Prevention Control and Countermeasure (SPCC) Plan and a Facility Response Plan for the Walker Road Complex and has indicated that no reportable spills occurred during 2010. The SPCC plan is currently being updated in accordance with regulatory requirements. The Facility Response Plan was updated in 2009 and training and plan implementation are currently in progress.

## General Environmental

A sodium hypochlorite spill occurred on April 17, 2010 during transfer from bulk storage to a day tank as the result of a combination operator error and malfunction of a high-level sensor in a day tank. Approximately 850 gallons of sodium hypochlorite spilled. The spill was contained and did not leave the immediate area. LUS monitored pH in the soil around the area and no further action was required by LDEQ. Two additional spills occurred during 2010, one on April 13 and one on August 11. Both involved 35 – 55 gallons of sulfuric acid. The spills were properly remediated and LDEQ inspected each area. LUS personnel believe the issues are considered closed by LDEQ.

Three offsite incidents involving leaks or spills of transformer oil occurred in 2010. In each case the spill was properly cleaned, an inspection was conducted by LDEQ, and the proper reports were filed by LUS.

## T. J. Labbé Plant

The T. J. Labbé Plant is comprised of two natural gas fired simple-cycle combustion turbines. Construction was completed during 2005.

### Air Permit

As indicated in Table 9-1 above, the T. J. Labbé Plant must maintain compliance with the requirements of its Part 70 Operating Permit and Acid Rain Program Permit. A revised permit was issued by LDEQ on April 16, 2009. The Operating Permit is now identical to the permit for Hargis-Hebert.

Compliance during operations is demonstrated by monitoring fuel usage and quality, operating time, and NO<sub>x</sub> emissions with a certified CEMS. LUS personnel report that during 2010 the CEMS have complied with the applicable performance specifications for relative accuracy and quality assurance, the required quarterly CEMS reports were submitted to USEPA, and the applicable emissions allowance accounts were covered as necessary. RATA testing was conducted on Unit 1 on October 7 and 8, 2010 and on Unit 2 on March 31 and April 1, 2010.

Pursuant to state requirements, an annual emissions inventory for the T. J. Labbé Plant was submitted to LDEQ during 2010. Additionally, semi-annual, and annual emissions compliance reports were submitted during 2010. Starting in 2010, monitoring and deviation reports for the CEMS are now required to be submitted semi-annually instead of quarterly.

In accordance with new federal regulations, monitoring of CO<sub>2</sub> has been initiated at the facility although reporting requirements have been delayed and will not begin until late 2011.

### Wastewater Discharge

Process wastewater from the T. J. Labbé Plant, including cooling tower blow down and sanitary wastes, is discharged to the City's sewer system. The facility is not subject to the requirements of an Industrial Wastewater Discharge permit. Turbine water-wash wastes are collected in the water-wash drain tank, sampled and evaluated, and pumped to the City sewer system or picked up and disposed of by an outside contractor.

### Oil Storage

Pursuant to regulatory requirements, the site SPCC plan has recently been updated and implemented. LUS personnel indicated that no reportable spills occurred during 2010.

## Hargis-Hébert Plant

The Hargis-Hébert Plant is comprised of two natural gas fired simple-cycle combustion turbines. Construction was completed during 2006.

### Air Permit

As indicated in Table 9-1 above, the Hargis-Hébert Plant must maintain compliance with the requirements of its Part 70 Operating Permit and Acid Rain Program Permit. The facility operates under an Operating Permit identical to that of the T. J. Labbe plant. Compliance during operations is demonstrated by monitoring fuel usage and quality, operating time, and NO<sub>x</sub> emissions with a certified CEMS. LUS personnel report that during 2010 the CEMS have complied with the applicable performance specifications for relative accuracy and quality assurance, the required quarterly CEMS reports were submitted to USEPA, and the applicable emissions allowance accounts were covered as necessary. RATA testing for Unit 1 was completed June 22 and 23, 2010, while the RATA for Unit 2 was completed June 23 and 24, 2010.

Pursuant to state requirements, an annual emissions inventory for the Hargis-Hébert Plant was submitted to LDEQ during 2010. Semi-annual and annual emissions compliance reports were submitted as required during 2010. Starting in 2010, monitoring and deviation reports for the CEMS are now required to be submitted semi-annually instead of quarterly.

In accordance with new federal regulations, monitoring of CO<sub>2</sub> has been initiated at the facility although reporting requirements have been delayed and will not begin until late 2011.

### Wastewater Discharge

Process wastewater from the Hargis-Hébert Plant, including cooling tower blow down and sanitary wastes, is discharged to the City's sewer system. The facility is not subject to the requirements of an Industrial Wastewater Discharge permit. Turbine water-wash wastes are collected in the water-wash drain tank, sampled and evaluated, and pumped to the city sewer system or picked up and disposed of by an outside contractor.

### Oil Storage

Pursuant to regulatory requirements, the site SPCC plan has recently been updated and implemented. LUS personnel indicated that no reportable spills occurred during 2010.

### RPS-2 in Boyce, LA

LUS has an interest in the coal-fired steam electric generating unit RPS-2 through their interests in LPPA. There are several items to note related to current operations at RPS-2:

- Wastewater: appear in material compliance with permit requirements; currently working with LDEQ to establish acceptable limits for copper in the effluent discharge based on the results of the copper sampling program. LDEQ may, based on their evaluation of these reports, impose additional LPDES permit requirements.

- Cooling water intake: Lake Rodemacher was constructed solely for the purpose of supporting the power plant operation it is not “waters of the state” and is not subject to the 316b regulation. During February 2006, LDEQ issued a renewed final NPDES permit (LAR10D337) allowing the continued disposal of wastewater and stormwater to the Red River Basin. Cleco personnel report that the contents of the permit represent a compromise between USEPA and LDEQ with regard to CWA 316b applicability. The compromise involves performing an impingement study of the cooling water intake structure. This study was performed during 2007 and submitted to LDEQ in January 2008. The renewed permit continues to reflect that the man-made discharge reservoir will not be classified as “Waters of the State.” We are of the understanding that this compromise does not represent a final resolution as to the applicability of 316b.
- Air emissions: appears in material compliance with permit requirement, including Acid Rain program and Clean Air Interstate Rule requirements. Historical opacity issues have been improved upon and RPS-2 personnel report in excess of 99 percent compliance over the past three years.
- Solid waste: in the recent past, more ash has been sold than deposited in the ponds. RPS-2 personnel report that the results of groundwater monitoring at the site correlate with historical results and continue to suggest that the operation of the ponds have not adversely impacted the groundwater quality at the Station.
- Hazardous waste: no apparent issues.

There are a number of regulations that have either been implemented or will be proposed in the near future that may have an effect on the operations of RPS-2. These initiatives are briefly discussed in the paragraphs that follow. Since the rules are only recently implemented or proposed, the ultimate effect on RPS-2 operations cannot be determined at this time. However, several of the rules are expected to have a significant financial impact due to the possible requirement for emission control retrofits to achieve compliance.

The Clean Air Interstate Rule (CAIR) was finalized by the EPA in March 2005. The details are discussed in Section 9. As a result of rule implementation, additional costs will likely be incurred by the Unit 2 owners (including LUS) to manage future emissions allowance programs for NO<sub>x</sub> and a tightened availability of existing sulfur dioxide (SO<sub>2</sub>) allowances. New low-NO<sub>x</sub> burners were installed on the unit between October and December 2008 to reduce the costs of compliance with the NO<sub>x</sub> emissions trading program. Information provided by LUS personnel indicate that Unit 2 NO<sub>x</sub> emissions have dropped substantially, from approximately 0.4 lb/MMBtu to about 0.175 lb/MMBtu, with the operation of the new burners in 2009.

## PCB Transformers

The electrical transmission and distribution system includes oil filled electrical equipment. Occasionally, replacements and repairs can require disposal of the oil filled contents. A portion of this equipment contains trace amounts of PCBs, which are regulated under the Toxic Substance Control Act. LUS manages their

PCB-containing equipment as required by federal and state regulations. LUS indicated that there were no PCB transformers (transformers containing >500 ppm PCBs in the oil) in its inventory, and they have a program to systematically remove and replace transformers with PCB contamination (transformers with >51 ppm PCBs in the oil). As mentioned earlier, LUS manages the disposal of regulated and non-regulated wastes, including PCB contaminated wastes, from a facility at the Walker Road Complex.

## Groundwater and/or Soil Contaminated Sites

Following is a review of environmental compliance activities and known instances of soil and/or groundwater contamination at facilities owned by LUS. There were no changes to the sites or advances in the remediation/decommissioning programs in 2010.

### Grant Street Substation

In September of 1991, LUS undertook a project to install and upgrade the electrical capabilities of Grant Street Substation No. 2. During the course of the construction activities, visible traces of petroleum products were discovered in the shallow ground water. Construction was halted and the upgrade plan was suspended.

Subsequent investigations at the site revealed petroleum contamination in the groundwater at the site, under adjoining property not owned by LUS, and at the nearby Grant Street Substation No. 1. In 2000, LUS submitted a Risk Evaluation Corrective Action Plan (RECAP) to LDEQ. LUS submitted a RECAP sampling and analysis plan to LDEQ in early 2005 and the plan was approved in late 2005. Sampling performed during late 2005 indicated that the extent of the contamination plume had not yet been determined, so additional sampling and analysis is required. As part of the settlement, LUS purchased property adjacent to the Grant Street site. A building on the property was dismantled in 2007. However, the slab is still in place. LUS is waiting for a determination by LDEQ before removal of the slab and underlying soil. LUS continues to work with LDEQ to resolve the issue. Future costs associated with soil remediation of this site (Grant Street Substation No. 1 and Grant Street Substation No. 2) could be significant.

### Curtis Rodemacher Decommissioning

The Curtis Rodemacher Power Plant has been retired and most of the facility is in the process of decommissioning. Thus far, a new fence has been installed and additional security measures have been implemented. Fuel oil tanks, small buildings, above ground piping, boilers, and cooling towers have been removed from the site. LUS is continuing to perform air monitoring at the site. Remaining tasks for decommissioning include: remediation of existing PCB contamination, asbestos, bio-hazards created from pigeons, and lead-based paint in the power plant building; demolition of the warehouse and power plant building; and removal of underground piping. With the exception of a few capacitors temporarily stored at the site, all oil

and oil containing devices were removed from the site in 2008. Based on current knowledge of the environmental conditions at the site, the process of removing underground piping may identify contamination issues and trigger further remediation requirements. The decommissioning schedule and long-term plan for the site are still being evaluated and the future costs associated with remediation of the site could be significant.

## **Transformer Leak**

On June 1, 2009, it was discovered that a transformer located behind the Super Target at 4313 Ambassador Caffery Road released less than five gallons of mineral oil onto the concrete surrounding the transformer. The oil was cleaned up and properly disposed of. Upon further inspection of the transformer, it was discovered that the transformer was short of capacity by approximately 50 – 100 gallons of oil. Since the transformer is completely surrounded by concrete, it is believed the oil may have leaked into the soil directly below the transformer. This information has been provided to LDEQ and, as of early 2011, they have yet to determine whether a cleanup will be required.

## **Water Production and Distribution System**

LUS reports that the North, South, and Gloria Switch Water Treatment Plants are currently complying with their operating permits and meeting all applicable drinking water standards of the SDWA. The South Water Treatment Plant is permitted to discharge wastewater from the treatment of potable water, stormwater and sanitary wastewater under LPDES Permit LA0079278 with an effective date of November 1, 2009 and a term of five years. The North Water Treatment Plant is permitted to discharge wastewater associated with the treatment of potable water under General LPDES permit LAG380000 (facility permit No: LAG380057) modified and effective July 1, 2010 with a term of five years. The Gloria Switch Water Treatment Plant also discharges wastewater associated with the treatment of potable water under General LPDES permit LAG380000 (facility permit No: LAG380096) modified and effective July 1, 2010 with a term of five years.

An inspection of the facilities as part of a Sanitary Survey conducted by DHH every three years was conducted in the fall of 2010. The resulting report included the identification of deficiencies in the program that require action. It is noted that under current DHH policy, all deficiencies are considered significant. LUS reports all corrective actions, with the exception of minor modifications related to chlorine storage areas, will be completed within nine months of the date of the DHH letter (December 7, 2010). LUS reports most of the corrections are complete at this time and none require a significant financial investment.

## **Drinking Water Quality**

LUS, in response to the requirements of the SDWA, must prepare and distribute an annual water quality report to its customers. The 2010 Water Quality Report (which

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will be published in June 2011) includes results of periodic monitoring of the quality of water distributed to LUS customers. Table 9-3 summarizes monitoring results for the most recent water quality tests performed. As shown on the table, all monitoring results show LUS water quality to be within the regulatory limits. Biological water quality is also monitored throughout the system, although it is not required to be reported in the annual report.

Table 9-3  
2010 Water Quality Results <sup>(1) (2)</sup>

Monitored Before Any Treatment

Substance	Major Source in Drinking Water	EPA Designated Contaminant Level	EPA Designated Maximum Contaminant Level Goal	LUS Maximum
Arsenic	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	10 ppb	0 ppb	1 ppb
Fluoride	Erosion of natural deposits; Discharge from fertilizer and aluminum factories	4 ppm	4 ppm	0.2 ppm
p-Dichlorobenzene	Discharge from industrial chemical factories	75 ppb	75 ppb	0.53 ppb
Bis(2-ethylhexyl) Phthalate	Discharge from rubber and chemical factories	6 ppb	0 ppb	1.49 ppb
2-ethylhexyl Adipate	Discharge from rubber and chemical factories	400 ppb	400 ppb	0.72 ppb

Monitored as Finished Water (monitoring of finished water not required)

Barium	Discharge from drilling wastes Discharge from metal refineries Erosion of natural deposits	2 ppm	2 ppm	0.1 ppm
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Monitored in the Water Distribution System

Substance	Major Source in Drinking Water	Maximum Contaminant Level	Maximum Contaminant Level Goal	LUS Maximum
Coliform	Naturally present in the environment	No more than 5% positive monthly samples	0	0
E. Coli	Human and animal fecal waste	A routine sample and a repeat sample are total coliform positive, and one is also fecal positive/E. coli positive	0	0
Total Trihalomethanes (TTHM)	By-Product of drinking water chlorination	80 ppb	0	14.3 ppb
Haloacetic Acids (HAA5)	By-Product of drinking water chlorination	60 ppb	0	2.8 ppb



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### Monitored At Customer's Tap

Substance	Major Source in Drinking Water	EPA Designated Action Level (requires treatment) at 90th Percentile	LUS Results at 90th Percentile Testing
Lead	Corrosion of household plumbing systems; Erosion of natural deposits	15 ppb	1.0 ppb or less <sup>(3)</sup>

(1) ppb is parts per billion.

(2) ppm is parts per million.

(3) No individual sample exceeded the Action Level

Source: Nadine Perry, LUS, 03/11

## Wastewater Collection and Treatment

The Federal Water Pollution Control Act Amendments of 1972 and 1977, commonly known as the Clean Water Act, established the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the EPA the authority to implement pollution control programs such as setting wastewater discharge standards and water quality standards for all contaminants in surface waters. In many instances the EPA has delegated program administration to the states and, in the case of the State of Louisiana; LDEQ has assumed responsibility for administering the NPDES program.

The EPA also funded the construction of sewage treatment plants under the construction grants program and recognized the need for planning to address the critical problems. Programs implemented by the EPA that directly affect municipal systems include:

- LPDES/NPDES Permit Program, including stormwater management, and control of combined sewer and sanitary sewer overflows
- The National Pretreatment Program, emphasizing control and prevention of water pollution from industrial facilities
- Biosolids (sewage sludge) management program promoting compliance with the Federal biosolids rule and practices for managing biosolids
- Administration of the Clean Water State Revolving Fund (CWSRF)
- CMOM program addressing sanitary sewer overflows

## Vermilion River Water Quality Standards

Section 303(d) of the 1972 Clean Water Act requires all states to develop a list of their state's impaired water bodies that do not meet state regulatory water quality standards even with the current pollution controls in place. The Clean Water Act requires all states to develop Total Maximum Daily Loads (TMDLs) for these waters based on priority ranking. A TMDL is a pollution budget for a specific water body (river, lake, stream, etc.) and is the maximum amount of a pollutant from point and non-point sources that it can receive without causing it to violate state water quality standards.

Once the TMDLs are established, they are then translated into requirements to reduce the contributions of pollutants by point sources such as municipal wastewater treatment plants, industrial wastewater discharges and by non-point sources such as stormwater runoff from agricultural fields. If water quality monitoring shows that the water body is no longer impaired, no further reductions are needed. However, if pollution levels are still unacceptable at the end of a reasonable time period, LDEQ must revise the TMDLs and implement additional control measures.

The current discharge permits for LUS wastewater plants reflect the TMDLs that were established for the Vermilion watershed after water quality monitoring that occurred in 2003. Requirements to establish stricter wastewater discharge limits did not occur after results of the monitoring were analyzed.

LDEQ adopted TMDLs standards for sulfate for the Vermilion River similar to those for the Atchafalaya River but which are not expected to require LUS to upgrade its wastewater plants to remove sulfate. LDEQ informed LUS it will establish TMDL limits on discharge of mercury to the Vermilion River and required LUS to conduct mercury sampling in the effluent from the wastewater treatment plants in 2006. LDEQ could require LUS to implement Best Management Practices for reduction of mercury in its wastewater but has not done so to date (including as part of permit renewals in 2009). At the time of this Report, mercury monitoring is complete and no further action has been taken or is anticipated.

Because the Vermilion River is considered oxygen deficient, maximum waste load allocations have been established for carbonaceous biological oxygen demand and ammonia nitrogen. These allocations limit the quantity of these pollutants that can be discharged to the river. Due to these limitations and based on discussions with LDEQ, it is highly unlikely LUS will receive any increase in its present waste load allocations. This implies that future growth in the wastewater service area will require more efficient wastewater treatment in order to stay within existing allocations. Indeed, recent discussions between LUS and LDEQ revealed the next Vermilion River TMDL will re-evaluate dissolved oxygen levels in the river and will likely result in more stringent discharge permit limits. Additionally, LDEQ and the EPA are considering a trading program for pollutant discharge allocations. If this occurs, it could ease or delay the need for upgrades at the LUS wastewater plants.

It is also a possibility that nutrient limits for nitrate and phosphorus could be added to the LUS wastewater permits within the next 10 years. LUS is currently evaluating alternatives for converting existing treatment facilities to accommodate nutrient reduction.

LUS staff is monitoring these regulatory developments and will incorporate the requirements into planning and capital requirements as they become more definite. Compliance with the regulations is not anticipated to require major capital expenditures at this time.

### **Wastewater Collection and Treatment Permits**

The wastewater discharge permits for each of the four LUS wastewater treatment plants (Ambassador Caffery, East, South, and Northeast) require LUS to regularly test

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for compliance with permit conditions and report any violations or exceedances of permit limits, including bypass or overflow of wastewater.

The wastewater discharge permit renewals for all four plants were completed in 2009. The Ambassador Caffery, South and Northeast Plants' permits were re-issued beginning in April 2009 and East Plant's beginning in June 2009. All renewed permits contain identical effluent limits for biological oxygen demand, total suspended solids, ammonia-nitrogen, dissolved oxygen, total residual chlorine and pH, and have not changed as a result of the renewals. However, the daily maximum criteria have changed to weekly maximum.

Each plant must, among other things:

- Conduct quarterly whole effluent toxicity testing using bioassay methods
- Perform an annual Environmental Audit Report including a resolution from the governing body
- Operate an industrial pretreatment program
- Submit monthly reports to LDEQ

### Stormwater

New to the permitting process in 2009 is the incorporation of the stormwater permits into the discharge permits. This change consolidates the once distinct permits (linking compliance between the two) but does not include any changes to the requirements of the permit. Therefore, no additional capital expenditures or operational changes are anticipated in order to remain in compliance.

A review of the treatment plant Stormwater Pollution Prevention Plans (SW3P) is currently in progress to confirm the accuracy of the SW3P and to update the plans as necessary in 2011. LUS reports that there were no spills, no complaints, and no notices of violation issued for the wastewater treatment facilities in 2010.

A summary listing of the treatment plant permits is included in Table 9-4.

Table 9-4  
List of Major Permits

Permit	Responsible Agency	Expiration Date	Comments/Description
<b>Ambassador Caffery Wastewater Treatment Facility</b>			
Louisiana Pollution Discharge Elimination System Permit Number LA0042561	LDEQ	March 31, 2014	Modification effective October 1, 2009. Allows the discharge of treated sanitary wastewater into the Vermilion River. Sets forth monitoring, recordkeeping, and reporting requirements.
<b>East Wastewater Treatment Facility</b>			
Louisiana Pollution Discharge Elimination System Permit Number LA0036382	LDEQ	May 31, 2014	Permit effective June 1, 2009. Allows the discharge of treated sanitary wastewater into the Vermilion River. Sets forth monitoring, recordkeeping, and reporting requirements.
<b>South Wastewater Treatment Facility</b>			
Louisiana Pollution Discharge Elimination System Permit Number LA0036374	LDEQ	March 31, 2014	Permit effective April 1, 2009. Allows the discharge of treated sanitary wastewater into the Vermilion River. Sets forth monitoring, recordkeeping, and reporting requirements.
<b>Northeast Wastewater Treatment Facility</b>			
Louisiana Pollution Discharge Elimination System Permit Number LA0036391	LDEQ	March 31, 2014	Permit effective April 1, 2009. Allows the discharge of treated sanitary wastewater into Bayou St. Claire thence to the Vermilion River. Sets forth monitoring, recordkeeping, and reporting requirements.

## Industrial Pretreatment

The Industrial Pretreatment Program (Pretreatment Program) was implemented in 1984 and is mandated by LDEQ through the LPDES permits issued to the wastewater treatment plants. LUS manages and enforces the Pretreatment Program to protect the integrity of the wastewater treatment plants and fulfill the following objectives:

- Prevention of the introduction of pollutants into the Publicly Owned Treatment Works (POTW) which will interfere with the operation of the plants, including interference with its use or disposal of municipal sludge
- Prevention of the introduction of pollutants into the POTW, which will pass through the treatment works and enter waters of the state
- Reduction of the risk of exposure of workers to chemical hazards
- Improving opportunities to recycle and reclaim municipal and industrial wastewaters and sludge

The Pretreatment Program provides a service to the community by allowing industry to discharge pretreated wastewater, to be further treated at the wastewater treatment plants, in lieu of meeting water quality regulations required for direct dischargers to the waters of the state. The Pretreatment Program regulates significant industrial users

with a Wastewater Discharge Permit program, which requires monthly reporting requirements and permit fees. Less significant users are regulated under a Best Management Practices program, which enforces a set of guidelines on specified types of industrial activity. With the potential requirements of a mercury minimization program under Wastewater Treatment Plant LPDES permits, the Pretreatment Program would need to adopt such requirements.

During September 20 – 23, 2010, LDEQ conducted a Pretreatment Program Audit of the wastewater treatment facilities. The November 1, 2010 letter from LDEQ states that the results of the audit indicate there were no findings requiring corrective action. A Pretreatment Compliance Inspection was conducted by USEPA Region 6 on August 17, 2010 and results indicate “the pretreatment program appears to be in compliance at this time.”

An inspection was conducted by LDEQ at the Ambassador Caffery Treatment Plant on October 12, 2010. The written report indicated there were no areas of concern.

The 2010, DMRs for the treatment plants were reviewed and only a few minor exceedances of permit discharge limits were noted. There was no indication that any of the exceedances were caused by a recurring issue or problem. LUS reports that the treatment plants are current with all fees and report submittals and there were no public complaints in 2010. Also, a review of the treatment plant Stormwater Pollution Prevention Plans was conducted to confirm the accuracy of the plans and plans were updated as necessary in 2010. LUS reports that there were no spills, no complaints, and no notices of violation were issued for the wastewater treatment facilities in 2010.

As required by the conditions of the LPDES permits, the 2009 Annual Pretreatment Report was submitted in early 2010. At the time of the site visit on March 16, 2011, the 2011 Annual Pretreatment Report had been prepared and was ready for submittal.

## Biosolids Beneficial Reuse Land Application Program

LUS utilizes a land farming program to use biosolids that are produced as a result of its wastewater operations and lime sludge from its water treatment plant operations. This program is operated under a Biosolids/Sewage Sludge Landfarming / Beneficial Reuse Permit (number LASS021025) issued by the LDEQ with effective dates from February 1, 2009 through January 31, 2014. Compliance with the permit is demonstrated through the sampling, analysis, recordkeeping, and reporting. We reviewed 2010 sludge DMRs for each of the treatment facilities and Class B Biosolids reports and, as required by the conditions of the permit, LUS reports that the necessary quarterly, semiannual and annual application and soil and sludge testing reports were submitted to LDEQ during 2010.

LUS has land applied wastewater treatment plant sludge since the 1950s, and has operated under a permitted land application program since 1987. The program is reported to utilize a total of six permitted land application properties totaling 1,767 acres, which is considered to be in excess of the requirements for the program.

It is noted that the land owner agreements must be renewed every ten years and contain provisions to allow for termination with 90 days notice two years from the effective date of the agreement. Some land owners have dropped out of the program over the years and the area of other properties has been reduced due to development. The issue regarding a potentially dwindling base of eligible land application property is being evaluated by LUS, but as of the date of this Report, there are no concerns for the near future.

## Spill Prevention Control and Countermeasure Plans

Electric generation facilities, electric substations, and water and wastewater treatment facilities that are located where oil (or fuel) from a spill could reach navigable waters, and have a storage capacity of more than 1,320 gallons at a single facility, must have a SPCC plan prepared in accordance with federal regulations. SPCC plans must also be consistent with the Spill Prevention and Control (SPC) Planning regulations of the state. Recent modifications, and proposed modifications, to the federal regulations include a requirement to review, revise, and implement SPCC plans for existing facilities and develop and implement SPCC plans for new facilities (constructed after July 2002) in accordance with the modified regulation by November 2010. An important requirement of the revised SPCC regulation will be the implementation of a recognized engineering standard for inspection and maintenance of the large fuel storage tanks at the Doc Bonin Plant. Such a standard will require tanks to be drained, cleaned, and internally inspected on occasion. SPCC plans for each of the generation facilities have been updated and implemented in accordance with regulatory requirements.

## Clean Air Interstate Rule (CAIR)

The CAIR program was to take effect in 2009 and impose a cap-and-trade program for both NO<sub>x</sub> and SO<sub>2</sub>. However on July 11, 2008, the U.S. Court of Appeals for the District of Columbia Circuit (the Court) decided to vacate the CAIR in response to petitions for review challenging various aspects of the rule. At that time, the Court vacated CAIR and its associated Federal Implementation Plan in its entirety and remanded both to the USEPA to promulgate a rule that is consistent with the Court's opinion. On December 23, 2008, the Court issued an opinion in response to a petition for rehearing by the USEPA. The Court held that CAIR shall remain in effect until USEPA promulgates a new regulation that addresses the flaws that lead to the Court's decision to strike down the CAIR.

The CAIR rule applies to electric generating units that are currently subject to Title IV of the CAA (known as the Acid Rain Program, or ARP). The RPS, Doc Bonin Plant, T. J. Labbé Plant, and the Hargis-Hébert Plant are all subject to the CAIR. The rule is being implemented with the Phase 1 NO<sub>x</sub> reductions, which began in 2009, and the Phase 1 SO<sub>2</sub> reductions, which began in 2010. Under the cap-and-trade program, existing sources are allocated SO<sub>2</sub> allowances in proportion to the existing SO<sub>2</sub> allowances that were allocated under the ARP. The rule specifies a 50 percent

reduction in allowances when compared to the ARP for 2010. NO<sub>x</sub> allowances are distributed to states which, in turn, distribute the allowances to the pool of affected emissions source owners. LDEQ has allocated NO<sub>x</sub> allowances to facilities within the state based on historic operations. The NO<sub>x</sub> allowances allocated to the LUS units, as well as RPS2, are shown in the table below. The allocation of SO<sub>2</sub> allowances will continue under the Acid Rain program. However, as noted above, two allowances will be required for each ton of emissions. Overall, the allocations of NO<sub>x</sub> and SO<sub>2</sub> allowances to LUS plants, including RPS2, may not cover all emissions during future years. Under such circumstances, LUS will be required to purchase allowances to cover facility emissions. However, since all of the LUS units except for RPS2 are gas-fired, the cost to purchase additional SO<sub>2</sub> allowances, should additional allowances be required, is not expected to be significant.

**Table 9-5  
NO<sub>x</sub> Allowance Allocations to LUS under the CAIR**

Unit	Annual NO <sub>x</sub> Allocations (ton)			Ozone Season NO <sub>x</sub> Allocations (ton)		
	2009	2010	2011	2009	2010	2011
Doc Bonin 1	152	147	145	101	99	97
Hargis-Hébert	136	132	130	60	58	58
T. J. Labbé	136	132	130	60	50	58
Rodemacher No. 2	2,812	2,714	2,670	1,396	1,352	1,332

## Future Environmental Regulatory Obligations

There are a number of regulations that have either been implemented or will be proposed in the near future that may have an effect on the operations of RPS2. These initiatives are briefly discussed in the paragraphs that follow. Since the rules are only recently implemented or proposed, the ultimate effect on RPS2 operations cannot be determined at this time. However, several of the rules are expected to have a significant financial impact.

### Maximum Achievable Control Technology (MACT)

The USEPA released proposed MACT standards for utility boilers on March 16, 2011. The standards, issued in accordance with the requirements of CAA Section 112, are proposed to regulate the emissions of hazardous air pollutants, including mercury, arsenic, chromium, nickel, and acid gases from coal and oil-fired power plants. Since the rule is only recently proposed, estimates of impacts to the operation of RPS2 cannot be determined at this time. However, since the unit is currently equipped with only a hot-side electrostatic precipitator for emission control, it is not unreasonable to anticipate that the addition of air pollution controls, such as conversion to a cold-side precipitator, or the addition of a spray dryer absorber (SDA) and baghouse may be required to meet requirement of the final rule. In anticipation of the rule, Cleco personnel contracted with Sargent & Lundy to prepare an Environmental Control

Study to investigate the capital and operation and maintenance costs that could be expected if RPS<sub>2</sub> is required to reduce emissions of various pollutants. The study, dated May 2010, includes planning level costs for several pollution control technologies. Depending on requirements of the final rule, the costs for compliance at RPS<sub>2</sub> are expected to be significant. It is also believed that emissions testing while firing oil could be required at Bonin if the ability to maintain oil firing capability is desired. It is possible the units could not meet emission limits in the rule and oil firing at Bonin may not be feasible in the future.

## **National Ambient Air Quality Standards (NAAQS)**

The CAA requires USEPA to set NAAQS for pollutants considered harmful to public health and the environment. The CAA established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly, while secondary standards are set to protect public welfare. New one-hour standards were promulgated for SO<sub>2</sub> and NO<sub>x</sub> in 2010, and new standards for ozone and PM<sub>2.5</sub> are expected in 2011. The new SO<sub>2</sub> and NO<sub>2</sub> standards are more restrictive than the previous standards since they offer a much shorter time period over which to average emissions/impacts. Should LDEQ request dispersion modeling, or should a modification be contemplated that would require dispersion modeling, an analysis would have to be performed to determine compliance with these new standards. Until such a study is conducted, it is not known whether operations at any of the LUS facilities cause or contribute to a predicted violation of the standards. If a violation of the standard were predicted by the modeling, or if the area around the plant was determined to not meet the NAAQS, actions to reduce emissions could be required.

## **Clean Air Transport Rule (CATR)**

The CATR was proposed in August 2010 as USEPA's response to the remand of the CAIR. The proposed rule includes requirements for significant reductions in SO<sub>2</sub> and NO<sub>x</sub> emissions that cross state lines. Louisiana is included in the states subject to the rule. This rule contains emission reduction requirements that are similar in nature to the CAIR. Upon promulgation, a Phase I allowance program would be expected to begin in 2012 followed by a Phase II allowance program beginning in 2014. Since the rule has not been finalized, the impacts on LUS operations are not known at this time.

## **Tailoring Rule**

The "Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule" was published in the Federal Register on June 3, 2010. Publication of this rule set in the motion the mechanism for the regulation of GHG emissions from stationary sources. The purpose of the rule was to tailor the applicability thresholds for major sources under PSD and Title V in order to relieve sources and permitting authorities of the overwhelming burden that would fall on them in the absence of the rule. The rule establishes a phased-in approach for PSD and Title V applicability, with the first two steps focused on the largest emitters of GHGs.



Step 1 of the rule is in effect from January 2, 2011, through June 30, 2011. This step requires PSD permitting for new and modified sources that (1) are already required to obtain PSD permits on account of emissions other than GHGs and (2) would generate increases in GHG emissions of 75,000 tons of carbon dioxide equivalent (CO<sub>2</sub>e). Sources already required to have Title V permits for non-GHG pollutants will be required to address GHGs as part of their Title V permitting process, regardless of their CO<sub>2</sub>e emissions.

Step 2 is in effect from July 1, 2011, through June 30, 2013. During this period, PSD requirements will apply to sources covered by Step 1 as well as new sources emitting at least 100,000 tons per year of CO<sub>2</sub>e and existing sources that undergo modifications that increase emissions by at least 75,000 tons per year CO<sub>2</sub>e. Title V permits will be required for sources emitting over 100,000 tons CO<sub>2</sub>e per year.

Step 2 is one aspect of the rule that could be challenging for both new and existing sources. This step could require PSD permitting for sources that, in the absence of GHG regulation, would be minor sources and not subject to PSD requirements. In order for otherwise minor sources to avoid the PSD process during the Step 2 period, there may be a rush to get minor sources permits issued and construction started prior to July 1, 2011. In addition, the numerous sources requiring permits due to GHG emissions may overload the system and significantly add to the time required for permit application processing. Therefore, the ability of an entity to request a new permit or make timely changes to existing permits may be restricted.

Step 3 requires USEPA to undertake additional rulemakings beginning in 2011 in order to determine the specifics of a phase in to the PSD and Title V permit programs for sources below the 75,000 and 100,000 ton per year CO<sub>2</sub>e thresholds. USEPA has indicated PSD and Title V requirements will not apply to sources emitting below 50,000 tons per year CO<sub>2</sub>e prior to April 2016.

## Greenhouse Gas Regulations

Control of greenhouse gases such as carbon dioxide (“CO<sub>2</sub>”) is receiving a great deal of attention within the United States Congress and many state legislatures. The predominant sentiment is that regulation is inevitable and only the timing and method of regulation is unknown. The two primary methods of regulation are either a tax imposed on emissions or some form of a cap-and-trade system comparable to what presently exists for SO<sub>2</sub> and NO<sub>x</sub> emissions. As discussed above, the requirement to permit emissions of GHG is covered under the Tailoring Rule. The USEPA’s GHG reporting rule is planned to take effect in 2011. However, while USEPA is moving forward with GHG regulation, a bill that would prevent the USEPA from regulating GHG under the CAA passed the House Energy and Commerce Committee on March 15. If ultimately passed, the bill would amend the CAA to clarify that greenhouse gases do not fall under the definition of an "air pollutant" under the clean air law. While the specific details of GHG regulation are not presently known, and the financial impacts to specific EGUs cannot be determined without the benefit of such details, the cost impacts could be significant.

## New Source Performance Standards (NSPS)

On December 23, 2010, the USEPA announced it would issue proposed NSPS for power generation facilities in July 2011 with a final rule to be issued in May 2012. Regulation under NSPS has a potentially broader reach and impact than the requirements of the Tailoring Rule which became effective on January 2, 2011. NSPS can be applied to not only new and modified facilities but also to existing facilities. Regulation of existing sources is accomplished under CAA Section 111(d) where EPA establishes “emissions guidelines” for facilities in the subject source category and the guidelines are then used by states in development of enforceable performance standards for facilities within their boundaries. States have the right to develop less stringent standards or longer compliance schedules if they demonstrate that following the federal guidelines is unreasonably cost-prohibitive, physically impossible, or that there are other factors that reasonably preclude meeting the guidelines. States may also impose more stringent standards or shorter compliance schedules in appropriate cases. Since the NSPS for power generation facilities has not been proposed at the current time, it is not possible to determine the magnitude of impact on LUS. However, it is noted that compliance costs could be significant.

## New Source Review (NSR)

During February 2005, Cleco received and forwarded to LUS a Clean Air Act Section 114 letter from USEPA. This letter requested information pursuant to the Clean Air Act to determine whether projects undertaken at the Station may have triggered any of the Clean Air Act’s requirements for New Source Review and the New Source Performance Standards. It is not unusual for electric utilities to have received a request of this nature from the USEPA. R. W. Beck is of the understanding that Cleco provided a complete response to the Section 114 letter. No response or further inquiry has been received from USEPA since the response was submitted.

Changes to the NSR permit programs (Prevention of Significant Deterioration and Nonattainment New Source Review) are related to the inclusion of GHGs in permit applications and are described above under the Tailoring Rule heading.

## Coal Combustion Residuals

Coal Combustion Residuals (CCRs) are byproducts from the combustion of coal – fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. On June 21, 2010, EPA proposed two separate approaches for regulating disposal of CCRs under the Resource Conservation and Recovery Act (RCRA): a Subtitle C approach and a Subtitle D approach. The proposals cover CCRs generated from the combustion of coal at electric utilities. One avenue proposed for regulation is classifying the CCRs as special waste subject to Subtitle C. This essentially classifies the CCRs as hazardous waste and requires a cradle to grave management program including requirements for the generator, transporter, permitting, ground water monitoring, corrective action, and financial assurance. Under Subtitle D, the CCRs would remain classified as a “non-hazardous” waste and be subject to national minimum criteria

governing facilities disposing of CCRs. Since the rule is only in the proposal stage and there are many different requirements that could be included in the final rule, it is too early to determine the impacts to a facility such as RPS2. However, the cost of regulation, particularly if a Subtitle C approach is required by the final rule, could be significant.

## Drinking Water Standards

There are two categories of drinking water standards: primary and secondary. Primary standards are legally enforceable standards that apply to public water systems. Primary standards protect drinking water quality by limiting the levels of specific contaminants that are known or anticipated to occur in water. Secondary standards are non-enforceable guidelines regarding contaminants that may cause cosmetic or aesthetic effects. Primary standards go into effect three years after they are finalized. If capital improvements are required, EPA’s Administrator or a state may allow this period to be extended up to two additional years.

New and proposed rules and standards, listed below in Table 9-6, are in various stages of development and publication.

**Table 9-6  
New and Proposed Rules**

Rule/Regulation	Compliance Date	Comments
Groundwater Rule	Effective Dec. 2009	Requires monitoring for bacterial contamination in distribution system and corrective action as needed
Total Coliform Rule	Based on Population	Requires bacterial monitoring and corrective action based on population
Fluoridation Law	March 1, 2009	Furnished capital and O&M estimates of cost of compliance (implementation not required at this time)
Stage 2 Disinfectants and Disinfection Byproducts Rule	April 1, 2012	Requires additional monitoring for disinfection byproducts within the system; Lowers Maximum Contaminant Levels
Chemical Facility Anti-Terrorism Standards	None (Under Consideration)	Establishes risk-based performance standards and requires certain chemical facilities to prepare Security Vulnerability Assessments and develop and implement Site Security Plans

LUS is aware of these regulations and has or will incorporate the requirements into current and future operations. Compliance with the regulations is not anticipated to require major capital expenditures at this time.

The EPA upgraded water treatment plant operator certification requirements on February 5, 1999, upon publication of “Federal Guidelines for the Certification and Re-certification of the Operators of Community and Non-transient Non-community Public Water Systems.” In April 2002, the State of Louisiana implemented these guidelines and changed the Louisiana Administrative Code Title 48; Chapter 73

entitled “Certification.” LUS upgraded the qualifications of its water treatment plant operators by April 2006, thereby complying with those requirements. Moreover, R. W. Beck recommends LUS consider developing an operator certification (and recertification) program. Additionally, staff anticipates needing certifications for distribution (along with operator certification) by operators at the newly constructed Fabacher Field facilities.

## **Wastewater Effluent Standards**

USEPA has recently reviewed current effluent guidelines for the steam electric power generating industry and has concluded the current regulations, which were last updated in 1982, do not adequately address the pollutants being discharged and have not kept pace with changes that have occurred in the electric power industry over the last three decades. Approximately 733 facilities received questionnaires related to their wastewater systems and USEPA plans to use this information as the basis for a proposed rulemaking for the steam electric power generating industry in July 2012 and take final action by January 2014.

## **Chemical Facility Anti-Terrorism Standards**

A Department of Homeland Security initiative which could potentially affect municipal treatment facilities, known as the Chemical Facility Anti-Terrorism Standards (CFAS), is still under consideration by the U.S. legislature. Previously, this proposed legislation exempted wastewater facilities but it now appears they will be subject to the proposed legislation. The legislation is progressing slowly through the legislature and it is not known when, if at all, it may take effect. The program, as it currently exists, would establish risk-based performance standards and require designated chemical facilities to prepare Security Vulnerability Assessments and develop and implement Site Security Plans. It is not certain at this time if all four LUS treatment facilities would be required to follow the proposed CFAS regulations, if enacted.

## **Sanitary Sewer Overflow Control Policy**

In 2003, the EPA proposed a policy addressing NPDES permit requirements for municipal wastewater treatment plants (serving sanitary sewers) during wet weather conditions. The proposed policy was intended to provide clarity about managing peak wastewater flows that are sometimes diverted from secondary treatment unit processes during significant wet weather events. The EPA has since abandoned this wet weather policy but is considering implementing its CMOM program instead. To date, the EPA has only pursued CMOM-specific activities as part of Consent Decrees issued against wastewater utilities and not as a stand-alone program.

Although the program is not currently implemented, wastewater utility staff anticipates CMOM requirements will be incorporated into upcoming discharge permitting. This program will likely include the following steps:

- (1) identification and inventory of infrastructure,
- (2) prioritization of needs and actions, and

(3) performance of repair and rehabilitation efforts.

Under the requirements of its current LPDES permit, LUS is encouraged to participate in a CMOM program and LUS achieves this, in part, via its SSES program and through CMOM-specific activities.

### Regional Haze Rule

On July 5, 2005, USEPA promulgated that Regional Haze Regulations which require certain existing large stationary emissions sources, such as coal fired power generation units, to install Best Available Retrofit Technology (BART) to improve visibility at certain National Parks designated as Class I areas. Due to the date of construction of RPS2, the unit is exempt from the BART requirements.

We note that it is too early to determine the implications resulting from the development of these rules on LUS facilities. However, the costs for compliance, particularly for RPS2, a coal-fired unit, could be significant.

The SDWA passed in 1974 and amended in 1986 and 1996 gives the EPA the authority to set standards to protect drinking water. EPA has delegated responsibility for implementing drinking water standards to the Louisiana Department of Health and Hospitals.

### Key Challenges, Issues, and Goals

The following is a list of current challenges, issues, and goals of the Environmental Compliance Division:

- Attraction and retention of qualified employees.
- Training of new employees to achieve proficiency in required environmental compliance monitoring and reporting activities.
- Implementation and budgeting for additional obligations due to currently known and potential future regulatory changes.

### Recommendations

Recommendations and their status are provided in Table 9-7 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 9-5  
Recommendations**

Environmental Issues	Priority	Status
LUS should continue dialog with LDEQ regarding Doc Bonin Plant Consolidated Compliance Order and Notice of Potential Penalty, and also with Unit 3 NO <sub>x</sub> emissions compliance and bring these issues to a conclusion.	High	In Progress
LUS should continue to develop and implement a plan to clean and decommission the aboveground storage tanks and associated piping located the Doc Bonin Plant.	Normal	In Progress
LUS should monitor the monetary implications of the RPS2 environmental compliance obligations.	High	In Progress
LUS should continue to evaluate and update its environmental plans, including its SPCC plans, Facility Response Plan, Stormwater Pollution Prevention Plan, etc, to ensure that they include the latest changes to the respective regulations and facility infrastructure.	Normal	In Progress
LUS should monitor the development and implementation of the CATR, the Utility Boiler MACT, New Source Performance Standards for Utility Boilers, and the regulation of green house gases to ensure compliance strategies are implemented for all affected power plants.	High	In Progress

# APPENDIX A

## FINANCIAL AND STATISTICAL DATA

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### Financial and Statistical Data

The following financial and statistical data is related to the City of Lafayette and Lafayette Parish. This information was provided by LCG and is included in this Report as a requirement determined by LCG and LUS Bond Counsel.

### Location and Area of the City

The City is located on the Vermilion River, approximately 30 miles from the Gulf of Mexico. The City is the Parish seat, which was created on January 17, 1823, and covers a total area of approximately 277 square miles. The area of the City is approximately 50 square miles. Table A-10 displays the Population over the past four decades.

Table A-1  
City of Lafayette Population

Year	Population
1970	68,908
1980	81,961
1990	94,440
2000	110,257
2010	111,451

Source: U.S. Census and Lafayette Economic Development Authority

The trend in the assessed valuation of the City appears in Table A-2 below.

Table A-2  
Assessed Value of Taxable Property

Fiscal Year	Assessed Value (\$1,000)	Fiscal Year	Assessed Value (\$1,000)
2000	552,896	2006	826,075
2001	584,023	2007	864,797
2002	673,318	2008	905,005
2003	692,626	2009	1,129,670
2004	716,544	2010	1,167,335
2005	785,937	2011	1,178,154

Sources: City of Lafayette Comprehensive Annual Financial Report and Lafayette Parish Assessor.

A breakdown of the City's 2010 assessed valuation by classification of property is shown in Table A-3 as follows:

## Appendix A – Financial and Statistical Data

Table A-3  
Property Assessed Valuation

Classification of Property	2010 Assessed Valuation (\$)
Real Estate	876,900,072
Personal Property	284,629,840
Public Service Property	<u>15,183,508</u>
Total	1,176,713,420

Source: Lafayette Parish Assessor's Office

## Millage Rates

The recent trend in the ad valorem tax rates levied within the boundaries of the City are displayed in Table A-4 below:

Table A-4  
Millage Rates

	2006	2007	2008	2009	2010
<b>Parish wide Taxes:</b>					
Schools	4.59	4.59	4.59	4.59	4.59
School District No. 1	0.52	0.19	0	0	0
Special	7.27	7.27	7.27	7.27	7.27
Special School Improvements	5.00	5.00	5.00	5.00	5.00
School 1985 Operation	16.70	16.70	16.70	16.70	16.70
Courthouse & Hail Maintenance	2.25	2.25	2.34	2.34	2.34
Library(1987-1996) (1997-2006) (2007-2016)	2.80	2.91	2.91	2.91	2.91
Library(1979-1998) (1999-2008) (2009-2018)	1.55	1.55	1.55	1.61	1.61
Library (2003-2013)	2.00	2.00	2.00	2.00	2.00
Health Unit Maintenance	0.99	0.99	0.99	0.99	0.99
Juvenile Detention Maintenance	1.13	1.13	1.13	1.17	1.17
Lafayette Economic Development Authority	1.92	1.92	1.58	1.92	1.92
Assessment District	1.56	1.56	1.56	1.56	1.56
Law Enforcement	16.79	16.79	16.79	16.79	16.79
Airport Maintenance	1.71	1.71	1.71	1.71	1.71
Minimum Security Maintenance	1.98	1.98	2.06	2.06	2.06
Bridges and Maintenance	4.01	4.17	4.17	4.17	4.17
Lafayette Parish Bayou Vermillion -					
Bond & Interest	0.20	0.20	0.20	0.20	0.20
Maintenance	0.75	0.75	0.75	0.75	0.75
Drainage Maintenance	3.34	3.34	3.34	3.34	3.34
Public Improvement Bonds	3.50	3.50	3.50	3.40	3.00



## Appendix A – Financial and Statistical Data

	2006	2007	2008	2009	2010
Teche-Vermillion Water District	1.00	1.48	1.26	1.26	1.26
Mosquito Abatement & Control	1.50	1.50	1.50	1.50	1.50
<b>Other Parish and Municipal Taxes:</b>					
Parish Tax (Inside Municipalities)	1.52	1.52	1.52	1.52	1.52
Parish Tax (Outside Municipalities)	3.05	3.05	3.05	3.05	3.05
Lafayette Centre Development District	10.91	10.91	10.91	10.91	10.91
<b>City of Lafayette</b>	<b>17.81</b>	<b>17.81</b>	<b>17.81</b>	<b>17.81</b>	<b>17.81</b>

Sources: Lafayette Parish Assessor and Lafayette Consolidated Government

## Leading Taxpayers

The ten largest property taxpayers of the City and their 2010 assessed valuation are shown below in Table A-5:

**Table A-5**  
**Ten Largest Property Taxpayers**

Name of Taxpayer	Type of Business	2010 Assessed Valuation (\$)
AT&T	Communications	24,473,654
Stuller	Manufacturing	18,042,496
Baker Hughes	Oilfield Service	16,327,115
Iberia Bank	Financial Services	14,768,446
Walmart/Sam's	Retail Services	13,443,847
Southwest Louisiana Electric (SLEMCO)	Utilities	12,598,270
Frank's Casing Crew & Rental Tools	Oilfield Service	12,458,766
Petroleum Helicopters	Oilfield Service	12,104,619
Cox Communications	Communications	11,572,372
Weatherford	Oilfield Service	8,345,058
		144,134,643 <sup>(1)</sup>

(1) Approximately 7.30percent of the 2010 assessed valuation of the City.  
Source: Lafayette Consolidated Government

## Short Term Indebtedness

According to the Lafayette City-Parish Consolidated Government has no short term indebtedness, other than normal accounts payable.

## Default Record

According to the Lafayette City-Parish Consolidated Government has never defaulted in the payment of its outstanding bonds or obligations.

## Appendix A – Financial and Statistical Data

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### Bank Balances

The Governing Authority reported the following balances in its various funds as of October 31, 2010, shown below in Table A-6:

Table A-6  
Bank Balances

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General Operating Funds	Cash and Investments (\$)
101 GENERAL FUND	22,225,124
102 PROPERTY TAX ESCROW FUND	24,261
105 GENERAL FUND-PARISH	7,869,310
151 ARRA ADULT ALLICATON FY 08/09	(5,743)
154 FTA PLANNING GRANT FUND 07/08-06/09	(7,127)
155 FHWA PLANNING GRANT FUND 07/08-06/09	(2,837)
156 ARRA YOUTH ALLOCATION FY 08/09	(9,135)
157 ARRA DISLOCATED WORKER ALLOCATION FY 08/09	(5,918)
159 ACADIANA RECOVERY CENTER NON-GRANT FUND	(12,518)
161 FHWA 149/MPO (STP-2808-503) GRANT	527,209
162 FTA PLANNING GRANT FUND 07/09-06/10	19,121
163 FHWA PLANNING GRANT FUND 07/09-06/10	(10,179)
166 SAFE & DRUG FREE SCHOOLS GRT FUND FY 7/09-6/10	13,697
169 LA SUPREME COURT DRUG CRT OFFICE GRANT 07/09-06/10	(37,008)
172 SAFE & DRUG FREE SCHOOLS GRT FUND FY 07/08-06/09	(67,157)
180 URBAN INFILL HOME PROGRAM FUND	(1,286)
181 DHH-GOVERNOR'S INITIATIVE HEALTH GRANT 08/07-06/08	(67,950)
182 DHH-GOVERNOR'S INITIATIVE HEALTH GRANT 1/09-9/10	(11,227)
184 DISABILITY NAVIGATOR PROGRAM GRANT 07/08-06/09	(3,307)
185 WIA-TITLE IB ADULT GRANT 07/08-06/09	824,720
186 WIA-TITLE IB YOUTH GRANT 07/08-06/09	(98,436)
190 FTA PLANNING GRANT FUND 07/07-06/08	(3,143)
192 FHWA-FRONTAGE ROAD STUDY	(38,656)
194 FHWA 149/MPO (STP-2805-502) GRANT	(45,169)
203 TRANSIT SYSTEM	(25,653)
206 ANIMAL SHELTER	(1,530,573)
207 TRAFFIC SAFETY FUND	425,164
219 HOME PROGRAM FUND FY 06/07	4,453,676
220 HOME PROGRAM FUND FY 07/08	68,060
221 HOME PROGRAM FUND FY 08/09	(1,219)
223 HOME PROGRAM FUND FY 09/10	(16,551)
224 EMERGENCY SHELTER GRANT FUND	29,033
227 WIA-NEG GRANT-HURRICANE GUSTAV FUND	(28,501)
230 COMMUNITY DEVELOPMENT FUND FY 07/08	(1,891)
232 FHWA COMPREHENSIVE LAND USE PLAN GRANT	13,423
233 COMMUNITY DEVELOPMENT 00/01	(58,262)
234 COMMUNITY DEVELOPMENT 01/02	(23,229)
235 COMMUNITY DEVELOPMENT 02/03	(7,734)
236 COMMUNITY DEVELOPMENT 99/00	(17,338)
240 URBAN DEVELOPMENT ACTION GRANT	39
241 HUD HOUSING LOAN PROGRAM FUND	991,711

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## Appendix A – Financial and Statistical Data

General Operating Funds	Cash and Investments (\$)
242 COMMUNITY DEVELOPMENT FUND FY 04/05	(29,080)
244 COMMUNITY DEVELOPMENT FUND FY 06/07	108,241
246 COMMUNITY DEVELOPMENT FUND FY 08/09	2,380
247 COMMUNITY DEVELOPMENT FUND FY 09/10	(185,900)
250 HUD-AMERICAN RECOVERY & REINVESTMENT ACCT (ARRA)	(37,928)
252 STATE SEIZED/FORFEITED PROPERTY FUND	29,758
253 FED. NARCOTICS SEIZED/FORFEITED PROPERTY	19,495
255 CRIMINAL NON-SUPPORT FUND	11,703
260 ROAD & BRIDGE MAINTENANCE FUND	(276,508)
261 DRAINAGE MAINTENANCE FUND	6,102,163
263 LIBRARY FUND	8,597,163
264 COURTHOUSE COMPLEX FUND	24,662,651
265 JUVENILE DETENTION FACILITY FUND	2,623,598
266 PUBLIC HEALTH UNIT MAINTENANCE FUND	1,884,469
268 CRIMINAL COURT FUND	4,887,072
271 MOSQUITO ABATEMENT & CONTROL FUND	(1,869,168)
272 JUSTICE DEPT FEDERAL EQUITABLE SHARING FUND	4,683,750
273 WIA STEP GRANT 7/09-6/10	181,857
276 WIA TITLE 1B DISLOCATED WORKERS GRT 7/09-6/10	(3,737)
277 CRIMINAL JUSTICE SUPPORT SERVICES FUND	25,518
278 WIA TITLE 1B ADULT GRANT 7/09-6/10	(3,958)
279 WIA TITLE 1B YOUTH GRANT 7/09-6/10	(6,252)
284 ARC-US PROBATION OUTPATIENT 10/08-09/09	15,297
286 DHH ACADIANA RECOVERY INPATIENT FUND 07/08-06/09	184,195
287 DHH ACADIANA RECOVERY INPATIENT FUND 7/09-6/10	(1,625,225)
297 PARKING PROGRAM	3,893,209
298 ENVIRONMENTAL SERVICES FUND	(675,173)
299 CODES & PERMITS FUND	816,633
599 COMBINED GOLF COURSES FUND	(31,654)
601 PAYROLL FUND	4,858,663
605 UNEMPLOYMENT COMPENSATION	286,759
607 GROUP HOSPITALIZATION	331,383
610 HURRICANE KATRINA FUND	7,516
611 HURRICANE RITA FUND	(1,639,170)
612 BNSF TRAIN DERAILMENT 05/08	6,782
613 HURRICANE GUSTAV FUND	2,561,424
701 CENTRAL PRINTING	22,225,124
702 VEHICLE MAINTENANCE	24,261
<b>Total General Operating Funds</b>	<b>95,744,725</b>
<b>Debt Service Funds:</b>	
215 1961 CITY SALES TAX TRUST FUND	57
222 1985 CITY SALES TAX TRUST FUND	0
290 TIF CITY SALES TAX TRUST FUND-MM101	450,717
291 TIF CITY SALES TAX TRUST FUND-MM103	122
302 1961 SALES TAX BOND SINKING FUND	5,890,167

## Appendix A – Financial and Statistical Data

General Operating Funds		Cash and Investments (\$)
303	1961 SALES TAX BOND RESERVE FUND	14,758,904
304	1985 SALES TAX BOND SINKING FUND	4,841,463
305	1985 SALES TAX RESERVE FUND	19,234,854
306	CONTINGENCY SINKING FUND-PARISH	4,524,057
310	PARISH CERT OF INDEBT SINKING FUND-1999	109,452
801	CONSOLIDATED SEWERAGE SINKING FUND	391,596
821	CONSOLIDATED PAVING SINKING FUND	<u>409,059</u>
<b>Total Debt Service Funds</b>		<b>50,610,448</b>
<b>Construction Funds:</b>		
401	SALES TAX CAPITAL IMPROVEMENT FUND	25,376,615
402	PARISH LIBRARY GENERAL OBLIG. BOND CONST.	2,016,705
403	PARISH CERTIFICATES OF INDEBTEDNESS FD	151,089
404	2001 PARISH GENERAL OBLIGATION BOND CONST.	1,669,163
405	2003 PARISH GENERAL OBLIGATION BOND CONST.	5,800,665
406	2005 PARISH GENERAL OBLIGATION BOND CONST.	7,069,951
407	2009 PARISH GENERAL OBLIGATION BOND CONST.	(475,884)
417	1993 SALES TAX BOND CONSTRUCTION	29,494
419	1997A SALES TAX BOND CONSTRUCTION	136,638
420	1997B SALES TAX BOND CONSTRUCTION	(83,074)
421	1998 SALES TAX BOND CONSTRUCTION	23,306
422	1999B SALES TAX BOND CONSTRUCTION	315,982
423	1999A SALES TAX BOND CONSTRUCTION	416
424	2000B SALES TAX BOND CONSTRUCTION	263,903
425	2000A SALES TAX BOND CONSTRUCTION	76,321
426	2001A SALES TAX BOND CONSTRUCTION	191,102
427	2001B SALES TAX BOND CONSTRUCTION	654,703
428	2002A SALES TAX BOND CONSTRUCTION	380,606
429	2003B SALES TAX BOND CONSTRUCTION	1,595,290
430	2003C SALES TAX BOND CONSTRUCTION	43,714
431	2003D SALES TAX BOND CONSTRUCTION	2,019,698
432	2004 SALES TAX BOND CONSTRUCTION	2,968,146
433	2005C SALES TAX BOND CONSTRUCTION	21,052
434	2007 SALES TAX BOND CONSTRUCTION	11,721,796
435	2007B SALES TAX BOND CONSTRUCTION	1,538,263
436	2009A SALES TAX BOND CONSTRUCTION	22,816,718
437	2009B SALES TAX BOND CONSTRUCTION	<u>23,844,172</u>
<b>Total Construction Funds:</b>		<b>110,166,548</b>
<b>Other:</b>		
602	FIREMEN'S PENSION FUND	1,213,010
603	POLICE PENSION FUND	(11,988)
604	RISK MANAGEMENT FUND	<u>1,437,454</u>
<b>Total Other</b>		<b>2,638,477</b>

## Appendix A – Financial and Statistical Data

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General Operating Funds	Cash and Investments (\$)
<b>Utilities System Funds:</b>	
501 RECEIPTS FUND	471,135
502 OPERATION AND MAINTENANCE	8,096,820
503 BOND & INTEREST	0
504 CAPITAL ADDITIONS FUND	60,945,017
505 SECURITY DEPOSIT FUND	6,581,121
506 BOND RESERVE FUND	18,262,541
529 2004 BOND CONSTRUCTION FUND	<u>1,061</u>
<b>Total Utilities System Fund</b>	<b>94,357,695</b>
<b>LPPA Funds:</b>	
520 LPPA REVENUE FUND	3,779,420
521 LPPA OPERATING FUND	6,693,483
522 LPPA FUEL COST STABILITY FUND	4,500,000
523 LPPA BOND RESERVE FUND	15,481,313
524 LPPA RESERVE & CONTINGENCY FUND	5,163,741
525 LPPA BOND INTEREST & PRINCIPAL FUND	0
526 LPPA 2007 BOND CONSTRUCTION FUND	<u>7,748,650</u>
<b>Total LPPA Fund</b>	<b>43,366,606</b>
<b>LUS Communications System Accounts:</b>	
531 RECEIPTS ACCOUNT	20,331
532 OPERATING ACCOUNT	1,927,513
533 DEBT SERVICE ACCOUNT	0
537 CAPITAL ADDITIONS ACCOUNT	1,972,349
539 BOND CONSTRUCTION ACCOUNT	<u>17,268,359</u>
<b>Total LUS Communications System Accounts</b>	<b><u>21,188,552</u></b>
<b>TOTAL ALL FUNDS</b>	<b><u>418,073,051</u></b>

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## Economic Indicators

A comprehensive revision of the estimates of Per Capita Personal Income by State was published in April 2007 by the Bureau of Economic Analysis of the U.S. Department of Commerce. The recent trends in revised per capita personal income from Lafayette Parish, Louisiana, and the United States are indicated in Table A-7:

## Appendix A – Financial and Statistical Data

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Table A-7  
Per Capita Personal Income

	2001	2002	2003	2004	2005
Lafayette Parish (\$)	28,951	29,192	29,934	31,279	32,892
Louisiana (\$)	24,702	25,219	25,819	27,088	24,664
United States (\$)	30,562	30,795	31,466	33,090	34,471

Source: U.S. Department of Commerce, Bureau of Economic Analysis. April, 2007. No new data available as of this Report.

The personal income level for the United States is derived as the sum of the county estimates; it differs from the national income and product accounts (NIPA) estimate of personal income because by definition, it omits the earnings of Federal civilian and military personnel stationed abroad and others. It can also differ from the NIPA estimate because of different data sources and revision schedules. Table A-8 displays the most recent estimate of effective buying income.

## Effective Buying Income

Table A-8  
Median Household Effective Buying Income

Year	Lafayette Parish	City of Lafayette	Louisiana	Nation
2004 (\$)	36,854	35,580	32,993	39,324

Source: 2005 Survey of Buying Power, Sales and Marketing Management, 770 Broadway, New York, New York 10003. No new data available as of this Report.

## Employment

The Louisiana Department of Labor has issued revised not seasonally adjusted annual average statistics for various employment areas within Louisiana. The revised not seasonally adjusted annual average figures for Lafayette Parish and the State were reported in Table A-9:

## Appendix A – Financial and Statistical Data

**Table A-9**  
**Lafayette Parish Labor Statistics**

Year	Labor Force	Employment	Unemployment	Parish Rate	State Rate
2001	99,779	95,858	3,921	3.90	5.40
2002	98,724	94,269	4,455	4.50	5.90
2003	98,798	94,035	4,763	4.80	6.30
2004	99,691	95,371	4,320	4.30	5.70
2005	104,920	99,431	5,489	5.20	7.10
2006	107,748	104,830	2,918	2.70	4.00
2007	108,205	105,276	2,929	2.70	3.80
2008	110,553	106,528	4,025	3.60	5.50
2009	111,122	105,385	5,737	5.20	6.80
2010	112,610	106,218	6,392	5.7	7.50

Source: Louisiana Department of Labor

Table A-10 shows the composition of the employed work force in the Lafayette MSA.

**Table A-10**  
**Non-Farm Wage and Salary**  
**Employment by Major Industry**  
(Employees in thousands)

	February 2008	April 2009	March 2010	February 2011
Mining	16.40	17.00	14.80	15.40
Construction	6.50	6.90	7.10	5.90
Manufacturing	10.5	9.90	9.00	9.60
Trade, Transportation, & Utilities	28.60	28.60	28.20	28.70
Information	3.40	3.20	2.70	2.70
Financial Activities	9.50	8.50	8.10	8.30
Professional And Business Services	17.50	17.50	16.20	17.10
Educational and Health Services	20.80	20.80	22.10	22.10
Leisure and Hospitality	14.90	14.70	15.10	14.90
Other Services	4.90	5.10	5.00	4.80
Government	<u>16.80</u>	<u>17.60</u>	<u>18.40</u>	<u>17.90</u>
<b>Total</b>	<u>149.80</u>	<u>150.90</u>	<u>146.40</u>	<u>146.40</u>

Source: Louisiana Department of Labor

## Appendix A – Financial and Statistical Data

**Table A-11**  
**Annual Average Lafayette Parish Concurrent Economic**  
**Indicators, 2008 – 2009 and 2nd Quarter 2010**  
 (All data not seasonally adjusted)

	2008	2009	2010:2Q
<b>EMPLOYMENT</b>			
<b>Total</b>	<b>137,027</b>	<b>129,250</b>	<b>131,210</b>
Agriculture, Forestry, Fishing, and Hunting	115	94	87
Mining	16,485	13,800	14,481
Utilities	467	505	497
Construction	6,486	6,787	5,934
Manufacturing	9,011	7,798	8,002
Wholesale Trade	7,230	6,573	7,052
Retail Trade	16,202	15,902	15,649
Transportation & Warehousing	4,498	3,592	3,547
Information	3,204	2,746	2,735
Finance & Insurance	3,230	3,046	3,074
Real Estate and Rental and Leasing	4,143	3,734	3,967
Professional & Technical Services	7,986	7,545	7,639
Management of Companies and Enterprises	2,884	2,832	2,786
Administrative and Waste Services	6,414	5,676	6,106
Educational Services	7,991	8,058	8,129
Health Care and Social Services	19,433	19,673	19,780
Arts, Entertainment, and Recreation	2,054	1,934	2,235
Accommodation and Food Services	12,282	11,963	12,368
Other Services, except Public Administration	3,345	3,121	3,162
Public Administration	3,423	3,631	3,908
<b>EARNINGS (\$1,000)</b>			
<b>Total</b>	<b>Annual</b> <b>\$1,622,310</b>	<b>Annual</b> <b>\$1,342,005</b>	<b>Quarter</b> <b>\$1,396,223</b>
Agriculture, Forestry, Fishing, and Hunting	846	541	631
Mining	337,053	259,340	291
Utilities	5,202	6,418	5,570
Construction	92,524	76,681	68,400
Manufacturing	115,511	88,662	96,259
Wholesale Trade	109,928	82,097	88,841
Retail Trade	112,951	96,595	97,755
Transportation & Warehousing.	51,923	36,893	39,883
Information	31,918	27,341	27,157
Finance & Insurance	43,410	36,911	39,958
Real Estate and Rental and Leasing	63,506	50,000	52,486
Professional & Technical Services	144,127	100,533	102,554
Management of Companies and Enterprises	49,678	41,124	42,346
Administrative and Waste Services	54,517	48,294	49,113
Educational Services	81,252	79,763	79,828
Health Care and Social Services	202,902	187,323	190,382
Arts, Entertainment, and Recreation	7,796	7,833	8,601
Accommodation and Food Services	50,308	47,785	48,620
Other Services, except Public Administration	28,289	23,752	24,248
Public Administration	37,331	42,286	42,180

Source: Louisiana Department of Labor



## Appendix A – Financial and Statistical Data

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The names of several of the largest employers located in City of Lafayette are displayed in Table A-12:

Table A-12  
Largest Employers in the City of Lafayette

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Name of Employer	Type of Business	Approximate No. of Employees
School Board Lafayette Parish	Education	4,563
Lafayette Consolidated Government	Public Administration	2,212
Univ of LA Lafayette	Education	1,900
Wal-Mart Stores, Inc.	Retail Trade	1,774
Lafayette General Medical Ctr	Healthcare	1,761
Island Operating Company	Oil and Gas	1,400
University Medical Center	Healthcare	1,309
Acadian Ambulance	Healthcare	1,295
Our Lady of Lourdes Reg Med Ct	Healthcare	1,265
Stuller Inc.	Manufacturing	1,234

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Source: Lafayette Economic Development Authority, 3/11

*There can be no assurance that any employer listed will continue to locate in the City or continue employment at the level stated.*

## Appendix A – Financial and Statistical Data

**Table A-13**  
**STATEMENT OF DIRECT, OVERLAPPING, UNDERLYING**  
**AND PARTIALLY UNDERLYING BONDED DEBT AS OF MAY 2, 2011**  
**(The accompanying notes are an integral part of this statement.)**

<u>Notes</u>	<u>Name of Issuer &amp; Issue</u>	<u>Due Within</u> <u>Rates (%)</u>	<u>Interest</u> <u>Date</u>	<u>Final</u> <u>Dated</u> <u>Date</u>	<u>Maturity</u> <u>Outstanding</u>	<u>Principal</u> <u>Amount</u> <u>Principal</u> <u>One Year</u>
(1)	<b><u>Direct Debt of the City of Lafayette, State of Louisiana</u></b>					
(2)	Public Improvement Sales Tax Bonds, Series 2001A	4.0-4.75	12/01/01	3/01/26	\$17,175,000	\$ 765,000
(2)	Public Improvement Sales Tax Bonds, Series 2003A	4.25-5.25	1/01/03	3/01/27	8,490,000	425,000
(2)	Public Improvement Sales Tax Refunding Bonds, Series 2003	3.5-4.3	2/20/03	3/01/18	7,980,000	955,000
(2)	Public Improvement Sales Tax Bonds, Series 2003C	4.0-6.0	11/01/03	3/01/28	6,175,000	260,000
(2)	Public Improvement Sales Tax Refunding Bonds, Series 2005	3.25-5.0	3/22/05	3/01/24	36,375,000	2,200,000
(2)	Public Improvement Sales Tax Bonds, Series 2005B	4.0-6.0	6/01/05	3/01/30	22,295,000	710,000
(2)	Public Improvement Sales Tax Refunding Bonds, Series 2006B	4.0-5.0	9/07/06	3/01/25	9,630,000	505,000
(2)	Public Improvement Sales Tax Bonds, Series 2007A	4.0-7.0	8/01/07	3/01/32	15,990,000	435,000
(2)	Taxable Public Improvement Sales Tax Build America Bonds, Series 2009A	3.03-7.08	8/18/09	3/01/33	29,155,000	910,000
(2)	Taxable Public Improvement Sales Tax Recovery Zone Economic Development Bonds, Series 2009A	7.23	8/18/09	3/01/34	3,640,000	0
(3)	Public Improvement Sales Tax Bonds, Series 2001B	4.0-4.75	12/01/01	5/01/26	12,000,000	540,000
(3)	Public Improvement Sales Tax Bonds, Series 2003B	4.25-5.0	1/01/03	5/01/27	12,115,000	565,000
(3)	Public Improvement Sales Tax Bonds, Series 2003D	4.0-5.75	11/01/03	5/01/28	15,215,000	620,000
(3)	Public Improvement Sales Tax Refunding Bonds, Series 2004	3.5-5.0	2/03/04	5/01/15	4,110,000	1,215,000
(3)	Public Improvement Sales Tax Refunding Bonds, Series 2004A	3.25-4.3	5/01/04	5/01/20	2,295,000	210,000
(3)	Public Improvement Sales Tax Refunding Bonds, Series 2005A	4.0-5.0	3/22/05	5/01/24	18,705,000	1,225,000
(3)	Public Improvement Sales Tax Bonds, Series 2005C	4.0-5.25	6/01/05	5/01/30	2,070,000	65,000
(3)	Public Improvement Sales Tax Refunding Bonds, Series 2006A	4.0-5.0	9/07/06	5/01/25	12,385,000	665,000
(3)	Public Improvement Sales Tax Refunding Bonds, Series 2006C	4.0-5.0	11/30/06	5/01/23	27,995,000	1,780,000
(3)	Public Improvement Sales Tax Bonds, Series 2007B	4.5-6.0	8/01/07	5/01/32	2,000,000	55,000
(3)	Taxable Public Improvement Sales Tax Build America Bonds, Series 2009B	3.03-7.23	8/18/09	5/01/34	25,960,000	750,000
(4)	Utilities Revenue Bonds, Series 1996	2.95	8/22/96	11/01/17	7,410,000	970,000
(4)	Utilities Revenue Bonds, Series 2004	4.0-5.25	8/10/04	11/01/28	183,990,000	0
(4)	Utilities Revenue Bonds, Series 2010	3.0-5.0	12/15/10	11/01/35	86,080,000	0
(5)	Taxable Refunding Bonds, Series 2002	4.6-5.75	11/07/02	5/01/28	39,200,000	1,465,000
(6)	Communications System Revenue Bonds, Series 2007	4.0-5.25	6/28/07	11/01/31	110,405,000	3,190,000
(7)	<b><u>Overlapping Debt of the Parish of Lafayette, State of Louisiana</u></b>					
(5)	Certificates of Indebtedness, Series 1999	5.75	12/14/99	12/01/19	880,000	80,000
(8)	General Obligation Bonds, Series 2003 (a) (Roads)	4.0-5.0	12/01/03	3/01/28	5,090,000	190,000
(8)	General Obligation Bonds, Series 2003 (b) (Drainage)	4.0-5.0	12/01/03	3/01/28	3,185,000	120,000
(8)	General Obligation Bonds, Series 2003 (c) (Fire Protection)	4.0-5.0	12/01/03	3/01/28	160,000	5,000
(8)	General Obligation Bonds, Series 2003 (d) (Jail)	4.0-5.0	12/01/03	3/01/28	2,340,000	85,000
(8)	General Obligation Bonds, Series 2003 (e) (Courthouse)	4.0-5.0	12/01/03	3/01/28	810,000	30,000
(8)	General Obligation Bonds, Series 2003 (f) (Recreation)	4.0-5.0	12/01/03	3/01/28	525,000	20,000

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(8)	General Obligation Bonds, Series 2003 (g) (Library)	4.0-5.0	12/01/03	3/01/28	5,895,000	220,000
(8)	General Obligation Bonds, Series 2005	4.0-5.0	6/01/05	3/01/25	12,610,000	395,000
(8)	General Obligation Bonds, Series 2010	2.0-5.0	1/12/11	3/01/35	25,425,000	635,000
(8)	General Obligation Refunding Bonds, Series 2010	2.0-5.0	1/12/11	3/01/26	12,555,000	610,000
(9)	<b><u>Overlapping Debt of the Parish School Board of the Parish of Lafayette, State of Louisiana</u></b>					
(5)	Certificates of Indebtedness, Series 2003	3.68	12/15/03	11/01/13	\$ 1,115,000	\$ 360,000
(5)	Certificates of Indebtedness, Series 2005	3.6-3.95	3/02/05	3/01/15	1,820,000	425,000
(5)	Certificates of Indebtedness, Series 2007	3.61	12/17/07	11/01/17	4,840,000	595,000
(10)	LCDA QZAB	0	2/01/02	11/01/15	982,165	218,259
(11)	Public School Refunding Bonds, Series 2004	3.5-4.0	3/01/04	4/01/13	3,265,000	1,595,000
(11)	Public School Refunding Bonds, Series 2008	3.5-5.0	6/30/08	4/01/19	39,160,000	2,965,000
(11)	Public School Refunding Bonds, Series 2010	2.0-4.0	5/27/10	4/01/21	8,080,000	705,000
(12)	Limited Tax Bonds (Taxable QSCB), Series 2009	0.8	12/11/09	10/01/24	10,000,000	(a)
(12)	Limited Tax Bonds (Taxable QSCB), Series 2011	0	3/01/11	10/01/26	10,000,000	(a)
(a)	<i>Various amounts are required to be deposited annually into a sinking fund.</i>					
(13)	<b><u>Overlapping Debt of Lafayette Parish Bayou Vermilion District</u></b>					
(8)	General Obligation Bonds, Series 2004	3.1-4.5	5/01/04	3/01/24	1,520,000	85,000
(14)	<b><u>Underlying Debt of Lafayette Public Power Authority</u></b>					
(15)	Electric Revenue Refunding Bonds, Series 2002	3.8-3.9	9/01/02	11/01/12	2,380,000	1,275,000
(15)	Electric Revenue Refunding Bonds, Series 2003A	5.0	8/04/03	11/01/12	12,595,000	8,415,000
(15)	Electric Revenue Refunding Bonds, Series 2003B	5.0	8/04/03	11/01/12	4,190,000	2,800,000
(15)	Electric Revenue Bonds, Series 2007	3.5-5.0	12/06/07	11/01/32	32,585,000	540,000
(16)	<b><u>Partially Underlying Debt of Lafayette Parish Waterworks District North, Lafayette Parish, Louisiana</u></b>					
(17)	Water Revenue Bonds	5.625	6/30/93	10/27/32	754,229	18,185
(17)	Water Revenue Bonds, Series 1998	4.75	5/05/98	10/27/37	1,434,976	27,257
(17)	Water Revenue Bonds, Series 2004	3.45	6/03/04	10/01/25	2,413,000	87,000
(17)	Water Revenue Refunding Bonds, Series 2005	4.3	6/02/05	10/01/20	1,102,000	91,000
(18)	<b><u>Partially Underlying Debt of Lafayette Parish Waterworks District South, Lafayette Parish, Louisiana</u></b>					
(17)	Water Revenue Bonds, Series 2002	5.1	4/23/02	8/12/21	1,346,000	80,000
(17)	Water Revenue Refunding Bonds, Series 2004	4.25	12/21/04	8/12/19	693,000	66,000
(17)	Water Revenue Refunding Bonds, Series 2006A	4.58	8/15/06	8/12/21	82,000	5,000
(17)	Water Revenue Refunding Bonds, Series 2006B	4.58	8/15/06	8/12/21	1,595,000	114,000

## Appendix A – Financial and Statistical Data

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### NOTES

- (1) The 2010 total assessed valuation of City of Lafayette is approximately \$1,176,713,420, all of which is taxable for municipal purposes.
- (2) Payable solely from and secured by an irrevocable pledge and dedication of the net avails or proceeds of the one percent (1%) sales and use tax being levied and collected by the City of Lafayette, pursuant to elections held therein on May 13, 1961, November 20, 1965, March 22, 1977, and July 21, 2001.
- (3) Payable solely from and secured by an irrevocable pledge and dedication of the net avails or proceeds of the one percent (1%) sales and use tax being levied and collected by the City of Lafayette, pursuant to an elections held therein on May 4, 1985, November 15, 1997, and July 21, 2001.
- (4) Payable as to principal and interest, solely from the income and revenues to be derived from the operation of the Lafayette Utilities System, subject only to the prior payment of the reasonable expenses of administration, operation and maintenance of the utilities system.
- (5) Secured by and payable from an irrevocable pledge and dedication of the excess of annual revenues of the issuer above statutory, necessary and usual charges in each of the fiscal years during which the obligations are outstanding.
- (6) The Bonds shall be special obligations of the issuer payable first, from the net income and revenues of the Communications System and second, to the amount necessary, from a secondary or subordinate pledge of the revenues of the Utilities System.
- (7) The 2010 total assessed valuation of the Parish of Lafayette is approximately \$1,975,116,139, of which \$1,629,435,454 is taxable.
- (8) Secured by and payable from unlimited *ad valorem* taxation.
- (9) The 2010 total assessed valuation of the Lafayette Parish School Board is approximately \$1,975,116,139, of which \$1,629,435,454 is taxable.
- (10) Payable from available funds of the Lafayette Parish School Board.
- (11) Secured by and payable solely from an irrevocable pledge and dedication of the avails or net proceeds of the one percent (1%) sales and use tax being levied and collected by the Issuer, in compliance with a special election held within the Parish of Lafayette, Louisiana on September 18, 1965.
- (12) Secured by and payable from an irrevocable pledge and dedication of the funds to be derived by the issuer from the levy and collection of a special tax of 4.59 mills (such rate being subject to adjustment from time to time due to reassessment) authorized to be levied each year on all the property subject to taxation within the corporate boundaries of the issuer.
- (13) The 2010 total assessed valuation of Lafayette Parish Bayou Vermilion District is approximately \$1,975,116,139, of which \$1,629,435,454 is taxable.
- (14) The Lafayette Public Power Authority has no assessed valuation.
- (15) Secured by a pledge of project power revenues of the Lafayette Public Power Authority attributable to the project after payment of operating expenses.
- (16) Lafayette Parish Waterworks District North includes an area lying to the North of the Township line between Township 9 South and Township 10 South, except those areas included in any municipality or other water district, and except certain areas adjacent to the City of Lafayette.
- (17) Payable solely from the income and revenues derived or to be derived from the operation of the utility system of the issuer, subject only to the prior payment of the reasonable and necessary expenses of operating and maintaining the system.
- (18) Lafayette Parish Waterworks District South includes an area lying to the South of the Township line between Township 9 South and Township 10 South, except those areas included in any municipality or other water district and/or certain water systems, and except certain areas adjacent to the City of Lafayette.

*(NOTE: The above statement excludes the outstanding indebtedness of the Lafayette Airport Commission, the Lafayette Economic Development Authority [formerly the Lafayette Harbor, Terminal and Industrial Development District], the Lafayette Parish Public Trust Financing Authority, and the Lafayette Industrial Development Board and all operating and capital leases.)*