LAFAYETTE CONSOLIDATED GOVERNMENT, LOUISIANA
LAFAYETTE UTILITIES SYSTEM

Comprehensive Engineering Final Report

April 27, 2012

APRIL 2012

SAIC®

May 1, 2012

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

Subject: **2011 Comprehensive Engineering Report - FINAL**

Dear Terry:

Enclosed please find 15 copies of SAIC's final 2011 Comprehensive Engineering Report. This Report is based on field reviews and interviews conducted during early 2012.

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,

SAIC Energy, Environment & Infrastructure, LLC

Scott H. Burnham
Project Manager

SHB/jg

c w/encl: Kerney Simoneaux, LCG (3 copies)

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LAFAYETTE UTILITIES SYSTEM
2011 COMPREHENSIVE ENGINEERING REPORT

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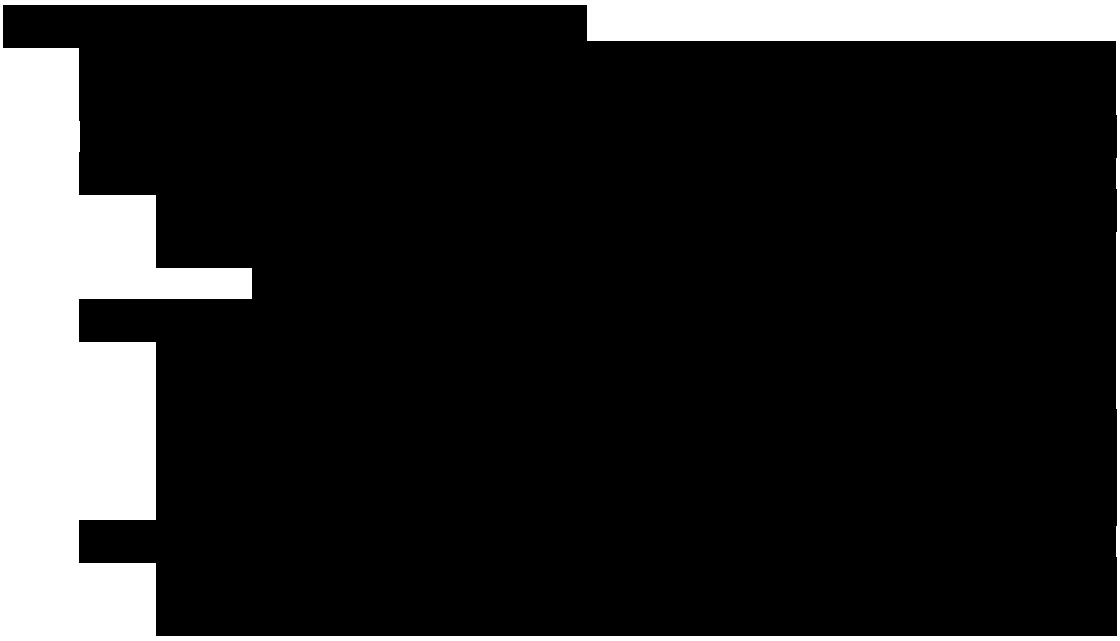

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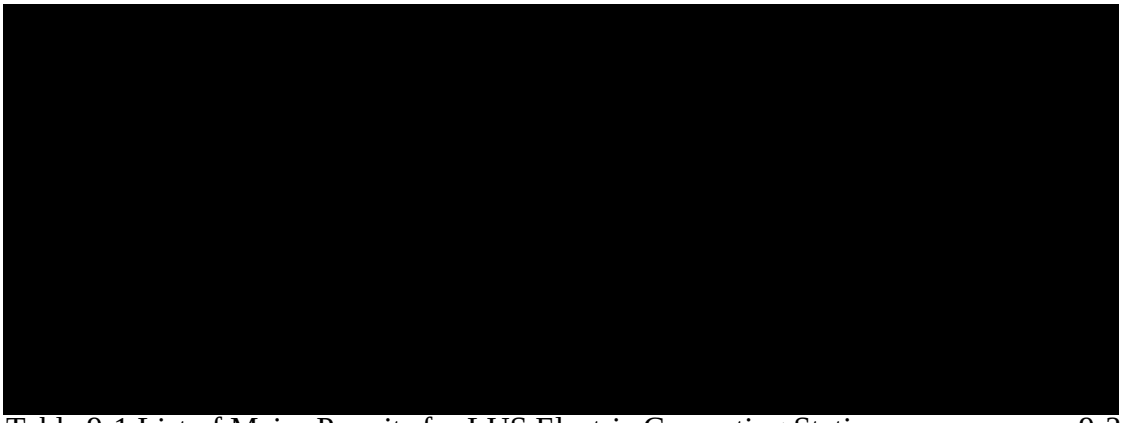

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Section 1
EXECUTIVE SUMMARY

The City of Lafayette (the City) and the Parish of Lafayette (the Parish) are governed by the Lafayette City-Parish Consolidated Government (referred to as Lafayette Consolidated Government or LCG). The Lafayette City-Parish Council (the Council) is the governing authority of the Lafayette Public Power Authority (LPPA), a political subdivision created for the purpose of acquiring electric generating facilities to provide power to the City's Utilities System (LUS). The City issued the Utilities Revenue Bonds, Series 2010, Series 2004, and the Communications System Revenue Bonds, Series 2007. As required by the bond ordinances in each of these offerings, this 2011 Comprehensive Engineering Report (Report) has been prepared in accordance with the bond covenants of the General Bond Ordinance dated November 2, 2010 (the 2010 Bond Ordinance), 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 2011 (November 1, 2010 to October 31, 2011) period (the Report Period). Unless otherwise stated, financial data and operational data were reported on a fiscal year basis.

This report was prepared by SAIC Energy, Environment & Infrastructure, LLC (SAIC), formerly R.W. Beck, Inc., 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. SAIC has not been retained to update this Report beyond the date hereof.

Field interviews were initiated as part of this Report during March 2012. 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 2010 and 2004 Bond Covenants

Article VII of the 2010 and 2004 Bond Ordinances are identical and put forward a number of covenants for LUS. The following discussion addresses compliance with each such covenant.

Table 1-1
2010 and 2004 Bond Covenant Opinions Pertaining to the Electric, Water, and Wastewater Utilities

Section	Description	Opinion
7.1	Operations Covenant	The Utilities System (1) 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 2011 was adopted September 30, 2010.
7.7	Rate Covenant	LUS has reasonably complied with the elements of the rate covenants of the 2004 Bond Ordinance and 2010 Bond Ordinance during the Report Period.
7.8	Books and Records	The City has complied with the basic accounting principles and requirements with respect to the Utilities System, as addressed in the 2004 Bond Ordinance and the 2010 Bond Ordinance during the Report Period.
7.9	Reports and Annual Audits	The City has complied with the basic accounting principles and requirements with respect to the Utilities System, as addressed in the 2004 Bond Ordinance during the Report Period.
7.10	Insurance and Condemnation Awards	The Utilities System has worked with their insurance consultants (not the Consulting Engineer) to indentify 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 SAIC's review of the 2010 and 2004 Bond Ordinances, together with verbal and written reports provided by LCG and LUS staff, no events of material default were identified during the Report Period.

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Recommendations

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

Section 2
INTRODUCTION

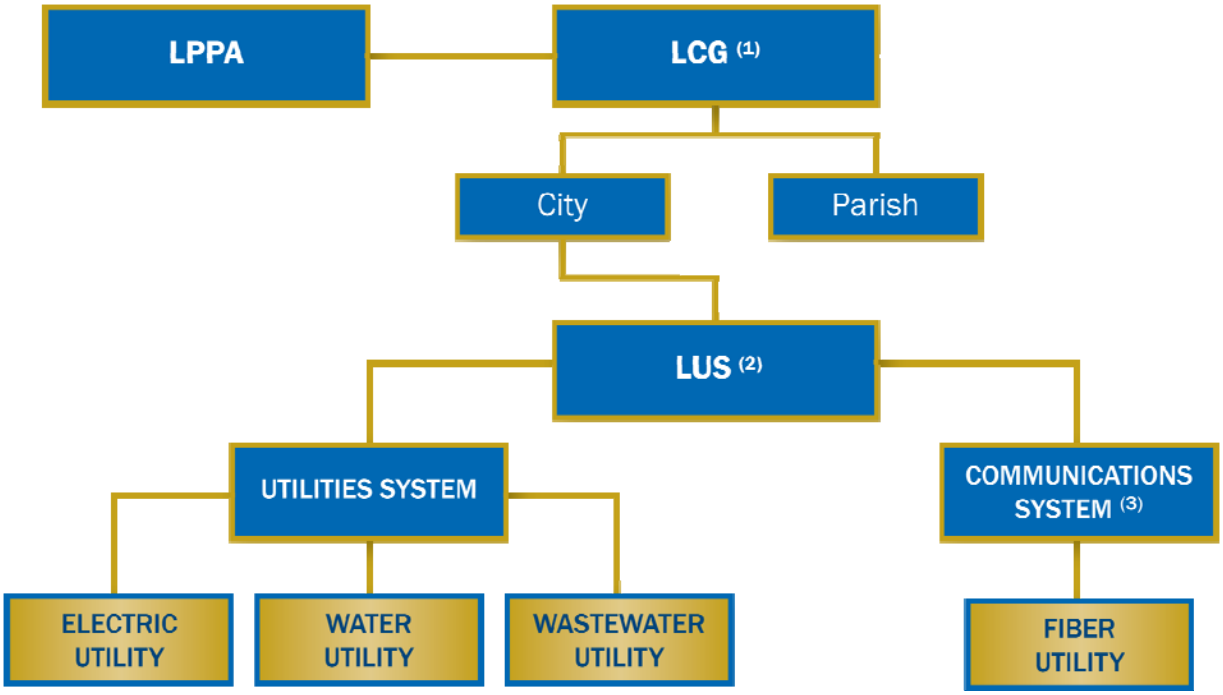
This Report is presented in nine Sections. Section 1 provides an Executive Summary of the Consulting Engineer's opinions regarding achievement of the covenants described in the bond ordinances. Section 2 provides a description of the governing authority for LUS, the Utilities' Revenue Bonds, Series 2010, 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 SAIC 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 includes (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 consists 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) LUS is governed by the Council and LPUA. All other LCG issues are governed by the Council
(2) From an operational perspective, the Utilities System and the Communications System are both operated by LUS
(3) From an accounting perspective, the Utilities System and Communications System are separate

Figure 2-1: LCG and LUS Structure

Requirements of Report

The City issued the Utilities Revenue Bonds, Series 2010 (2010 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 2011 (November 1, 2010 to October 31, 2011) (the Report Period). Unless otherwise stated, financial data and operational data are reported on a fiscal year basis.

2010, 2004 and 2007 Bond Ordinances

This Report is prepared in accordance with the provisions of Sections 8.1 and 8.2 of the 2010 and 2004 Bond Ordinances 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, including 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

SAIC Energy, Environment & Infrastructure, LLC (SAIC), formerly R.W. Beck, Inc. 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.

SAIC 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, 2011 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
2010	$86,080,000	Improvements to the Electric System to alleviate the Acadian Load Pocket, development of Advanced Metering Infrastructure (AMI) to benefit the Electric and Water Systems, and collection improvements for the wastewater system.

Source: Official Statements

Utilities Revenue Bonds, Series 2010

Prior to the issuance of the 2010 Bonds, the proceeds from two prior bond issues remained outstanding. Specifically, the prior outstanding debt included $183,990,000 from the 2004 Bonds and $8,350,000 from the 1996 Bonds.

The 2010 Bonds were issued for the purpose of financing improvements and upgrades associated with LUS's Electric transmission and substation systems to address the Acadian Load Pocket project, development of LUS's Automated Metering Infrastructure (AMI) initiative to benefit the Electric and Water systems, and Wastewater System collection improvements (lift stations / interceptors). The total amount of debt issued under the 2010 Bonds was approximately $86,080,000.

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

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 Report 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, 12/11

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

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.

Upon the retirement of Ms. Rebecca Lalumia in February 2011, Ms. Lorrie Toups now 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

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. Mr. Kevin L. Samples serves as the Chief Information Officer (CIO).

Legal Department

Mr. Michael D. Hebert 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
Kenneth P. Boudreaux	Vice Chair
Donald L. Bertrand	Member
Keith Patin	Member
Sam Dore	Member

Source: LCG, 3/12

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. RPS2 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
Utilities System	
Engineering	Frank Ledoux
Water Operations	Craig Gautreaux
Wastewater Operations	Craig Gautreaux
Electric Operations	Mike Boustany
Power Production	Frank Ledoux
Support Services	Andrew Duhon
Customer Service	Andrew Duhon
Environmental Compliance	Allyson Pellerin
Communications System	Frank Ledoux
Engineering	Frank Ledoux
Fiber Operations	Frank Ledoux
Business Support Services	Frank Ledoux
Administration and Support	Frank Ledoux

Source: LUS, 3/12

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 2011, the Meter Services Section was required to re-read approximately 8,000 electric and water meters. As discussed below, LUS is currently replacing its electric and water meters with advanced digital electric and water meters that will make use of the existing fiber optic network to transport near real-time usage data to LUS. Deployment of the meters is expected to be completed by the end of December 2012.

Smart Grid & Advanced Metering Infrastructure

Lafayette Utilities System conducted an economic evaluation of Advanced Metering Infrastructure (AMI) systems in 2008 and in 2009 was approved for $11.6 million in stimulus funding from the Federal government for Smart Grid-related investment. This money is granted only if LUS can match with $11.6 million in funds. LUS is currently rolling out its AMI infrastructure; the system is expected to be fully operational by December 2012.

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 18,781 customers were registered with the website of which 12,991 utilized this option to pay online during 2011. In 2007, LUS introduced an integrated voice response system (IVR) that allows automated handling of customer calls and customer payments. During 2011, approximately 5,332 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 2011, the Environmental Compliance Division consisted of 20 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 this compliance task tracking software 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 7 percent of the LUS total budgeted positions were unfilled at the end of 2011 (39 vacancies out of 523 positions). The average annual vacancy rate was approximately 7 percent or 35 vacant positions per month. The employee turnover rate for 2011 was reported as approximately 4 percent (including departures, transfers, retirements, etc.). The number of people employed by LUS, as well as LUS Fiber, as of October 31, 2011 and the number of full-time employees authorized in the budget for the same fiscal year are shown in Table 3-4.

Table 3-4
LUS Budgeted and Actual Number of Employees

Division	2010-2011 Budget	2011 Actual Full Time	Difference	Percent Vacancy
Director's Office	2	2	0	0%
Support Services				
Admin & Support	11	11	0	0%
Training	3	3	0	0%
Meter Services	26	22	4	15%
Total Support Services	40	36	4	10%
Customer Service	32	28	4	13%
Environmental Compliance	16	16	0	0%
Power Production	49	42	7	14%
Electric Operations				
Admin & Support	2	2	0	0%
Transmission & Distribution	50	47	3	6%
Energy Control	17	17	0	0%
Substation & Communication	7	1	0	0%
Facilities Management	14	13	1	7%
Total Electric Operations	90	86	4	4%
Water Operations				
Production	20	20	0	0%
Distribution	43	41	2	5%
Total Water Operations	63	61	2	3%
Wastewater Operations				
Treatment	61	59	2	3%
Collection	39	31	8	21%
Total Wastewater Operations	100	90	10	10%
Engineering				
Civil	17	15	2	12%
Administration	11	11	0	0%
Power Marketing	9	8	1	11%
System Engineering	23	22	1	4%
Electric System Construction	5	5	0	0%
Environmental Compliance	4	4	0	0%
Total Engineering	69	65	4	6%
LUS Fiber				
Administration	3	3	0	0%
Operations	18	17	1	6%
Warehouse	3	3	0	0%
Business Support	18	17	1	6%
Engineering	20	18	2	10%
Total LUS Fiber	62	58	4	6%
Total Staff	523	484	39	7%

Source: LUS, 'Personnel Strength Monthly Report,' 3/12

Succession Planning

Lafayette Utilities System has a large number of highly qualified staff approaching retirement or eligible to retire and 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 had struggled to fill vacant positions with qualified personnel and has had difficulty retaining staff, LUS has been proactive within their pay scale constraints, identifying key staff members to be mentored and working to fill vacant positions. Lafayette Utilities System should continue these activities and maintain their proactive approach to succession planning. The turnover rate at LUS dropped to 4 percent in 2011 compared 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 has been noted that communication has improved as groups reached full staffing levels, but in other cases ineffective communications have been 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 require 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 2011 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 salaries associated with LUS Fiber employees.

Table 3-5
LUS Average Annual Salaries

	2007	2008	2009	2010	2011
Average Salary ($)[1]	37,789	37,224	43,274 [2]	43,539 [2]	46,024

Beginning in 2008, salary data for LUS includes the Communications System salaries

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

Source: LUS, 3/12

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, SAIC 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. The salary data obtained from Salary.com, Salaryexpert.com and Engineersalary.org and is from March 2012.
- The American Public Power Association salary data is from May 2011.
- The American Water Works Association salary data is from 2008 and was escalated to 2011 using a -0.4 percent factor for 2009, a 2.2 percent factor for 2010 and a 3.0 percent factor for 2011, based on the annual consumer price index (CPI) changes as published by the Bureau of Labor Statistics.
- The Dietrich Survey data is from September 2011.
- 2010 readily available data from the Bureau of Labor Statistics (BLS) was escalated to 2011 using a 3.0 percent factor, based on the annual consumer price index (CPI) increase 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 9 percent below market. For the Water and Wastewater Utilities, the median salary ranges are approximately 3 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.

LCG implemented a market based rate system in 2009. Based on our conversations with LUS management, the system has improved LUS' ability to compensate its

employees competitively. As shown in Table 3-5, the average LUS salary has increased significantly since implementation.

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 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 and a random testing program. LUS encourages its personnel to attend numerous technical short courses and seminars to keep abreast of changing technology and procedures in the utility industry.

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 2011, 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 2011 and the previous four

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 (1)

	2007	2008	2009	2010	2011
Payments ($)	1,783.006	617,358	687,155	842,417	1,347,212
Recovery ($)	(612,087)	(26,796)	(19,300)	(105,977)	(623,378)
Effective Payments ($)	1,170,919	590,563	667,855	736,439	723,834

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

Source: L. Shearer, LCG, 03/12

Table 3-7
LUS Fiber Insurance Transactions

	2011
Payments ($)	47,108
Recovery ($)	(4,472)
Effective Payments ($)	42,636

Source: L. Shearer, LCG, 03/12

Communications System

It was previously noted that, as of October 31, 2008, LCG reported that the total amount of property insurance in effect for LUS Fiber was approximately $1.7 million, the net book value of such assets was approximately $29.0 million and that insurance was "bare" for automobile liability, general liability, errors and omissions, automobile property damage and boilers and machinery. As of October 31, 2010, the total assets of LUS Fiber increased to approximately $112.4 million. LCG reported that the following insurance was in effect as of October 31, 2011.

- General Liability, Each Occurrence: $1,000,000
- General Liability, Damages to Rented Property: $100,000
- General Liability, Medical, Any One Person: $5,000
- General Liability, Personal Injury: $1,000,000
- General Liability, General Aggregate: $2,000,000
- General Liability, Products: $2,000,000
- Automobile Liability, Combined Single Accident: $1,000,000
- Excess Umbrella Liability: $10,000,000
- Employers Liability: $1,000,000
- Workers Compensation, Statutory Louisiana: Unlimited

- Head End Building and Equipment: Included in LCG's property insurance: $15,965,869 [1]
- LUS Fiber Building: Included in LCG's property insurance
- Fiber Optic Cable (Overhead and Underground) and associated apparatus: Bare

LCG verbally reported that it is unaware of any insurance related issues that would not be in conformance with the Communications System Revenue Bonds, Series 2007.

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 continue its ongoing efforts in conducting studies to ensure employee security and asset preservation.

During March 2012, SAIC 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. LUS reports that they are fully compliant with NERC standards that pertain to cyber security. During 2011, LUS created a new cyber security plan that is specific to smart grid implementation. This plan was formally approved by the Department of Energy in that year. Details of SAIC'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 goals in five areas consistent with LUS' vision, mission, values, and departments. Electric, Water, and Wastewater Utilities' objectives include supporting the customer

[1] Based on the replacement value of LUS Fiber assets.

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

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

LUS is directed by the President and regulated by the Council and LPUA 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 competitive 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 2011, LCG implemented a new financial management system from Lawson Software. Progress was made throughout the year in transitioning and utilizing its potential.

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, 2011.

Utilities Revenue Bonds, Series 2010

The 2010 Bonds were issued for the purpose of financing improvements and upgrades associated with LUS's Electric transmission and substation systems to address the Acadian Load Pocket project, development of LUS's Automated Metering Infrastructure ("AMI") initiative to benefit the Electric and Water systems, and Wastewater System collection improvements (lift stations / interceptors). The total amount of debt issued under the 2010 Bonds was approximately $86,080,000.

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

Payment Date	Interest Payment ($)	Principal Payment ($)	Total Payment ($)	Bonds Outstanding ($)
2011	13,516,463	970,000	14,486,463	278,420,000
2012	14,011,693	1,575,000	15,586,692	276,845,000
2013	13,959,140	10,950,000	24,909,140	265,895,000
2014	13,436,903	11,470,000	24,906,902	255,030,000
2015	12,889,180	12,020,000	24,909,180	252,385,000
2016	12,314,575	12,600,000	24,914,575	240,305,000
2017	11,711,523	13,200,000	24,911,523	227,655,000
2018	11,079,025	12,645,000	23,724,025	215,590,000
2019	10,450,475	13,275,000	23,725,475	202,915,000
2020	9,790,288	13,930,000	23,720,288	188,430,000
2021	9,097,150	14,625,000	23,722,150	174,435,000
2022	8,337,288	15,385,000	23,722,288	159,705,000
2023	7,537,925	16,185,000	23,722,925	144,215,000
2024	6,696,975	17,025,000	23,721,975	127,950,000
2025	5,812,363	17,910,000	23,722,363	110,840,000
2026	4,881,750	18,840,000	23,721,750	92,840,000
2027	3,939,750	19,780,000	23,719,750	73,945,000
2028	2,950,750	20,775,000	23,725,750	54,100,000
2029	1,912,000	4,695,000	6,607,000	50,345,000
2030	1,677,250	4,930,000	6,607,250	46,410,000
2031	1,430,750	5,180,000	6,610,750	25,150,000
2032	1,171,750	5,435,000	6,606,750	19,950,000
2033	900,000	5,710,000	6,610,000	14,490,000
2034	614,500	5,995,000	6,609,500	8,750,000
2035	314,750	6,295,000	6,609,750	2,730,000

Source: 2010 Bonds, Official Statement. Amortization schedule includes 2010 Bonds, 2004 Bonds and 1996 Bonds

Approximately 72 percent of the principal amount of the Series 2010 Bonds was used by the Electric System. Electric System capital projects include improvements and upgrades associated with LUS's transmission and substation systems to address the

Acadiana Load Pocket project. Also a significant portion of the proposed bond funding has been allocated to develop LUS's Advanced Metering Infrastructure ("AMI") initiative. Water System improvements include LUS's AMI initiative (for water meters) and improvements to the water production system. Wastewater System improvements are primarily focused on collection system improvements (lift stations / interceptors).

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 2010 and 2004 Bond Ordinances, Section 8.3, state 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 have 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) changing customer usage and cost characteristics due to a variety of factors such as growth and conservation, (iii) ILOT payments to LCG, (iv) regulatory requirements, and (v) the issuance of indebtedness to fund major capital improvements, 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. No rate increases are planned for FY 2012. Historical and approved rate changes are shown below in Table 4-2.

Table 4-2
Rate Changes Approved by LPUA

	2007 (1)	2008 (1)	2009 (1)	2010 (2)	2011 (1)	2012
Electric						
Retail (%) (3)	0.0	0.0	0.0	11.0	10.0	0.0
Water						
Retail (%)	5.0	0.0	0.0	9.0	9.0	0.0
Wholesale (%)	0.0	0.0	0.0	9.0	9.0	0.0
Wastewater						
Retail (%)	12.5	0.0	0.0	18.0	18.0	0.0

(1) Rate changes took effect on November 1 of each year
(2) Rate changes took effect on February 1 of 2010
(3) 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

According to the Bond Resolution, the ILOT payment to the general fund is based on the previous year's revenues. Historical payments are shown in Table 4-3. . The budgeted amount to be paid in 2011 is $20.4 million, or approximately 8.7 percent of LUS 2011 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 averaging 8.2 percent of electric operating revenues over the past five years are approximately 74.0 percent higher than APPA's median value.

Table 4-3
Historical ILOT Payments

	2007	2008	2009	2010	2011	Average
LUS Operating Revenues ($1,000)	206,987	231,788	205,522	212,213	237,552	
LUS Calculated ILOT ($1,000)	18,799	18,660	18,692	19,463	19,200	
ILOT as a percent of Revenues (%)	9.08	8.05	9.09	9.17	8.08	8.67
Electric Operating Revenues ($1,000)	169,696	195,627	169,717	172,484	189,386	
Electric Calculated ILOT ($1,000)	14,539	14,266	14,511	15,020	14,480	
ILOT as a percent of Revenues (%)	8.57	7.29	8.55	8.71	7.65	8.12

Source: LUS Financial and Operating Statements 2006-2011 audited
Note: Beginning in fiscal year 2008 LUS Fiber wholesale is no longer included with the Utilities System

Balance Sheet

To determine the extent and character of the changes in assets and liabilities for 2011, a Comparative Balance Sheet is shown on Table 4-4. The comparison shows a 14.0 percent increase in Total Assets and 3.5 percent decrease in Retained Earnings, driven primarily by an increase in Revenue Bond Liability.

Table 4-4
Comparative Balance Sheet

	2007	2008	2009	2010	2011
Assets & Other Debits					
Utility Plant ($)					
Plant in Service	792,979,794	801,467,870	828,723,603	847,110,635	910,743,865
Less Accumulated Depreciation & Amortization	(282,466,635)	(292,162,949)	(311,781,650)	(332,270,899)	(351,221,496)
Net Plant in Service	510,513,160	509,304,920	516,941,953	514,839,736	559,522,369
Construction Work in Progress Accrued	2,686,045	3,192,985	1,170,504	1,744,891	(36,491,367)
Total Utility Plant ($)	513,199,204	512,497,905	518,112,457	516,584,626	523,031,003
Current Assets ($)					
Receipts Fund	548,920	435,240	558,094	1,021,971	699,085
O&M Fund (Cash & Temp. Cash Investment)	8,182,793	14,195,956	8,073,213	8,073,243	8,095,676
Accounts Receivable	21,615,806	27,970,201	24,612,625	24,004,860	27,353,240
Other	12,200	12,200	12,200	12,300	12,300
Notes Receivable	2,590,427	11,595,777	11,102,306	14,817,021	15,973,078
Inventories	6,417,348	5,398,699	5,208,157	8,300,598	7,619,240
Total Current Assets ($)	39,367,493	59,608,072	49,566,594	56,229,993	59,752,618
Restricted Assets ($)					
Capital Additions Fund	80,693,888	78,269,468	71,987,397	60,948,496	77,410,619
Bond Reserve	18,654,469	18,642,493	18,201,075	18,203,234	24,841,060
Security Deposits Fund Investments	5,497,347	5,989,670	5,997,628	6,479,084	6,939,764
2004 Construction Fund - Cash & Investment	20,904,201	14,124,322	9,154,206	1,061	(0)
2010 Construction Fund - Cash & Investment					61,588,828
Other	5,705,162	767,469	721,987	311,094	357,287
Total Restricted Assets ($)	131,455,068	117,793,422	106,062,292	85,942,969	171,137,559
Deferred Debits ($)					
Unamortized Debt Discount and Expense	2,806,855	2,664,684	2,515,311	2,358,373	3,097,377
Hurricanes	0	3,592,951	3,179,058	3,092,883	1,657,401
Other	31,633	(369)	14,809	380	(1,756,268)
Total Deferred Debits ($)	2,838,488	6,257,266	5,709,178	5,451,637	2,998,510
Total Assets & Other Debts ($)	686,860,254	696,156,665	679,450,521	664,209,224	756,919,689

Table 4-4
Comparative Balance Sheet (continued)

	2007	2008	2009	2010	2011
Long Term Liabilities					
Revenue Bonds (inclusive of current maturities)	194,145,000	193,255,000	192,340,000	191,400,000	276,510,000
Current Liabilities (payable from Current Assets)					
Accounts Payable	15,284,401	22,092,790	13,289,498	10,957,821	13,784,360
Other	4,798,381	5,041,248	6,344,069	7,223,845	7,271,297
Total Current Liabilities Payable from Current Assets	20,082,782	27,134,038	19,633,567	18,181,666	21,055,658
Other Liabilities (payable from Restricted Assets)					
Interest Accrued	4,767,856	0	0	0	0
Customer Deposits	5,475,595	5,986,815	5,992,263	6,468,117	385,503
Other	0	0	0	0	0
Total Other Liabilities Payable from Restricted Assets	10,243,451	5,986,815	5,992,264	6,468,117	385,503
Long-Term Liabilities					
Unamortized Premium on 2004 Revenue Bonds	4,945,511	4,695,013	4,431,828	4,155,313	3,864,792
Total Long-Term Liabilities	4,945,511	4,695,013	4,431,828	4,155,313	3,864,792
Reserves					
Reserve for Revenue Bond Debt Service	18,654,469	18,642,493	18,201,075	18,203,234	24,841,060
Reserve for Capital Additions	80,693,888	78,269,468	71,987,397	60,948,496	77,410,619
Reserve for Security Deposits	5,497,347	5,989,670	5,997,628	6,479,084	6,939,764
Reserve for Risk Management	426,329	0	(356,150)	0	0
Total Reserves	105,272,034	102,901,631	95,829,949	85,630,814	109,191,443
Retained Earnings (not including reserves)	352,171,476	362,184,167	361,222,913	358,373,314	345,912,293
Total Liabilities & Other Credits	686,860,254	696,156,665	679,450,521	664,209,224	756,919,689

Source: LCG Financial & Operating Statements 2007-2011 audited

Restricted Asset Transactions and Fund Balances

The 2010 and 2004 Bond Ordinances contain certain provisions and covenants pertaining to the separation and maintenance of funds. The 2010 and 2004 Bond Ordinances 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, 2010	9,024	0	18,603	33,926	61,553
Receipts during the Period:	235,284	11,300	0	43,660	290,244
Total Receipts and Cash Balance	244,308	11,300	18,603	77,586	351,797
Disbursements during the Period:	205,457	11,300	0	42,046	258,803
Fund Balance as of October 31, 2011	38,851	0	18,603	35,540	92,994

Source: LUS Funds Annual Budget Document 2011-2012

2010 Construction Fund

The Construction Fund, identified in Table 4-6, was established as a result of the Series 2010 bond financing for major Electric and Wastewater Utility construction projects. The beginning balance of this fund in 2010 was $73.1 million. Subsequent interest earnings of $8 million and disbursements of $25.6 million resulted in an ending balance of $55.5 million in 2011.

Table 4-6
2010 Construction Fund ($1,000)

Fund Balance as of November 1, 2010	73,053
Receipts during the Period:	8,000
Total Receipts and Cash Balance	81,053
Disbursements during the Period:	25,600
Fund Balance as of October 31, 2011	55,453

Source: LCG Annual Budget Document 2011-2012

2004 Construction Fund

The Construction Fund was established as a result of the Series 2004 bond financing for major Electric and Wastewater Utility construction projects. For this period, the 2004 Construction Fund has a beginning balance of zero.

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 11.9 percent since 2010. LUS operating expenses have increased by 4.5 percent since 2010. Depreciation and amortization decreased by 4.9 percent since 2010. Other income increased by 93.8 percent, from approximately $2.1 million in 2010 to $4.1 million in 2011; decreased interest revenues were more than offset by increased miscellaneous non-operating revenues. Income deductions increased by 19.0 percent, primarily driven by increased interest on long term debt.

Collectively, these changes had a positive impact on net income, which increased from $0.7 million in 2010 to approximately $20.1 million in 2011. As discussed earlier (Table 4-2), LCG approved rate changes for the Utilities System that took effect in 2011. 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

	2007	2008	2009	2010	2011
Total Operating Revenues ($)	206,987,370	231,787,922	205,522,289	221,304,052	247,625,213
Total Operating Expenses ($)	156,329,581	187,626,202	169,450,165	173,002,757	180,840,726
Depreciation ($)	18,023,133	18,112,349	18,521,599	18,637,254	17,716,330
Other Income ($)	9,520,295	7,451,395	4,679,866	2,097,260	4,063,747
Income Deductions ($)	10,889,052	10,286,318	11,551,848	11,586,362	13,786,699
Net before ILOT ($)	31,265,898	23,214,448	10,671,740	20,174,939	39,345,205
ILOT ($)	18,831,929	18,799,006	18,660,233	19,462,860	19,199,649
Net Income ($)	12,433,969	4,415,442	(7,981,690)	712,079	20,145,556

Source: LCG Financial & Operating Statements 2007-2011 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 2011, the Utilities System total revenues (including retail sales, wholesale sales and other sources of income, and excluding Communications System totals) increased by nearly $26.3 million (11.9 percent), and operating expenses increased by $7.8 million (4.5 percent). This resulted in an increase in Net Operating Revenue of approximately 28.8 percent, or $19.2 million.

The total debt service payment for in 2011 increased over the 2010 payment by approximately 13.5 percent, or $1.4 million, according to the 2004 and 2010 Official Statements. This increase is attributed to the Series 2010 Bonds**.** Normal capital expenditures for additions to plant paid from cash, not including retained earnings, decreased by 62.9 percent.

Table 4-8
Cash Flow and Disposition of Unpledged Cash

	2007	2008	2009	2010	2011
Utilities System Operating Revenues ($)	206,987,370	231,787,922	205,522,289	221,304,052	247,625,213
Utilities System Operating Expenses ($)	156,329,581	187,626,202	169,450,165	173,002,757	180,840,726
Utilities System Other Revenues (Expenses) ($)	8,648,982	9,923,729	6,107,523	2,467,704	3,177,771
Net Operating Revenues ($)	59,306,771	54,085,449	42,179,647	50,768,999	69,962,258
Debt Service					
Interest ($)	9,043,138	8,239,988	9,451,150	9,782,038	11,227,182
Principal ($)	860,000	890,000	915,000	940,000	940,000
Total Debt Service($)	9,903,138	9,129,988	10,366,150	10,722,038	12,167,182
Balance After Debt Service ($)	49,403,633	44,955,461	31,813,497	40,046,961	57,795,076
Less Normal Capital ($)	9,136,459	14,300,895	10,150,440	11,081,943	4,115,030
Change in Cash due to Operations ($)	40,267,174	30,654,566	21,663,056	28,965,018	53,680,046
Change in 'Unpledged Cash' - Funds($)	4,455,916	(1,238,776)	(13,071,571)	(9,735,128)	23,260,176
Subtotal	44,723,090	29,415,789	8,591,486	19,229,890	76,940,222
Less In-Lieu-of-Tax Payment ($)	18,831,929	18,799,006	18,660,233	19,462,860	19,199,649
Changes in Balance Sheet Accounts affecting Cash ($)	25,891,161	10,616,783	(10,068,747)	(232,970)	57,740,573

Source: LUS Financial and Operating Statements 2007-2011 audited
LUS Unofficial Status of Construction Work Orders, October 2011
NOTE: Beginning in fiscal year 2008 LUS Fiber wholesale is no longer included in with LUS

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 2009 data for these systems was obtained from the APPA[1]. This may significantly impact the comparisons that are based on fuel costs as fuel costs have changed dramatically in recent years.

[1] APPA 2011-2012 Public Power Annual Directory & Statistical Report

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

Financial Ratios – 2010 Median Values	20,000 to 50,000 Customers	50,000 to 100,000 Customers	Southwest	LUS 2009	LUS 2010	LUS 2011
1. Revenue per kWh for Retail Customers ($)	0.086	1.000	0.081	0.083	0.081	0.088
2. Debt to Total Assets	0.407	0.352	0.461	0.327	0.329	0.397
3. Operating Ratio (Electric only)	0.852	0.805	0.860	0.841	0.854	0.812
4. Current Ratio	2.500	2.530	3.360	1.501	1.680	2.042
5. Times Interest Earned	2.470	3.330	2.730	2.023	1.511	3.341
6. Debt Service Coverage	3.380	3.290	2.800	3.232	3.409	4.380
7. Net Income per Revenue Dollar ($)	$0.042	$0.056	$0.069	(0.035)	(0.062)	0.042
8. Uncollectible Accounts per Revenue Dollar ($)	$0.003	$0.003	$0.003	0.005	0.004	0.004

Source: Ratios from the 'Selected Financial and Operating Ratios of Public Power Systems' published in 2012 by APPA, 2010 Data
For description on ratios, see glossary following this table
Source: LUS Financial and Operating Statements 2007-2011 audited

LUS had 63,531 electric retail customers in 2011 – hence data for two different sizes of utilities are 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' 2011 Times Interest Earned and Debt Service coverage have increased over 2010 as LUS' net revenues have increased. Similarly, LUS' net earnings per dollar of revenue in 2011 increased substantially over 2009 and 2010 when these ratios were negative; 2011 results were comparable to APPA survey participants in the 20,000 to 50,000 customer range.

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 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

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. 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

	2011 Actual Results	2011 Adopted Budget	Difference	% Difference
Receipts ($1,000)	243,976	230,755	13,221	5.7
Non-Operating Revenues/Expenses ($1,000)	2,393	2,220	173	7.8
O&M ($1,000)	177,033	178,014	(982)	-0.6
Balance Before Debt Service ($1,000)	69,337	54,960	14,376	26.2
Debt Service ($1,000)	11,955	11,301	654	5.8
Balance After Debt Service ($1,000)	57,382	43,659	161,798	31.4
Capital Expenditures ($1,000)	4,115	9,833	-5,718	-58.2
In-Lieu-of-Tax ($1,000)	20,366	19,526	840	4.3
Balance of Revenues ($1,000)	32,900	14,300	18,600	130.1

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

The budget estimated a gain of $14.3 million and the actual results were a gain of $32.9 million.

2011-2012 Operating Budget

The LCG's fiscal year 2011-2012 budget (November 1, 2011 through October 31, 2012), including LUS' budget, was submitted by the President to the Council and approved by the Council by Ordinance No. O-186-2011.

The end-of-year balance of all Utilities System Funds is budgeted at $110 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, 2011 was adopted by Council. Included in the Ordinance is the five-year capital plan beginning in 2012.

The combined estimated requirements for capital improvements to the Electric, Water, and Wastewater Utilities through October 31, 2016 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 2012 – 2016

Year Ending	2012	2013	2014	2015	2016	Total
Revenues ($)						
Retained Earnings Capital	9,783,278	6,508,896	18,583,522	31,221,630	19,918,704	86,016,030
Bond Proceeds - Utilities Revenue	51,000,000	16,000,000	0	0	12,600,000	79,600,000
Prior Year Reserve Balance	9,873,311	41,854,089	43,241,840	27,278,362	37,274,992	9,873,311
Total Revenues ($)	70,656,589	64,362,985	61,825,362	58,499,992	69,793,696	175,489,341
Appropriations ($)						
Electric	14,632,000	11,745,145	16,907,000	4,730,000	1,730,000	49,744,145
Water	4,451,000	2,937,000	2,335,000	885,000	560,000	11,168,000
Wastewater	5,333,500	5,063,000	15,305,000	15,610,000	6,645,000	47,956,500
Reserve Fund / Capitalized Interest	4,386,000	1,376,000	0	0	1,083,600	6,845,600
Balance Available	41,854,089	43,241,840	27,278,362	37,274,992	59,775,096	59,775,096
Total Appropriations ($)	70,656,589	64,362,985	61,825,362	58,499,992	69,793,696	175,489,341

Source: LUS Five-Year Capital Outlay Program Summary, 2011-2012 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

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, only 74 percent of the budget for the Electric System was appropriated.

Over the five-year period, the Electric Utility appropriations amounted to approximately $187.8 million compared with actual expenditures amounting to approximately $49.9 million. Over the past five years, an average of 27.0 percent of the appropriations has actually been spent.

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

	2007	2008	2009	2010	2011	Total
Adopted Budget	10,594	9,250	15,639	48,275	17,496	101,254
Percent of Budget Appropriated (%)	153%	191%	97%	44%	26%	74%
Current Year Work Orders						
Appropriations	16,257	17,647	15,113	21,478	4,531	75,027
Expended	10,295	5,494	5,687	5,128	2,843	29,448
Unexpended	5,961	12,153	9,426	16,351	1,688	45,579
Percent Expended (%)	63%	31%	38%	24%	63%	39%
Prior Year Work Orders						
Appropriations	24,458	20,464	22,686	22,181	(504.66)	112,806
Expended	2,723	4,402	5,942	2,481	4,941	20,489
Unexpended	21,735	16,062	16,744	19,700	18,076	92,317
Percent Expended (%)	11%	22%	26%	11%	21%	18%
Current & Prior Year Work Orders						
Appropriations	40,714	38,111	37,799	43,660	27,548	187,833
Expended	13,018	9,897	11,629	7,609	7,784	49,937
Unexpended	27,696	28,214	26,170	36,051	19,764	137,896
Percent Expended (%)	32%	26%	31%	17%	28%	27%

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, only 55 percent of the budget for the Water Utility was appropriated.

Over the five-year period, the Water Utility appropriations amounted to approximately $59.0 million compared with actual expenditures amounting to approximately $13.2 million. Over the past five years, an average of 22.0 percent of the budget has actually been spent.

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

	2007	2008	2009	2010	2011	Total
Adopted Budget	4,225	3,470	5,725	4,374	5,039	22,833
Percent of Budget Appropriated	141%	68%	29%	32%	22%	55%
Current Year Work Orders						
Appropriations	5,970	2,354	1,668	1,396	1,123	12,511
Expended	1,938	1,246	872	1,003	699	5,759
Unexpended	4,032	1,109	796	393	423	6,752
Percent Expended (%)	32%	53%	52%	72%	62%	46%
Prior Year Work Orders						
Appropriations	20,573	4,404	10,240	6,053	5,211	46,482
Expended	1,033	1,434	4,084	471	376	7,399
Unexpended	19,540	2,970	6,156	5,583	4,835	39,083
Percent Expended (%)	5%	33%	40%	8%	7%	16%
Current & Prior Year Work Orders						
Appropriations	26,543	6,758	11,909	7,449	6,334	58,993
Expended	2,972	2,680	4,956	1,474	1,075	13,157
Unexpended	23,572	4,078	6,953	5,975	5,258	45,836
Percent Expended (%)	11%	40%	42%	20%	17%	22%

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, approximately $144.5 million was budgeted for the Wastewater Utility compared with actual expenditures of approximately $27 million, for an average of 19.0 percent of the budget actually being spent.

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

	2007	2008	2009	2010	2011	Total
Adopted Budget	10,295	3,640	9,755	13,321	12,772	49,782
Percent of Budget Appropriated	41%	97%	15%	18%	15%	27%
Current Year Work Orders						
Appropriations	4,204	3,533	1,495	2,400	1,920	13,551
Expended	1,994	1,562	1,025	1,433	1,446	7,459
Unexpended	2,210	1,971	470	967	474	6,092
Percent Expended (%)	47%	44%	69%	60%	75%	55%
Prior Year Work Orders						
Appropriations	31,306	31,513	30,332	20,305	17,488	130,943
Expended	4,002	4,063	6,821	2,843	1,876	19,606
Unexpended	27,304	27,450	23,511	17,462	15,612	111,337
Percent Expended (%)	13%	13%	22%	14%	11%	15%
Current & Prior Year Work Orders						
Appropriations	35,510	35,045	31,827	22,705	19,408	144,494
Expended	5,996	5,625	7,846	4,276	3,322	27,065
Unexpended	29,514	29,420	23,980	18,428	16,086	117,429
Percent Expended (%)	17%	16%	25%	19%	17%	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

Combining the data contained in Table 4-12 through Table 4-14 shows that overall LUS appropriates approximately 58.0 percent of the adopted budgets and of the appropriations, LUS spends approximately 23.0 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.

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 learn the new LAWSON system and improve the timeliness of financial reporting.	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 profitable wholesale power sales	High	In Progress

Section 5
UTILITIES SYSTEM - ELECTRIC UTILITY

During March 2012, 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.

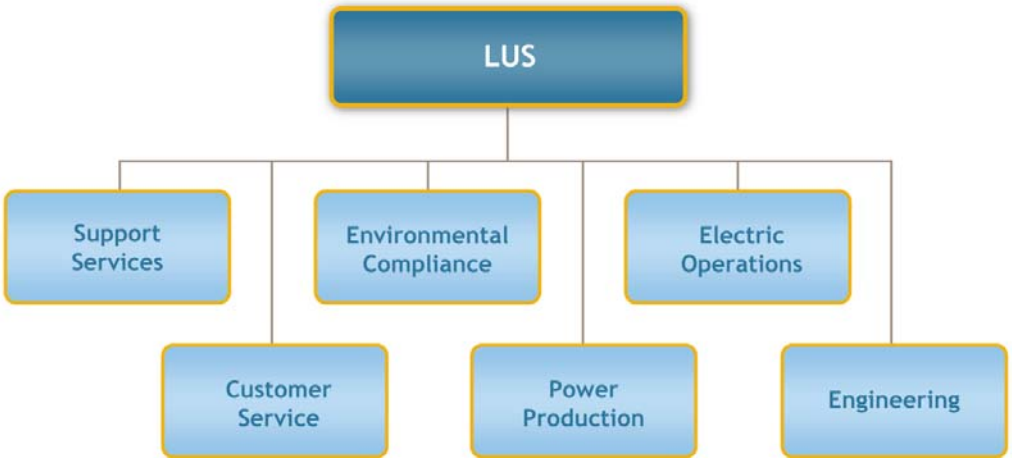
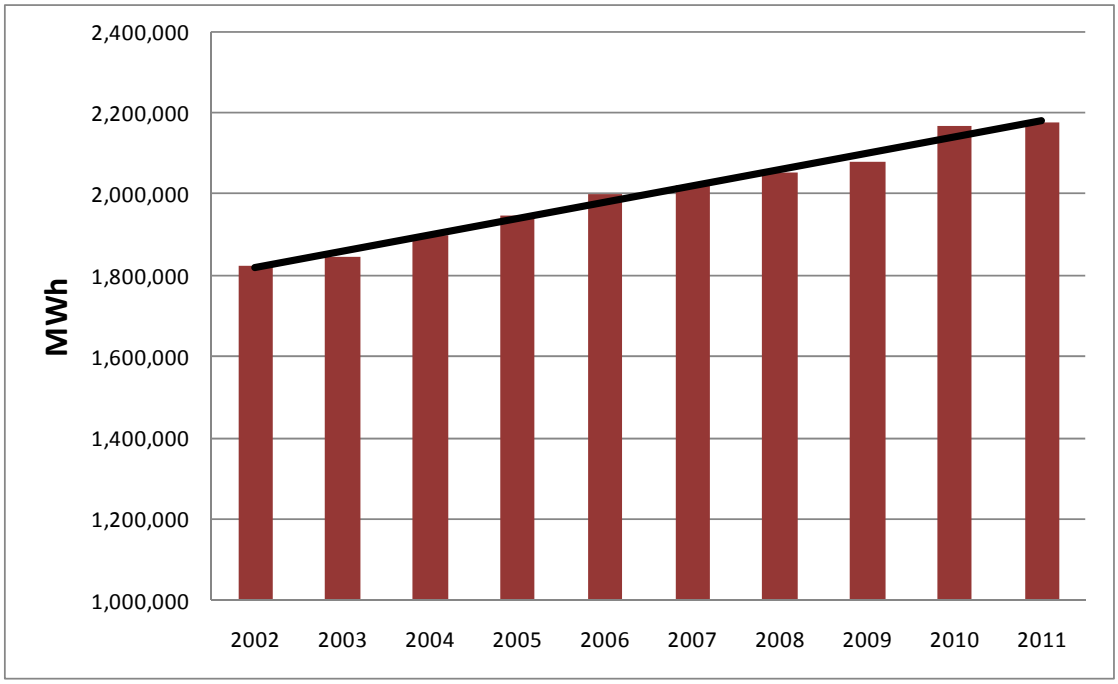


Figure 5-1: Electric Utility Organization Chart

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 2002 through 2011, which indicates a normalized growth rate for the period of approximately 2.0 percent.



Source: LUS Financial and Operating Statements 2002-2011 audited

Figure 5-2: Historical Energy Requirements

Table 5-1
Historical Capacity and Energy Requirements

	2007	2008	2009	2010	2011	Compound Annual Change (%)
Number of Customers	58,722	60,018	61,752	62,403	63,531	2.0
Peak Demand megawatts(MW) (1)	478	451	472	466	486	0.4
Energy Requirements gigawatt hours (GWh) (1)	2,023	2,052	2,080	2,169	2,174	1.8
Annual Load Factor (%)	48.3	51.9	50.1	53.0	50.9	1.3

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

Source: LUS Financial and Operating Statements 2007-2011 audited

Retail electric service has grown steadily over the period shown above. Customer growth has averaged 2.0 percent per year while average usage per customer has increased slightly over the 5 year period at 0.40 percent. These two influences have resulted in average annual growth of approximately 1.8 percent in energy requirements.

Forecasted Capacity and Energy Requirements

Historical and forecasted demand and sales for 2011 through 2016 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 2011	2012	2013	2014	2015	2016	Average Annual Change %)
Peak Demand (MW) (1)	486	501	508	515	522	531	1.5
Energy Requirements (GWh) (1)	2,174	2,268	2,306	2,344	2,383	2,422	1.7

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

Source: Karen Hoyt, LUS, 2/12

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 and Hargis-Hébert Plant were completed in 2005 and 2006, respectively.

Doc Bonin Plant

The Doc Bonin Plant, pictured 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 2011, 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, pictured 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_X) 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_X 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 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

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 is listed in Table 5-3.

Table 5-3
Gas-Fired Generation

Unit	Gross Capacity (MW)(2)	Fuel	Boiler Manufacturer	Turbine Manufacturer
Doc Bonin Unit 1	40	Gas/Oil(1)	Babcock and Wilcox	Westinghouse
Doc Bonin Unit 2	75	Gas/Oil(1)	Combustion Engineering	General Electric
Doc Bonin Unit 3	170	Gas/Oil(1)	Babcock and Wilcox	General Electric
Doc Bonin Plant Total	285			
T. J. Labbé Unit 1	50	Gas	N/A	General Electric
T. J. Labbé Unit 2	50	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	50	Gas	N/A	General Electric
Hargis-Hébert Plant Total	100			
Total	485			

(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, 2/12

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 270 GWh (net) between 2007 and 2011, the majority of which was provided by Units 2 and 3. Annual natural gas consumption averaged 3,145,176 million British thermal units (MMBtu) over the same period. The five-year annual average heat rate of the Doc Bonin Plant was approximately 12,339 Btu per kilowatt-hour (Btu/kWh).

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

	2007	2008	2009	2010	2011	5-Year Average
Doc Bonin – 1						
Gross Generation (MWh)	6,834	45,528	4,290	2	0	11,331
Gross Capacity Factor (%) (1)	2	10	1	0	0	3
Service Factor (%) (2)	3	17	2	0	0	4
Availability Factor (%) (3)	56	97	73	28	36	58
Forced Outage Rate (%) (4)	0.00	8.7	93.0	72	0	35
Number of Starts	3	4	2	1	0	2
Doc Bonin – 2						
Gross Generation (MWh)	53,984	90,797	160,244	251,461	288,263	168,950
Gross Capacity Factor (%) (1)	7	12	20	32	37	22
Service Factor (%) (2)	17	28	43	53	58	40
Availability Factor (%) (3)	96	97	93	86	81	91
Forced Outage Rate (%) (4)	12.8	10.8	7.6	3	0.8	7.0
Number of Starts	2	5	4	9	4	5
Doc Bonin – 3						
Gross Generation (MWh)	0	0	123,419	179,635	284,572	117,525
Gross Capacity Factor (%) (1)	0	0	8	11	17	7
Service Factor (%) (2)	0	0	17	25	45	17
Availability Factor (%) (3)	100	98.38	100	62	54	83
Forced Outage Rate (%) (4)	N/A	N/A	0.0	3	12.5	5.2
Number of Starts	0	0	1	3	7	2
Doc Bonin Totals						
Total Gross Generation (MWh)	60,818	136,325	287,953	431,097	572,835	297,806
Total Net Generation (MWh)	46,441	119,372	260,180	395,518	526,993	269,701
Total Gas Usage (MMBtu)	670,089	1,551,016	3,030,798	4,359,661	6,114,318	3,145,176
Net Heat Rate (Btu/kWh)	14,429	12,993	11,649	11,023	11,602	12,339

(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: Karen Hoyt, LUS 2/12

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 103 GWh (net) since 2007, with the electrical production mostly by Unit 1 during the last two years. Annual natural gas consumption averaged 1,293,708 MMBtu over the same period. Since 2007 the annual average heat rate of the T. J. Labbé Plant has been approximately 12,523 Btu/kWh.

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

	2007	2008	2009	2010	2011	5-Year Average
T. J. Labbé - 1						
Gross Generation (MWh)	49,468	55,239	18,072	67,016	151,490	68,257
Gross Capacity Factor (%) (1)	11	13	4	15	35	16
Service Factor (%) (2)	25	26	8	36	72	34
Availability Factor (%) (3)	95	59	93	99	94	88
Forced Outage Rate (%) (4)	4.4	61.1	37.79	0	2.7	21.2
Number of Starts	60	34	66	34	35	46
T. J. Labbé - 2						
Gross Generation (MWh)	51,199	48,915	23,614	37,537	35,373	39,328
Gross Capacity Factor (%) (1)	12	11	5	9	8	9
Service Factor (%) (2)	25	23	11	20	17	19
Availability Factor (%) (3)	90	77	96	98	99	92
Forced Outage Rate (%) (4)	22.4	9.5	15.3	3	1.8	10
Number of Starts	60	57	65	49	50	56
T. J. Labbé Totals						
Total Gross Generation (MWh)	100,667	104,154	41,686	104,551	186,863	107,584
Total Net Generation (MWh)	94,209	101,531	38,926	102,745	177,384	102,959
Total Gas Usage (MMBtu)	1,202,723	1,224,845	468,323	1,370,659	2,201,988	1,293,708
Net Heat Rate (Btu/kWh)	12,767	12,064	12,031	13,340	12,414	12,523

(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: Karen Hoyt, LUS, 2/12

Table 5-6 contains operating statistics for Hargis-Hébert for the last five years. Annual generation at the Hargis-Hébert Plant has averaged approximately 158 GWh (net) since 2007, with the electrical production generally even between Unit 1 and Unit 2. Annual natural gas consumption averaged 1,764,294 MMBtu over the same period. Since 2007, the annual average heat rate of the Hargis-Hébert Plant has been approximately 11,171 Btu/kWh.

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

	2007	2008	2009	2010	2011	5-Year Average
Hargis-Hébert - 1						
Gross Generation (MWh)	79,474	79,332	58,390	89,566	87,168	78,786
Gross Capacity Factor (%) (1)	18.1	18	13	20	20	18
Service Factor (%) (2)	36.91	34	14	24	29	28
Availability Factor (%) (3)	95.99	96	99	87	95	95
Forced Outage Rate (%) (4)	0.19	8.7	6.8	4	1.0	4.1
Number of Starts	72	109	123	89	166	112
Hargis-Hébert - 2						
Gross Generation (MWh)	71,263	98,825	105,277	81,757	70,334	85,491
Gross Capacity Factor (%) (1)	16.3	23	24	19	16	20
Service Factor (%) (2)	34.75	44	32	24	20	31
Availability Factor (%) (3)	94.14	97	99	94	96	96
Forced Outage Rate (%) (4)	5.3	5.1	1.6	3	4.5	3.9
Number of Starts	61	111	140	101	110	105
Hargis-Hébert Totals						
Total Gross Generation (MWh)	150,737	178,158	163,667	171,323	157,502	164,277
Total Net Generation (MWh)	142,547	170,328	158,193	168,074	151,742	158,177
Total Gas Usage (MMBtu)	1,769,260	2,050,158	1,658,598	1,740,821	1,602,632	1,764,294
Net Heat Rate (Btu/kWh)	12,412	12,037	10,485	10,358	10,562	11,171

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

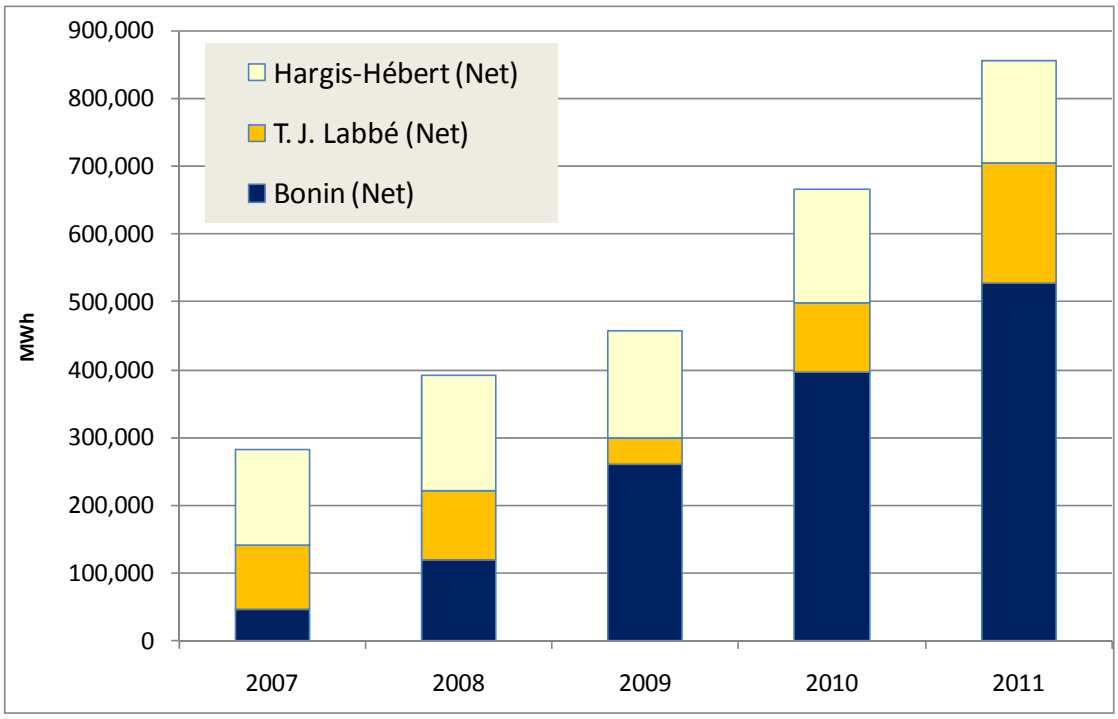
(2) Service Factor reflects the percent of time the unit was electrically connected to the transmission system

(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: Karen Hoyt, LUS, 2/12

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. In recent years, LUS has reported the occurrence of transmission constraints has required an increase in operation of the Doc Bonin units. In 2011, transmission construction required an even higher dispatch of the Doc Bonin units. Figure 5-5 above 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 three years.

The 2011 availability of the Doc Bonin Units 2 and 3 were lower than we would expect the long-term average availability to be for units of similar size, type, and age, due to mostly scheduled outages during the year. The Doc Bonin Unit 1 experienced low availability due to continued boiler and control system problems and the associated extended outage. In 2011, the Doc Bonin Unit 2 forced outage rate was better than we would expect for units of similar size, type, and age. Conversely, the Doc Bonin Unit 3 forced outage rate was worse than we would expect, due mostly to

boiler tube leaks. 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_X emissions events relative to the air permit.

In 2011, 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 Gulf) pipeline systems. LUS reports that the Texas Gas supply system has not been used in over 15 years. The LUS-owned gas pipeline is the primary means of supplying gas to the Doc Bonin Plant and the T. J. Labbé Plant; alternatively, the Crosstex Gulf Coast Marketing, Ltd. (Crosstex) pipeline may be used. In 2011, LUS reports the Crosstex pipeline was used to supply fuel to the Doc Bonin Plant, to mitigate the risk of fuel supply interruption during critical periods of generation. 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 easterly 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 50. As of the end of 2011, eight positions were vacant, but five contract employees were being utilized to meet staffing needs. 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. Although power plant positions remain vacant, LUS reports progress is currently being made in filling positions with permanent hires. 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 standardized and accomplished via the Original Equipment Manufacturer (OEM) manuals. Routine inspection, testing, and reporting include but are not limited to: boiler chemistry included turbine over-speed trip tests, relief valve testing, piping hanger walk downs, 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. 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. We received a comprehensive list of the backlog, and it appears the preventative maintenance and repairs work orders are well tracked and managed by the LUS staff.

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. 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 made progress in 2011 to implement those recommendations and is using Synterprise to assist and coach the staff.

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 2011.

CT major maintenance is driven by the manufacturers' recommended maintenance schedule and equivalent baseload operating hours. The T. J. Labbé Plant and the Hargis-Hébert Plant CTs had boroscope inspections in the fall and spring of 2011, respectively. Each CT was found to be in serviceable condition and available for continued operation.

The units at the Doc Bonin Plant are generally well maintained and LUS has continued to make capital improvements. Capital project plans for the LUS generation are extensive in the upcoming years, including but not limited:

- Upgrade of Bonin 2 boiler and turbine control systems
- Replacement of fixed inlet guide vanes with variable inlet guide vanes on both T. J. Labbé units
- Cooling tower upgrades
- Bonin 2 condenser tube replacement

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

- Silencers' work at both the Labbé and Hargis-Hébert Plants
- Transformer deluge system upgrade
- Bonin 3 air heater basket and expansion joint replacement
- LUS pipeline custody transfer station upgrades
- Replacement of fixed inlet guide vanes with variable inlet guide vanes on both Hargis-Hébert units

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 l,005 degrees Fahrenheit (°F) with a reheat temperature of l,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 230-kV line.

Through these Cleco transmission facilities, the Rodemacher switching station is interconnected with the area transmission grid. LUS is interconnected with the area transmission grid through its 138-kV and 230-kV ties to Cleco and Entergy. Interconnection facilities provide capability for LUS to receive electricity at a maximum capacity of 500 MW.

Coal for Rodemacher Unit No. 2

The principal fuel for RPS2 is coal; 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.

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. These performance measurements are provided in Table 5-7. The generation statistics shown are for the entire RPS2 plant.

Table 5-7
RPS2 Operating Statistics

	2007	2008	2009	2010	2011	5-Year Average
Gross Generation (MWh)	3,730,004	3,387,322	3,108,727	3,455,279	3,433,091	3,422,885
Station Service (MWh)	253,045	228,966	216,251	239,105	237,591	234,992
Net Generation (MWh)	3,476,959	3,158,356	2,892,476	3,216,174	3,195,500	3,187,893
Station Service (%)	6.8%	6.8%	7.0%	6.9%	6.9%	6.9%
Net Capacity Factor (%) (1)	75.9%	68.8%	63.1%	70.2%	69.8%	69.6%
Hours Available	7,997	7,356	6,996	7,945	7,943	7,647
Net Unit Heat Rate (Btu/kWh)	10,928	10,975	10,923	10,975	10,754	10,911
Availability Factor (%)(3)	91.3%	83.7%	79.9%	90.7%	90.7%	87.2%
Forced Outage Factor (%)(4)	1.5%	2.6%	4.2%	4.9%	1.7%	3.0%
Scheduled Outage Factor (%)	7.2%	13.7%	15.9%	4.4%	7.6%	9.8%

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

(2) 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

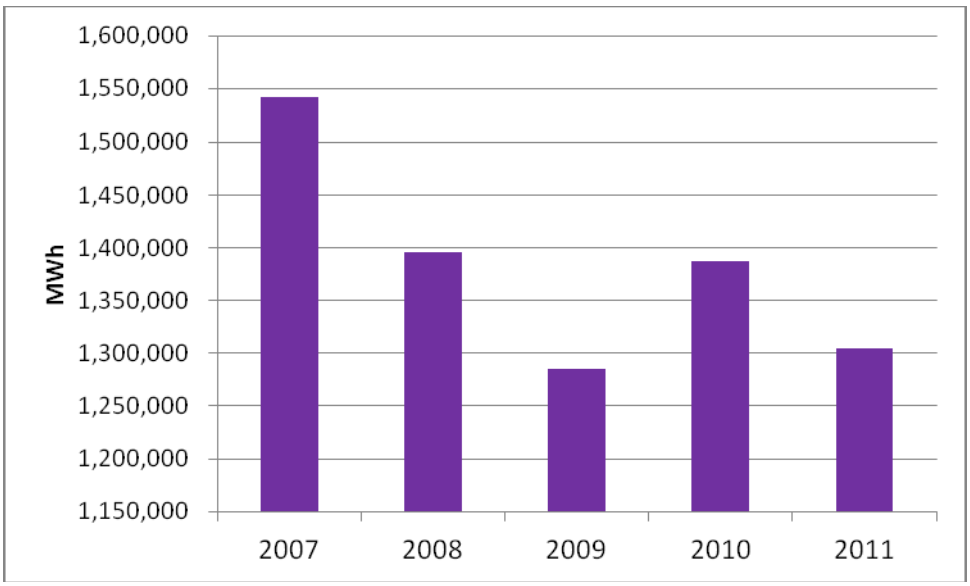
(3) Availability Factor reflects the percent of the time the unit was capable of providing service

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

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 5-7 shows the MWh delivered to LUS annually from RPS2.



Source: LPPA Manager's Monthly Reports

Figure 5-7: Annual RPS2 MWh Delivery to LUS

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 5-8 below.

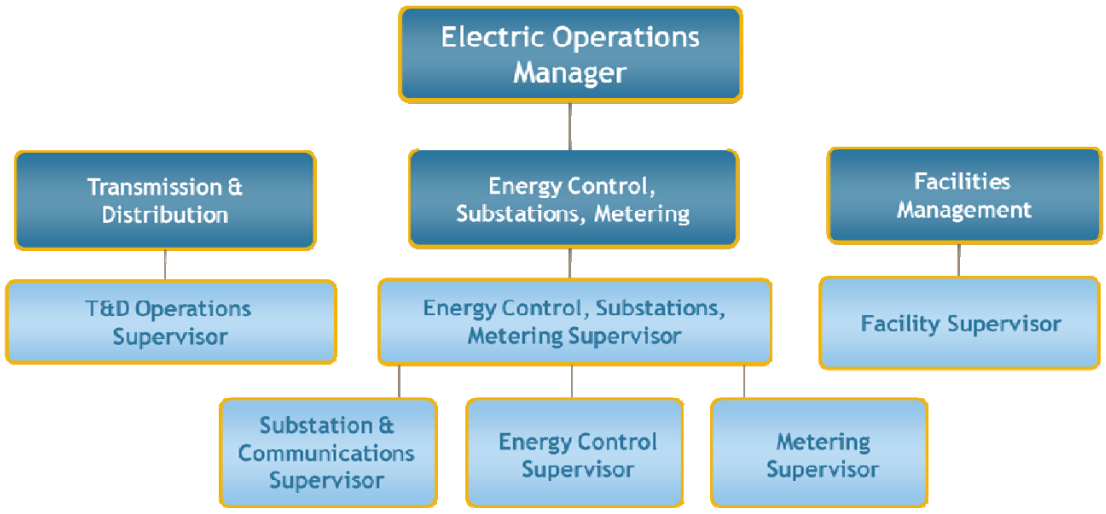


Figure 5-8: Electric Operations Organization Chart

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 reported to the Consulting Engineer. A summary of the major functions of the Electric Operations Division is also provided below.

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 LUS' 230-kV transmission system is comprised of 16.0 miles of line. This includes a new 230kV line from Bonin/Labbé substation which started construction in 2011 and will be placed in service in early 2012. LUS' transmission interconnections are with Cleco at Pont Des Mouton 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. Two new 230kV interconnections at the Labbé substation, Entergy's Sellers to Labbe project and Cleco's Wells to the Labbé Plant, are being constructed and will be placed in service in early 2012 as part of the Acadiana Load Pocket project. The Doc Bonin Switchyard has one (1) autotransformer connecting the 230kV and 138kV system as well as two (2) autotransformers that connect the 138kV and 69kv systems. 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 substations (T. J. Labbé and Hargis-Hébert Plants). The distribution system has 80 13.8-kV feeders with 471 miles of overhead lines and 466 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 2008 through 2011.

Table 5-8
Outage-Cause Summary

	2008	2009	2010*	2011
Tree Outage Customer-Minutes	433,808	149,738	124,828	461,224
Animal Outage Customer-Minutes	486,293	322,249	590,970	569,756
Equipment Outage Customer-Minutes	780,813	358,805	3,162,230(1)	826,024
Lightning Outage Customer-Minutes	537,894	352,915	586,662	466,223
Unknown Outage Customer-Minutes	118,273	40,975	50,773	43,936
Total Outage Customer-Minutes	2,357,081	1,224,682	4,515,463(2)	2,367,163
Percent Change from Previous Year	(19)	(48)	269(3)	(48)

*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, 3/12

The 2011 storm season was relatively mild with the year ending in a significant lack of rain fall. The drought conditions weaken trees in the area and contributed to an increase in tree related outages and impacted customer outage minutes. The animal-related outages were relatively the same as the previous year but from field observations, LUS recognized that the existing squirrel guards are becoming problematic and will be scheduled for replacement with a new brand in 2012. Equipment-related outages are up from the average. In September, a substation 13.8kV switch failed, which resulted in over 400,000 customer minutes of outages. This event was a major contributor to the year's results.

Transmission lines are inspected and maintained yearly, per NERC compliance requirements. Distribution lines are inspected and maintained on an approximate four year cycle. All distribution lines are on their second pass in the four-year trimming cycle. LUS maintains a tree trimming contractor for day-to-day tree trimming work and maintenance and trims approximately 100 circuit miles per year, as shown below in Table 5-9. LUS verbally reported that it will continue to monitor tree-related outages to ensure that the tree trimming cycle is adequate.

LUS has begun to selectively managed maintenance by using information from its outage data base and overlaying these causes onto its GIS mapping system. As historical data is gathered, the maintenance programs will be analyzed to prioritize improvements on the basis of areas that have the high density of outages. This method will be used for the animal outages and squirrel guard replacement program.

Table 5-9
Tree Trimming Summary

	2008	2009	2010	2011
Total Overhead Distribution (Miles)	461	465	466	467
Overhead Distribution Trimmed (Miles)	116.7	114.0	107.8	91
Percent of Total (%)	25.3	24.5	23.1	19.5

Source: Mike Boustany, Jr., LUS, 3/12

LUS experienced a major outage on November, 2010 due to a failure to the T7 transformer.

LUS employs an in-house written Outage Management program, which produces standard utility outage and reliability indices. Over the past year, LUS with the assistance of its Consultant completed specifications and evaluation of RFPs for the new Outage Management System (OMS). This new system will be implemented in 2012.

Based on conversations with LUS' representatives, overall system reliability is improving. 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 for defining and calculating a major event day found in the Institute of Electrical and

Electronics Engineers' (IEEE) Standard No. 1366-2003. LUS' method, based on the LPSC General Order, is still an accepted industry practice.

Other analysis that LUS performs as directed by the LPSC's General Order is to identify their five worst performing circuits and make plans to address such circuits. During 2011, LUS worked on the five distribution circuits (4052, 2556, 5051, 5055) and 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

The LPSC has 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. Reliability data for LUS and the sample set of other Louisiana utilities are summarized in Table 5-10, Figure 5-9, and Table 5-11 below.

Table 5-10
LUS Reliability Summary

	2007	2008 (1)	2009 (1)	2010 (1)	2011(1)
SAIDI (Minutes/Customer/Year)	52.6	44.9	23.0	33.3(2)	44.5
SAIFI (Interruptions/Customer/Year)	1.43	1.00	0.52	0.79(2)	1.02

(1) The reliability indexes are calculated for the calendar year for 2008, 2009, 2010, and 2011, not the fiscal year as shown for previous years. This change was made to be consistent with the industry and other published reports.

(2) Excludes the major event that occurred with the transformer T7outage in November 2010 (FY 2010-11) because it affected more than 10% of the customers and by definition is not included in SAIDI and SAIFI outage statistics.

Source: Mike Boustany, Jr., LUS, 3/12

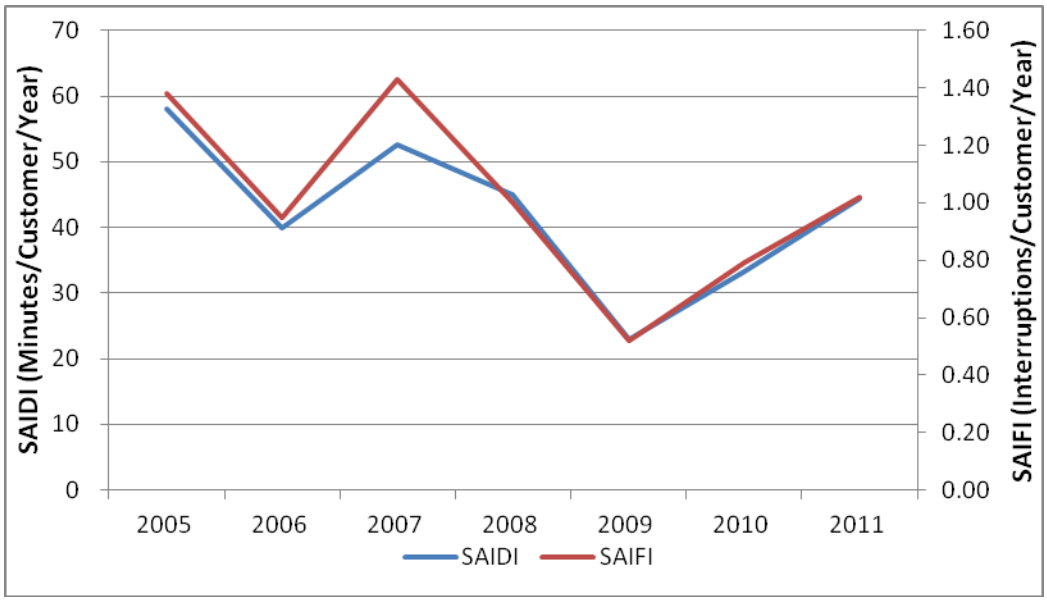


Figure 5-9: LUS SAIDI and SAIFI Reliability Data
Note: Excludes major system outage T7 that occurred in November 2010.

Table 5-11
2011 Reliability Indices for Similar Utilities

Energy Provider	SAIDI Minutes/Customer	SAIFI Interruptions/Customer
LUS	44.5	1.02
Entergy	136.2	1.2
AEP SWEPCO	277.2	2.03
Claiborne Electric Cooperative	228.6	1.51

Note: The LPSC does not receive SAIDI and SAIFI data from municipally-owned utilities
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 1,322 outage calls during 2011, which is an increase of approximately 12 percent from the 1,183 outage calls that crews responded to during 2010. LUS' data indicates that average Trouble-shooters Response Time decreased slightly between 2010 and 2011. Crew Response Time appears to be improving

slightly. A couple of factors influence the response time value, the road traffic with the City and the distance from the LUS facility to the crew members' homes. Table 5-12 shows the response times for the past five years.

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

	2007	2008(1)	2009 (1)	2010 (1)	2011(1)
Average Crew Response Time (Minutes)	18.6	20.2	22.6	20.9	19.7
Average Trouble-shooter Response Time (Minutes)	25.3	28.7	23.7	24.9	23.9

(1) The Crew Response Time and Trouble Shooter Response Time are calculated on the calendar year basis not the fiscal year as shown for previous years

Source: Mike Boustany, Jr., LUS, 3/12

Operations and Maintenance

General

Predictive and preventative maintenance on the system may contribute to improvements in the reliability of the electric system. LUS has achieved a high level of system reliability is due to its consistent equipment monitoring. Infrared scanning, formal testing programs, and visual inspection continue to enhance the reliability of the electric system. According to LUS staff, all scheduled maintenance and testing for 2011 was completed on schedule and appropriate follow-up actions were completed in a timely manner.

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.

Breaker oil analyses and tap changer signature analyses are used for scheduling maintenance of major power equipment including distribution and transmission transformers, 69-kV, 138-kV, and 230-kV oil circuit breakers. Maintenance may be initiated based on a predetermined time interval or a "trigger". A trigger includes, but is not limited to, gas levels, breaker operations, or tap operations.

LUS also performs infrared analyses 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 2011 and included testing of the following equipment:

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

Infrared tests revealed no major issues for 2011. 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.

Batteries are being maintained according to IEEE standards. Routine tests have discovered numerous issues with high internal resistance; individual battery cells have been replaced to eliminate this issue. The battery systems data are trended to provide a historical maintenance costs and when a system becomes uneconomical to maintain, it is scheduled for replacement. LUS maintenance program has ensured that LUS's battery systems are reliable and power the protection system when required.

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 2011 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

T&D Crews

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, 2011, including the Section Supervisor. The T&D section re-organized to create two sections with supervisors, the T&D section and the Service section. The Trouble Shooters have been included in Service section.

The T&D line crews include 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 meet the service work load. The T&D crews are adequately staffed, with few vacancies. Competing with neighboring utilities for qualified

linemen has made recruiting efforts a major concern. Competitive compensation will be required to fill vacant positions and reduce 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 2011, T&D purchased one new 50-foot bucket truck and a 47-foot digger truck. LUS monitors their truck fleet and has a program for replacement of older vehicles.

During 2011, 2,551 poles were treated or tested through a service contract with Osmose. They identified 50 bad poles that needed replacement. LUS replaced 173 bad and end-of-life poles in 2011, as summarized in Table 5-13. The pole inspection contract was rebid and began a new ten-year cycle in 2011.

Table 5-13
Wood Pole Test Summary

	2009	2010	2011
Total Wood Poles	20,414	20,414	24,110
Poles Inspected	2,307	0	2,551
Poles Inspected (%)	11.3	0	10.6
Poles Replaced	134	96	173
Poles Replaced (%)	0.7	0.3	0.7

Source: Mike Boustany, Jr., LUS, 3/12

LUS uses work management software, CityworksTM, to track work completed in the T&D Section. The following type work is tracked in Cityworks: streetlights, pole change outs, transformer change outs, meter change outs, service tickets, outages, and all engineered jobs.

A summary of the T&D and Service crew work for 2011 is presented below:

- Total Service Requests Completed – 11,621
- Total Work Orders Completed – 10,670

Service Crews

The Service crews include four service crews. The service crews are generally organized into specific service zones within the City to handle the day-to-day service requests. Utilizing work zones has increase the overall efficiency of the crews by reducing travel times. The service crews handle connection orders, private lighting maintenance, troubleshooting, and service requests. One of the service crews assumes the arterial lighting maintenance.

Response time benchmarks for service requests are one to three days for streetlights and typically next day for service connections. The response times are monitored and

remain consistent in the range set. Discussions with LUS indicate that four service crews are sufficient to keep up with the present service work load.

Energy Control System

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

Presently, there are 17 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 work primarily on electrical SCADA-related projects and the fourth working on water/wastewater SCADA-related projects), and two SCADA technicians. A System Support Specialist was added to assist in network requirements related to NERC compliance. All ECS operators are NERC-certified as mandated by NERC. NERC-certified training for the ECS operators included emergency operations for 2011.

SPP Regional Entity conducted an on-site compliance audit of LUS' active NERC standards for year 2011 during the month of September of 2011. The audit team reviewed 28 NERC standards with 84 requirements that applied to LUS; 61 were found fully compliant, 3 possible violations, 3 open enforcement actions, and 17 non-applicable. Mitigation plans were filed to correct possible alleged violations. The mitigation plans have been fully implemented, fulfilling the compliance requirements.

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. This data positively affects system reliability, as system status information is instantly available to operations and engineering staff.

The LogRhythem tool LUS uses 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, it provides for real-time monitoring of logs, alerts for suspicious activity, and provides automated reporting functionality.

The Energy Management System (EMS)/SCADA system was upgraded during 2011 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, Oracle Backup Exec and Trend Micro antivirus, 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. 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, 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 37 lift stations in the wastewater system. LUS intends to eventually install remote terminal units (RTUs) at all 127 lift stations.

Metering

The Metering Section is staffed by three electric metering technicians and one electric metering supervisor. Salient accomplishments by the electric meter shop during 2011 are shown in Table 5-14.

Table 5-14
Meter Test Summary

Test Performed	2010	2011
Pull and test for accuracy per customer complaint	195	182
Meter installs or change outs (residential, commercial, industrial)	993	1,472
New CT jobs wired and energized	48	50
Meters calibrated and returned to inventory	867	1,255
Meters programmed in the meter shop	960	1,152
Meters retired due to age, test results of physical conditions	1,220	1,140
Meters tested in the field (residential, commercial, industrial)	1,106	1,318
Meters pulled for electricians to do work	183	190
Primary metering sites tested (total 37)	0	0
Power quality monitors (installed, downloaded, analyzed)	77	80
Power line interference complaints investigated	27	19

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 billing deviation of 30 percent or more compared to previous year, same month, 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.

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-furbished 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.

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. This project is expected to be implemented in 2012 and include the replacement of all electric meters in the LUS' service area.

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, one position is vacant at this time. 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. Also, a 4800 sq. ft. building located at Bower Road material yard serves as additional storage for transmission material and high voltage cable.

The new inventory software system (LAWSON) was implemented completely throughout LCG in fiscal year 2011. According to LUS staff, the inventory control portion of the system has provided improved efficiency and accuracy in controlling and tracking inventory.

Security

Security is composed of a combination of in-house staff and security staff contracted with the Sheriff's department. Security staff includes two full-time employees. Security measures include, but are not limited to, motorized vehicle gates with cameras, video monitoring and recording, voice box, and employee access card controls.

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' Electric Transmission Assessment Report. The analysis results indicate that with all transmission components in service, there is sufficient capacity in the transmission system to meet existing and forecasted peak loading conditions through 2022 and that no system component is loaded above 80 percent of maximum rating, with the exception of the Elks-Hargis 69kV transmission line. Power flow studies are performed for years one through ten concentrating on summer peak, winter peak, and

two intermediate loading scenarios. Study scenarios include: all facilities in service, one facility out of service (single contingency), two facilities out of service (double contingency) conditions, and extreme events (loss of two or more bulk electric system elements). 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 in 2009, it was a joint effort between LUS, Cleco, and Entergy. The study 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.

The last full short circuit study was conducted in 2006. LUS performed a sensitivity analysis on elements involved in the Acadiana Load Pocket ("ALP") transmission improvement projects. All elements studied were 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. LUS has also completed or initiated several substation projects to improve system reliability. The status of major projects in 2011 includes:

- Doc Bonin Switchyard – Autotransformer T7 Repair. In addition to remanufacturing the unit, LUS chose to make several improvements including, but not limited to, an eleven percent (11%) rating increase of the autotransformer. The remanufactured unit was returned to service on October 2, 2011. As a result of taking T7 out of service, the most limiting transmission element became the Doc Bonin 138/69kV Autotransformer (T6) for the loss of the Flanders-Beadle 230kV transmission line. LUS took several measures to increase reliability, protect equipment and reduce the risk of load shed under contingency. They were:
- Doc Bonin Switchyard – Due to the critical nature of the LUS electric system due to the absence of T7 in service, LUS leased an autotransformer that helped alleviate flows over other critical electric facilities. The unit was placed into service in July 2011 and taken out of service in September 2011 and a temporary

69kV transmission line was constructed and tied into the LUS 69kV electric system.

- Distribution Reconfiguration. LUS reconfigured the 13.8kV distribution system by transferring approximately 60 MW of load served from 69kV substations to 230kV substations. This provided approximately 30 MW of post-contingent relief on the 138/69kV autotransformer (T6) at Doc Bonin Switchyard. Once T7 returned to service, the distribution system was restored to normal.
- Doc Bonin Generation. Doc Bonin Unit #2 was run to alleviate power flow and provide additional reliability. With T7 being out of service from November 26, 2010, to October 2, 2011, LUS was limited in its ability to take outages necessary for ALP construction and general maintenance.

Ongoing Major Projects:

- Doc Bonin Switchyard – Switchyard Reconfiguration (ALP) continued in 2011. LUS is in the process of significantly modifying 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 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) continued in 2011. 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, owned by LUS, Cleco Power, and Entergy Gulf States Louisiana respectively. This project began in the fourth quarter of FY2009-10 and will be completed the first quarter of fiscal year 2012.
- Doc Bonin – T.J. Labbé – New 230kV Transmission Line (ALP) continued in 2011. This project calls for the construction of a new 230kV transmission line from Doc Bonin Switchyard to T.J. Labbé Switchyard. Final construction will be completed in fiscal year 2011.

Doc Bonin Switchyard - 230kV/138kV Autotransformer (ALP). This project was identified as part of the MOU signed by LUS, Cleco Power, and Entergy Gulf States Louisiana and endorsed by SPP-ICT. This project calls for the procurement and installation of one (1) 230kV/138kV autotransformer. This autotransformer is intended to be identical match to the existing unit located at Doc Bonin. As part of this project LUS engaged a transformer consultant, James J. Templeton Consulting, Inc., with expertise in the design and procurement. At this time the transformer has been awarded to HICO America with delivery anticipated in the end of the first quarter of FY2011-12.

Upcoming Major Projects:

Beadle Substation – 36 MVAR Capacitor Bank (ALP). This project was identified as part of the MOU signed by LUS, Cleco Power, and Entergy Gulf States Louisiana and

endorsed by SPP-ICT. This project calls for the procurement and installation of a 230kV 36 MVAR capacitor bank to be located at Beadle Substation. As part of this project LUS entered into a professional service contract with the Engineering Service division of the S&C Electric Company. At this time the design is ongoing with the anticipated completion of the project in the end of the first quarter of FY2012-13.

- Southeast Substation. This project was identified as the result of distribution contingency studies previously performed. It calls for the construction of new electrical distribution substation near the southeast portion of the LUS service territory primarily to alleviate loading on the Beadle and Flanders electrical distribution substations due to the high growth rate experienced in this portion of our service territory. Currently, the property has been purchased and design is ongoing with the construction anticipated to begin in the late third to early fourth quarter of the fiscal year 2012 with completion in the third quarter of fiscal year 2013.
- Luke Substation Transformer Addition. This project was identified as the result of distribution contingency studies previously performed. This project calls for the installation of an additional distribution power transformer and bus tie breaker at the Luke electrical distribution substation. The design has been completed and the construction is anticipated to begin in the third quarter of fiscal year 2012 with completion in the first quarter of fiscal year 2013.

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 is reviewed annually using Cooper Power Systems CYME power engineering software. The distribution system undergoes power flow analysis of capacities and voltages as part of this review. Based on these studies, if the distribution apparatus is loaded at or above 70 percent of its continuous nameplate rating, the apparatus is placed on a Project List. The Project list is used to initiate further investigations, remediation options, and a planned course of action. Higher priority is given to apparatus that is loaded at or above 80 percent.

LUS staff verbally reported that contingency studies found no inadequacies in the distribution system. LUS continues 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 FY2010-11 several improvements were made to the distribution system;

Completed projects include the following:

Project	Completion Date
New Pont Des Mouton Feeder 3553	2nd Qtr FY2011
Distribution Feeder Balancing	FY2011
Installation of Capacitor Banks	FY2011
New service to Our Lady of Lourdes Regional Medical Center	FY2011

Upcoming projects include the following:

Project	Completion Date
Mall Feeder 2553 U/G Getaway (2-350AL to 2-350CU)	1st Qtr FY2012
New Gilman Feeder 7555	4th Qtr FY2012

GIS

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

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 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.

LUS now has the Network Engineering and Operations group, which was previously with Division 7083, because of the anticipated growth in this technology area. The Network Engineering and Operations group has continually grown, and with the addition of the Advanced Metering Infrastructure project, the number of servers approximately doubled to 40.

Other projects include moving Cityworks to a virtual server, continued work on the electric data dictionary, and collecting GPS points for the new AMI water meters.

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 2011, LUS sold 214,440 MWh of energy to TEA and purchased 194,778 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 practice-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. 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. The cost of this power for 2011 was $56.03 per MWh for peaking energy and $47.17 per MWh for the combination of both peaking and supplemental energy.

Power Sales

Electric Interconnection and Interchange

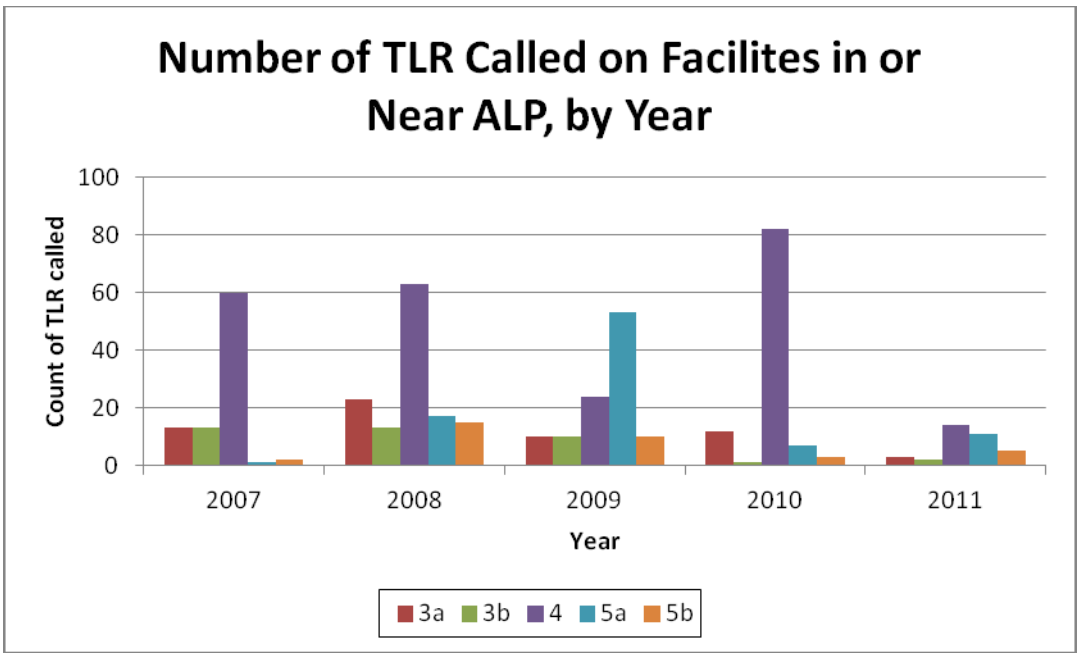
System interconnection refers to a connection between two electric systems permitting the transfer of electric energy in either direction. Interchange refers to kilowatt-hours delivered to, or received by, one electric utility or pooling system from another. Transmission access refers to the ability 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. LUS 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 252 MW from May 1 through October 1 for the FY2011. 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 Acadian Load Pocket and formalized a reaction plan that is based on a seven tier Transmission Loading Relief (TLR) program, which is a part of NERC. 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. Activities proposed by NERC in response to the various levels of TLR are described as follows:

- 3a - Reallocation of Transmission Service by curtailing Interchange Transactions using Non-firm Point-to-Point Transmission Service to allow Interchange Transactions using higher priority Transmission Service.
- 3b – Curtail Interchange Transactions using Non-firm Point-to-Point Transmission Service to mitigate an SOL or IROL violation.
- 4 – Reconfigure transmission system to allow Transactions using Firm Point-to-Point Transmission Service to continue.
- 5a – Reallocation of Transmission Service by curtailing Interchange Transactions using Firm Point-to-Point Transmission Service on a pro rata basis to allow additional Interchange Transactions using Firm Point-to-Point.
- 5b – Curtail Interchange Transactions using Firm Point-to-Point Transmission Service to mitigate an SOL or IROL Violation.
- 6 – Emergency procedures

LUS tracks TLR events and the total number of TLR events rated at levels three through six (per year) are shown in the following Figure 5-10.



Source: E. Rivera, LUS, 3/11

Figure 5-10: Number of TLR Called on Facilities in or Near ALP, by Year

The TLR events and associated impacts on import limits increased from 2001 through 2010, exceeding 100 occurrences in calendar years 2008 through 2010. Reported TLR events in 2011 are lower than in previous years due to system adjustments before a 3 TLR event occurs. In addition, some of the system projects designed to relief transmission congestion became operational in late 2010 and 2011. LUS should continue 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 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. 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 (1)	25

(1) Louisiana Energy and Power Authority (LEPA)

Source: Ron Gary, LUS, 1/12

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, 1/12

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.

In August 2009, the initial confirmation under the Arch Coal Sales Inc. master coal purchase agreement was executed for 900,000 tons per year in 2010 and 2011 at $12.00 per ton and $13.25 per ton respectively.

ATMOS Energy Marketing, LLC

Natural gas supply and delivery is primarily provided from ATMOS Energy Marketing, LLC (ATMOS) pursuant to a base contract between ATMOS and TEA dated February 1, 2004, which is backed by LUS, in conjunction with confirmations between TEA and ATMOS dated August 9, 2010.

Confirmation No. 4 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.

Confirmation No. 5 was executed on April 6, 2010 for deliveries to the Hargis-Hébert Plant over a Gulf South pipeline. This confirmation will expire on October 31, 2012 as well.

Crosstex Gulf Coast Marketing, Ltd

Natural gas supply can also be provided from Crosstex for up to 15,000 MMBtu per day 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, 2010. This confirmation has an initial term from January 1, 2010 to December 31, 2010 but will continue month to month thereafter until either party terminates the confirmation upon 30 days written notice.

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. The CT Parts Agreement effective November 9, 2006 (executed on February 17, 2006) gave LUS CT parts price certainty for a five-year term. The contract expired February 16, 2011 and LUS is undergoing a public bid process to establish a new contract. LUS is purchasing parts from GE through the CT Services Agreement until the parts contract is in place.

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, 2010	Month to month	Supply of natural gas for LUS generating facilities
TEA	ATMOS	August 9, 2009	October 31, 2012	Supply of natural gas for Bonin and Labbé generating facilities
TEA	ATMOS	April 6, 2010	October 31, 2012	Supply of natural gas for Hargis-Hébert generating facilities
LUS	SLEMCO	September 10, 2004	September 10, 2019	Customer acquisition agreement
LUS	GE	November 9, 2006	6 years	CT Maintenance Services
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,1/12

Regulatory & Environmental

LUS operates the Doc Bonin, T. J. Labbé, and Hargis-Hébert Plants, 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. However, at the wholesale level, LUS could face new opportunities and challenges from increased competition in the wholesale power market. If LUS is to capitalize on these market opportunities, the decision-making process must be swift and efficient. Although the current decision-making 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). LUS and Cleco are members of the SPP, which is a FERC-approved Regional Transmission Organization (RTO) and a NERC region. SPP is an independent, non-profit organization with 47 members across eight states that currently provides independent reliability coordination and tariff administration, planning, operating and reliability assessment studies, and regional transaction scheduling. SPP operates the Energy Imbalance Services (EIS) Market. The EIS is a wholesale energy market that allows for economically efficient deployment of wholesale electricity generation across the SPP region through the establishment of an offer-based market for energy imbalance services; the EIS Market is operated under a FERC approved tariff. 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 (EPAct 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 EPAct 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.

EPAct 2005 created a self-regulating reliability organization, eventually deemed to be NERC, charged with developing mandatory and enforceable electric reliability rules. FERC has 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.

All shift operators in LUS' ECS Section 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

EPAct 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. 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

EPAct 2005 Section 1252, is directly related to Smart Grid and Demand Response, including:

- Required 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.

- Created 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, 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 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 awarded LUS approximately $11.6 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 includes AMI with two-way communications, dynamic pricing (time-of-use pricing), load control, and demand response applications.
- Smart Grid will incorporate into LUS' existing fiber optic network infrastructure.
- 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.
- AMI meter proposals were solicited and received during 2010. Installation and integration into LUS' billing system is expected to occur in 2011 and 2012.
- LUS plans to complete meter installation and have the AMI system operational by December 31, 2012.
- Distribution and transmission automation projects include upgrades to transmission relays and the installation of the Beadle Capacitor Bank, of the distribution capacitor controllers, and the installation of fault indicators on the distribution feeders.

Financial

Capital Outlay Program

Fiscal Year 2010

Table 5-18 provides the fixed plant and equipment expenditures made during 2011. 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	2011
Normal Capital	
Bond Reserve & Capital Additions	2,732,847
Special Equipment	210,737
2010 Revenue Bonds	33,068,880
Retained Earnings	8,567,583
Total	44,580,047

Source: LUS Status of Construction Work Orders

Five-Year Capital Outlay Program

The estimated requirements for improvements to the electric department for the 2012 to 2016 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 2012 – 2016 ($000)

	2012	2013	2014	2015	2016	Total
Acquisitions	0	0	3,000	0	0	3,000
Production	6,130	3,900	4,080	4,600	1,600	20,310
Distribution	2,527	2,627	300	100	100	5,789
Substation	4,255	4,260	5,510	10	10	14,045
Transmission	735	485	4,007	10	10	5,247
General	985	338	10	10	10	1,353
Total	14,632	11,745	16,907	4,730	1,730	49,744

Source: LUS Five-Year Capital Outlay Program Summary, 2011-2012 Adopted Budget, Combined Summary Retained Earnings and Bond Capital

Acquisitions

LUS planned for the acquisition of utility customers from Southwest Louisiana Electric Membership Corporation (SLEMCO). LUS entered into a 15-year contract with SLEMCO which allows for acquisition of 3,104 customers from 2004 through 2019 and anticipates acquiring 110 customers in 2012.

As of the date of this Report, LUS is in the process of acquiring approximately 60 customers who reside within the City limits and were previously served by Entergy. Litigation over acquisition of these customers was resolved in LUS' favor in April 2006 and LUS subsequently acquired approximately 300 of these customers.

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

Distribution/ Production/ Substation/ Transmission/ General Plant

LUS has planned for line extensions, new feeders, and feeder ties to extend service to new areas of the City. Production funds represent improvements to existing power plants, including improvements to turbines, cooling towers, control systems, and environmental and safety controls. LUS plans to install autotransformers at the Doc Bonin Plant and at the Pont Des Mouton Substation, as well as construct the Northeast Substation and Southeast Substation and various upgrades and automation projects. CIP funds are provided for the planned building of transmission lines between the new Northeast Substation and the Pont Des Mouton and Peck Substations, as well as the re-conductoring of lines between the Bonin Substation and the Gilman and Luke Substations. General plant improvements include improvements to the LUS headquarters facility, acquisition of new property for future expansion, control room improvements, and other unidentified general plant additions.

Operating Results

Table 5-20 summarizes the Electric Utility revenues and expenses for the most recent five years. In 2011, the Electric Utility operating revenues increased approximately 9.8 percent, or approximately $16.9 million, from 2010. During 2011, Electric Utility total O&M expenses increased by 4.4 percent, from 2010. The natural gas cost increased by 22.2 percent, or $7.9 million, due to changes in the generation resource mix from 2010 to 2011. The LPPA purchased power cost decreased 0.9 percent, or $0.6 million and Purchased Power cost (other than LPPA) decreased 22.3 percent, or $2.7 million. Other 2011 operating expenses increased by about 10.0 percent, or $2.4 million, from 2010, and maintenances expenses decreased in 2011 by 3.8 percent, or $0.4 million, from 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 2011, the Net Margin increased by approximately 40.9 percent, or $11.1 million from 2010 levels.

Table 5-20
Electric Utility Operating Results

	2007	2008	2009	2010	2011
Electric Operating Revenues ($)					
Retail	166,149,829	189,513,152	162,840,592	164,430,120	178,575,608
Wholesale	1,150,327	1,329,215	1,334,735	3,952,181	6,145,005
Other	2,395,985	4,784,975	5,542,082	4,102,088	4,665,025
Total Electric Operating Revenues ($)	169,696,141	195,627,343	169,717,409	172,484,389	189,385,638
Electric Operating Expenses ($)					
Operation Expenses					
Fuel – Gas	27,863,787	46,286,299	26,187,503	35,639,036	43,553,606
Purchased Power – LPPA	62,412,389	61,874,524	65,840,205	64,653,777	64,047,865
Purchased Power – Other	14,803,604	23,405,229	17,660,119	12,114,427	9,415,304
Other	20,426,428	21,087,919	24,748,572	23,554,970	25,915,281
Maintenance Expenses	7,470,080	7,725,129	8,318,750	11,267,443	10,839,644
Total Operating Expenses ($)	132,976,289	160,379,100	142,755,149	147,229,653	153,771,699
Electric Non Operating Revenues (Expenses) ($)					
Interest Revenues	5,415,927	4,402,446	5,216,213	1,911,058	$1,516,233
LUS Fiber Start –up Cost Reimbursement	1,059,598	0	0	0	$0
Miscellaneous Non Operating Revenues	0	91,873	108,855	(56,504)	1,478,052
Fiber to the Home (FTTH) Start Up Project	0	(24,173)	(42,409)	0	0
Interest on Customer Deposits	(9,538)	(10,711)	(14,400)	(5,909)	0
Hurricanes Rita, Katrina and Gustav	0	(65,769)	0	0	0
Tax Collections/Non Operating	12,759	52,410	91,947	55,521	(87,789)
Miscellaneous Non Operating Expense	0	(32,767)	(57,485)	0	(256,386)
Total Non Operating Revenues (Expenses) ($)	6,478,746	4,413,309	5,302,721	1,904,166	2,650,110
Net Margin ($) (1)	43,198,599	39,661,552	32,264,981	27,158,901	38,264,048

(1) Before Depreciation and Debt Service

Source: LUS Financial and Operating Statements 2007-2011 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 2007 through 2011.

Revenues

Table 5-21 shows the Electric Utility statistics for the most recent five years. The total sales MWh increased by 3.8 percent between 2010 and 2011. The number of electric accounts increased by 1.3 percent over the previous fiscal year.

In 2011, the average electric usage per retail customer decreased by 1.0 percent, from 32,196 kWh to 31,862 kWh. The average electric revenue per retail customer, including fuel cost adjustment charges increased by 7.3 percent in 2011 compared to 2010. Table 5-21 shows the wholesale revenue on a per MWh basis increased slightly from $26.14 per MWh in 2010 to $26.66 per MWh in 2011.

Table 5-21
Electric Sales Revenue and Statistics

	2007	2008	2009	2010	2011
Electric Sales Revenues ($)					
Retail - Rate Base	70,333,804	71,213,614	71,907,624	80,680,077	90,791,982
Retail - Fuel Adjustment	95,816,026	118,299,538	90,932,968	83,750,043	87,783,625
Wholesale	1,150,327	1,329,215	1,334,735	3,952,181	6,145,005
Other	2,395,985	4,784,975	5,542,082	4,102,088	4,665,025
Total Electric Sales Revenues ($)	169,696,141	195,627,343	169,717,409	172,484,389	189,385,638
Electric Sales (MWh)					
Retail	1,917,891	1,933,371	1,950,205	2,020,173	2,024,230
Wholesale	34,661	33,071	60,673	151,215	230,531
Total Sales	1,952,552	1,966,442	2,010,878	2,171,388	2,254,761
Electric Number of Accounts (Average)					
Retail	60,018	61,752	62,403	62,746	63,531
Wholesale	13	13	13	13	13
Total Accounts	60,031	61,765	62,416	62,759	63,544
Electric Statistics – Retail					
Usage per Account (kWh)	31,955	31,309	31,252	32,196	31,862
Revenue per Account (with fuel) ($)	2,768	3,069	2,609	2,621	$2,811
Revenue per Account (without fuel) ($)	1,172	1,153	1,152	1,286	$1,429
Revenue per MWh (with fuel) ($)	86.63	98.02	83.50	81.39	$88.22
Revenue per MWh (without fuel) ($)	36.67	36.83	36.87	39.94	$44.85
Electric Statistics - Wholesale					
Usage per Account (kWh)	2,666,231	2,543,923	4,667,154	11,631,923	17,733,154
Revenue per Account (with fuel) ($)	88,487	102,247	102,672	304,014	472,693
Revenue per MWh (with fuel) ($)	33.19	40.19	22.00	26.14	26.66

Source: LUS Financial and Operating Statements 2007-2011 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 increased overall by 1.0 percent to $53.28 per MWh in 2011. Total self-generation costs increased by 17.0 percent. However on a unit basis, self-generation costs declined by 8.9 percent primarily due to the decrease in natural gas costs.

Total purchased power costs decreased by 7.7 percent, but on a unit basis increased by 3.7 percent per MWh from 2010 to 2011. LPPA purchased power costs increased by 5.4 percent per MWh, primarily due to increased coal purchase costs.

Table 5-22
Electric Utility Annual Power Costs

	2007	2008	2009	2010	2011
Expenses					
Self Generation ($)					
Fuel	27,863,787	46,286,299	26,187,503	35,639,036	43,553,606
Other	5,685,003	6,495,265	6,642,118	10,191,250	10,088,322
Total Self Generation ($)	33,548,790	52,781,564	32,829,621	45,830,286	53,641,928
Purchases ($)					
LPPA	62,412,389	61,874,524	65,840,205	64,653,777	64,047,865
Other Supplies	14,803,604	23,405,229	17,660,119	12,114,427	9,415,304
Total Purchased Power ($)	77,215,993	85,279,753	83,500,324	76,768,205	73,463,169
Total Supply ($)	110,764,782	138,061,317	116,329,945	122,598,491	127,105,096
Energy (MWh)					
Self Generation	283,191	388,408	457,295	666,337	856,119
Purchases					
LPPA	1,576,314	1,430,888	1,316,905	1,422,361	1,336,972
Other Supplies	223,593	284,029	359,833	235,474	192,527
Total Purchased Power	1,799,907	1,714,917	1,676,738	1,657,835	1,529,499
Total Supply	2,083,098	2,103,325	2,134,033	2,324,172	2,385,618
Average Costs ($/MWh)					
Self Generation ($)					
Fuel	98.39	119.17	57.27	53.49	50.87
Other	20.07	16.72	14.52	15.29	11.78
Total Self Generation ($)	118.47	135.89	71.79	68.78	62.66
Purchases ($)					
LPPA	39.59	43.24	50.00	45.46	47.91
Other Supplies	66.21	82.40	49.08	51.45	48.90
Total Purchased Power ($)	42.90	49.73	49.80	46.31	48.03
Total Supply ($)	53.17	65.64	54.51	52.75	53.28

Source: LUS Financial and Operating Statements 2006-2011 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:

- Production Operations and Maintenance Expense (non-fuel) – 15.4 percent increase
- Fuel and purchased power – 2.7 percent increase
- Transmission Expense – 8.6 percent increase
- Distribution Expense – 4.2 percent increase
- Administrative Support – 3.4 percent increase

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

Table 5-23
Electric Utility Detailed Expenses

	2007	2008	2009	2010	2011
Electric Production Expense ($)					
Operation – Fuel	27,863,787	46,286,299	26,187,503	35,639,036	43,553,606
Operation – Non Fuel	2,135,202	2,552,478	2,754,221	3,158,473	3,627,872
Maintenance	3,549,801	3,942,787	3,887,897	7,032,777	6,460,449
Purchased Power – LPPA	62,412,389	61,874,524	65,840,205	64,653,777	64,047,865
Purchased Power – Other	14,803,604	23,405,229	17,660,119	12,114,427	9,415,304
Electric Transmission Expense ($)					
Operation	4,017,349	4,094,431	5,393,998	5,316,005	5,580,029
Maintenance	153,215	122,595	101,969	165,393	214,600
Electric Distribution Expense ($)					
Operation	3,160,416	3,156,114	3,739,038	3,584,827	4,009,221
Maintenance	3,767,064	3,659,747	4,322,081	4,069,273	4,164,595
Other Electric Expense ($)					
Customer Operations	2,309,474	2,464,103	2,926,847	2,651,103	2,754,974
Customer Services	76,140	67,450	86,918	59,211	39,605
Administrative & General	8,727,846	8,753,343	9,847,550	8,891,160	9,903,580
Total Electric Expense ($)	132,976,289	160,379,100	142,748,345	147,335,463	153,771,699

Source: LUS Financial and Operating Statements 2007-2011 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 2012-2013 (APPA Report). The survey included 188 public power systems. The APPA data represents 2010 operations.

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

Operating Ratios – 2009 Median Values	20,000 to 50,000 Customers	50,000 to 100,000 Customers	Southwest	LUS 2009	LUS 2010	LUS 2011
1. Total O&M Expenses per kWh Sold ($)	0.072	0.075	0.070	0.071	0.068	0.068
2. Total O&M Expense (excluding Power Supply) per Retail Customer ($)	409	363	420	424	394	420
3. Total Power Supply Expense per kWh Sold ($)	0.056	0.061	0.056	0.058	0.056	0.056
4. Purchased Power Cost per kWh ($)	0.055	0.065	0.054	0.050	0.046	0.048
5. Retail Customers per Meter Reader	6,837	6,183	5,132	3,120	3,137	3,177
6. Distribution O&M Expense per Retail Customer ($)	149	137	165	129	122	129
7. Distribution O&M Expense per Circuit Mile ($)	5,233	8,325	7,103	8,743	8,302	8,865
8. Customer Accounting, Service and Sales Expense per Retail Customer ($)	63	73	65	49	43	44
9. Administrative & General Expense per Retail Customer ($)	140	133	154	158	142	156

Source: Ratios from 'Selected Financial and Operating Ratios of Public Power Systems' published by APPA in 2012, 2010 Data
For description on rations, see glossary later in this Section
LUS Financial and Operating Statements 2006-2011 audited

Because LUS had 63,531 electric retail customers in 2011, 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.

As shown in Table 5-24, LUS' purchased power costs on a unit basis for 2009 through 2011 are slightly lower than the APPA averages. LUS' retail customers per meter reader are much lower than the APPA averages. The 2009 through 2011 customer-related expenses also appear to be somewhat lower than average when compared to the APPA data, however, A&G expense are slightly higher than the APPA averages for similar sized systems and somewhat lower than the average for the region.

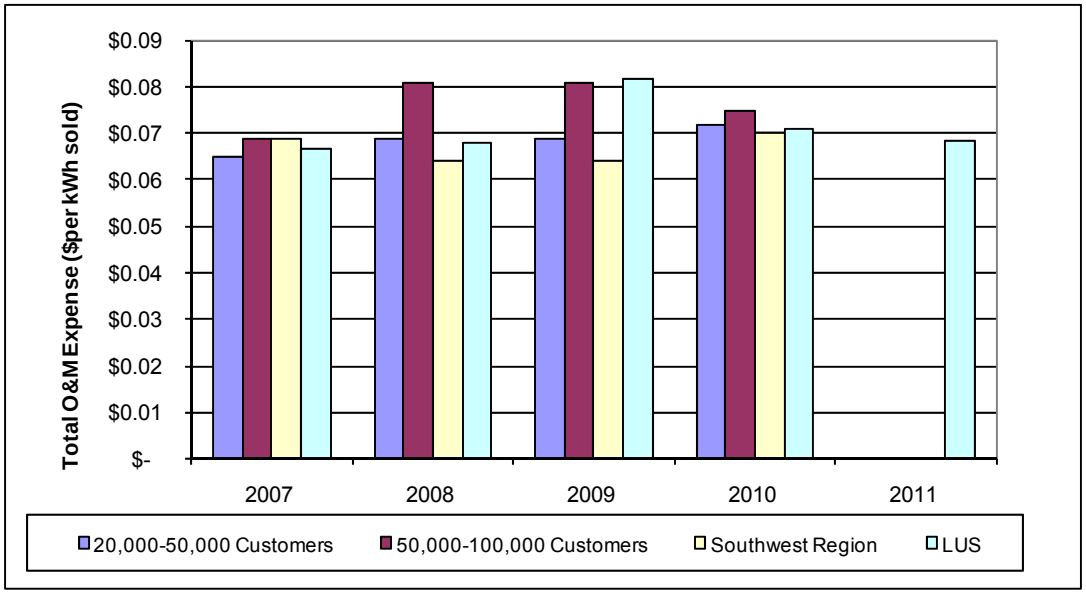


Figure 5-11: Total O&M Expense on a per kWh Basis

Figure 5-11 shows that when comparing LUS' Total O&M expense on a unit basis to utilities in the APPA report, LUS' expenses appear to be comparable in all other years, with the exception of 2009. At the time of this report APPA data for 2011 was not available.

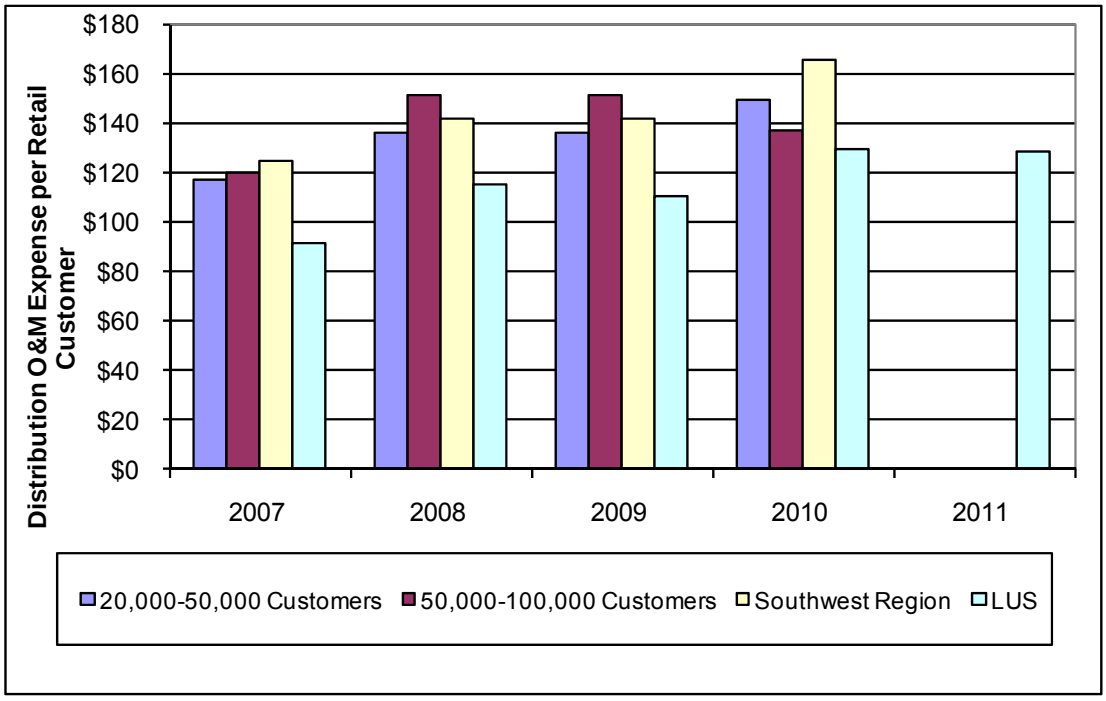


Figure 5-12: Distribution O&M Expense per Retail Customer

As shown in Figure 5-12, LUS' Distribution O&M expense on a retail customer basis is on average lower than the other utilities in the APPA report.

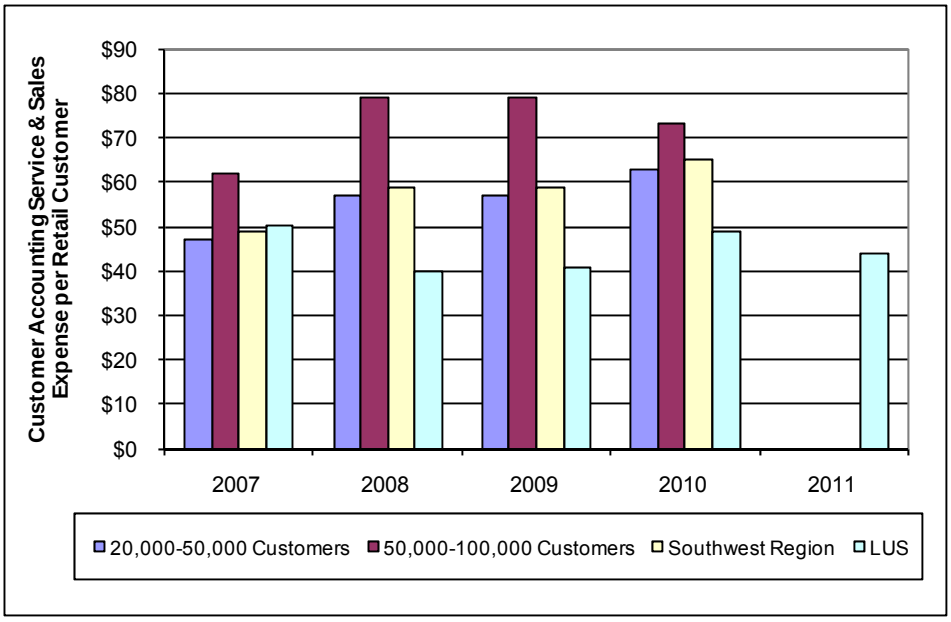


Figure 5-13: Customer Accounting Service & Sales Expense per Retail Customer

As shown in Figure 5-13, LUS' customer-related expenses on a retail customer basis are below the average when compared with other utilities in the APPA report.

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.

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

In 2009, LUS performed a cost-of-service and rate design study for the Electric Utility and found that current rates were insufficient to support future operations. As a result of the 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.

As shown in Table 5-25, Electric Utility average Residential, Small Commercial and Large Commercial base rates remained generally flat from 2007 through 2009, increased by less than ten percent in 2010, and increased by approximately 12.7 percent in 2011. Since 2007, the average residential rates have increased by approximately 22 percent, Small Commercial rates have increased by 24 percent, and the Large Commercial rates have increased by 23 percent.

Table 5-25
Electric Retail Base Rate Revenue

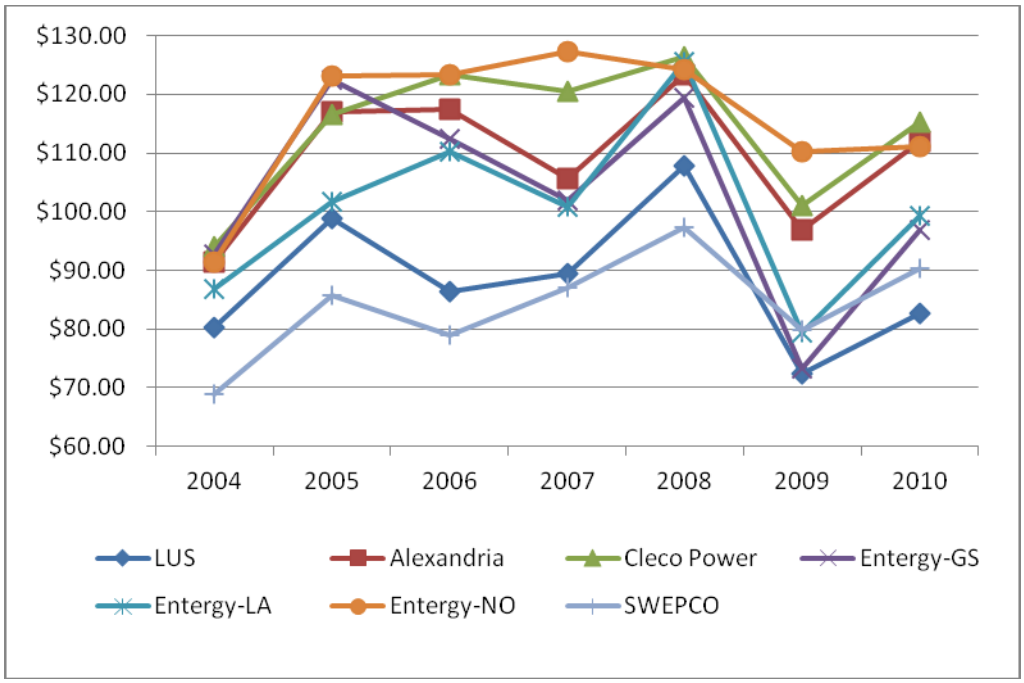
Class	2007	2008	2009	2010(1)	2011
Residential ($/kWh)	0.0364	0.0365	0.0364	0.0395	0.0445
Small Commercial-No Demand ($/kWh)	0.0498	0.0498	0.0499	0.0547	0.0618
Large Commercial-Demand ($/kWh)	0.0336	0.0339	0.0339	0.0365	0.0413

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

Source: LUS Financial and Operating Statements 2007-2011 audited

Rate Comparison

Figures 5-14 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 5-14 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 5-14: 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 SAIC have identified:

- 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 for specialty areas.
- 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.
- Meet NERC compliance requirements

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 advanced 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.
- Continue to 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:

- Documented NERC Reliability requirements.
- Repaired Autotransformer T7 and associated work to maintain reliability while T7 was out of service
- Completed distribution reliability study
- Continued work associated with the ALP upgrades.
- Performed work to improve the reliability of the 5 worst performing distribution feeders.
- Constructed the new Pont Des Mouton Feeder 3552
- Installed distribution capacitor banks
- Installed new service to Our Lady of Lourdes Regional Medical Center
- Updated GIS mapping and databases
- Inspected 2,551 and replaced 175 power poles
- Completed 11,621 service requests and 10,670 work orders

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	Normal	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
LUS should continue efforts to update and enhance the GIS mapping system and integration with Cityworks	Normal	In Progress
LUS should perform an arc-flash hazard study of each Plant's electrical power system to identify flash-protection boundaries and incident energy for respective work tasks. ·	Normal	New
LUS should Evaluate the Bonin Plant Switchyard circuit breakers' reliability and need for their replacement.	Normal	New
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	Normal	In Progress

Electric Utility	Priority	Status
Occupational Safety & Health Administration (OSHA) requirements and/or APPA safety guidelines and pursue on-going training programs for linemen and foremen		
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

Section 6
UTILITIES SYSTEM - WATER UTILITY

The Consulting Engineer performed Water Utility facility site visits and interviewed LUS staff in March 2012 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.

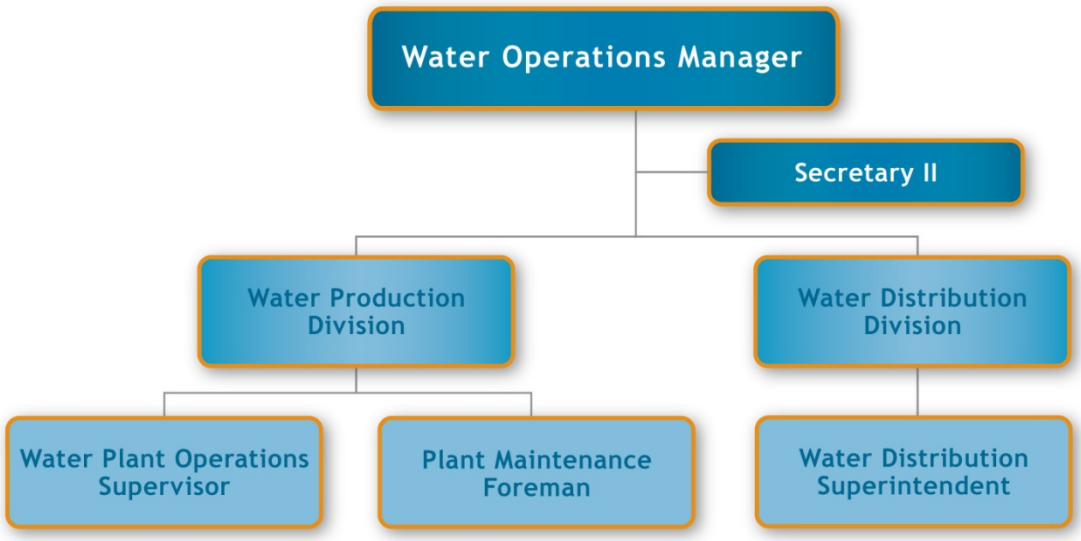


Figure 6-1: Water Utility Organization Chart

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 1 percent per year since 2007 while annual growth in the number of customers has been approximately 1.5 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 3.7 percent. The sharp increase in peak day demand is likely attributable to wet weather (i.e., less demand) earlier in the reporting period versus dry conditions (i.e., increased demand) in the 2009, 2010, and 2011.

Table 6-1
Historical Water System Production

	2007	2008	2009	2010	2011
Number of Customers (1)	49,622	51,134	51,276	51,960	52,749
Annual (million gallons) (2)	7,904	7,938	8,008	8,020	8,243
Annual (mgd) (2) (3)	21.7	21.7	21.9	22.0	22.6
Peak Day (million gallons)	25.5	25.8	29.5	29.5	29.5
Annual Precipitation (in.)	67	67	67	54	51

(1) Number of meters in service
(2) Based on water produced
(3) mgd = million gallons per day
Source: LUS Financial and Operating Statements 2007-2011 audited
Water Production Division, LUS, 2/12

In the past, LCG adopted water ordinances and an increasing block rate structure to reduce peak usage. These measures were deemed relatively ineffective as evidenced by the continued disproportionate increase in annual and peak day demand as compared to customers.

Forecasted Water Production

The forecasts of water production and peak day usage for the five year period of 2012 through 2016 are presented below in Table 6-2. The forecast reflects 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 (1) (2)

	Actual 2011	2012	2013	2014	2015	2016
Daily mgd	22.5	24.3	25.1	26.0	26.9	27.8
Peak Day (million gallons)	31.1	32.7	33.9	35.0	36.2	37.5

(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 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. In the past during periods of high demand, low pressure complaints were received in isolated areas of the distribution system but system improvements and operational improvements have alleviated those issues.

Water Supply

The Chicot underground aquifer is the sole source of water supply for LUS. The United States Environmental Protection Agency (USEPA) 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 Louisiana Department of Environmental Quality (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.

Well No. 24 began operation in June 2006 in the northern portion of the water system, but production was not fully realized until the addition of pressure filters during 2009. Well No. 25 came online during 2009, increasing the Water Utility's production capacity. Plans are already in place to expand the Well No. 24 facility including constructing another well (Well No. 26).

Figure 6-2 is a photograph of the pressure filters at Well No. 24.

Figure 6-2: Pressure Filters at Well No. 24

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 6-3 is a photograph of the pipe gallery at the South Plant.

Figure 6-3: Pipe Gallery at South Plant

Well Nos. 23 and 25 serve the southern portion of the distribution system while Well No. 24 serves the northern portion. Minimal water treatment is provided at Well No. 23/25 consisting of chlorination and phosphate addition. Well No. 24 utilizes four pressure filters on site for treatment and plans exist for installation of pressure filters at Well No. 23/25. The present system treatment capacity (both plants and Well Nos. 23, 24, and 25) is approximately 50.6 mgd and is expected to be slightly greater when Well No. 26 comes online in the next few years.

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. Of $11.2 million included in the Water Utility's the Five-Year Capital Outlay Program (Five-Year COP), approximately $4.4 million are for improvements to the distribution system to reduce this constraint. Currently, the preferred total production capability is estimated by LUS to be 30 mgd. While actual production capabilities exceed this figure (2011 peak day production exceeded 31 mgd), pressure and delivery within some portions of the system may suffer at production levels over 30 mgd. Once completed, the projects included in the Five-Year COP would increase the production capability to approximately 32 mgd.

Table 6-3
Plant Treatment Capacity [1]

	(mgd)
North Water Plant	21.5
South Water Plant	24.0
Well No. 23	1.4
Well No. 24	1.5
Well No. 25	2.2
Total Plant Capacity	50.6
Total Effective Plant Capacity	31.1 [2]

(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, 2/12

Water is disinfected with chlorine before it is introduced into the water distribution system. The chlorine used at each treatment plant is supplied in the gaseous form, and is stored on site. 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

During 2011, LUS had armed, uniformed Sheriff's Department personnel stationed at each water plant 12 hours per day between 6 p.m. and 6 a.m., seven days per week. 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 involved in association and/or agency programs related to safety and terrorism during 2011. LUS is also involved in the Louisiana Water/Wastewater Agency Response Network (LaWARN), a statewide group of water agencies that have jointly created a mutual response network. This organization is an outgrowth of cooperative efforts implemented in response to Hurricane Katrina.

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 USEPA that the

Vulnerability Assessments were conducted, and submit a copy of the Vulnerability Assessments to the USEPA. Section 1433(b) requires that certain community water systems prepare or revise Emergency Response Plans and certify to the USEPA that an Emergency Response Plan has been completed. LUS attained full compliance with the Bioterrorism Act early in 2003.

Water Storage

Treated water storage totals approximately 14.5 million gallons. This includes 4.3 million gallons of elevated storage and 10.2 million gallons of ground storage, including pumping station wet wells.

In 2010, LUS constructed the Fabacher Field facilities comprised of 2.0 million gallon ground storage and booster pumping facilities to improve the pressure conditions. 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 6-4 shows a photograph of the newly constructed ground storage tank at Fabacher Field.

Figure 6-4: Fabacher Field Ground Storage Tank

Water Distribution

The Water System distribution network consists of 1,064 miles of pipe, most of which is in the 6-inch to 12-inch diameter range. The distribution system includes 21,512 valves and 6,205 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 (1)

	2007	2008	2009	2010	2011
Miles of Main Lines	1,030	1,043	1,051	1,071	1,064
Number of Valves	20,314	20,745	20,909	21,412	21,512
Number of Hydrants	6,016	6,060	6,095	6,146	6,205

(1) Includes LUS contract service to Water District North
Source: Grant Besse, LUS, 2/12

A 12-inch line along LA Highway 93 was constructed in 2009 to increase the distribution system's capacity but LUS recognizes its plant treatment and distribution pumping continues to be limited by restrictions of the water distribution network. The Five-Year COP addresses these ongoing issues with additional transmission and distribution improvements including increasing the outflow capacity directly from North Plant.

Unbilled Water Volumes

In 2008 the Water Utility completed a citywide effort to repair/replace large meters; the result has been more accurate measurements. However, direct comparisons between years pre- and post-replacement are 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 2007 through 2009, but declined significantly in 2010. Lost water volumes remained relatively flat from 2010 to 2011 with the slight decrease possibly attributed to the discovery of unmetered volume of water being used by the City of Broussard.

Table 6-5
Not Accounted For Water Volumes

	2007	2008	2009	2010	2011
Not Accounted For (%)	8.43	10.70	12.10	6.69	6.57

Source: LUS Financial and Operating Statements 2007-2011 audited

System Development Plan

LUS completed a System Development Plan 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 as well as significant opposition to such efforts.

LUS staff is particularly sensitive to, and concerned about, impacts unplanned annexations may have on the system.

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. Specifically, 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. Both the North and South Water Districts construct their own additions and extensions according to standards set by LUS. Contractual arrangements between LCG and other entities (both water districts and municipalities) which own or operate water utility properties represent 23.4 percent of LUS' annual water revenues and features of these contracts are discussed below. 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, 1/12

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 6.3 percent of total water sales revenue and 6.0 percent of total water sales volume for 2011.

The Water District North Agreement includes the following provisions:

- 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, 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 3.2 percent of the total LUS water revenues and 4.3 percent of the total water volume for 2011.

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.

LUS currently provides Water District South with sufficient water volume to meet its customer demand and the District has expressed interest in purchasing more water but its distribution system is too small to accommodate an increase at this time. The District's long term plan is 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 3.0 percent of total LUS water sales revenues and 4.2 percent of water sales volume for 2011.

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 represent 1.7 percent of LUS water sales revenues and 2.4 percent of water sales volume for 2011. 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 5.8 percent of the total LUS water sales revenues and 1.8 percent of water sales volume for 2011.

During FY2011 LUS discovered a main line delivering water to the City of Broussard was operating unmetered for approximately five years resulting in a significant amount of unbilled and unaccounted for water volume. At the time of this report LUS was negotiating back payments with the City.

Milton Water System

LCG serves the Milton Water System under a 40-year contract signed April 28, 1997. Water sales to Milton represent approximately 2.1 percent of the total LUS water sales revenues and 3.0 percent of water sales volume for 2011. In addition to the water supplied by LUS, Milton operates a water treatment plant for additional supply. In 2009, Milton inquired about 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.

Milton ceased operation of its treatment plant, without permission from LUS, in 2010 and a meeting was held in late summer 2010 at which time LUS instructed Milton to resume operations of its plant. Milton's plant was placed back online in 2011 with no lasting detriments to the LUS system or its relationship with the City.

Wholesale Water Sales Summary

During 2011, water delivered to wholesale customers amounted to 23.4 percent of the revenue and 24.1 percent of the water sold by LUS. The difference is attributed to the difference between water rates for wholesale and retail service. Reversing a distinct trend observed over the past five years or more of an increased percentage of water sales being supplied to wholesale customers, FY2011 marks the first decrease (on a percentage basis) in wholesale water sales volume from 24.7 percent to 24.1 percent.

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.

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

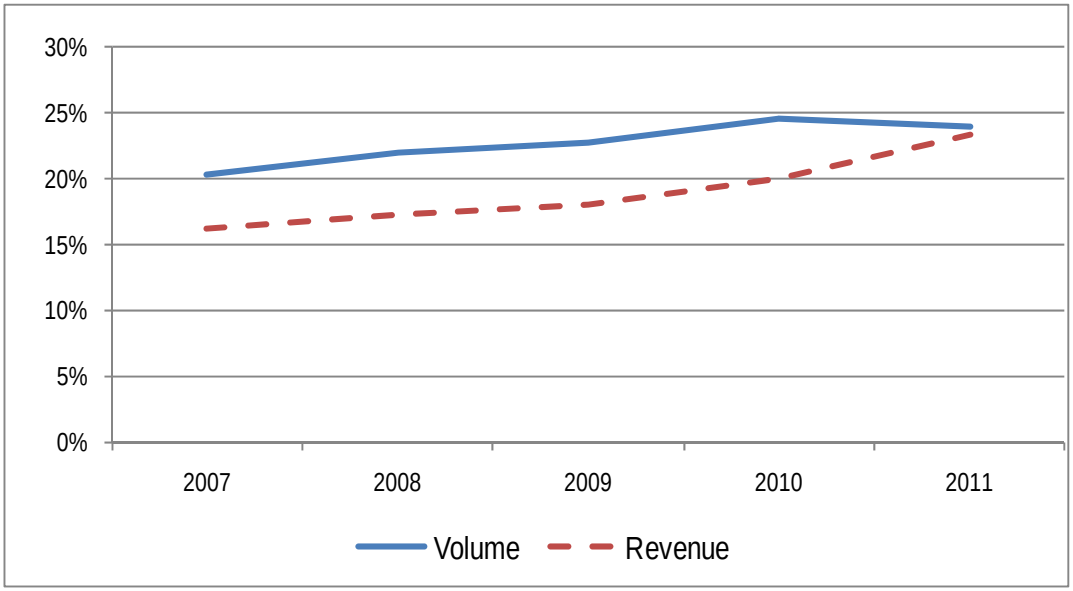
Customer	2007	2008	2009	2010	2011
City of Scott	298,098	320,467	336,237	327,053	324,086
Water District North	352,441	348,351	359,916	452,802	462,651
City of Broussard	99,734	108,392	112,842	122,721	134,461
Water District South	310,003	292,176	315,653	322,702	332,830
Milton Water System	106,946	141,517	146,083	210,133	226,708
Town of Youngsville	123,665	133,450	146,472	186,898	183,976
Water District North – Wholesale	174,731	200,922	186,150	211,725	181,378
Total Wholesale Water Sales	1,465,618	1,545,275	1,603,353	1,834,034	1,846,090
Total Water Sales (Wholesale and Retail)	7,222,823	7,038,250	6,987,117	7,433,414	7,672,381
Percent of Total Water Sales from Wholesale Sales (%)	20.3	22.0	22.8	24.7	24.1

Source: LUS Financial and Operating Statements 2007-2011 audited

Table 6-8
Wholesale Water Sales Revenue

Customer	2007	2008	2009	2010	2011
City of Scott ($)	384,549	440,801	470,734	489,468	544,014
Water District North ($)	673,156	763,594	797,688	1,005,829	1,132,562
City of Broussard ($)	124,666	145,715	153,463	178,253	1,045,442
Water District South ($)	387,504	391,993	429,288	468,716	545,076
Milton Water System ($)	133,684	190,719	198,675	307,658	371,598
Town of Youngsville ($)	154,582	180,170	199,202	307,707	300,550
Water District North-Wholesale ($)	220,843	270,742	253,163	272,507	302,351
Total Wholesale Water Sales ($)	2,078,985	2,383,734	2,502,213	3,030,138	4,241,593
Total Water Sales ($)	12,756,232	13,762,805	13,901,932	15,107,093	18,098,559
Percent of Total Water Sales from Wholesale Sales (%)	16.3	17.3	18.0	20.1	23.4

Source: LUS Financial and Operating Statements 2007-2011 audited



Source: LUS Financial and Operating Statements 2007-2011 audited

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

Total retail water sales volume (represented as the difference between total sales and wholesale sales) has increased approximately 1.2 percent since 2007. Total annual water sales has increased approximately 6.2 percent during this time, however, wholesale sales have increased at a rate about four times that of total production (approximately 26 percent). It is clear wholesale customers have required an increasing percentage of the total water produced and this trend is expected to continue despite the leveling off occurring in 2011. This will place continued pressure on the distribution system and could adversely affect LUS retail customers. Figure 6-4 also illustrates that the gap between volume of wholesale sales (volume) and revenue generated has narrowed significantly in 2011, due in part to the back payments from the City of Broussard. Prior to 2011, wholesale customers placed a disproportionate demand on the system as compared 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.

For planning purposes, LUS lacks projected demographics and demand information from its wholesale customers but coordination between LUS and its wholesale customers has improved recently. LUS should insist that adequate planning data be provided by those wholesale customers.

Water Utility Operations

Staffing Levels

While the overall staffing situation has improved in recent years, a number of current and anticipated vacancies remain within the Water Utility. Previous concerns about overdependence on overtime to meet day-to-day needs, lack of qualified candidates for open positions and a wave of retirements anticipated in 2011 have not materialized and/or have subsided. The issues could reappear if economic conditions change significantly, new facilities are constructed requiring additional staff or the State Legislature changes the retirement criteria (proposed legislation to this effect has not been successful to date but remains a possibility).

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. The Utility has begun to informally address succession through several measures including cross-training of staff and increasing levels of responsibility of junior staff.

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 2011 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	389,557
Special Equipment	130,161
2010 Revenue Bonds	12,412,381
Retained Earnings	507,677
Total	13,439,773

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 2011-2012. 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 2012 – 2016 ($)

	2012	2013	2014	2015	2016	Total
Production	2,295,000	2,262,000	1,810,000	310,000	110,000	6,787,000
Distribution	2,156,000	675,000	525,000	575,000	450,000	4,381,000
Totals	4,451,000	2,937,000	2,335,000	885,000	560,000	11,168,000

Source: LUS Five-Year Capital Outlay Program Summary 2011-2012 Adopted Budget

Production Improvements

Water production funds include building and pipe gallery improvements, ground storage improvements, and South Plant treatment unit No. 1. In addition, improvements to production facilities at the North Treatment Plant and West Gloria Switch facilities are included in the Five-Year COP. Water plant pressure filters and generator improvements are also planned, as well as other typical renewals and replacements.

Distribution Improvements

Plans for water distribution funds include the construction of a new Well No. 26 and 750 million gallon ground storage at the West Gloria Switch facility. Other notable improvements are extensions of distribution lines along Ambassador Caffery Parkway between Verot School Road and the Youngsville Highway as well as typical renewals and replacements.

Operating Results

Table 6-11 summarizes the Water Utility revenues and expenses for the most recent five years. In 2011, the Water Utility total operating revenues increased by approximately 7.0 percent over 2010, largely due to increased rates. Retail water revenues increased by 14.7 percent over the previous year. The wholesale revenues increased by 40.0 percent. The Water Utility operating expenses increased approximately 8.2 percent over 2010. The increase in margin of 41.0 percent is driven by increased rates.

Table 6-11
Water Utility Operating Results

	2007	2008	2009	2010	2011
Water Operating Revenues ($)					
Retail	10,677,248	11,379,071	11,399,719	12,076,955	13,856,966
Wholesale	2,078,985	2,383,734	2,502,213	3,030,138	4,241,593
Other	496,203	376,342	366,248	426,985	426,985
Total Water Operating Revenues ($)	13,252,435	14,139,148	14,268.180	15,534,079	18,525,544
Water Operating Expenses ($)					
Operation Expenses	3,454,424	4,330,083	4,720,348	4,878,949	4,959,273
Maintenance Expenses	1,092,949	1,104,849	1,635,069	1,534,098	1,674,551
Other Expenses	4,675,183	4,385,407	4,898,308	4,472,875	5,149,883
Total Operating & Maintenance Expenses ($)	9,222,556	9,820,340	11,253,724	10,885,922	11,783,706
Water Non Operating Revenues (Expenses) ($)					
Interest Revenues	422,957	318,191	234,438	171,668	137,108
Water Tapping Fees	141,100	140,500	112,000	97,800	47,900
LUS Fiber Start-up Reimbursement	359,507	0	0	0	0
Miscellaneous Non Operating Revenues	0	6,640	33,5	(5,076)	133,656
FTTH Start Up Project (1)	0	(7,634)	0	0	0
Interest on Customer Deposits	(1,047)	(1,312)	(1,243)	(1,083)	0
Tax Collections/Non Operating	4,329	16,550	15,114	17,533	(27,723)
Miscellaneous Non Operating Expense	0	(10,347)	0	0	(80,964)
Total Non Operating Revenues (Expenses) ($)	926,846	462,588	393,821	280,842	209,977
Net Margin ($) (2)	4,956,726	4,781,396	3,408,277	4,928,999	6,951,815

(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 2007-2011 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 2007 through 2011.

Revenues

Table 6-12 shows the Water Utility retail statistics for the most recent five years. During 2011, the total revenues increased 19.3 percent, the total volume sales increased by 3.2 percent, and the number of accounts increased by 1.5 percent.

Compared to the prior year, the average water usage per retail account increased by 2.6 percent from 121,000 gallons to 124,000 gallons. However, average water usage per retail account has decreased by 3.4 percent from 2007 levels.

Retail water sales increased in total volume by 4.1 percent in 2011 compared to 2010, with average water revenue per retail account rising by 14.7 percent in 2011. The retail water revenue per thousand gallons increased by 10.3 percent.

Compared to the prior year, the average water usage per wholesale account decreased by 3.2 percent from 329,000 gallons to 319,000 gallons. Wholesale water sales increased in total volume by 0.7 percent during 2011. The water revenue per thousand gallons increased by 39.1 percent during 2011. From 2007 to 2011, wholesale water sales have increased by 26.0 percent, wholesale revenues have increased by 104.0 percent, and the overall revenue per thousand gallons has increased 62.0 percent.

Table 6-12
Water Sales Revenue and Statistics

	2007	2008	2009	2010	2011
Water Sales Revenues ($)					
Retail	10,677,248	11,379,071	11,399,719	12,076,955	13,856,966
Wholesale	2,078,985	2,383,734	2,502,213	3,030,138	4,241,593
Other	496,203	376,342	366,248	426,985	426,985
Total Water Sales Revenues ($)	13,252,435	14,139,148	14,268,180	15,534,079	18,525,544
Water Sales (1,000 gallons)					
Retail	5,757,205	5,492,975	5,383,764	5,599,380	5,826,291
Wholesale	1,465,618	1,545,275	1,603,353	1,834,034	1,846,090
Total Sales (1,000 gallons)	7,222,823	7,038,250	6,987,117	7,433,414	7,672,381
Water Number of Accounts					
Retail	44,809	45,983	45,994	46,387	46,954
Wholesale	4,813	5,151	5,281	5,573	5,795
Total Accounts	49,622	51,134	51,276	51,960	52,749
Water Statistics Retail					
Usage per Account (1,000 gallons)	128	119	117	121	124
Revenue per Account ($)	238	247	248	260	295
Revenue per 1,000 gallons ($)	1.85	2.07	2.12	2.16	2.38
Water Statistics - Wholesale					
Usage per Account (1,000 gallons)	305	300	304	329	319
Revenue per Account ($)	432	463	474	544	732
Revenue per 1,000 gallons ($)	1.42	1.54	1.56	1.65	2.30

Source: LUS Financial and Operating Statements 2007-2011 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 – 95 percent increase
- Power and Pumping Expense – 7.0 percent decrease
- Purification Expense – 13.2 percent increase
- Distribution Expense – 13.5 percent increase
- Administrative Support – 2.4 percent increase

Table 6-13
Water Utility Detailed Expenses

	2007	2008	2009	2010	2011
Water Source of Supply Expense ($)					
Operation	2,970	148	81	53	11,272
Maintenance	499	433	8,391	31,490	38,886
Water Power & Pumping Expense ($)					
Operation	1,008,639	862,714	873,502	771,235	750,777
Maintenance	0	0	0	0	5,193
Water Purification Expense ($)					
Operation	1,653,192	2,638,385	2,940,672	3,023,788	3,078,710
Maintenance	453,006	348,244	595,479	500,837	374,157
Water Distribution Expense ($)					
Operation	789,623	828,837	906,093	1,083,873	1,118,514
Maintenance	639,443	756,171	1,031,199	1,001,770	1,256,315
Other Water Expense ($)					
Customer Operations	976,245	1,038,942	1,233,473	1,155,959	1,157,447
Customer Services	85,717	72,899	44,270	33,196	58,967
Administrative & General	3,613,222	3,273,567	3,620,565	3,283,720	3,933,468
Total Water Expense ($)	9,222,556	9,820,340	11,253,724	10,885,922	11,783,706

Source: LUS Financial and Operating Statements 2007-2011 audited

Rate Revisions

Water rates were modified in 2008 to create a two-tiered rate structure and in 2009 LUS performed a cost-of-service and rate design study for the Water Utility. As a result of this study, the Council passed Ordinance O-012-2010 that authorized two rate increases the each increased the average rate by 9.0 percent. The first increase went in to effect on February 1, 2010 and the second increase went in to effect on November 1, 2010 (the start of FY2011).

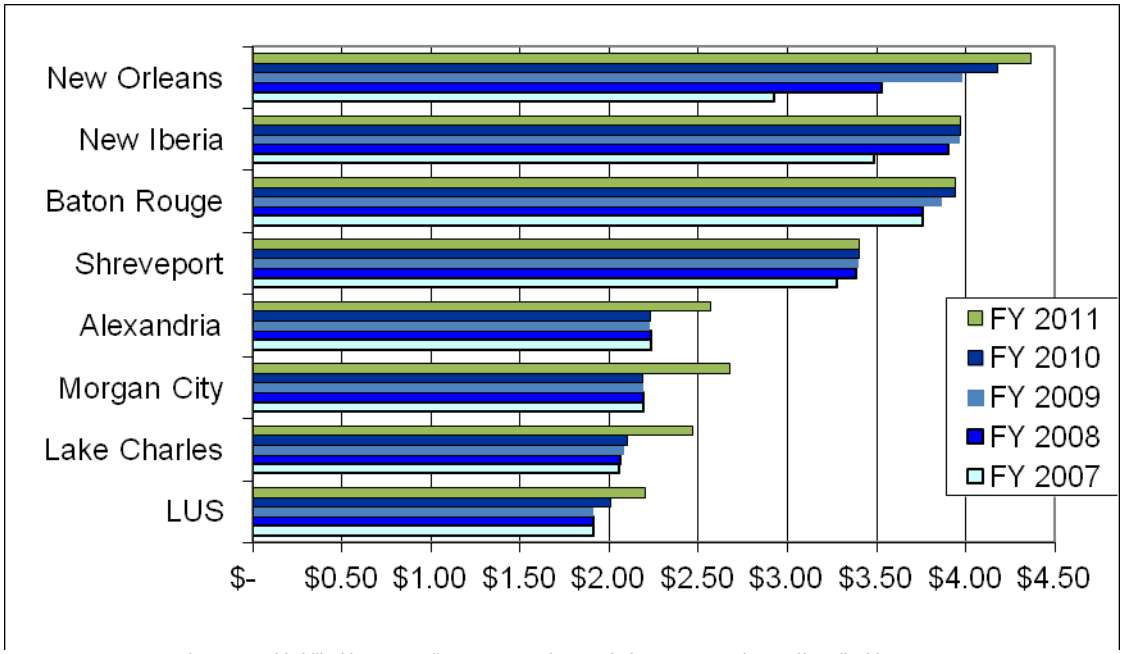
As shown in Table 6-14, the Water Utility average residential revenues per thousand gallons increased by 11.4 percent from 2010 to 2011, while during that time period commercial revenues per thousand gallons increased by 18.2 percent. Since 2006, the average residential revenues per thousand gallons have increased 23.2 percent, while commercial revenues per thousand gallons have increased 35.2 percent.

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

Class	2007	2008 (1)	2009	2010(2)	2011
Residential ($)	2.04	2.35	2.26	2.25	2.51
Commercial ($)	1.54	1.73	1.70	1.76	2.08

(1) Water retail customers experienced a rate increase and change in rate structure during 2008
(2) Water retail customers experienced a rate increase of 9 percent on February 1, 2010
Source: LUS Financial and Operating Statements 2007-2011 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 & 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. While these remain, progress has been made on all of these fronts in FY2011 as described in earlier sections and the following paragraphs.

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 including an undersized outflow pipe from the North Water Plant. Engineering has begun evaluating alternatives to increase distribution capacity of the

North Plant and recent improvements to the system have reduced the occurrences of low pressure within the network.

The current Operator pay scale at LUS was once considered to be unattractive to candidates with the required level of education but further evaluation of the LUS pay rate for new Water Plant Operators appears to be in line with the local/regional market. LUS has not had difficulty in filling open positions in FY2011. It is assumed this shift could be attributable, in part, to depressed economic conditions and elevated unemployment rates so should be monitored.

While the SCADA system is not fully integrated into the plant controls (Wonderware) system, Water Utility Operators do have direct operational control allowing for more real-time monitoring and control of the distribution system. SAIC recommends that the SCADA system used by the water distribution system be integrated in the water treatment plant control system for increased system operational efficiency.

Additional pressure monitoring capabilities within the distribution system are needed for improved system performance monitoring and preliminary work, including identifying potential new monitoring site locations within the system and fiber installation, has already been performed. Pressure monitor installation is anticipated in FY2012.

LUS is in the process of implementing a backflow prevention program (BPP); subsequent steps for complete implementation include training certified testers, testing units, and educating customers. At the end of FY2010 the Department of Health and Hospitals (DHH), 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. LUS immediately began addressing the deficiency and FY2011 coordinated/negotiated the specific criteria required by DHH, sent an ordinance to council establishing the BPP and adopted BPP policies and procedures guides. LUS anticipates implementation of the BPP to occur in FY2012.

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 evaluate alternatives to improve system pressure including increasing North Plan delivery capacity and constructing ground storage and booster pumping systems	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, 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 implement a certification/recertification training program for Water Plant Operation staff	Normal	Investigating
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	Normal	In Progress
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

The Consulting Engineer performed Wastewater Utility facility site visits and interviewed LUS staff in March 2012 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. 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. Since precipitation in 2011 was considerably less than in the previous four years, average daily flows decreased over the period 2007 through 2011 at an average rate of

approximately 2%. While the fluctuations in rainfall make it more difficult to glean trends in wastewater flows, it is clear the four treatment facilities have adequate capacity to handle levels anticipated in the near term. Further, 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) (1)

	2007	2008	2009	2010	2011	Permitted Capacity
South Plant	6.7	5.8	5.0	5.2	4.4	7.0
East Plant	3.1	3.3	3.3	3.3	2.8	4.0
Ambassador Caffery Plant	4.7	5.2	5.8	6.0	6.1	6.0 (2)
Northeast Plant	1.2	1.2	1.2	1.1	1.0	1.5
Totals	15.7	15.5	15.3	15.6	14.3	18.5
Annual Precipitation (in.)	67	67	67	54	51	--

(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, 2/12

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 2016.

Conservative load forecasts for the average daily flow to each of the wastewater treatment plants for the five-year period of 2012 through 2016 are presented in Table 7-2. The forecasts reflect the current assessment of expected load growth for the period alongside recorded 2011 values for comparison.

Table 7-2
Wastewater Utility
Projected Average Day Hydraulic Loads (mgd) (1)

	Actual 2011	2012	2013	2014	2015	2016	Permitted Capacity
South Plant	4.4	5.3	5.3	5.4	5.4	5.5	7.0
East Plant	2.8	3.4	3.4	3.4	3.4	3.4	4.0
Ambassador Caffery Plant	6.1	6.2	6.2	6.3	6.3	6.3	6.0 (2)
Northeast Plant	1.0	1.2	1.2	1.3	1.3	1.3	1.5
Totals	14.3	16.1	16.1	16.4	16.4	16.5	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, 2/12

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 completed 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 has adopted 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 was approved on August 17, 2011 and at the time of this report LUS had overseen the installation of the first system pursuant to the ordinance.

Wastewater Utility Facilities

The Wastewater System includes four treatment plants and a collection system consisting of nearly 570.3 miles of pipe (excluding service lines), 11,431 manholes and 145 lift stations. This system reliably serves 41,928 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.

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 photographs 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

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 over the past five years.

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

	2007	2008	2009	2010	2011
Flow					
South Plant	2	1	0	1	0
East Plant	1	2	1	2	0
Ambassador Caffery Plant	1	1	3	3	5
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	12(1)	3	0	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, 2/12

Engineering design of plans to expand the South Plant from 7 mgd to 12 mgd was completed in 2011 and construction is anticipated to commence in 2012. 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. It is expected that upon completion in 2016, these improvements will provide sufficient capacity for the foreseeable future.

A long-term plan for sludge stabilization and disposal is still needed and an investigation of this issue is included in the recently completed wastewater master plan. 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. The preliminary evaluation includes land acquisition and treating to Class A standards as options in the long-term, for example, but it would be worthwhile for LUS to also consider short-term scenarios in which its largest land application site becomes unavailable. This risk assessment/mitigation effort should include planning for the abrupt loss of a significant land application site, how the treatment/disposal process would be restructured permanently and how biosolids would be handled in the interim.

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

	2007	2008	2009	2010	2011
Number of Connections	40,353	41,273	41,185	41,522	41,928
Miles of Pipe (1)	556	561	563	564	571
Number of Manholes	11,041	11,213	11,252	11,276	11,431
Number of Lift Stations	147	148	149	146	145

(1) Not including service lines
Source: Craig Gautreaux, LUS, 2/12

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 approximately 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. As of the end of FY2011, the number of lift stations has been reduced and is now back to pre-2007 levels with the expectation that more will be eliminated in the coming years.

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 System. Significant progress has been made and staff anticipates only one of the originally inherited facilities to remain by mid-2012.

The Verot School Road Wastewater Lift Station Facility is pictured in Figure 7-6.

Figure 7-6: Verot School Road Wastewater Lift Station Facility

Sanitary Sewer Evaluation Survey Program

Inflow and Infiltration

The wastewater collection system in the past experienced excessive wastewater flow, resulting in treatment plant bypasses and overflows of the wastewater collection system due to infiltration and inflow of surface and groundwater into the wastewater collection system during and after rainfall events. As a result, the EPA issued administrative orders (AO) requiring treatment plant upgrades and expansions. LUS has successfully addressed the AO associated with each plant and the EPA has officially transferred permitting authority for the NPDES to the LDEQ for all four facilities. The Wastewater Utility is no longer operating under any administrative order.

The wastewater collection division records the number and type of overflows occurring in the system and that information is summarized by year 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

	2007	2008	2009	2010	2011
Rain Related	51	43	66	56	45
Lift Station Equipment Failure	9	0	1	6	12
Main Line Stoppage	12	16	6	7	16
Broken Pipe	5	6	18	5	2
Total	77	75 (1)	91	74	75
Total Annual Precipitation (inches)	67	67	67	54	51

(1) Does not include overflows caused by electrical outages due to Hurricane Gustav

Source: Craig Gautreaux, LUS, 2/12

Overall the total number of occurrences appears to be in line with typical levels experienced in the recent past. Specifically, rain related incidences were less common in 2011 as would be expected given that it was a relatively dry year. However, the number of lift station equipment failures and main line stoppages both increased noticeably over 2010 numbers. It is difficult to determine definitely, but it is thought that accumulation within the pipes occurring during prolonged dry weather (i.e., low flow) became dislodged when periodic wet weather (i.e., high flows) occurred resulting in blockages and disruption to lift station facilities.

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 $50,000 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 USEPA 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 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 2011, 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 2011. 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	319,206
Special Equipment	175,083
2004 Revenue Bonds	815,257
Retained Earnings	11,165,026
Total	12,474,571

Source: Status of Construction Work Orders, LCG, 2/12

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 2011-2012. Wastewater system master planning concluded in 2010 and considered current and future needs, including capital and operational aspects of the Wastewater System. Proposed improvements are delineated into three planning horizons, 5-year, 10-year, and 20-year periods based on the timeframe of anticipated system needs. The intent is that 5-year capital outlays identified in the LUS planning process will be incorporated into the Five-Year COP and capital 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).

Table 7-7
Capital Outlay Program 2012 – 2016 ($)

	2012	2013	2014	2015	2016	Total
Collection	4,623,500	2,833,000	2,872,000	1,925,000	2,070,000	14,323,500
Treatment	710,000	2,230,000	12,433,000	13,685,000	4,575,000	33,633,000
Total	5,333,500	5,063,000	15,305,000	15,610,000	6,645,000	47,956,500

Source: LUS Five-Year Capital Outlay Program Summary, 2011-12 Adopted Budget, Combined Summary Retained Earnings and Bond Capital

Wastewater Treatment Plant Improvements

Proposed South Plant improvements are planned to occur in three (3) phases to include clarifier rehabilitation, new bar screens and submersible pumps (Phase I); construction of a sludge treatment facility and aerobic digesters (Phase II); and construction of SBR and additional chlorination facilities (Phase III). The majority of the treatment capital dollars presented above represents the anticipated South Plant improvements which are slated to begin in 2012 and be completed in 2016.

Wastewater Collection System Improvements

Proposed improvements to the wastewater collection system include improvements to the Old Maurice Lift Station; the existing interceptors located in the Pont des Mouton corridor and those located parallel to Ambassador Caffery Parkway and Kaliste Saloom Road; completion of the installation of emergency power generators for use at lift stations; and telemetry equipment and odor control. After these capital improvements, staff anticipates a slowdown in capital growth in the coming years, resulting in a shift towards operations and maintenance expenses ("O&M") rather than capital expenditures.

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 22.3 percent, or approximately $5.4 million. Wastewater Utility operating expenses increased approximately 3.4 percent or approximately $0.5 million from 2010. Overall the Wastewater Utility operating margin increased by approximately 50.7 percent from 2010 to 2011 due to the higher revenues.

Table 7-8
Wastewater Utility Operating Results

	2007	2008	2009	2010	2011
Wastewater Operating Revenues ($)					
Retail Service	21,479,609	21,893,058	21,320,392	23,982,152	29,326,976
Other	692,444	128,374	215,893	252,026	313,914
Total Wastewater Operating Revenues ($)	22,172,054	22,021,432	21,536,286	24,234,178	29,640,890
Wastewater Operating Expenses ($)					
Operation	6,324,360	6,904,585	6,787,270	6,766,795	7,063,843
Maintenance	1,930,553	2,020,107	2,442,184	2,304,508	2,174,272
Other	4,978,554	5,273,723	6,212,916	5,761,126	6,047,206
Total Operating Expenses ($)	13,233,467	14,198,414	15,442,369	14,832,429	15,285,321
Wastewater Non Operating Revenues (Expenses) ($)					
Interest Revenues	707,631	495,576	357,408	268,505	237,307
LUS Fiber Start-up Reimbursement	454,114	0	0	0	0
Miscellaneous Non Operating Revenues	0	10,342	78,921	(7,939)	231,331
FTTH Start Up Project (1)	0	(10,602)	0	0	0
Interest on Customer Deposits	(2,322)	(2,377)	(2,784)	(2,221)	0
Tax Collections/Non Operating	5,468	22,987	20,922	24,351	(38,504)
Miscellaneous Non Operating Expense	0	(14,371)	0	0	(112,450)
Total Non Operating Revenues (Expenses) ($)	1,164,891	501,555	454,467	282,696	317,684
Net Margin ($) (2)	10,103,478	8,324,572	6,548,383	9,735,501	14,673,253

(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 2007-2011 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 2007 through 2011.

Revenues

Table 7-9 shows the Wastewater Utility statistics for the most recent five years. Compared to the prior year, the average wastewater intake per account in 2011 decreased by approximately 10.1 percent, from 138,000 gallons to 124,000 gallons. Over the five year period, estimated wastewater intake per account decreased by 12.5 percent from 2007 levels. From 2010 to 2011, the average wastewater revenue per customer increased 21.1 percent.

Table 7-9
Wastewater Sales Revenue and Statistics

	2007	2008	2009	2010	2011
Wastewater Sales Revenues ($)					
Retail Service	21,479,609	21,893,058	21,320,392	23,982,152	29,326,976
Other	692,444	128,374	215,893	252,026	313,914
Total Wastewater Sales Revenues ($)	22,172,054	22,021,432	21,536,286	24,234,178	29,640,890
Wastewater Intake (1,000 gallons)	5,711,781	5,669,875	5,570,825	5,715,794	5,190,182
Wastewater Number of Accounts	40,353	41,043	41,185	41,522	41,928
Wastewater Statistics					
Intake per Account (1,000 gallons)	142	138	135	138	124
Revenue per Account ($)	549.45	536.55	522.92	583.65	706.95
Revenue per 1,000 gallons ($)	3.88	3.88	3.87	4.24	5.71

Source: LUS Financial and Operating Statements 2007-2011 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 – 4.3 percent increase
- Treatment Expense – 2.0 percent increase
- Administrative Support – 5.0 percent increase

Table 7-10
Wastewater Utility Detailed Expenses

	2007	2008	2009	2010	2011
Wastewater Collection Expense ($)					
Operation	1,229,554	1,457,596	1,339,497	1,496,394	1,653,895
Maintenance	1,757,778	1,850,105	2,273,449	2,146,923	1,887,051
Wastewater Treatment Expense ($)					
Operation	5,094,806	5,446,989	5,447,773	5,270,401	5,409,947
Maintenance	172,775	170,002	168,735	157,585	287,222
Other Wastewater Expense ($)					
Customer Operations	680,712	732,283	931,239	860,777	834,361
Customer Services ($)	361,978	304,243	365,997	345,861	65,197
Administrative & General	3,935,864	4,237,197	4,915,681	4,503,392	5,147,648
Total Wastewater Expense ($)	13,233,467	14,198,414	15,442,369	14,781,373	15,285,321

Source: LUS Financial and Operating Statements 2007-2011 audited

Rate Revisions

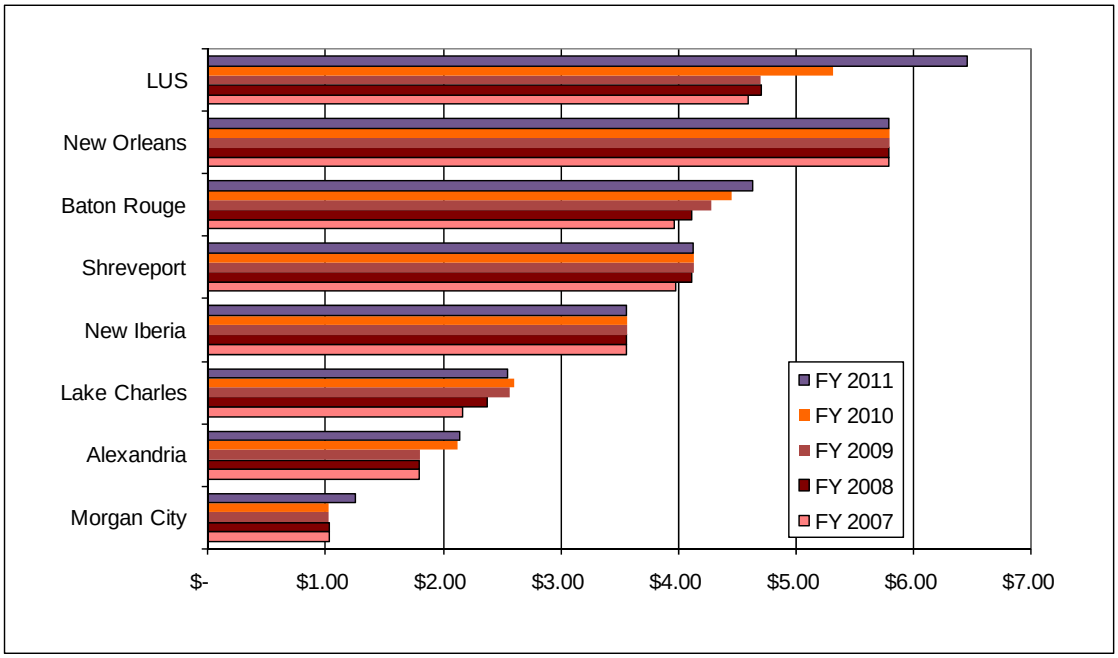
LUS implemented rate increases in 2010 and FY2011. Since 2007, the average residential rates for the Wastewater Utility have increased by 32.6 percent. The overall Wastewater Utility rate increases are consistent with what we expect to see due to capital requirements.

Table 7-11
Wastewater Retail Rates (Revenue/Account)

Class	2007 (1)	2008	2009	2010(2)	2011
Residential ($)	327.53	332.41	330.51	363.96	434.26
Commercial ($)	1,855.70	1,809.92	1,702.95	1,887.20	2,310.08

(1) The Wastewater Utility customers experienced a rate increase of 12.5 percent on November 1, 2006
(2) The Wastewater Utility customers experienced a rate increase of 18 percent on February 1, 2010
Source: LUS Financial and Operating Statements 2007-2011 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 that in 2011 LUS wastewater rates are the highest of the utilities reviewed in 2011.



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.

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 complete long term strategy for sludge processing (Class A/B) and disposal to include interim plans to accommodate loss of available land application sites	Highest	In Progress
LUS should continue evaluating alternatives for reallocating flows from existing treatment facilities to other treatment facilities	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

Section 9
ENVIRONMENTAL ISSUES

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 Safety Drinking Water Act (SDWA). Requirements of the CAA are addressed through a permit program administered by the Louisiana Department of Environmental Quality (LDEQ) and the United States Environmental Protection Agency (USEPA). Requirements of the CWA are administered through a permit process whereby any discharge into surface waters requires a National Pollutant Discharge Elimination System (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

Ms. Allyson Pellerin is the Environmental Compliance Manager for water and wastewater facilities. Ms. Gini Ingram is the Electric Reliability and Environmental Compliance Administrator for all electric operations. Ms. Ingram works under the supervision of Frank Ledoux, Engineering, Power & Communications Manager. The Environmental Compliance Division supports the Utilities System in the following areas:

- 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 RPS-2 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
Doc Bonin Electric Generating Station			
Part 70 Operating Permit Number 1520-00002-V2 (Title V Air Permit)	LDEQ	December 19, 2016	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-IV2 (Title IV Air Permit)	USEPA	December 19, 2016	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 Vermilion River via local drainage. Sets forth monitoring, recordkeeping, and reporting requirements.
Clean Air Interstate Rule Permit 1520-00002-IR0	LDEQ	December 19, 2016.	Issued December 19, 2011. Required for compliance with Clean Air Interstate Rule requirements.
T. J. Labbé Electric Generating Station			
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.
Hargis-Hébert Electric Generating Station			
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 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 2011 indicate material compliance with LPDES permit limits.

Air Permit

A new Part 70 Operating Permit was received during December 2011 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 few 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 December 19, 2016.

Results of testing for carbon monoxide (CO) at Units 1 and 3 at the Doc Bonin Plant indicate these units were not in compliance with permit limitations. The LDEQ issued a Consolidated Compliance Order and Notice of Potential Penalty ("CCONOPP") on January 14, 2010. Emissions testing required by the Order was completed and the new Part 70 Operating Permit was issued. 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. 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 NOx limits.

Pursuant to the requirements of Acid Rain Program under the CAA, all three units at the Doc Bonin Plant were equipped with a Continuous Emissions Monitors (CEMs) prior to 1996. LUS personnel report that during 2011 the CEMS complied with the applicable performance specifications for relative accuracy test audit ("RATA") and quality assurance, the required semi-annual CEMs reports were submitted to LDEQ, and the applicable emissions allowance accounts were covered as necessary. RATA testing was conducted on September 7, 2011 for Unit 2 and November 22, 2011 for Unit 3.

In accordance with state requirements, an annual emissions inventory for the Doc Bonin Plant was submitted to LDEQ during 2011. Additionally, all necessary semi-annual, and annual emissions compliance reports were submitted during 2011. In accordance with new federal regulations, monitoring of CO_2 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(1)
Tank No. 2	No. 2 Fuel Oil	1,443,000	50,000(1)
No. 2 Fuel Oil Total		1,883,000	0
Tank No. 3	No. 6 Fuel Oil	2,538,000	6,000 (2)
Tank No. 4	No. 6 Fuel Oil	2,538,000	85,000 (2)
No. 6 Fuel Oil Total		5,076,000	188,000 (2)

(1) No. 2 Fuel Oil Sludge.

(2) No. 6 Fuel Oil Sludge.

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.

LUS is in the process of removing the sludge and decommissioning these tanks. 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 2011. The SPCC plan is currently being updated in accordance with regulatory requirements. The Facility Response Plan was updated in 2011 and training and plan implementation are currently in progress.

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_X emissions with a certified CEMS. LUS personnel report that during 2011 the CEMS have complied with the applicable performance specifications, the required semi-annual 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 26, 2011 and on Unit 2 on October 25, 2011.

Pursuant to state requirements, an annual emissions inventory for the T. J. Labbé Plant was submitted to LDEQ during 2011. Additionally, semi-annual, and annual emissions compliance reports were submitted during 2011.

In accordance with new federal regulations, monitoring of CO_2 has been initiated at the facility and the first report was submitted in 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 subject to the City's Pretreatment Wastewater Discharge Program. 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 2011.

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. Labbé plant. LUS personnel report that during 2011 the CEMS have complied with the applicable performance specifications for relative accuracy and quality assurance, the required semi-annual CEMS reports were submitted to USEPA, and the applicable emissions allowance accounts were covered as necessary. RATA testing for Unit 1 was completed June 14, 2011, while the RATA for Unit 2 was completed June 15, 2011.

Pursuant to state requirements, an annual emissions inventory for the Hargis-Hébert Plant was submitted to LDEQ during 2011. Semi-annual and annual emissions compliance reports were submitted as required during 2011.

In accordance with new federal regulations, monitoring of CO_2 has been initiated at the facility and the first report was submitted in 2011.

Wastewater Discharge

Process wastewater from the Hargis-Hébert Plant, including cooling tower blowdown and sanitary wastes, is discharged to the City's sewer system. The facility is subject to the requirements of the City's Pretreatment Wastewater Discharge Program. 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 2011.

RPS-2 in Boyce, LA

LUS has an interest in the coal-fired steam electric generating unit RPS-2 through its interest in LPPA which in turn has an ownership interest in RPS-2. CLECO is the majority owner and is responsible for operation of the facility and for advising LUS and LPPA of current and future issues that may affect RPS-2. The following is a discussion of newly enacted and anticipated environmental regulations that will affect RPS-2.

Mercury and Air Toxics Standards

EPA has adopted rules under Section 112 of the CAA governing the emissions of mercury and other hazardous air pollutants from certain electric generating units (EGUs). The EPA established maximum achievable control technology (MACT) standards for coal-fired EGUs in late 2011, and signed a final rule setting forth national emissions standards for hazardous air pollutants (NESHAP) from coal- and oil-fired electric utility steam generating units on December 16, 2011. The final rule is now known as Mercury and Air Toxics Standards (MATS) and requires affected EGUs to meet specific numeric emission standards and work practice standards to address hazardous air pollutants.

MATS imposes strict emission limits on new and existing coal- and liquid oil-fired EGUs for mercury, acid gases (hydrochloric acid, or HCI, as a surrogate), and non-mercury metallic pollutants (filterable particulate matter (filterable PM) as a surrogate). Affected EGUs also have to comply with certain work practice standards to control the emission of organic air toxins.

MATS allows existing sources approximately three years to comply with the rule. The actual compliance deadline is April 16, 2015. A one-year compliance extension is available with approval from the relevant permitting authority, which in Cleco's case is the LDEQ, if that facility is actively installing control equipment to comply with the rule.

Currently, the RPS-2 is equipped with a hot-side electrostatic precipitator (ESP) for emission control. Cleco plans to convert the ESP to a cold-side ESP and add dry sorbent and carbon injection systems for control of acid gases and mercury. Expectations are that the addition of these control systems will allow compliance with emission standards in the MATS as currently proposed. In addition, LUS has authorized the installation of a Selective Non-catalytic Reduction (SNCR) system for the control of NO_x emissions. With the addition of this system in the spring of 2012, LUS anticipates that its NO_x allowances under the CSAPR will be adequate to comply with the regulation.

Expenditures for compliance with MATS are expected to be incurred over the next three years and may require a bond issue by LPPA. Capital improvements for LPPA owned assets are not included in the LUS Five-Year Capital Outlay Program. To date, these costs have been funded within LPPA.

Coal Combustion Residuals

On May 18, 2010, the EPA released a proposed rule for regulating the disposal and management of Coal Combustion Residuals (CCRs) from coal-fired power plants. Rather than offering a single approach, the EPA requested comments on two options for regulating CCRs. The first, known as the "Subtitle C" option, would regulate CCRs as a new special waste subject to many of the requirements for hazardous waste, while the second, known as the "Subtitle D" option, would regulate CCRs in a manner similar to industrial solid waste. Either of the EPA proposed options represent a shift toward more comprehensive and costly requirements for CCR disposal and management, but the Subtitle C option contains significantly more stringent requirements and would require greater capital and operating costs to comply with that rule, if finalized. Both options seem to allow the continued use of ash for certain beneficial reuses. Depending upon the outcome of the final rule, this regulatory proposal could significantly impact the manner and cost in which Cleco Power manages its CCRs. The final CCR rule is now expected to be issued by the EPA in late 2012 or early 2013. Any stricter requirements imposed on coal ash and associated ash management units by the EPA as a result of this new rule could significantly increase the cost of operating existing units or require them to be significantly upgraded. Until a final rule is promulgated, determination of the potential cost of compliance it is not possible.

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.

Fifteen offsite incidents involving leaks or spills of transformer oil occurred in 2011. Four spills were reported to LDEQ and one spill was found to be greater than the reportable quantity. In each case the spill was properly cleaned.

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 2011.

Curtis Rodemacher Decommissioning

The Curtis Rodemacher Power Plant has been retired and most of the facility is in the process of decommissioning. 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. 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.

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.

Drinking Water Quality

In response to the requirements of the SDWA, LUS must prepare and distribute an annual water quality report to its customers. The 2011 Water Quality Report (which will be published in June 2012) includes results of periodic monitoring of the quality of water distributed to LUS customers. Past annual monitoring reports 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. LUS reports that monitoring results for 2011 show compliance with water quality standards.

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)
- Capacity, Management, Operations, and Maintenance (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. The Clean Water Act requires all states to develop Total Maximum Daily Loads (TMDLs) for these waters based on priority ranking. If pollution is at unacceptable levels 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 in 2003. 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, limitations have been established for the release of carbonaceous biological oxygen demand and ammonia nitrogen into the river. Due to these regulations it is highly unlikely LUS will receive any increase in its present waste load allocations; therefore, more efficient wastewater treatment facilities will be required as the service area grows. Recent discussions between LUS and LDEQ revealed the next Vermillion 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 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. 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

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 2012. LUS reports that there were no spills, no complaints, and no notices of violation issued for the wastewater treatment facilities in 2011.

A summary listing of the treatment plant permits is included in Table 9-3.

Table 9-3
List of Major Permits

Permit	Responsible Agency	Expiration Date	Comments/Description
Ambassador Caffery Wastewater Treatment Facility			
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.
East Wastewater Treatment Facility			
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.
South Wastewater Treatment Facility			
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.
Northeast Wastewater Treatment Facility			
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 regulates significant industrial users with a Wastewater Discharge Permit program. Less significant users are regulated under a Best Management Practices program. There are potential requirements of a mercury minimization program under Wastewater Treatment Plant LPDES permits; if adopted, the Pretreatment Program would need to adopt these requirements.

The 2011, 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 2011. 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 2011. 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 2010 Annual Pretreatment Report was submitted in early 2011. At the time of the site visit in March, 2012, the 2011 Annual Pretreatment Report had been prepared and was ready for submittal.

Biosolids Beneficial Reuse Land Application Program

LUS participates in a land farming program using biosolids that are a byproduct of 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. LUS reports that the necessary quarterly, semiannual and annual application and soil and sludge testing reports were submitted to LDEQ during 2011.

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. SPCC plans for each of the generation facilities have been implemented in accordance with regulatory requirements.

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 LUS facilities. These initiatives are briefly discussed in the paragraphs that follow.

Cross State Air Pollution Rule (CSAPR) /Clean Air Interstate Rule (CAIR)

On July 6, 2011, USEPA finalized the Cross State Air Pollution Rule (CSAPR) to replace the CAIR. The CSAPR was proposed and promulgated as a result of the July 11, 2008 remand of the CAIR by the U.S. Court of Appeals for the District of Columbia Circuit. The CSAPR requires 27 states in the eastern U.S. to meet state level caps on emissions from power generation facilities, thereby reducing emissions that are transported across state borders and degrade air quality in downwind states. The CSAPR is to go into effect January 1, 2012 and would impose new cap-and-trade programs for ozone season NO_X, annual NO_X, and annual SO_2 emissions. Also on July 6, 2011, USEPA issued a supplemental proposal that would require six additional states (Iowa, Kansas, Michigan, Missouri, Oklahoma, and Wisconsin) to reduce ozone season NO_X emissions under the ozone season control program of the CSAPR. All of these states, except for Oklahoma, are already included in the annual SO_2 and NO_X reduction program of the CSAPR.

The CSAPR will initially be implemented via Federal Implementation Plans (FIPs) being adopted by USEPA for each of the states covered. States will have the opportunity to implement the CSAPR through a State Implementation Plan (SIP) in the future. Allowances are initially allocated to power generation facilities based on historical heat input, but states will have the authority to modify future allocations implementing their own allocation regulations in their SIP.

Additionally, the CSAPR includes provisions to correct errors that may have been made in determining the initial allocation. Initial allocations are posted on the USEPA website with each allowance being worth one ton of emissions. Emission caps are applied at the state level with the initial annual cap set for 2012 and a lower or equivalent cap starting in 2014 and beyond. Emission allowances may be traded across state borders; however, if a state assurance (state budget plus one year variability limit) level emission cap is exceeded, units that are found to exceed their respective share of the state assurance level will be required to surrender two allowances for each ton emitted over their proportional share of the state's emission cap. The surrendered allowances will be deducted from the unit's allocation (or an equivalent amount determined for new units) for the year immediately following the year of the state emission cap exceedance.

On October 6, 2011, USEPA proposed certain adjustments to the final CSAPR. The proposal revises some discrepancies affecting state budgets in Florida, Louisiana, Michigan, Mississippi, Nebraska, New Jersey, New York, Texas, and Wisconsin and new unit set-asides in Arkansas and Texas. This action revises unit-level allocations in Alabama, Indiana, Kansas, Kentucky, Ohio and Tennessee to better account for utility consent decrees. The proposal also amends the assurance penalty provisions for all states within the programs, thus increasing the opportunity for market-based compliance options until January 2014. Finally, the proposed rule revises typographical errors in the final CSAPR. In Louisiana, a power generation facility is to participate in only one of the programs; the ozone season NO_X. LUS facilities are covered sources under the CSAPR.

A ruling issued by the U. S. Court of Appeals for the District of Columbia Circuit December 30, 2011 has stayed the CSAPR until further resolution of petitions filed by several entities. The former CAIR is to be in effect until resolution of the CSAPR petitions.

Mercury and Air Toxics Standards

The USEPA released proposed Maximum Achievable Control Technology standards for utility boilers on March 16, 2011; the final rule was released on December 21, 2011 (referred to as MATS) and is expected to be published in the first quarter of 2012. 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.

Pursuant to MATS, emissions testing while firing oil may be required at the Doc Bonin plant if there is a continued desire for this capability. It is possible the Doc Bonin plant may not meet emission limits in the rule and oil firing at the Doc Bonin plant may not be feasible in the future.

National Ambient Air Quality Standards

The CAA requires USEPA to set National Ambient Air Quality Standards 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 standards for ozone and PM2.5 are being developed by EPA and are anticipated to be issued in 2012. Once the standards are known, the impact on LUS facilities can be determined.

Tailoring Rule

The “Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule” (PSD and Title V) was published in the Federal Register on June 3, 2010. Publication of this rule set in the motion the mechanism for the regulation of greenhouse gas (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 was 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_2e). 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_2e 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_2e and existing sources that undergo modifications that increase emissions by at least 75,000 tons per year CO_2e. Title V permits will be required for sources emitting over 100,000 tons CO_2e per year.

Based on past operating patterns, CO_2e emissions from LUS' T.J. Labbé and Doc Bonin power plants exceed the 100,000 tons per year threshold but CO2e emission from the Hargis-Hébert power plant have been less than the threshold.

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. 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_2 thresholds. USEPA has indicated PSD and Title V requirements will not apply to sources emitting below 50,000 tons per year CO_2e prior to April 2016.

New Source Performance Standards for Greenhouse Gases

USEPA has developed proposed Greenhouse Gas New Source Performance Standards (NSPS) for power generation facilities and in November of 2011 submitted the regulations to the Office of Management and Budget for regulatory review. A final rule is anticipated in mid 2012. NSPS can be applied to not only new and modified facilities but also to existing facilities for pollutants not previously regulated. 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. LUS is in the process of assessing the impact of the regulation on its facilities. The cost of compliance could be significant.

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. A final rule on

CCRs is expected to be issued by the EPA in 2012. The impact on RPS-2 could be significant. This is not the case for other LUS generating facilities since they are not coal fired.

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, USEPA'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 9-4, are in various stages of development and publication.

Table 9-4
New and Proposed Rules

Rule/Regulation	Compliance Date	Comments
Total Coliform Rule	Based on Population	Requires bacterial monitoring and corrective action based on population
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.

Wastewater Effluent Standards

The USEPA is expected to issue a proposed rulemaking for the steam electric power generating industry in July 2012, and issue a final rule in 2014. At this juncture, it is too early to determine the impacts the rule may have on LUS.

Sanitary Sewer Overflow Control Policy

The EPA established the CMOM program to help municipalities manage, operate, and maintain collection systems, investigate capacity constrained areas of the collection system, and respond to sanitary sewer overflow events. This is not a stand-alone program. To date, the EPA has only pursued CMOM-specific activities as part of Consent Decrees issued against wastewater utilities.

Although the program is not currently mandated, 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.

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 9-5 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_X emissions compliance and bring these issues to a conclusion.	High	In Progress
LUS should monitor the monetary implications of the RPS-2 environmental compliance obligations.	High	In Progress
LUS should monitor the development and implementation of the CSAPR, MATS, green house gas New Source Performance Standards for Utility Boilers, to ensure compliance strategies are implemented for all affected power plants and future costs are included in the LUS capital budget as needed.	High	In Progress
LUS should continue to develop and implement a plan to clean and decommission the aboveground storage tanks and associated piping located at the Doc Bonin Plant.	Normal	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