

**Final Report**

**2000 COMPREHENSIVE  
ENGINEERING REPORT**

**LAFAYETTE CONSOLIDATED  
GOVERNMENT, LOUISIANA  
LAFAYETTE UTILITIES SYSTEM**

**Year Ended October 31, 2000**

**June 5, 2002**





June 5, 2002

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

Subject: **2000 Comprehensive Engineering Report - Final**

Dear Terry:

We are pleased to submit 25 copies of the 2000 Comprehensive Engineering Final Report for the Lafayette Consolidated Government's Lafayette Utilities System.

Sincerely,

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

A handwritten signature in black ink, appearing to read 'Scott Burnham', written over a horizontal line.

Scott H. Burnham  
Project Manager

SHB/sb  
Enclosure

# LAFAYETTE UTILITIES SYSTEM 2000 COMPREHENSIVE ENGINEERING REPORT

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

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# Section 1 INTRODUCTION

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## Requirements of Report

This Comprehensive Engineering Report ("Report") is prepared in accordance with the provisions of Sections 6.1 and 6.2 of the 1993 Bond Resolution that states in part:

*"...The City...covenants and agrees that so long as any of the bonds remain outstanding it will retain a nationally known consulting utility engineer or a firm of consulting utility engineers on a continuing basis for the purpose of providing to the Issuer immediately and continuously utility engineering council in its operation of the utilities system... The consulting engineer shall prepare within ninety days after the close of each sinking fund year a comprehensive report...upon the operations of 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 Bond Ordinance, and all other things having a bearing upon the efficient and profitable operations of the Utilities System..."*

This Report covers the 2000 period. Financial data and most operational data is reported for the fiscal year (November, 1999 to October 31, 2000). Some electric generation plant operating data is on a calendar year basis. The Report has been prepared in accordance with the requirements of the City of Lafayette ("City") Bond Resolution dated March 12, 1963, and in accordance with subsequent pari passu indebtedness including the 1993 Board Resolution as referenced above. Pari passu means that the covenants on these bonds are identical to all other revenue bonds issued by the City.

## Authority

The City operates with Lafayette Parish Government as a consolidated government known as the Lafayette City-Parish Consolidated Government (referred to as "Lafayette Consolidated Government" or "LCG"). The Lafayette City Parish Council ("Council") and Lafayette Public Utility Authority ("LPUA") are the governing authorities of the Lafayette Utilities System ("LUS"). The Council is the governing authority of the Lafayette Public Power Authority ("LPPA"). The Chief Executive Officer of LPPA is the President of the Lafayette City-Parish Consolidated Government. The LUS Director is also the Managing Director of LPPA.

## Section 1

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LUS' properties and assets, which are controlled and operated by the Lafayette Parish Consolidated Government are designated by the Bond Resolution as the Utilities System. The Utilities System is comprised of an electric system (including generation, transmission and distribution facilities), a water system (including supply, treatment, transmission, distribution and storage facilities), and a wastewater system (including wastewater collection and treatment facilities).

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. LPPA constitutes a legal governmental entity separate and apart from the City.

## Report Purpose

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

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

## Consulting Engineer

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

The duties of the Consulting Engineer, which are specifically defined in the Bond Resolution, include providing continuous engineering counsel to LCG in connection with the operations of the Utilities System, the preparation of analyses of LUS' monthly financial reports, and the preparation of an annual comprehensive report (specifically, this Report) on the operations of LUS after the close of each fiscal year.

The Bond Resolution contains certain covenants that pertain to the assets of LUS. These covenants state that the City:

- Will not expend Utilities System revenues for any extensions, betterments or improvements which are not economically sound;
- Will issue no other bonds or obligations of any kind or nature payable from or enjoying a lien on the Utilities System revenues and having priority over or parity with the bonds authorized under the existing Bond Resolution; however, bonds may hereafter be issued on a parity with the existing authorized bonds under conditions as set forth in the Bond Resolution;

- Will not sell, lease, or in any manner, dispose of the Utilities System or any substantial part thereof except in accordance with specific conditions set forth in Section 10F of the March 12, 1963 Bond Resolution; and
- Will maintain the Utilities System in good repair and working order and will make all reasonable and necessary repairs, renewals, and replacements thereto.

The Consulting Engineer is required to approve LUS' budget, and is also required to advise LCG with respect to the system of budgetary control used by LUS. The Consulting Engineer must review and comment on the economic soundness and feasibility of extensions, betterments, improvements, expenditures or purchases of equipment and materials or supplies which will involve the expenditure of more than \$1,000, or such greater amount as may be established in writing by the Consulting Engineer. The Consulting Engineer's budget approval includes all such expenditures except those from the Director's reserve, which are approved individually.

A certification by the Consulting Engineer is required with respect to certain activities which may be carried out by LUS, including: the sale of additional Utilities System Revenue Bonds and the use of proceeds from claims received from private insurance companies as settlements for losses. The sale of any properties of LUS must have the prior written approval of the Consulting Engineer and the revision of rates and charges for utility service must also be approved by the Consulting Engineer.

Field interviews were initiated as part of this Report in March, 2001. The Consulting Engineer interviewed LUS staff regarding utility operations and performed analyses of operating statistics that are indicative of the general operating condition of LUS' plant facilities.

## Utilities System Revenue Bonds

Utilities System revenue bonds have been an important source of capital for additions and improvements to the Utilities System. On August 1, 1996, LUS issued Revenue Bonds Series 1996 exclusively for sewer facilities in the amount of \$18,400,000. With the issuance of the Series 1996 Bonds, the existing voter authorization for the issuance of Utility System Revenue Bonds amounting to \$40,400,000 became fully issued.

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

**Table 1-1**  
**Projected Lafayette Utilities Revenue Bonds**  
**Bond Amortization Schedule**

Payment Date	Interest Payment	Principal Payment	Total Payment	Bonds Outstanding
2000	1,730,574	5,760,000	7,490,574	44,000,000
2001	1,491,474	5,995,000	7,486,474	38,240,000
2002	1,236,703	6,245,000	7,481,703	32,245,000
2003	967,225	6,520,000	7,487,225	26,000,000
2004	680,010	6,810,000	7,490,010	19,480,000
2005	373,765	815,000	1,188,765	12,670,000
2006	349,723	840,000	1,189,723	11,855,000
2007	324,943	860,000	1,184,943	11,015,000
2008	299,573	890,000	1,189,573	10,155,000
2009	273,318	915,000	1,188,318	9,265,000
2010	246,325	940,000	1,186,325	8,350,000
2011	218,595	970,000	1,188,595	7,410,000
2012	189,980	995,000	1,184,980	6,440,000
2013	160,628	1,025,000	1,185,628	5,445,000
2014	130,390	1,055,000	1,185,390	4,420,000
2015	99,268	1,090,000	1,189,268	3,365,000
2016	67,113	1,120,000	1,187,113	2,275,000
2017	<u>34,073</u>	<u>1,155,000</u>	<u>1,189,073</u>	<u>1,155,000</u>
TOTAL	\$8,873,680	\$44,000,000	\$52,873,680	\$0

Source: Joan Parish, 3/7/01. LUS

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. The above table shows that most of LUS' existing revenue bonds will be retired in 2004. Bonds remaining after 2004 relate exclusively to the Wastewater Utility. A summary of the issuance of authorized and issued revenue bonds as of October 31, 2000 is provided Table 1-2 below.

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

<b>Date Issued</b>	<b>Authorized Amount</b>		<b>Application of Proceeds</b>
11-09-49	\$ 7,000,000	<sup>1</sup>	Steam-electric generating plant and improvements and extensions to the electric, water and wastewater systems.
10-26-54	3,000,000	<sup>1</sup>	
05-01-58	<u>8,000,000</u>	<sup>1</sup>	
<b>Total Authorization</b>	<b>\$18,000,000</b>		
10-01-62	\$ 3,500,000		Improvements and extensions to the electric, water and wastewater systems.
06-01-63	6,600,000		
05-01-65	<u>2,400,000</u>		
<b>Total Authorization</b>	<b>\$12,500,000</b>		
06-01-66	\$ 3,300,000		Addition to electric generation capacity, extensions and improvements to the electric, water and wastewater systems and additional water and wastewater treatment capacity.
04-01-67	6,200,000		
06-01-68	4,500,000		
06-01-69	<u>5,800,000</u>	<sup>2</sup>	
<b>Total Authorization</b>	<b>\$19,800,000</b>		
10-01-73	10,000,000		Addition to electric generation capacity and extensions, additions and improvements to the electric, water and wastewater systems.
11-01-74	15,000,000	<sup>2</sup>	
09-01-75	5,000,000	<sup>2</sup>	
03-01-76	6,000,000	<sup>2</sup>	
11-01-76	<u>3,000,000</u>		
<b>Total Authorization</b>	<b>\$39,000,000</b>		
05-01-78	\$6,000,000	<sup>2</sup>	Additions to the electric transmission system and extensions and improvements to the electric, water and wastewater distribution and collection systems.
08-01-80	7,000,000	<sup>3</sup>	
11-01-81	<u>13,000,000</u>	<sup>4</sup>	
<b>Total Authorization</b>	<b>\$26,000,000</b>		
04-01-83	\$10,000,000	<sup>3</sup>	Additions, extensions and improvements to the electric, water and wastewater system and acquisition of electric distribution customers.
06-01-84	12,000,000	<sup>3</sup>	
08-01-96	<u>18,400,000</u>	<sup>5</sup>	
<b>Total Authorization</b>	<b>\$40,400,000</b>		

<sup>1</sup> Utilities System revenue refunding bonds were issued April 1, 1963 in the amount of \$18,485,000 for the purpose of refunding the outstanding balances of the then outstanding revenue bonds.

<sup>2</sup> These bonds were refunded by the Utilities System Refunding Bonds, Series 1993.

<sup>3</sup> These bonds were refunded by the Utilities System Refunding Bonds, Series 1987.

<sup>4</sup> Utilities System Revenue Refunding Bonds were issued May 1, 1983 in the amount of \$10,510,000 to refund the then outstanding balance of the Utilities System Revenue Bonds, series 1981, dated November 1, 1981 and originally issued in the total amount of \$13,000,000.

<sup>5</sup> The Series 1996 Revenue Bond Issue is the most recent issuance of bonds for system improvements pursuant to the Utilities System Revenue Bond Authorization approved by the City Council in Resolution No. 3241. With this issue, all bonds authorized have been issued.

Source: R. W. Beck, Previous CER.

## Section 2 RECOMMENDATIONS

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### **Recommendations**

This section provides a summary of the recommendations as they are presented at the end of each section within the Report.

### **Definitions**

In order to help LUS focus on the different recommendations, R. W. Beck has devised a categorical priority system as follows:

#### **Highest Priority**

Recommendations with this priority designation should receive maximum focus from LUS. Lack of adequate attention to these items may contribute to a significantly weakened LUS in the future. It is anticipated that by the next review period these Highest Priority recommendations should have already been acted upon.

#### **High Priority**

Recommendations with this priority designation should receive a high level of focus by LUS. Without adequate attention to these recommendations within the next review period, High Priority recommendations could be elevated to Highest Priority. It is anticipated that solution implementation be completed or a clear strategy or plan be in place by the next review period.

#### **Normal Priority**

Recommendations with this priority designation should receive normal focus from LUS. The LUS strategic plan should include these items and LUS should assign adequate resources to implement these recommendations within a reasonable period of time.

## Section 3 – Organization and Management

Organization and Management	Priority	Status
We recommend that LUS continue to aggressively prepare and implement optimal competitive electric utility service pricing strategies for both wholesale and retail electric service.	Highest	Investigating
We recommend LUS continue to investigate appropriate actions to attract and maintain qualified employees, thus reducing the turnover rate. This would include development and implementation of a compensation plan which ensures competitive salaries such that key employees can be attracted and retained in the organization.	Highest	Investigating
We recommend that LCG identify methods or procedures that shorten the purchasing and procurement process. The time interval needed to obtain services or equipment is critical to reliable services to both wholesale and retail utility customers who may shop elsewhere if not satisfied.	Highest	New Recommendation
We recommend a review of the specific risks covered and probabilities of claim events for the self-insurance fund.	High	New Recommendation
We recommend that LUS' management closely monitor electric deregulation events on the state and national level, and begin to prepare and implement competitive strategies in the near term to meet this impending challenge.	High	Investigating
We recommend that LUS utilize the new CIS to its fullest by changing some current business practices to comply with system capabilities, in so doing the Customer Service Division will realize savings by becoming more proficient and productive. One such area we recommend changing is the end of day cash. Currently, LUS ends the cash day at 2:00 pm due to bank closure, all payments collected after 2:00 PM are deposited on next day's business. The new CIS accounts for all payments in one business day, therefore several hybrid reports are being generated in order to balance the system with current business practices. The Consulting Engineer recommends making two bank deposits, one at 2:00 pm, and another after the close of business to accommodate the system generated reports.	High	Investigating
We recommend that LUS evaluate its strategic planning processes and procedures.	Normal	New Recommendation

## Section 4 - Finance and Accounting

Finance and Accounting	Priority	Status
We recommend that the LUS explore financial reporting resources that will provide essential financial information a few weeks after the end of a given month.	Highest	New Recommendation
We recommend that the adequacy of the Fuel Adjustment Factor be carefully monitored on a monthly basis and that fuel and purchased power costs be fully recovered.	High	New Recommendation
We recommend that the five-year capital budgetary process be altered so that projected capital needs are budgeted more precisely. Total capital budget estimates often exceed the actual expenditures in a given year by forty and fifty percent. Estimates of capital needs in excess of fifty percent over what is actually spent will indicate false rates and bonding needs, and result in faulty financial plans.	High	Investigating
We recommend that monthly power costs from individual supply sources be critically analyzed to identify possible improvements to minimize the cost of electric supply.	High	Investigating
We recommend that the LUS operating budget process include a monthly cash forecast of the flow of funds.	Normal	New Recommendation

## Section 5 – Electric Utility

Electric Utility	Priority	Status
We recommend LUS reevaluate plant-staffing levels. Interim needs have been met with contract personnel, but a long-term permanent staffing plan should be evaluated and compensation plan developed which will allow success in recruiting and retaining these individuals.	Highest	Investigating
We recommend LUS investigate new power supply additions for the future.	Highest	Investigating
Previous reports identified a need for a comprehensive operator training program, which has been initiated. Additional training and ongoing re-qualification training is recommended.	High	Investigating
We recommend continued expansion of the MP2 maintenance management system by involving operations, maintenance, engineering, and other plant personnel in the implementation of the system.	Normal	Investigating
We recommend implementation and maintenance of a spare parts and inventory control system.	Normal	Investigating
We recommend continued implementation and expansion of the preventative and predictive maintenance programs currently in place.	Normal	Investigating
We recommend implementation and maintenance of a unit-performance monitoring program to continuously monitor individual unit heat rates and execute appropriate heat rate improvement programs.	Normal	Investigating



## Section 2

Electric Utility	Priority	Status
We recommend a determination of actual heat rate versus output relationship for each unit. The Bonin Plant reports that recent progress has been made on a project to install energy metering/upgraded gas yard controls of the incoming gas supply. This metering and controls, which is connected to input signals from unit specific fuel flow and generation signals, will provide the actual heat rate versus output relationships forming the basis for economic dispatch and allow the on-line measurement of individual unit heat rates.	Normal	Investigating
We recommend that LUS demonstrate plant operation on No. 2 fuel oil to verify its emergency use at the Bonin Plant.	Normal	Investigating
We recommend proceeding with plans to repaint the externals of the Bonin Plant Units 2-3.	Normal	Investigating
We recommend continued frequent monitoring of the 138/230-kV CLECO tie transformer T5, which is exhibiting high dissolved gases.	Normal	Investigating
We recommend LUS continue progress made in the area of meter testing and implementation of automatic meter reading systems.	Normal	Investigating
We recommend, in transmission and distribution, continue to review OSHA requirements and or APPA safety guidelines and pursue ongoing training programs for linemen and foremen.	Normal	Investigating

## Section 6 - Water Utility

Water Utility	Priority	Status
We recommend the completion of the south water loop and associated new water storage tanks be given highest priority.	Highest	Investigating

## Section 7 - Wastewater Utility

Wastewater System	Priority	Status
We recommend that LUS give highest priority to upgrading and expanding the South and Ambassador Caffery plants as soon as possible to provide adequate treatment and capacity and avoid exceedance of NPDES permit limits.	Highest	Investigating

## Section 8 – Environmental Issues

Environmental Issues	Priority	Status
We recommend LUS complete a cost-benefit assessment of the Inflow and Infiltration (I&I) expenditures to determine the amount of I&I reduction relating to the amount of I&I remediation expenditures.	Highest	Investigating

**Recommendations**

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<b>Environmental Issues</b>	<b>Priority</b>	<b>Status</b>
We recommend LUS review all of its various environmental plans (SPCC, Emergency Response, SPPP) to ensure that they are in compliance with regulations.	Highest	Investigating

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## Section 3

# ORGANIZATION AND MANAGEMENT

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## Government Organization

### Organization

The current form of government includes both the City of Lafayette and Lafayette Parish and is referred to as the Lafayette Consolidated Government ("LCG"). This city-parish 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. The name of each of the officials and the offices held by each during the period reported on herein are shown in the Table 3-1 below:

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

Name	Office
Walter Comeaux	President
Bobby Badeaux	District 1 Member
Bobby Castille	District 2 Member
Christopher Williams	District 3 Member
Louis C. Benjamin, Jr.	District 4 Member
Lenwood Broussard	District 5 Member
Jerry Trumps	District 6 Member
Marc F. Mouton	District 7 Member
Rob Stevenson	District 8 Member
Randal L. Menard	District 9 Member

Source: Norma Dugas, 3/7/01. LCG

The President and his Chief Administrative Officer 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.

### Home Rule Charter

In the fall of 1992, the electorate of the Parish, including the City, adopted a Home Rule Charter establishing LCG for the purposes 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.

## Lafayette Utilities System

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

As noted earlier, the Council and LPUA are the governing authorities of LUS. LPUA consists of those members of the LCG Council whose districts include 60 percent or more of persons residing within the boundaries of the City of Lafayette as they exist on the effective date of the Charter. They may be changed in the future if the boundaries of the City of Lafayette are changed. The latest census reports of the United States Bureau of the Census are the basis for determining the council districts including 60 percent or more of persons residing within the City of Lafayette.

LPUA members are provided in Table 3-2 below.

**Table 3-2  
LPUA Members**

Name	Office
Jerry Trumps	Chair
Rob Stevenson	Vice Chair
Christopher Williams	Member
Louis C. Benjamin, Jr.	Member
Marc F. Mouton	Member

Source: Andrew Duhon, 3/7/01. LUS

The Director of the Utilities Department is appointed by the LCG President, subject to approval by LPUA, in accordance with provisions included in current or future bond resolutions and covenants. Nothing in the Charter in any manner affects franchises and contracts in existence at the time the Charter becomes effective for the remaining life of these franchises and contracts.

LPUA, subject to approval by the President and the LCG 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 of Lafayette 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 service.

The Utilities Department functions in accordance with conditions included in current bond resolutions and covenants except that references in these documents to "city" are now intended to refer to LPUA. Funds paid by LUS to LCG for in-lieu-of taxes must be used only for programs and services within the City of Lafayette. LPUA fixes rates, incurs indebtedness, approves LUS' budget, and approves proposals for the improvement and extension of the utilities, subject to approval by the President and LCG Council.

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. LPUA must submit an annual report to the President and members of the LCG Council on the operations of LUS and projections for the future.

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

## LUS Management, Organization and Personnel

### Management of the Utilities System

The President, Walter S. Comeaux, Jr., who is the Chief Executive Officer of LCG, and his Chief Administrative Officer, Mr. Glenn Weber, direct and supervise the administration of various departments of LCG. The three departments of LCG involved in day-to-day management and operation of LUS are the Department of Administrative Services, the Department of Utilities ("LUS"), and the Department of Finance.

Administrative Services provide the following functions to the Utilities System: personnel services, training and safety, reproduction, communications, data processing, and risk management. The Office of Finance is responsible for accounting, budget management and procurement. The Chief Administrative Officer supervises all departments, offices, and agencies of LCG under the direction and supervision of the President, except the legal department.

### Organization

The Director of Utilities is responsible for the operations of the electric, water and wastewater systems in all areas of activity not otherwise provided for by the Departments of Administrative Services or Finance. As outlined in the Charter, the duties of the Director of Utilities are as follows:

- Electricity production and distribution;
- Water production, treatment and distribution;
- Sewage collection, treatment and disposal;
- Utility engineering services;
- Supervision of contract construction work for LUS;
- Maintenance of utility equipment in cooperation with the central garage;
- Revenue Collection;

## Section 3

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- Reading of utility meters; and
- Other such activities as may be directed by the President are necessary or incidental to the operation of LUS.

Mr. Terry Huval, Director of Utilities, is a graduate of the University of Southwestern Louisiana with a B.S. in Electrical Engineering. He has been employed in the utility industry throughout his career. He 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 provided in Table 3-3 below.

**Table 3-3**  
**LUS Division Managers**

Division	Manager
Water Operations	Don Broussard
Wastewater Operations	Craig Gautreaux
Electric Operations	Ronald Landry
Engineering	Frank Ledoux
Power Supply	Frank Ledoux
Utilities Support Services	Andrew Duhon
Customer Service	Andrew Duhon
Environmental Compliance	Allyson Chaumont

Source: Joan Parish, 3/7/01. LUS

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

The **Wastewater Operations Division** responsibilities include operation and maintenance of the treatment and collection facilities. Also included is the management of wastewater discharge quality, capital facility construction, and industrial discharge permits and fees.

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

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 **Power Supply Division** is responsible for the operation and maintenance of the electric power production facilities. This Division is also responsible for the

procurement of fuel, the billing of wholesale customers, and dispatching electric power to retail and wholesale customers.

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

**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. This division uses microfiche for billing register report retention to reduce storage and printing costs. Customer bill paying and other business facilities are located in the LCG building, including a drive-up window. The cashier function includes receiving all payments delivered by mail or by hand.

LUS installed a new PeopleSoft customer information system ("CIS") in September 2000 earlier than the original "go-live" date of November 1. Accounts Receivables were transferred seamlessly from the old to the new system, and newly formatted customer bills were mailed successfully.

The LUS is currently seeking assistance for developing an RFP for the procurement of an automated telephone Automatic Call Distribution system. This system will enable the utility to route calls to proper personnel, provide automatic responses when necessary, allow customers to retrieve account information, and track items such as call duration, number and type of call.

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. As competition moves steadily into the electric business, an effective customer-oriented, revenue collection division will become essential to the success of LUS.

The **Environmental Compliance Division** was added to the Utilities Department in 1991 as part of LUS' commitment to both employees and customers. This division was established to oversee the LUS' environmental regulatory requirements.

## Engineering Department

This major Division of LUS provides technical engineering support to all three Utilities (Electric, Water and Wastewater). Department organization includes six major sections including Civil Engineering, Utility Marketing, System Engineering, Distribution, Electric System Construction and Power Supply. The Engineering and Power Production Manager are responsible for the following sections.

The **Civil Engineering Section** focuses on the Water and Wastewater Utilities. Services include planning and design of major water and wastewater infrastructure projects that are scheduled and budgeted with a system of work orders. Activities of this Section also include acquisition of real property rights including easements and property ownership needed for infrastructure expansions. This latter function has been performed in the past by the Public Works Department of the City.

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

- Special Contracts
- Wholesale electric purchases and sales contracts and negotiations
- Fuel supply contract management (coal, gas and transportation)
- Transmission and interconnection contract management
- Federal Energy Regulatory Commission related issues and compliance reporting
- Work with developers to meet special electric service expansion needs
- Wholesale water rates and contracts

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

- Graphical information system (GIS) development to provide infrastructure locations and system mapping
- Information Systems – computer net work installations and maintenance for the LUS offices
- Drafting function

The **Distribution Section** function is responsible for the design and planning of the electric distribution system.

The **Electric System Construction Section** responsibilities are as follows:

- Electric Substation design
- Transmission line design
- Electric system planning
- Management of the electric system communication system.
- Electric system training

The **Power Supply Section** is responsible for the operation and maintenance of the LUS' gas-fired generation facility and management of the LPPA entitlement in coal generation unit operated by Central Louisiana Electric Company ("CLECO").

## Personnel

The average salary per employee during 2000 and prior years is shown in the Table 3-4. 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).



**Table 3-4**  
**LUS Annual Salaries**

Year	Average Annual Salary
1990	\$24,540
1991	\$22,227
1992	\$25,834
1993	\$25,422
1994	\$25,941
1995	\$26,214
1996	\$27,584
1997	\$28,827
1998	\$30,409
1999	\$32,635
2000	\$33,696

Source: Joan Parish, 3/7/01. LUS

Approximately 91 percent of LUS' total budgeted positions were filled at the end of fiscal year 2000 (386 employees out of 424 positions). Employee turnover for the fiscal year was reported to be 14.8 percent of the total number of employees compared to the prior year's 13.8 percent. The level of compensation for technical and professional staff continues to be a problem for LUS. The turnover rate is, in part, indicative of salaries that are not sufficiently competitive to retain qualified staff in many areas. The number of people employed by LUS as of October 31, 2000 and the number of employees included in the budget for the same fiscal year, by Division, are shown in the Table 3-5 below.

**Table 3-5  
LUS Employees as of October 2000**

Division	2000 Actual	2000 Budget	Change
Director's Office	2	2	-
Water Operations	54	58	-4
Wastewater Operations	86	91	-5
Electric Operations	89	100	-11
Engineering	53	58	-5
Power Supply	27	35	-8
Utilities Support Services	21	22	-1
Customer Service	34	37	-3
Environmental Compliance	<u>20</u>	<u>21</u>	<u>-1</u>
<b>TOTAL</b>	<b>386</b>	<b>424</b>	<b>38</b>

Source: Joan Parish, 3/7/01. LUS: PAB 077 Report - Personnel

### Employment Practices and Employee Benefits

All 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.

Procedures for filling personnel vacancies in LUS begin with a list of eligible persons. The applicable appointing authority makes the final selection for the specific position. An employee 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 83 percent of employee health insurance, 100 percent of life insurance premiums, and 74 percent of the cost for dependent medical coverage. The group life insurance plan provides coverage equal to two times the employees' annual salary.

Paid vacation (annual leave) up to a maximum of twenty-four working days per year is earned and provided to employees. The maximum annual level is reached after twenty 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

Employee's Retirement System ("PERS"), although all new employees are enrolled into PERS. Disability and survivor benefits are also provided.

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

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

### Insurance

LCG maintains a self-insurance fund for property (fire and extended coverage/boiler and machinery) and worker's compensation. Liabilities in excess of the fund amount are covered by policies purchased from insurance carriers. LCG fully self-insures general liability, auto liability, fleet collision/fleet fire, and directors' and officers' liability. LCG also fully insures the group health plan and administers a flex-funded life insurance plan.

In addition, LCG has a Risk Management Division within the Department of Administrative Services. The program implemented by this Division includes the establishment of an uninsured loss reserve fund, which is designed and administered by the Risk Management Division. The Division is composed of a Risk Manager, a self-administered property and casualty claims section, a safety and loss prevention section, a full time registered nurse and a self-administered group health/life claims section.

LCG reports that the program effectively provides for the reduction of risk and monetary savings associated with premium reduction and has lowered the average cost of claims. LCG is in compliance with Governmental Accounting Standards Board 10, Reporting for Risk Financing and Related Issues, for public entities.

The current balance in the Risk Management Fund is approximately \$888,700. The 2000 fund balance is lower than the previous year's balance of approximately \$1,707,500.

Causality and liability related expenditures net of recoveries from the Fund are as provided in Table 3-6 below.

**Table 3-6**  
**LUS Self Insurance Expenditures**

<b>Year</b>	<b>Amount</b>
1995	\$838,352
1996	\$613,822
1997	\$1,829,801
1998	\$1,846,469
1999	(\$90,059)
2000	\$1,417,145

Source: Lewana Shearer, 3/7/01. LUS.

## **Governmental Functions Supporting LUS**

### **Finance Responsibilities**

Financial responsibilities are handled by the Office of Finance and Management. These duties include:

- Assistance to the LCG President in the preparation of the annual operating budget and the capital improvement budget.
- Maintenance of a record of indebtedness and the 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 that incur a financial obligation for LCG, and that such documents are in accordance with established 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.
- Maintenance of inventory records of all property, real and personal.

Prior to 1999, the duties of utility billing and revenue collection (customer service) were handled by the Office of Finance and Management. During this reporting period, these duties were transferred to Department of Utilities.

Ms. Rebecca Lalumia serves as the Associate Chief Administrative Officer for the Office of Finance and Management. Key division managers under this office are provided in Table 3-7 below.

**Table 3-7**  
**Office of Finance and Management**  
**Associate CAO – Finance and Management**

Division	Manager
Accounting	Melinda Phelps
Budget Management	Karen Hover
Purchasing & Property Management	Jody Williamson

Source: Joan Parish, 3/7/01. LUS

A description of the functions of the divisions in Table 3-7 are provided below.

The **Accounting Division** is responsible for: (i) processing invoices, payroll and other accounts payable transactions; (ii) maintaining accounts receivable records including processing and mailing customer bills (including utility bills) and maintaining associated management reports of the accounts receivables; and (iii) managing and maintaining the entire accounting system including the general ledger, completion of periodic financial statements, payroll, management reports and special accounting assignments, including those for LUS.

The **Budget Management Division** employs a municipal budget management system. The concepts embodied in this management tool initially require recognition of financial and operational goals by the department heads. Based on these goals, the management of each department determines dollar amounts necessary to reach the goals. Budgeting for utility capital needs and facility addition and renewal projects is the responsibility of LUS.

The **Purchasing and Property Management Division** is responsible for all LCG purchasing and control of the fixed assets. The management of central receiving, central warehousing and distribution of inventory for the operations of the Utilities System are the responsibility of the Utility Support Services Division of LUS.

### Administrative Services Department

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

- Personnel matters for employees including personnel policies, employee relations, employee counseling, and unemployment and worker's compensation reports and hearings.
- Data processing, records management, microfilming, printing, copier services and related administrative services.
- Developing and implementing a communications system.
- Risk management, insurance and safety programs.

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- Maintenance of inventory records of all property, real and personal.
- The Administrative Operations Division provides personnel services other than those performed by Civil Service through its Human Resources Section. The Division also provides printing and communications services to LUS.

The Director of Administrative Services Department is Mr. Benny Soulier. Mr. Soulier oversees information systems (data processing), communication systems, property inventory, and risk management. The Information Systems Division provides staff support to LUS through the following programs: "on-line" input to property assessment accounts relative to wastewater collection facilities constructed pursuant to improvement districts and "on-line" utility inventory actions.

The City's Risk Management Division continues to provide certain risk coverage for the operation of LUS. A Safety Officer assists in the safety-related matters of LUS, including loss prevention programs for assisting all divisions of LUS to comply with federal, state, and local regulations regarding safety matters.

The cost of finance and administrative services are allocated to all LUS Departments, including the operation of the Utilities System on the basis of allocation procedures adopted by LCG.

### Counsel

Steven Dupuis is retained as the Director of the Legal Department to render legal opinions and to counsel and advise LCG and LUS. Various Assistant City Attorneys have also been appointed. The Director assigns their work as it pertains to LUS.

### LUS Organizational Goals

During 2000, LUS operated under a Strategic Plan adopted in 1999. Various employee committees crafted goals in five areas consistent with LUS' vision and added specific tasks to these goals. Specific key areas and goals are provided in Table 3-8.

**Table 3-8  
Key Areas and Goals**

Goals	Key Areas
<b>New Products/Services Development Focus</b>	Engineering & Construction Mgmt. Laboratory Services Bottled Water Wastewater Services Water Services Electric Services
<b>Customer Focus</b>	Customer Service Improvement Customer Expansion & Retention Community Partnerships
<b>Employee Focus</b>	Continuous Improvement Pay for Performance Employee Development Safety & Health
<b>Legislative Focus</b>	Legislative Issues
<b>Environmental Focus</b>	Eliminate/Prevent Administrative Orders
<b>Operational Efficiency Focus</b>	Performance Measurement Operational Cost Containment Strategic Cost Containment Information Systems General Fund

Source: Andrew Duhon, 3/7/01. LUS

## Changing Utility Environment

In June, 1997, the Louisiana legislature passed a resolution that created a 23-member committee to investigate electric retail competition issues for the state of Louisiana and to develop a legislative proposal.

In 1999, the Louisiana Public Service Commission ("PSC") prepared a report and recommendations that set forth three principal recommendations regarding restructuring and retail competition. First they concluded that retail competition did not appear to be in the public interest currently, because it would not lead to lower rates for most Louisiana consumers. Secondly, the report recommended continuing its investigation of expected impacts of restructuring on consumers and utility specific standard costs. Finally, the report outlined the major elements of a restructuring plan. This plan emphasized that retail competition be accompanied by efficient wholesale market platform, standard offer services for small customers for an extended period of time and a thorough set of consumer protection and regulatory safeguards.

Two bills were introduced into the Legislature requesting the commencement of retail choice for all customers on January 1, 1999. The House Commerce Committee deferred this legislation and the Louisiana PSC is reviewing proposals from both utility and consumer groups and studying other competition issues surrounding

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electric utility deregulation. It is probable that LUS will face significant retail competition in some form in the next two to six years.

## Recommendations

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

**Table 3-9  
Recommendations**

Organization and Management	Priority	Status
We recommend that LUS continue to aggressively prepare and implement optimal competitive electric utility service pricing strategies for both wholesale and retail electric service.	Highest	Investigating
We recommend LUS continue to investigate appropriate actions to attract and maintain qualified employees, thus reducing the turnover rate. This would include development and implementation of a compensation plan which ensures competitive salaries such that key employees can be attracted and retained in the organization.	Highest	Investigating
We recommend that LCG identify methods or procedures that shorten the purchasing and procurement process. The time interval needed to obtain services or equipment is critical to reliable services to both wholesale and retail utility customers who may shop elsewhere if not satisfied.	Highest	New Recommendation
We recommend a review of the specific risks covered and probabilities of claim events for the self-insurance fund.	High	New Recommendation
We recommend that LUS' management closely monitor electric deregulation events on the state and national level, and begin to prepare and implement competitive strategies in the near term to meet this impending challenge.	High	Investigating
We recommend that LUS utilize the new CIS to its fullest by changing some current business practices to comply with system capabilities, in so doing the Customer Service Division will realize savings by becoming more proficient and productive. One such area we recommend changing is the end of day cash. Currently, LUS ends the cash day at 2:00 pm due to bank closure, all payments collected after 2:00 PM are deposited on next day's business. The new CIS accounts for all payments in one business day, therefore several hybrid reports are being generated in order to balance the system with current business practices. The Consulting Engineer recommends making two bank deposits, one at 2:00 pm, and another after the close of business to accommodate the system generated reports.	High	Investigating
We recommend that LUS evaluate its strategic planning processes and procedures.	Normal	New Recommendation



## Section 4

# FINANCE AND ACCOUNTING

### LUS Business

LUS consists of electric, water and wastewater systems. These utility systems provide services to customers located both inside and outside the City limits. The business of LUS is directed by the President and regulated by the Council with regard to utility service pricing and revenue bond financing.

During 2000, LUS' net revenues before debt service decreased by approximately 14.2 percent or approximately \$6.2 million from 1999 are shown in Table 4-1.

**Table 4-1**  
**Combined System Net Operating Results:**  
**Major Changes Between 1999 and 2000**

	2000	1999	Percent Change
<b>REVENUES:</b>			
Electric Revenues	\$133,336,583	\$121,020,096	10.2%
Water and Wastewater Revenues	<u>23,231,623</u>	<u>21,949,457</u>	5.8%
Combined System Revenues	156,568,206	142,969,553	9.5%
<b>EXPENSES:</b>			
Electric Fuel & Purchased Power Costs	86,607,449	67,629,551	28.1%
Electric Other Operating Costs	15,002,701	15,303,420	-2.0%
Electric Maintenance Costs	3,838,419	3,500,362	9.7%
Water and Wastewater Operating Expense	11,808,188	11,199,689	5.4%
Water and Wastewater Maintenance Expense	<u>1,977,961</u>	<u>1,815,455</u>	9.0%
Combined System Maintenance Costs	<u>119,234,718</u>	<u>99,448,478</u>	19.9%
NET OPERATING RESULTS	\$37,333,488	\$43,521,075	-14.2%
(Before Depreciation and Debt Service)			

Source: LCG Financial and Operating Statement October 1999 and October 2000.

In summary, the principal amounts leading to this increase in net operating revenues are:

- Overall, the Combined System revenues rose \$13.6 million in 2000 from 1999 but operating costs rose nearly \$20.0 million. This resulted in a decline in operating results of approximately \$6 million.
- Revenues:
  - Electric sales rose 10.2 percent or \$12.3 million over 1999. The major contributing factor was the increased revenue from the pass through of higher fuel costs. Overall, sales volumes (kWh) rose approximately 1.6 percent

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while the average price per kWh rose approximately 8.6 percent. Water and wastewater revenues rose approximately \$1.3 million or 5.8 percent.

### ■ Expenses:

- Because of significant increases in the price of natural gas in 2000 the cost of electric supply rose 28.1 percent over 1999 or approximately \$19 million. Only \$1 million of this was due to increased sales volumes. The remaining part of the increase (approximately \$18 million) was due to increased prices in fuel and purchased power. The average cost of natural gas rose 62 percent in 2000 over 1999 and the average price of purchased power rose 31 percent during the same period. Due to the price difference, electric supply was strategically shifted from gas to coal resources through increased purchases from LPPA. LPPA generation (kWh) increased 12 percent over the 1999 electric volumes.

A comparative analysis of power supply costs is shown in Table 4-2 below.

**Table 4-2**  
**Average Energy Costs (Mills/kWh)<sup>1</sup>**

	2000	1999	Percent Change
<i>Self Generation:</i>			
Fuel	45.58	27.50	65.7%
Other	<u>5.23</u>	<u>3.82</u>	37.1%
Total	50.82	31.32	62.2%
<i>Purchases:</i>			
LPPA	29.77	30.03	-0.9%
Other Supplies	<u>42.67</u>	<u>22.38</u>	90.7%
Total Purchases	<u>31.99</u>	<u>28.63</u>	11.7%
Total Supply	36.96	29.50	25.3%

<sup>1</sup> Developed in Exhibit 4-3.

Source: LCG Financial and Operating Statement, October 2000.

- The balance of the increase in total system operating expenses, \$19.8 million, came from the water and wastewater utilities which rose approximately \$0.8 million or 5.9 percent over the 1999 expenses.

## Adequacy of Revenues

The Bond Resolution contains the following covenants as to the adequacy of revenues.

*"...The City will fix, establish and maintain such rates and collect such fees, rents or other charges for all water, electric and sewer services and facilities furnished by the Utilities System, after making due allowances for delinquencies in collection, as shall be sufficient to provide for the payment of all reasonable and necessary expenses of administering, operating and maintaining the Utilities System, to provide for the payment of interest on and principal of all bonds or other obligations payable therefrom, including the bonds herein authorized, as and when the same shall become due and*

*payable, including the creation of a reserve therefore, and to make the payments into the Bond Reserve and Capital Additions Fund hereinabove required...*

*"...The City will not permit free water, electricity or sewer service to be supplied by the Utilities System to the City or any department thereof or to any person, firm or corporation, public or private, or to any public agency or instrumentality. The reasonable cost and value of all water, electricity and sewer service rendered to the City and its various departments, except interdepartmental charges within the Utilities System, by the Utilities System, including a minimum fire hydrant rental of twenty-five dollars (\$25.00) per hydrant per year, will be charged against the City and will be paid for as the service accrues, from the City's current funds, including the proceeds of taxes which will be levied in an amount sufficient for that purpose. All payments so made shall be considered revenues of the Utilities System and shall be deposited in the Receipts Fund in the manner hereinabove provide..."*

LUS' revenues have met the above covenants for the reporting period and all previous reporting periods.

## Rates and Franchises

The Bond Resolution contains covenants to the effect that rates and charges:

*"...shall in no event in the future be reduced to an extent which will prevent the revenues derived from the operation of the Utilities System being fully sufficient to pay all expenses of operation and maintenance, to pay principal of and interest on the bonds and make possible the retirement of all of the bonds on or prior to their maturity, and to carry out all the provisions of this resolution..."*

The revenues and other receipts of LUS considered revenues for this purpose have been sufficient for the 12 months ended October 31, 2000 to pay the costs of operating and maintaining LUS and to pay the required principal and interest of all outstanding revenue bonds. Accordingly, LUS has complied with all elements of the above rate covenant of the Bond Resolution for this reporting period and all previous reporting periods.

The Council, the LCG Council and LPUA have the exclusive right to regulate LUS' rates and charges for services within and outside the corporate limits of the City. There were no rate changes adopted in the 2000 fiscal year for electric, water or sewer service rates.

Covenants in the Bond Resolution also state that the government:

*"...will not grant a franchise to any competing water, electric or sewer system or service for operation within the boundaries of the Cit..."*

No such franchise was granted during the current reporting period and no such franchise now exists.

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The existing water and wastewater rates are partially subsidized by the electric revenues, which come from a disproportionately large allocation of retained earnings capital to the water and wastewater capital improvement programs. If the allocation were based on the source of these prior-year earnings, the electric utility would be allocated most, if not all, of these retained earnings, and the water and wastewater utilities would be required to issue bonds or raise service rates, or both.

A joint pole attachment agreement with the South Central Bell Telephone Company ("SCB") specifies that LCG will pay to SCB a rate of \$8.00 per pole, per year, for use of SCB poles; SCB will pay LCG \$6.00 per pole, per year for the use of LUS' poles. The difference would be based on use per pole. LCG also has an agreement with Telecable Associates, Inc. for pole rental of LCG's poles to Telecable at \$7.00 per pole, per year.

## In-Lieu-Of Tax

On August 20, 1999, the City adopted the following change to the computation of taxable receipts for purposes of calculating the in-lieu-of tax payment to the City's General Fund:

*In computing the annual in-lieu-of-tax payment to the city general fund by the system pursuant to the bond resolution adopted by the City of Lafayette Board of Trustees on March 12, 1963 (Ordinance No. O-1523, Section 3, adopted August 9, 1977):*

- (1) The cost of fuel shall be excluded from "receipts fund deposits" for such computation. Except that for the purpose of yielding additional in-lieu-of-tax, there shall be a partial amount of fuel cost restored to "receipts fund deposits" for the fiscal year 1998-1999 (for payment in the general fund during fiscal year 1999-2000). This fuel restoration shall be \$25,000,000.00 and shall be applied as adopted in this section. The cost of fuel shall include all component costs of fuel burned to deliver energy to retail and wholesale electric customers, including all component costs of power purchased to offset or supplement generation by the city's own generating units.*
- (2) Revenues derived from the sale of unused capacity and energy from Rodemacher Power Station No. 2 to the other owners shall be excluded from the "receipts fund deposits" for such computation.*

The above ordinance was replaced on August 22, 2000 with Ordinance No. 155-2000. Essentially this updated ordinance allowed the fuel restoration charge to exceed the \$25,000,000 value stated above.

The in-lieu-of tax payment to the general fund for the current reporting period totaled \$14,828,023 compared with \$14,190,873 in the prior year according to the LUS financial statements. The current year amount represents the highest ILOT (In-Lieu-Of-Tax) payment to date. These amounts represent 9.5 and 9.9 percent of the 2000 and 1999 Combined System operating revenues, respectively. By comparison, American Public Power Association's survey (published May 2000) of 549 public power systems shows that the median payments and contributions to their community's general fund was 5.8 percent of electric operating revenues. LUS'

average payment rate for 2000 is approximately 64 percent higher than the nation's median.

## Customer Sales Data

The selected statistical data in Table 4-3 pertaining to the number of customers, customer usage, and revenues by classes of customers were obtained or developed from LUS' Financial Statement for the 12 months ended October 31, 2000.

**Table 4-3  
Utilities System Selected  
Customer Accounts and Usage Data**

Utility Service	Annual Averages, Fiscal Year 2000		
	Avg. No. of Accounts	Usage per Accounts	Revenue per Account (\$)
<b>Electric: (kWh Usage)</b>			
Residential	45,689	15,712	571
Commercial Non-Demand	5,837	28,363	1,313
Commercial Demand Metered	1,072	629,217	19,451
Private Security Lighting	1,741	747	196
Traffic Lighting	1	1,782,415	70,022
Street Lighting	1	14,016,293	626,758
Schools, Churches, Other	347	109,202	4,175
Municipal - General Fund	152	143,281	5,497
UL	19	2,494,925	75,557
Interdepartmental	168	151,843	5,089
Total Electric System	55,027	31,030	1,099
<b>Water (Gallons Usage 000's):</b>			
General Service	39,764	155	248.39
Contracts	4,456	208	335.29
Total Water System	44,220	161	257.52
<b>Wastewater:</b>			
General Service	35,902	N/A	323.28

<sup>1</sup> Electric revenue per account is shown in dollars without fuel adjustment charges.

Source: LUS Financial Statement, October 2000.

Certain sales revenue and related data for 2000 and 1999 are compared in Table 4-4.

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**Table 4-4  
City of Lafayette, Louisiana Utilities System  
Selected Statistical Sales Revenue and Related Data**

	2000	1999	Percent Change
Number of Customers (Average)			
Electric	55,027	54,657	0.7%
Water	44,220	42,671	3.6%
Wastewater	35,902	35,695	0.6%
Electricity Sales (MWh):			
Retail	1,707,490	\$1,666,802	2.4%
For Resale	<u>616,288</u>	<u>620,565</u>	-0.7%
Total Megawatt Hour Sales	<u>2,323,778</u>	<u>\$2,287,367</u>	1.6%
Water Sales (000 Gallons)	7,110,008	6,553,423	8.5%
Sales Revenues:			
Electric - Retail <sup>1</sup>	\$105,716,568	\$96,188,440	9.9%
Electric - Resale	26,597,737	23,505,400	13.2%
Electric - Other	<u>1,022,278</u>	<u>1,326,264</u>	-22.9%
Total Electric Sales Revenues	<u>\$133,336,583</u>	<u>\$121,020,104</u>	10.2%
Water	11,522,769	10,850,421	6.2%
Wastewater	11,708,854	11,099,036	5.5%
Total Sales Revenues	<u>\$156,568,206</u>	<u>\$142,969,561</u>	9.5%
Electric:			
Annual Energy Usage per Meter (kWh) <sup>2</sup>	31,030	30,496	1.8%
Annual Revenue per Meter-with Fuel Adjustment Revenues	\$1,921	\$1,760	9.2%
Annual Revenue per Meter-without Fuel Adjustment Revenues <sup>2</sup>	\$1,099	\$1,079	1.9%
Average Revenue per kWh Sold-with Fuel Adjustment Revenues <sup>2</sup>	\$0.0616	\$0.0579	6.4%
Average Revenue per kWh Sold Without Fuel Adjustment Revenues <sup>2</sup>	\$0.0354	\$0.0354	0.0%
Water:			
Annual Water Usage (000 Gal/Meter) <sup>2</sup>	161	154	4.4%
Annual Water Revenue per Meter <sup>2</sup>	\$257.52	\$249.31	3.3%
Average Sales Revenue per 000 Gallons Water Sold <sup>2</sup>	\$1.60	\$1.62	-1.2%
Wastewater:			
Annual Revenue per Wastewater Account	\$323.28	\$306.52	5.5%

<sup>1</sup> Includes Fuel Adjustment Clause Revenues: 2000 - \$45,603,350

<sup>2</sup> Average amount obtained from LCG Financial and Operating Statement October 1999.

Source: LCG Financial & Operating Statement, October 2000.

Compared to the prior year, the average electric usage per customer in fiscal year 2000 increased by approximately 1.8 percent from 30,496 kWh to 31,030 kWh. The average electric revenue per customer, including fuel cost adjustment charges increased significantly (6.4 percent) in 2000 compared to 1999 due to the pass through of higher fuel costs (\$0.0616 in 2000 and \$0.0579 in 1999).

## Financial and Operating Ratios

Table 4-5 provides a comparison of LUS' electric system with approximately 431 similar-sized electric power systems nationwide; however, not all ratios are based on 431 electric power systems since some did not have data applicable to each ratio. The 2000 data for these systems was secured from the American Public Power Association publication dated March of 2000, the data is included for comparison.

In summary, the most noteworthy difference between LUS' ratios and the national averages occurs in the distribution functions. LUS' below-average ratios relating to this function may indicate potential for productivity improvement. Alternatively, these results may indicate a subsidization of water and/or sewer costs in the areas of water distribution and sewer collection.

**Table 4-5**  
**Financial and Operating Ratios - Public Power Systems, 2000**  
**Median Values by Size Class and Region Compared with LUS 1,3**

Ratio	20,000 to 50,000 Customer <sup>1</sup>	50,000 to 100,000 Customer <sup>1</sup>	Southwest <sup>2</sup>	LUS Fiscal Year 1998-1999	LUS Fiscal Year 1999-2000
1. Revenue per kWh of Retail Customers	\$0.063	\$0.068	\$0.058	\$0.058	\$0.058
2. Debt to Total Assets	0.244	0.337	0.260	0.122	0.107
3. Operating Ratio (Electric)	0.822	0.769	0.803	0.846	0.800
4. Current Ratio	2.47	2.98	3.18	1.547	1.571
5a. Times Interest Earned	4.69	2.93	5.46	22.7	26.4
5b. Debt Service Coverage	4.33	4.04	4.86	6.55	6.64
6. Net Income per Revenue Dollar	\$0.055	\$0.074	\$0.107	\$0.164	\$0.137
7. Uncollectible Accounts per Revenue Dollar	\$0.0023	\$0.0041	\$0.0029	\$0.002	\$0.001
8. Retail Customers per Non-Power-Generation Employee	286	287	329	359	
9. Total O&M Expenses per kWh Sold	\$0.053	\$0.051	\$0.044	\$0.058	\$0.058
10. Total O&M Expense (Excluding Power Supply Exp.) per Retail Customer <sup>4</sup>	\$214.00	\$288.00	\$248	\$503.88	\$575.05
11. Total Power Supply Expense per kWh Sold	\$0.045	\$0.040	\$0.036	\$0.032	\$0.031
12. Purchased Power Cost per kWh	\$0.044	\$0.042	\$0.033	\$0.028	\$0.029
14. Retail Customers per Meter Reader	5,894	8,312	3,678	N/A	N/A
15. Distribution O&M Expense per Retail Customer	\$87	\$94	\$103	\$64.61	\$75.69
16. Distribution O&M Expense per Circuit Mile	\$4,988	\$4,540	\$4,036	\$3,914.59	\$3,851.53
17. Customer Accounting, Service and Sales Expense per Retail Customer	\$41	\$50	\$36	\$43.13	\$64.45
18. Administrative and General Expense per Retail Customer	\$67	\$115	\$96	\$100.29	\$112.82

<sup>1</sup> Ratios from March 2000 APPA publication.

<sup>2</sup> Southwest Region = Southwest Power Pool and ERCOT.

<sup>3</sup> For comments on the ratios, see note corresponding to letter in last column on the following page.

<sup>4</sup> Calculation assumes one-half of both the engineering staff and the utilities support staff are associated with water and wastewater operations, representing 145 employees.

Note A (regarding lines 2, 5a, and 5b): The three ratios referenced here pertain to the general financial position of LUS. The financial ratios include: debt to asset, times interest earned, and debt service coverage. All of these ratios indicate that LUS has a comparatively low debt level and high-retained earnings. Times interest earned is notably high because the debt is mature, resulting in a lower interest component of the debt service. Utility managers, in general, struggle with the problem of the optimum mix of capital sources (debt or retained earnings in LUS' case).

Note B (regarding line 6): LUS earned 13.7 cents on every dollar of revenue. This strong financial result provides for a major part of the capital needed for the Five-year Capital Budget, as well as significant financial transfers to the General Fund of the LCG.

Note C (regarding line 11): The LUS power supply costs per kWh are approximately 31 and 23 percent lower than the average for the two national categories (20,000 to 50,000 customers and 50,000 to 100,000 customers respectively). This appears to be a competitive benefit.

Source: Selected Financial and Operating Ratios of Public Power Systems, 2000. LCG Financial and Operating Statement, October 2000-P2.

## General Observations

The financial performance as measured by net income was good in 2000. The major influences came from a significant increase in power supply costs and increased revenues due to higher sales volumes. Several of the ratios in the above table showed improvement over 1999. None of the ratios indicated areas that suggest concern or the need for additional analysis. A historical comparison of these ratios for the LUS is shown on Exhibit 4-5.

A contributing factor to LUS' lower distribution costs compared to national statistics may be attributed to LUS' salary ranges, which are generally lower than national



averages. Distribution costs are often viewed as relatively small and not material when compared with the influence they exert on rates. This would change if LUS divested the generation business due to increased competition. While LUS enjoys quality earnings now, meeting the threat of significant competition for electric customers will stress LUS' earning potential. LUS is closely monitoring the changes and influences that transition competition may bring to Louisiana and LUS.

### Balance Sheet

To determine the extent and character of the changes in assets and liabilities for 2000, a Comparative Balance Sheet is shown on Exhibit 4-4. The comparison shows no significant areas of major change.

### Audit

Revenue bond covenants relative to the Consulting Engineer's responsibility regarding accounting, financial reporting and budgeting matters are as follows:

*"The Issuer will cause such books to be audited annually by an independent certified public accountant or firm of accountants and will annually, within sixty days after the close of each sinking fund year, file with the Depository, the Consulting Engineer and the original purchasers of the Bonds, copies of said report accompanied by a certificate by said accountant or firm of accountants showing, in reasonable detail, the revenues and expenditures of the Utilities System for such year and the amounts in the hands of the Depository. A summary of such statement shall be published in a newspaper having general circulation in the Issuer. Said statement shall be available at any reasonable time to the holders of any of the Bonds or any consumer of the services rendered by the Utilities System. Within twenty (20) days after the close of each month, a statement of the revenues and expenses of the Utilities System for such month, and a balance sheet certified by the manager or superintendent of the Utilities System and the Mayor of the Issuer, shall be prepared and filed with the Depository, the Consulting Engineer and the original purchasers of the Bonds."*

Accordingly, the Firm of Broussard, Poché, Lewis & Breaux, Certified Public Accountants of Lafayette, Louisiana, was chosen by LCG to audit the books of accounts and records of the Utilities System for the Sinking Fund Year ended October 31, 2000. The Certified Public Accountant's audit of the books of accounts and records of the Utilities System is filed by LCG with the Depository, the Consulting Engineer and the original purchasers of the bonds.

### Operating Budget

The Operating Budget ("Budget") for the Sinking Fund Year ended October 31, 2000 was adopted by Ordinance No. 0-232-99. Included in the Ordinance is the five-year

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capital plan beginning in 2001. The Operating Budget was approved by the Consulting Engineer both as to content and form in accordance with requirements of the Bond Resolution.

A comparison of the project operations in the Amended Budget with actual operating results is shown below. Actual revenues and operating expenses were nearly on target (revenues were above projections by 1.5 percent and operating expenses were below target by 0.6 percent). Capital expenditures exceeded the budget by 56.4 percent resulting in a deficit for the year of \$7.63 million. The deficit is above the anticipated deficit of \$1.70 million by \$5.93 million. Both deficits (actual and budget) are met with existing fund balances.

**Table 4-6**  
**Comparison of Actual Combined System**  
**Operating Results to the 1999-2000 Amended Budget**

	Actual	Budget	Difference	Percent Change (%)
Revenues	159.58	157.23	2.35	1.5%
O&M	119.66	120.42	(0.76)	-0.6%
Balance after O&M	39.92	36.81	3.11	8.4%
Debt Service	7.40	7.49	(0.09)	-1.2%
Balance after D.S	32.52	29.32	3.20	10.9%
Capital Expenditures	25.32	16.19	9.13	56.4%
ILOT	14.83	14.83	0.00	0.0%
Balance of Revenues	(7.63)	(1.70)	(5.93)	-348.8%

Source: LCG Financial and Operating Budgets Statement.

The comparisons shown in Table 4-6 is on a cash basis and therefore will not necessarily agree with audited amounts which are on an accrual basis.

Under Section 9 of the 1963 Bond Resolution and Section 6.6 of the 1993 Revenue Refunding Bond Resolution, the City covenants cause the manager or superintendent to prepare and submit a "proposed budget" to the City not less than 75 days prior to the beginning of each Sinking Fund Year. With regard to the annual operating budget, the Bond Resolution states:

*"...covering the anticipated revenues and balances in various funds and accounts including surpluses and anticipated expenditures of such revenues, funds, accounts and surpluses for all purposes including operation, maintenance, rehabilitation, renewals, replacements, construction and purchase of materials, supplies and equipment and the hiring of employees and services for the ensuing year, said proposed budget to be prepared in the form prescribed by the Consulting Engineer and to bear the approval or recommendation of the Consulting Engineer as to content as well as form before same is submitted to this Governing Authority. Simultaneously with submitting such budget to this Governing Authority a copy of said budget shall be filed by the Mayor or the manager or superintendent with the original*

*purchasers of the bonds and a copy shall be mailed to any holder of revenue bonds who may have so requested in writing... ”*

The LCG’s 2001 budget (November 1, 2000 through October 31, 2001), including LUS’ budget, was submitted by the President to the Council and approved by the Council by Ordinance No. 0-149-2000. LUS’ budget for the fiscal year ending October 31, 2001 as adopted by the LCG and approved by the Consulting Engineer as summarized in Table 4-7.

**Table 4-7  
Utilities System Budget  
November 2000 - October 31, 2001**

Estimated Fund Balances as of November 1, 2000		<b>\$25,690,011</b>
Proposed Receipts:		
Retail Electric, Water & Wastewater Revenues	\$137,237,718	
Interdepartmental Sales	950,000	
Wholesale Electric Revenues	25,140,745	
Telecommunications	980,000	
Interest – Operating Funds	5,063,500	
Contributions in Aid of Construction	75,000	
Accounts Receivable & Other	1,000,000	
Miscellaneous Operating Fees	575,000	
<b>Total Receipts</b>		<b><u>\$171,021,963</u></b>
<b>Total Proposed Revenues &amp; Fund Balance</b>		<b><u>\$196,711,974</u></b>
<b>Operating &amp; Maintenance (O&amp;M)</b>		
Fuel Costs (Gas)	\$24,015,110	
Purchase Power (LPPA)	\$42,500,000	
Purchased Power Other	\$24,015,110	
Transmission Charge	\$4,265,592	
Other O&M	\$34,561,239	
<b>Total Operation and Maintenance</b>		<b>\$129,357,051</b>
<b>Interest &amp; Principal Amounts</b>		
Existing Debt	\$7,486,474	
Proposed New Debt	\$1,491,000	
<b>Total Principal and Interest Payments</b>		<b>\$8,977,474</b>
<b>Capital Renewals and Replacements</b>		
Normal Renewals and Replacements	\$8,462,000	
Special Equipment	\$3,103,401	
Expenditures from Retained Earnings	\$5,094,126	
Special Capital	\$0	
<b>Total Capital Expenditures</b>		<b>\$16,659,527</b>
<b>In-Lieu-of-Tax Payments</b>		<b><u>\$14,200,000</u></b>
<b>Total Expenditures</b>		<b><u>\$169,194,052</u></b>
<b>Revenue Less Expenditures</b>		<b><u>\$1,827,911</u></b>
<b>Fund Balances as of 10/31/01</b>		<b><u>\$27,517,922</u></b>

Source: LCG Annual Budget Document.

The above balance of all Utilities System Funds (\$27,517,922) anticipates the specific fund balances presented in Table 4-8.

**Table 4-8**  
**Projected Utilities System Fund Balances**  
**as of October 31, 2001**

Receipts Fund	\$0
Operating and Maintenance Fund Balance	\$4,000,000
Bond Reserve and Capital Additions Fund:	
Bond Reserve Fund	\$8,981,010
Capital Additions Fund	\$14,632,328
Total Bond Reserve and Capital Additions Fund	<u>\$23,613,338</u>
<b>Total of Fund Balances</b>	<u>\$27,613,338</u>

Source: LCG Annual Budget Document.

The above operating budget anticipates a increase of approximately \$1,827,911 in cash balances during the 2000-2001 period. LUS continues to review and adjust the current budgeting system to increase financial and accounting controls and meet changing operating requirements.

## Summary: Utilities System Capital Program

The combined estimated requirements for improvements to the electric, water and wastewater departments through October 31, 2005 are summarized in Table 4-9. Each year, as the City revises its five-year CIP for the Utilities System, the priorities for each of the work items are re-examined by the managers, giving consideration to improvements then in process, and to the developing patterns of growth in the area to be served by the City. This review process needs to be improved in order that priorities and costs are established which are more manageable. Therefore, budget planning becomes an accurate reflection of reality.

**Table 4-9**  
**Summary Budget - System Capital Resources and Requirements**  
**Budget Document 2000 - 2001 (\$000)**

	2001	2002	2003	2004	2005	Total
<b>Beginning Balance</b>	\$19,500	\$258	\$273	\$3,653	\$2,538	\$19,500
<b>Revenues</b>						
From Retained Earnings	5,000	4,000	3,000	2,000	1,000	15,000
Bond Proceeds	22,500	24,000	22,000	0	0	68,500
<b>Total</b>	<u>27,500</u>	<u>28,000</u>	<u>25,000</u>	<u>2,000</u>	<u>1,000</u>	<u>83,500</u>
<b>Appropriations</b>						
Electric	15,063	10,660	3,070	605	290	29,688
Water	6,350	3,325	2,785	650	1,110	14,220
Wastewater	23,829	11,900	14,950	1,350	1,350	53,379
Telecommunications	1,500	2,100	815	510	405	5,330
<b>Total</b>	<u>46,742</u>	<u>27,985</u>	<u>21,620</u>	<u>3,115</u>	<u>3,155</u>	<u>102,617</u>
<b>Ending Balance</b>	\$258	\$273	\$3,653	\$2,538	\$383	\$383

Source: Budget Document

Financing for the above CIP capital requirements anticipates capital from revenue bond issues in FY 2001, 2002 and FY2003, coupled with a significant decline in the balance of retained earnings amounting to approximately \$19,117,000 (from \$19,500,000 down to \$383,000).

### Capital Improvement Program

The current capital budgeting 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 changes, bond financing and resource planning. We recommend that the 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 is essential.

The CIP in the utility business is generally the largest financial requirement. LCG's budgeting and accounting system did not offer LUS the degree of information and control needed to manage construction. Comprehensive changes to the CIP 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 CIP:
  - Is it realistic; i.e., not a "wish list?"
  - Does it extend over a sufficient period of time (normally, at least ten years) with clearly identified and costed projects and contain detailed plans/schedules and costs for the short-term?
  - Is it formulated and reviewed participatively, particularly with input from the field and other concerned parties?
  - Is it reviewed periodically (normally at least quarterly by a CIP committee with broad utility representation)?
  - Is it clearly and effectively presented annually to the Administration to promote a continuous "buy-in?"

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As discussed above, Table 4-10 shows the magnitude of the planned capital projects that have not been accomplished within the scheduled time frame. The table shows the percentage capital budget dollars that were left unspent at year-end.

**Table 4-10**  
**Comparison of Budgeted and Actual Capital Expenditures for 1995-2000 (\$000)**

Year		Electric	Water	Wastewater	Total
FY 2000	Budgeted	\$9,929	\$5,125	\$17,135	\$32,189
	Actual	19,213	2,510	4,176	25,899
	Unspent	\$(9,284)	\$2,615	\$12,959	\$6,290
	Unspent Percentage	-94%	51%	76%	20%
FY 1999	Budgeted	\$21,098	\$4,182	\$11,594	\$36,874
	Actual	10,023	3,882	7,494	21,389
	Unspent	\$11,075	\$300	\$4,110	\$15,485
	Unspent Percentage	52%	7%	35%	42%
FY 1998	Budgeted	\$30,354	\$9,317	\$17,969	\$57,640
	Actual	11,114	3,404	12,622	27,139
	Unspent	\$19,240	\$5,913	\$5,347	\$30,501
	Unspent Percentage	63%	63%	30%	53%
FY 1997	Budgeted	\$28,278	\$7,413	\$16,089	\$51,780
	Actual	9,766	7,243	12,293	29,302
	Unspent	\$18,512	\$170	\$3,796	\$22,478
	Unspent Percentage	65%	2%	24%	43%
FY1996	Budgeted	\$11,662	\$16,054	\$20,592	\$48,308
	Actual	2,416	13,432	2,331	18,179
	Unspent	\$9,246	\$2,622	\$18,261	\$30,129
	Unspent Percentage	79%	16%	89%	62%
FY1995	Budgeted	\$9,205	\$9,822	\$11,168	\$30,195
	Actual	4,415	3,305	2,618	10,338
	Unspent	\$4,790	\$6,517	\$8,550	\$19,857
	Unspent Percentage	52%	66%	77%	66%

Source: LUS Adopted Budget.

Historically, approximately 51.5 percent of the budget is actually spent. This lack of precision influences the accuracy of financial projection and decisions. Financial areas that are influenced include service rates, bond financing and cash management.

We suggest schedules 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 CIP should indicate if the engineering will be accomplished by LUS engineering or if it will be outsourced.

## Fund Balances

The Utility System will likely experience a reduction in retained earnings over the next several years if competition is implemented in Louisiana and if subsidization by the electric utility portion of the Utility System to other utilities continues. Budgeting

of monthly fund balances should be included in the Utility System's budget process to anticipate the impact of monthly cash balance volatility in the future. This monthly cash budget could be readily adopted from the actual Utility Systems Funds Flow statement now being prepared.

### Accounting

The City covenants and agrees under the respective bond resolutions that so long as any of the bonds remain outstanding and unpaid as to either principal or interest:

*"The City will cause to be kept proper books of record and account covering the operation of the Utilities System. As to the electric division such books shall be kept in accordance with the laws of the State of Louisiana and the Uniform System of Accounts prescribed by the Federal Power Commission, and as to the water and sewer division, such books shall be kept in accordance with the procedure prescribed by the Uniform System of Accounts for Water Utilities, Classes A and B, as prescribed by the National Association of Railroad and Utilities Commissioners..."*

The Charter, Section 7-16, Utility System Financing, states: "The finances, bonded debt, receipts and disbursements of the City's Utilities shall be subject to the provisions of the bond resolution of the City adopted March 12, 1963, as amended or revised." These provisions under the bond resolution have been adhered to and Utilities System funds have been accounted for in a manner consistent with these provisions.

LUS currently prepares monthly financial statements that include important operating financial and managerial data. Except for several months following the close of a fiscal year, these internal statements are scheduled to be issued by the 25th day of the month following the period of reporting.

However, the above exception extends from the first several monthly financial statements following the close of a fiscal year. These statements in final form for the new fiscal year are not completed until the prior year's independent auditor's report is received by the City. The audit for the fiscal year ending in October is not available until approximately May in the following year.

We are particularly concerned about the delay in the availability of important and often critical financial information necessary for informed management of the Utility business. Basic financial and operating results including costs, revenue and performance measurements should be available within a few weeks (2 to 4) after the end of a given month if the utility is to be responsive to the dynamics of the rapidly changing electric industry.

The Consulting Engineer is of the opinion that the basic accounting principles and requirements with respect to the Utilities System, as contained under the respective bond resolutions, have been complied with by the City for the period ended October 31, 2000.

## Restricted Asset Transactions and Balances

The Bond Resolution contains certain provisions and covenants pertaining to the separation and maintenance of funds as follows:

*"...Said income and revenues be and they (sic) are hereby irrevocably and irreparably pledged in an amount sufficient for the payment of the bonds herein authorized in principal and interest. Said income and revenues shall be set aside in separate funds and shall be and remain so pledged for the security and payment of said bonds and interest, and for all of the other payments and purposes provided for in the resolutions until said bonds have been fully paid and discharged..."*

The Bond Ordinance established the following funds: (i) Receipts Fund; (ii) Operation and Maintenance Fund; (iii) Bond and Interest Fund; and (iv) Bond Reserve and Capital Additions Fund. Transactions in the latter two funds for the current reporting year are analyzed below.

### Bond and Interest Fund

The Bond and Interest Fund transactions during the fiscal year are presented in Table 4-11.

**Table 4-11**  
**Bond and Interest Fund**  
**Fiscal Year 2000**

CASH BALANCE as of November 1, 1999	\$0
RECEIPTS during the Period:	
Transferred from Receipts Fund	\$7,403,252
Interest Earned on Fund	363,419
Investments matured (net of purchases)	0
Transfer from Capital Additions Fund	0
Total Receipts	<u>\$7,766,671</u>
Total Receipts and Cash Balance	\$7,766,671
DISBURSEMENTS during the Period:	
Principal and Interest Payment	\$7,403,252
Interest Earnings Transferred to Receipts	363,419
Other Transfers	0
Total Disbursements	<u>\$7,766,671</u>
CASH BALANCE as of October 31, 2000	0
Plus Investments (at face value)	0
FUND BALANCE as of October 31, 2000	<u>\$0</u>

Source: Melinda Felps 3/7/01.



## Bond Reserve and Capital Additions Fund

In compliance with the requirements of the Bond Resolution concerning receipts and disbursements of the Bond Reserve and Capital Additions Fund, the transactions during the fiscal year are presented in Table 4-12. Required transfers of principal and interest were made in a timely fashion to the City's paying agent.

**Table 4-12**  
**Bond Reserve and Capital Additions Fund**  
**Fiscal Year 2000**

CASH BALANCE as of November 1, 1998	\$80,194,630
RECEIPTS during the Period:	
Transferred from Receipts Fund	\$37,400,000
Transfer from Construction Fund	0
Interest Earned on Fund Investments	4,233,951
Miscellaneous (Contributions in Aid and Salvage and Other Transfers)	<u>246,223</u>
Total Receipts	<u>\$41,880,174</u>
Total Receipts and Cash Balance	\$122,074,804
DISBURSEMENTS during the Period:	
Transfer to Bond and Interest Fund	\$0
Payment of In-Lieu-of Taxes	14,828,023
Total Capital	29,450,953
Interest Transferred to Receipts Fund	<u>4,233,951</u>
Total Disbursements	<u>\$48,512,927</u>
CASH BALANCE as of October 31, 2000	0
Plus Investments (at face value)	\$73,561,877
FUND BALANCE as of October 31, 2000	<u>\$73,561,877</u>
The above balance is available for the 1999-2000 fiscal year requirements	
Payment of In-Lieu-of Tax	14,190,874
Fund Balance not Specifically Committed <sup>1</sup>	<u>59,371,003</u>
BALANCE in Fund as of October 31, 2000	<u>73,561,877</u>

<sup>1</sup> Excludes both bond and principal and interest due November 1, 2000 of \$5,574,538.

Source: Prepared by Client (PBC's) 3/7/01.

## Construction Fund

The Construction Fund was established in August of 1996 for purposes of financing major wastewater construction projects. Bonds for these projects were sold to the State of Louisiana's Department of Environmental Quality ("LDEQ") and total \$18,400,000. Proceeds from these bonds are drawn down from LDEQ when needed by LUS. Interest is charged only on the cumulative amounts drawn. Draw downs through October 31, 2000 total \$15,439,932.74.

For this reporting period the Construction Fund has a zero balance since the draw downs requested were all expended by the end of their reporting period.

## Recommendations

Recommendations and their status are provided in Table 4-13 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 4-13  
Recommendations**

Finance and Accounting	Priority	Status
We recommend that the LUS explore financial reporting resources that will provide essential financial information a few weeks after the end of a given month.	Highest	New Recommendation
We recommend that the adequacy of the Fuel Adjustment Factor be carefully monitored on a monthly basis and that fuel and purchased power costs be fully recovered.	High	New Recommendation
We recommend that the five-year capital budgetary process be altered so that projected capital needs are budgeted more precisely. Total capital budget estimates often exceed the actual expenditures in a given year by forty and fifty percent. Estimates of capital needs in excess of fifty percent over what is actually spent will indicate false rates and bonding needs, and result in faulty financial plans.	High	Investigating
We recommend that monthly power costs from individual supply sources be critically analyzed to identify possible improvements to minimize the cost of electric supply.	High	Investigating
We recommend that the LUS operating budget process include a monthly cash forecast of the flow of funds.	Normal	New Recommendation

## Section 5 ELECTRIC UTILITY

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### Existing Utilities System

This section of the Report sets forth the changes which have occurred to the properties of LUS during fiscal year 2000. A description and discussion of existing facilities and resources, and summaries of historical service requirements, are presented in the following pages of this section.

From March 6 - 8, 2000, 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' plant facilities.

### Additions to Plant

Table 5-1 provides the fixed plant and equipment made during fiscal year 2000. LUS accounts for such expenditures by using a capital work order system. All extensions or improvements made to the Utilities System are considered economically sound or otherwise necessary for the profitable operation of LUS.

**Table 5-1  
Capital Workorder Expenditures for Fiscal Year 2000**

Source of Funds	Electric
Current Earnings	\$14,324,099
Special Capital	3,364,617
Retained Earnings	<u>1,524,199</u>
<b>TOTAL</b>	<b>\$19,212,915</b>

### System Maintenance Expenditures

Historical maintenance expenditures from 1989 are shown in Table 5-2. The average annual percentage growth in the maintenance for the utility after leveling the variations between years (using a linear regression function) is 5.58 percent annually for the electric system during the 1989-2000 period. However, the expense for 1998 shown below (\$5,788,172) includes a certain amount of extra ordinary maintenance. If this were normalized to approximately \$3,000,000, the resulting average annual increase would be approximately 3.49 percent. Both the amount of investment in facilities and inflation influence the amount of maintenance expense incurred. The amounts expended for maintenance of the electric system for the fiscal years ended 1989 through 2000 are provided in Table 5-2.

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**Table 5-2  
Annual System Maintenance Expense – Electric System**

<b>Year Ended October 31</b>	<b>Amount</b>	<b>% Change</b>
1989	\$2,361,025	20.2%
1990	\$2,286,374	-3.2%
1991	\$2,675,271	17.0%
1992	\$2,857,068	6.8%
1993	\$3,389,012	18.6%
1994	\$2,982,171	-12.0%
1995	\$2,485,217	-16.7%
1996	\$2,771,051	11.5%
1997	\$2,711,881	-2.1%
1998	\$5,788,172	113.4%
1999	\$3,500,362	-39.5%
2000	\$3,838,419	9.7%

Suggestions are included in the following pages concerning adopting a predictive and/or preventative maintenance program for specific utility functions such as the power generation. Such suggestions may not be made for each function, but is a recommended activity to be initiated at all levels of LUS facility operations.

LUS has an integrated resource plan for electric power supply in place for this reporting period, however, this plan is beginning to become outdated. It was prepared in 1996 using 1995 data and LUS should begin to plan for an updated study. The need for this planning has become even greater because of the governmental consolidation.

## **Existing Electric Utility System**

The following discussions summarize the findings of the Consulting Engineer with respect to the general condition of the properties based upon discussions with utility supervisory personnel and information supplied by LUS' personnel.

## **Electric System Power Supply**

### **Gas-fired Generation: Facilities Description**

The gas-fired generating facilities which supply a portion of the power and energy requirements of LUS include the Louis "Doc" Bonin Electric Generating Station ("Bonin Plant") and, in the past, included the Curtis A. Rodemacher Electric Generating Station, both located within the City. The Rodemacher Station has not operated since 1994 and LUS is planning to convert the building for non-utility use. Design parameters for each of the Bonin units are listed below:

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

Unit	Net Capacity (MW)	Fuel	Boiler Manufacturer	Turbine Manufacturer
Bonin Unit 1 <sup>2</sup>	50	Gas/Oil <sup>1</sup>	Babcock and Wilcox	Westinghouse
Bonin Unit 2	89	Gas/Oil <sup>1</sup>	Combustion Engineering	General Electric
Bonin Unit 3	<u>178</u>	Gas/Oil <sup>1</sup>	Babcock and Wilcox	General Electric
<b>TOTAL</b>	<b>317</b>			

<sup>1</sup> Natural gas is the primary fuel for generation, with oil used as an alternative supply.

<sup>2</sup> The Bonin Unit No. 1 was inoperative from January 1995 until March 1999 due to extended repair and improvements to the boiler and cooling tower.

Source: Jamie Broussard, 3/7/01, LUS.

## Gas-Fired Generation: Condition of the Property

The electric power production facilities at the Bonin Station are generally being well maintained. In January 1995, the Bonin Unit 1 boiler was severely damaged due to a boiler explosion. A contract was awarded to Babcock and Wilcox to repair the damaged components due to the explosion and other age-related damage. The repairs to the boiler were nearly complete when, in November 1997, a tornado touched down at the plant site and completely destroyed the Unit 1 cooling tower. A contract was issued for the replacement of the cooling tower and the unit was operational again in March 1999.

During the period of the cited repairs on Unit 1, other work was accomplished, including the replacement of boiler controls with a Foxboro IA distributed control system, performance of a five-year major turbine inspection, and the retrofit of the turbine exciter to a static excitation system. In conjunction with the upgrade in boiler controls, a majority of field instrumentation was replaced and a combustion analyzer, which monitors boiler flue gas, was integrated into Unit 1's furnace supervisory and protection system.

LUS replaced Unit 3's turbine and boiler control systems in May 2000. LUS is planning to replace Unit 2's turbine control system in 2001.

The Comprehensive Engineering Report for the Fiscal Year 1996 reported that there was significant surface corrosion on the external boiler surfaces and structural steel. Painting of Unit No. 1 was accomplished in conjunction with the boiler repair contract. Plant personnel indicated that plans are in place to repaint the external facilities of Bonin Unit Nos. 2 and 3, but such work has not been initiated due to scheduling and manpower constraints. We recommend proceeding with the plans to repaint the affected areas as soon as possible to prevent further degradation. The areas inside the facility are clean and well kept and the yard areas of the facility were generally neat and well maintained.

In 2000, LUS replaced Unit 2's economizer and primary superheater. The replacements were performed in response to reliability concerns in these areas, mainly

## Section 5

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associated with tube leaks. Other major work in 2000 included the repair of Unit 3's main steam superheat stop valve welds and replacement of the plant's diesel generator.

LUS intends to sell or convert the Curtis A. Rodemacher Station site for other purposes since it is no longer useful for generating electricity. LUS has continued some environmental clean-up at the site in 2000. Further information on this subject is presented in Section 8.

### **Gas-Fired Generation: Operations and Maintenance**

Operations at the Bonin Plant are accomplished through the use of written operational procedures. The Bonin Plant reports routine use of the boiler chemistry lab, start-up/shutdown checklist and the common practice of apprentice training of operations technicians, routine turbine over-speed trip tests, and the weekly functional test of the 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. Boiler tube porosity and thickness testing was completed for Unit 2 in 2000. These programs can detect problems prior to catastrophic failure of the equipment. The repair of the equipment will typically have less of an adverse impact on operation, can be better planned, and may cost less to perform the repair. Preventative maintenance include routine lubrication, cleaning, and general inspection of equipment.

Both predictive and preventative maintenance tasks are implemented into the existing maintenance management program employs the network version of the MP2 software package. Maintenance management systems such as the MP2 system are designed to track work orders from origination through completion. This allows plant personnel to monitor progress, identify backlog and produce planning and scheduling information.

The 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. LUS personnel have assembled the available spare parts and consumables in the maintenance shop storage area. However, the spare parts have not yet been incorporated in the MP2 inventory system.

Major turbine maintenance work in the past years has included five-year overhauls on Unit 1 in 1997 and Units 2 and 3 in 1998.

Day-to-day operational challenges include coordination of dispatch and generation requirements. The long-term challenge facing LUS Bonin Plant operations is a shortage of qualified labor. The labor shortage has not yet impacted plant reliability, however the shortage along with the longevity of the present workforce could impact operations in the future. The shortage of labor has increased plant personnel overtime, which, as reported by the Bonin Plant superintendent, average approximately 11 hours per week for O&M personnel. To adjust for these shortages, LUS has utilized contract labor to perform the duties of the plant engineer and instrument/control/electric technician positions. Also, LUS occasionally uses, on an as needed basis, one LUS

Wastewater Operator and two Water Plant Operators to support Bonin Plant operations.

## Gas-Fired Generation: Operating Statistics

LUS personnel reported the following significant operating statistics for the units shown below.

**Table 5-4**  
**LUS Gas Fired Electric Generation**  
**Operating System**

	1996	1997	1998	1999	2000	5-Year Average
<b>Doc Bonin – 1</b>						
Gross Generation, MWh	0	0	0	77,252	149,668	45,384
Availability Factor	NA	NA	NA	75%	100%	88%
Forced Outage Rate	NA	NA	NA	0.1%	0.2%	0%
Number of Starts	NA	NA	NA	11	9	10
Gross Capacity Factor	NA	NA	NA	17%	33%	25%
Service Factor	NA	NA	NA	39%	68%	54%
<b>Doc Bonin – 2</b>						
Gross Generation, MWh	219,227	210,980	189,262	222,001	233,378	214,970
Availability Factor	83%	94%	61%	88%	85%	82%
Forced Outage Rate	2.5%	3.0%	0.1%	1.6%	3.4%	2%
Number of Starts	9	0	9	10	10	8
Gross Capacity Factor	26%	27%	24%	28%	30%	27%
Service Factor	62%	62%	55%	64%	61%	61%
<b>Doc Bonin – 3</b>						
Gross Generation, MWh	164,062	326,524	373,907	509,229	296,934	334,131
Availability Factor	67%	71%	80%	97%	63%	76%
Forced Outage Rate	4.2%	1.3%	0.6%	2.7%	3.7%	3%
Number of Starts	7	0	3	5	8	5
Gross Capacity Factor	10%	20%	23%	31%	18%	20%
Service Factor	24%	45%	45%	65%	42%	44%
Total Gross Gas Generation, MWh.	383,289	537,504	563,169	808,482	679,980	594,485
Total Net Gas Generation, MWh	354,502	495,738	524,498	754,269	629,259	606,605
Total Gas Consumption, MMBtu	4,256,251	5,767,016	6,113,660	8,738,260	7,461,158	7,108,250
Net Heat Rate BTU/kWh	12,006	11,633	11,656	11,585	11,857	11,718

Availability Factor reflects the % of the time the unit was capable of providing service

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

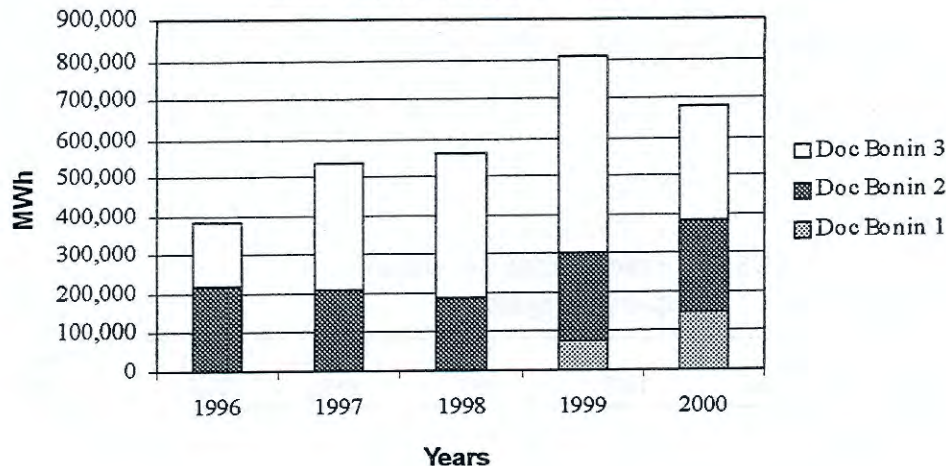
Forced Outage Rate reflects the % of time the unit was removed from service due to an unplanned failure

Service Factor reflect the % of time the unit was electrically connected to the transmission system

Source: Jamie Broussard, 3/7/01. LUS

Figure 5-1 below shows the total generation from the gas-fired facilities and illustrates the amount contributed by each of the units.

**Figure 5-1**  
**Electric Gross Generation Gas-Fired**



Source: Jamie Broussard, 3/7/01 / File: Section 5-Electric.xls

Historically, only one of the three active gas-fired generating units at Bonin has been operated at one time. In this mode of operation, there were essentially “spare” generating units to ensure system reliability. Based on the trend of increasing power costs experienced during peak load periods, LUS anticipates it will be profitable to operate two or, eventually, three units and sell excess electricity to the market. The availability for the Doc Bonin Plant, Unit Nos. 1-3, was 100 percent, 85 percent and 63 percent, respectively. It is noted that scheduled outages had the biggest impact on Unit 2 and 3’s availability in 2000, and during the last quarter of FY 2000, Unit 3 achieved an availability of 92 percent. The achieved 2000 availability for Units 2-3, excluding duration of Unit 3’s extended outage, is within the range, and for Unit 1, is at the high end of the range of expected values for availability at gas-fired power plants of similar size and technology.

### Utility Deregulation Issues

As provisions in the Energy Policy Act of 1992 are implemented by the Federal Energy Regulatory Commission’s (“FERC”) Orders 888 and 889, LUS will face new challenges resulting from increased competition. The Bonin generating facility will essentially become a commodity that competes for a market share. These changes will put pressure on LUS to alter certain practices to enable utility management personnel to make timely business decisions regarding operation and maintenance of the plant, purchasing power, selling power, pricing power, plant capital improvements, plant upgrades, etc. There may be significant opportunities for LUS to take advantage of the changes in the utility environment. Capitalizing on these opportunities will be extremely difficult if the decision-making process is not quick and efficient. Although the current process is consistent with other municipal utilities, it will not provide the flexibility to compete with other participants in the industry, such as independent



power producers, investor-owned utilities, non-regulated subsidiaries of utility holding companies, and power marketers.

## 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, Rodemacher Unit No. 2 (the Unit), located in northwest Rapides Parish near Boyce, Louisiana, which is approximately 100 miles northwest of Lafayette. The Unit, which is operated by CLECO, consists of a General Electric nominal 510,828-kW, reheat steam turbine generator and a Foster-Wheeler steam generator. The demonstrated capability of the Unit is 523 MW net.

The Unit burns coal as its primary fuel and is capable of burning oil and natural gas. Provisions were made in the design of the Unit to allow the addition of the equipment needed for burning lignite. Coal for the Unit is purchased from Kerr-McGee Coal Corporation and is transported from Campbell County, Wyoming by railroad. LPPA owns two unit trains that are operated by CLECO in coordination with CLECO's unit trains to bring LPPA's coal to the generation site.

The Unit is equipped with a hot electrostatic precipitator for fly ash removal at 99.5 percent efficiency when burning coal. The Unit is connected into CLECO's 230-kV transmission system. Transmission service for LPPA's portion of the power output from the Unit is provided pursuant to a transmission service agreement between CLECO and LCG.

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 are included as indicators of plant performance. These performance measurements are provided in Table 5-5.

**Table 5-5  
LPPA Electric Generation Operating Statistics  
Rodemacher Unit No. 2**

	1996	1997	1998	1999	2000	5-Year Average
Gross Generation (MWh)	3,391,894	3,405,472	3,614,002	3,288,805	3,570,060	3,454,047
Station Service (MWh)	218,955	221,772	228,919	214,974	233,070	223,538
Net Generation (MWh)	3,172,939	3,183,703	3,385,083	3,073,831	3,336,990	3,230,509
Station Service (%)	6.5	6.5	6.3	6.5	6.5	6.46
Net Capacity Factor (%)	69.0	69.5	73.9	67.1	72.6	70.42
Hours Available	7,896	7,925	8,090	7,498	7,965	7,875
Net Unit Heat Rate (Btu/kWh)	10,621	10,574	10,571	10,437	10,736	10,588
Availability Factor (%)	89.9	90.5	92.4	85.6	90.7	89.82
Forced Outage Factor (%)	6.1	3.2	2.6	2.3	2.4	3.32
Scheduled Outage Factor (%)	4.0	6.3	5.0	12.1	6.9	6.86

The reduction in Hours Available, for 1995, is primarily due to the 9.5 weeks of major maintenance.

Maintenance of this level is scheduled in 5-year cycles.

Availability Factor reflects the % of the time the unit was capable of providing service

Capacity Factor is the actual electric generation divided by the maximum the unit is capable of generating

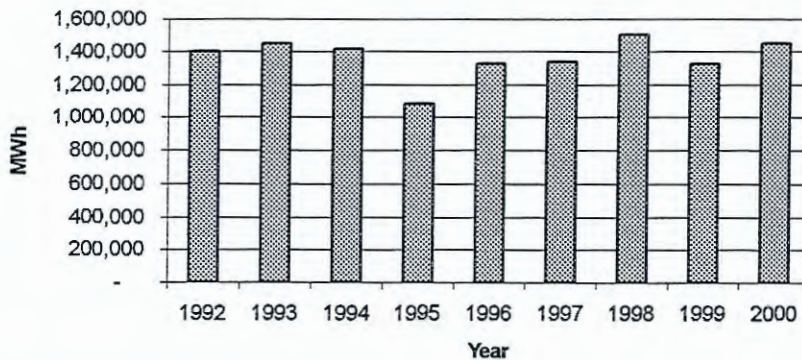
Forced Outage Factor reflects the % of time the unit was removed from service due to an unplanned failure

Source: Steve Derouen 3/28/01. LUS – Financial and Operating Statement

The generation statistics shown above are for the entire Unit, not just LPPA's 50 percent ownership.

Figure 5-2 shows the MWh delivered to LUS annually from the unit.

**Figure 5-2  
Electric Generation Coal-Fired  
Rodemacher II**



Source: Frank Ledoux, 3/7/01 / File: Section 5-Electric.xls

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

## Electricity Dispatching Function

LUS dispatches electric power and energy from its dispatching control center to several neighboring municipalities and other off-system sales customers. In its dispatch function, LUS provides the following services:

- Production scheduling and costing;
- Off-system power sales billing;
- Fuel adjustment calculation;
- Financial planning and budgeting;
- Load analysis and forecasting;
- Data reporting for regulatory agencies; and
- Monitoring inadvertent power interchanges.

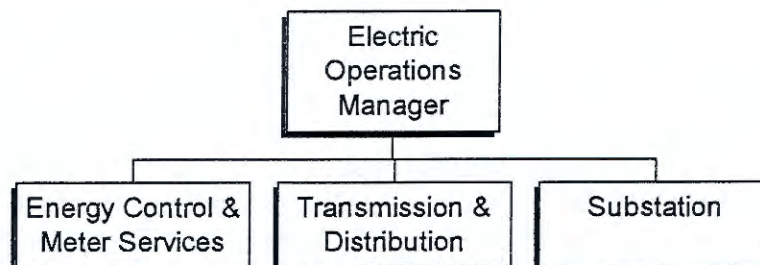
## Electric Operations

The Electric Operations division of the LUS is primarily responsible for the transmission, distribution, metering, and accounting of electrical power to consumers. The Electric Operations division is also responsible for the Energy Control Systems (“ECS”) section, which provides for the scheduling and dispatch of generating resources (including the purchase and sale of wholesale power) and the operation of the System Control and Data Acquisition (“SCADA”) system for the entire LUS. The SCADA system provides direct control of the electric transmission and distribution system, as well as control and monitoring of certain water and wastewater facilities and equipment.

## Organization

The Electric Operations division consists of four discrete operating sections: Meter Services, ECS, Transmission and Distribution, and Substations.

The Electric Operations Division is currently organized as follows:



During 2000, no significant events occurred which deserve special attention (such as the hurricane affecting operations in 1993). The Electric Operations Division continued with significant system improvements and upgrades consistent with the

## Section 5

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five-year capital improvement budget, and operated the system in a manner consistent with prudent utility practice. Highlights for 2000 included:

- Continued focus on operational issues;
- Training taking place as needed;
- Overall adequate staffing levels;
- Examination of a formal benchmarking program;
- Continued monitoring of statistical operational data; and

The following are some of the challenges or key issues that LUS is monitoring:

- The increasingly competitive labor market for skills within the ECS section and the ability to retain experienced personnel.
- Continuing to improve the capabilities and utilization of the SCADA system.
- Installing controllable capacitor banks on lines to improve voltages and power factors.
- Developing and maintaining relationships with power marketers and other utilities in addition to LUS' traditional business associates in the wholesale power market.
- Reducing the increase in tree-related outages.
- Improving the communication and coordination between the Bonin power plant operations staff and the ECS operations staff and others.

## Electric Transmission and Distribution System

### Physical Layout

LUS's electric transmission system includes 230-kV transmission facilities and a 69-kV loop. Step-down transformation from the 230-kV and 69-kV systems to the 13.8-kV distribution service is located at 14 substations. The system still has a small amount of 2,400-kV service. However, nearly all 2,400-kV facilities have been converted to 13.8-kV. The remainder of the 2,400-V system is very small and will be converted to 13.8-kV in the future.

### Reliability and Performance

The electric transmission and distribution systems continued to maintain high reliability during the past fiscal year. The electric operations manager monitors outages and categorizes them by three primary groups: tree-related, animal-related, and equipment-failure-related. No significant outages were reported other than isolated storm or equipment-related problems. However, it was reported that a significant decrease in tree-related outages has occurred. Tree trimming activities through the use of outside contractors has been constant. System failures due to animal and equipment failure are reported to be higher than previous years. However, an overall decrease in equipment failure related outages was reported in 2000. LUS

believes that the reduction in equipment failures has been a consequence of increased attention to equipment maintenance. Based on conversations between LUS staff and the Consulting Engineer, it appears that reliability continues to be acceptable and that LUS staff is committed to continuing existing tracking and prevention procedures.

## Predictive and Preventative Maintenance

Predictive and preventative maintenance on the system, in connection with feeder, substation and equipment (as well as the full operation of the energy control center), continue to improve the reliability of the electric system. Continual improvements in the recording of outage data allow staff to quickly identify changes in reliability. Indices are summarized in Table 5-7 below.

**Table 5-7**  
**Reliability Index Summary**

12 Months Ended October 31	System Average Interruption Duration Index Minutes/Customer	System Average Interruption Frequency Index Interruptions/Customer
1996	119.5	1.85
1997	153.9	2.34
1998	106.2	2.16
1999	102.9	2.52
2000	65.9	1.42

In addition to the above reliability indices, LUS also monitors crew response time, trouble-shooter response time and average outage time. LUS staff reports that each of these indices has been falling over recent history.

One of the reasons that LUS has been able to demonstrate a high level of system reliability is due to their commitment to equipment monitoring. Infrared scanning, formal testing programs, and visual inspection enhance the reliability of the electric system.

LUS, using a hand-held infrared device, scans the following equipment each year to identify system weakness or potential overloading conditions:

- Distribution feeders over 13.8-kV;
- Substation breakers;
- Substation bus;
- Substation transformer bushings, and
- Switches.

Historically, six to ten hot spots have been found each year in substations, and five to eight hot spots have been found each year on distribution feeders. Since 1999, the priority for conducting infrared surveys has been in the areas of transmission and substations. Each discovery reflects a case where an electric system outage may have been prevented.

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In addition to infrared scanning, substation transformers are subjected to annual and biannual preventive maintenance and testing programs. Annual tests include oil filtering, micro-ohm tests, operation with protective relays, motion and speed breaker tests, bushings and contacts and oil tests. Bi-annual tests include TTR, pressure, Dolby, combustible gases, and oil analyses. The test schedule for breakers, relays, and batteries is tabulated below.

In 2000, LUS continues to report that a 138/230-kV CLECO tie transformer T5 has high dissolved gases which are being monitored approximately every three months. For this monitoring, LUS substation personnel and engineering utilize an expert software program for analysis of transformer dissolved gases. The maintenance and equipment schedule is provided in Table 5-8.

**Table 5-8  
Maintenance and Equipment Schedule**

	Frequency
Distribution Breakers	Annually
Transmission Breakers	2 Years
Relays	18 Months
Batteries	12 Months

Another type of reliability test is the visual inspection of all substations. Here, LUS field crews visually inspect all substations on a monthly basis. This includes visual analyses of transformer bushings, the general substation environment, feeder voltages, battery water levels, alarms, and nitrogen bottle levels.

It is our opinion that the reliability related inspections discussed above are important and aid in controlling equipment failure and customer outages.

## Electric Operations

The following discussion summarizes of our review of each of the operating sections within the Electric Operations division. The summaries include highlights and concerns for each of the sections as well as pertinent comments. Recommendations follow at the end of the section.

### Energy Control System

The ECS section is responsible for generating unit commitment, dispatch, the purchase and sale of wholesale power and the operation of the SCADA system for all LUS facilities.

A staff of five operators working 12-hour shifts operates the ECS. In addition, ECS includes an engineer responsible for hardware systems, an engineer responsible for software systems, two technicians, and one supervisor. The ECS/Meter Services Supervisor oversees the ECS and the Meter Services Division. All five operators have received Southwest Power Pool ("SPP") operator training and are SPP certified. In addition, all five operators are NERC certified. This commitment to training is highly

advantageous and will assist LUS in positioning themselves in a future environment of deregulated electricity.

### **SCADA System**

The SCADA system became operational in fiscal year 1992. In 1999, the system continued to mature as additional data-gathering points for water and wastewater systems came on line. Additionally, some progress has been made toward completion of fuel monitoring systems for the Bonin Plant that are expected to provide better economic information for making informed operating decisions. Efforts in this area are continuing to progress.

The SCADA system maintains control of all electric distribution substations, feeder circuit breakers, and other equipment on the electric system. The SCADA system collects a wide range of electric system operating data and information regarding alarms, system energy flow, voltage, switch positions, protective equipment operations and transmission interchange status. The availability of this data positively affects system reliability, as system status information is instantly available to operations staff.

In 2000, LUS began the pre-planning process to replace the SCADA system with a full-graphics system.

Improvements to fuel flow instrumentation are projected to be operational in 2001. To date, ECS is not fully utilizing such data in dispatching the Bonin Plant. As LUS more frequently operates more than one unit at the Bonin Plant, unit dispatch is expected to become more complex. Additional complexity is expected to come to the extent that LUS participates in energy markets. In order to achieve an effective economic dispatch, the refinement and verification of O&M costs, start-up costs, and real-time fuel monitoring data will be needed. Both the Bonin Plant staff and ESC staff need to strengthen their coordination and gain an understanding of operating costs to aid future opportunities for power sales and purchases.

Reducing power production costs can also be achieved through improved participation in the regional market for electricity. LUS has made important steps in this regard by joining the SPP in mid-1998. The SPP market for electricity operates through frequent telephone contacts that share price signals between prospective buyers and sellers. This approach does not include computerized matching of buyers and sellers and does not openly publish clearing prices. LUS reports that since joining SPP, they have significantly increased the amount of electricity that they buy and sell, and, are now interacting with a broader set of sources. Based on verbal reports from LUS, we believe that their recent participation in such markets is very useful to their economic future and should continue to receive high priority.

One attribute of participating in markets for electricity is the acceptance of risk. Under certain circumstances, non-traditional contracts for electricity have the potential to be unprofitable or to operate at a loss.

The ECS system collects data from thirteen locations in the water system. In addition, ECS collects data from approximately 50 lift stations in the wastewater system. LUS

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intends to eventually install RTUs at all 116 lift stations. Implementation is based on priority, budget, and schedule.

In addition to providing system information and control, SCADA system software also maintains a listing of customer locations where life support systems are in place. When outages affect those locations, SCADA operators contact the customer via telephone and convey information regarding the status of the outage and expected system restoration. When service is restored, customers are contacted again to verify that their service is on. This proactive and service-oriented customer focus is representative of LUS' mission statement, strategic plan, goals and policy, and is to be commended.

The electric system had a significant improvement program underway to install additional capacitor controls on the distribution system. Full implementation of the program was previously delayed by equipment problems and communication/control interface problems. LUS resolved these issues by not using the remote features of these new capacitors. Consequently, all of LUS' capacitors are operated on seasonal settings with voltage and time of day over-rides. Additional voltage control is available from load tap changers at 69-kV and 230-kV transformers.

Expansion of the operational capabilities of the SCADA computer/control and processing equipment is in progress. ECS personnel continue to monitor the state of the industry in this regard so that prudent equipment upgrades can be made in the future. LUS also continues to upgrade the software to improve system graphics and improve its interface capability with the Lafayette Utilities Management Information System ("LUMIS"). The current focus of this effort is on updating databases. Information pertaining to the primary distribution system is approximately 10 percent complete. Databases for the secondary distribution and transmission systems are expected to be approximately 70 percent complete in 2000. As of 2000, databases for the water and wastewater systems are 90 percent and 95 percent complete, respectively.

### **Meter Services**

The Meter Services section is responsible for meter reading, replacement, testing and repair, and as customer connects and disconnects. The supervision of this section has been combined with the ECS supervisor. The Meter Services section is comprised of 29 staff.

The Meter Services section continues to compile 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 Meter Services section uses an electronic meter reading system that consists of hand-held remote data collection devices carried by meter readers, computer-based translation and processing equipment at the meter services office, and provides meter data for customer billing functions.



LUS continues to explore opportunities for improving meter reading efficiency. LUS continues to utilize an outside consultant to investigate automatic meter reading systems that include radio and/or telephone transmission of metered data. In 2000, the pilot program to measure the benefits of automatic meter reading was expanded to include 30 electric and 29 water meter locations.

The Meter Services Meter Shop 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;
- Meters that reflect a deviation of 30 percent or more from the same month, one year-ago, are tested;
- The meter shop checks all active accounts with little or no electric consumption, and
- Meters are tested whenever customers express concern about the accuracy of their bills.

In addition to these scenarios, LUS has in the past conducted random testing of residential meters to determine whether the program should be extended to residential meters. The testing has concluded that it would not be cost effective to extend the program to residential meters.

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 re-calibrated and re-furnished for future use. If necessary, the customer's bill is adjusted based on the findings of the meter test report and historical electrical consumption. Meter Services section issues a monthly report of the top commercial and industrial users. This list aids the identification of meters that require testing. We agree with the progress in meter testing and recommend its continued focus and expansion.

In 2000, the Meter Services section was required to re-read approximately 18,200 meters, which is down from the 1999 approximate re-read total of 22,500 meters.

## Substation and Communications

The Substation and Communication section includes eight employees responsible for 14 electric distribution substations. The LUS distribution system is tied to the electrical grid through 69-kV, 138-kV and 230-kV transmission tie-ins. LUS management reported that system reliability during 1999 was high, indicated by substation breaker/reclosers having proper operation 95 percent of the time. (Note: the total number of operations was lower than in previous years). The substation and communication section has highly trained personnel which has contributed to the achieved reliability.

LUS has also completed or initiated several substation and transmission projects to improve system reliability. Major projects include:

- Fiber Optic communication system;

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- Installed a power transfer scheme at University of Louisiana, Lafayette's Rex Street Substation;
- Guilbeau 69-kV substation upgrade (completed in 2000), and
- Perard 69-kV substation upgrade (completed in 2000).

Currently, substation loads are well within maximum capabilities. During 2000, LUS reports no substation was loaded above 80 percent of its rated capacity. As a result, no further significant substation upgrades are currently planned to meet existing loads, however, to meet future growth, substation additions are planned for 2001.

Spill prevention plans have been completed for all substations and a formal spill procedure has been implemented. Some substations have berm walls for oil spill containment and all larger substations have oil spill cleanup materials on site (see Section 8).

A new fiber optic based communications system is currently being constructed to link all substations and replace the aging microwave system. Replacement of the microwave system with a new fiber optic system will allow LUS to keep pace with the increasing communication requirements of a sophisticated protection system. These improvements are recommended and consistent with the high level of customer service commitment made by LUS. The fiber communications system may also provide opportunities for LUS to provide other kinds of communication services using excess capacity in the system. The system is based on approximately 60 miles of fiber and will reach all electric substations, water plants, wastewater plants, city hall, and municipal facilities. In April 1999, the majority of construction on the fiber optic project was completed. Splicing and testing of the fiber optic communication system occurred in 2000.

## Transmission and Distribution

The Transmission and Distribution section ("T&D") dispatches all field crews and performs operations and maintenance activities for the electric system. The total staffing level in this section is approximately 48 individuals, including the Section Supervisor. Operation and maintenance activities include but are not limited to new line construction, line rebuilds, relocation projects, trouble-shooting, equipment installation and maintenance, and tree trimming. The T&D line crews are comprised of three overhead line crews (four people in each crew), one underground crew (eight people) and two streetlight crews (two people per crew plus a foreman) and one service crew (two people).

LUS staff report that the distribution system has been prudently planned and designed. The capacity of the transmission system is routinely analyzed and reported on in LUS' Five-Year Planning Report and One-Year Contingency Report. These reports conclude that there is sufficient capacity in the system to meet existing loads. These efforts also found that 1) a new 230/13.8-kV substation (Beadle Road) was needed to meet the anticipated requirements of a new 7 MW load and 2) a new 69 kV substation would be needed in 2004. The Beadle Road substation was energized in October 2000. The distribution system also undergoes an annual analysis of loads and

capacities. According to LUS staff, continuing studies find no inadequacies in the distribution system. LUS has continued their efforts in standardizing construction, material specifications, and contract documents, along with close supervision of construction, to ensure that the distribution system operates in accordance with prudent industry practices.

LUS has completed upgrading systems previously acquired from SLEMCO. Recent SLEMCO acquisitions have been very limited, making system integration and upgrades less costly.

The T&D section conducts a variety of ongoing training classes for its staff. A second area of attention has been on T&D lineman.

Historically, LUS utilized a significant number of mercury vapor streetlights. Nearly all mercury vapor streetlights have since been converted to more efficient, high-pressure sodium lighting. These will be converted as work loads permit or as these fixtures fail over time. LUS currently replaces all failed mercury vapor streetlights with high-pressure sodium lights. Street lighting maintenance crews respond during normal business hours to light outages and are generally able to replace reported light failures within three working days. This rapid response rate provides a visible indication to customers that LUS is committed to high quality service.

The T&D section's wood pole testing and maintenance program has been in place for several years and continues to aggressively address the integrity of wood poles. Approximately 2,000 wood poles have in the past been identified for replacement, with 483 poles being replaced in 2000. LUS staff reports that a significant number of these poles came from a single supplier. Staff further indicated that LUS is participating in a class action suit against that supplier. Replacing these deteriorated wood poles is expected to continue in future years. LUS has also purchased an ultrasound tester to facilitate this effort.

During the reporting period, LUS completed the replacement of all PCB Transformers (substation and distribution) (see Section 8).

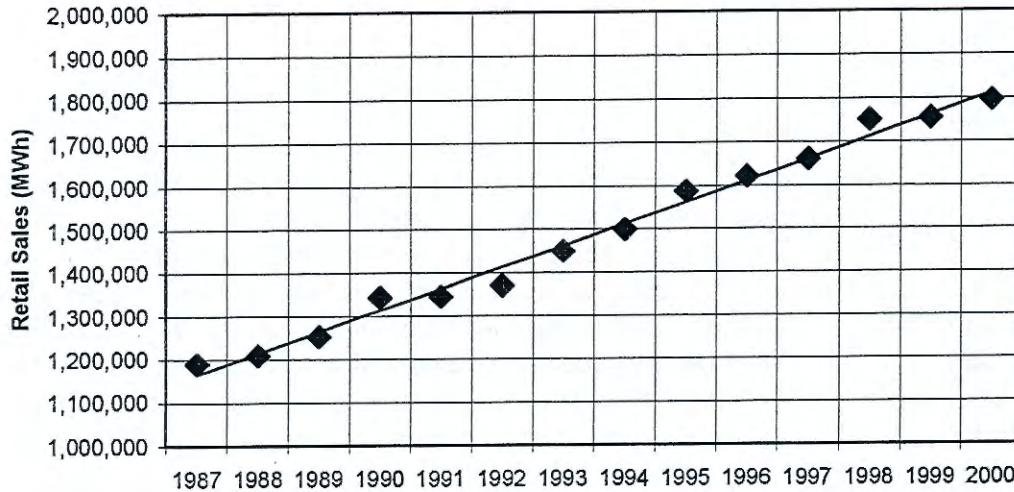
## Historical Utility Requirements

The electric facility of LUS has met customer demands for service, and provided its customers with adequate and reliable utility services during the period reported herein. The historical loads and load growth as served by the electric system is presented in Table 5-9.

## Electric System Requirements

The historical net power and energy requirements for the past ten years are tabulated below and are also shown on the following graph. To calculate a more stable or normalized growth rate for the period, we calculated the linear regression amounts for the 1987 through 2000 period. The resulting graph is shown in Figure 5-3 below.

**Figure 5-3**  
**Total Annual Electric Retail Sales**  
**(MWh)**



**Table 5-9**  
**Electric System <sup>(1)</sup>**  
**Historical Power And Energy Requirements**

Fiscal Year	Number of Customers	Demand MW	Energy Requirements MWh	Annual Change in Energy Requirements %	Annual Load Factor %
1989	43,574	295	1,252,493	3.5	48.5
1990	45,343	316	1,344,540	7.3	48.6
1991	46,719	310	1,345,521	0.1	49.5
1992	48,009	318	1,371,271	1.9	49.1
1993	48,931	339	1,450,791	5.8	48.9
1994	50,107	350	1,499,424	3.4	48.9
1995	51,197	368	1,587,590	5.9	49.2
1996	52,366	358	1,623,350	2.3	51.6
1997	53,048	368	1,661,996	2.4	51.6
1998	54,154	391	1,749,782	5.3	51.1
1999	54,657	401	1,753,844	0.2	49.9
2000	55,027	428	1,794,318	2.3	47.9

<sup>(1)</sup> Does not include sales to other utilities and associated losses  
 Source: LUS Financial and Operating Statement.

Retail electric service has grown significantly and steadily over the period shown above. Customer growth has averaged 2.3 percent per year while usage per average customer has grown at 0.8 percent per year. These two influences have resulted in

annual energy growth of approximately 3.2 percent. Energy sales were nearly 51 percent higher than those in 1989.

LUS, through interconnection arrangements with other utilities, has also marketed power and energy that is surplus to the requirements of its retail customers. For fiscal year 2000, LUS sold surplus power and energy to 10 wholesale customers. Surplus power and energy sales totaled 616,288 MWh, and provided \$26.6 million of gross revenues.

## Contracts and Agreements

LCG has many contracts and agreements in connection with the business of the Utilities System. Only principal contracts and agreements are summarized in the following paragraphs. The contracts and agreements are listed in Table 5-12.

### Electric Purchased Power and Energy Agreements

LUS' electric power and energy requirements are met through purchases from power suppliers including LPPA and the Southwestern Power Administration ("SWPA"), as well as by the locally installed generating capacity.

#### Lafayette Public Power Authority

LCG, through LPPA, acquired a 50-percent ownership interest in the Rodemacher Unit No. 2 ("Unit"). The primary fuel supply to the Unit is low-sulfur Wyoming coal and the output is sold by LPPA to LCG in accordance with a long-term power sales contract. LCG is obligated to make all payments required in connection with its 50-percent share of costs for operation and maintenance of, and renewals and replacements to the Unit, as well as for debt service, debt service reserves, and such other amounts which LPPA is required to pay or set aside into any other fund or account established by the Ordinance adopted by LCG (LPPA Bond Ordinance). LPPA's 50-percent ownership interest in the Unit, together with its 50-percent ownership of coal cars acquired by LPPA for transportation of fuel to the Unit are referred to in this report as the "Project."

LCG pays the "Monthly Power Costs" (as defined in the power sales contract between LCG and LPPA) including all the operating and maintenance costs, debt service and capital expenditures of the Project to LPPA for the delivery of power.

#### Southwestern Power Administration

LCG has a purchase agreement with SWPA and a current capacity allocation of 18 MW and energy allocation of 1,200 kWh per kW per year. Currently, the demand and energy cost of this power is approximately 21.55 mills per kWh. The total annual energy under this contract represents approximately two percent of LUS' total annual energy requirement. The contract terminates December 31, 2003.

SWPA will have a limited quantity of peaking capacity available for sale as a number of firm and peaking power sales contracts terminate in the future, and as new hydro capacity from two multipurpose projects under construction become operable.

### **Louisiana Energy and Power Authority**

The State of Louisiana enacted legislation (Act No. 772 adding Chapter 10-A, Section 33:4545.1 et seq., to the Louisiana Revised Statutes of 1950) in 1979 to create the Louisiana Energy and Power Authority ("LEPA") as a political subdivision of the State of Louisiana to provide for joint ownership and cooperation in electric generation and transmission facilities. Such joint ownership may occur between such authority and municipally owned entities, investor-owned electric power companies and electric power cooperative associations or corporations within the State of Louisiana.

LEPA subsequently acquired a 20 percent undivided ownership interest from CLECO in the electric power generation facility called Rodemacher Unit No. 2. This is the same facility in which Lafayette Public Power Authority has a 50-percent ownership interest. LCG is a member of LEPA and contractually sells power and energy to LEPA, as discussed below.

### **Power and Energy Sales Agreements**

As a result of LUS' marketing efforts for the sale of excess power and energy, the following are principal agreements for sales to other entities.

#### **City of Natchitoches**

LCG and Natchitoches operate under an agreement whereby LUS provides the full load requirements of Natchitoches plus normal load growth. Natchitoches agrees to maintain and make available all of its generating plant capacity for LUS' use when such use is desirable and necessary. LUS acts as Natchitoches' scheduling agent for its total power supply, including Natchitoches' SWPA hydroelectric power and energy allocation. The agreement was amended in 1995 to include the establishment of a new incremental demand class for high peak demand and high annual load factor customers serviced by the City of Natchitoches. The term of this agreement extends through December of 2001 and provides for service to Natchitoches directly from LUS or through LEPA. However, the contract provides for cancellation with a one-year notice, provided that the canceled service is then purchased from LEPA and LEPA increases its purchases from LUS by 73 percent of Natchitoches' peak load.

#### **Louisiana Energy and Power Authority**

On June 28, 1985, the City of Lafayette and LEPA entered into an Agreement for Purchase of Power and Energy and Coordination of Operations. The Agreement stipulates the amounts of power and energy to be delivered by LCG during future time periods, and also provides for the sale to LEPA of additional capacity and energy above the contract amounts if required by LEPA and available from LCG. In addition, provisions for reserves and the sale of secondary energy are covered in the Agreement. The Agreement also contains provisions for LCG to sell supplemental, replacement, economy and emergency energy to LEPA. The most recent amendment is the second amendment to the agreement, and is dated September 1, 1992. This amendment capped the capacity at 58 MW plus losses, reduced rates, and extended the agreement

through December 2000. There is a provision to reduce the purchased capacity further if certain member cities do not extend their contracts with LEPA.

## **Electric Interconnection, Interchange, and Transmission Access Agreements**

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.

The various interconnection, interchange, and transmission agreements in effect between LCG and other electric utilities and agencies are with Entergy/Gulf States Utilities, CLECO, Cajun Electric Cooperative Inc. ("Cajun") and Louisiana Power and Light ("LP&L"). These agreements provide various terms for the purchase and sale of emergency, replacement, and economy energy. The existing agreements appear to be working satisfactorily for LUS. Certain details of these agreements are presented below.

## **Interconnection and Transmission Agreements**

### **ENTERGY/Gulf States Utilities**

The City of Lafayette signed a long-term (31 years) Interconnection Agreement with GSU, now Entergy/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 the Entergy/Gulf States has agreed to provide transmission service for delivery of the Unit's 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 Agreement with Entergy/Gulf States, LCG provides for reserve capacity requirements consistent with the reserve capacity guide as adopted or recommended from time to time 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.

### **Central Louisiana Electric Company**

Central Louisiana Electric Company and LCG entered into a new 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:

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- Identification of the Unit - a point where power may flow into CLECO facilities from an LCG power source, or an LCG-contracted power source; and
- Identification of the following power delivery points and associated capacity effective with agreement modifications as of March of 1996 are presented in Table 5-10.

**Table 5-10  
Power Delivery Points**

138 kV and Above	Contract Demand - MW
Lafayette	169.0
Natchitoches	52.0
LEPA	25.0

Source: R. W. Beck, Previous CER.

## Interchange Agreements

LUS has entered into interchange agreements with Cajun, Southwestern Electric Power Company ("SWEPCO"), LP&L, and the SWPA. The termination of each of these agreements is provided in Section 5-11.

**Table 5-11  
Interchange Agreements**

Entity	Termination
CAJUN	Any date after May 23, 1993 with three-(3) years notice.
LP&L	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.
SWPA	December 31, 2003.

Source: R. W. Beck, Previous CER.

## Joint Ownership/Use Agreements

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

## Electric Customer Acquisition Agreements

LUS currently holds one electric customer acquisition agreement, which is discussed in detail below.



## Electric System Fuel Supply Contracts

### Coal for Rodemacher Unit No. 2

The principal fuel for LPPA's Rodemacher Plant is coal, which is supplied to the Project by the Kennecott Energy Company and mined in Campbell County, Wyoming. As operator of the Unit, 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, the most recent of which was signed in February 1998. Pursuant to the fifth contract modification, the next opportunity for renegotiations of the contract is scheduled after December 2001.

### Louisiana Intrastate Gas Corporation

Louisiana Interstate Gas ("LIG") is the supplier of natural gas for generation of electricity. The contract with this supplier has a one-year term with the option of automatic renewal. The LIG contract continues to be operative through 2001.

A summary of the contracts and agreements is provided in Table 5-12.

**Table 5-12**  
**Contracts and Agreements**

Contracts and Agreements between		Date Signed/Renewed	Termination Date	Provisions
LCG	LPPA	May 1, 1997	End of useful life	Purchase of power from LPPA's 50% share in Rodemacher Unit 2.
LCG	SWPA	January 1, 1994	December 31, 2003	
LCG	Natchitoches	February 1, 1995	December 31, 2001	LUS provides wholesale electric service to Natchitoches
LCG	LEPA	June 28, 1985	December 31, 2001	LUS sells power and energy to LEPA
LCG	GSU	October 1, 1984	October 1, 2015	Interconnection agreement for delivery of power
LCG	CLECO	August 29, 1986	August 29, 2016	Interconnection agreement for delivery of power
LUS	CAJUN	May 23, 1983	upon 3 year notice	Interchange agreement for electric transmission
LUS	LP&L	October 6, 1988	upon 18 month notice	Interchange agreement for electric transmission
LUS	SWEPCO	May 1, 1994	upon 45 notice	Interchange agreement for electric transmission
LPPA	CLECO, LEPA	November 1, 1982	end of useful life	Joint ownership of Rodemacher Unit 2
LCG	SLEMCO	March 28, 1996	June 1, 2000	Acquisition of electric customers
LCG	GSU	September 1, 1988	Expires 6/2000	Acquisition of electric customers
LPPA	Kennecott Coal	March 27, 1987	June 30, 2002	Purchase price of coal for Rodemacher Unit 2
LUS	LIG	July 1, 1999	July 1, 1999	Supply of natural gas for Bonin Units

Source: R. W. Beck, Previous CER.

## Load Forecasts

Load forecasts for the electric system for the five-year period of 2001 through 2005 is presented below. The forecasts reflect the current assessment of expected load growth for the period.

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The actual electric quantities for fiscal year 2000 and the forecasts of system, off-system and total electric power and energy requirements for 2001 through 2005 are shown in Tables 5-13 and 5-14 below.

**Table 5-13  
Electric System - Projected Energy Requirements**

Fiscal Year	Total Retail Requirements <sup>(1) (2)</sup> (MWh)	Total Wholesale Sales <sup>(1)</sup> (MWh)	Total Requirements (MWh)
2000 (Actual)	1,794,318	616,288	2,40,606
2001	1,884,391	543,120 <sup>(3)</sup>	2,427,511
2002	1,931,511	267,180 <sup>(3)</sup>	2,198,691
2003	1,978,355	267,180 <sup>(3)</sup>	2,245,535
2004	2,025,193	267,180 <sup>(3)</sup>	2,292,373
2005	2,071,975	267,180 <sup>(3)</sup>	2,339,150

<sup>1</sup> As estimated in LUS Pro Forma.

<sup>2</sup> Includes contract loss adjustment; unintentional flow in/out; includes street lighting, transmission losses and kWh not accounted for, all at 6.5% of retail sales.

<sup>3</sup> Estimated based on load factor of 50%.

Source: Steven Derouen, 3/7/01. LUS

**Table 5-14  
Electric System  
Projected Peak Power Requirements**

Fiscal Year Ending October 31	LUS System <sup>(1)</sup> (MW)	Off System <sup>(2)</sup> (MW)	Total (MW)
2000 (Actual)	428	123	551
2001	416	124	540
2002	426	61	487
2003	435	61	496
2004	445	61	506
2005	455	61	516

<sup>1</sup> Estimated based on load factor of 52%

<sup>2</sup> Based on wholesale contract requirements.

Source: Steven Derouen, 3/7/01. LUS

Table 5-15 provides a comparison of electric loads versus resources, expressed in MW, for LUS. This reflects the demand requirements of retail sales, sales for resale, and a reserve requirement equal to 18 percent of demand.

**Table 5-15**  
**Electric System Comparison**  
**of Total Demands and Resources (MW)**

Year Ending October 31	REQUIREMENTS		RESOURCES					Surplus/ Deficit <sup>(2)</sup>
	Total Demand	Demand Plus Reserves <sup>(1)</sup>	Gas-Fired Generation	Coal-Fired Generation	Natchitoches Generation	SWPA Peaking	Total	
2000 (Actual)	551	650	295	246	35	21	597	-53
2001	540	637	302	246	35	21	604	-33
2002	487	575	302	246	0	19	567	-8
2003	496	585	302	246	0	19	567	-18
2004	506	597	302	246	0	19	567	-30
2005	516	609	302	246	0	19	567	-42

<sup>1</sup> 1.18 times the system demand.

<sup>2</sup> Capacity deficits are offset with purchased power as required.

Source: Steven Derouen, 3/7/01. LUS

The above table indicates that projected electric requirements exceeded demand plus reserves in 2000 and this will continue in future years. Based on the electric integrated resource plan, LUS is formulating actions to address this and similar issues relating to capacity and energy production capabilities. LUS has indicated capacity deficits will be offset with purchased power. We recommend that LUS investigate new power supply additions for the future.

## System Improvement Program

LUS established a system improvement program called Capital Improvement Program ("CIP") in 1989. The program is a five-year "look ahead," which is revised annually and is a means to plan for and manage the major capital projects for the electric system.

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

The estimated annual capital budget requirement amounts are shown in Table 5-16.

The CIP includes costs for compensation to SLEMCO associated with acquisition by LUS of customers that are presently served by GSU and SLEMCO but are located in areas annexed by LCG.

Future improvements to the electric distribution system include upgrading of circuit protection, line extensions, re-conductoring, and construction of new circuits.

Substation improvement projects include upgrade of the communication system, construction of a new substation at North Pierce, relaying improvements, installation of a second transformer at The Mall Substation, and a project for new feeder breakers (Acadmall and Flanders). A new 69 kV transmission loop is planned for South

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College Road. Re-conductoring and rehabilitation of transmission lines on Pinhook Road is also planned.

Capital improvements to electric production facilities include construction to improve storm drainage at the Walker Road utility complex is also included in the CIP.

Electric production facility capital improvement projects include the Unit 3 turbine supervisory instrumentation replacement, replacement of Unit 2 boiler tube sections, painting of Unit 3, and projects for the Unit 3 acid tank containment system and the Bonin Station start-up bus.

The estimated requirements for improvements to the electric department through October 31, 2005 are summarized in the following table. Each year, as the City revises its five-year CIP for the Utilities System, the priorities for each of the work items are re-examined by the managers, giving consideration to improvements then in process, and to the developing patterns of growth in the area to be served by the City. This review process needs to be improved in order that priorities and costs are established that which are more manageable, and therefore, budget planning becomes an accurate reflection of reality.

**Table 5-16**  
**Estimated Annual Capital Requirement Appropriations**  
**Electric System Improvements (\$000)**

Year Ending October 31	Production	Trans.	Substation/ Distribution	Dist.	Customer Acq.	General	Subtotal	Telecom	Total
2001	\$1,749	\$579	\$6,480	\$2,900	\$1,400	\$1,955	\$15,063	\$1,500	\$16,563
2002	1,080	630	3,830	4,380	150	590	10,660	2,100	12,760
2003	80	900	890	950	150	100	3,070	815	3,885
2004	30	-	-	350	150	75	605	510	1,115
2005	<u>30</u>	-	-	<u>50</u>	<u>150</u>	<u>60</u>	<u>290</u>	<u>405</u>	<u>695</u>
Total	\$2,969	\$2,109	\$11,200	\$8,630	\$2,000	\$2,780	\$29,688	\$5,330	\$35,018

Source: LUS Capital Budget.

## Recommendations

Recommendations and their status are provided in Table 5-17 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 5-17**  
**Recommendations**

Electric Utility	Priority	Status
We recommend LUS reevaluate plant-staffing levels. Interim needs have been met with contract personnel, but a long-term permanent staffing plan should be evaluated and compensation plan developed which will allow success in recruiting and retaining these individuals.	Highest	Investigating
We recommend LUS investigate new power supply additions for the future.	Highest	Investigating

Electric Utility	Priority	Status
Previous reports identified a need for a comprehensive operator training program, which has been initiated. Additional training and ongoing re-qualification training is recommended.	High	Investigating
We recommend continued expansion of the MP2 maintenance management system by involving operations, maintenance, engineering, and other plant personnel in the implementation of the system.	Normal	Investigating
We recommend implementation and maintenance of a spare parts and inventory control system.	Normal	Investigating
We recommend continued implementation and expansion of the preventative and predictive maintenance programs currently in place.	Normal	Investigating
We recommend implementation and maintenance of a unit-performance monitoring program to continuously monitor individual unit heat rates and execute appropriate heat rate improvement programs.	Normal	Investigating
We recommend a determination of actual heat rate versus output relationship for each unit. The Bonin Plant reports that recent progress has been made on a project to install energy metering/upgraded gas yard controls of the incoming gas supply. This metering and controls, which is connected to input signals from unit specific fuel flow and generation signals, will provide the actual heat rate versus output relationships forming the basis for economic dispatch and allow the on-line measurement of individual unit heat rates.	Normal	Investigating
We recommend that LUS demonstrate plant operation on No. 2 fuel oil to verify its emergency use at the Bonin Plant.	Normal	Investigating
We recommend proceeding with plans to repaint the externals of the Bonin Plant Units 2-3.	Normal	Investigating
We recommend continued frequent monitoring of the 138/230-kV CLECO tie transformer T5, which is exhibiting high dissolved gases.	Normal	Investigating
We recommend LUS continue progress made in the area of meter testing and implementation of automatic meter reading systems.	Normal	Investigating
We recommend, in transmission and distribution, continue to review OSHA requirements and or APPA safety guidelines and pursue ongoing training programs for linemen and foremen.	Normal	Investigating

## Section 6 WATER UTILITY

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### Water Utility

This section of the Report sets forth the changes that have occurred to the properties of LUS during fiscal year 2000. A description and discussion of existing facilities and resources, and summaries of historical service requirements, are presented in the following pages of this section.

The Consulting Engineer interviewed LUS staff regarding water utility operations and performed analyses of operating statistics that are indicative of the general operating condition of LUS' water utility facilities.

### Additions to Plant

The expenditures for fixed plant and equipment made during fiscal year 2000 are presented in Table 6-1. LUS accounts for such expenditures by using a capital work order system. All extensions or improvements made to the Utilities System are considered economically sound or otherwise necessary for the profitable operation of LUS.

**Table 6-1  
Capital Workorder Expenditures  
for Fiscal Year 2000**

<b>Source of Funds</b>	<b>Water</b>
Retained Earnings	\$1,382,757
Normal Capital	1,006,423
Special Equipment	<u>120,901</u>
<b>TOTAL</b>	<b>\$2,510,082</b>

Source: "Status of Construction Workorders" by Acct. Dept.

The following table, Table 6-2, lists the additions and capital improvements completed in 2000.

**Table 6-2  
Water System Improvements for Fiscal Year 2000**

	Project	Amount	Completion Date
<b>Water Distribution</b>			
WD97-U1	FY 96/97 S Water Loop - Kal. Saloom to Verot	\$910,000	1/1/2000
WD98-01	W. Martial Avenue Extension	\$70,000	1/31/2000
WD93-12	Tolson Rd-Bonin Rd (Sara Dee to Edie Ann)	\$175,000	4/30/2000
WD95-01	Ridge Rd/lles Des Canne Annexation	\$140,000	5/31/2000
WD96-U1	Bertrand Dr. Improvements	\$80,000	6/1/2000
WD2000-01	Birdsong Road Water Main Extension	\$150,000	6/30/2000
WD2000-02	Ambassador Caffery Water Main Ext.	\$70,000	6/30/2000
WD94-01	Failla-Tolson Rd (La Neuville to Sara Dee)	\$175,000	7/31/2000
WD98-02	Downtown Street Improvements - Phase II	\$620,000	7/31/2000
WD2000-05	Southpark to Boyce Water Main Extension	\$150,000	10/31/2000
WD2000-06	N Plant and W End Water Towers Demolition	\$160,000	10/31/2000
WD93-06	Line Pressure Point Monitoring	\$110,000	10/31/2000
WD2000-04	Pigging/Cleaning of Distribution Mains	\$500,000	12/31/2000
<b>Water Production</b>			
WP93-04	South Plant Redundancy/Expansion	\$14,100,000	1/31/2000
WP94-02	System Development Plan (W)	\$200,000	1/31/2000
WP99-01	N/S Plant Process Modifications	\$200,000	1/31/2000
WP93-06	S Plant Repaint 2MG Ground Storage Tank	\$280,000	3/31/2000
WP98-01	North Plant Water Well #23	\$425,000	6/30/2000
WP2000-01	Pigging/Cleaning of Plant Water Lines	\$400,000	10/31/2000

## System Maintenance Expenditures

Historical annual maintenance expenditures from 1991 are shown in Table 6-3. The average annual percentage growth in maintenance cost after leveling the variations between years (using a linear regression function) is 3.6 percent for water during the 1991-2000 period. Both the amount of investment in facilities and inflation influence the amount of maintenance expense incurred.

**Table 6-3  
Annual Water System Maintenance Expense**

Year Ended October 31	Amount	Change
1991	\$578,646	14.9%
1992	\$602,833	4.2%
1993	\$642,666	6.6%
1994	\$658,408	2.4%
1995	\$780,350	18.5%
1996	\$850,581	9.0%
1997	\$772,946	-9.1%
1998	\$716,663	-7.3%
1999	\$779,141	8.7%
2000	\$815,534	4.7%

Source: Don Broussard, 3/7/00 LUS – Fin. St. pg 22.

## Water System

The following discussion summarizes the findings of the Consulting Engineer with respect to the general condition of the property based upon discussions with utility supervisory personnel and information supplied by LUS' personnel.

The Chicot underground aquifer is the source of water supply for Lafayette public water supply. The LUS Water department has joined with the LDEQ to implement a wellhead protection program for Lafayette's water supply. The LUS Water Division has completed the necessary data gathering to identify potential contamination sources within the wellhead protection areas and to allow the LDEQ to take appropriate action to assure contamination is prevented.

The Water System includes 16 wells serving the system with a combined capacity of 46.2 million gallons per day ("mgd"). In addition, the water system includes two water treatment facilities (the North Plant and the South Plant) which provide for removal of iron and manganese by coagulation, sedimentation and filtration; hardness reduction by a lime-softening process; and chlorination. The present treatment capacities of both plants are shown below in Table 6-4. Although the two plants are each capable of producing over 20 mgd of treated water, the total amount of water they can deliver to customers is constrained by the capability of the distribution system to deliver the water to customers at an acceptable pressure. At 90 psi, the total effective production capability is estimated by LUS to be 26.7 mgd.



**Table 6-4  
Plant Treatment Capacity  
(mgd)**

	Treatment Units	Filter Units
North	21.5	21.5
South	24.0	24.0
<b>Total Effective Production Capability</b>	26.7 MGD AT 90 PSI	

Source: Don Broussard, March 7, 2001, LUS

Treated water storage totals approximately 11.7 mg; this includes 2.8 mg of elevated storage and 7.9 mg of ground storage, including pumping station wet wells.

Upgrades to the South Plant were completed in 1999 and subsequently the construction contractor filed a claim against LUS charging LUS with causing delays that resulted in financial damage to the contractor. The dispute was submitted to arbitration and LUS was required to pay the contractors claim of \$1,300,000. LUS is considering legal action against the design engineer to recover the costs resulting from claimed deficiencies in the design and construction of the South Plant upgrades.

LUS' water distribution system consists of 930 miles of pipe, most of which is in the 6-inch to 12-inch diameter range. This represents an increase in total miles of pipe of 4.8 percent above the 1999 value. Approximately 8.3 percent of the water distribution system made up of galvanized iron. LUS has a program in place to replace this galvanized iron with PVC or cast iron. The distribution system includes approximately 17,623 valves and 5,702 fire hydrants. LUS reports that they have completed the installation of pressure meters at nine locations throughout the water distribution system in order to monitor system operating pressure. Readings from these meters are recorded electronically and are available for analysis by the staff. They report that the measurements have enabled them to identify areas in the system where pressures are, at times, below the desired level. A proposed new south loop is expected to correct the problems of low system pressure.

In addition to the facilities that are owned by the City, LUS operates and maintains the water distribution facilities of certain water districts in accordance with contracts between the City and the districts. LUS also provides wholesale water service to various water districts and municipalities within the Parish. During 2000, water delivered to these users amounted to 12.2 percent of the water sold by LUS. Table 6-5 shows wholesale water sales by year for the last 6 years.

**Table 6-5  
Wholesale Water Sales Volumes (Mgals)**

	1995	1996	1997	1998	1999	2000
Town of Scott	202,164	204,264	215,101	230,546	260,797	255,737
Water District North	252,611	286,759	307,376	341,637	290,168	307,054
Town of Broussard	18,963	21,818	29,383	43,584	51,754	66,090
Longbridge	8,180	8,644	5,698	5,169	5,499	3,603
Water District South	24,185	27,790	78,647	144,738	160,386	226,881
Milton Water System	N/A	N/A	N/A	N/A	9,935	5,742
Water District North - Wholesale	N/A	N/A	N/A	N/A	N/A	1,563
<b>Total</b>	<b>506,103</b>	<b>549,275</b>	<b>636,205</b>	<b>765,674</b>	<b>778,539</b>	<b>866,670</b>

Approximately 1/8 of the total sales volumes of water goes to wholesale customers (12.2 percent in 2000 and 11.9 percent in 1999).

## Unbilled Water Volumes

During the past ten years, LUS' operating results at time show a significant amount of unaccounted-for water. Data for the period 1991 through 2000 are summarized in Table 6-6.

**Table 6-6  
Unbilled Water Volumes**

Year	Percent Unaccounted-For
1991	17%
1992	12%
1993	10%
1994	8%
1995	12%
1996	16%
1997	7%
1998	2%
1999	2%
2000	2%

Source: Don Broussard, March 7, 2001, LUS - Fin. St. pg 23.

LUS' monthly operating statistics show that unaccounted-for water dropped from 16 percent in 1996 to 7 percent in 1997 to 2 percent in 1998 and 1999 and 2 percent in 2000. However, LUS staff cannot identify the reason(s) for the wide swings in these numbers.

## Historical Water Utility Requirements

The water facility of LUS has met customer demands for service, and provided its customers with adequate and reliable utility service during the period reported herein. The historical loads and load growth as served by the water system is presented below.

## Water System Production

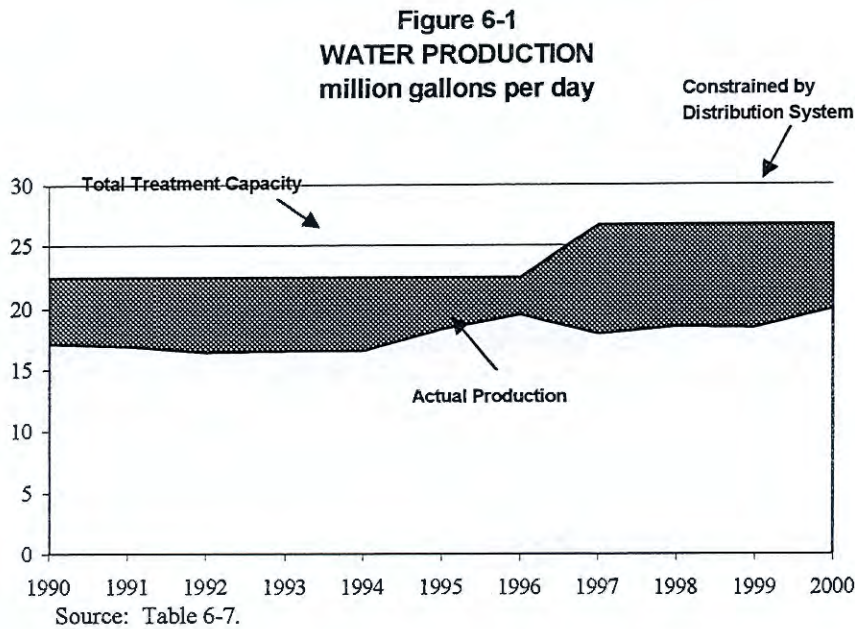
The historical water production for the past ten years are tabulated below in Table 6-7. The annual growth rate of annual water production has been approximately 2.0 percent over the ten-year period shown while growth in the number of customers was 2.6 percent. In addition to annual requirements, peak day production requirements are also provided in Table 6-7.

**Table 6-7  
Water System Historical Production**

Fiscal Year Ended October 31	Number of Customers	PRODUCTION		
		Annual (Mgal)	Annual (mgd)	Peak Day
1991	35,030	6,157	16.9	21.7
1992	35,908	6,008	16.4	19.6
1993	36,908	6,043	16.6	21.6
1994	38,110	6,039	16.5	21.2
1995	39,293	6,698	18.4	24.9
1996	40,327	7,103	19.4	25.1
1997	41,016	6,536	17.9	26.2
1998	41,886	6,761	18.5	24.1
1999	42,673	6,754	18.5	25.1
2000	44,220	7,294	19.9	26.5

Source: LUS Financial and Operating Statements and LUS Water Production Division - Fin St. pg 23

Total water production and number of customers is shown in Figure 6-1.



Beginning in 1990 and continuing through 1994, the total water production was relatively flat until 1995, when it increased sharply. Water production in 1997, 1998 and 1999 decreased from 1996 levels but remained relatively flat. When adjusted for wholesale water sales, water production appears to be decreasing.

Some of this volatility may be due to the addition of wholesale customers. However, to the best of our knowledge, the factors causing the fluctuations in the average usage per customer have yet to be identified. Table 6-8 illustrates the historical trends in key water distribution system statistics. Generally, the increase in miles of line, valves, and hydrants has paralleled the increase in customers.

**Table 6-8  
Water System Distribution**

Fiscal Year Ended October 31	Number of Customers	DISTRIBUTION		
		Miles of Main Lines	Number of Valves	Number of Hydrants
1991	35,030	761	14,656	4,673
1992	35,908	775	14,823	4,795
1993	36,908	803	15,234	4,911
1994	38,110	832	15,679	5,056
1995	39,295	842	15,945	5,114
1996	40,327	851	16,216	5,150
1997	41,014	862	16,514	5,203
1998	41,886	873	16,919	5,579
1999	42,671	887	17,249	5,634
2000	44,220	930	17,623	5,702

Source: Don Broussard, 3/7/01, LUS.

## Contracts and Agreements

Contractual arrangements between LCG and other entities (both water districts and municipalities) which own or operate water utility properties currently represent over ten percent of LUS' annual water revenues. Details of these contracts are discussed below.

LCG has executed agreements with two water districts: Water District North and South. Water service to District North customers is billed by LCG in the name of the Water District North consistent with the applicable rate schedules. The North and South District's construct their own additions and extensions according to standards set by LCG.

### Water District North

The District North territory is defined as Lafayette Parish areas not currently incorporated as a municipality or included in another water district. LUS' water sales to the District North represented 6.5 percent of the total LUS water revenues for the reporting period.

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Revenues for water service are collected from District North customers by LCG and are transferred to the District North after deducting the charges for water provided pursuant to the agreement and based on metered water use.

The Water District North retains ownership of its line additions and extensions; however, in the event that an area of the District North is annexed to the City, the District North's properties within the new corporate boundaries shall be sold to the City by the District North upon an offer to purchase by the City.

LUS and Water District North are negotiating the terms of an agreement whereby LUS will provide all operation and maintenance services for all Water District North's facilities. The agreement is to replace all other existing agreements and is for a 40-year term.

### Water District South

This district serves the southern portion of Lafayette Parish, neither currently incorporated as a municipality nor included in another water district. LUS' water sales to the District South represent approximately 2.5 percent of the total LUS water revenues for the reporting period.

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

### Other Wholesale Water Contracts

LCG has also entered into contracts to provide wholesale water service to the following entities.

- LCG sells water to the City of Scott, Louisiana, for distribution and resale by the City to its water customers under a 25-year contract, which terminates May 27, 2022. Water is delivered to the City of Scott through a 4,000-foot, 12-inch main; constructed and operated by LUS. This line also provides service along U.S. Highway 90. Revenues from this wholesale service are approximately 2.8 percent of LUS' total water sales.
- LCG sells water to the Town of Youngsville, Louisiana for distribution and resale under the provisions of a contract effective on December 24, 1998 with a term of 40 years. There were no sales to Youngsville in 1999 or 2000.
- LCG and the Town of Broussard, Louisiana signed a 40-year contract, which expires on March 5, 2038. The contract provides for service to a portion of the Town located on the northeast side of U.S. Highway 90. Revenues from this wholesale service are approximately 0.7 percent of the LUS' total water sales volume.
- LCG serves the town of Milton, Louisiana under a 40-year contract signed April 28, 1997. Sales to Milton in 1999 amounted to approximately 0.8 percent of total sales.

A summary of the contracts and agreements for the water utility is provided in Table 6-9 below.

**Table 6-9  
Contracts and Agreements**

Contracts and Agreements between	Date Signed/Renewed	Termination Date
Water District North Phases 1,2 and 3 <sup>(1)</sup>	February 6, 1985	February 6, 2025
Water District North Phase 4 (Scott) <sup>(1)</sup>	April 28, 1997	April 28, 2017
Water District North Phase 4 (NE and NW) <sup>(1)</sup>	October 12, 1998	October 12, 2038
Water District North <sup>(2)</sup>	(pending)	(Pending)
Water District South <sup>(1)</sup>	August 21, 1997	August 21, 2037
City of Scott <sup>(1)</sup>	May 27, 1997	May 27, 2022
Town of Broussard <sup>(1)</sup>	March 5, 1998	March 5, 2038
Milton Water System <sup>(1)</sup>	April 28, 1997	April 28, 2037
Town of Youngsville <sup>(1)</sup>	December 24, 1998	December 24, 2038

(1) Wholesale sale of water by LUS.

(2) Operation and maintenance.

Source: Ron Gary, 3/7/01, LUS.

## Forecasts

Forecasts of water use for the water system for the five-year period of 2001 through 2005 is presented below in Table 6-10. The forecasts reflect the current assessment of expected growth for the study period.

**Table 6-10  
Water System  
Projected Requirements**

Fiscal Year Ending	PRODUCTION REQUIREMENTS <sup>1</sup>	
	Daily mgd	Peak mgd
October 31		
2000 (Actual)	19.4	
2001	19.8	25.6
2002	20.1	25.9
2003	20.5	26.1
2004	20.8	26.4
2005	21.2	26.4

(1) Includes unaccounted-for volumes

Source: Table 6-7 workpapers in Section 6 spreadsheet.

## System Improvement Program

LUS established a system improvement program called Capital Improvement Program (“CIP”) in 1989. The program is a five-year “look ahead,” which is revised annually and is a means to plan for and manage the major capital projects for all utility divisions, including water.

The estimated annual capital budget requirement amounts are presented in Table 6-11 and were obtained from LUS’ Capital Improvement Plan dated December 2000.

Major improvements and additions to the water system for the next five-year period include:

- New North Park water storage tank
- New Phase I and Phase II water storage tanks
- Addition of the south water loop
- Various water main extensions

The addition of the south water loop and associated storage tanks are intended to improve distribution of water into the system and reduce occurrences of low system pressure.

**Table 6-11**  
**Estimated Annual Capital Requirement Appropriations**  
**Water System Improvements (\$000)**

Year Ending October 31	Water Production Improvements	Water Distribution Improvements	Totals
2001	\$1,250	\$5,100	\$6,350
2002	875	2,450	3,325
2003	525	2,260	2,785
2004	100	550	650
2005	100	1,010	1,110
<b>Total</b>	<b>\$2,850</b>	<b>\$11,370</b>	<b>\$14,220</b>

Source: Don Broussard, March 7, 2001, LUS Capital Improvement Plan December 1999

## Recommendations

Recommendations and their status are provided in Table 6-12 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 6-12**  
**Recommendations**

Water Utility	Priority	Status
We recommend the completion of the south water loop and associated new water storage tanks be given highest priority.	Highest	Investigating

## Section 7 WASTEWATER SYSTEM

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### Wastewater System

This section of the Report sets forth the changes that have occurred to the wastewater system of LUS during fiscal year 2000. A description and discussion of existing facilities and resources, and summaries of historical service requirements, are presented in the following pages of this section.

The Consulting Engineer interviewed LUS staff regarding wastewater operations and performed analyses of operating statistics that are indicative of the general operating condition of LUS' wastewater facilities.

### Additions to Plant

Table 7-1 provides expenditures, for fixed plant and equipment were made during fiscal year 2000. LUS accounts for such expenditures by using a capital work order system. All extensions or improvements made to the wastewater system are considered economically sound or otherwise necessary for the profitable operation of LUS.

**Table 7-1  
Capital Workorder Expenditures for Fiscal Year 2000**

Source of Funds	Wastewater
Retained Earnings	\$2,717,589
Normal Capital	499,756
Special Capital	515,075
Special Equipment	446,041
<b>Total</b>	<b>\$4,178,461</b>

Source: "Status of Construction Workorders" by Acct. Dept.

The following table, Table 7-2 lists the additions and improvements completed in 2000.



**Table 7-2**  
**Wastewater System Improvements for Fiscal Year 2000**

	<b>Project</b>	<b>Amount</b>	<b>Completion Date</b>
<b>Wastewater Collection</b>			
WWC97-04	1997 Mainline Rehabilitation	\$ 750,000	4/30/2000
WWC96-02	95-96 Mainline Rehabilitation	\$ 575,000	6/30/2000
WWC98-03	Downtown Street Improvements - Phase II	\$ 530,000	7/31/2000
WWC93-03	Consolidated Sewerage Distr - Project IX	\$1,850,000	8/31/2000
WWC95-01	System Development Plan (WW)	\$ 230,000	8/31/2000
WWC92-03	Consolidated Sewerage Distr - Project VII	\$2,950,000	10/31/2000
WWC93-04A	Lift Station Telemetry	\$ 650,000	10/31/2000
WWC98-01	Consolidated Sewerage Distr - Project X	\$2,525,000	10/31/2000
<b>Wastewater Treatment</b>			
WWT98-01	NE Plant Improvements	\$ 750,000	4/30/2000

## System Maintenance Expenditures

Historical maintenance expenditures from 1990 are shown on Table 7-3. The average annual percentage growth in the maintenance after leveling the variations between years (using a linear regression function) is 5.2 percent for wastewater during the 1991-2000 period. Both the amount of investment in facilities and inflation influence the amount of maintenance expense incurred. The amounts expended for maintenance of the wastewater system for the fiscal years ended 1991 through 2000 are provided in Table 7-3 below.

**Table 7-3**  
**Annual System Maintenance Expense - Wastewater System**

<b>Year Ended October 31</b>	<b>Amount</b>	<b>% Change</b>
1990	\$615,760	N/A
1991	\$725,093	17.8%
1992	\$793,123	9.4%
1993	\$834,038	5.2%
1994	\$862,196	3.4%
1995	\$859,165	-0.4%
1996	\$1,011,153	17.7%
1997	\$1,005,728	-0.5%
1998	\$931,480	-7.4%
1999	\$1,036,312	11.3%
2000	\$1,162,426	12.2%

Source: Craig Gautreaux, 3/7/01, LUS. - Fin. St. pg 32.

## Wastewater System

The following discussions summarize the findings of the Consulting Engineer with respect to the general condition of the properties based upon discussions with utility supervisory personnel and information supplied by LUS personnel.

The four principal wastewater treatment facilities are the South Plant, the East Plant, the Ambassador Caffery Parkway Plant, and the Northeast Plant. The four treatment plants, the type of treatment, the permitted capacity, and the estimated capacity for each wastewater treatment facility are shown in Table 7-4.

**Table 7-4  
Wastewater Treatment Plants**

Facility	Treatment Facilities Type	Permitted Daily Flow (mgd)	Estimated Capacity (mgd)
South Plant	Activated Sludge	7.0	7.0 <sup>(1)</sup>
East Plant	Trickling Filter and Oxidation Ditch	4.0	4.0
Ambassador Caffery Plant	Rotating Biological Contractor (RBC) and Oxidation Ditch	6.0	6.0
Northeast Plant	Oxidation Ditch	<u>1.5</u>	<u>1.5</u>
<b>TOTAL</b>		18.5	18.5

<sup>1</sup> Short term hydraulic capacity is 9.0 mgd  
Source: Craig Gautreaux, 3/7/01, LUS

The wastewater collection system consists of gravity sewers, interceptors, manholes, pumping stations and force mains, as tabulated in Table 7-5.

**Table 7-5  
Collection System**

Total miles of pipe	647.3
Manholes	9850
Pumping Stations	118

Source: Craig Gautreaux, 3/7/01, LUS

The wastewater collection system has, in the past, experienced excessive wastewater flow resulting in treatment plant bypasses and overflows of the wastewater collection system. The excess flows are attributed to infiltration and inflow of surface and groundwater into the wastewater collection system during and after rainfall. These incidents occurred at various locations in the collection systems for the Ambassador Caffery Plant, the South Plant, the Northeast Plant, and the East Plant. LUS reported these incidents to the United States Environmental Protection Agency ("USEPA") as required by its wastewater discharge National Pollution Discharge Elimination System ("NPDES") permits. As a result of these reports, the USEPA issued administrative orders requiring LUS to take immediate action to stop the overflows and to prepare a

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report identifying corrective action to prevent additional occurrences. The administrative orders by the USEPA require LUS to submit quarterly progress reports as the corrective infiltration and inflow plan proceeds.

LUS reports that the wastewater treatment plants are in material compliance with their NPDES permit conditions. There are times during or shortly after periods of heavy rainfall when they exceed their permit limits for suspended solids and occasionally biochemical oxygen demand ("BOD") and ammonia. These occurrences are reported to the regulatory agencies by LUS, as required by their permit conditions, thereby keeping LUS in compliance. The action required by the USEPA administrative orders described above for infiltration and inflow programs is intended to reduce flow throughout the system, thereby reducing overflows and bypasses and exceedances. However, there is no assurance the USEPA may not issue future notices of violation in connection with these exceedances.

## Historical Wastewater Utility Requirements

The wastewater facility of LUS has met customer demands for service, and provided its customers with adequate and reliable utility services during the period reported herein. The historical loads and load growth as served by the wastewater system is presented in Table 7-6.

**Table 7-6**  
**Wastewater System Historical Hydraulic Loads**

Fiscal Year Ending October 31	AVERAGE DAY HYDRAULIC LOADS (mgd) <sup>(1)</sup>				Totals
	South Plant	East Plant	Ambassador Caffery Plant	Northeast Plant <sup>(2)</sup>	
1991	5.6	2.8	4.7	1.0	14.1
1992	5.3	2.5	5.2	1.0	14.0
1993	5.3	2.6	5.4	0.9	14.2
1994	5.4	2.5	5.4	0.9	14.2
1995	5.3	2.2	5.1	0.9	13.5
1996	6.6	2.9	4.9	1.0	15.4
1997	6.8	3.1	5.2	1.1	16.2
1998	6.7	2.8	5.6	1.2	16.3
1999	6.4	2.3	5.5	1.1	15.3
2000	5.6	2.5	5.2	1.1	14.3
Permitted Capability	7.0	4.0	6.0	1.5	18.5
Estimated Capability	7.0 <sup>(3)</sup>	4.0	6.0	1.5	16.8

<sup>1</sup> Average day hydraulic loads are not adjusted to dry weather conditions and therefore include infiltration.

<sup>2</sup> Increase attributed to additions to service area and infiltration and inflow from older portions of service area.

<sup>3</sup> Based on addition of new clarifiers.

Source: Craig Gautreaux, 3/7/01, LUS

The decrease in flow from 1999 to 2000 is attributed to decreased rainfall. Each year LUS must prepare a municipal water pollution prevention audit report for each wastewater plant. The report is submitted to the Parish Council and the LDEQ. The report compares the design hydraulic and biological treatment capacity of each plant with the actual conditions. (See Table 7-7.)

**Table 7-7  
Wastewater Load vs Design**

Plant	Number of Months During Which an Exceedance of Design Occurred					
	Flow			Biological Loading		
	1998	1999	2000	1998	1999	2000
South Plant	3	3	2	1	1	1
East Plant	0	0	0	0	0	0
Northeast Plant	1	0	0	0	0	0
Ambassador Caffery Plant	2	1	1	3	8	2

Source: Craig Gautreaux, 3/7/01, LUS

It is apparent that the South Plant and the Ambassador Caffery Plant are at or very near their design limits. As described below, both are being upgraded.

The South Plant is being upgraded to accept 9 mgd of inflow, but permitted capacity will be limited to 7 mgd due to sludge processing limitations. The South Plant upgrades consist of a 3.5 million gallons (“mg”) flow holding basin, four 65-foot diameter clarifiers, new rotating screens and grit removal units, new return sludge stations on the east and west sides, modifications to the east side aeration chambers to connect to new final clarifiers, a new process water system by modifying the chlorine contact chamber, modifications to the existing roadway to fit the new clarifiers on the west side, and a SCADA system to monitor the plant and allow remote operation. The expected completion date for the South Plant project is early 2000.

The Ambassador Caffery Plant is also nearing its design capacity. LUS has begun engineering studies to determine what actions are needed to provide adequate future treatment capacity along with additional storage capacity.

The East Plant, also being upgraded, project consists of a three mg holding basin, two 60-foot diameter clarifiers, a new sludge processing facility, new influent rotating screens for rag removal, an additional headworks pumping station along with modifications to the existing facility, a new storage building, and modifications to the return sludge pumping station. The expected completion date for the East Plant project is early 2000. A major improvement will be a SCADA system utilizing software for remote monitoring and allowing remote control from the South Plant.

Historical information describing the wastewater collection system is summarized in Table 7-8.

**Table 7-8  
Wastewater Collection System**

Fiscal Year Ended October 31	Number of Customers	COLLECTION	
		Total Miles of Pipe <sup>(1)</sup>	Total Number of Pumping Stations
1990	31,746	599.9	101
1991	32,154	604.4	103
1992	32,467	610.6	107
1993	32,896	619.3	106
1994	33,476	624.8	106
1995	33,955	628.5	106
1996	34,475	633.0	106
1997	34,835	621.7	112
1998	35,261	636.8	115
1999	35,695	640.4	116
2000	35,902	647.3	118

<sup>1</sup> Not including service lines.

Source: Craig Gautreaux, 3/7/01, LUS and LUS Financial and Operating Statement - 2000

The above statistics show that the total pipe in the wastewater collection system has increased at the same rate as the number of customers, while the number of lift stations has increased at a significantly greater rate. The flat topography of the service area means that additional lift stations will be needed as the system expands.

The wastewater collection division has been recording the number and type of overflows that have occurred in the system since 1993. The information is summarized in Table 7-9. LUS staff reports that the efforts to collect data on overflows were increased beginning in 1995 when wastewater collection personnel began to actively seek rain-related problems during periods of rainfall when normal work assignments were interrupted. Prior to 1995, incidents were recorded when reported but were not actively sought out.

**Table 7-9  
Wastewater Collection System Overflows**

Fiscal Year Ended October 31	Rain Related	Lift Station Equipment Failure	Main Line Stoppage	Broken Pipe	Total	Total Annual Precipitation
1993	58	19	15	3	95	81
1994	59	26	6	0	91	62
1995	70	43	21	4	138	77
1996	51	25	19	5	100	67
1997	69	21	10	4	104	52
1998	60	16	44	6	126	73
1999	34	13	44	11	102	53
2000 <sup>(1)</sup>	6	14	36	9	65	44

<sup>1</sup> Includes seven months of recorded data.

Source: Craig Gautreaux, 3/7/01, LUS.

In compliance with regulations and administrative orders by USEPA, LUS has initiated a pretreatment, user permit and fee program for the purpose of issuing wastewater discharge permits and pretreatment standards to industrial, commercial and non-residential customers who discharge wastewater to the wastewater collection system. LUS performs this service as a benefit to its customers. If LUS did not have an approved program, these customers could not discharge to the System and would have to construct their own treatment facilities which would very likely be considerably more expensive than discharging to LUS' Wastewater System. LUS has established a rate for industrial users to recover a portion of program costs. The remaining costs are recovered through wastewater revenues.

## **Contracts and Agreements**

LCG has many contracts and agreements in connection with the business of the Utilities System. Only principal contracts and agreements are summarized in the following paragraphs. The contracts and agreements are listed in Table 7-10.

On June 16, 1975, the City entered into an agreement with Sewerage District No. 6 to provide treatment and disposal of all sewage collected and to provide the operation and maintenance for the District's Sewage System. The terms of the agreement is for a period of time until more than 50 percent of the District's customers are located within the city limits of Lafayette.

In August of 1995, LUS entered into a wastewater operation and maintenance agreement with an area known as the Grossie Avenue Area. This area is served by a system that is separately located and owned and consists of a very small number of customers (approximately 50). The 40-year agreement expires in August, 2035.

**Table 7-10  
Contracts and Agreements**

<b>Contracts and Agreements between</b>	<b>Date Signed/Renewed</b>	<b>Termination Date</b>	<b>Provisions</b>
LCG Sewerage District 6	June 16, 1975	until 50% served	Wastewater treatment by LUS
LUS Grossie Ave Area	August 21, 1995	August 21, 2035	Wastewater treatment by LUS

Source: LUS Power Marketing

## **Load Forecasts**

Load forecasts for the wastewater utility system for the five-year period of 2001 through 2005 are presented below. The forecasts reflect the current assessment of expected load growth for the period.

The five-year projection of average-day inflow to the wastewater treatment plants is represented in Table 7-11. It is based upon the historical trend over the last 10 years. Some residents in the Parish are presently served by privately owned wastewater systems. The projection does not include any sharp increase in inflow that could result from adding these areas to the LUS system.

**Table 7-11  
Wastewater System  
Projected Hydraulic Loads**

Fiscal Year Ending October 31	AVERAGE DAY HYDRAULIC LOADS (mgd)				
	South Plant	East Plant	Ambassador Caffery Plant	Northeast Plant	Totals
2000 (Actual)	5.6	2.5	5.2	1.1	14.4
2001	6.4	2.6	5.6	1.2	16.4
2002	6.5	2.6	5.7	1.2	16.7
2003	6.6	2.7	5.8	1.2	17.1
2004	6.7	2.8	5.9	1.2	17.4
2005	8.3	3.0	5.5	1.2	18.0
Permitted Capacity	7.0	4.0	6.0	1.5	18.5

Source: Craig Gautreaux, 3/7/01, LUS.

The above forecast of wastewater treatment inflows is based upon recent historical trends for each wastewater plant. These projections are subject to change depending upon the success of the inflow and infiltration program in controlling or reducing rain-related effects. The projections should be used with prudence and frequently updated based on results of the infiltration and inflow program. The forecast for the South Plant predicts that it will exceed its present design capacity in the near future.

## System Improvement Program

LUS established a system improvement program called CIP in 1989. The program is a five-year "look ahead," which is revised annually and is a means to plan for and manage the major capital projects and wastewater.

The estimated annual capital budget requirement amounts are shown in Table 7-12 and were obtained from LUS' Five Year Capital Improvement Program dated December 1999.

**Table 7-12  
Estimated Annual Capital Budget Requirements**

	Collection	Treatment	Total
2000	\$10,734	\$13,095	\$23,829
2001	4,600	7,300	11,900
2002	4,200	10,750	14,950
2003	1,250	100	1,350
2004	<u>1,250</u>	<u>100</u>	<u>1,350</u>
Total	\$22,034	\$31,345	\$53,379

Source: Wastewater Capital Improvement Plan.

## Wastewater System

The wastewater program has seen the greatest growth in the total cost of CIP projects. This is driven by EPA mandates to eliminate overflows and bypass of wastewater and

to reduce inflow and infiltration. Projects planned for the next five years are summarized as follows.

- Rehabilitation of manholes, lift stations, and mainline sewers;
- Television inspection and repair of sewer lines
- Upgrade of Old Maurice lift station
- South Plant trunk line replacement
- Addition of equalization basins and secondary clarifier at South and East Plants
- Improvements to South Plant sludge handling and treatment

The projects are intended to reduce infiltration and inflow, and that are mandated by the EPA's administrative orders.

Two of the existing treatment plants, the South Plant and the Ambassador Caffery Plant, are both near capacity even with the planned upgrades and additions. LUS has begun evaluating options for providing additional capacity including expanding the South Plant or constructing a new plant or some combination.

## Recommendations

Recommendations and their status are provided in Table 7-13 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 7-13  
Recommendations**

Wastewater System	Priority	Status
We recommend that LUS give highest priority to upgrading and expanding the South and Ambassador Caffery plants as soon as possible to provide adequate treatment and capacity and avoid exceedance of NPDES permit limits.	Highest	Investigating



## Section 8

# ENVIRONMENTAL ISSUES

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### Introduction

LUS' electric, water and wastewater systems are subject to numerous environmental laws and regulations. This section provides a discussion of the current status of major environmental permits for the Utilities System. This section is not meant to provide a comprehensive compliance audit of the system and addresses only the major laws that affect the electric, water and wastewater systems including: the Clean Air Act Amendments of 1990 ("CAAA"), the Clean Water Act, and the Safe Drinking Water Act ("SDWA"). Requirements of the CAAA are administered through a permit program administered by LDEQ and USEPA. Requirements of the Clean Water Act are administered through a permit process whereby any discharge into surface waters requires NPDES permit. The SDWA establishes standards for public water systems, whereby tap water must meet certain quality standards for different chemicals as established by the USEPA.

LUS facilities, operations and associated activities are subject to regulations that cover the following areas: storage and disposal of hazardous waste, Superfund liability, used oil, pesticides, wastewater discharges, PCBs, underground tanks, oil spills, asbestos, wood poles, emergency planning and community right-to-know, stormwater discharges, air emissions, solid waste disposal, waterways permitting, federal lands, groundwater, and emergency notification.

### Environmental Compliance

The Environmental Compliance Division is managed by the Environmental Compliance Manager, who reports directly to the Director of Utilities. The Environmental Compliance Manager is Ms. Allyson Chaumont. The Environmental Compliance Division supports the Utilities System in the following areas:

- Regulatory compliance for electric production/distribution
- Industrial pretreatment
- Wastewater analysis and land-farming
- Water analysis

### Electric Production

LUS operates one electric generating facility located in the City (the Doc Bonin Plant) which is fueled by natural gas. Another LUS facility, the Curtis Rodemacher Station is no longer in operation.

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Boiler Nos. 1 and 2 at Bonin Station were constructed before 1969, and therefore do not need a LDEQ air emissions operating permit. Boiler No. 3 at Bonin LDEQ was either constructed or modified after 1969 and, therefore, has a air emissions certificate for operation. The LDEQ issued a variance that allows LUS to burn diesel fuel (or No. 2 fuel oil) in Boiler No. 3 for up to four days per year. The purpose of this variance is to allow LUS to burn fuel oil if their natural gas supply is temporarily interrupted.

The Bonin Plant includes four fuel storage tanks, which are dedicated to Fuel Oil No. 6 and diesel fuel, as provided in Table 8-1 below.

**Table 8-1**  
**Fuel Oil Storage Tanks**

Tank	Type	Gallons
Tank No. 1	Fuel Oil No. 6	440,000
Tank No. 2	Fuel Oil No. 6	1,443,000
Tank No. 3	Diesel Fuel	2,538,000
Tank No. 4	Diesel Fuel	2,538,000

Source: J. Broussard, 3/7/01. LUS.

Since LUS does not have a permit to burn No. 6 fuel oil in any of its facilities, the contents of Tank Nos. 1 and 2 were sold in 1999. LUS is preparing to have the remaining sludge removed from these tanks. After removal of this sludge, Tanks 1 and 2 will be cleaned and filled with the diesel fuel currently in Tanks 3 and 4. Tanks 3 and 4 will be assessed for future use.

The Oil Pollution Control Act requires that oil spill response plans be prepared for facilities that exceed certain requirements. Briefly, if the facility's total oil storage capacity is greater than or equal to 1,000,000 gallons, an oil spill response plan must be prepared. LUS reports that they have prepared an oil spill response plan that meets the requirements of the regulation.

LUS installed continuous emission monitors ("CEMs") at the Bonin Plant prior to January 1, 1996 as required by CAAA regulations issued by USEPA (40 CFR75). Combustion gas flow, NO<sub>x</sub> emissions, and CO<sub>2</sub> emissions are monitored and reported quarterly to the State and USEPA. SO<sub>2</sub> emissions are monitored through gas fuel flow monitoring and low sulfur content in the gas fuel. LUS did not experience any exceedances of its permitted emissions from the Bonin Plant in 2000.

The CAAA requires LUS to obtain new air emissions operating permits for the Bonin Plant. Application for this new "Title V" operating permit was submitted on October 15, 1996, to the LDEQ. The LDEQ issued a letter of completeness dated December 17, 1996, which extends the effective date of all operating permits until the Title V permit is issued. The timing for the issuance of the final permit is unknown at the time of this report.

The Bonin Plant operates under an NPDES wastewater discharge permit issued by the LDEQ (Permit #LA 0005711). The current permit provides for the discharge of cooling tower blowdown and plant site stormwater drainage. No violations of this

permit were issued in 2000, however, exceedances of iron concentrations in water discharge were reported.

## **SPCC Plans - Electric Transmission And Distribution, Generation**

Electric substations that are located where oil from a spill could reach navigable waters and have more than 660 gallons in any single container, must have a Spill Prevention Control and Countermeasure ("SPCC") Plan in accordance with 40 CFR 112. LUS reports that they have 16 such substations and have prepared SPCC plans for all of them. SPCC plans must be updated every three years, however, LUS is not sure if these plans have been updated. R. W. Beck has not reviewed these plans. No reportable spills occurred in 2000.

## **Other Environmental Plans**

Other environmental plans required by LUS include the Emergency Response Plan (also Risk Management Plan) and Stormwater Pollution Prevention Plan ("SPPP"). LUS indicated they were in compliance with the requirements of these plans, however, copies of these plans were not available for review.

## **PCB Transformers**

LUS reports that they manage PCB-containing equipment as required by Federal and State law and regulations. LUS has PCB-containing equipment in service and they also store, inspect and keep records of all PCB-containing equipment and fluids before sending them off-site for disposal. In 2000, LUS filed a report with EPA stating there were no PCB transformers (>500 ppm) in its inventory. Additionally, LUS has a program in which they remove transformers with any concentrations of PCBs as they are identified. These transformers are replaced with PCB-free transformers.

## **Grant Street Substation - Environmental Cleanup**

In September of 1991, LUS undertook a project to install and upgrade the electrical capabilities of Grant Street Substation No. 2. During the course of the construction activities, visible traces of petroleum products were discovered in the shallow ground water. LUS notified the LDEQ of the findings and began a historical investigation of the site.

Subsequent investigations at the site revealed petroleum contamination in the groundwater at the site, under the adjoining property owners' sites and at the nearby Grant Street Substation No. 1. LUS reports that remediation of the sites has been started using an in-place biological technology process which degrades the petroleum contamination by means of bacterial action. They report that contamination levels have been reduced to target levels but the process is slower than anticipated. Additionally, LUS has installed several monitoring wells at and near these sites. In

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2000, LUS submitted a Risk Evaluation Corrective Action Plan ("RECAP") to LDEQ. No response was received from LDEQ.

### **Curtis Rodemacher Decommissioning**

As mentioned in Section 5 of this report, the Curtis Rodemacher Plant has been retired. LUS is in the process of decommissioning this site. In 2000, LUS submitted a RECAP to LDEQ for the chemical storage area of this site. Additionally in 2000, LUS hired a consultant, limited access to the site, plugged two water wells on site, and sampled transformer concrete pads for contamination.

### **Beadle Road Substation**

In 2000, LUS began preparing an existing site for a new substation located at Beadle Road. During this process, evidence of subsurface contamination was discovered. LUS has removed the sources of contamination from the site and submitted a RECAP to LDEQ in September 2000.

### **Industrial Pretreatment**

The Industrial Pretreatment program provides system monitoring, customer service, and community outreach services. In 1999, the Pretreatment Division initiated several programs, including visits to elementary schools, presentations at USEPA conferences, as well as development of an Internet based information system. For its efforts, LUS' pretreatment program received a certificate of appreciation from the USEPA in 1999.

### **Wastewater Collection and Treatment**

Each of the four wastewater treatment plants have NPDES permits that specify the operating and performance conditions for the wastewater system. The NPDES permits for each of the four wastewater treatment plants expired on October 31, 1999. LUS reports that they have submitted renewal applications for all four plants, however, they are waiting for a response from LDEQ. The existing permits although expired, remain in effect since renewal applications have been submitted. The permit conditions require LUS to regularly test for compliance with permit conditions, and report any violations or exceeds of permit limits, including bypass or overflow of wastewater. Although some notices of bypass were reported to the LDEQ, however no violations were issued.

LUS has responded to reported bypasses with the development of a long-term program of corrective actions to eliminate overflows and bypasses and to reduce infiltration and inflow. The corrective action includes repairs and modifications to pumping stations, construction of retention basins, flow metering, sewer system evaluation, repair and rehabilitation of manholes, service connections, and sewer pipes throughout the system. LUS and USEPA agreed to a compliance schedule that identifies the corrective actions to be taken by LUS to eliminate the causes of overflows and

bypasses. Table 8-2 below summarizes the outstanding issues that remain with regard to this agreement.

**Table 8-2  
Compliance Schedule and Associated Corrective Actions (EPA/LUS Agreement)  
Outstanding Issues**

<b>EAST TREATMENT PLANT (VI-96-1224)</b>	
<b>ACTIVITY</b>	<b>DUE DATE</b>
Attain compliance with permit conditions.	January 31, 2000
<b>SOUTH TREATMENT PLANT (VI 94-1225)</b>	
<b>ACTIVITY</b>	<b>DUE DATE</b>
Complete all improvements necessary to comply with the NPDES Permit and eliminate all unpermitted discharges.	January 1, 1999
All terms and conditions of the permit are effective as issued and require full compliance.	January 31, 2000
<b>AMBASSADOR CAFFERY TREATMENT PLANT (VI 96-1226)</b>	
<b>ACTIVITY</b>	<b>DUE DATE</b>
Complete all improvements necessary to comply with the NPDES Permit and eliminate all unpermitted discharges.	July 1, 2002

Source: Craig Gautreaux, 3/7/01. LUS

Additional planned work for control of infiltration and inflow ("I&I") is identified in Section 7 of this Report.

The LDEQ is studying the Vermilion River for possible changes in water quality standards that could affect LUS' wastewater treatment plants. However, the effect of these new standards on LUS is not known at this time.

## **Wastewater Analysis and Land Farming**

LUS currently utilizes a land farming program to dispose of its biosolids that are a result of its wastewater operations. This program is operated under a permit from the LDEQ. In early 2000, LUS identified increases in the molybdenum concentrations of its biosolid waste. The source of this increase has yet to be determined, however, LUS is actively pursuing this issue. Despite these increased concentrations, no exceedances of LUS' land farming permit occurred in 2000. In fact, the LDEQ recognized LUS' land farming operations as being in full compliance for 2000.

## **Water Production and Distribution System**

LUS reports that the water production facilities are currently complying with their operating permits, and they report that they currently meet all applicable drinking water standards of the Safe Drinking Water Act.

## Recommendations

Recommendations and their status are provided in Table 8-3 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 8-3  
Recommendations**

Environmental Issues	Priority	Status
We recommend LUS complete a cost-benefit assessment of the Inflow and Infiltration (I&I) expenditures to determine the amount of I&I reduction relating to the amount of I&I remediation expenditures.	Highest	Investigating
We recommend LUS review all of its various environmental plans (SPCC, Emergency Response, SPPP) to ensure that they are in compliance with regulations.	Highest	Investigating