

Final Report

# **2004 COMPREHENSIVE ENGINEERING REPORT**

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

**Year Ended October 31, 2004**

April 29, 2005









April 29, 2005

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

Subject: **2004 Comprehensive Engineering Report**

Dear Terry:

Enclosed please find 30 copies of R. W. Beck's Final 2004 Comprehensive Engineering Report. This report is based on field reviews and interviews conducted during the week of February 21, 2005.

It was pleasure working with you and your staff on this project. If you have any questions, please feel free to contact me directly at (303) 299-5327.

Sincerely,

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

A handwritten signature in cursive script that reads 'Jill Sangster'.

Jill Sangster  
Assistant Project Manager

JAS/km

Enclosure





# LAFAYETTE UTILITIES SYSTEM 2004 COMPREHENSIVE ENGINEERING REPORT

## Table of Contents

---

*Letter of Transmittal*

*Table of Contents*

*List of Tables*

### **Section 1 INTRODUCTION**

Requirements of Report.....	1-1
Authority.....	1-1
Report Purpose .....	1-2
Consulting Engineer.....	1-2
Utilities System Revenue Bonds .....	1-3
Security Issues .....	1-5
Changing Utility Environment .....	1-6
Recommendations .....	1-8

### **Section 2 RECOMMENDATIONS**

Definitions .....	2-1
Highest Priority .....	2-1
High Priority .....	2-1
Normal Priority .....	2-1
Recommendations .....	2-2
Section 1 – Introduction.....	2-2
Section 3 – Organization and Management.....	2-2
Section 4 – Finance and Accounting .....	2-2
Section 5 – Electric Utility.....	2-3
Section 6 – Water Utility .....	2-4
Section 7 – Wastewater Utility .....	2-5
Section 8 – Fiber Utility.....	2-5
Section 9 – Environmental Issues .....	2-6

### **Section 3 ORGANIZATION AND MANAGEMENT**

Government Organization .....	3-1
Organization.....	3-1
Home Rule Charter .....	3-1
Lafayette Utilities System.....	3-2
LUS Management, Organization and Personnel .....	3-3
Management of the Utilities System.....	3-3

---



## Table of Contents

---

Organization .....	3-3
Engineering Division .....	3-5
Personnel .....	3-7
Results .....	3-9
Insurance .....	3-10
Governmental Functions Supporting LUS .....	3-11
Department of Finance .....	3-11
Department of Administrative Services .....	3-12
Counsel .....	3-13
Meter Services .....	3-13
LUS Organizational Goals .....	3-14
Recommendations .....	3-15

### Section 4 FINANCE AND ACCOUNTING

LUS Operating Results .....	4-1
Customer Sales Data .....	4-6
Adequacy of Revenues .....	4-9
Franchises .....	4-9
Rate Revisions .....	4-10
Rate Comparison .....	4-12
Operation & Maintenance Expenses .....	4-14
LUS Operation and Maintenance Expenses .....	4-14
Comparative Operation and Maintenance Expenses .....	4-18
Glossary for Electric Operating Ratios .....	4-21
Utilities System Capital Improvement Program .....	4-23
Capital Improvement Program .....	4-24
Restricted Asset Transactions and Balances .....	4-26
Bond Reserve Fund .....	4-27
Capital Additions Fund .....	4-27
Construction Fund .....	4-28
In-Lieu-of Tax .....	4-29
Financial and Operating Ratios .....	4-30
Glossary for Electric Financial and Operating Ratios .....	4-31
Balance Sheet .....	4-33
Operating Budget .....	4-35
Fund Balances .....	4-38
Audit .....	4-38
Accounting .....	4-38
Recommendations .....	4-39

### Section 5 ELECTRIC UTILITY

Existing Utilities System .....	5-1
Additions to Plant .....	5-1
System Maintenance Expenditures .....	5-1
Existing Electric Utility System .....	5-2
Electric System Power Supply .....	5-2
Gas-fired Generation: Facilities Description .....	5-2



Gas-Fired Generation: Condition of the Property.....	5-3
Gas-Fired Generation: Operations and Maintenance.....	5-3
Gas-Fired Generation: Operating Statistics .....	5-5
New Gas-Fired Generation .....	5-6
Coal-Fired Generation .....	5-7
Electricity Dispatching Function .....	5-9
Electric Operations .....	5-9
Organization.....	5-9
System Characteristics .....	5-10
Key Issues, Goals and Achievements .....	5-10
Reliability and Performance .....	5-11
Predictive and Preventative Maintenance.....	5-12
Electric Operations Division .....	5-14
Transmission and Distribution.....	5-14
Energy Control System & Meter Shop .....	5-15
Energy Control System .....	5-15
SCADA System .....	5-16
Meter Shop.....	5-17
Substation and Communications.....	5-18
Facilities Management .....	5-19
Historical Utility Requirements.....	5-19
Electric System Requirements .....	5-20
Electric Contracts and Agreements .....	5-21
Purchased Power and Energy Agreements .....	5-21
Lafayette Public Power Authority .....	5-21
Southwestern Power Administration .....	5-21
Power and Energy Sales Agreements .....	5-21
Louisiana Energy and Power Authority.....	5-22
The Energy Authority .....	5-22
Electric Interconnection, Interchange, and Transmission Access	
Agreements .....	5-23
Interconnection and Transmission Agreements.....	5-23
Entergy Gulf States .....	5-23
Central Louisiana Electric Company .....	5-24
Interchange Agreements .....	5-24
Joint Ownership/Use Agreements.....	5-25
Other Agreements .....	5-25
Southwestern Louisiana Electric Membership Co-op .....	5-25
Coal for Rodemacher Unit No. 2 .....	5-25
Louisiana Intrastate Gas Corporation .....	5-25
Gas Pipeline .....	5-26
Load Forecasts.....	5-26
System Improvement Program .....	5-28
Recommendations .....	5-29

## Section 6 WATER UTILITY

Water Utility System .....	6-1
----------------------------	-----

## Table of Contents

---

Key Challenges, Issues, and Goals .....	6-1
Additions to Plant.....	6-2
System Operation and Maintenance Expenditures.....	6-2
System Staffing .....	6-4
Water System.....	6-4
Wholesale Water Sales .....	6-5
Unbilled Water Volumes .....	6-7
Drinking Water Quality .....	6-7
Historical Water Utility Requirements.....	6-8
Water System Production .....	6-8
Contracts and Agreements .....	6-10
Water District North .....	6-10
Water District South .....	6-11
Other Wholesale Water Contracts .....	6-12
Forecasts.....	6-12
Future Regulatory Requirements .....	6-13
System Improvement Program.....	6-14
Key Issues .....	6-15
Cost Containment .....	6-15
Customers and Community .....	6-16
Operations.....	6-16
Performance Measurement .....	6-16
Recommendations .....	6-16

### Section 7 WASTEWATER UTILITY

Wastewater Utility System.....	7-1
Additions to Plant.....	7-1
Operation and Maintenance Expenditures .....	7-1
Wastewater System .....	7-2
Historical Wastewater Utility Requirements.....	7-4
Contracts and Agreements .....	7-8
Load Forecasts.....	7-9
Future Regulatory Requirements .....	7-10
Sanitary Sewer Overflow Control Policy .....	7-10
System Improvement Program.....	7-11
Wastewater System.....	7-12
Key Issues .....	7-12
Cost Containment .....	7-13
Customers and Community .....	7-13
Operations.....	7-13
Performance Measurement .....	7-14
Recommendations .....	7-14

### Section 8 FIBER UTILITY

Introduction .....	8-1
System Condition and Capital Requirements.....	8-1
Customer and Service Offerings .....	8-2



Contracts and Pricing .....	8-3
Financial Performance .....	8-3
Recommendations .....	8-4

## Section 9 ENVIRONMENTAL ISSUES

Introduction .....	9-1
Environmental Compliance .....	9-1
Electric Production.....	9-2
Spill Prevention Control and Countermeasure Plans.....	9-3
Other Environmental Plans .....	9-3
PCB Transformers .....	9-3
Grant Street Substation .....	9-4
Curtis Rodemacher Decommissioning .....	9-4
Beadle Road Substation .....	9-4
Industrial Pretreatment.....	9-4
Wastewater Collection and Treatment .....	9-5
Wastewater Analysis and Biosolids Reuse.....	9-6
Water Production and Distribution System.....	9-6
New Gas Turbine Electric Generators.....	9-6
Recommendations .....	9-7

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.

Copyright 2005, R. W. Beck, Inc.  
All rights reserved.

## Table of Contents

---

### List of Tables

Table 1-1 Projected Lafayette Utilities Revenue Bonds Bond Amortization Schedule.....	1-4
Table 1-2 Utilities System Revenue Bonds Summary.....	1-5
Table 1-3 Recommendations .....	1-8
Table 3-1 President and Council Members (2004).....	3-1
Table 3-2 LPUA Members (2004).....	3-2
Table 3-3 LUS Division Managers .....	3-4
Table 3-4 LUS Annual Salaries .....	3-7
Table 3-5 LUS Employees as of October 2004 .....	3-8
Table 3-6 LUS Median Salary Ranges .....	3-9
Table 3-7 LUS Insurance Transactions.....	3-11
Table 3-8 Department of Finance Associate CAO – Finance and Management.....	3-12
Table 3-9 Key Areas and Goals .....	3-14
Table 3-10 Recommendations .....	3-15
Table 4-1 Electric System Net Operating Revenues.....	4-2
Table 4-2 Average Energy Costs (\$/MWh) .....	4-2
Table 4-3 Water System Net Operating Revenues .....	4-3
Table 4-4 Wastewater System Net Operating Revenues .....	4-4
Table 4-5 Fiber System Net Operating Revenues.....	4-5
Table 4-6 Disposition of Unpledged Cash.....	4-6
Table 4-7 Electric Sales Revenue and Statistics .....	4-7
Table 4-8 Water Sales Revenue and Statistics.....	4-8
Table 4-9 Wastewater Sales Revenue and Statistics.....	4-8
Table 4-10 Fiber Sales Revenue and Statistics .....	4-9
Table 4-11 Electric Retail Base Rates (\$/kWh).....	4-11
Table 4-12 Water Retail Rates (\$/1,000 gallons).....	4-11
Table 4-13 Wastewater Retail Rates (\$/1,000 gallons) .....	4-12
Table 4-14 Electric System Detailed Expenses .....	4-15
Table 4-15 Water System Detailed Expenses .....	4-16
Table 4-16 Wastewater System Detailed Expenses.....	4-16
Table 4-17 Fiber System Detailed Expenses .....	4-17
Table 4-18 Electric System Annual Power Costs .....	4-17
Table 4-19 Financial & Operating Ratios - Public Power Systems.....	4-20
Table 4-20 Capital Improvement Program 2005 – 2009 (\$1,000).....	4-24
Table 4-21 Comparison of Budget and Actual Capital Expenditures (\$1,000).....	4-26
Table 4-22 Reserve Fund (\$1,000) .....	4-27
Table 4-23 Capital Additions Fund (\$1,000).....	4-28
Table 4-24 Construction Fund (\$1,000) – 2004 Bonds .....	4-29
Table 4-25 Historical ILOT Payments (\$1,000).....	4-30
Table 4-26 Financial & Operating Ratios - Public Power Systems.....	4-31
Table 4-27 Comparative Balance Sheet.....	4-34
Table 4-27 (continued) Comparative Balance Sheet .....	4-35
Table 4-28 Comparison of Actual Results to the Amended Budget (\$1,000).....	4-36



Table 4-29 Utilities System Budget .....	4-37
Table 4-30 Recommendations.....	4-39
Table 5-1 Capital Workorder Expenditures for Fiscal Year 2004 .....	5-1
Table 5-2 Electric System Annual Maintenance Expense .....	5-2
Table 5-3 LUS Gas-Fired Generation .....	5-3
Table 5-4 LUS Gas Fired Electric Generation Operating Statistics .....	5-5
Table 5-5 LPPA Electric Generation Operating Statistics Rodemacher Unit No. 2...	5-8
Table 5-6 LUS Reliability Index Summary .....	5-12
Table 5-7 2004 Reliability Index Summary Comparison .....	5-12
Table 5-8 Maintenance and Equipment Schedule.....	5-13
Table 5-9 Electric System Historical Power And Energy Requirements .....	5-21
Table 5-10 Power Delivery Points .....	5-25
Table 5-11 Interchange Agreements .....	5-25
Table 5-12 Contracts and Agreements.....	5-27
Table 5-13 Electric System Projected Energy Sales .....	5-28
Table 5-14 Electric System Projected Peak Power Requirements.....	5-28
Table 5-15 Electric System Comparison Total Demands and Resources (MW).....	5-29
Table 5-16 Estimated Annual Capital Requirement Appropriations Electric System Improvements (\$1,000) .....	5-30
Table 5-17 Recommendations.....	5-31
Table 6-1 Capital Workorder Expenditures Fiscal Year 2004.....	6-2
Table 6-2 Annual Water System Operation and Maintenance Expense .....	6-3
Table 6-3 Plant Treatment Capacity .....	6-5
Table 6-4 Wholesale Water Sales Volumes (1,000 gallons).....	6-6
Table 6-5 Wholesale Water Sales Revenue .....	6-6
Table 6-6 Unaccounted for Water Volumes .....	6-7
Table 6-7 Water Quality Results.....	6-8
Table 6-8 Historical Water System Production .....	6-9
Table 6-9 Water Distribution System .....	6-10
Table 6-10 Contracts and Agreements LUS Wholesale Water Sales .....	6-12
Table 6-11 Water System Projected Requirements .....	6-13
Table 6-12 New and Proposed Rules.....	6-14
Table 6-13 CIP Water System Improvements (\$1,000).....	6-15
Table 6-14 Recommendations.....	6-17
Table 7-1 Capital Workorder Expenditures for Fiscal Year 2004 .....	7-1
Table 7-2 Annual Wastewater System Operation and Maintenance Expense.....	7-2
Table 7-3 Wastewater Treatment Plants .....	7-3
Table 7-4 Collection System.....	7-3
Table 7-5 Wastewater System Historical Hydraulic Loads .....	7-5
Table 7-6 Wastewater Load vs. Design .....	7-6
Table 7-7 Wastewater Collection System.....	7-7
Table 7-8 Wastewater Collection System Overflows .....	7-8
Table 7-9 Contracts and Agreements.....	7-9
Table 7-10 Wastewater System Projected Hydraulic Loads.....	7-9
Table 7-11 Estimated Annual Capital Budget Requirements (\$1,000).....	7-12
Table 7-12 Recommendations.....	7-14

## Table of Contents

---

Table 8-1 Actual Capital Expenditures Compared to Budget .....	8-2
Table 8-2 Revenue Composition by Service Category .....	8-3
Table 8-3 LUS Powered Network Historical Annual Revenues .....	8-3
Table 8-4 Recommendations .....	8-4
Table 9-1 Fuel Oil Storage Tanks .....	9-2
Table 9-2 Recommendations .....	9-7

## List of Figures

Figure 4-1: Residential Rates for LUS and Selected Louisiana Utilities .....	4-12
Figure 4-2: Commercial Rates for LUS and Selected Louisiana Utilities .....	4-13
Figure 4-3: Water Rates for LUS and Selected Louisiana Utilities .....	4-13
Figure 4-4: Wastewater Rates for LUS and Selected Louisiana Utilities .....	4-14
Figure 4-5: Production & Purchased Power Expense per MWh (Total Resources) .....	4-18
Figure 4-6: Transmission O&M per MWh (Total Resources) .....	4-19
Figure 4-7: Distribution O&M per Customer .....	4-19
Figure 4-8: Overhead O&M per MWh Retail Sales .....	4-20
Figure 5-1: Total Generation Contribution by Gas-Fired Facilities .....	5-6
Figure 5-2: Annual Unit MWh Delivery to LUS .....	5-8
Figure 5-3: Energy Requirements .....	5-20
Figure 6-1: Water System Annual O&M Cost .....	6-3
Figure 6-2: Water System Annual O&M (Cost per 1,000 gallons) .....	6-3
Figure 6-3: Water Production (million gallons per day) .....	6-9









**Section 1**  
**INTRODUCTION**

---







# Section 1

## INTRODUCTION

---

### Requirements of Report

This 2004 Comprehensive Engineering Report ("Report") covers the Fiscal Year 2004 period. Financial data and most operational data is reported for the fiscal year (November 1, 2003 to October 31, 2004). Some electric generation plant and water system operating data is on a calendar year basis. This Report has been prepared in accordance with the requirements of the City of Lafayette (the "City") General Bond Ordinance dated June 29, 2004 (the "Bond Ordinance"), and in accordance with subsequent pari passu indebtedness. Pari passu means that the covenants on these bonds are identical to all other revenue bonds issued by the City.

This Report is prepared in accordance with the provisions of Sections 8.1 and 8.2 of the Bond Ordinance that states in part:

*"...The Issuer...shall retain Consulting Engineer for the purpose of providing the Issuer immediate and continuous counsel and advise regarding the Utilities System...The Consulting Engineer shall prepare within one hundred eighty (180) days after the close of each fiscal year a comprehensive report... upon the operations of the 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, and shall include whatever criticism of any phase of the operation of the Utilities System the Consulting Engineer may deem proper...including recommended changes in organization, pay scales and risk management practices..."*

### Authority

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

## Section 1

---

Executive Officer of LPPA is the President of the LCG. The LUS Director is also the Managing Director of LPPA.

LUS' properties and assets, controlled and operated by the LCG, are designated by the Bond Ordinance as the "Utilities System." The Utilities System is comprised of an electric system (including generation, transmission and distribution facilities), a fiber system (including a fiber optic loop throughout the City), 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" or "R. W. Beck"), 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 Ordinance, include advising LUS on its appointment of Chief Operating Officer, providing continuous engineering counsel to LCG in connection with the operations of the Utilities System, advising on rate revisions, and preparing an annual comprehensive report (specifically, this Report) on the operations of LUS after the close of each fiscal year.

This Report includes our opinion and suggestions on the following issues:

- Operations of the Utilities System.
- Maintenance of the properties.
- Efficiency of management of the properties.



- Proper and adequate keeping of books of account and record.
- Adherence to budget and budgetary control provisions.
- Adherence to all the provisions of the Ordinance.
- Other items having a bearing on efficient and profitable operations.

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

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

- Will operate the Utilities System in a business-like manner.
- 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 Ordinance. However, bonds may hereafter be issued on a parity with the existing authorized bonds under conditions as set forth in the Bond Ordinance.
- 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 7.2 of the Bond Ordinance.
- Will maintain the Utilities System in good condition and will make all reasonable and necessary repairs, renewals, and replacements thereto.

Field interviews were initiated as part of this Report in February of 2005. 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' facilities.

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

## Utilities System Revenue Bonds

Utilities System Revenue Bonds have been an important source of capital for additions and improvements to the Utilities System. Prior to the issuance of the Utility Revenue Bonds, Series 2004 (the "2004 Bonds"), the proceeds from two prior bond issues remained outstanding. Specifically, the prior bond balances included \$6,020,000 from the Revenue Refunding Bond Series 1993 (the "1993 Bonds") and \$13,520,000 from the Utilities Revenue Bond Series 1996 (the "1996 Bonds"). With the issuance of the 2004 Bonds, the City defeased the 1993 Bonds. The Louisiana Department of

## Section 1

Environmental Quality, the sole owner of the 1996 Bonds, agreed that the 2004 Bonds issued will be on parity with the 1996 Bonds and will become Outstanding Parity Bonds.

The 2004 Bonds were issued for the purpose of financing the construction of the North and South Generation Projects (subsequently renamed the T. J. Labbé and Hargis-Hébert Electric Generation Station Projects, respectively), Electric System Transmission and Distribution Improvements, and Wastewater Capital Improvements Projects. The total amount of the debt issued under the 2004 Bonds is approximately \$190,000,000.

Table 1-1 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**

<b>Payment Date</b>	<b>Interest Payment</b>	<b>Principal Payment</b>	<b>Total Payment</b>	<b>Bonds Outstanding</b>
2004	\$2,339,841	\$503,260	\$2,843,101	\$197,163,260
2005	9,909,478	815,000	10,724,478	196,660,000
2006	9,885,435	840,000	10,725,435	195,845,000
2007	9,860,655	860,000	10,720,655	195,005,000
2008	9,835,285	890,000	10,725,285	194,145,000
2009	9,809,030	915,000	10,724,030	193,255,000
2010	9,782,038	940,000	10,722,038	192,340,000
2011	9,754,308	970,000	10,724,308	191,400,000
2012	9,725,693	1,575,000	11,300,693	190,430,000
2013	9,673,140	8,625,000	18,298,140	188,855,000
2014	9,243,903	9,055,000	18,298,903	180,230,000
2015	8,792,780	9,510,000	18,302,780	171,175,000
2016	8,318,575	9,985,000	18,303,575	161,665,000
2017	7,820,123	10,485,000	18,305,123	151,680,000
2018	7,296,225	9,820,000	17,116,225	141,195,000
2019	6,780,675	10,335,000	17,115,675	131,375,000
2020	6,238,088	10,875,000	17,113,088	121,040,000
2021	5,667,150	11,445,000	17,112,150	110,165,000
2022	5,066,288	12,045,000	17,111,288	98,720,000
2023	4,433,925	12,680,000	17,113,925	86,675,000
2024	3,768,225	13,345,000	17,113,225	73,995,000
2025	3,067,613	14,045,000	17,112,613	60,650,000
2026	2,330,250	14,785,000	17,115,250	46,605,000
2027	1,591,000	15,520,000	17,111,000	31,820,000
2028	<u>\$815,000</u>	<u>\$16,300,000</u>	<u>\$17,115,000</u>	<u>\$16,300,000</u>
Total	\$171,804,718	\$197,163,260	\$368,967,979	

Source: 2004 Bonds, Official Statement

Bond authorization programs and associated expenditures of bond proceeds follow a predetermined plan of facility additions and improvements based upon an engineering planning and feasibility study. A summary of the issuance of authorized and issued revenue bonds as of October 31, 2004 is provided in 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>
1949 – 1958	\$18,000,000	Steam-electric generating plant and improvements and extensions to the electric, water and wastewater systems.
1962 – 1965	\$12,500,000	Improvements and extensions to the electric, water and wastewater systems.
1966 – 1969	\$19,800,000	Addition to electric generation, water and wastewater treatment capacity, and extensions and improvements.
1973 – 1976	\$39,000,000	Addition to electric generation capacity and extensions, additions and improvements to the electric, water and wastewater systems.
1978 – 1981	\$26,000,000	Additions to the electric transmission system and extensions and improvements to the electric, water distribution and wastewater collection systems.
1983 – 1996	\$40,400,000	Additions, extensions and improvements to the electric, water and wastewater system and acquisition of electric distribution customers.
2004	\$190,000,000	Addition to electric generation capacity and extensions, and wastewater improvements.

Source: R. W. Beck, Previous CER.

## Security Issues

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

On June 12, 2002, President Bush signed the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (“Bioterrorism Act”) into Law (PL 107-188). The Bioterrorism Act amends the Safe Drinking Water Act by adding Section 1433. Section 1433(a) requires that certain community water systems (LUS is subject to the Bioterrorism Act) conduct Vulnerability Assessments, certify to the United States Environmental Protection Agency (“USEPA”) that the Vulnerability Assessments were conducted, and submit a copy of the Vulnerability Assessments to the USEPA. Section 1433(b) requires that certain community water systems prepare or revise Emergency Response Plans and certify to the USEPA that an Emergency Response Plan has been completed.



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

According to LUS representatives, Sheriff Department personnel are stationed at the Bonin Power Plant, the North and South Water Treatment Plants seven days a week, 24 hours per day to provide additional security at each facility. LUS has installed additional security equipment and established operating procedures to further enhance security at its water treatment facilities. LUS staff has been trained in emergency planning and reaction that is integrated with ongoing programs for hurricane emergency response.

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

## Changing Utility Environment

Deregulation of the electric utility industry at the retail level is currently not an issue of significance in the state of Louisiana. Although retail deregulation is currently in-place in neighboring Texas and in other states across the country, the movement has lost much political and public interest in the last several years. Crises in the California market, as well as a significant weakening in the financial condition of electric utilities across the country, have caused regulators and consumers to rethink the benefits of retail deregulation. However, at the wholesale level, as provisions in the Energy Policy Act of 1992 are implemented by the Federal Energy Regulatory Commission ("FERC") Orders 888 and 889, LUS is facing new challenges resulting from increased competition in the wholesale power market. LUS generating facilities have become commodities that compete in the market with similar resources. These changes pressure LUS to re-examine, and in some cases alter certain practices to be competitive. Utility management must make timely business decisions regarding plant dispatch, operations and maintenance, purchasing power, selling power, pricing power, plant capital improvements, plant upgrades, etc. There may be significant opportunities for LUS to take advantage of these 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.



## **Enterprise Risk Management**

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

## **Regional Reliability Councils**

LUS is a member of the Southwest Power Pool ("SPP"), but is situated such that most of its wholesale transactions occur in Entergy, which is a sub-region of Southeastern Electric Reliability Council ("SERC"). Neither SPP nor SERC plans to implement standard market design or locational marginal pricing markets in the near future. LUS' relationship with The Energy Authority ("TEA") will continue to be important for buying and selling into the wholesale markets, especially as new resources come on-line.

SPP was founded in 1941 and is a group of 48 electric utilities serving more than four million customers across all or part of eight southwestern states. This membership is comprised of investor-owned utilities, municipal systems, generation and transmission cooperatives, state authorities, federal agencies, wholesale generators, and power marketers. SPP serves as a North American Electric Reliability Council ("NERC") regional reliability council and (since 1997) has provided independent security coordination and tariff administration, pursuant to a FERC-approved tariff, across a service area with more than 33,000 miles of transmission lines and a gross plant investment approaching \$4 billion.

During the first quarter of 2003, SPP mutually agreed to terminate merger plans with the Midwest Independent Transmission System ("ISO"). Immediately following this agreement, a Strategic Planning Committee was appointed by the Board of Directors to consider and recommend the path SPP should take going forward. In October 2003, SPP filed with FERC for recognition as an Regional Transmission Organization ("RTO") and restarted previous plans to implement an energy imbalance market, and began the foundational work for further market development.

SERC is the Regional Reliability Organization ("RRO") responsible for promoting, coordinating and ensuring the reliability and adequacy of the bulk power supply systems in the area served by the member systems. SERC promotes the development of reliability and adequacy arrangements among the systems; participates in the establishment of reliability policies, standards, principles, and guides; administers a regional compliance and enforcement program to achieve the reliability benefits of coordinated planning and operations; and provides a mechanism to resolve disputes on reliability issues.

SERC is the largest NERC region as measured by total generation and total load. The SERC region covers an area of 464,000 square miles and includes part or all of

## Section 1

---

thirteen southeastern and southcentral states. SERC is divided geographically into four diverse sub-regions: Entergy (the geographical area of the Entergy Operating Companies and Associated Electric Cooperative, Inc.), Southern (the geographical area of the Southern electrical system), TVA (the Tennessee Valley Authority area), and VACAR (the Virginia-Carolinas area).

## Recommendations

Recommendations and status thereof are provided in Table 1-3. Priority of the recommendation as either highest, high or normal.

**Table 1-3**  
**Recommendations**

Introduction	Priority	Status
LUS continue to review necessary security actions to ensure employee security and asset preservation.	High	Investigating
LUS continue its efforts to identify opportunities for wholesale power sales.	High	Ongoing
LUS' management continue to monitor electric deregulation events on the state and national level.	Normal	Ongoing
LUS establish a formalized Enterprise Risk Management Program to reduce operational and financial risk exposure.	High	New









## Section 2

# RECOMMENDATIONS

---







## Section 2

# 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 the priority designation should receive a high level of focus by LUS. Without adequate attention to these recommendations with 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.

# Recommendations

## Section 1 – Introduction

Recommendations	Priority	Status
LUS should continue to review necessary security actions to ensure employee security and asset preservation.	High	Investigating
LUS should continue its efforts to identify opportunities for wholesale power sales.	High	Ongoing
LUS management should continue to monitor electric deregulation events on the state and national level.	Normal	Ongoing
LUS should establish a formalized Enterprise Risk Management Program to reduce operational and financial risk exposure.	High	New

## Section 3 – Organization and Management

Recommendations	Priority	Status
LUS should investigate the succession of key management positions due to potential retirements in these areas in the next 3-5 years.	High	Ongoing
LUS should continue to investigate appropriate actions to attract and maintain qualified employees, thus reducing the turnover rate.	High	Ongoing

## Section 4 – Finance and Accounting

Finance and Accounting Recommendations	Priority	Status
LCG should 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.	Normal	Ongoing Progress
LUS should increase the water and wastewater systems debt to equity ratio and continue to work towards financing a considerable portion of future capital improvement projects with debt.	High	Ongoing Progress
LUS should continue to pursue a strategy of increasing wastewater rates over the next several years.	Highest	Ongoing Progress
LUS should continue to actively conduct financial planning, particularly as LUS adds new generation resources and increases combined system debt.	Highest	Ongoing Progress



## RECOMMENDATIONS

Finance and Accounting Recommendations	Priority	Status
Under the current financial constraints placed on the combined system, LUS cannot continue to absorb significant increases in the ILOT without jeopardizing the funding of important future capital projects. Therefore, LUS should examine ways to meet ILOT obligations without adversely impacting the utilities competitive position or financial integrity.	Highest	Ongoing Progress
LUS should conduct a combined system cost of service study including electric, water, wastewater, and fiber systems. This analysis is important in that LUS must understand the cost structure associated with the new capital and operating requirements of the combined system.	Highest	No Progress Seen
LUS should continue to explore ways of improving the timeliness of financial reporting, including the implementation of new financial management tools.	Highest	No Progress Seen
LUS should modernize and streamline human resource systems in order to accommodate current and future staffing and management needs of the utilities.	High	New
LUS should continue to improve the five-year capital budgetary process (cash-needs capital budget).	High	No Progress Seen
LUS should review and evaluate the accuracy of accounting policies related to booking transmission and distribution investment and related operation and maintenance expense.	Normal	New

## Section 5 – Electric Utility

Electric Utility Recommendations	Priority	Status
LUS should continue its efforts to investigate new power supply additions for the future.	High	Complete
LUS should continue the development of a comprehensive operator training program.	High	In Progress
LUS should provide secession planning to replace retiring staff and provide the necessary transfer of knowledge.	High	In Progress
LUS should continue to evaluate plant-staffing levels and compensation plans.	Normal	In Progress
LUS should continue transmission and distribution personnel training and retention efforts.	Normal	In Progress
LUS should continue to install microprocessor relays for new construction and develop plans for replacing electromechanical relays with microprocessor relays.	Normal	In Progress
LUS should continue efforts to complete GIS mapping system	Normal	In Progress
LUS should complete the implementation of the new SCADA/EMS system.	Normal	In Progress

## Section 2

Electric Utility Recommendations	Priority	Status
LUS should continue its 2003 progress of testing generator and other equipment electro-mechanical protective relays at the Doc Bonin plant through coordination between plant personnel and the LUS transmission and distribution section personnel.	Normal	In Progress
LUS should continue the implementation and maintenance of a spare parts and inventory control system, with particular emphasis on the spare parts needs of the new generation projects and other major system components.	Normal	In Progress
LUS should continue its implementation and expansion of the preventative and predictive maintenance programs currently in place.	Normal	In Progress
LUS should determine the actual heat rate versus output relationship for each unit. The Doc Bonin Plant reports that the project to install energy metering/upgraded gas yard controls of the incoming gas supply is complete. The 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	In Progress
LUS should proceed with plans to repaint the externals of the Doc Bonin Plant Units 2-3.	Normal	Investigating
LUS should continue frequent monitoring of the 138/230-kV CLECO tie transformer T5.	Normal	In Progress
In the transmission and distribution functions, LUS should continue to review OSHA requirements and/or APPA safety guidelines and pursue ongoing training programs for linemen and foremen.	Normal	In Progress

## Section 6 – Water Utility

Water Utility Recommendations	Priority	Status
LUS should give priority to constructing booster wells in low pressure areas of system to improve system pressure.	Highest	Investigating
LUS should continue to develop in-house expertise with use of water system model and acquire a system capable of modeling time of travel and concentration of introduced pollutants.	Highest	Investigating



## RECOMMENDATIONS

Water Utility Recommendations	Priority	Status
LUS should consider the following additions to its system to increase system reliability and integrity: <ul style="list-style-type: none"><li>■ Install additional emergency electric generators at the North Plant.</li><li>■ Install emergency electric generators at all water supply wells.</li><li>■ Install piping at the North and South Plants to allow emergency bypass of treatment units.</li><li>■ Install roofing and covers over the North Treatment Plant treatment units, sludge tanks, backwash tanks and meter pit.</li><li>■ Construct building enclosures of all off-site water wells.</li></ul>	Highest	In Progress
LUS should give high priority to completing removal of the “Galbestos” building siding at the North Plant.	High	In Progress
LUS should consider developing an operator certification (and re-certification) program.	Normal	Investigating
LUS should initiate succession planning for senior water system management staff	Normal	Investigating

## Section 7 – Wastewater Utility

Wastewater Utility Recommendations	Priority	Status
LUS should continue to develop the wastewater hydraulic model of the system.	Highest	Ongoing
LUS should continue planning for a new wastewater treatment plant site.	High	Ongoing
LUS should develop a certification (and re-certification) program for wastewater utility employees.	Normal	Ongoing

## Section 8 – Fiber Utility

Fiber Utility Recommendations	Priority	Status
LUS should determine a process that accurately allocates joint/common costs to the Fiber Utility Business Unit. The allocation methodology should consider cost causation and should not be based on revenue allocation methodology.	Highest	Ongoing
LUS should develop incremental and full-embedded cost financial reports and pricing analyses to evaluate the short term and long-term profitability of the fiber business and specific service offerings.	Highest	Ongoing

## Section 2

---

Fiber Utility Recommendations	Priority	Status
LUS should increase funding for marketing within the fiber business in recognition that fiber is significantly different from a traditional municipal utility. Fiber requires head-to-head competition with other service providers that invest heavily in marketing and promotional development.	Normal	Ongoing
LUS must improve the flexibility and sophistication of its billing function and the interface of such function with the accounting system. Current limitations in the billing system result in a competitive disadvantage, particularly when pursuing other Tier 1 wholesale customers.	Normal	Ongoing

## Section 9 – Environmental Issues

Environmental Issues Recommendations	Priority	Status
LUS should continue to evaluate alternatives for its biosolid disposal program.	High	Ongoing
LUS should continue to update its environmental plans, including its SPCC plans, to ensure that they include the latest changes to the appropriate requirements.	High	Investigating









## Section 3

# ORGANIZATION AND MANAGEMENT

---







## Section 3

# ORGANIZATION AND MANAGEMENT

---

## Government Organization

### Organization

The current form of government includes both the City and the Parish and is referred to as 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. Names of each official and offices held by each during the reporting period are shown in the Table 3-1.

**Table 3-1**  
**President and Council Members**  
**(2004)**

Name	Office
J. L. Durel, Jr.	President
Bobby Badeaux	District 1 Member
Dale Bourgeois	District 2 Member
Christopher J. Williams, Ph.D.	District 3 Member
Louis C. Benjamin, Jr.	District 4 Member
Lenwood Broussard	District 5 Member
Bruce Conque	District 6 Member
Marc F. Mouton	District 7 Member
Rob Stevenson	District 8 Member – Vice Chair
Randal L. Menard	District 9 Member – Chair

Source: Norma Dugas, LCG, 2/22/05

The President and his Chief Administrative Officer, Mr. Dee Stanley, direct and supervise the administration of all departments, offices, and agencies of LCG, except as may otherwise be provided by the Home Rule Charter (“Charter”) or by law.

### Home Rule Charter

In the fall of 1992, the electorate of the Parish, including the City, adopted a Charter establishing LCG for the purpose of consolidating the governmental functions of the

---

## Section 3

---

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 Charter.

The governing authority of LUS is the Lafayette Public Utilities Authority ("LPUA"). LPUA consists of those members of the Council whose districts include 60 percent or more of persons residing within the boundaries of the City as they existed on the effective date of the Charter. They may be changed in the future if the boundaries of the City change. The latest census reports of the United States Census Bureau are the basis for determining the council districts including 60 percent or more of persons residing within the City.

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

**Table 3-2  
LPUA Members  
(2004)**

Name	Office
Rob Stevenson	Member
Marc F. Mouton	Chair
Bruce Conque	Vice Chair
Louis C. Benjamin, Jr.	Member
Christopher J. Williams, Ph.D.	Member

Source: Norma Dugas, LCG. 2/22/05

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

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

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. LPUA fixes rates, incurs



indebtedness, approves LUS' budget, and approves proposals for the improvement and extension of the Utilities System, subject to approval by the President and 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 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 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.

## **LUS Management, Organization and Personnel**

### **Management of the Utilities System**

The President, who is the Chief Executive Officer of LCG, and his Chief Administrative Officer, direct and supervise the administration of various departments of LCG. The non-utility departments of LCG involved in day-to-day management and operation of LUS are the Department of Administrative Services and the Department of Finance.

Administrative Services provide the following functions to the Utilities System: personnel services, training and safety, printing, communications, information services, and risk management. The Department 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. The legal department is headed by Patrick S. Ottinger, the City Parish Attorney.

### **Organization**

The Director of Utilities is responsible for the operations of the electric, fiber, water and wastewater systems in all areas of activity not otherwise provided for by the Departments of Administrative Services, Finance or Information Technology. As

## Section 3

---

outlined in the Charter, the duties of the Director of Utilities are as follows:

- Electricity production and distribution.
- Fiber operations, maintenance and planning.
- 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.
- Reading of utility meters.
- Other such activities as may be directed by the President as 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 shown in Table 3-3.

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

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

Source: Joan Parish, LUS, 2/7/05

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

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 service calls, system construction, and system control, meter shop and substation operations.

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

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.

The **Customer Service Division** collects and processes utility customer deposits and bills daily. This division also provides utility customers with service and responses to billing questions. 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.

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 **Meter Services Division** is responsible for meter reading, replacement, testing and repair, and customer connects and disconnects. The Meter Services Division is comprised of 28 staff members. The automatic meter reading and on-site meter reading (AMR/OMR) Pilot Project has continued through 2004.

The **Environmental Compliance Division** was added to the Utilities Department in 1991 as part of LUS' commitment to employees, customers, and the environment. This division was established to oversee the LUS' environmental regulatory requirements, including management of industrial discharge permits and fees.

## Engineering Division

This major division of LUS provides technical engineering support to the Electric, Water, Wastewater and Fiber Utilities. The Engineering Division includes the Civil Engineering, Utility Marketing, System Engineering and System Construction Sections. The Engineering and Power Production Division Manager is responsible for the following sections.

## Section 3

---

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

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

- Special contracts.
- Wholesale electric purchases and sales contracts and negotiations (including LUS' involvement with The Energy Authority, as described in Section 5 of this report).
- Fuel supply contract management (coal, gas and transportation).
- Transmission and interconnection contract management.
- FERC related issues and compliance reporting.
- Work with developers to meet special electric service expansion needs.
- Wholesale water rates and contracts.
- Development and implementation of telecommunication contracts for vendors and wholesale customers.

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

- Graphical Information System ("GIS") development to provide infrastructure locations and system mapping.
- Information Systems – computer network installations and maintenance for the LUS offices.
- Drafting functions.
- Acquisition of real property rights including easements and property ownership required for infrastructure expansions.

The **System Construction Section** responsibilities include:

- Electric substation design and planning.
- Transmission line design.
- Electric system planning.
- Fiber construction and installation.
- Management of the electric system communication system.
- Electric system personnel training.



## Personnel

The average LUS employee salary during 2004 and prior years is shown in 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 Average Annual Salaries**

Year	Average Annual Salary
1994	\$24,379
1995	\$23,577
1996	\$25,272
1997	\$27,142
1998	\$27,167
1999	\$28,139
2000	\$29,354
2001	\$29,631
2002	\$30,431
2003	\$29,161
2004	\$28,693

Source: Heather Albritton, LUS, 2/1/05

Approximately 7 percent of LUS' total budgeted positions were unfilled at the end of fiscal year 2004 (32 vacancies out of 438 positions). The average annual vacancy rate was approximately 6 percent or 33 vacant positions per month. Employee turnover for the fiscal year was reported to be approximately 7 percent (29 departures, transfers, retirements, etc.) of the total number of permanent employees. The number of people employed by LUS as of October 31, 2004 and the number of employees included in the budget for the same fiscal year, by Division, are shown in Table 3-5.

**Table 3-5  
LUS Employees as of October 2004**

Division	2004 Actual	2004 Budget	Difference
Director's Office	2	2	0
Water Operations (Prod & Dist)	61	62	1
Wastewater Operations	89	93	4
Electric Operations	86	89	3
Engineering	61	63	2
Power Production	25	37	12
Utilities Support Services	35	37	2
Customer Service	29	33	4
Environmental Compliance	20	20	0
Telecommunications	<u>0</u>	<u>4</u>	<u>4</u>
<b>TOTAL</b>	<b>408</b>	<b>440</b>	<b>32</b>

Source: Heather Escott, LUS, 2/22/05

## Employee Compensation

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.

Regional market data was collected to examine the pay ranges for the following five positions within Lafayette Utilities Systems:

- Chief Electrical Engineer
- Power Plant Technician
- Lineman
- Water Operations Manager
- Wastewater Operations Manager

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

- LUS job descriptions were compared to the descriptions available from market data sources. If an exact match in title or job description was not evident, R. W. Beck determined how to align the various positions. A general correlation was made between the positions based on job titles, education and experience requirements.
- The salary comparison was based on annual median salary ranges for 2004.
- The 2003 readily available data from the Bureau of Labor Statistics was escalated to 2004 using a 2.54 percent factor. The 2.54 percent factor used to escalate the



ranges from 2003 to 2004 was calculated based on the CPI annual increase from 2003 to 2004 for the South Urban area of the nation.

## **Results**

Table 3-6 compares the median LUS salary and approximate market data. The comparative analysis between LUS' median salary ranges for the defined positions and the median salary obtained from market sources shows that LUS' median salary ranges are below market for most positions.

**Table 3-6**  
**LUS Median Salary Ranges**

<b>Position</b>	<b>Median</b>
Chief Electrical Engineer	-85% to -0.2%
Lineman II	-60% to -41%
Power Plant Technician	-61% to -2%
Wastewater Operations Manager	-43% to 9%
Water Plant Operator	-23% to 4%

Source: R. W. Beck Analysis, 2/14/05

## **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.

The procedure for filling personnel vacancies in LUS begins with a list of eligible applicants. The applicable appointing authority makes the final selection for the specific position. An applicant hired for a permanent position must then serve an initial probationary period of six months. The career advancement process includes an employee evaluation program, which is used to assist Management in determining which employees have potential for promotion.

A group life and medical insurance program for employees is provided through the LCG self-insurance program. LCG pays 77 percent of employee health insurance, 100 percent of life insurance premiums, and 66 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 24 working days per year is earned and provided to employees. The maximum annual level is reached after 20 years of service. Sick leave with pay is credited at the rate of one day per month of employment, with no limit to the amount of sick leave an employee may accumulate.

## Section 3

---

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, such as water quality, wastewater treatment, electric relay, system protection and electric distribution system design. Clerical staff skills are also enhanced with course topics such as office management and writing skills.

## Insurance

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

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 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 and self-insured group health/life claims section.

According to LCG's financial report for 2004, LCG is in compliance with Governmental Accounting Standards Board 10, Reporting for Risk Financing and Related Issues, for public entities.

The balance in the Risk Management Fund at the end of 2004 was approximately \$3,300,000. Insurance related expenditures and recoveries from the Risk Management Fund for LUS are provided in Table 3-7.



**Table 3-7**  
**LUS Insurance Transactions<sup>(1)</sup>**

<b>Year</b>	<b>Payments</b>	<b>Recovery</b>	<b>Effective Payments</b>
1997	\$2,442,900	(\$648,049)	\$1,794,851
1998	2,208,028	(362,228)	1,845,800
1999	2,849,497	(2,905,410)	(55,914)
2000	1,696,533	(241,856)	1,454,677
2001	1,073,430	(1,831,889)	(758,459)
2002	866,393	(1,804,635)	(938,242)
2003	1,015,923	(498,752)	517,161
2004	\$1,065,232	(\$350,584)	\$684,648

<sup>(1)</sup> Cash basis. Expenditures incurred, recoveries collected during year, not necessary at time of claim.

Source: Lewana Shearer, LUS, 2/22/05

## **Governmental Functions Supporting LUS**

### **Department of Finance**

Financial responsibilities are handled by the Department of Finance. These duties include:

- Assistance to the President in the preparation of the annual operating budget and the capital improvement budget.
- Maintenance of a record of indebtedness and payment of the principal and interest on such indebtedness.
- Ascertaining that funds are available for payment of all contracts, purchase orders and any other documents 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 20 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.

## Section 3

---

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

Ms. Rebecca Lalumia serves as the Associate Chief Administrative Officer (“CAO”) for the Department of Finance. Key division managers under this office are provided in Table 3-8.

**Table 3-8**  
**Department of Finance**  
**Associate CAO – Finance and Management**

Division	Manager
Accounting	Melinda Felps
Budget Management	Lawrence “Pete” Mayeaux <sup>(1)</sup>
Purchasing and Property Management	Jody Williamson

<sup>(1)</sup> Resigned effective November 2004

Source: Andrew Duhon, LUS, 2/22/05

Division function descriptions in Table 3-8 are provided below.

The **Accounting Division** is responsible for: (i) processing invoices, payroll and other accounts payable transactions; (ii) maintaining accounts receivable records and associated management reports; 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 managers. 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 Electric Operations Division of LUS.

## Department of Administrative Services

As described in the Charter, the Director of the Department of Administrative Services 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.
- The Department of Administrative Services 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 the Department of Administrative Services is Ms. Gail Smith. Ms. Smith oversees information systems (data processing), communication systems, 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 **Risk Management Division** provides 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 LCG Departments, including the operation of the Utilities System on the basis of allocation procedures adopted by LCG.

In 2004, LCG created the **Information Services and Technology Department** (“IS&T”) and appointed Keith Thibodeaux as the Chief Information Officer. The IS&T Department is responsible for managing the coordinated development of an integrated information technology system for LCG and external organizations who contract with LCG for computer services. It is comprised of 29 full-time employees and two part-time employees within four divisions.

### Counsel

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

### Meter Services

The Meter Services Division is responsible for meter reading, replacement, and customer connects and disconnects. The Meter Services Division is comprised of 28 staff members. The automatic meter reading and on-site meter reading (AMR/OMR) Pilot Project has continued through 2004, although some aspects have been postponed until the LUS retail fiber issue is resolved.

The Meter Services Division 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 function.

The Meter Services Division 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 Division's effectiveness. Due to changes resulting from the new Customer Information System ("CIS"), statistics have now been narrowed to tracking "re-reads" of customer accounts. Tracking the number of re-reads reflects the overall efficiency of a meter reader, of a crew, and of Meter Services in general. In 2004, the Meter Services Division was required to re-read approximately 9,000 meters.

LUS continues to explore opportunities for improving meter reading efficiency. To date, 4,245 meters have been converted to AMR technology. Other technologies are being explored to assist with commercial and industrial ("C&I") accounts that may need hourly profiling data or other value added services available from LUS through the meter.

## LUS Organizational Goals

During 2004, LUS updated its Strategic Plan. Various employee committees crafted goals in five areas consistent with LUS' vision, mission, values, and departments. Specific key areas and goals are provided in Table 3-9. The Strategic Plan includes specific action items assigned to specific LUS individuals for the key areas identified below.

The objectives of each of the utilities include supporting the customers focus and include promotion of customer growth and creation of a customer-focused culture, in addition to the specific key areas listed in Table 3-9.

**Table 3-9**  
**Key Areas and Goals**

Focus	Key Areas
Customer Focus (Main Focus)	Improve customer service. Customer expansion and retention. Maintain community partnerships. Legislative issues.
Employee Focus	Reinforce LUS core values. Develop appropriate training. Career development. Identify and respond to needs and concerns.
Electric Focus	Ensure adequate self-generation capacity.



Focus	Key Areas
Electric Focus (continued)	<p>Maintain and supply of competitively-priced fuel.</p> <p>Operate and maintain generating and transmission and distribution facilities using best practices.</p> <p>Ensure adequate transmission system capacity with M-1 reliability criteria.</p>
Water Focus	<p>Ensure adequate supply, treatment, and distribution capacity.</p> <p>Operate and maintain systems using best practices of industry leaders obtained through a benchmarking process.</p> <p>Develop strategies and methodologies to extend service to our customers.</p>
Wastewater Focus	<p>Ensure adequate treatment and collection capacity.</p> <p>Operate and maintain systems using best practices of industry leaders obtained through benchmarking process.</p>
Telecom Focus	<p>Ensure adequate telecom facilities.</p> <p>Use proven technologies and methodologies for operation and maintenance.</p> <p>Develop strategies and methodologies to extend service to our customers.</p>

Source: Strategic Plan FY 2004-2005

## Recommendations

Recommendations and their status are provided in Table 3-10. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 3-10  
Recommendations**

Organization and Management	Priority	Status
LUS should investigate the succession of key management positions due to potential retirements in these areas in the next 3-5 years.	High	Ongoing
LUS should continue to investigate appropriate actions to attract and maintain qualified employees, thus reducing the turnover rate.	High	Ongoing











## Section 4

# FINANCE AND ACCOUNTING

---







## Section 4

# FINANCE AND ACCOUNTING

---

### LUS Operating Results

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

The data included in this section is based on audited reports generated by LUS and LCG. Tables 4-1 through 4-6 summarize the Electric, Water, Wastewater, Fiber and Combined System revenues and expenses for the most recent five years.

As shown in Table 4-1, 2004 Electric System retail revenues increased 6.5 percent, or \$7.9 million, over Fiscal Year 2003. A major contributing factor to this revenue increase was revenue from the passthrough of higher fuel costs as seen in Table 4-2. In addition, wholesale sales revenue increased slightly in 2004 compared to 2003.

Electric System fuel and purchased power costs increased approximately 3.8 percent, or \$3.4 million, over year 2003 as shown in Table 4-1. Other Electric System O&M expenses increased by \$2.6 million, or 11.8 percent, over Fiscal Year 2003. Total system energy costs increased by 2.2 percent to \$44.33 per MWh in 2004 as shown in Table 4-2.

LUS passes fuel costs on to retail customers via a fuel adjustment factor. LUS reviews the fuel adjustment factor monthly and adjusts the calculation periodically in order to recover fuel and purchased power costs.

Tables 4-1 and 4-2 below show historical Electric system financial performance over the 2000-2004 time period.

## Section 4

**Table 4-1**  
**Electric System Net Operating Revenues**

	2000	2001	2002	2003	2004
Electric Operating Revenues					
Retail	\$105,716,568	\$113,588,781	\$103,442,565	\$122,845,356	\$130,780,046
Wholesale	26,597,737	24,696,671	10,520,237	12,232,000	12,742,061
Other	<u>1,022,278</u>	<u>1,545,690</u>	<u>1,138,529</u>	<u>1,391,538</u>	<u>1,751,337</u>
Total Electric Operating Revenues	\$133,336,583	\$139,831,142	\$115,101,332	\$136,468,894	\$145,273,444
Electric Operating Expenses					
Operation Expenses					
Fuel - Gas	\$29,262,723	\$25,387,948	\$14,169,879	\$20,909,938	\$28,871,511
Purchased Power - LPPA	44,151,647	43,171,190	41,464,787	44,230,058	44,566,751
Purchased Power - Other	13,193,079	24,666,165	11,785,361	25,211,290	20,315,416
Other	15,007,045	14,605,943	15,970,462	16,898,665	17,773,657
Maintenance Expenses	<u>3,834,075</u>	<u>4,256,143</u>	<u>3,530,731</u>	<u>4,990,853</u>	<u>6,702,630</u>
Total Operating & Maintenance Expenses	\$105,448,569	\$112,087,389	\$86,921,221	\$112,240,804	\$118,229,964
Electric Non Operating Revenues (Expenses)					
Interest on Investments:					
Interest Revenues	\$4,145,235	\$3,480,890	\$2,257,112	\$1,633,993	\$1,613,012
Miscellaneous Non Operating Revenues <sup>(1)</sup>	335,274	85,492	202,245	340,504	0
FTTH Start-Up Project <sup>(2)</sup>	0	0	0	0	306,984
Interest on Customer Deposits	74,165	32,276	25,349	13,935	1,413
Loss on Extinguishment of Debt	(245,870)	(205,752)	(161,789)	(112,128)	(61,104)
Hurricane Lili <sup>(3)</sup>	0	0	(317,048)	(30,582)	0
Power Plant Decommissioning <sup>(4)</sup>	0	0	0	(887,594)	(298,643)
Loss on Disposition of Property <sup>(5)</sup>	(420,421)	0	0	0	0
Miscellaneous Non Operating Expense	<u>(1,912)</u>	<u>(907)</u>	<u>(61)</u>	<u>(14,935)</u>	<u>(8,217)</u>
Total Non Operating Revenues (Expenses)	\$3,886,471	\$3,391,999	\$2,005,808	\$943,193	\$1,553,443
Net Margin <sup>(6)</sup>	\$31,774,484	\$31,135,752	\$30,185,919	\$25,171,283	\$28,596,924

<sup>(1)</sup> The 2004 value of zero per LCG Audited Financial Statements.

<sup>(2)</sup> Electric allocation of FTTH project start up cost. Allocation pursuant to LUS proposed Cost Allocation Manual.

<sup>(3)</sup> Non-recurring operation and maintenance expenses associated with Hurricane Lili cleanup.

<sup>(4)</sup> Decommissioning expenses associated with Curtis A. Rodemacher Generating Station. At a minimum, costs expected to be incurred through 2007.

<sup>(5)</sup> Non-recurring expense related to write down of oil fuel inventory.

<sup>(6)</sup> Before Depreciation and Debt Service.

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

In 2004, Net Margin reversed a historical declining trend and increased by \$3.4 million over the previous fiscal year.

Table 4-2 summarizes Electric System Supply unit costs for the most recent five years.



**Table 4-2**  
**Average Energy Costs (\$/MWh)**

	2000	2001	2002	2003	2004
Self Generation					
Fuel	\$45.58	\$53.79	\$36.83	\$60.27	\$62.34
Other	<u>5.64</u>	<u>6.83</u>	<u>6.80</u>	<u>9.12</u>	<u>9.60</u>
Total Self Generation	51.22	60.62	43.63	69.39	71.94
Purchases					
LPPA	29.77	32.15	29.55	35.39	33.28
Other Supplies	<u>42.67</u>	<u>49.04</u>	<u>32.87</u>	<u>45.11</u>	<u>49.19</u>
Total Purchased Power	31.99	36.75	30.23	38.39	37.03
Total Supply	\$37.06	\$41.61	\$32.63	\$43.38	\$44.33

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Power supply costs have stabilized in 2004 after rising significantly in 2003.

Table 4-3 summarizes the Water System revenues and expenses for the most recent five years. The Water System retail revenues remained relatively flat in 2004, increasing only by 0.1 percent, or less than \$10,000, over Fiscal Year 2003. The Water System operating expenses increased approximately 6.9 percent, or approximately \$477,000, over Fiscal Year 2003.

**Table 4-3**  
**Water System Net Operating Revenues**

	2000	2001	2002	2003	2004
Water Operating Revenues					
Retail	\$9,874,858	\$9,296,649	\$9,624,484	\$9,875,508	\$9,885,284
Wholesale	1,497,048	1,594,377	1,668,492	1,669,941	1,715,164
Other	<u>150,863</u>	<u>158,856</u>	<u>201,943</u>	<u>179,655</u>	<u>265,109</u>
Total Water Operating Revenues	\$11,522,769	\$11,049,882	\$11,494,918	\$11,725,104	\$11,865,556
Water Operating Expenses	\$2,720,910	\$2,788,292	\$2,301,823	\$2,971,923	\$3,237,792
Maintenance Expenses	815,534	879,604	953,119	1,091,875	1,115,341
Other Expenses	<u>2,270,141</u>	<u>2,101,624</u>	<u>2,877,266</u>	<u>2,819,649</u>	<u>3,007,651</u>
Total Operating & Maintenance Expenses	\$5,806,585	\$5,769,520	\$6,132,208	\$6,883,447	\$7,360,784
Water Non Operating Revenues (Expenses)					
Interest on Investments					
Interest Revenues	\$849,645	\$736,912	\$429,531	\$326,532	\$131,747
Water Tapping Fees	130,065	182,248	245,634	114,100	123,100
Miscellaneous Non Operating Revenues <sup>(1)</sup>	68,721	16,402	38,488	68,045	0
FTTH Start Up Project <sup>(2)</sup>	0	0	0	0	88,453
Interest on Customer Deposits	15,202	6,192	4,824	2,785	235
Extinguishment of Debt	(36,061)	(30,177)	(23,729)	(16,445)	(8,962)
Miscellaneous Non Operating Expense	<u>(145)</u>	<u>(84)</u>	<u>(6)</u>	<u>(1,211)</u>	<u>(2,368)</u>
Total Non Operating Revenues (Expenses)	\$1,027,427	\$911,493	\$694,742	\$493,806	\$332,205
Net Margin <sup>(4)</sup>	\$6,743,611	\$6,191,855	\$6,057,453	\$5,335,463	\$4,836,978

<sup>(1)</sup> The 2004 value of zero per LCG Audited Financial Statements.

<sup>(2)</sup> Water allocation of FTTH project start up cost. Allocation pursuant to LUS proposed Cost Allocation Manual.

<sup>(3)</sup> Before Depreciation and Debt Service.

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

## Section 4

Water System Net Margin has been declining over the last five years. However, Water System capital requirements currently consist of normal renewals and replacement. Although the Net Margin is declining, the margin is sufficient to meet capital and reserve obligations for this system.

Table 4-4 summarizes the Wastewater System revenues and expenses for the most recent five years. The Wastewater System retail revenues increased 7.3 percent, or approximately \$1.0 million, over Fiscal Year 2003. Wastewater System operating expenses increased approximately 4.4 percent, or approximately \$434,000, over Fiscal Year 2003.

**Table 4-4**  
**Wastewater System Net Operating Revenues**

	2000	2001	2002	2003	2004
Wastewater Operating Revenues					
Service	\$11,558,992	\$12,377,542	\$12,814,793	\$14,105,471	\$15,140,093
Other	<u>149,862</u>	<u>137,352</u>	<u>162,690</u>	<u>185,084</u>	<u>265,109</u>
Total Wastewater Operating Revenues	\$11,708,854	\$12,514,894	\$12,977,483	\$14,290,555	\$15,405,202
Wastewater Expenses					
Operating Expenses	\$3,854,649	\$4,640,613	\$4,786,363	\$5,036,124	\$5,210,368
Maintenance Expenses	1,162,427	1,192,357	1,059,951	1,183,048	1,294,289
Other Expense	<u>2,962,488</u>	<u>2,820,611</u>	<u>3,133,877</u>	<u>3,577,748</u>	<u>3,726,228</u>
Total Operating & Maintenance Expenses	\$7,979,564	\$8,653,581	\$8,980,191	\$9,796,920	\$10,230,885
Wastewater Non Operating Revenues (Expenses)					
Interest on Investments					
Interest Revenues	\$554,316	\$538,874	\$320,167	\$303,060	\$168,993
Miscellaneous Non Operating Revenues <sup>(1)</sup>	44,834	11,994	28,688	63,154	0
FTTH Start Up Project <sup>(2)</sup>	0	0	0	0	114,469
Interest on Customer Deposits	9,918	4,528	3,596	2,585	261
Extinguishment of Debt	(45,896)	(38,407)	(30,201)	(20,931)	(11,406)
Miscellaneous Non Operating Expense	<u>(173)</u>	<u>(100)</u>	<u>(7)</u>	<u>(1,555)</u>	<u>(3,064)</u>
Total Non Operating Revenues (Expenses)	\$562,999	\$516,889	\$322,243	\$346,313	\$269,252
Net Margin <sup>(3)</sup>	\$4,292,289	\$4,378,202	\$4,319,535	\$4,839,948	\$5,443,569

<sup>(1)</sup> The 2004 value of zero per LCG Audited Financial Statements.

<sup>(2)</sup> Wastewater allocation of FTTH project start up cost. Allocation pursuant to LUS proposed Cost Allocation Manual.

<sup>(3)</sup> Before Depreciation and Debt Service

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Wastewater System net operating income has increased since 2003. This increase can be attributable to the Wastewater System rate increases in November 2003. Although the Net Margin is improving, the Wastewater System is faced with significant capital improvements over the next several years. To meet future capital obligations, including the repayment of debt service, additional rate increases will be required in the coming years.

Table 4-5 summarizes the Fiber System revenues and expenses for the most recent five years. The Fiber System service and access revenues increased 84.3 percent, or approximately \$349,000, over Fiscal Year 2003. Fiber System operating expenses



increased approximately 12.8 percent, or approximately \$73,000, over Fiscal Year 2003.

**Table 4-5**  
**Fiber System Net Operating Revenues**

	2000	2001	2002	2003	2004
Fiber Operating Revenues					
Fiber Service and Access Revenues	\$0	\$0	\$119,772	\$413,512	\$762,143
Miscellaneous Fiber Revenues	<u>0</u>	<u>0</u>	<u>69,219</u>	<u>72,139</u>	<u>113</u>
Total Fiber Operating Revenues	\$0	\$0	\$188,990	\$485,651	\$762,256
Fiber Operating Expenses	\$0	\$55,182	\$364,965	\$568,599	\$641,648
Fiber Maintenance Expenses	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Operating & Maintenance Expenses	\$0	\$55,182	\$364,965	\$568,599	\$641,648
Fiber Non Operating Revenues (Expenses)					
Interest on Investments					\$8,464
Interest Revenues	\$0	\$0	\$0	\$0	10,406
FTTH Start-Up Project <sup>(1)</sup>	0	0	0	0	(279)
Miscellaneous Non Operating Expense	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>(279)</u>
Total Non Operating Revenues (Expenses)	\$0	\$0	\$0	\$0	\$18,591
Net Margin <sup>(2)</sup>	\$0	(\$55,182)	(\$175,975)	(\$82,949)	\$139,200

<sup>(1)</sup> Fiber allocation of FTTH project start up cost. Allocation pursuant to LUS proposed Cost Allocation Manual.

<sup>(2)</sup> Before Depreciation and Debt Service

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

The Fiber System is a wholesale fiber business that is in the start-up phase. Year 2004 is the first year that the Net Margin is positive. Historical numbers do not reflect uniform treatment and application of LUS Combined System administration and general, and other overhead costs to the Fiber System. LUS is currently evaluating the proper allocation of these costs to the Fiber System.

Table 4-6 summarizes the Combined System revenues and expenses for the Electric, Water, Wastewater and Fiber Systems for the most recent five years. Overall, in 2004 the Combined System total revenues (including retail sales, wholesale sales and other sources of income) increased by \$10.7 million, and operating expenses increased by \$7.0 million. This resulted in an increase in a Net Margin of approximately 10.6 percent, or \$3.8 million.

## Section 4

**Table 4-6**  
**Disposition of Unpledged Cash**

	2000	2001	2002	2003	2004
Combined System Operating Revenues	\$156,568,206	\$163,395,918	\$139,762,723	\$162,970,204	\$173,306,458
Combined System Operating Expenses	119,234,719	126,565,671	102,398,584	129,489,771	136,463,280
Combined System Other Revenues (Expenses)	<u>5,476,897</u>	<u>4,820,381</u>	<u>3,022,793</u>	<u>1,783,312</u>	<u>2,173,491</u>
Net Margin	\$42,810,384	\$41,650,628	\$40,386,932	\$35,263,745	\$39,016,669
Debt Service					
Interest	\$1,643,252	\$1,423,425	\$1,226,474	\$956,997	\$656,367
Principal	<u>5,760,000</u>	<u>8,545,883</u>	<u>6,015,000</u>	<u>6,270,000</u>	<u>12,213,278</u>
Total Debt Service	\$7,403,252	\$9,969,308	\$7,241,474	\$7,226,997	\$12,869,645
Balance After Debt Service	\$35,407,132	\$31,681,320	\$33,145,458	\$28,036,748	\$26,147,025
Less Interest on Customer Deposits	99,285	42,996	33,769	19,305	1,908
Balance Available for Capital Expenditures, In-Lieu-of-Taxes, Reserves, Other Lawful Purposes	\$35,307,847	\$31,638,324	\$33,111,689	\$28,017,443	\$26,145,116
Less Expenditures for Normal Additions to Plant Considered Payable from Operating Revenues	0	5,289,297	6,224,008	8,144,540	9,385,964
Change in Cash due to Operations	\$35,307,847	\$26,349,027	\$26,887,681	\$19,872,903	\$16,759,152
Less In-Lieu-of-Tax Payment	14,190,874	14,200,000	17,293,176	16,140,625	16,331,779
Changes in Balance Sheet Accounts affecting Cash	12,568,792	24,739,703	7,299,238	(4,610,583)	5,960,665
Resulting Change in 'Unpledged Cash'	<u>(\$8,548,181)</u>	<u>\$12,590,676</u>	<u>(\$2,295,267)</u>	<u>(\$8,342,861)</u>	<u>\$5,533,292</u>

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Source: City of Lafayette Utilities System Status of Construction Work Orders - October 2004

Combined System debt service increased in 2004 as a result of the 2004 Bonds issue. Monies from this issue are currently being applied to the T. J. Labbé and Hargis-Hébert generating stations. Cash balances were increased in 2004 as a result of increased electric system and wastewater system revenues.

### Customer Sales Data

The selected statistical data in Tables 4-7 through 4-10 pertaining to the number of customers, customer usage, and revenues by classes was obtained or developed from LCG's audited Financial Statement for the 12 months ended October 31, 2004.

Table 4-7 shows the Electric System retail statistics for the most recent five years. Compared to the prior year, the average electric usage per retail customer in Fiscal Year 2004 decreased by approximately 2.7 percent from 27,177 kWh to 26,431 kWh. The average electric revenue per retail customer, including fuel cost adjustment charges increased (4.8 percent) in 2004 compared to 2003 due to the passthrough of higher fuel costs.



**Table 4-7**  
**Electric Sales Revenue and Statistics**

	2000	2001	2002	2003	2004
Electric Sales Revenues:					
Retail - Rate Base	\$60,113,217	\$58,187,086	\$59,584,385	\$60,607,556	\$62,038,819
Retail - Fuel Adjustment	45,603,350	55,401,695	43,858,180	62,237,800	68,741,227
Wholesale	<u>26,597,737</u>	<u>24,696,671</u>	<u>10,520,237</u>	<u>12,232,000</u>	<u>12,742,061</u>
Total Electric Sales Revenues	\$132,314,305	\$138,285,452	\$113,962,803	\$135,077,356	\$143,522,107
Electric Sales (MWh)					
Retail	1,091,007	1,262,634	1,474,314	1,538,315	1,519,463
Wholesale	<u>616,483</u>	<u>507,754</u>	<u>281,280</u>	<u>268,379</u>	<u>284,095</u>
Total Sales	1,707,490	1,770,388	1,755,595	1,806,694	1,803,558
Electric Number of Accounts (Average)					
Retail	55,027	55,268	55,244	56,604	57,489
Wholesale	<u>15</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>12</u>
Total Accounts	55,042	55,278	55,255	56,616	57,501
Electric Statistics – Retail					
Usage per Account (kWh)	19,827	22,846	26,687	27,177	26,431
Revenue per Account (with fuel)	\$1,921	\$2,055	\$1,872	\$2,170	\$2,275
Revenue per Account (without fuel)	\$1,092	\$1,053	\$1,079	\$1,071	\$1,079
Revenue per MWh (with fuel)	\$96.90	\$89.96	\$70.16	\$79.86	\$86.07
Revenue per MWh (without fuel)	\$55.10	\$46.08	\$40.41	\$39.40	\$40.83

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Table 4-8 shows the Water System retail statistics for the most recent five years. Compared to the prior year, the average water usage per retail customer in Fiscal Year 2004 decreased by approximately 5.3 percent, from 142,832 gallons to 135,290 gallons. The average water revenue per customer decreased (1.6 percent) in 2004 compared to 2003.

## Section 4

**Table 4-8**  
**Water Sales Revenue and Statistics**

	2000	2001	2002	2003	2004
Water Sales Revenues:					
Retail	\$9,874,858	\$9,296,649	\$9,624,484	\$9,875,508	\$9,885,284
Wholesale	<u>1,497,048</u>	<u>1,594,377</u>	<u>1,668,492</u>	<u>1,669,941</u>	<u>1,715,164</u>
Total Water Sales Revenues	\$11,371,906	\$10,891,026	\$11,292,975	\$11,545,449	\$11,600,448
Water Sales (1,000 gallons)					
Retail	6,181,717	5,960,855	5,877,726	5,961,809	5,745,371
Wholesale	<u>928,291</u>	<u>1,094,092</u>	<u>1,122,567</u>	<u>1,150,109</u>	<u>1,171,125</u>
Total Sales	7,110,008	7,054,947	7,000,293	7,111,918	6,916,496
Water Number of Accounts (Average)					
Retail	39,757	39,911	40,583	41,740	42,467
Wholesale	<u>4,465</u>	<u>4,429</u>	<u>3,865</u>	<u>3,986</u>	<u>4,155</u>
Total Accounts	44,222	44,340	44,448	45,726	46,622
Water Statistics					
Usage per Account (1,000 gallons)	155	149	145	143	135
Revenue per Account	\$248.38	\$232.93	\$237.16	\$236.60	\$232.78
Revenue per 1,000 gallons	\$1.60	\$1.56	\$1.64	\$1.66	\$1.72

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Table 4-9 shows the Wastewater System statistics for the most recent five years. Compared to the prior year, the average wastewater usage per customer in Fiscal Year 2004 increased by approximately 0.7 percent, from 171,088 gallons to 172,243 gallons. The average wastewater revenue per customer increased by 5.5 percent in 2004 compared to 2003.

**Table 4-9**  
**Wastewater Sales Revenue and Statistics**

	2000	2001	2002	2003	2004
Wastewater Sales Revenues:					
Service	<u>\$11,558,992</u>	<u>\$12,377,542</u>	<u>\$12,814,793</u>	<u>\$14,105,471</u>	<u>\$15,140,093</u>
Total Wastewater Sales Revenues	\$11,558,992	\$12,377,542	\$12,814,793	\$14,105,471	\$15,140,093
Wastewater Intake (1,000 gallons)	4,917,233	6,142,415	6,128,633	6,446,588	6,601,199
Wastewater Number of Accounts (Average)	35,902	35,914	37,073	37,680	38,325
Wastewater Statistics					
Intake per Account (1,000 gallons)	137	171	165	171	172
Revenue per Account	\$321.96	\$344.64	\$345.66	\$374.35	\$395.04
Revenue per 1,000 gallons	\$2.35	\$2.02	\$2.09	\$2.19	\$2.29

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Table 4-10 shows the Fiber System statistics for the most recent five years. Compared to the prior year, the average fiber revenue per customer increased significantly (30.8 percent) in 2004 compared to 2003.



**Table 4-10**  
**Fiber Sales Revenue and Statistics**

	2000	2001	2002	2003	2004
Fiber Sales Revenues					
Service and Access Revenues	\$0	\$0	\$119,772	\$413,512	\$762,143
Total Fiber Sales Revenue	\$0	\$0	\$119,772	\$413,512	\$762,143
Fiber Number of Accounts (Average)	N/A	N/A	11	22	31
Fiber Statistics					
Revenue per Account	N/A	N/A	\$10,888	\$18,796	\$24,585

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Number of Accounts includes 14 Government, 11 Wholesale and 6 Other customers

Revenue per customer has increase significantly due to increased service requirements of existing customers.

## Adequacy of Revenues

The Utilities Revenue Bonds, Series 2004 Bond Ordinance, contains the following covenants as to the adequacy of revenues.

*“(a) So long as any Obligations remain Outstanding, the Issuer will fix, charge and collect, or cause to be fixed, charged and collected, subject to applicable requirements or restrictions imposed by law, such rates, rentals, fees and charges for the use of and for the services and products provided by the Utilities System as are expected to be sufficient in each Sinking Fund Year to produce Revenues, in an amount, at least equal to the sum of (i) one hundred percent (100%) of the Costs of Operation and Maintenance for such Sinking Year Fund Year, (ii) one hundred percent (100%) of the Bond Service Requirements for such Sinking Fund Year, (iii) one hundred percent (100%) of the amounts payable with respect to Subordinated Indebtedness and Subordinated Contract Obligations in such Sinking Fund Year, (iv) one hundred percent (100%) of the amount required to maintain the Reserve Fund in accordance with Section 5.1 hereof, and any additional amount required to make all other payments required to be made.”*

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

## Franchises

Covenants in Section 7.3 of the Bond Ordinance also state that the government should not voluntarily grant a franchise to any entity or construct or operate any competing facility providing the same services as provided by the Utilities System. No such franchise was granted during the current reporting period and no such franchise now exists.

A joint pole attachment agreement with the Bell South Telephone Company (“BSTC”) specifies that LCG will pay to BSTC a rate of \$8.00 per pole per year for use of BSTC



## Section 4

---

poles; BSTC 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 Cox Communications ("Cox") for pole rental of LCG's poles to Cox at \$7.00 per pole per year. A temporary franchise was granted to Light Core to utilize the City's right-of-way for a limited segment of fiber optic cable.

### Rate Revisions

The Bond Ordinance contains a rate covenant in Section 7.7 stating that LUS will fix charge and collect rates and fees for the use of services by the Utilities System. The rates should sufficiently produce revenues to fund the costs of O&M, Bond Reserve Requirement, Subordinated Indebtedness and Subordinated Contract Obligations, and the Reserve Fund.

The revenues and other receipts of LUS considered revenues for this purpose were sufficient for the 12 months ended October 31, 2004 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 Ordinance for this reporting period and all previous reporting periods.

The Council and LPUA have the exclusive right to regulate LUS' rates and charges for services within and outside the corporate limits of the City. The Bond Ordinance, Section 8.3, states that it is the duty of the Consulting Engineer to advise on any revisions of rates and charges except fuel adjustment charges. During Fiscal Year 2004, LUS increased base service rates for the Wastewater Systems by 10 percent in November of 2003.

LUS Electric System rates consist of a base and fuel component. Current base rates are inadequate and need to be adjusted to reflect new fixed costs associated with debt service payments related to the new generation projects. LUS increased the Electric System fuel charge to \$0.0375 in June 2003, and to \$0.0453 on October 14, 2004 in recognition of higher fuel costs. When both generation stations become operational in July 2006, LUS is expected to realize fuel savings. Fuel saving are expected to offset any increases in base electric rates. In the near future, LUS will need to conduct a comprehensive cost-of-service study to examine the adequacy and equity of existing electric system rates.

Existing wastewater rates, although recently increased, are insufficient to fully fund Wastewater System operation on a stand-alone basis. The Wastewater System is partially subsidized by the electric revenues due to large capital requirements of the system. The Wastewater System will be faced with continued rate increases over the next several years before the system will be financially self-sufficient. As soon as possible, LUS should raise wastewater rates to minimize subsidization of this system by the electric system.

The existing water rates are sufficient to fully fund the Water System operation on a stand-alone basis. However, the water rates should be monitored closely to ensure that rates continue to support the Water System. Water utility rates may be expected to



increase in the next three to five years. Tables 4-11 through 4-13 show the average revenue by rate class for the Electric, Water and Wastewater Systems.

Electric System average Residential base rates increased by 2 percent during the Fiscal Year 2004 compared to the prior year. The Small Commercial average base rates increased by 2.5 percent and the large commercial average base rates increased by 2.3 percent for Fiscal Year 2004 as shown in Table 4-11. Base rate increases can be attributable to changes in customer usage patterns.

However, since 2000, the average residential rates have decreased by approximately 6.2 percent. The Small Commercial rates have remained fairly steady since Year 2000. The Large Commercial rates have increased since 2000 by approximately 2 percent. Because LUS has kept base rates steady for this period, base rate changes can be attributable to changes in customer usage patterns.

**Table 4-11**  
**Electric Retail Base Rates (\$/kWh)**

<b>Class</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Residential	\$0.0363	\$0.0326	\$0.0337	\$0.0334	\$0.0341
Small Commercial-No Demand	\$0.0465	\$0.0442	\$0.0460	\$0.0455	\$0.0466
Large Commercial-Demand	\$0.0310	\$0.0295	\$0.0311	\$0.0309	\$0.0316

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

The Water System Average Residential Base Rates increased by 3 percent during Fiscal Year 2004. The Commercial average base rates increased by approximately 1 percent during Fiscal Year 2004 as shown in Table 4-12.

Since 2000, the Residential rates have consistently increased and the Commercial rates have varied. Changes in average revenue per Mgal can be attributable to changes in customer usage patterns.

**Table 4-12**  
**Water Retail Rates (\$/1,000 gallons)**

<b>Class</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Residential	\$1.66	\$1.72	\$1.79	\$1.80	\$1.85
Commercial	\$1.48	\$1.37	\$1.43	\$1.45	\$1.46

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

The Wastewater System Average Residential Base Rates increased by 6 percent during the Fiscal Year 2004. The average Commercial rates increased 5.4 percent during Fiscal Year 2004 as shown in Table 4-13.

Since 2000, the average residential wastewater rates have fluctuated with significant increased over the last two years. The commercial average rates have consistently increased since 2000. Changes in average revenue per Mgal can be attributable to changes in customer usage patterns

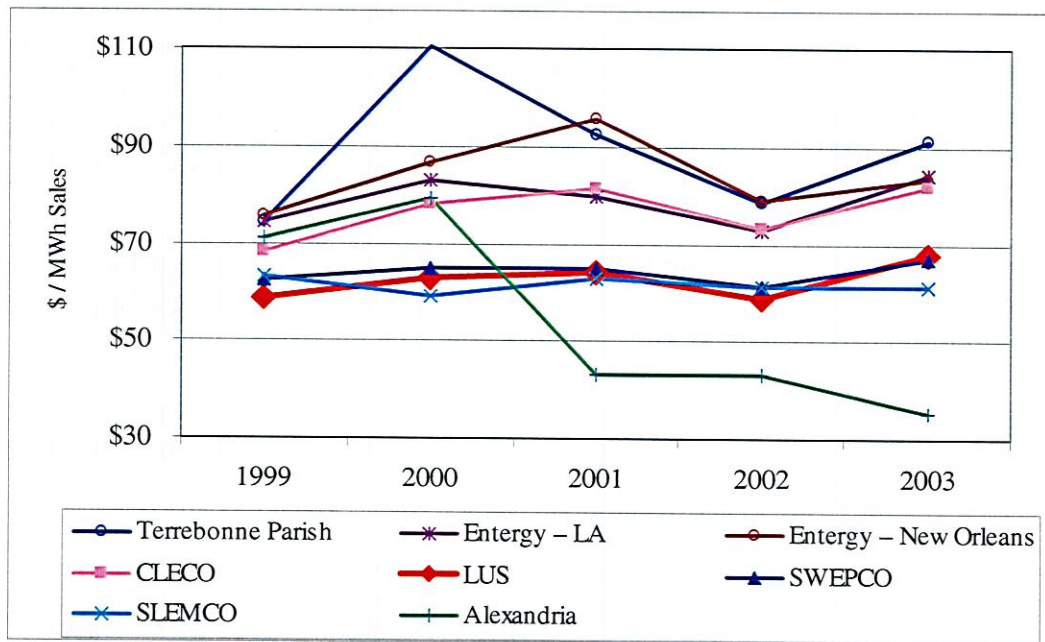
**Table 4-13**  
**Wastewater Retail Rates (\$/1,000 gallons)**

Class	2000	2001	2002	2003	2004
Residential	\$232.67	\$213.71	\$212.27	\$232.95	\$246.97
Commercial	\$949.85	\$1,198.53	\$1,225.59	\$1,270.46	\$1,339.24

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

### Rate Comparison

Figures 4-1 through 4-2 graphically compare the average electric residential and commercial retail rates for LUS and other selected Louisiana utilities for year 2002. Values for selected Louisiana utilities were not available for 2004 at the time of this report. Figure 4-1 displays the rate benefit LUS residential customers experience compared to surrounding utilities in Louisiana. In 2002, LUS' residential rates were some of the lowest in Louisiana.

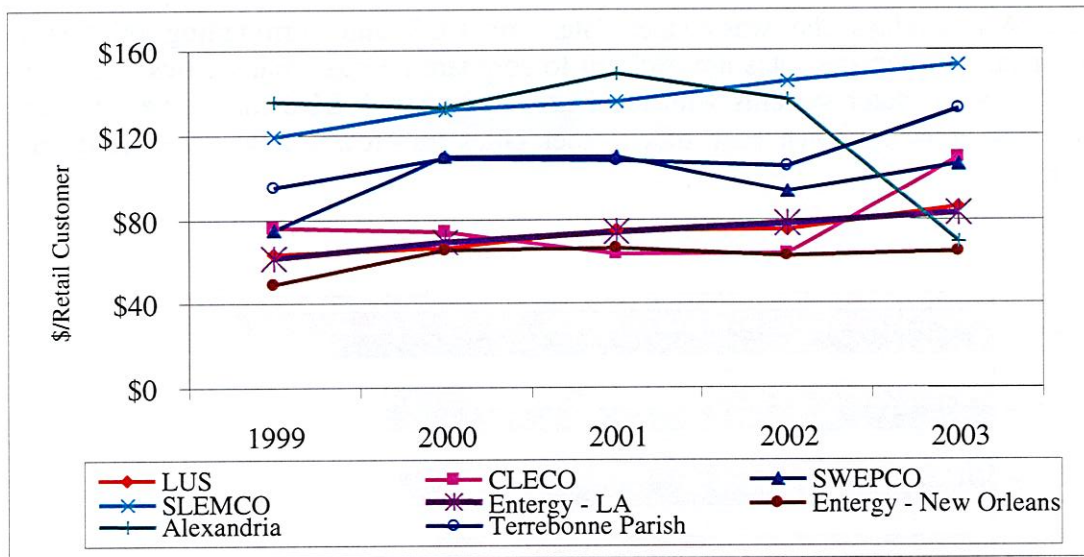


**Figure 4-1: Residential Rates for LUS and Selected Louisiana Utilities**

Source: Energy Velocity

Figure 4-2 displays the rate benefit LUS commercial customers experience compared to surrounding utilities in Louisiana. In 2002, LUS' commercial rates are some of the lowest in Louisiana. A comparison of industrial rates was not performed because LUS does not maintain an industrial class of rates in its preparation of the Energy Information Administration ("EIA") Form 861.

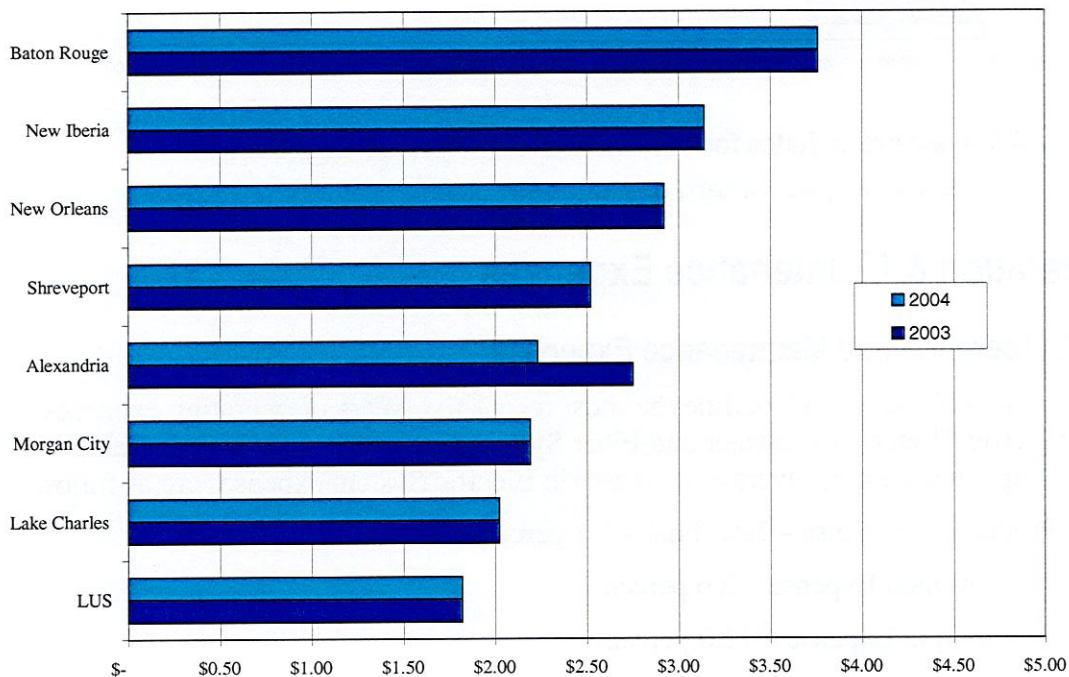




**Figure 4-2: Commercial Rates for LUS and Selected Louisiana Utilities**

Source: Energy Velocity

Figure 4-3 displays the rate benefit LUS water customers experience compared to surrounding utilities in Louisiana. LUS' water rates were among the lowest in Louisiana.

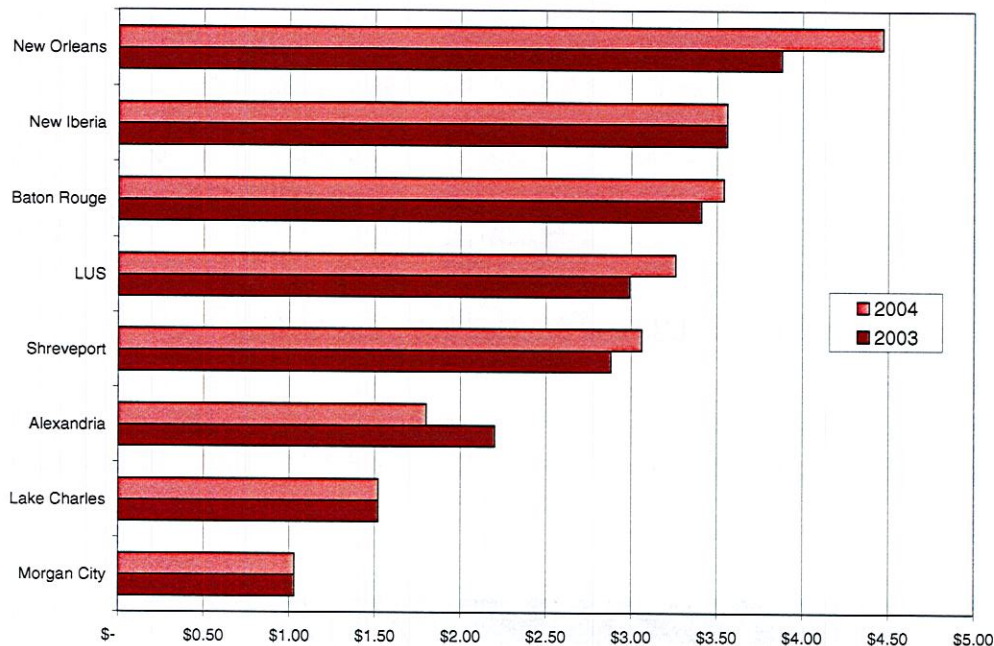


**Figure 4-3: Water Rates for LUS and Selected Louisiana Utilities**

Source: LUS, Based on a monthly bill with 7,000 gallons consumption

## Section 4

Figure 4-4 displays the wastewater rates for LUS and surrounding utilities in Louisiana. Wastewater rates are difficult to compare because many cities and towns subsidize wastewater systems with local taxes. Although LUS may appear to have high rates, it is unknown how much other cities and towns have subsidized their systems.



**Figure 4-4: Wastewater Rates for LUS and Selected Louisiana Utilities**

Source: LUS, Based on a monthly bill with 7,000 gallons consumption

## Operation & Maintenance Expenses

### LUS Operation and Maintenance Expenses

Tables 4-14 through 4-17 outline the most recent five years of operating expenses for the Electric, Water, Wastewater and Fiber Systems in detail. As shown in Table 4-14, the compounded annual average increases in Electric System expenses are as follows:

- Production Expense – Non-Fuel – 5.3 percent
- Transmission Expense – 2.6 percent
- Distribution Expense – 12.0 percent
- Administrative Support – 6.8 percent

Distribution Expenses have grown at a significant rate over the prior five-year period. Activities causing this rapid increase in expense are related in part to increased tree and animal-related outages.



**Table 4-14**  
**Electric System Detailed Expenses**

	2000	2001	2002	2003	2004
Electric Production Expense					
Operation - Fuel	\$29,262,723	\$25,387,948	\$14,169,879	\$20,909,938	\$28,871,511
Operation - Other	1,747,619	1,314,465	1,281,572	1,221,658	1,544,458
Maintenance	1,872,153	1,909,820	1,334,979	1,940,871	2,903,976
Purchased Power - LPPA	44,151,647	43,171,190	41,464,787	44,230,058	44,566,751
Purchased Power - Other	13,193,079	24,666,165	11,785,361	25,211,290	20,315,416
Electric Transmission Expense					
Operation	4,037,923	4,512,961	4,587,399	4,562,148	4,360,383
Maintenance	30,863	102,608	69,417	96,848	150,917
Electric Distribution Expense					
Operation	1,724,977	1,768,805	2,010,063	1,890,682	2,103,120
Maintenance	1,931,059	2,243,715	2,126,335	2,953,134	3,647,737
Other Electric Expense					
Customer Operations Expense	1,930,270	2,314,915	2,516,995	2,429,964	2,566,156
Customer Services	134,809	169,609	145,602	86,697	103,182
Administrative & General	<u>5,431,447</u>	<u>4,525,189</u>	<u>5,428,831</u>	<u>6,707,516</u>	<u>7,096,358</u>
Total Electric Expense	\$105,448,569	\$112,087,389	\$86,921,221	\$112,240,804	\$118,229,964

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

As shown in Table 4-15, the compounded annual average increases in Water System expenses are as follows:

- Supply Expense – 79.9 percent
- Power and Pumping Expense – 5.9 percent
- Purification Expense – 3.5 percent
- Distribution Expense – 7.9 percent
- Administrative Support – 7.3 percent

Supply Expenses have grown at a significant rate over the prior five-year period. This increase can be attributed to a change in cost booking methodology for the Water System.

## Section 4

**Table 4-15**  
**Water System Detailed Expenses**

	2000	2001	2002	2003	2004
Water Source of Supply Expense					
Operation	\$141	\$0	\$488	\$29,359	\$11,428
Maintenance	1,083	8,225	1,035	1,230	1,392
Water Power & Pumping Expense					
Operation	564,702	682,725	582,811	641,975	708,850
Maintenance	0	0	0	0	0
Water Purification Expense					
Operation	1,577,664	1,485,130	1,125,198	1,718,453	1,770,445
Maintenance	345,139	364,779	383,809	421,106	438,916
Water Distribution Expense					
Operation	578,403	620,437	593,326	582,136	747,069
Maintenance	469,312	506,600	568,275	669,539	675,033
Other Water Expense					
Customer Operations Expense	570,592	673,084	712,529	733,705	826,959
Customer Services	21,904	78,842	49,515	80,279	54,598
Administrative & General	<u>1,677,645</u>	<u>1,349,697</u>	<u>2,115,221</u>	<u>2,005,666</u>	<u>2,126,093</u>
Total Water Expense	\$5,806,585	\$5,769,520	\$6,132,208	\$6,883,447	\$7,360,784

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

As shown in Table 4-16, the compounded annual average increases in Wastewater System expenses are as follows:

- Collection Expense – 5.0 percent
- Treatment Expense – 7.6 percent
- Administrative Support – 5.9 percent

Treatment Expenses have grown as a result of LUS upgrading and adding treatment capacity.

**Table 4-16**  
**Wastewater System Detailed Expenses**

	2000	2001	2002	2003	2004
Wastewater Collection Expense					
Operation	\$737,940	\$957,876	\$970,139	\$995,725	\$1,036,545
Maintenance	1,052,931	1,068,892	946,171	1,032,366	1,140,669
Wastewater Treatment Expense					
Operation	3,116,709	3,682,737	3,816,224	4,040,399	4,173,823
Maintenance	109,496	123,465	113,780	150,682	153,619
Other Wastewater Expense					
Customer Operations Expense	300,814	479,735	479,052	447,595	484,251
Customer Services	353,825	360,746	332,995	397,131	360,200
Administrative & General	<u>2,307,849</u>	<u>1,980,129</u>	<u>2,321,829</u>	<u>2,733,022</u>	<u>2,881,777</u>
Total Wastewater Expense	\$7,979,564	\$8,653,581	\$8,980,191	\$9,796,920	\$10,230,885

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

As shown in Table 4-17, the Fiber System expenses have significantly increased over the most recent five years. Because the Fiber System is a new business venture, trends in O&M costs are not meaningful.



**Table 4-17**  
**Fiber System Detailed Expenses**

	2000	2001	2002	2003	2004
Fiber Expenses					
Network Support Services	\$0	\$0	\$166,519	\$123,393	\$61,774
General Support Services	0	0	12,902	2,312	241
General Office Switching Expense	0	911	0	0	0
Operators System Expense	0	6,392	7,454	4,654	1,021
Central Office Transmission Expense	0	0	0	0	13,657
Information on Origination/Termination Assets	0	0	0	0	0
Cable & Wire Facilities Assets	0	0	566	0	0
Materials & Supplies	0	0	1,370	0	361
Network & Operations Expense	0	0	835	147,297	163,774
Access Expense	0	0	0	0	0
Other Fiber Expense					0
Customer Operations Expense	0	77	24,077	352	1,325
Customer Services	0	0	29,364	944	399,496
Administrative & General	0	47,802	121,879	289,648	0
Total Fiber Expense	\$0	\$55,182	\$364,965	\$568,599	\$641,648

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

As shown in Table 4-18, the unit cost of self generation has increased significantly since 2000 due to both fuel cost and O&M. The unit cost for LPPA purchased power has increased slightly since 2000. The total supply unit costs have increased since 2000.

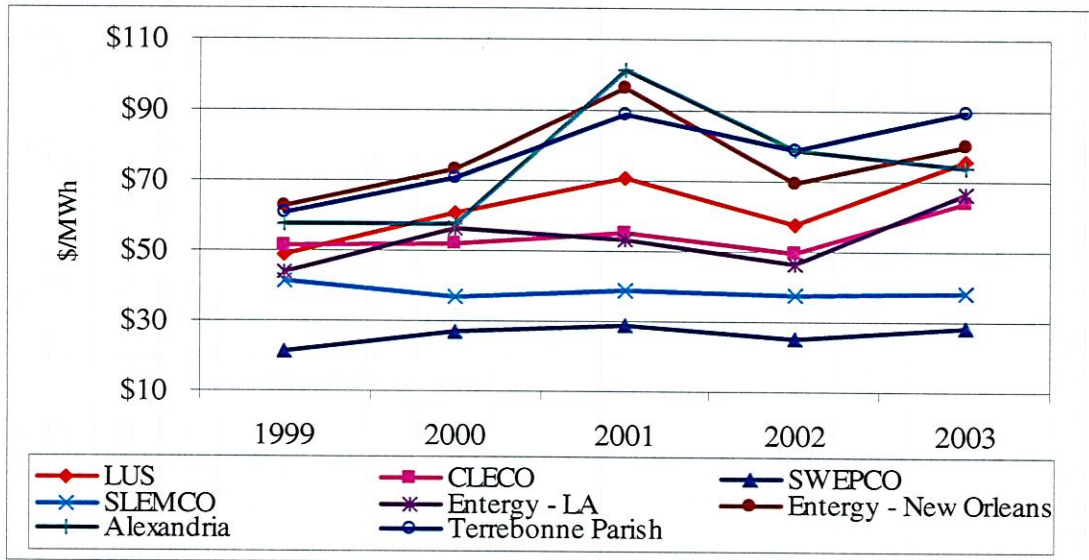
**Table 4-18**  
**Electric System Annual Power Costs**

	2000	2001	2002	2003	2004
Expenses					
Self Generation					
Fuel	\$29,262,723	\$25,387,948	\$14,169,879	\$20,909,938	\$28,871,511
Other	<u>3,619,771</u>	<u>3,224,284</u>	<u>2,616,552</u>	<u>3,162,529</u>	<u>4,448,433</u>
Total Self Generation	\$32,882,494	\$28,612,232	\$16,786,431	\$24,072,467	\$33,319,945
Purchases					
LPPA	\$44,151,647	\$43,171,190	\$41,464,787	\$44,230,058	\$44,566,751
Other Supplies	<u>13,193,079</u>	<u>24,666,165</u>	<u>11,785,361</u>	<u>25,211,290</u>	<u>20,315,416</u>
Total Purchased Power	<u>\$57,344,726</u>	<u>\$67,837,355</u>	<u>\$53,250,148</u>	<u>\$69,441,348</u>	<u>\$64,882,166</u>
Total Supply	\$90,227,220	\$96,449,587	\$70,036,579	\$93,513,815	\$98,202,111
Energy (MWh)					
Self Generation	692,805	514,759	418,447	377,943	463,145
Purchases					
LPPA	1,483,244	1,342,947	1,403,069	1,249,829	1,339,136
Other Supplies	<u>309,219</u>	<u>502,935</u>	<u>358,561</u>	<u>558,829</u>	<u>412,996</u>
Total Purchased Power	<u>1,792,463</u>	<u>1,845,882</u>	<u>1,761,630</u>	<u>1,808,658</u>	<u>1,752,132</u>
Total Supply	2,485,268	2,360,641	2,180,077	2,186,601	2,215,277
Average Costs (\$/MWh)					
Self Generation					
Fuel	\$42.24	\$49.32	\$33.86	\$55.33	\$62.34
Other	<u>5.22</u>	<u>6.26</u>	<u>6.25</u>	<u>8.37</u>	<u>9.60</u>
Total Self Generation	\$47.46	\$55.58	\$40.12	\$63.69	\$71.94
Purchases					
LPPA	\$29.77	\$32.15	\$29.55	\$35.39	\$33.28
Other Supplies	<u>\$42.67</u>	<u>\$49.04</u>	<u>\$32.87</u>	<u>\$45.11</u>	<u>\$49.19</u>
Total Purchased Power	<u>\$31.99</u>	<u>\$36.75</u>	<u>\$30.23</u>	<u>\$38.39</u>	<u>\$37.03</u>
Total Supply	\$36.30	\$40.86	\$32.13	\$42.77	\$44.33

Source LCG Audited Financial and Operating Statement October 2004, 2/05

### Comparative Operation and Maintenance Expenses

Figure 4-5 displays the production O&M expense on a Total Resource basis (including self-generation and purchased power) for LUS and other selected utilities. LUS has average power supply costs compared to the neighboring utilities on a MWh basis.

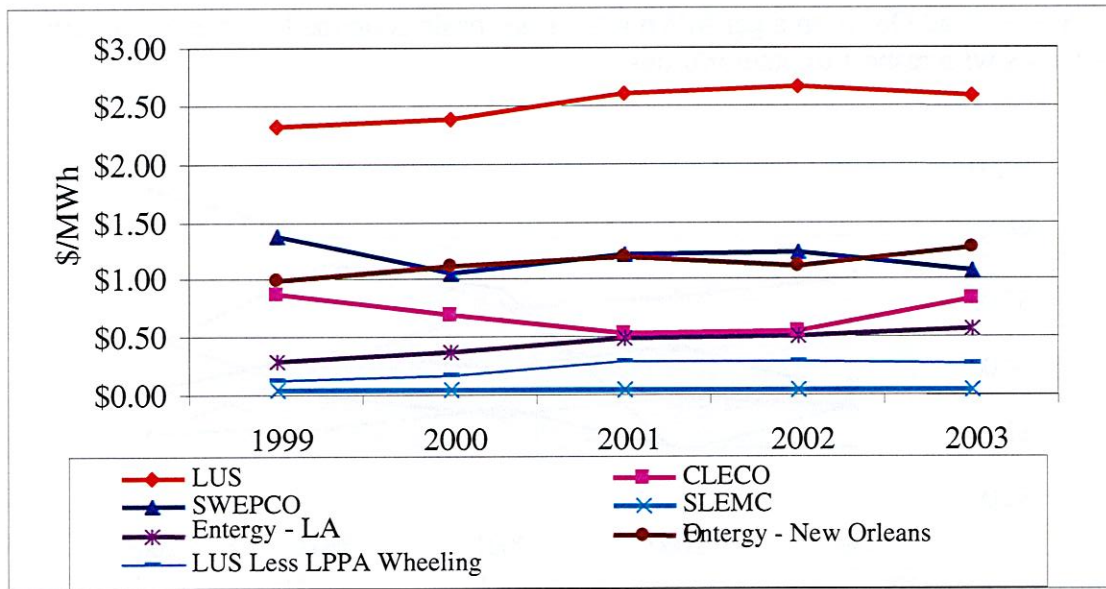


**Figure 4-5: Production & Purchased Power Expense per MWh (Total Resources)**

Source: Energy Velocity

Figure 4-6 shows the transmission O&M expense on a per-MWh sold basis for LUS and other selected utilities. LUS' is the highest compared to other selected utilities when wheeling charges for LPPA purchases (Rodemacher) (transmission of electricity by others) are included. If wheeling charges are not included, LUS values are the lowest compared to other utilities. This may be attributed to the fact that LUS only has approximately 40 miles of transmission line as compared to CLECO with approximately 1,250 miles and Southwestern Electric with approximately 3,400 miles.

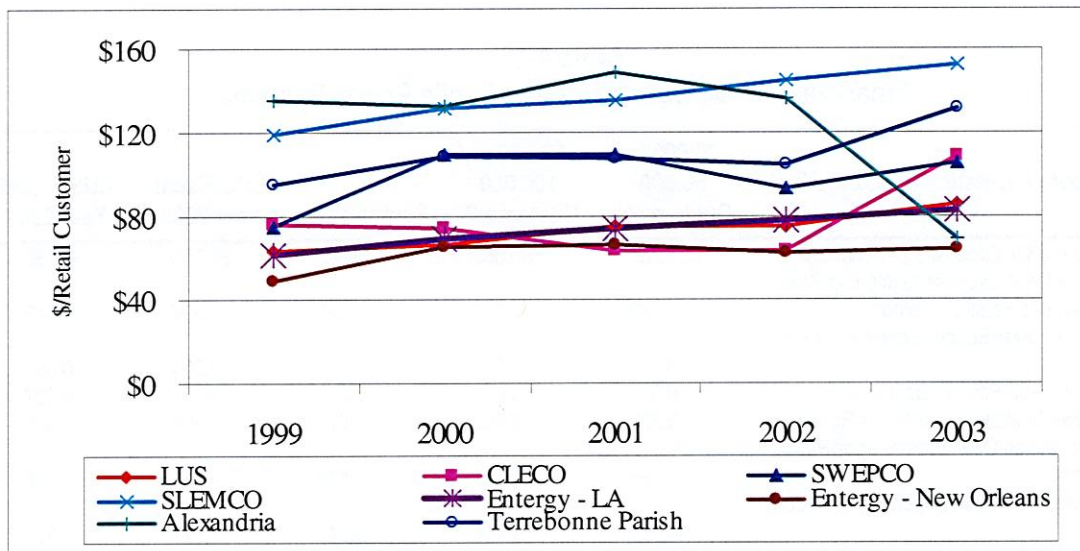




**Figure 4-6: Transmission O&M per MWh (Total Resources)**

Source: Energy Velocity

Figure 4-7 displays the distribution O&M expense on a per MWh sales basis for LUS and other selected utilities. LUS' distribution O&M on a per MWh basis is average with respect to other utilities.



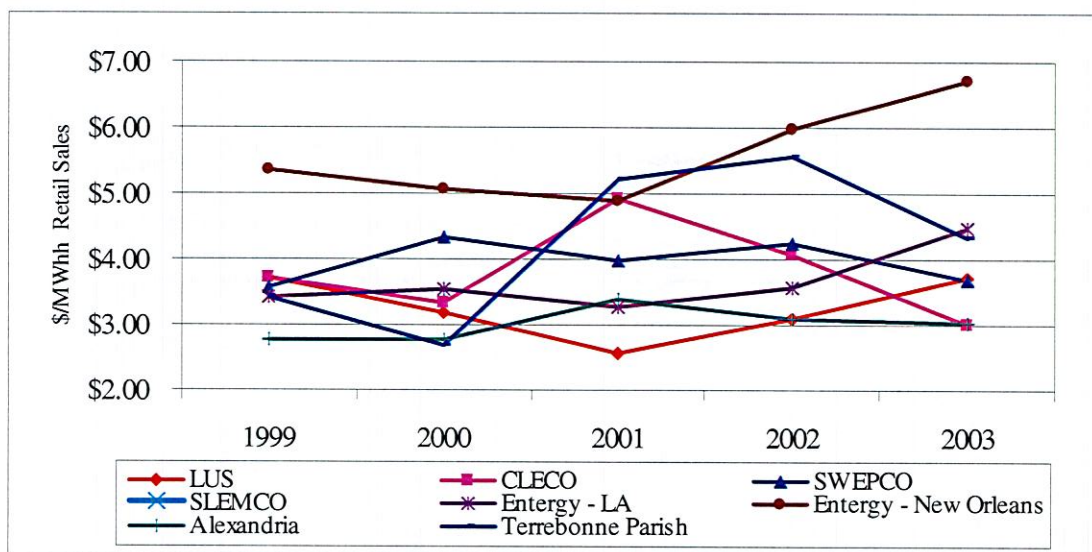
**Figure 4-7: Distribution O&M per Customer**

Source: Energy Velocity

Figure 4-8 displays the Overhead O&M expense on a per MWh retail sales basis for LUS and other selected utilities. The Overhead O&M expense includes the following: Customer Accounts, Customer Service & Info, Sales Expense and A&G Expense.

## Section 4

LUS' overhead O&M on a per MWh retail sales basis is on the lower end of overhead expenses with respect to other utilities.



**Figure 4-8: Overhead O&M per MWh Retail Sales**

Source: Energy Velocity

Table 4-19 compares LUS financial and operating ratios with other public power systems across the United States.

**Table 4-19**  
**Financial and Operating Ratios - Public Power Systems**

Operating Ratios – 2002 Median Values <sup>(1)</sup>	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 2002	LUS Fiscal Year 2004
1. Total O&M Expenses per kWh Sold	\$0.054	\$0.053	\$0.047	\$0.050	\$0.066
2. Total O&M Expense (excluding Power Supply) per Retail Customer	232	310	293	306	348
3. Total Power Supply Expense per kWh Sold	0.045	0.043	0.039	0.034	0.054
4. Purchased Power Cost per kWh	0.044	0.044	0.037	0.030	0.037
5. Retail Customers per Meter Reader	5,333	6,401	4,074	N/A	N/A
6. Distribution O&M Expense per Retail Customer	96	102	119	75	100
7. Distribution O&M Expense per Circuit Mile	4,104	5,217	4,945	5,171	7,361
8. Customer Accounting, Service and Sales Expense per Retail Customer	42	55	44	48	46
9. Administrative & General Expense per Retail Customer	\$67	\$117	\$107	\$98	\$123

<sup>(1)</sup> Ratios from the 'Selected Financial and Operating Ratios of Public Power Systems' published by APPA in April 2004, 2002 Data

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

The LUS power supply costs per kWh are higher than the average for the two national categories (20,000 to 50,000 customers and 50,000 to 100,000 customers respectively).



## **Glossary for Electric Operating Ratios**

The following definitions and comments relate to the ratio input data and national ratio statistics and are excerpted from APPA's Selected Financial and Operating Ratios of Public Power Systems shown in Table 4-19.

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

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

Included in operation and maintenance costs are the expenses associated with power supply (generation and purchased power), transmission, distribution, customer accounting, customer services, sales, and administrative and general functions of the electric utility. Because power supply expenses typically comprise the largest component of total operation and maintenance expenses, this ratio may be influenced by the proportion of power generated by a utility and the availability of alternative power supplies. Kilowatt-hours of electricity produced but not sold (i.e., energy furnished without charge or energy used internally and energy losses) are not included in the denominator.

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

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

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

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

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

The ratio includes operation and maintenance costs arising from all generation types, including steam, nuclear, hydraulic and other types of generation. Operation and maintenance expenses include the costs of fuel, labor, supervision, engineering, materials and supplies, and also include the cost of purchased power. The ratio may be influenced by the geographic location of the utility, the availability of alternative power supplies, and the degree to which the utility can generate its own power, and



## Section 4

---

access to transmission. The ratio does not include kilowatt-hours produced but not sold (i.e., energy used internally, energy furnished without charge, or energy losses).

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

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

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

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

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

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

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

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

The ratio of total distribution operation and maintenance expenses to the total number of retail customers measures the average distribution expense associated with delivering power to each retail customer.

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

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

The ratio of total distribution operation and maintenance expenses to the total number of circuit miles of distribution line measures the total distribution costs associated with each circuit mile of distribution line used to deliver power to customers.

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



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

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

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

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

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

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

**Utilities System Capital Improvement Program**

The combined estimated requirements for improvements to the Electric, Water, Wastewater and Fiber Systems through October 31, 2009 are summarized in Table 4-20. Each year, as the City revises its five-year Capital Improvement Program ("CIP") for the Utilities System and the priorities for each of the work items are re-examined. This review process needs to be improved in order that priorities and costs are established which are more manageable.

**Table 4-20**  
**Capital Improvement Program 2005 – 2009 (\$1,000)**

<b>Fiscal Year Ending</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>Total</b>
<b>Revenues</b>						
Retained Earnings Capital	\$8,524,804	\$533,741	\$549,359	\$1,838,055	\$1,999,016	\$13,444,975
Bond Proceeds - Utilities Revenue	0	25,000,000	0	3,000,000	0	28,000,000
Proceeds - LDEQ	33,000,000	0	0	0	0	33,000,000
Prior Year Reserve Balance	<u>16,175,570</u>	<u>18,423,374</u>	<u>15,542,115</u>	<u>5,071,474</u>	<u>3,939,529</u>	<u>16,175,570</u>
<b>Total Revenues</b>	<b>\$57,700,374</b>	<b>\$43,957,115</b>	<b>\$16,091,474</b>	<b>\$9,909,529</b>	<b>\$5,938,545</b>	<b>\$90,620,545</b>
<b>Appropriations</b>						
Electric	\$11,139,862	\$6,911,767	\$2,062,500	\$1,062,500	\$1,012,500	\$22,189,129
Water	2,589,923	2,386,972	752,500	202,500	652,500	6,584,395
Wastewater	21,797,435	15,804,261	7,802,500	4,102,500	2,852,500	52,359,196
Fiber	749,780	812,000	402,500	302,500	302,500	2,569,280
Reserve Fund / Capitalized Interest	3,000,000	2,500,000	0	300,000	0	5,800,000
Balance Available	<u>18,423,374</u>	<u>15,542,115</u>	<u>5,071,474</u>	<u>3,939,529</u>	<u>1,118,545</u>	<u>1,118,545</u>
<b>Total Appropriations</b>	<b>\$57,700,374</b>	<b>\$43,957,115</b>	<b>\$16,091,474</b>	<b>\$9,909,529</b>	<b>\$5,938,545</b>	<b>\$90,620,545</b>

Source: LCG Annual Budget Document 2004-2005, 2/05

### Capital Improvement Program

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

The CIP in the utility business is generally the largest financial requirement. LCG's budgeting and accounting system does not offer LUS the degree of information and control needed to manage construction. Comprehensive changes to the 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 10 years) with clearly identified and costed projects and contain detailed plans/schedules and costs for the short-term?
- Is it formulated and reviewed, particularly with input from the field and other concerned parties?
- Is it reviewed periodically (normally at least quarterly by a CIP committee with broad utility representation)?
- Is it clearly and effectively presented annually to the LUS administration to promote a continuous “buy-in?”

Table 4-22 shows that many of the planned capital projects have not been accomplished within the scheduled timeframe. LUS needs to improve project budgeting and/or improve the accomplishment of the planned activities. The lack of precision in budgeting and scheduling affects cash flow planning, planning for the sale of bonds and service rate changes. To adjust for this difference between budget and actual expenditures, the total budget expenditure amounts for each utility are arbitrarily reduced for cash flow planning. This reduction is based on the fact that historically the actual expenditures are significantly less than the budgeted expenditures.

## Section 4

**Table 4-21**  
**Comparison of Budget and Actual Capital Expenditures (\$1,000)**

	2000	2001	2002	2003	2004	Total
Electric System						
Budgeted	\$9,929	\$16,563	\$14,040	\$12,149	\$17,597	\$70,278
Actual	<u>19,213</u>	<u>10,530</u>	<u>6,143</u>	<u>6,020</u>	<u>7,927</u>	<u>49,833</u>
Unspent	(\$9,284)	\$6,033	\$7,897	\$6,129	\$9,670	\$20,445
Unspent Percentage	-94%	36%	56%	50%	55%	29%
Water System						
Budgeted	\$5,125	\$6,350	\$4,240	\$3,277	\$3,925	\$22,917
Actual	<u>2,510</u>	<u>2,642</u>	<u>1,954</u>	<u>2,830</u>	<u>1,489</u>	<u>11,425</u>
Unspent	\$2,615	\$3,708	\$2,286	\$447	\$2,436	\$11,492
Unspent Percentage	51%	58%	54%	14%	62%	50%
Wastewater System						
Budgeted	\$17,135	\$23,829	\$17,975	\$14,658	\$24,800	\$98,397
Actual	<u>4,176</u>	<u>5,173</u>	<u>4,477</u>	<u>7,090</u>	<u>5,896</u>	<u>26,812</u>
Unspent	\$12,959	\$18,656	\$13,498	\$7,568	\$18,904	\$71,585
Unspent Percentage	76%	78%	75%	52%	76%	73%
Fiber System						
Budgeted	\$0	\$0	\$2,100	\$915	\$1,700	\$4,715
Actual	<u>0</u>	<u>0</u>	<u>1,608</u>	<u>108</u>	<u>809</u>	<u>2,525</u>
Unspent	\$0	\$0	\$492	\$807	\$891	\$2,190
Unspent Percentage			23%	88%	52%	46%
Total System						
Budgeted	\$32,189	\$46,742	\$38,355	\$30,999	\$48,022	\$196,307
Actual	<u>25,899</u>	<u>18,345</u>	<u>14,182</u>	<u>16,048</u>	<u>16,121</u>	<u>90,595</u>
Unspent	\$6,290	\$28,397	\$24,173	\$14,951	\$31,901	\$105,712
Unspent Percentage	20%	61%	63%	48%	66%	54%

Source: LCG Annual Budget Document 2004-2005, 2/05

Source: Status of Construction Work Orders

Note: Actual includes budgeted and previous year's carryovers

Over the above five-year period, the total budget expenditures amounted to approximately \$196 million compared with actual expenditures amounting to approximately \$91 million. Historically, on average of 54 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 recommend that the capital budgetary process be altered so that the estimated capital needs are more accurately developed.

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

## Restricted Asset Transactions and Balances

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

- (i) Receipts Fund



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

Fund requirements were impacted significantly in 2004 as a result of the Series 2004 bond issue.

### **Bond Reserve Fund**

The Bond Reserve Fund transactions during the fiscal year are presented in Table 4-22.

**Table 4-22  
Reserve Fund (\$1,000)**

Cash Balance as of November 1, 2003	\$7,480
Receipts during the Period:	
Interest	155
Transfer from Capital Additions	0
Transfer from 2004 Bond Fund	<u>17,116</u>
Total Receipts	17,271
Total Receipts and Cash Balance	24,751
Disbursements during the Period:	
Transfer to Receipts Fund	0
Defease 1993 Bonds	<u>6,147</u>
Total Disbursements	6,147
Fund Balance as of October 31, 2004	<u>\$18,604</u>

Source: Prepared by LCG and LUS 2/05

### **Capital Additions Fund**

In compliance with the requirements of the Bond Ordinance concerning receipts and disbursements of the Capital Additions Fund, the transactions during the fiscal year are presented in Table 4-23. Required transfers of principal and interest were made in a timely fashion to the City's paying agent.

**Table 4-23**  
**Capital Additions Fund (\$1,000)**

Cash Balance as of November 1, 2003	\$74,749
Receipts during the Period:	
Transfer from Receipts Fund	\$0
Transfer from Bond & Interest Fund	0
Transfer from Bond Construction Fund	1,916
Miscellaneous Revenues	953
Interest Earnings	<u>30,298</u>
Total Receipts	\$33,167
Total Receipts and Cash Balance	\$107,916
Disbursements during the Period:	
In Lieu-of-Tax Payment	\$16,332
Transfer to Bond Reserve	0
Transfer to Bond & Interest Fund	0
Transfer to O&M for Norm. Cap	10,300
Transfer to O&M for Retained Earnings	16,950
Transfer to O&M for Special Capital	<u>40</u>
Total Disbursements	\$43,622
Fund Balance as of October 31, 2004	\$64,294
The above balance is available for the 2004-2005 fiscal year requirements	
In Lieu-of-Tax Payment	\$17,467
Fund Balance not specially committed	<u>46,827</u>
Fund Balance as of October 31, 2004	\$64,294

Source: Prepared by LCG and LUS 2/05

## Construction Fund

The following Construction Fund, identified in Table 4-24, was established for purposes of financing major electric and wastewater construction projects. Bonds for these projects total \$157,864,000.

The 1996 LDEQ Construction Fund was established for purposes of financing major wastewater construction projects. Bonds for these projects 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, 2004 total \$18,053,278. For this period, the Construction Fund has a zero balance since the drawdowns requested were all expended by the end of their reporting period.



**Table 4-24**  
**Construction Fund (\$1,000) – 2004 Bonds**

Cash Balance as of November 1, 2003	\$0
Receipts during the Period:	
Bond Proceeds	\$187,192
Interest Earnings	125
Miscellaneous	0
Total Receipts	\$187,317
Total Receipts and Cash Balance	\$187,317
Disbursements during the Period:	
Transfer to Bond & Interest Fund	\$11,681
Transfer to Bond Reserve Fund	17,116
Transfer to Capital Additions Fund	1,856
Construction Expenses Paid	14,074
Total Disbursements	\$44,728
Fund Balance as of October 31, 2004	\$142,589

Source: Prepared by LCG and LUS 2/05

## In-Lieu-of Tax

On August 19, 2003, the City adopted the following change to the computation of taxable receipts for purposes of calculating the in-lieu-of tax ("ILOT") payment to the City's General Fund. The Ordinance (No. O-185-2004) authorizing this change reads as follows:

*In computing the annual in-lieu-of-tax payment to the City of Lafayette General Fund by the system pursuant to the bond resolution adopted by the Lafayette City-Parish Council and the Lafayette Public Utilities Authority on June 29, 2004 (Ordinance No. O-12-2004, Section 5.1 (e)(iv)):*

- (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 2003-2004 (for payment to the General Fund during FY 2004-2005). This "fuel restoration" shall be \$41,666,667 and shall be applied as herein adopted. 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 owned by Lafayette and the Lafayette Public Power Authority (LPPA).*
- (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.*
- (3) The additional \$5,000,000 of in-lieu-of-tax payment generated through the fuel restoration of \$41,666,667 is made up of two components. The first \$25,000,000 of fuel restoration implemented prior to Fiscal Year 2000-2001 and generating \$3,000,000 of in-lieu-of-tax is not subject to any of the*

## Section 4

*considerations listed below...The second component of the fuel restoration equal to \$16,666,667, generating \$2,000,000 of in-lieu-of-tax, and implemented for the first time in Fiscal Year 2000-2001 shall be applied as credit for utility relocation costs owed by the City of Lafayette Utilities System to the City of Lafayette's general and/or capital funds...*

The in-lieu-of tax payment to the general fund is based on the previous year's revenues. The amount paid in 2004 (based on 2003 LUS revenues) was \$16,331,779. This represented an increase from the amount paid in 2003 (based on 2002 LUS revenues) of \$16,140,675. Based on the new ordinance and revenues in 2004, the amount projected to be paid in 2005 is \$16,316,608. These in-lieu-of tax payments as a percent of the prior year's combined operating revenues were 10.13 percent and 9.35 percent as shown in Table 4-25. By comparison, American Public Power Association's ("APPA") survey (published April 2002) 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 (based on the four years) was approximately 15 percent higher than the nation's median.

**Table 4-25**  
**Historical ILOT Payments (\$1,000)**

	2000	2001	2002	2003	2004	Average
LUS Operating Revenues	\$156,568	\$163,396	\$139,763	\$162,970	\$173,121	
LUS Calculated ILOT	14,200	17,293	16,141	16,332	16,317	
ILOT as a percent of Revenues	9.07%	10.58%	11.55%	10.02%	9.42%	10.13%
Electric Operating Revenues	136,469	136,469	136,469	136,469	136,469	
Electric Calculated ILOT	\$10,850	\$13,214	\$12,332	\$13,343	\$14,052	
ILOT as a percent of Revenues	7.95%	9.68%	9.04%	9.78%	10.30%	9.35%

Source: 2004-2005: LCG Annual Budget Document 2004-2005, 2/05

Source: LCG Audited Financial and Operating Statements October 2004, 2/05

## Financial and Operating Ratios

Table 4-26 provides a comparison of LUS' electric system with over 406 other similar-sized electric power systems nationwide; however, not all ratios are based on the same number of power systems since some did not have data applicable to each ratio. The 2002 data for these systems was obtained from the APPA publication dated April 2004. This may significantly impact the comparisons that are based on fuel costs as fuel costs have changed dramatically in recent years.



**Table 4-26**  
**Financial & Operating Ratios - Public Power Systems**

Financial Ratios – 2002 Median Values <sup>(1)</sup>	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 2002	LUS Fiscal Year 2004
1. Revenue per kWh for Retail Customers	\$0.063	\$0.071	\$0.061	\$0.059	\$0.086
2. Debt to Total Assets	0.275	0.328	0.266	0.068	0.300
3. Operating Ratio (Electric only)	0.882	0.824	0.822	0.755	0.814
4. Current Ratio	2.250	2.770	3.550	0.990	0.696
5. Times Interest Earned	3.930	1.810	3.340	33.0	40.1
6. Debt Service Coverage	3.460	3.410	2.810	5.41	2.04
7. Net Income per Revenue Dollar	0.045	0.041	0.062	0.058	\$0.034
8. Uncollectible Accounts per Revenue Dollar	\$0.003	\$0.005	\$0.005	\$0.007	\$0.004

<sup>(1)</sup> Ratios from the 'Selected Financial and Operating Ratios of Public Power Systems' published by APPA in April 2004 APPA, 2002 Data

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

The financial ratios (debt to total asset, times interest earned, and debt service coverage) indicate that LUS has an average debt level. LUS earned 3.4 cents on every dollar of revenue.

## Glossary for Electric Financial and Operating Ratios

The following definitions and comments relate to the ratio input data and national ratio statistics and are excerpted from APPA's *Selected Financial and Operating Ratios of Public Power Systems* shown in Table 4-26.

### Revenue per kWh (Line 1)

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

### Debt to Total Assets (Line 2)

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

Long-term debt includes bonds, advances from the municipality, other long-term debt, any unamortized premium on long-term debt and any unamortized discount on long-term debt. Current and accrued liabilities include warrants, notes and accounts payable, payables to the municipality, customer deposits, taxes accrued, interest accrued, and miscellaneous current and accrued liabilities. Total assets and other debits include utility plant, investments, and current and accrued assets and deferred debits.

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

## Section 4

---

### Operating Ratio (Line 3)

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

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

### Current Ratio (Line 4)

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

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

### Times Interest Earned (Line 5)

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

### Debt Service Charge (Line 6)

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

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

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

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

The ratio may be influenced by the type and availability of power supply options and by the amount of taxes and tax equivalents that a utility transfers to the municipality or



other governmental body. Financial policies and the amount of debt may also affect this ratio (e.g., how a utility finances capital investments).

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

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

**Retail Customers per Non-power Generation Employee (Line 9)**

The ratio of the average number of retail customers from all classes to the total number of full-time, part-time and contract employees not involved in the generation of power measures the average number of customers served by each non-generation employee.

The ratio may be influenced by the mix of customers and by population density. It will be influenced by the extent that employees shared with other (non-electric) departments are not properly prorated, or that employees involved in resale transactions are included. Part-time employees are assumed to work half-time (i.e., two part-time employees are counted as one full-time employee). To the extent that this assumption is violated, the ratio will be biased. Contract employees include only those individuals performing regular utility work on an ongoing basis.

**Balance Sheet**

To determine the extent and character of the changes in assets and liabilities for 2004, a Comparative Balance Sheet is shown on Table 4-27. The comparison shows significant changes in the restricted assets deferred debits, and arbitrage liability due to the sale of the 2004 Bonds. In addition, Miscellaneous Accounts Payable increased significantly.

## Section 4

**Table 4-27**  
**Comparative Balance Sheet**

	2000	2001	2002	2003	2004
<b>Assets &amp; Other Debits</b>					
Utility Plant					
Plant in Service	\$496,937,330	\$514,280,623	\$534,959,541	\$557,247,646	\$597,540,034
Less Accumulated Depreciation & Amortization	(181,970,062)	(192,749,803)	(205,240,038)	(217,690,932)	(231,829,008)
Net Plant in Service	\$314,967,268	\$321,530,820	\$329,719,503	\$339,556,714	\$365,711,027
Construction Work in Progress	241,329	1,258,329	1,199,683	1,309,294	14,232,223
Total Utility Plant	<u>\$315,208,597</u>	<u>\$322,789,149</u>	<u>\$330,919,186</u>	<u>\$340,866,008</u>	<u>\$379,943,250</u>
Current Assets					
Receipts Fund	\$51,833	\$7,223	\$17,835	\$12,805	\$145,959
O&M Fund (Cash & Temp. Cash Investment)	\$4,278,362	\$3,465,094	\$3,814,902	\$4,732,033	\$3,666,462
Revolving Cashier's Fund and Water District Operating Fund (Cash)	\$8,350	\$7,740	\$8,450	\$9,450	\$9,800
Accounts Receivable					
Utility Consumers (less Uncollectible)	\$21,232,876	\$11,420,027	\$12,455,599	\$14,087,633	\$17,848,512
Other Utilities	2,389,493	1,395,065	1,011,552	929,008	1,245,780
Municipal & Other Receivables (less Reserve for Uncollectible Masc.)	2,364,399	1,863,864	5,033,461	1,692,382	1,898,346
Total Accounts Receivable	<u>\$25,986,768</u>	<u>\$14,678,956</u>	<u>\$18,500,612</u>	<u>\$16,709,023</u>	<u>\$20,992,638</u>
Inventories					
Inventories - Fuel Oil	\$698,678	\$698,678	\$698,678	\$698,678	\$698,678
Inventories - Other	2,059,981	2,175,000	2,189,688	2,948,860	4,230,998
Interest Receivable and Enamor					
Premiums	636,174	692,207	732,862	374,333	53,673
Prepayments	129,698	120,453	160,606	144,257	114,027
Total Inventories	\$3,524,529	\$3,686,338	\$3,781,834	\$4,166,128	\$5,097,375
Total Current Assets	<u>\$33,849,842</u>	<u>\$21,845,351</u>	<u>\$26,123,633</u>	<u>\$25,629,439</u>	<u>\$29,912,234</u>
Restricted Assets					
Capital Additions Fund	\$73,949,586	\$85,155,625	\$83,124,816	\$74,432,229	\$64,134,899
Bond Reserve	7,497,556	7,487,328	7,578,303	7,529,184	18,526,844
Bond and Interest Redemption Fund	0	0	0	0	9,645,973
Allowance for Market Value Adjustment	(28,682)	1,205,812	773,624	17,620	(202,941)
Security Deposits Fund Investments	3,725,596	4,061,027	3,561,785	4,194,443	4,237,143
Investment in Risk Management Fund	888,705	2,700,778	2,370,150	1,096,985	1,051,526
1996 Construction Fund - Cash	0	0	0	0	0
2004 Construction Fund - Cash & Investment	N/A	N/A	N/A	N/A	143,394,858
Expense Fund Escrow	0	0	0	0	0
Cash on Deposit with Paying Agent	5,678,313	5,784,162	5,897,470	6,023,720	2,145,535
Total Restricted Assets	<u>\$91,711,074</u>	<u>\$106,394,732</u>	<u>\$103,306,146</u>	<u>\$93,294,181</u>	<u>\$242,933,836</u>
Deferred Debits					
Unamortized Debt Discount and Expense	\$230,361	\$158,816	\$98,561	\$50,834	\$0
Unamortized Loss of Refunded Debt	1,044,858	717,031	442,695	226,977	0
1997 Tornado Clean up	37,298	37,298	37,298	0	0
2004 Revenue Bond Issuance Costs	N/A	N/A	N/A	N/A	3,220,823
Hurricane Lili	0	0	0	0	0
Clearing Accounts & Other	61,417	103,637	(515)	12,233	93,647
Miscellaneous	0	0	30,119	30,929	5,682
Total Deferred Debits	<u>\$1,373,934</u>	<u>\$1,016,782</u>	<u>\$608,158</u>	<u>\$320,973</u>	<u>\$3,320,152</u>
<b>Total Assets &amp; Other Debits</b>	<b>\$441,786,295</b>	<b>\$451,637,390</b>	<b>\$460,669,938</b>	<b>\$459,902,334</b>	<b>\$656,109,472</b>



Table 4-27 (continued)  
Comparative Balance Sheet

	2000	2001	2002	2003	2004
<b>Long Term Liabilities</b>					
Revenue Bonds (inclusive of current maturities)	\$40,334,933	\$37,168,278	\$31,153,278	\$24,883,278	\$196,660,000
Current Liabilities (payable from Current Assets)					
Accounts Payable (Fuel)	3,065,203	0	2,402,951	2,338,443	4,806,707
Accounts Payable (O&M Fund)	1,551,763	1,720,004	1,802,397	479,565	400,814
Accounts Payable (Payroll)	571,264	605,438	674,642	244,088	254,330
Accounts Payable (Miscellaneous)	3,979,158	3,984,630	5,665,588	4,749,027	18,383,222
Accounts Payable (Purchased Power LPPA)	(11,320)	(483,175)	910,780	5,117,359	1,386,060
Accounts Payable (Purchased Power Other)	204,460	435,586	2,053,956	2,395,338	296,749
Accounts Payable (Environmental Clean Up 'Grant St')	1,750,000	1,750,000	1,750,000	1,750,000	1,750,000
Miscellaneous Current and Accrued Liabilities	1,162,687	1,207,803	3,098,353	2,976,664	3,443,702
Accrued Interest on Security Deposits	44,742	76,456	22,479	16,185	0
A/P Water District North	403,714	263,616	249,055	115,562	206,840
Total Current Liabilities Payable from Current Assets	\$12,721,671	\$9,560,358	\$18,630,201	\$20,182,231	\$30,928,423
Other Liabilities (payable from Restricted Assets)					
Interest Accrued on Bonds	\$623,313	\$514,162	\$397,470	\$273,720	\$2,145,535
Interest Accrued on Security Deposits WDN	1,004	554	191	40	0
Customer Deposits	3,797,023	4,178,641	3,531,824	4,185,684	4,230,294
Arbitrage Liability	0	0	0	0	5,674,897
Total Other Liabilities Payable from Restricted Assets	\$4,421,340	\$4,693,357	\$3,929,485	\$4,459,444	\$12,050,727
Reserves					
Reserve for Revenue Bond Debt Service	\$7,497,556	\$7,487,328	\$7,578,303	\$7,529,184	\$18,526,844
Reserve for Capital Additions	(28,682)	1,205,812	83,124,816	74,432,229	64,134,899
Reserve for Security Deposits	0	0	3,561,785	4,194,443	4,237,143
Reserve for Risk Management	1,707,459	1,707,459	1,707,459	1,096,985	1,051,526
Total Reserves	\$9,176,333	\$10,400,599	\$95,972,363	\$87,252,841	\$87,950,411
Contributions					
Contributions from Municipality	\$5,317,627	\$5,317,627	\$0	\$0	\$0
Contributions from Others	32,579,228	32,694,236	0	0	0
Total Contributions	\$37,896,855	\$38,011,863	\$0	\$0	\$0
Retained Earnings	\$337,235,167	\$351,802,937	\$310,984,613	\$323,124,538	\$328,519,910
<b>Total Liabilities &amp; Other Credits</b>	<b>\$441,786,299</b>	<b>\$451,637,392</b>	<b>\$460,669,940</b>	<b>\$459,902,332</b>	<b>\$656,109,472</b>

Source: LCG Annual Budget Document 2004-2005, 2/05

Source: LCG Audited Financial and Operating Statements. October 2004, 2/05

## Operating Budget

The Operating Budget ("Budget") for the Year ended October 31, 2004 was adopted by Council. Included in the Ordinance is the five-year capital plan beginning in 2005. The Budget was approved by the Consulting Engineer both as to content and form in accordance with requirements of the Bond Ordinance.

A comparison of the project operations in the Amended Budget with actual operating results is shown in Table 4-28.

**Table 4-28**  
**Comparison of Actual Results to the Amended Budget (\$1,000)**

	<b>Actual</b>	<b>Amended Budget</b>	<b>Difference</b>	<b>% Difference</b>
Receipts	\$173,306	\$194,280	(\$20,973)	-10.8%
O&M	<u>136,463</u>	<u>157,483</u>	<u>(21,020)</u>	-13.3%
Balance After O&M	\$36,843	\$36,797	\$46	0.1%
Debt Service	<u>12,870</u>	<u>7,480</u>	<u>5,390</u>	72.1%
Balance After Debt Service	\$23,974	29,317	(\$5,343)	-18.2%
Capital Expenditures	\$9,386	\$12,833	(\$3,447)	-26.9%
In-Lieu-of-Tax	\$16,332	\$16,634	(\$303)	-1.8%
Balance of Revenues	(\$1,744)	(\$150)	(\$1,594)	1061.8%

Source: LCG Audited Financial and Operating Statement October 2004, 2/05

Source: LCG Annual Budget Document 2004-2004, 2/05

The comparisons shown in Table 4-28 are on a cash basis and therefore will not necessarily agree with audited amounts that are on an accrual basis.

Section 7.6 of the Bond Ordinance requires the governing body to prepare, approve, and adopt an annual budget.

The LCG's 2005 budget (November 1, 2004 through October 31, 2005), including LUS' budget, was submitted by the President to the Council and approved by the Council by Ordinance No. 0-178-2004. LUS' budget for the fiscal year ending October 31, 2005 as adopted by the LCG is as summarized in Table 4-29.



**Table 4-29**  
**Utilities System Budget**

Estimated Fund Balances as of November 1, 2004	\$187,315,824
<b>Receipts</b>	
Electric Retail Sales - Base Rate	\$63,793,837
Electric Retail Sales - Fuel Adjustment Charge	69,542,700
Electric Wholesale Sales	16,228,534
Water Retail Sales	11,700,513
Water Wholesale Sales	0
Wastewater Retail Sales	15,990,248
Fiber Wholesale Sales	1,000,000
Contributions in Aid of Construction	0
Interest - Operating Funds	2,929,000
Miscellaneous	<u>1,900,000</u>
<b>Total Receipts</b>	<b>\$183,084,832</b>
Total Receipts and Cash Balance	\$370,400,656
<b>Operating &amp; Maintenance</b>	
Fuel Costs	\$33,113,000
Purchased Power - LPPA	46,600,000
Purchased Power - Other	15,253,000
Electric O&M	25,965,739
Water O&M	7,798,231
Wastewater O&M	12,152,804
Fiber O&M	<u>1,397,075</u>
Total Operation & Maintenance	\$142,279,849
Interest & Principal Amounts	\$10,714,249
<b>Capital Renewals &amp; replacements</b>	
Normal Renewals & Special Equipment	\$9,934,863
Retained Earnings Capital Improvement	8,524,803
Reserve Requirement Reduction	0
Bond Capital Improvements	<u>115,000,000</u>
Total Capital Expenditures	\$133,459,666
In-Lieu-of-Tax Payments	\$16,484,156
<b>Total Expenditures</b>	<b>\$302,937,920</b>
Fund Balances as of October 31, 2005	\$67,462,736
Source: LCG Annual Budget Document 2004-2005, 2/05	

The above balance of all Utilities System Funds, (\$67,462,736) anticipates the specific fund balances presented in Table 4-29.

The above operating budget anticipates a decrease of approximately \$119,853,088 in cash balances during the 2004-2005 period. LUS continues to review and adjust the current budgeting system to increase financial and accounting controls and meet changing operating requirements.

### Fund Balances

The Utilities System will likely experience an increase in retained earnings over the next several years largely due to the financing of future capital projects with new debt in 2004 and 2005.

### Audit

Section 7.9 of the Bond Ordinance requires an annual audit of the Utilities System by a qualified independent Certified Public Accountant.

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, 2004. 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.

### Accounting

Section 7.8 of the Bond Ordinance requires that the City of Lafayette keep separate identifiable financial books, records, accounts and data regarding the Utilities System.

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

LCG currently prepares monthly financial statements that include important operating financial and managerial data. Except for several months following the close of a fiscal year, these internal statements are scheduled to be issued by the 20th day of the month following the 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. This is particularly critical for the telecommunications business. Timely information is essential for all LUS business, particularly as margins diminish. Additionally, the new management of business ventures such as telecom is extremely difficult when current financial initiatives may exist. Basic financial and operating results including costs, revenue and performance measurements should be available from two to four weeks after the end of a given month if the utility is to be responsive to the dynamics of the rapidly changing utility industry.



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 resolution, have been complied with by the City for the period ended October 31, 2004.

## Recommendations

Based on our review of the LUS financial and accounting records, we recommend the following as shown in Table 4-30:

**Table 4-30  
Recommendations**

Finance and Accounting	Priority	Status
LCG should 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.	Normal	Ongoing Progress
LUS should increase the water and wastewater systems debt to equity ratio and continue to work towards financing a considerable portion of future capital improvement projects with debt.	High	Ongoing Progress
LUS should continue to pursue a strategy of increasing wastewater rates over the next several years.	Highest	Ongoing Progress
LUS should continue to actively conduct financial planning, particularly as LUS adds new generation resources and increases combined system debt.	Highest	Ongoing Progress
Under the current financial constraints placed on the combined system, LUS cannot continue to absorb significant increases in the ILOT without jeopardizing the funding of important future capital projects. Therefore, LUS should examine ways to meet ILOT obligations without adversely impacting the utilities competitive position or financial integrity.	Highest	Ongoing Progress
LUS should conduct a combined system cost of service study including electric, water, wastewater, and fiber systems. This analysis is important in that LUS must understand the cost structure associated with the new capital and operating requirements of the combined system.	Highest	No Progress Seen
LUS should continue to explore ways of improving the timeliness of financial reporting, including the implementation of new financial management tools.	Highest	No Progress Seen
LUS should modernize and streamline human resource systems in order to accommodate current and future staffing and management needs of the utilities.	High	New
LUS should continue to improve the five-year capital budgetary process (cash-needs capital budget).	High	No Progress Seen
LUS should review and evaluate the accuracy of accounting policies related to booking transmission and distribution investment and related operation and maintenance expense.	Normal	New











**Section 5**  
**ELECTRIC UTILITY**

---







## Section 5 ELECTRIC UTILITY

---

### Existing Utilities System

This section of the Report sets forth the changes that have occurred to the Electric Utility properties of LUS during fiscal year 2004. A description and discussion of existing facilities and resources and summaries of historical service requirements are presented in the following pages of this section.

In February 2005, 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 expenditures made during fiscal year 2004. 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 2004**

Source of Funds	Electric
Normal Capital/Special Equipment	\$5,951,437
2004 Revenue Bonds	16,430,398
Retained Earnings	<u>7,927,293</u>
Total	\$30,309,128

Source: "Status of Construction Work Orders"  
Joan Parish, LUS, 2/22/05

### System Maintenance Expenditures

The average annual percentage growth in the maintenance for the utility after leveling the variations between years (using a linear regression function) is 8.7 percent annually for the electric system during the 1995-2004 period. 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 1995 through 2004 are provided in Table 5-2.

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

<b>Year Ended October 31</b>	<b>Amount</b>	<b>% Change</b>
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	\$3,834,075	9.5%
2001	\$4,256,143	11.0%
2002	\$3,530,731	-17.0%
2003	\$4,990,853	41.4%
2004	\$6,702,630	34.3%

Source: LCG Financial and Operating Statement October 2004 and previous CER Reports

## **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 demand 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 in the process of decommissioning the plant. The above ground exterior equipment has been removed and LUS plans to remove the power plant in 2007. LUS plans to return this site to a vacant piece of property. Gross operating parameters for each of the Bonin Plant's three units are listed in Table 5-3.



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

<b>Unit</b>	<b>Gross Capacity (MW)<sup>(2)</sup></b>	<b>Fuel</b>	<b>Boiler Manufacturer</b>	<b>Turbine Manufacturer</b>
Bonin Unit 1	45	Gas/Oil <sup>(1)</sup>	Babcock and Wilcox	Westinghouse
Bonin Unit 2	80	Gas/Oil <sup>(1)</sup>	Combustion Engineering	General Electric
Bonin Unit 3	<u>170</u>	Gas/Oil <sup>(1)</sup>	Babcock and Wilcox	General Electric
Total	295			

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

<sup>(2)</sup> Summer rating with AGC.

Source: Jamie Webb, LUS, 2/05

## **Gas-Fired Generation: Condition of the Property**

The electric power production facilities at the Bonin Plant are generally being well maintained and LUS has continued to make capital improvements to the Bonin plant. In 2000, LUS replaced Unit 3's turbine and boiler control systems and Unit 2's economizer and primary superheater. In 2001, LUS completed condenser tube replacement on Unit 3. In 2002, LUS replaced Unit 2's turbine control system, installed a camera in Unit 1's Boiler, replaced Unit 2 Boiler corner tubes around the burners, replaced two instrument air dryers, and upgraded plant lighting. In 2003, LUS replaced Unit 1's generator step up transformer, and replaced Unit 1 and Unit 2 flame scanner system. In 2004, a reverse osmosis system was installed to increase the period between regenerations for the existing demineralizer trains. Also in 2004 an additional emergency diesel generator was installed to provide increased emergency power.

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. 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.

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

Operations at the Bonin Plant are accomplished through the use of operational procedures incorporated in Original Equipment Manufacturer (OEM) manuals. 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, piping hanger walkdowns and the weekly functional test of the plant's diesel generator. The plant has also started an extensive relay testing program.

Predictive maintenance programs include vibration monitoring, lube oil analysis, meggar testing, ultrasonic leak detection (air systems), and boiler tube porosity and thickness testing. These programs can detect problems prior to catastrophic failure of

the equipment. The repair of the equipment will typically have less of an adverse impact on operation, can be better planned, and may cost less to perform the repair. Preventative maintenance includes routine lubrication, cleaning, and general inspection of equipment. LUS purchased new testing equipment in 2002 to upgrade the existing program for vibration monitoring.

Both predictive and preventative maintenance tasks are implemented into the existing maintenance management program, which 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 capital and consumable spare parts in three areas of the facility in separate bins with assigned tag numbers. Consumable and capital spares have been integrated in the MP2 system. Minimum and maximum levels have been established in the system for the consumable spares.

In 2004, major repair/inspection/upgrade work included the following:

- Rewind of Unit No. 3 generator field windings as part of the Unit No. 3 major overhaul.
- Upgraded gas yard controls and metering.

Major turbine maintenance work in past years has included overhauls on Unit 1 and 3 in 1997 and Unit 2 in 1998. Unit 3 underwent a major overhaul in 2004 which included rewinding the generator field windings, which was a recommendation from Unit 3's prior overhaul. Unit 2 is planned for a major overhaul in 2005.

Day-to-day operational challenges include coordination of dispatch and generation requirements. The long-term challenge facing Bonin Plant operations is a shortage of qualified labor. Key power plant positions remain vacant, but the plant has overcome this by outsourcing and hiring contract labor. The labor shortage has not yet impacted plant reliability; however, the shortage along with the longevity of the present workforce may impact operations in the future.

LUS has implemented a formal training program for operations personnel, consisting of industry specific plant science and process training. Additionally, plant specific operating training materials are being developed by LUS.



## 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 Statistics**

	2000	2001	2002	2003	2004	5-Year Average
<b>Doc Bonin – 1</b>						
Gross Generation, MWh	149,668	49,737	4,116	10,879	48,826	52,645
Availability Factor <sup>(1)</sup>	100%	84%	67%	81%	99%	86%
Forced Outage Rate <sup>(2)</sup>	0.20%	0.19%	42.00%	0.00%	0.25%	9%
Number of Starts	9	7	4	3	5	560%
Gross Capacity Factor <sup>(3)</sup>	33%	11%	1%	2%	11%	12%
Service Factor <sup>(4)</sup>	68%	29%	2%	6%	26%	26%
<b>Doc Bonin – 2</b>						
Gross Generation, MWh	233,378	119,384	44,494	76,700	135,825	121,956
Availability Factor <sup>(1)</sup>	85%	92%	85%	90%	93%	89%
Forced Outage Rate <sup>(2)</sup>	3.00%	1.00%	5.00%	0.10%	1.20%	2%
Number of Starts	10	12	5	10	13	1000%
Gross Capacity Factor <sup>(3)</sup>	30%	15%	6%	10%	17%	16%
Service Factor <sup>(4)</sup>	61%	42%	20%	28%	50%	40%
<b>Doc Bonin – 3</b>						
Gross Generation, MWh	296,934	344,299	357,168	290,363	318,104	321,374
Availability Factor <sup>(1)</sup>	63%	81%	86%	93%	60%	77%
Forced Outage Rate <sup>(2)</sup>	3.70%	0.09%	0.50%	0.00%	0.05%	1%
Number of Starts	8	4	5	2	6	500%
Gross Capacity Factor <sup>(3)</sup>	18%	21%	22%	18%	19%	20%
Service Factor <sup>(4)</sup>	42%	56%	59%	49%	47%	50%
<b>Total Gross Gas</b>						
Generation, MWh	679,980	513,420	405,778	377,942	502,755	495,975
Total Net Gas Generation, MWh	629,259	470,652	384,704	346,913	463,146	458,935
Total Gas Consumption, MMBtu	7,461,158	5,606,380	4,444,668	3,844,806	5,227,479	5,316,898
Net Heat Rate, Btu/kWh	11,857	11,912	11,553	11,083	11,287	11,585

<sup>(1)</sup> Availability Factor reflects the percent of the time the unit was capable of providing service.

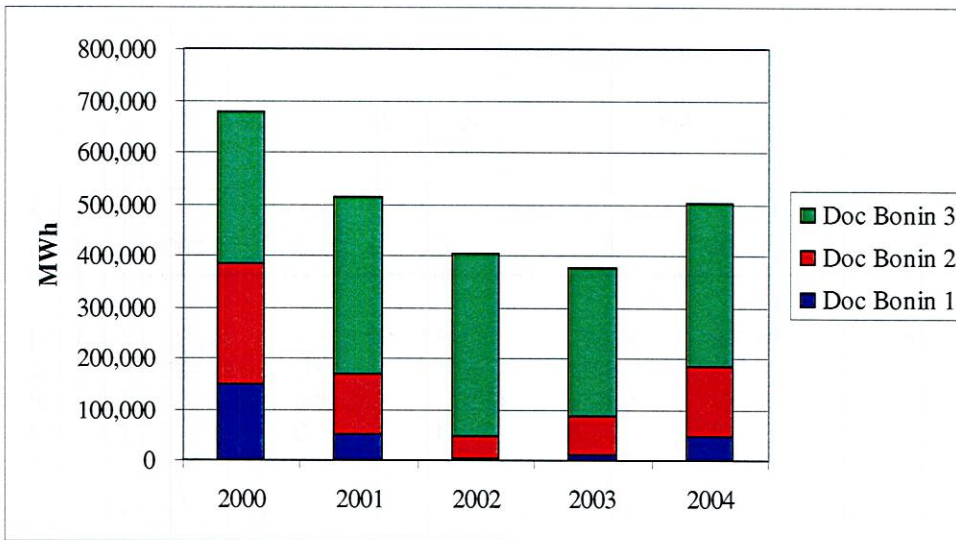
<sup>(2)</sup> Forced Outage Rate reflects the percent of time the unit was removed from service due to an unplanned failure.

<sup>(3)</sup> Gross Capacity Factor is the actual electric generation divided by the maximum the unit is capable of generating.

<sup>(4)</sup> Service Factor reflects the percent of time the unit was electrically connected to the transmission system.

Source: Jamie Webb/Jeff Stewart, LUS 2/22/05

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



Source: Jamie Webb, LUS 2/23/05

**Figure 5-1: Total Generation Contribution by Gas-Fired Facilities**

Historically, only one of the three active gas-fired generating units at the Bonin Plant was operated at one time. In this mode of operation, there were essentially “spare” generating units to ensure system reliability. The availability in 2004 for the Bonin Plant, Unit Nos. 1-3, was 99 percent, 93 percent and 60 percent, respectively. Unit No. 3 availability in 2004 was impacted by the extensive major overhaul which included rewind of the generator field windings. With the exception of Unit No 3, which was impacted by the abnormally long planned outage, the Bonin Plant units are within the range of expected values for availability for gas-fired power plants of similar size and technology. More importantly, due to the nature of their operation, the Bonin Plant units are within the range of expected values for forced outage rate for gas-fired power plants of similar size and technology.

## New Gas-Fired Generation

LUS is in the process of expanding their existing gas-fired generation by implementing two capital projects, which will increase the capacity of their gas-generation and improve the system efficiency. Both the T. J. Labbé Electric Generation Station Project (“T. J. Labbé Project”) and the Hargis-Hébert Electric Generation Station Project (“Hargis-Hébert Project”) will be 100 MW natural gas-fired simple-cycle power plants consisting of two General Electric LM6000 Next-Gen combustion turbines (the “CTs”). Both projects will be provided with blackstart capability, allowing operation of the plant in the event of the loss of power from the transmission grid, and both projects will be monitored and controlled from the Bonin Plant. The CTs utilize water injection for NO<sub>x</sub> control, and will be provided with inlet-air cooling, for increased performance during elevated ambient temperatures.



The T.J. Labbé Project is located toward the northern portion of the Parish, and will be electrically connected by means of a looped 230 kV interconnect to the existing Pont des Mouton to Bonin 230 kV line. The Industrial Company ("TIC") was awarded the Construction Contract and was given a Notice to Proceed on August 10, 2004. TIC's activities through January 2005 focused on engineering design, initial construction activities, and procurement for the project. Commercial operation of the T. J. Labbé Project is expected in June 2005. The project is 67 percent complete overall through January 2005.

The Hargis-Hebert Project will be constructed towards the southern portion of the Parish, and will interconnect to the existing LUS Elks Substation by means of a new 1.2-mile 69-kV transmission line. TIC was awarded the Construction Contract and was given a Notice to Proceed on October 29, 2004. TIC's activities focused on the engineering design and procurement for the project. Commercial operation of the Hargis-Hebert Project is expected in May 2006. Engineering is 9 percent complete through January 2005.

## 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, 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 boiler.

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 Kennecot 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 approximately 99.5 percent design 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**

	2000	2001	2002	2003	2004	5-Year Average
Gross Generation (MWh)	3,570,060	3,047,186	3,260,784	2,962,806	3,209,806	3,210,128
Station Service (MWh)	233,070	198,831	217,305	210,898	225,587	217,138
Net Generation (MWh)	3,336,990	2,848,355	3,043,479	2,751,908	2,984,219	2,992,990
Station Service (%)	6.5	6.5	6.7	7.1	7.0	6.8
Net Capacity Factor (%) <sup>(1)</sup>	72.6	62.2	66.4	60.1	65.0	65
Hours Available	7,965	6,836	7,818	7,091	7,508	7,444
Net Unit Heat Rate (Btu/kWh)	10,736	10,869	10,703	10,800	11,053	10,832
Availability Factor (%) <sup>(2)</sup>	90.7	78.0	89.3	81.0	85.5	85
Forced Outage Factor (%) <sup>(3)</sup>	2.4	4.6	1.6	3.6	1.4	3
Scheduled Outage Factor (%)	6.9	17.4	9.1	15.4	13.2	12

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

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

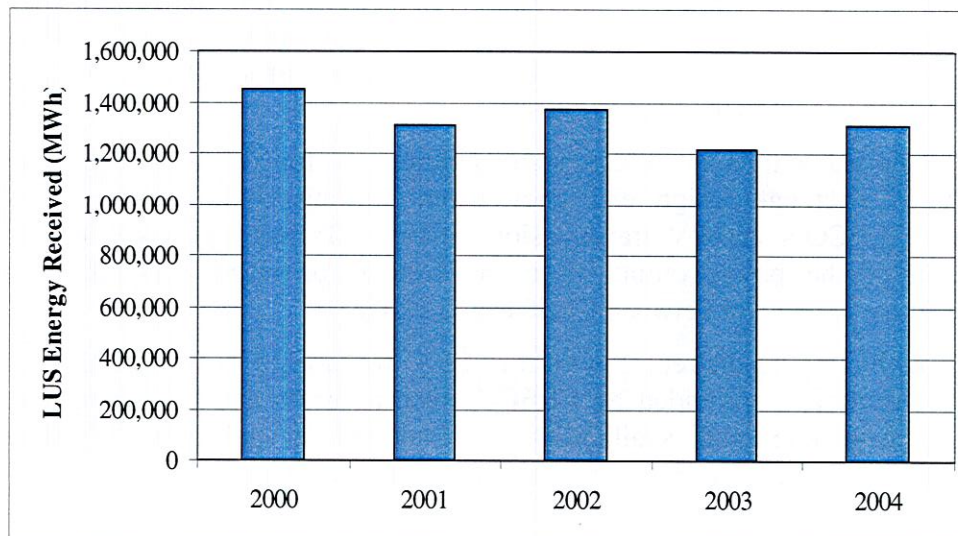
<sup>(3)</sup> Forced Outage Factor reflects the percent of time the unit was removed from service due to an unplanned failure.

Source: LPPA Manager's Monthly Report, year ending October 31

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

Commercial operation of the new CT projects discussed above should work to increase the capacity factor of the Unit. Currently, the Unit is often curtailed at night because the Bonin Plant is not cycled off-line. With the new CTs in operation, they can be cycled off-line at night resulting in higher nighttime loads at the Unit.

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



**Figure 5-2: Annual Unit MWh Delivery to LUS**

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
- Monitoring inadvertent power exchanges

As discussed later in this section, The Energy Authority ("TEA") is utilized by LUS to negotiate and coordinate wholesale power transactions.

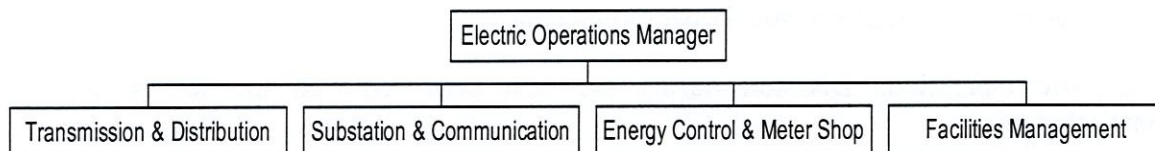
## Electric Operations

The Electric Operations Division of the LUS is responsible for the transmission, distribution, metering, and accounting of electrical power to consumers; inventory management of electric, water and wastewater materials and LUS security; and the monitoring of the LUS Fiber Optic System. The Electric Operations Division is also responsible for the Energy Control System ("ECS") section, which provides for the scheduling and dispatch of generating resources (including the purchase and sale of wholesale power) and the operation of the Supervisory Control and Data Acquisition ("SCADA") system. 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, and the monitoring of the LUS Power Network System.

## Organization

The Electric Operations Division consists of four discrete operating sections: Transmission and Distribution, Substation and Communications, ECS and Meter Shop, and Facilities Management.

The Electric Operations Division is currently organized as follows:



Each section plays a critical role in determining the degree of success LUS will have in meeting customer expectations. Although each section has its own responsibilities as later defined, they interact extensively and operate in a cohesive manner.

### System Characteristics

LCG'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. All 2400 V facilities have been converted to 13.8 kV. The system still has a small amount of 2400 V service at Doc Bonin Plant that will remain in service for the life of the plant. The service area covers approximately 40 square miles and is primarily residential and commercial customers.

### Key Issues, Goals and Achievements

The following are some of the challenges or key issues that LUS have identified:

- The increasingly competitive labor market for skills within the Electric Operations Division and the ability to retain experienced personnel.
- Continuing to improve the capabilities and utilization of the SCADA and GIS systems.
- Developing and maintaining relationships with power marketers and other utilities in addition to LUS' traditional business associates in the wholesale power market.
- Reducing tree-related outages.
- Develop succession planning to replace retiring staff.
- Improving the communication and coordination between the Bonin power plant operations staff, ECS operations staff, neighboring utilities, and the Southwest Power Pool.

The Electric Operations Division continues working toward meeting these challenges by setting the following goals:

- Continue focusing on operational issues.
- Provide training to personnel as needed.
- Maintain adequate staffing and experience levels.
- Hold monthly interdepartmental coordination meetings.
- Continue monitoring of statistical operational data.

The Electric Operations Division during the past year achieved the following accomplishments:

- Continued with significant system improvements and upgrades consistent with the five-year capital improvement budget.



- Operated the system in a manner consistent with prudent utility practice.
- Successfully completed start-up of SCADA/EMS Master Station to replace the current 12-year-old system.

## Reliability and Performance

The electric operations manager monitors outages and categorizes them by three primary groups: tree-related, animal-related, and equipment-failure-related. It was reported that a 66 percent increase in tree-related outages has occurred, along with a 40 percent increase in animal-related outages and a 2 percent decrease in equipment failure-related outages. The increase in tree-related outages is due primarily to an 80 percent increase in "Non-Preventable" tree-related outages. We feel the increase was a direct result of drought conditions during several recent years, which caused distress in a large number of, otherwise, healthy trees. Tree trimming activities through the use of outside contractors has been constant. 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. However, the number of customers affected by an outage is currently estimated by the field crews, which could affect the outage statistics. The GIS system, once completed, can assist in providing more accurate information pertaining to outages and the number of the customer impacted.

Continuous recording of outage data allow staff to quickly identify changes in reliability. Recent historical indices for LUS are summarized in Table 5-6.

**Table 5-6**  
**LUS Reliability Index Summary**

12 Months Ended October 31	System Average Interruption Duration Index (SAIDI) Minutes/Customer	System Average Interruption Frequency Index (SAIFI) 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
2001	86.1	2.10
2002	78.4 <sup>(1)</sup>	2.13 <sup>(1)</sup>
2003	64.0 <sup>(1)</sup>	1.20 <sup>(1)</sup>
2004	60.1	1.41

Note: The LPSC does not set any minimum for municipally owned utilities.

Source: Cynthia Thompson, Louisiana Public Service Commission

<sup>(1)</sup> Values revised for 2002 and 2003.

Source: Ron Landry 02/05, LUS

## Section 5

---

In addition to the above reliability indices, LUS also monitors crew response time and trouble-shooter response time. The response times are as follows:

Average Crew Response Time: 20.9 minutes

Average Trouble-shooter Response Time: 35.5 minutes

### 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.

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.

The LUS Substation Section has implemented the CASCADE program software that was purchased in 2002. It is a Computerized Maintenance Management System (CMMS) for the scheduling and tracking of equipment maintenance. The program can provide assistance with predictive and preventive maintenance items. It is also being utilized for the scheduling of major power equipment oil analysis. Maintenance may be initiated following a predetermined time interval or number of events that “trigger” the need, where triggers could be gas levels, breaker operations, or tap operations to name a few.

Another tool for aiding in predictive maintenance is the Breaker Oil Analysis & Tap Changer Signature Analysis and was implemented in early 2004. These programs should allow LUS to extend some of the Equipment Maintenance intervals shown in Table 5-7.

**Table 5-7**  
**Maintenance and Equipment Schedule**

	Old Frequency	New Frequency
Distribution Breakers	Annually	2 Years with triggers
Transmission Breakers	2 Years	3 Years with triggers
Power Transformers	2 Years	3 Years with triggers
Transformer Oil Analysis	Annually	Annually
Distribution Relays	Annually	18 Months
Transmission Relays	18 Months	24 Months
Batteries	Annually	Annually

Source: Ron Landry 2/05 LUS

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



- Transmission line 69 kV and higher
- Distribution lines 13.8 kV
- Substation breakers
- Substation bus
- Substation transformer bushings
- Switches

Infrared testing was performed for all substations in June and July of 2004 and a few minor problems were identified in the substations. These were corrected when discovered or are scheduled for repairs in 2005. The transmission system was also surveyed in 2004. Minor problems were corrected as found. The distribution systems were not surveyed due to limited staff and most likely will not be surveyed in 2005. 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.

In addition to infrared scanning, substation transformers are subjected to annual and bi-annual preventive maintenance and testing programs. Annual tests on distribution breakers include oil filtering, oil dielectric tests, contact resistance tests, operational tests and protective relaying tests. Bi-annual maintenance on transmission breakers entails the same testing as distribution equipment with additional maintenance and checks done on hydraulic pneumatic, SF6 systems, and motion analysis. Transformers 2500 kVA and above are tested periodically. The transformer turns ratio ("TTR") and sudden pressure relay testing are done on a bi-annual basis. Doble analysis is performed every five years and oil analysis is performed annually. In 2004, all breakers and LTCs at 69 kV and higher voltages were analyzed using the Breaker Oil Analysis and Tap Changer Signature Analysis tool, totaling 138 tanks. The substation power transformer tanks are scheduled for testing in 2005.

The monitoring of the 230-138 kV CLECO-tie power transformer T5 continued in 2004 due to problems discovered in 2001. Repairs made in 2001 have improved the gassing problem, but the transformer may not be 100 percent due to the shifting of the core laminations. Recent test shows that the gas levels are consistent over the past few testing cycles indicating that the transformer condition has stabilized. Future plans call for loading T5 to 70 percent of nameplate for normal conditions and near nameplate ratings under contingency cases due to a CLECO and Entergy 500/230 kV substation addition. With the known issues of the shifting of the core, LUS staff is concerned with the reliability of T5 at the higher load level. A reactor is to be installed by Entergy/CLECO to better control power flows and reduce potential over loading conditions. In addition, LUS engineering staff has perform power flow analysis under normal and contingency conditions and the results show that all system components are within loading limits, even if T5 is out of service. T5 should be monitored closely, especially when the loading levels are increased.

Another type of reliability test is the visual inspection of all substations. LUS field crews visually inspect all substations on a weekly basis. This includes visual analyses



of transformer bushings, the general substation environment, feeder voltages, battery water levels, alarms, and nitrogen bottle levels. Regular maintenance schedules have been extended again in 2004 due to a shortage of available manpower. Of the 163 high voltage breakers, 36 breakers are due for maintenance, of which seven breakers are three months past due. Four of the 45 power transformers are scheduled for maintenance in spring of 2005 if system requirements allow. LUS has 891 protective relays and 280 relays are due for calibrations where 130 relays are over three months over due. Outside contractors will be used to catch up on the calibration and testing of relays. All battery banks in the substations were tested in 2004. LUS continues its efforts to recruit and retain highly qualified personnel, but is hampered by a competitive labor market that pays higher wages for similar positions.

It is our opinion that the reliability related inspections discussed above are important and aid in controlling equipment failure and customer outages. The Breaker Oil Analysis and Tap Changer Signature Analysis detected three LTC that had higher than average gas levels. Upon further investigation it was determined that oil degassing, changing of contacts, and general maintenance was required. This maintenance was scheduled and completed in 2004, thereby preventing a possible outage and major damage to the equipment if the repairs were not performed.

## Electric Operations Division

The following summaries contain information pertaining to each of the operating sections within the Electric Operations Division. Each summary includes highlights and concerns for each of the sections as well as pertinent comments.

### Transmission and Distribution

The Transmission and Distribution section ("T&D") dispatches all electric, water and wastewater field crews and performs operations and maintenance activities for the electric system. The total staffing level in this section is 48, 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 four overhead line crews, two underground crews, two streetlight crews, and two service crews. The T&D crews are currently staffed at approximately 95 percent of the available positions.

LUS staff report that the transmission and distribution systems have been prudently planned and designed. The capacity of the transmission systems is routinely analyzed using PTI and ASPEN software analysis programs purchased in 2004 and reported on in LUS' Five-Year Planning Report and One-Year Contingency Report. These software programs provide compatibility with the SPP and other utilities interconnected to LUS' transmission system making it more efficient to exchange data and information as required. The analysis concludes that there is sufficient capacity in the transmission system to meet existing and future loads under normal conditions through 2009 and that no system component is loaded above 80 percent of maximum



rating. Specific line sections could potentially exceed 100 percent loading under contingency conditions. For these overloaded condition, system improvements have been identified and are in the capital improvement plans to resolve the issue.

The distribution system also undergoes an annual power flow 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.

The T&D section conducts a variety of ongoing training classes for its staff including Troubleshooter training, underground systems training, technical training, and climbing labs.

LUS has reorganized the street light crews in order to take advantage of particular skills and experience of key employees. Changes will continue to be monitored in order to improve performance.

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 been identified for replacement. Of these, there are 365 poles remaining to be replaced. A significant number of these poles came from a single supplier. Replacing these deteriorated wood poles is expected to continue in future years. LUS continues to use an ultra-sound tester to facilitate this effort. Each year, LUS utilizes an outside contractor to test the poles with the goal that the complete system will be tested on a 10-year cycle. In 2004, 404 deteriorated poles were replaced and 1,897 poles were checked / treated, by the contractor, throughout the LUS service territory.

## **Energy Control System & Meter Shop**

### **Energy Control System**

The Energy Control System ("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. The Energy Authority ("TEA") performs the wholesale power negotiations and transactions. ECS provides TEA with hourly/daily capacity and load requirement data.

A staff of five operators working 12-hour shifts operates the ECS. In addition, ECS has four electrical engineers (three working primarily on electrical projects and one on water/wastewater projects). The ECS/Meter Shop Supervisor position has not yet been filled since the retirement of the previous supervisor. Currently, the interim ECS Supervisor oversees the ECS and the Meter Shop sections. Two operators are Southwest Power Pool ("SPP") certified. Additionally, four of the five operators are North American Reliability Council ("NERC") certified. The fifth operator is currently in training and is anticipated to be certified during 2005. This commitment



to training is highly advantageous and will assist LUS in positioning itself in a future environment of electric deregulation.

### **SCADA System**

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

In 2000, LUS began the pre-planning process to replace the SCADA system with a full-graphics system. LUS has engaged the services of an Energy Management System ("EMS")/SCADA consultant and currently is under contract with a vendor to provide a full replacement system, to be fully operational the first quarter of 2005. In order to better optimize efficiencies and increase LUS' understanding of operating costs, Economic Dispatch and Unit Commitment programs will be requirements of the new system. Implementation of this new system will assist both the Bonin Plant staff and ECS staff in strengthening their coordination and help gain an understanding of operating costs to aid future opportunities for power sales and purchases. It will also help in the refinement and verification of O&M costs, start-up costs, and real-time fuel monitoring data.

The SCADA master station was operational in 2004 with final testing to be performed in January of 2005. The next steps to be completed in 2005 is to perform the final acceptance testing of the Master Station, install the Remote Terminal Units (RTU) at each of the remote sites (substations, water wells, power plant...), and cut over the remote stations to the new SCADA system. The SCADA system is designed for full redundancy including a back-up Master Station and parallel communications paths using dedicated fibers and Ethernet network. This provides an isolated network enhancing the security and the integrity of the system. In addition, the SCADA network is constantly monitored for security issues and will undergo periodic maintenance to ensure the integrity of the EMS and SCADA system based on NERC requirements.

In 2004, the Bonin Plant fuel monitoring system was completed and made operational on a local level. Final acceptance testing and SCADA connectivity will be completed in 2005. This will provide real time fuel flow data monitoring that will be used to calculate unit efficiencies and allow economic dispatch of the generating units.

LUS continues to provide notice to the SPP that they may terminate membership in that power pool in favor of joining a proposed regional transmission organization. The development of a favorable regional transmission organization has not yet developed and LUS continues to maintain its membership in the SPP.

The ECS system collects data from 14 electric substations, 16 water well, 5 water towers, and 37 lift stations in the wastewater system. LUS intends to eventually install remote terminal units ("RTUs") at all 127 lift stations. Twenty additional wastewater



lift stations are planned for SCADA integration in 2005. 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 pro-active and service-oriented customer focus is representative of LUS' mission statement, strategic plan, goals and policy, and is to be commended.

LUS utilizes load tap changers on each of the distribution power transformers to control the system voltage. The compactness of the LUS service area and general load characteristic has enabled LUS to avoid the use of down-line regulators and individual feeder regulation. The result is savings in material and maintenance cost that are typically incurred by most distribution systems. Load and phase balancing is performed on an ongoing basis and VAR management is achieved by installing fixed and switched capacitors on the distribution feeders to achieve an overall system power factor of approximately 98 percent lagging. Switched capacitors are operated on seasonal settings with voltage and time of day over-rides to control power factors. A higher power factor and balanced load reduces system losses and help achieve lower electrical rates.

LUS also continues to upgrade software systems to improve system graphics and improve its interface capability with the GIS mapping system. The current focus of this effort is on updating databases and graphical information. Information pertaining to the electric transmission, water, and wastewater has been entered into the GIS system. Water laterals are being field verified and will be completed in 2005. The electric distribution primary is 100 percent complete with minor adjustments remaining. The electric distribution secondary has some information included. Field verification is being performed on a feeder by feeder basis using GPS coordinates for poles, manholes, padmount transformers, and meters. Additional database fields are being populate where the data was non-existent. Three additional crews will be added in 2005 and the field verifications will continue through 2005 and be completed in Q1 2006.

### **Meter Shop**

The 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.



- 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 recalibrated and re-furbished 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. The Meter Shop also keeps abreast of the latest technology available in the meter industry by replacing older obsolete meters with new microprocessor digital meters that provide more accurate readings, thus maximizing revenues. We agree with the progress in meter testing and recommend its continued focus and expansion.

## Substation and Communications

The Substation and Communications section includes eight employees responsible for 14 electric transmission / distribution substations. Three of these employees have been dedicated full time to the implementation of the fiber network. The LUS distribution system is tied to the electrical grid through 69 kV, 138 kV and 230 kV transmission ties. 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:

- Final testing, commissioning, and energization of the capacity upgrades for Flanders and Acadiana Mall Substation Additions were completed. The capacity additions included replacing the power transformer with 30/40/50 MVA units and additional feeders.
- Gilman Substation was energized in 2004. This substation replaces an aging station that was designed as a 69 kV radial. The new station was incorporated into the 69 kV loop between Doc Bonin Substation and Peck Substation. This station provides for additional reliability and ease in expansion for future load growth.
- Limestone was applied to the yard at Peck Substation, decreasing the need for yard maintenance. This station yard was also upgraded for better drainage.
- New Vacuum Breakers were installed at Warehouse and Flander Substations. These VCB's replaced Westinghouse ESM Station Class Reclosers that presented safety and reliability problems.
- Luke Substation began construction in 2004 and will be completed in 2005. This station will be incorporated into the 69 kV loop between Doc Bonin Substation



and Guilbeau Substation, and should also provide for additional reliability and ease in expansion for future load growth.

Currently, substation loads are well within maximum capabilities. During 2004, LUS reports no substation was loaded above 80 percent of its rated capacity during normal operating conditions. Based on project load growth, all substations will be below 80 percent of capacity through 2009 under normal conditions. Under specific contingency conditions, system components could exceed 100 percent of the rated capacity. System improvements have been identified and included in the capital improvement plans.

Spill prevention plans and a formal spill procedure are in place for all substations. Some substations have berm walls for oil spill containment and all larger substations have oil spill cleanup materials on site (see Section 9).

A fiber optic based communications system to link all substations and replace the aging microwave system is in place and functioning. Replacement of the microwave system with a fiber optic system has allowed 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 will also provide opportunities for LUS to provide other kinds of communication services using excess capacity in the system. During 2004, the installed fiber was tested to each of the LUS facilities and is ready for the connection of the RTUs. In addition, the hospital was connected to the LUS fiber network.

## **Facilities Management**

The Facilities Management Division was transferred from Support Services to Electric Operations during this time period. This division is responsible for inventory control of electric, water, wastewater and fiber optic materials. Additionally, the Facilities Management Division is responsible for Security at all LUS facilities. This is comprised of a combination of in-house and contracted security staffing.

LUS is currently considering implementation of certain aspects of a vulnerability assessment conducted in 2004 at the Walker Rd complex. In 2004, LUS installed controlled access on all exterior doors at the LUS Engineering / Operations Complex. Implementation of restricted "card access" in conjunction with a newly instituted "ID Badge Policy" and enhanced security measures at the Doc Bonin Plant, has improved security at the Walker Rd. site. In addition, one substation has video monitoring on a trial basis to determine if it is feasible to monitor additional sites.

## **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.

## Electric System Requirements

The historical net power and energy requirements for the past 10 years are presented in Figure 5-3 and Table 5-8. To calculate a more stable or normalized growth rate for the period, a linear regression line was included for the period 1995 through 2004.

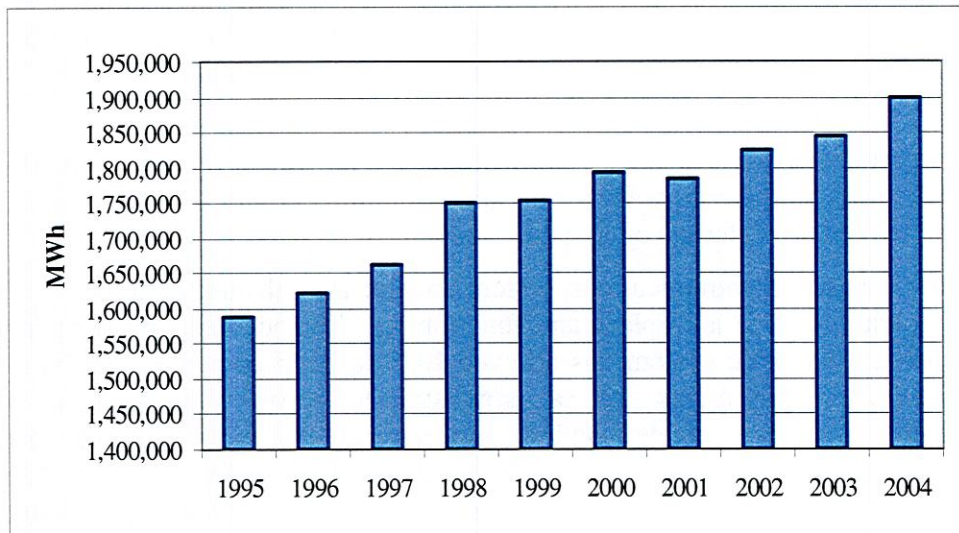


Figure 5-3: Energy Requirements

Table 5-8  
Electric System  
Historical Power And Energy Requirements<sup>(1)</sup>

Fiscal Year	Number of Customers	Peak Demand MW	Energy Requirements MWh	Annual Change in Energy Requirements %	Annual Load Factor %
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	1,794,268	2.3%	47.7%
2001	55,268	388	1,783,450	-0.6%	52.5%
2002	55,244	390	1,825,438	2.4%	53.4%
2003	56,606	402	1,844,755	1.1%	52.4%
2004	57,489	411	1,898,660	2.9%	52.6%

<sup>(1)</sup> Does not include sales to other utilities and associated losses.

Source: LUS Financial and Operating Statement, 2/23/05

Retail electric service has grown steadily over the period shown above. Customer growth has averaged 1.3 percent per year while usage per average customer has grown at 0.7 percent per year. These two influences have resulted in average annual energy growth of approximately 2.0 percent. Energy sales in 2004 were 19.6 percent higher than those in 1995.



LUS, through interconnection arrangements with other utilities, has also marketed surplus power and energy. For the 12 months ended October 31, 2004, surplus power and energy sales totaled 284,095 MWh and provided \$12.7 million in revenues.

## **Electric Contracts and Agreements**

LCG has many contracts and agreements in connection with the business of the Utilities System. Only LUS electric principal contracts and agreements are summarized in the following paragraphs.

### **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 ("SPA"), 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).

#### **Southwestern Power Administration**

LCG has a purchase agreement with SPA and a current capacity allocation of 18.6 MW and energy allocation of 1,200 kWh per kW per year. The cost of this power for the 2004 fiscal year was \$34.32 per MWh for peaking energy and \$25.20 per MWh for the combination of both peaking and supplemental energy. The total annual energy under this contract represents approximately 2 percent of LUS' total annual energy requirement. LUS entered into a new 15-year contract with SPA, which terminates December 31, 2018.

SPA 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.

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

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

### **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 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 LPPA has a 50 percent ownership interest. LCG is a member of LEPA and contractually sells power and energy to LEPA, as discussed below.

On December 20, 2000, the City and LEPA entered into an Agreement for Purchase of Power and Energy and Coordination of Operations ("Agreement"). 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. This Agreement is for a capacity of 61 MW plus losses and is effective through December 2005. There is a provision to reduce the purchased capacity further if certain member cities do not extend their contracts with LEPA.

### **The Energy Authority**

LUS signed a contract with The Energy Authority ("TEA") on November 28, 2000. The objective of this contract is for TEA to market LUS' capacity and energy in excess of the requirements of its retail customers and to purchase on behalf of LUS.

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

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

TEA is responsible for:

- Reservation and verification of transmission paths.
- Confirmation of schedule with counterparties.
- Creation of tags.
- Timely and effective notification of all schedules.



- Performance of daily checkouts.
- Adhering to LUS' credit policy.

On a day-to-day basis, LUS primarily uses their TEA arrangement to manage the hours when LUS is generation deficient. LUS will purchase wholesale power to serve their native load when Rodemacher is off-line and during the summer months (when demand is high). In 2004, LUS purchased 313,456 MWh of energy from TEA and sold 10,158 MWh of energy to TEA. Because of transmission constraints in the LUS region, buying and selling large amounts of wholesale power is not a viable alternative for most hours.

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

## **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, Central Louisiana Electric Company ("CLECO"), Cajun Electric Cooperative Inc. (now Louisiana Generating LLC "Louisiana Generating"), Entergy Louisiana (formerly Louisiana Power and Light), Southwestern Electric Power Company ("SWEPCO"), and SPA. These agreements provide various terms for the purchase and sale of emergency, replacement, and 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**

The City signed a long-term (31 years) Interconnection Agreement ("Agreement") with Entergy Gulf States (formerly Gulf States Utilities) in October 1984, which expires in 2015. LCG is recognized as a supplier to total requirements customers connected to the Entergy Gulf States system, and Entergy Gulf States has agreed to provide transmission service for delivery of the 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 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

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

- Identification of the Unit – a point where power may flow into CLECO facilities from an LCG power source, or an LCG-contracted power source.
- Identification of the following power delivery points and associated capacity effective with agreement modifications are presented in Table 5-9.

**Table 5-9**  
**Power Delivery Points**

138 kV and Above	Contract Demand – MW
Lafayette	221
LEPA	25

Source: LUS, Ron Gary 2/1/04

### Interchange Agreements

LUS has entered into interchange agreements with Louisiana Generating, SWEPCO, Entergy Louisiana, and the SPA. The termination of each of these agreements is provided in Table 5-10.

**Table 5-10**  
**Interchange Agreements**

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

Source: 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.

## **Other Agreements**

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

In 1987, LUS entered into a non-competitive agreement with Southwestern Louisiana Electric Membership Co-op ("SLEMCO") for certain electric customers outside of the City limits. This agreement expired in 2000 and until recently LUS had been successfully competing head to head with SLEMCO for customers. On September 10, 2004, LUS entered into a new 15-year non-competitive agreement with SLEMCO.

### **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 July 2004. The result of this latest renegotiation was confirmation of a new two-year letter agreement through 2006.

### **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 contract was due to expire April 1, 2004; however, LUS exercised the option to extend the contract an additional year in order to lock gas volumes and prices beyond April 30, 2004. Therefore, the current contract is due to expire April 30, 2005. Contractually, there is a requirement for LUS to nominate daily requirements one week prior to the beginning of each month. Coupled with the nomination requirement is a daily true-up of the actual volumes purchased vs. nominated volumes. In the event LUS purchased less than the nominated volume of gas, LIG would sell the difference into the market at the current sales price. The contract contains a 3,000,000 MMBtu minimum annual requirement that LUS must purchase. In April 2004, the LIG pipeline assets were purchased by Crosstex Gulf Coast Marketing, Ltd. (Crosstex). The LIG gas contract was assigned to Crosstex.

## Section 5

### Gas Pipeline

LUS owns one ten mile, 10-inch gas pipeline, which connects to Texas Gas and Columbia Gulf pipeline systems. The LUS owned gas pipeline also crosses (but is not interconnected with) two other gas pipelines, Florida Gas and Gulf South. The LUS-owned gas pipeline offers an alternative means of supplying gas to the Bonin plant in lieu of the above gas supply contract with LIG.

A summary of the contracts and agreements is provided in Table 5-11.

**Table 5-11**  
**Contracts and Agreements**

Contracts & Agreements Between		Date Signed/Renewed	Termination Date	Provisions
LCG	LPPA	May 1, 1997	End of useful life	Purchase of power from LPPA's 50 percent share in Rodemacher Unit 2.
LCG	SPA	January 1, 2004	December 31, 2018	
LCG	LEPA	June 28, 1985	December 31, 2005	LUS sells power and energy to LEPA.
LCG	Entergy Gulf States	October 1, 1984	October 1, 2015	Interconnection agreement for delivery of power.
LCG	CLECO	1991	August 29, 2016	Interconnection agreement for delivery of power.
LUS	Louisiana Generating	May 23, 1983	upon 3 year notice	Interchange agreement for electric transmission.
LUS	Entergy Louisiana	October 6, 1988	upon 18 month notice	Interchange agreement for electric transmission.
LUS	SWEPCO	May 1, 1994	upon 45 days notice	Interchange agreement for electric transmission.
LPPA	CLECO, LEPA	November 1, 1982	end of useful life	Joint ownership of Rodemacher Unit 2.
CLECO	Kennecott Coal	July 2004	December 2006	Purchase of coal for Rodemacher Unit 2.
LUS	LIG/Crosstex	July 25, 2003	April 30, 2005	Supply of natural gas for Bonin Units.

Source: R. W. Beck, Previous CER. Ron Gary, LUS 2/22/05

### Load Forecasts

Load forecasts for the electric system for the five-year period of 2005 through 2009 are presented below. The forecasts reflect the current assessment of expected load growth for the period. The actual electric quantities for fiscal year 2004 and the forecasts of system, off-system and total electric power and energy requirements for 2005 through 2009 are shown in Tables 5-12 and 5-13 below.



**Table 5-12**  
**Electric System**  
**Projected Energy Sales**

<b>Fiscal Year Ending October 31</b>	<b>Total Retail Sales <sup>(1) (2)</sup> (MWh)</b>	<b>Total Wholesale Sales <sup>(1)</sup> (MWh)</b>	<b>Total Sales (MWh)</b>
2004 (Actual)	1,803,558	284,095	2,087,653
2005	1,824,567	269,760	2,093,360
2006	1,921,611	239,888	1,921,611
2007	1,959,154	0	1,959,154
2008	1,995,531	0	1,995,531
2009	2,035,422	0	2,035,442

<sup>(1)</sup> Retail sale projections based on previous CER values.

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

Source: LUS load forecast results. Financial and Operating Statement 2004, 2/05

**Table 5-13**  
**Electric System**  
**Projected Peak Power Requirements**

<b>Fiscal Year Ending October 31</b>	<b>LUS System <sup>(1)</sup> (MW)</b>	<b>Off System <sup>(2)</sup> (MW)</b>	<b>Total (MW)</b>
2004 (Actual)	411	61	472
2005	418	61	479
2006	431	0	431
2007	440	0	440
2008	449	0	449
2009	458	0	458

<sup>(1)</sup> Off-System sale projections based on previous CER values

<sup>(2)</sup> Based on wholesale contract requirements

Source: LUS load forecast results

Table 5-14 provides a comparison of electric loads versus resources, expressed in megawatts, for LUS. This reflects the demand requirements of retail sales, sales for resale, and a reserve requirement equal to 18 percent of demand.

**Table 5-14**  
**Electric System Comparison**  
**Total Demands and Resources (MW)**

Year Ending October 31	REQUIREMENTS		RESOURCES				
	Total Demand	Demand Plus Reserves <sup>(1)</sup>	Gas-Fired Generation	Coal-Fired Generation	SPA Peaking	Total	Surplus/ Deficit <sup>(2)</sup>
2004 (Actual)	472	557	302	246	18	566	9
2005	479	565	392	246	18	656	91
2006	431	509	482	246	18	746	237
2007	440	519	482	246	18	746	227
2008	449	530	482	246	18	746	216
2009	458	540	482	246	18	746	206

(1) T.J. Labbe Generating Plant online 07/2005 (90 MW).

(2) Hargis-Hebert Generating Plant online 04/2006 (90 MW).

Source: Jeff Stewart, LUS 2/05

The above table indicates that projected electric requirements exceed resources beginning in 2003. 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.

## System Improvement Program

LUS established a system improvement program called Capital Improvement Program ("CIP") in 1989. The program is a five-year "look ahead," and is revised annually to plan for and manage the major capital projects for the 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 5-15 and were obtained from LUS' capital budget October 2004.

Two major generation additions are planned for 2005. The new generation will consist of the installation of two LM6000 combustion turbines at both the North and South Sites. The total capacity to be added is nominally 100 MW at the South and 100 MW at the North sites.

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

Substation improvement projects include completion of the Gillman substation circuit ties. A new distribution substation is planned for the Luke Street area. Two new



switching stations are planned to coincide with the addition of generation to the system. This includes a 230 kV switchyard at the North site and a 69 kV switchyard at the South site.

The estimated requirements for improvements to the electric department through October 31, 2009 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 5-15**  
**Estimated Annual Capital Requirement Appropriations**  
**Electric System Improvements (\$1,000)**

<b>Year Ending October 31</b>	<b>Production</b>	<b>Transmission</b>	<b>Substation</b>	<b>Distribution</b>	<b>General</b>	<b>Total</b>
2005	\$3,615	\$0	\$4,644	\$1,021	\$3,147	\$12,427
2006	3,520	400	950	550	4,045	9,465
2007	560	1,150	250	100	10	2,070
2008	610	100	250	100	10	1,070
2009	<u>710</u>	<u>100</u>	<u>100</u>	<u>100</u>	<u>10</u>	<u>1,020</u>
<b>Total</b>	<b>\$123,500</b>	<b>\$1,750</b>	<b>\$6,194</b>	<b>\$1,871</b>	<b>\$7,272</b>	<b>\$26,052</b>

Source: LUS Capital Budget 2004

## Recommendations

Recommendations and their status are provided in Table 5-16. We have indicated the priority of the recommendation as either highest, high or normal.

## Section 5

**Table 5-16**  
**Recommendations**

<b>Electric Utility</b>	<b>Priority</b>	<b>Status</b>
LUS should continue its efforts to investigate new power supply additions for the future.	High	Complete
LUS should continue the development of a comprehensive operator training program.	High	In Progress
LUS should provide secession planning to replace retiring staff and provide the necessary transfer of knowledge.	High	In Progress
LUS should continue to evaluate plant-staffing levels and compensation plans.	Normal	In Progress
LUS should continue transmission and distribution personnel training and retention efforts.	Normal	In Progress
LUS should continue to install microprocessor relays for new construction and develop plans for replacing electromechanical relays with microprocessor relays.	Normal	In Progress
LUS should continue efforts to complete GIS mapping system	Normal	In Progress
LUS should complete the implementation of the new SCADA/EMS system.	Normal	In Progress
LUS should continue its 2003 progress of testing generator and other equipment electro-mechanical protective relays at the Doc Bonin plant through coordination between plant personnel and the LUS transmission and distribution section personnel.	Normal	In Progress
LUS should continue the implementation and maintenance of a spare parts and inventory control system, with particular emphasis on the spare parts needs of the new generation projects and other major system components.	Normal	In Progress
LUS should continue its implementation and expansion of the preventative and predictive maintenance programs currently in place.	Normal	In Progress
LUS should determine the actual heat rate versus output relationship for each unit. The Doc Bonin Plant reports that the project to install energy metering/upgraded gas yard controls of the incoming gas supply is complete. The 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	In Progress
LUS should proceed with plans to repaint the externals of the Doc Bonin Plant Units 2-3.	Normal	Investigating
LUS should continue frequent monitoring of the 138/230-kV CLECO tie transformer T5.	Normal	In Progress
In the transmission and distribution functions, LUS should continue to review OSHA requirements and/or APPA safety guidelines and pursue ongoing training programs for linemen and foremen.	Normal	In Progress









## Section 6

# WATER UTILITY

---







## Section 6

# WATER UTILITY

---

### Water Utility System

This section of the Report sets forth the changes that have occurred to the water system of LUS during fiscal year 2004. A description and discussion of existing facilities and resources, and summaries of historical service requirements, are presented in the following pages of this section.

During February 2005, 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.

### Key Challenges, Issues, and Goals

The following are challenges and key issues for the water utility that LUS has identified: they are related to security, new water quality regulations, new requirements for certification, succession planning and business continuity issues.

The water utility needs to construct capital improvements at water facilities to protect the water system against deliberate, targeted attacks as identified in an evaluation of the water utility system required by the Bioterrorism Act.

There is no immediate impact of water regulations already promulgated or under development. LUS continues to monitor legislative activities regarding water regulations both at the federal and state level.

The main issue relating to the new certification requirements is that candidates applying for Water Plant Operator vacancies must attain full certification within four years of appointment. A careful review of the certification requirements suggests that applicants must have two full years of college to meet this four year deadline. However, LUS' current pay scale does not appear attractive to candidates with two years of college. The LUS hiring rate for new Water Plant Operators may need to be adjusted to attract and retain skilled and certified operators. Further, the Civil Service position description must be changed to reflect these new requirements.

Coupled with the new certification requirements, the water utility has several key employees that are nearing retirement based on either years of service or age eligibility.

## Additions to Plant

The expenditures for fixed plant and equipment made during fiscal year 2004 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 water system are considered economically sound or otherwise necessary for the profitable operation of LUS.

**Table 6-1**  
**Capital Work Order Expenditures**  
**Fiscal Year 2004**

Source of Funds	Water Utility
Normal Capital/Special Equipment	\$1,406,964
Special Capital	0
Retained Earnings	\$1,488,760
Total	\$2,895,724

Source: "Status of Construction Workorders" by Acct. Dept. Oct. 2004  
Joan Parish, LUS 2/05

## System Operation and Maintenance Expenditures

Historical annual Operation and maintenance expenditures from 1995 through 2004 are shown in Table 6-2 and graphically on Figures 6-1 and 6-2. The average annual percentage growth in operation and maintenance expenses is 4.0 percent for operating costs and 4.3 percent for maintenance costs. Both the amount of investment in facilities and inflation influence the amount of operation and maintenance expense incurred.

**Table 6-2**  
**Annual Water System Operation and Maintenance Expense (\$)**

Year Ended October 31	Operation	Maintenance	Total
1995	\$4,421,704	\$780,350	\$5,202,053
1996	4,113,916	850,581	4,964,497
1997	4,420,246	772,946	5,193,192
1998	4,437,304	716,663	5,153,967
1999	4,650,505	779,141	5,429,646
2000	4,991,001	815,534	5,806,535
2001	4,889,916	879,604	5,769,520
2002	5,179,088	953,118	6,132,206
2003	5,791,573	1,091,875	6,832,448
2004	\$6,208,882	\$1,115,341	\$7,324,224

Source: LUS Financial and Operating Reports, 1995 through 2004



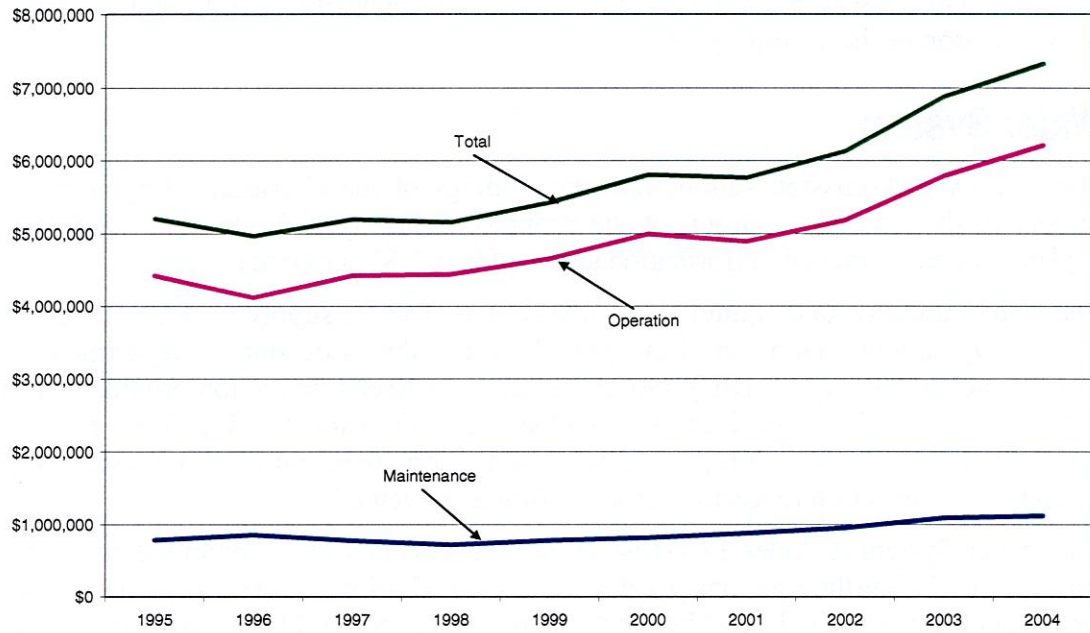


Figure 6-1: Water System Annual O&M Cost

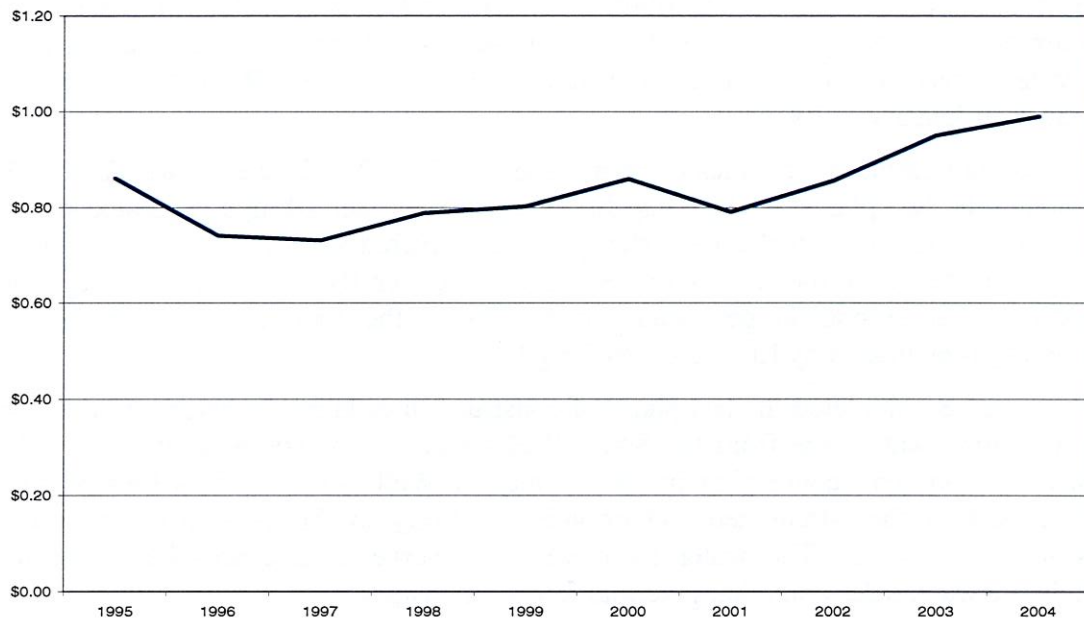


Figure 6-2: Water System Annual O&M (Cost per 1,000 gallons)

## System Staffing

R. W. Beck notes that several senior members of the staff are nearing retirement based on either years of service or age-eligibility. LUS management should initiate planning for succession of these employees.

## 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 sole source of water supply for LUS. The LUS Water Operations Division has joined with the Louisiana Department of Environmental Quality ("LDEQ") to implement a wellhead protection program for the City's water supply. The LUS Water Operations Division has identified potential contamination sources within the wellhead protection areas and LDEQ is available to take appropriate action to assure contamination is prevented.

The Water System includes 17 wells serving the system with a combined production capacity of 47.7 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. Well No. 23 (1,000 gpm) located in the southern portion of the water system is intended to meet peak demand in the weakest portion of the distribution system and is anticipated to reduce the occurrence of low pressures in the area it serves. Minimal water treatment is provided, consisting of chlorination and phosphate addition. Well No. 23 began production January 1, 2003.

The present treatment capacities of both plants and Well No. 23 are shown Table 6-3. Although the two plants are each capable of producing over 20 mgd of treated water, the total amount of water that can effectively be delivered to customers is constrained by the capability of the distribution system to deliver the water at an acceptable pressure. At 90 pounds per square inch ("psi"), the total effective production capability is estimated by LUS to be 26.7 mgd.

In 2003, LUS completed the last phase of construction of large diameter (16-inch and 24-inch pipe) water pipe from the South Water Plant to the southern portion of the distribution system, connecting in the vicinity of Well No. 23. This transmission project will further strengthen and provide reliability to this portion of the water distribution system. The water main will also serve as a connection point for wholesale water sales and other potential future extensions.



**Table 6-3**  
**Plant Treatment Capacity**

	(mgd)
North Plant	21.5
South Plant	24.0
Well No. 23	1.4
Total Effective Production Capability	26.7 <sup>(1)</sup>

<sup>(1)</sup> Total effective production capability adjusted for a pressure of 90 psi

Treated water storage totals approximately 12.2 million gallons (mg); this includes 4.3 mg of elevated storage and 7.9 mg of ground storage, including pumping station wet wells.

LUS has increased the security of its water system by stationing armed, uniformed Sheriff's Department personnel at each water plant 24 hours per day, seven days per week. Security cameras with recorders have been installed at the treatment plants. LUS staff has been provided training in emergency planning and reaction that is integrated with ongoing programs for hurricane emergency response.

## Wholesale Water Sales

In addition to the facilities owned by LCG, LUS operates and maintains the water distribution facilities of certain water districts in accordance with contracts between LCG and the districts. LUS also provides wholesale water service to several water districts and municipalities within the Parish. During 2004, water delivered to wholesale customers amounted to 16.9 percent of the water sold by LUS and 14.8 percent of the revenue. The difference is attributed to the difference between water rates for wholesale and retail service. Table 6-4 shows wholesale water sales by year for the last five years. Table 6-5 shows wholesale water revenue for the same years.

## Section 6

**Table 6-4**  
**Wholesale Water Sales Volumes (1,000 gallons)**

	2000	2001	2002	2003	2004
Town of Scott	255,737	283,278	267,036	264,836	271,704
Water District North	307,054	330,563	386,512	291,577	286,737
City of Broussard	66,090	89,482	61,997	63,555	69,216
Longbridge	3,603	0	0	0	0
Water District South	226,881	227,199	229,469	210,295	228,603
Milton Water System	5,742	99,313	104,944	109,700	79,065
Town of Youngsville			0	62,478	78,208
Water District North – Wholesale	1,563	64,257	72,069	147,668	157,592
Total Wholesale Water Sales	866,670	1,094,092	1,122,027	1,150,109	1,171,125
Total Water Sales (Wholesale and Retail)	7,110,008	7,054,947	7,000,293	7,111,918	6,916,496
Percent of Total Water Sales from Wholesale Sales	12.2%	15.5%	16.0%	16.2%	16.9%

(1) Average based on representative years

Source: LUS Financial and Operating Statement, October 2004

**Table 6-5**  
**Wholesale Water Sales Revenue (\$)**

	2000	2001	2002	2003	2004
Town of Scott	\$326,310	\$335,506	\$343,443	\$335,133	\$350,499
Water District North	706,213	680,289	733,711	608,124	598,741
City of Broussard	87,862	96,279	75,793	79,443	86,519
Longbridge	5,092	0	0	0	0
Water District South	272,342	281,174	285,446	255,237	285,755
Milton Water System	96,160	111,490	134,882	131,314	97,325
Town of Youngsville			0	78,096	97,758
Water District North-Wholesale	3,070	89,640	91,396	182,594	198,567
Total Wholesale Water Sales	\$1,497,049	\$1,594,378	\$1,664,671	\$1,669,941	\$1,715,164
Total Water Sales	\$11,371,906	\$10,891,026	\$11,292,975	\$11,545,449	\$11,600,448
Percent of Total Water Sales from Wholesale Sales	13.2%	14.6%	14.7%	14.5%	14.8%

Source: LUS Financial and Operating Statement, October 2004



## Unbilled Water Volumes

During the past ten years, LUS' operating results have at times shown a significant amount of unaccounted-for water. Data for the period 1995 through 2004 are summarized in Table 6-6.

**Table 6-6**  
**Unaccounted for Water Volumes**

<b>Year Ended October 31</b>	<b>Percent Unaccounted-For</b>
1995	12
1996	16
1997	7
1998	2
1999	2
2000	2
2001	2
2002	3
2003	4
2004	6

Source: LUS Financial and Operating Statement, October 2004

LUS' operating statistics show that unaccounted-for water since 1998 has averaged approximately 3.4 percent annually, which is well below the average for similar water systems. Discussion with LUS staff have concluded that the reason for the decrease in unaccounted for water compared with previously high values is not apparent and implies that the accuracy of the data may be suspect. An audit of water production, distribution and sales was performed during the first half of 2004.

## Drinking Water Quality

LUS, in response to the requirements of the Safe Drinking Water Act, must prepare and distribute an annual water quality report to its customers. The Water Quality Report includes results of periodic monitoring of the quality of water distributed to LUS customers. The following Table 6-7 summarizes monitoring results for the year (2003), which was the most recent report available at the time of this Report.

As shown on the table, all monitoring results show LUS water quality to be well within the regulatory limits. Biological water quality is also monitored throughout the system although it is not required to be reported in the annual report.

## Section 6

**Table 6-7**  
**Water Quality Results**

Monitored At Customer's Tap				
Substance	EPA Designated Action Level		LUS Test Results	
Copper	1.3 parts per million (ppm)		0.1 ppm or less	
Monitored in the Water Distribution System				
Substance	Maximum Contaminant Level	Maximum Contaminant Level Goal	LUS Average	LUS Range Minimum - Maximum
Total Organic Halides	Not regulated	---	Less than detection limit	ND – 0.86 ppb
Total Chlorine Residual	Not regulated	---	1.09 ppm	0.7 - 1.39 ppm
Total Trihalomethanes	100 ppb	N/A	10.07 ppb	1.1 - 22 ppb
Haloacetic Acids	Not regulated	---	1.11 ppb	ND - 5.7 ppb
Haloacetilenitriles	Not regulated	---	1.21 ppb	ND - 2.4 ppb
Monitored Before Any Treatment				
Substance	EPA Designated Contaminant Level	EPA Designated Maximum Contaminant Level Goal	LUS Average	LUS Range Minimum - Maximum
Fluoride	4.0 ppm	4.0 ppm	0.14 ppm	0.2 - 0.3 ppm
Antimony	6.0 ppb	6.0 ppb	Less than detection limit	ND - 2 ppb
Gross Alpha Activity	15 picocuries /L	0	1.28 picocuries /L	ND - 3 picocuries/L
Gross Beta Activity	50 picocuries /L	0	1.14 picocuries /L	ND - 4 picocuries/L
Thallium	2 ppb	0.5 ppb	Less then detection limit	ND - 2 ppb
Nitrates	10 ppm	10 ppm	0.07 ppm	ND - 1 ppm

Source: Water Quality Report 2003, LUS

ND = not detected, ppm = parts per million, ppb = parts per billion, L = liter

## Historical Water Utility Requirements

LUS' water utility has met customer demands for service, and provided its customers with adequate and reliable utility service during the reporting period. The historical water production and growth is presented in Table 6-8.

## Water System Production

The growth rate in water production has been approximately 2.1 percent per year while annual growth in the number of customers was 2.0 percent. In addition to annual requirements, peak day production requirements are also provided in Table 6-8.

LUS' water distribution system consists of 963 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



1.0 percent above the year 2003 amount. The distribution system includes 18,807 valves and 5,757 fire hydrants.

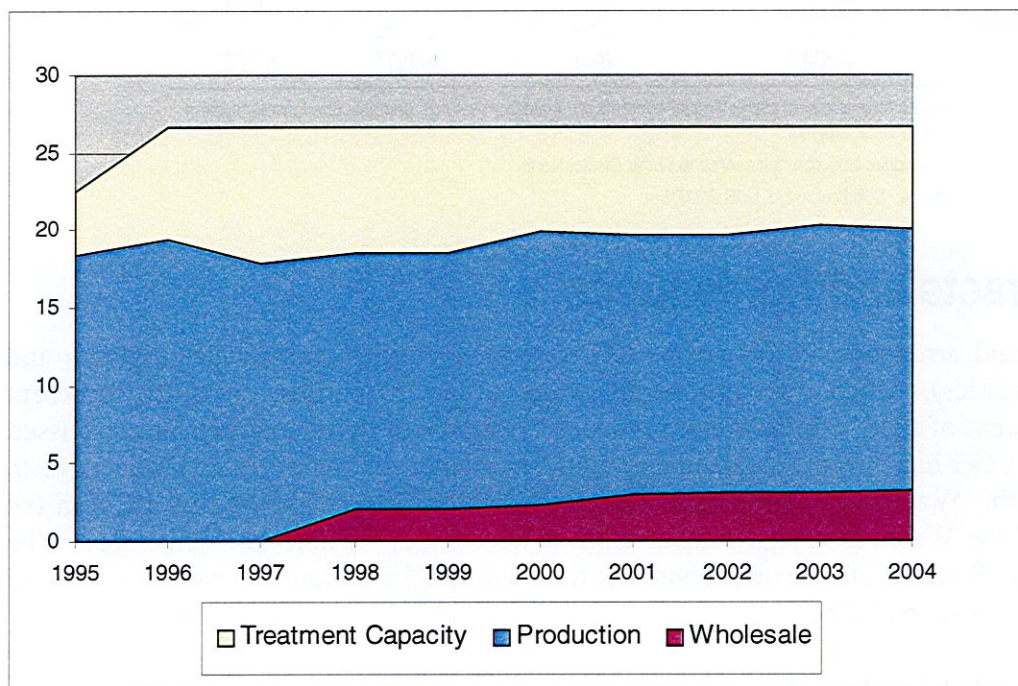
**Table 6-8**  
**Historical Water System Production**

Fiscal Year Ended October 31	Number of Customers <sup>(1)</sup>	PRODUCTION		
		Annual (million gallons)	Annual (mgd)	Peak Day (million gallons)
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
2001	44,339	7,159	19.6	23.2
2002	44,444	7,237	19.6	24.4
2003	45,726	7,392	20.3	25.7
2004	46,622	7,326	20.0	23.0

<sup>(1)</sup> Number of meters in service

Source: LUS Financial and Operating Statements and LUS Water Production Division – 1995-2004

Total water production is shown in Figure 6-3.



**Figure 6-3: Water Production (million gallons per day)**

As shown in Figure 6-3, total water production since 1997 has increased only slightly while wholesale sales have steadily increased its share of total water production. Total

retail water sales volume (i.e. sales to retail customers) has increased slightly since 1997 but recently the volume of water sold per retail customer has decreased by several percent.

Table 6-9 illustrates the historical trends in key water distribution system statistics. Generally, the increase in miles of line, valves, and hydrants has paralleled or slightly lagged the increase in customers. The rate of increase for these statistics has been 1.8 percent, 2.0 percent, 2.1 percent and 2.1 percent respectively.

**Table 6-9**  
**Water Distribution System**

Fiscal Year Ended October 31	DISTRIBUTION		
	Miles of Main Lines	Number of Valves	Number of Hydrants <sup>(1)</sup>
1994	832	15,679	5,056
1995	842	15,945	5,114
1996	851	16,216	5,150
1997	862	16,514	5,203
1998	873	16,919	5,579
1999	887	17,249	5,634
2000	930	17,623	5,702
2001	934	17,954	5,545
2002	941	18,161	5,605
2003	954	18,495	5,686
2004 <sup>(2)</sup>	963	18,807	5,757

<sup>(1)</sup> Decrease is due to accounting for hydrants removed from service, primarily due to water system relocation projects

<sup>(2)</sup> Includes LUS contract service to Water District North

Source: Don Broussard, LUS 2/23/05

## Contracts and Agreements

Contractual arrangements between LCG and other entities (both water districts and municipalities), which own or operate water utility properties, currently represent 14.8 percent of LUS' annual water revenues. Features of these contracts are discussed below. LCG has executed agreements with two water districts: Water District North and South. Water service to Water District North customers is billed by LCG in the name of the Water District North consistent with the applicable rate schedules. The North and South Water District construct their own additions and extensions according to standards set by LUS.

### Water District North

LCG and Lafayette Parish Water District North amended their existing water agreements by entering into a new water agreement (the "Water District North Agreement") in October of 2002. The Water District North Agreement includes the



following provisions. Water sales to Water District North amounted to 6.8 percent of total water sales revenue for the reporting period.

- LCG shall furnish potable water to the entire District and operate and maintain all District water distribution facilities except those specifically excluded by the Water District North Agreement.
- LCG shall construct a water production facility in the northwest region of Lafayette Parish and place it in operation within 12 months of purchasing the site.
- Plans and specifications for District facilities that LCG is obligated to operate and maintain must be approved by LCG as conforming with LCG material and construction standards.
- LCG shall provide meter reading services and customer billing services for all Water District North retail and wholesale meters in accordance with the rate schedule adopted by the Water District North.
- The Water District North Agreement establishes the rates to be charged to the Water District North for retail and wholesale water customers and provides that LCG rates are to be based upon generally accepted utility rate making principles and provides that the rates be recalculated biennially beginning in 2003 as described in the Agreement.
- In the event that an area within the Water District North is annexed to LCG, the District properties within the new corporate boundaries shall be sold to LCG by the Water District North upon request by LCG. Calculation of the payment for acquiring the Water District North's properties is described in the Water District North Agreement.
- The Water District North Agreement provides for resale of wholesale water by the Water District North to a third party including a requirement for a wholesale water agreement among the Water District North, LCG and the parties involved.
- The Water District North may purchase wholesale water from third parties provided water supplied by the third party is supplied by LCG.

Term of the Agreement is 30 years with provisions for automatic five-year extensions upon concurrence by both parties.

## **Water District South**

This district serves the southern portion of Lafayette Parish, which is neither currently incorporated as a municipality nor included in another water district. LUS' water sales to the Water District South represent approximately 2.2 percent of the total LUS water revenues for the reporting period.

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

## 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 under a 25-year contract, which terminates May 27, 2022. Water is delivered to the City of Scott at several interconnection points. Water sales to the City of Scott represent approximately 2.9 percent of total LUS water sales revenues for the reporting period.
- LCG may sell 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. Water sales to the Town of Youngsville first occurred in 2003 and represent 0.8 percent of LUS water sales revenues for the reporting period.
- LCG and the City of Broussard, Louisiana signed a 40-year water supply contract, which expires on March 5, 2038. Water sales to the City of Broussard represent approximately 0.7 percent of the total LUS water sales revenues for the reporting period.
- LCG serves the Milton Water District under a 40-year contract signed April 28, 1997. Water sales to Milton represent approximately 1.1 percent of the total LUS water sales revenues for the reporting period.

A summary of the contracts and agreements for the water utility is provided in Table 6-10 below.

**Table 6-10**  
**Contracts and Agreements**  
**LUS Wholesale Water Sales**

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

Source: Ron Gary. LUS, 1/30/03

## Forecasts

Forecasts of water use for the water system for the five-year period of 2004 through 2008 is presented below in Table 6-11. The forecasts reflect the current assessment of expected growth for the five-year period.



**Table 6-11**  
**Water System**  
**Projected Requirements**

Fiscal Year Ending October 31	PRODUCTION REQUIREMENTS <sup>(1)</sup>	
	Daily mgd	Peak mgd
2004 (Actual)	20.0	23.8
2005	20.3	23.4
2006	20.7	23.8
2007	21.0	24.2
2008	21.4	24.6
2009	21.8	25.0

<sup>(1)</sup> Includes unaccounted-for volumes

Source: R. W. Beck 2/05

LUS has completed a System Development Plan that is intended to provide a basis for long term planning of the water utility system.

Although system growth is projected to grow incrementally, experience has shown that a block of new customers can be added to the system with little or no notice, resulting in a sudden increase in demand. This occurred recently when the Holiday Garden area was added to the LUS system following bankruptcy of the water system operator that was established by the real estate developer. There is a possibility that similar circumstances can occur in the future with similar results.

LCG has adopted a water ordinance to assist in reducing the occurrence of low pressure in the water distribution system. The ordinance is directed at reducing peak system demand by restricting watering of lawns to the hours between midnight and 2 p.m. every other day. Enforcement of the ordinance began in August of 2001. LCG's ordinance requires wholesale customers to enact similar restrictions or be subject to restrictions on supply of water by LUS during the midnight to 2 p.m. time period. This ordinance is in effect from May 1 to September 30 of each year.

## Future Regulatory Requirements

The Safe Drinking Water Act ("SDWA"), passed in 1974 and amended in 1986 and 1996, gives the EPA the authority to set standards to protect drinking water. EPA has delegated responsibility for implementing drinking water standards to the Louisiana Department of Health and Hospitals.

There are two categories of drinking water standards: primary and secondary. Primary standards are legally enforceable standards that apply to public water systems. Primary standards protect drinking water quality by limiting the levels of specific contaminants that are known or anticipated to occur in water. Secondary standards are

## Section 6

non-enforceable guidelines regarding contaminants that may cause cosmetic or aesthetic effects. Primary standards go into effect three years after they are finalized. If capital improvements are required, EPA's Administrator or a state may allow this period to be extended up to two additional years.

New and proposed rules and standards, listed below in Table 6-12, are in various stages of development and publication.

**Table 6-12**  
**New and Proposed Rules**

<b>Rule/Regulation</b>	<b>Compliance Date</b>	<b>Comments</b>
Filter Backwash Recycling Rule	June 2005	Specifies provisions for recycling of filter backwash.
Arsenic Rule	January 2006	Establishes maximum contaminant level of 0.01 mg/L for arsenic in drinking water.
Groundwater Rule	August, 2006	Requires monitoring for fecal contamination in distribution system and corrective action as needed.
Stage 2 Disinfectants and Disinfection Byproducts Rule	Three Years from Final Rule	Requires assessment/monitoring of system for byproducts of disinfection.

LUS is aware of these regulations and has or will incorporate the requirements into current and future operations. Compliance with the regulations is not anticipated to require major capital expenditures.

The EPA upgraded water treatment plant operator certification requirements on February 5, 1999 upon publication of "Federal Guidelines for the Certification and Re-certification of the Operators of Community and Non-transient Non-community Public Water Systems." The State of Louisiana in April of 2002 implemented these guidelines and changed the Louisiana Administrative Code Title 48; Chapter 73 entitled "Certification." The changes will require LUS to upgrade the qualifications of its water treatment plant operators by April of 2006. This could result in higher wages for operators although the magnitude of any increase is not known at this time. We recommend that LUS consider developing an operator certification (and re-certification) program.

## 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 6-13 and were obtained from LUS' CIP adopted for fiscal year 2004-2005.



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

- Hypochlorite conversion.
- Water Transmission System Improvements.
- New Booster Supply Well (Well 24).
- Downtown Street Improvements.
- Various line relocations.

The installation of additional wells and construction of piping improvements are intended to improve distribution of water into the system and reduce occurrences of low system pressure.

**Table 6-13**  
**CIP Water System Improvements (\$1,000)**

Year Ending October 31	Water Production Improvements	Water Distribution Improvements	Totals
2005	700	1,450	2,150
2006	250	950	1,200
2007	100	650	750
2008	100	100	200
2009	<u>100</u>	<u>550</u>	<u>650</u>
Total	\$1,250	\$3,700	\$4,950

Source: LUS 5 Year Capital Outlay Plan FY 04-05 Adopted Budget

## Key Issues

LUS' Strategic Plan, updated in 2002, addresses the following areas:

- Vision, Values and Mission
- Goals and Key Results Areas
- Cost Containment
- Customers and Community
- Operations
- Performance

Strategic planning elements for each of these areas that are specific to the water utility are listed below.

## Cost Containment

- Continue Risk Management chlorine training for LUS personnel.

## Section 6

---

- Review operation standards of other w/ww service providers for planning and feasibility.

### Customers and Community

- Continue to pursue APPA/WEF/AWWA services: information, lobbyists.

### Operations

- Develop a more interactive database for storing hydrant maintenance information.
- Install pressure limiting devices at master metered locations.
- Input meter and valve location data into GIS using a Global Positioning Device.
- Filter rehabilitation at North Water Treatment Plant.
- Implement safety and security upgrades.
- Develop additional water supply project in northwest Lafayette Parish.
- Maintain progress in implementing planned water utility capital projects.
- Maintain active involvement in water planning organizations and trade associations.
- Maintain active involvement in legislative development.
- Maintain compliance with drinking water regulations.
- Conduct a formal water loss audit.
- Plan and implement selected recommendations of R.W. Beck CER.
- Operate within approved budget.
- Perform and document water distribution valve exercising program.

### Performance Measurement

- Benchmark water/wastewater against AWWA/WEF indices.
- Investigate water/wastewater safety issues & establish benchmarks.
- Benchmark water/wastewater against AWWA/WEF indices.

### Recommendations

Recommendations and their status are provided in Table 6-14 below. We have indicated the priority of the recommendation as either highest, high or normal.



**Table 6-14  
Recommendations**

<b>Water Utility Recommendations</b>	<b>Priority</b>	<b>Status</b>
LUS should give priority to constructing booster wells in low pressure areas of system to improve system pressure.	Highest	Investigating
LUS should continue to develop in-house expertise with use of water system model and acquire a system capable of modeling time of travel and concentration of introduced pollutants.	Highest	Investigating
LUS should consider the following additions to its system to increase system reliability and integrity:	Highest	In Progress
<ul style="list-style-type: none"> <li>■ Install additional emergency electric generators at the North Plant.</li> <li>■ Install emergency electric generators at all water supply wells.</li> <li>■ Install piping at the North and South Plants to allow emergency bypass of treatment units.</li> <li>■ Install roofing and covers over the North Treatment Plant treatment units, sludge tanks, backwash tanks and meter pit.</li> <li>■ Construct building enclosures of all off-site water wells.</li> </ul>		
LUS should give high priority to completing removal of the "Galbestos" building siding at the North Plant.	High	In Progress
LUS should consider developing an operator certification (and re-certification) program.	Normal	Investigating
LUS should initiate succession planning for senior water system management staff.	Normal	Investigating











## Section 7

# WASTEWATER UTILITY

---







## Section 7

# WASTEWATER UTILITY

---

### Wastewater Utility System

This section of this Report sets forth the changes that have occurred to the wastewater system of LUS during fiscal year 2004. A description and discussion of existing facilities and resources, and summaries of historical service requirements are presented in the following pages of this section.

During February of 2005, 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 2004. 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 2004**

Source of Funds	Wastewater Utility
Normal Capital/Special Equipment	\$1,993,329
Special Capital	17,372
Retained Earning	<u>5,895,963</u>
Total	<u>\$7,906,664</u>

Source: Status of Construction Workorders, October 2004

### Operation and Maintenance Expenditures

Historical total operation and maintenance expenditures from 1996 through 2004 are shown on Table 7-2. Operating expenses as tabulated include customer service, billing and collecting, administrative and general, and information services. Maintenance expenses for treatment plants increased by an average annual percentage

growth rate of 16.6 percent while collection system maintenance costs increased by an average of 2.6 percent. Total cost for operation and maintenance increased at an annual rate of 5.1 percent. Both the amount of investment in facilities and inflation influence the amount of maintenance expense incurred. Although the increase in maintenance costs for treatment plant was high, the dollar amount of the expenditures was much lower than the collection system maintenance costs. At the same time, the total investment in treatment plant facilities has greatly increased over the last ten years.

**Table 7-2**  
**Annual Wastewater System Operation and Maintenance Expense**

Fiscal Year Ended October 31	Operation	Maintenance		
	Collection and Treatment <sup>(1)</sup>	Collection	Treatment	Total
1996	\$5,871,163	\$961,526	\$49,627	\$6,882,316
1997	6,279,011	947,445	58,283	7,284,739
1998	6,214,795	840,815	90,665	7,146,275
1999	6,549,154	931,017	105,296	7,585,467
2000	6,817,137	1,052,931	109,496	7,979,564
2001	7,461,224	1,068,892	123,465	8,653,581
2002	7,978,676	946,171	113,780	9,038,627
2003	8,613,872	1,032,366	150,682	9,796,920
2004	\$8,885,778	\$1,140,669	\$153,619	\$10,180,067

Source: LUS Financial and Operating Statements 1996-2004

<sup>(1)</sup> Includes customer service, billing, collecting, information services

## 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 facility are shown in Table 7-3.



**Table 7-3**  
**Wastewater Treatment Plants**

Facility	Treatment Facilities Type	Permitted Capability (mgd)
South Plant	Activated Sludge	7.0 <sup>(1)</sup>
East Plant	Oxidation Ditch	4.0
Ambassador Caffery Plant	Rotating Biological Contractor (RBC) and Oxidation Ditch	6.0
Northeast Plant	Oxidation Ditch	<u>1.5</u>
Total		18.5

<sup>(1)</sup> Hydraulic capacity is 9.0 mgd.

Source: Craig Gautreaux, LUS 2/05.

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

**Table 7-4**  
**Collection System**

Total miles of pipe	678
Manholes	10,365
Pumping Stations	138 <sup>(1)</sup>

<sup>(1)</sup> Includes 7 stations previously owned by Holiday Utilities

Source: Craig Gautreaux, LUS 2/05

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 serving all four wastewater plants. LUS reported these incidents to the 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 ("AO") requiring LUS to take immediate action to stop the overflows and to prepare a report identifying corrective action to prevent additional occurrences.

The administrative orders by the USEPA require LUS to submit quarterly progress reports as construction of new facilities and repair of existing facilities proceeds. LUS has completed the treatment plant upgrades and expansions required by the administrative orders for the South Plant, East Plant and Northeast Plant. In June 2001, USEPA officially transferred permitting authority for the NPDES to the LDEQ for the South, East and Northeast Plants. Administration of the NPDES permit for the Ambassador Caffery Plant has remained with USEPA due to the AO for this plant. Based on discussions, meetings and correspondence with USEPA, LUS has requested

an extension of the compliance date to March 31, 2007 and the compliance schedule for Ambassador Caffery Plant has been extended to June 2007.

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 and ammonia. These occurrences are reported to LDEQ by LUS, as required by the permits. The action required by the administrative order described above is intended to reduce flow throughout the system, thereby reducing overflows and bypasses and exceedances. However, there is no assurance the USEPA or LDEQ may not issue future notices of violation in connection with these exceedances.

During 2004, LUS received a compliance order from LDEQ regarding discharge of sewage from an LUS sewage pumping station. The compliance order requires LUS to take action to comply with its wastewater permit in connection with elimination of sewage overflows.

LUS responded to the compliance order and to each issue raised by LDEQ by describing past or planned actions that have been or will be undertaken by LUS to eliminate the causes of sewage overflows.

The wastewater discharge permits for each of LUS four wastewater treatment plants (Ambassador Caffery, East, South and Northeast) were renewed in 2003 for a term of five years. The permits for each plant contain the same effluent limits for biological oxygen demand, total suspended solids, ammonia-nitrogen, dissolved oxygen, total residual chlorine and pH. Each plant must, among other things;

- Conduct whole effluent toxicity testing using bioassay methods.
- Perform an annual Environmental Audit Report including a resolution from the governing body.
- Operate an industrial pretreatment program.
- Submit monthly reports to LDEQ.

## 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 7-5.



**Table 7-5**  
**Wastewater System Historical Hydraulic Loads**

Fiscal Year Ending October 31	AVERAGE DAY HYDRAULIC LOADS (mgd) <sup>(1)</sup>				
	South Plant	East Plant	Ambassador Caffery Plant	Northeast Plant	Totals
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
2001	6.9	3.2	5.5	1.2	16.8
2002	7.5	3.0	5.2	1.1	16.8
2003	8.2	3.2	5.2	1.1	17.7
2004	8.0	3.3	5.4	1.3	18.0
Permitted Capacity	7.0 <sup>(2)</sup>	4.0	6.0	1.5	18.5

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

(2) Hydraulic capacity is 9 mgd

Source: Craig Gautreaux, LUS 2/05

Each year, LUS must prepare an annual 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 7-6.)

**Table 7-6**  
**Wastewater Load vs. Design**

**Number of Months During Which  
Design Capacity was Exceeded**

	<b>South Plant</b>	<b>East Plant</b>	<b>Northeast Plant</b>	<b>Ambassador Caffery Plant</b>
Flow				
1998	3	0	1	2
1999	3	0	0	1
2000	2	0	0	1
2001	3	3	0	4
2002	8	1	0	2
2003	11	0	0	0
2004	10	3	1	3
Biological Loading				
1998	1	0	0	3
1999	1	0	0	8
2000	1	0	0	2
2001	1	1	0	1
2002	1	0	1	14
2003	1	1	0	5
2004	1	0	0	6

Source: Craig Gautreaux, LUS 2/05

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 has been upgraded to accept 9 mgd of influent but permitted capacity is limited to 7 mgd due to sludge digesting and processing limitations. LUS has purchased 18 acres of land adjacent to the South Plant that is available for future expansion and to maintain a buffer between the plant and nearby residences. LUS has also initiated engineering design of improvements to sludge processing to increase total capacity to 12 mgd. The Ambassador Caffery Plant is also nearing its design capacity. LUS is completing engineering design of additional storage capacity and replacement of the rotating biological contactors with sequential batch reactors. Construction will start in 2005 with completion scheduled for 2007. The upgraded capacity will be 8 mgd.

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



**Table 7-7**  
**Wastewater Collection System**

Fiscal Year Ended October 31	Number of Customers	COLLECTION	
		Total Miles of Pipe <sup>(1)</sup>	Total Number of Lift Stations
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
2001	35,914	650.9	120
2002	37,420	671.0	128 <sup>(2)</sup>
2003	37,680	673.0	131 <sup>(2)</sup>
2004	38,325	678.0	138 <sup>(2)</sup>

(1) Not including service lines.

(2) Includes 7 lift stations from Holiday Utilities bankruptcy.

Source: Craig Gautreaux, LUS 2/05.

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 unless major interceptors are constructed.

The wastewater collection division recorded the number and type of overflows that have occurred in the system. The information is summarized in Table 7-8. 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 7-8**  
**Wastewater Collection System Overflows**

<b>Fiscal Year Ended October 31</b>	<b>Rain Related</b>	<b>Lift Station Equipment Failure</b>	<b>Main Line Stoppage</b>	<b>Broken Pipe</b>	<b>Total</b>	<b>Total Annual Precipitation</b>
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	6	14	36	9	65	44
2001	39	12	16	2	69	94
2002	40	5	4	4	53 <sup>(1)</sup>	79
2003	40	5	2	3	50	58
2004	141	4	1	3	149 <sup>(2)</sup>	91

Source: Craig Gautreaux, LUS 2/05

(1) Does not include occurrences during Category II hurricane event.

(2) Includes 3 large rain events over 10 inches, does not include occurrences during one 17 inch rain event.

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 sewer system and would have to construct their own treatment facilities which would very likely be considerably more expensive than discharging to LUS' sewer 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

Principal contracts and agreements for wastewater services are summarized in the following paragraphs and are listed in Table 7-9.

On June 16, 1975, the City entered into an agreement with Sewerage District No. 6 ("District") to provide treatment and disposal of all sewage collected and to provide the operation and maintenance for the District's sewer system. The term 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.

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 7-9**  
**Contracts and Agreements**

Contracts and Agreements between		Date Signed/Renewed	Termination Date	Provisions
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: Craig Gautreaux, LUS 2/04

## Load Forecasts

Load forecasts for the wastewater utility system for the five-year period of 2004 through 2009 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 7-10.

**Table 7-10**  
**Wastewater System**  
**Projected Hydraulic Loads**

Fiscal Year Ending October 31	AVERAGE DAY HYDRAULIC LOADS (mgd)				Totals
	South Plant	East Plant	Ambassador Caffery Plant	Northeast Plant	
2004 (Actual)	8.0	3.3	5.4	1.3	18.0
2005	8.5	3.3	5.4	1.1	18.3
2006	8.5	3.4	5.5	1.2	18.6
2007	8.7	3.4	5.6	1.2	18.9
2008	8.9	3.5	5.7	1.2	19.3
Permitted Capacity <sup>(1)</sup>	12.0	4.0	8.0	1.5	25.5

(1) Includes upgrades.

Source: Craig Gautreaux, 2/05, LUS.

The above forecast of wastewater treatment inflows is based upon recent historical trends for each wastewater plant and taking into account the capability to shift inflow between treatment plants. These projections are subject to change depending upon the success of the inflow and infiltration program in controlling or reducing rain-related effects. It should be noted that there are a number of small package type treatment plants scattered throughout the Parish that serve a total of 2,500 to 3,000 customers. These systems could, if emergency circumstances dictate, be quickly connected to the LUS system. A sudden increase in wastewater inflow could result. The projections shown herein should be used with prudence and frequently updated based on results of the infiltration and inflow program and additions to the system. Note that LUS plans

to re-route wastewater flows among the Ambassador Caffery Plant, the South Plant and the East Plant to avoid overloads and to accommodate construction at Ambassador Caffery. As discussed above, LUS has completed engineering design of improvements and expansions to the South Plant and to the Ambassador Caffery Plant. Construction is scheduled to begin in fiscal year 2005. Upon completion of these projects, neither site will be able to accommodate further increase in treatment capacity due to lack of space. LUS should begin engineering planning for a future treatment plant or plants to provide adequate treatment capacity for areas within Lafayette Parish where future growth is anticipated to occur.

## Future Regulatory Requirements

The Federal Water Pollution Control Act Amendments of 1972 and 1977, commonly known as the Clean Water Act, established the basic structure for regulating discharges of pollutants into the waters of the United States. It gives the USEPA the authority to implement pollution control programs such as setting wastewater discharge standards and water quality standards for all contaminants in surface waters. It also funded the construction of sewage treatment plants under the construction grants program and recognized the need for planning to address the critical problems posed by non-point source pollution. Programs implemented by the USEPA that directly affect municipal systems include:

- NPDES Permit Program, including stormwater management, and control of combined sewer and sanitary sewer overflows.
- The National Pretreatment Program, emphasizing control and prevention of water pollution from industrial facilities.
- Biosolids (sewage sludge) management program promoting compliance with the Federal biosolids rule and practices for managing biosolids.
- Administration of the Clean Water State Revolving Fund ("CWSRF").

The USEPA has delegated responsibility for implementing NPDES Permits and setting water quality standards to the LDEQ.

New and existing regulations that may have a future impact on LUS' wastewater treatment plants and related operations are discussed below.

## Sanitary Sewer Overflow Control Policy

In May through October of 1999, USEPA issued five draft documents on sanitary sewer overflows that outlined proposed regulations. The USEPA is currently working with Office of Management and Budget on the preamble language and guidance related to the capacity, management, operations, and maintenance requirements of the proposal. The USEPA plans to have a final rule completed two years after publication of the proposal.



## **Vermillion River Water Quality Standards**

Section 303(d) of the 1972 Clean Water Act requires all states to develop a list of their state's impaired water bodies that do not meet state regulatory water quality standards even with the current pollution controls in place. The Clean Water Act requires all states to develop Total Maximum Daily Loads for these waters based on priority ranking. A Total Maximum Daily Loads is a pollution budget for a specific water body (river, lake, stream, etc.) and is the maximum amount of a pollutant from point and non-point sources that it can receive without causing it to violate state water quality standards. Once the Total Maximum Daily Loads are established, they are then translated into requirements to reduce the contributions of pollutants by point sources such as municipal wastewater treatment plants, industrial wastewater discharges and by non-point sources such as stormwater runoff from agricultural fields.

If future water quality monitoring shows that the water body is no longer impaired, no further reductions are needed. However, if pollution levels are still unacceptable at the end of a reasonable time period, LDEQ must revise the Total Maximum Daily Loads and implement additional control measures. The current discharge permits for LUS wastewater plants reflect the Total Maximum Daily Loads that were established for the Vermillion watershed after water quality monitoring that occurred in 2003. Requirements to establish stricter wastewater discharge limits did not occur after results of the monitoring were analyzed.

LDEQ adopted total maximum daily loading standards for sulfate for the Vermillion River similar to those for the Atchafalaya River and which are not expected to require LUS to upgrade its wastewater plants to remove sulfate. LDEQ has informed LUS that it is likely to issue wastewater discharge monitoring requirements for mercury in anticipation of future mercury limits.

LUS is aware of these regulations and has or will incorporate the requirements into current and future operations. Compliance with the regulations is not anticipated to require major capital expenditures.

## **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 for all utility divisions including wastewater.

The estimated annual capital budget requirement amounts are shown in Table 7-11 and were obtained from LUS' Five Year Capital Improvement Program dated December 2004.

**Table 7-11**  
**Estimated Annual Capital Budget Requirements**  
**(\$1,000)**

<b>Year Ended October 31</b>	<b>Collection</b>	<b>Treatment</b>	<b>Total</b>
2005	\$13,000	\$8,300	\$21,300
2006	6,350	8,500	14,850
2007	3,450	4,350	7,800
2008	3,450	650	4,100
2009	<u>2,200</u>	<u>650</u>	<u>2,850</u>
<b>Total</b>	<b>\$28,450</b>	<b>\$22,450</b>	<b>\$50,900</b>

Source: LUS 5-Year Capital Outlay Program FY 2004-05 Adopted Budget

## Wastewater System

The wastewater program has seen the greatest growth in the total cost of CIP projects. This is driven by USEPA 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.
- Extension of sewer service.
- Addition of equalization basins and treatment modifications at Ambassador Caffery Plant.
- Improvements to South Plant sludge handling and treatment.

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. In addition to the CIP projects, we recommend that LUS implement a certification (and re-certification) training program for its wastewater utility employees.

## Key Issues

LUS' Strategic Plan, updated for 2004, addresses the following areas;

- Vision, Values and Mission
- Goals and Key Results Areas
- Cost Containment
- Customers and Community
- Operations



- **Performance**

Strategic planning elements for each of these areas that are specific to the wastewater utility are listed below.

## **Cost Containment**

- Continue Risk Management chlorine training for LUS personnel.
- Review operation standards of other w/ww service providers for planning and feasibility.
- Replace/upgrade sludge dewatering equipment at SSTP.
- Standardize pump and control equipment preferences for vendors.

## **Customers and Community**

- Continue to pursue APPA/WEF/AWWA services: information, lobbyists.

## **Operations**

- Implement Environmental Information System (EIS).
- NELAP and LELAP accreditation for wastewater lab.
- Implement pretreatment information management database (GERMS).
- Implement Integrated Contingency Plan.
- Evaluate use of compost facility for Class A sludge management.
- Recommend/Implement/analyze odor scrubber system for ACTP.
- Continuous collection system rehabs CIP.
- Complete SCADA upgrades in all lift stations.
- Complete SCADA upgrades at ACTP.
- Implement the I/I component of the Master Wastewater Plan.
- Establish an internal system of environmental auditing.
- Establish sewer system cleaning/PM program: Phase I-complete strategy for large lines.
- Maintain NPDES/LWDPS permits for water/ww/power plants.
- Maintain state certification of USEPA standards for QA/QC in laboratories.
- Continuous preparation of facilities and documents for DEQ inspections.
- Continue Municipal Water Pollution Prevention (MWPP) program for DEQ compliance.
- Change specifications on sewer force main pipe.
- Install electric generators at Heymann, Beaver, Acacia, Brown Park lift stations.

## Section 7

---

- Continue "monthly system min/max load report."

### Performance Measurement

- Benchmark water/wastewater against AWWA/WEF indices.
- Investigate water/wastewater safety issues & establish benchmarks.
- Benchmark water/wastewater against AWWA/WEF indices.

### Recommendations

Recommendations and their status are provided in Table 7-12 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 7-12**  
**Recommendations**

<b>Wastewater Utility</b>	<b>Priority</b>	<b>Status</b>
LUS should continue to develop the wastewater hydraulic model of the system.	Highest	Ongoing
Continue planning for a new wastewater treatment plant site.	High	Ongoing
We recommend LUS develop a certification (and re-certification) program for wastewater utility employees.	Normal	Ongoing









**Section 8**  
**FIBER UTILITY**

---







## Section 8

# FIBER UTILITY

---

### Introduction

*'The LUS Powered Network'* is a 65-mile, 96-strand SONET-based fiber infrastructure providing wholesale broadband and high-speed Internet access with direct connections to Tier 1 providers ("Fiber Utility"). In 1997, LPUA and the Council approved funding using retained earnings from the electric operations to upgrade LUS' telecommunications capabilities. The initial purpose of the project was to replace aging and increasingly costly LUS microwave communication system, which from an operational and reliability point of view was critical for the distribution system.

The LPUA and the Council approved the installation of a fiber optic cable to replace the LUS microwave system functions. LUS was also authorized to provide enhanced services to LCG and other local, state, and federal governmental entities, as well as third party wholesale customers in the LUS service area. LUS agreed to provide dark fiber to the University of Louisiana at Lafayette in order to connect the main campus and the research park.

The surplus fiber laid the groundwork for high-bandwidth availability of multi-service network connections for use by wholesale customers including CLECs, ISPs, and CAPs. Each wholesale customer requires specialized applications to promote their business model. LUS Powered Network Team works individually with each wholesale customer to determine their telecommunications needs/speeds/applications in order for them to implement their technological ideas while making the most of their financial resources.

The current network has excellent coverage as the fiber backbone passes within approximately one mile of every home and business in the City. The fiber network is extended to businesses on an as requested basis by LUS wholesale customers. LUS currently has fiber facilities extended to approximately 75 premise locations.

### System Condition and Capital Requirements

The system is relatively new (built in 1999) and in excellent condition. The system began transmitting working traffic in December of 2000 and began servicing wholesale customers in January of 2002. To date, the system has exhibited high reliability. Historical capital expenditures compared to budget are shown in Table 8-1.

**Table 8-1**  
**Actual Capital Expenditures Compared to Budget**

<b>FY</b>	<b>Description</b>	<b>Budget</b>	<b>Actual</b>	<b>Difference</b>
2004	Normal Capital	\$300,000	\$808,700	\$508,700
	Municipal Area Network	100,000	500	(99,500)
	Fiber Network Switch	<u>1,300,000</u>	<u>0</u>	<u>(1,300,000)</u>
	Total	\$1,700,000	\$809,200	(\$890,800)

Year 2004 capital expenditures were a result of circuit installations required to connect customers and meet growing customer service requirements. Additionally, LUS added inventory to the fiber system.

The above table indicates that circuit installations and inventory additions were greater than anticipated in 2004. The purchase of the network switch has been deferred until resolution of the LUS Fiber to the Home business planning efforts currently underway.

LUS is currently evaluating a retail telecommunications business model that contemplates providing cable, Internet and telephone services to customers within the LUS electric system service territory. LUS has retained a telecommunication consultant to evaluate this business venture.

## **Customer and Service Offerings**

Currently, the LUS Powered Network offers the following services:

- DS-1, DS-3, OC-12 and OC48 Broadband Service on LUS backbone
- DS-1, DS-3, OC-3, OC-12, OC48, 10Mbps and 100 Mbps Last Mile Service
- 10M and 100M Shared or Dedicated Packet Service
- Direct Internet Access from 1.5 Mbps to 45 Mbps
- Customer Premise Equipment Service
- Tower Lease Packages
- Network Monitoring

In 2004, LUS had 14 governmental, 11 wholesale, and 6 other customers. Other customers include tower lease and dark fiber leases.

Services provided to customers and associated revenue in 2004 were in the following areas as shown in Table 8-2.



**Table 8-2**  
**Revenue Composition by Service Category**

<b>Service Category</b>	<b>Percent of Total</b>
Broadband	32.0%
Internet	19.0%
Local Loop	23.0%
Other-Tower Lease	13.5%
Customer Premises Equipment	6.1%
Customer Connection Fees	2.9%
Other-Dark Fiber	2.3%
Other	<u>1.2%</u>
Total	100%

## Contracts and Pricing

The LUS Powered Network contracts with customers under a comprehensive standard service agreement for periods of 12 to 60 months. The agreements are flexible by allowing customers to add or modify services through separate service orders within the broader terms and conditions set forth in the agreement.

Pricing is market based and designed to attract new customers. Currently LUS offers the lowest priced broadband and Internet services within the City. Customers are offered volume discounts and other incentives to enhance the attractiveness of LUS products and services.

LUS routinely monitors competitor service offerings and prices to ensure its cost competitiveness.

## Financial Performance

Revenue growth for the telecommunications business has been indicative of a start-up business. Revenues, although small, compared to the combined system have shown steady growth as shown in Table 8-3.

**Table 8-3**  
**LUS Powered Network Historical Annual Revenues**

<b>Fiscal Year</b>	<b>Annual Revenues</b>	<b>Percent Change</b>
2002	\$188,990	N/A
2003	485,651	157%
2004	\$762,256	57%

In 2001, LCG began separately recording financial information related to the fiber system. Historically, cost accounting for the fiber system has not fully reflected the total cost of the new business. Currently LCG and LUS are evaluating and developing proper cost accounting and allocation methodologies for the fiber system. In the interim LUS staff is preparing financial reports, which do not completely reflect all aspects of the system. Financial information developed by the LCG is not timely and does not provide utility management with useful information, particularly considering the start up nature of this business. As such, fiber personnel developed their own draft financial and operating reports until more timely statements are provided by LCG.

Current cost accounts do not properly reflect labor costs directly related to the telecommunications business. Available financial summaries on either an incremental or full cost basis do not reflect the financial performance of the telecommunications business unit.

## Recommendations

Recommendations and their status are provided in Table 8-4 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 8-4**  
**Recommendations**

Telecommunications Issues	Priority	Status
LUS should determine a process that accurately allocates joint/common costs to the Fiber Utility. The allocation methodology should consider cost causation and should not be based on revenue allocation methodology.	Highest	Ongoing
LUS should develop incremental and full-embedded cost financial reports and pricing analyses to evaluate the short term and long-term profitability of the Fiber Utility business and specific service offerings.	Highest	Ongoing
LUS should increase funding for marketing within the telecommunications business in recognition that telecommunications is significantly different from a traditional municipal utility. Telecommunications requires head-to-head competition with other service providers that invest heavily in marketing and promotional development.	Normal	Ongoing
LUS must improve the flexibility and sophistication of its billing function and the interface of such function with the accounting system. Current limitations in the billing system result in a competitive disadvantage, particularly when pursuing other Tier 1 wholesale customers.	Normal	Ongoing

In 2004, progress is being made on all of the above recommendations.









## Section 9

# ENVIRONMENTAL ISSUES

---







## Section 9

# ENVIRONMENTAL ISSUES

---

### Introduction

LUS' electric, water and wastewater utilities 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 environmental compliance assessment 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 through a permit program administered by LDEQ and EPA. Requirements of the Clean Water Act are administered through a permit process whereby any discharge into surface waters requires a LPDES permit. The SDWA establishes standards for public water systems, whereby tap water must meet certain quality standards for different chemicals as established by the EPA.

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, 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 Pellerin. The Environmental Compliance Division supports the Utilities System in the following areas:

- Regulatory compliance for the electric, water and wastewater divisions
- Industrial pretreatment
- Wastewater analysis and biosolids reuse
- Water analysis

## Electric Production

LUS operates one electric generating facility, the Doc Bonin Plant located in the City and owns an interest in a coal-fueled generating facility in Boyce, Louisiana. Another LUS facility, the Curtis Rodemacher Station, is no longer in operation and is being decommissioned. LUS is also in the process of constructing two gas-fueled gas turbine electric generating facilities in Lafayette.

Bonin Plant Unit Nos. 1 and 2 boilers were constructed before 1969, and therefore do not require a LDEQ air emissions operating permit. Bonin Unit No. 3 was constructed after 1969 and, therefore, has an 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 currently contain some No. 6 fuel oil and diesel fuel, as described in Table 9-1 below.

**Table 9-1**  
**Fuel Oil Storage Tanks**

Tank	Type	Capacity (Gallons)	Contents (Gallons)
Tank No. 1	Diesel Fuel	440,000	324,360
Tank No. 2	Diesel Fuel	1,443,000	773,473
Tank No. 3	Fuel Oil No. 6	2,538,000	99,043
Tank No. 4	Fuel Oil No. 6	2,538,000	88,432

Source: George Stelly, LUS 1/22/04.

Since LUS does not have a permit to burn No. 6 fuel oil in any of its facilities, the contents of Tank Nos. 3 and 4 were sold in 1999 (all that remains is sludge). LUS intends to have the remaining sludge removed from these tanks and is investigating its options. After removal of this sludge, Tanks 3 and 4 will be tested and cleaned and no longer used. Tank 2 will be tested, cleaned and filled with the diesel fuel assessed for future use once its integrity has been confirmed.

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 and are currently updating that plan.

LUS installed continuous emission monitoring system ("CEMS") at the Bonin Plant prior to January 1, 1996 as required by CAAA regulations issued by EPA (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 EPA. 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 2003.

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. While the timing for the issuance of the final permit is unknown at the time of this report, LDEQ is in the process of reviewing the application.

The Bonin Plant operates under a new LPDES wastewater discharge permit issued by the LDEQ (Permit #LA 0005711) issued in October 2003. The current permit provides for the discharge of cooling tower blowdown and plant site stormwater drainage. No violations of this permit were issued in 2003; however, three exceedance of iron concentrations in water discharge were reported.

## **Spill Prevention Control and Countermeasure Plans**

Electric substations that are located where oil from a spill could reach navigable waters and have more than 1,320 gallons at a single facility, must have a Spill Prevention Control and Countermeasure ("SPCC") Plan in accordance with 40 CFR 112. Recent changes in these regulations include the requirement for secondary containment at the applicable facilities. LUS reports that they have 17 applicable substations and have prepared SPCC plans for all of them except the most recently added substation. LUS indicated that these plans will be updated with regard to the revised regulations and to add the new substation this year. The Walker Road Complex must have an SPCC plan consistent with the requirements of USEPA and the SPC requirements of LDEQ. That plan was recently prepared and authorized. SPCC plans are required for all of the wastewater and water treatment plants. Those plans are being completed. No reportable spills occurred in 2004.

## **Other Environmental Plans**

Other environmental plans required by EPA or LDEQ include Emergency Response Plans, specifically Risk Management Plans and Stormwater Pollution Prevention Plans. LUS indicated they were in compliance with the requirements for these plans.

## **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. LUS indicated that there were no PCB transformers (>500 ppm) in its inventory. LUS has a program in which they systematically remove transformers with any concentrations of PCBs (>51ppm) as time permits. These transformers are replaced with PCB-free transformers.



### Grant Street Substation

In September of 1991, LUS undertook a project to install and upgrade the electrical capabilities of Grant Street Substation No. 2. During the course of the construction activities, visible traces of petroleum products were discovered in the shallow ground water. Construction was halted and the upgrade plan was suspended.

Subsequent investigations at the site revealed petroleum contamination in the groundwater at the site, under the adjoining property owners' sites and at the nearby Grant Street Substation No. 1. In 2000, LUS submitted a Risk Evaluation Corrective Action Plan ("RECAP") to LDEQ. In 2003 and 2004, LUS continued its previous work with LDEQ to address outstanding issues at the site, as well as conducted semi-annual monitoring requirements. Future costs of remediation of this site could be significant.

### Curtis Rodemacher Decommissioning

As mentioned in Section 5 of this Report, the Curtis Rodemacher Plant has been retired and the facility is in the process of decommissioning. In 2003, LUS removed the boilers at the site, as well as installed wooden fencing around the site. LUS is phasing in a decommissioning process for this plant, which includes removal of small buildings, above ground piping and valves during 2004, removal of the power plant and warehouse buildings and a Phase 2 environment site assessment of the site. The extent of future environmental issues associated with this site will depend on LUS' long-term plan for the site and the results of testing related to the Phase 2 environmental site assessment. However, based on current knowledge of the environmental conditions at the site, the future costs associated with remediation are expected to be significant.

### 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 removed the sources of contamination from the site and submitted a RECAP to LDEQ in September 2000. In 2003, LUS conducted additional soil sampling at this site and is currently waiting on closure documentation from LDEQ. According to LUS, there is only a small risk to the environment associated with this site and cost estimates to complete work at this site are not expected to be significant.

### Industrial Pretreatment

The Industrial Pretreatment program is mandated by the LDEQ through the LPDES permits issued to the wastewater treatment plants. The Pretreatment Program protects the integrity of the wastewater treatment plants by fulfilling four objectives:

- Preventing the introduction of pollutants into the Publicly Owned Treatment Works ("POTW") which will interfere with the operation of the plants, including interference with its use or disposal of municipal sludge.



- Preventing the introduction of pollutants into the POTW, which will pass through the treatment works and enter stream waters.
- Reducing the risk of exposure of workers to chemical hazards.
- Improving opportunities to recycle and reclaim municipal and industrial wastewaters and sludge.

The Pretreatment Program provides a service to the community by allowing industry to discharge pretreated wastewater, to be further treated at the wastewater treatment plants, in lieu of meeting water quality regulations required for direct dischargers to the waters of the state. The Pretreatment Program regulates significant industrial users that discharge to the treatment plants as well as other non-significant industrial users. The program also includes a Best Management Practices (“BMP”) program for its industrial users. The BMP program allows small volume discharges to reduce the amount of pollution entering the sanitary sewer system through means other than a formal Wastewater Discharge Permit. BMP customers have certain guidelines that must be followed and are exempt from monthly reporting requirements and monthly permitting charges.

## **Wastewater Collection and Treatment**

The wastewater discharge permits for each of LUS four wastewater treatment plants (Ambassador Caffery, East, South and Northeast) were renewed in 2003 for a term of five years. The permit conditions require LUS to regularly test for compliance with permit conditions, and report any violations or exceedences of permit limits, including bypass or overflow of wastewater. Historically, notices of overflows primarily associated with heavy rainfall have been reported to the LDEQ.

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 EPA agreed to a compliance schedule that identifies the corrective actions to be taken by LUS to eliminate the causes of overflows and bypasses. The Ambassador Caffery Treatment Plant is still under an EPA Administrative Order to address issues related to unpermitted discharges.

In December 2003, LUS was issued a compliance order by LDEQ for violations of its LPDES permits for the South Sewage Treatment Plant. The compliance order also stated that LUS had failed to perform wastewater sampling in accordance with the South Wastewater Plant permit and the compliance order noted the occurrence of sewage overflows that LUS had reported to LDEQ as required by its wastewater permits. The compliance order requires LUS to take action to comply with its permit in connection with elimination of sewage overflows. LUS received compliance order from LDEQ in December of 2004 in connection with an overflow at a pumping station.



Additional planned work for control of infiltration and inflow is identified in Section 7 of this Report.

### **Wastewater Analysis and Biosolids Reuse**

LUS currently utilizes a land farming program to reuse biosolids that are produced as a result of its wastewater operations. This program is operated under a permit from the LDEQ. As an alternative to land farming, LUS is considering improving the quality of its biosolids to Class A, which would allow for its use as commercial compost. This alternative may increase the costs associated with sludge disposal; however, this alternative may increase LUS' ability to manage its disposal needs.

### **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.

### **New Gas Turbine Electric Generators**

LUS has identified the key permits, certifications and approvals required to construct and operate the T. J. Labbé and Hargis-Hébert Generation Projects. At the time of this Report, nearly all of the key permits and approvals were obtained. While there is no assurance that all the permits and approvals will be issued as anticipated, the process is proceeding in a timely manner consistent with the current construction and operation schedules. The following permits, certifications and approvals are being sought:

- LDEQ Approval of Emissions of Air Pollutants –Obtained.
- Part 70 (Title V) Operating Permit – Obtained.
- Title IV (Acid Rain) Permit – Obtained.
- Industrial Wastewater Discharge Permit – An application has been submitted to the LUS Wastewater System.
- Ground Water Certification – This certification has been received.
- Stormwater Pollution Prevention Plan for construction – This plan has been developed and submitted to LDEQ for review.
- Federal Aviation Administration (“FAA”) – The FAA confirmed that no approval is required from FAA.
- Historical/Archeological – The State Historic Preservation Officer has confirmed that the project will not impact historic or archaeological sites.
- Threatened and Endangered Species – The Louisiana Natural Heritage Commission has confirmed that the project will not impact threatened, endangered or otherwise listed species or critical habitat.



- Spill Prevention Plan – This will be developed as required shortly after operation begins.

LUS believes the key environmental issues for these projects will be air emissions, noise and visual aesthetics. LUS has undertaken specific mitigation measures for each issue. LUS does not anticipate a significant impact from the projects on the local environment. LUS expects that all required permits will be received well in advance of the anticipated construction completion of either project.

## Rodemacher Generating Unit in Boyce, LA

During February 2005, CLECO received and forwarded to LUS a Clean Air Section 114 letter, seeking information pursuant to the Clean Air Act in an effort to determine whether projects undertaken at the Rodemacher Power Station may have triggered any of the Clean Air Act's requirements under New Source Review Program or the New Source Performance Standards. It is not unusual for electric utilities to have received Section 114 letters from the EPA. As of this date, LUS is not aware that CLECO has received any Notices of violation or notices that an enforcement action has been commenced by the EPA with respect to this matter. Future actions of EPA relative to this matter cannot be determined now.

There are a number of potential future regulations that, if promulgated, could increase capital expenditures and O&M costs at LUS generating facilities. Such potential regulations include mercury control, particulate matter of 2.5 microns or less, regional haze, regional visibility, water intake structure regulations, solid waste disposal regulations, potential ratcheting of SO<sub>2</sub> allowances beyond 2009 and potential ratcheting of NO<sub>x</sub> allowances. The schedule and specific regulations to be promulgated are not presently known; therefore the impact of such potential regulations cannot be assessed now.

## Recommendations

Recommendations and their status are provided in Table 9-2 below. We have indicated the priority of the recommendation as either highest, high or normal.

**Table 9-2**  
**Recommendations**

Environmental Issues	Priority	Status
LUS should continue to evaluate alternatives for its biosolid disposal program.	High	On Going
LUS should continue to update its environmental plans, including its SPCC plans, to ensure that they include the latest changes to the appropriate requirements.	High	Investigating









