REPORT | April 2016

LUS
LAFAYETTE UTILITIES SYSTEM

Lafayette
CONSOLIDATED GOVERNMENT

# CONSULTING ENGINEER'S COMPREHENSIVE ANNUAL REPORT

## Lafayette Utilities System

Lafayette, Louisiana

PREPARED BY:

NewGen Strategies & Solutions

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NewGen Strategies & Solutions

*NewGen Strategies & Solutions, LLC, (NewGen) role as Consulting Engineer, has prepared the attached comprehensive annual report on the Utilities and Communications Systems for fiscal year 2014. Copies of the report shall be placed on file with the Chief Operating Officer by LCG and shall be open to inspection by any Owners of any of the Utility or Communications System Bonds. NewGen was supported by subcontractors and specific subject matter experts in the preparation of and analysis included in the report.*
*Our partners in this effort included:*

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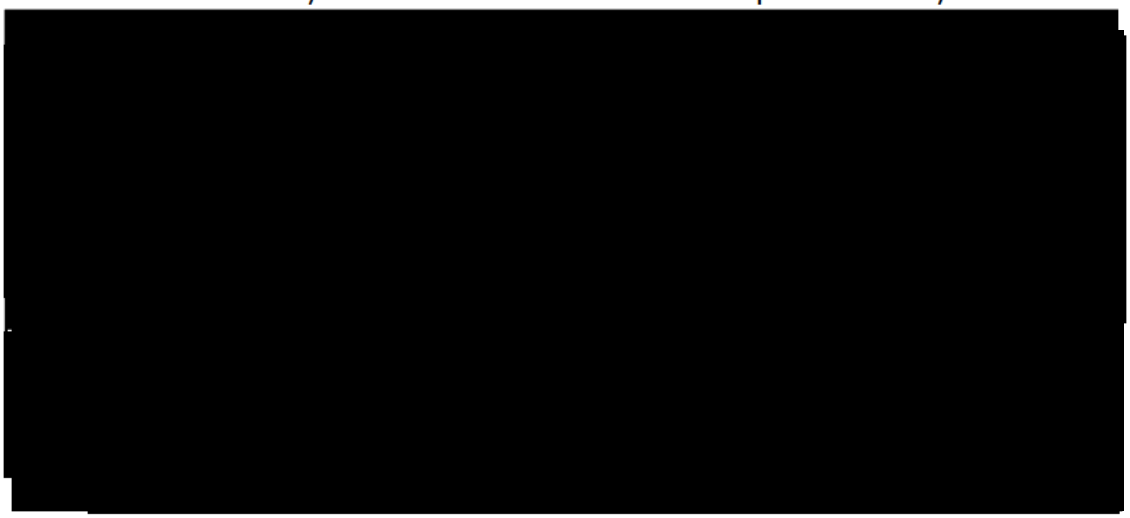

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# EXECUTIVE SUMMARY

## Introduction

Lafayette City-Parish Consolidated Government (Lafayette Consolidated Government or LCG) governs the City of Lafayette, Louisiana (City) and the Lafayette Parish (the Parish), collectively the City-Parish. LCG includes a Mayor-President and nine City-Parish Council members (the Council), elected by the Parish to four-year terms of office. The Council is also the governing authority of the Lafayette Public Power Authority (LPPA). LPPA is a political subdivision of the State of Louisiana and was created in 1976 to finance electric generating facilities in order to provide power to the City's Electric System. LPPA provides the output of these generating facilities via a "take or pay" wholesale power agreement with the Utilities Department, also known as Lafayette Utilities System (collectively defined as LUS). LUS includes the Electric, Water, and Wastewater Systems (collectively the Utilities System), and the Communications Systems.

The City has issued and is currently servicing debt related to Utilities System, Communications System, and LPPA bonds—Utilities Revenue Bonds (Series 2010 and 2012), Communications Revenue Bonds (Series 2012 and 2015), and LPPA Bonds (Series 2007, 2012, and 2015). As of October 31, 2015, the City was servicing debt related to the Series 2010 and 2012 Utilities Revenue Bonds, Series 2012 and 2015 Communications Bonds, and Series 2007 and 2012 LPPA Bonds. As required in the bond ordinances included with the Utilities System and Communications System Bonds (collectively the Bond Ordinances), a Consulting Engineering shall provide engineering counsel to LCG in connection with the operations of the Utilities System and Communications System, advise on rate revisions, and prepare an annual comprehensive report (e.g. the Consulting Engineer's Comprehensive Annual Report or Report). The Report shall address a number of covenants and continuing disclosures included in the Bond Ordinances such as the condition and operations of the systems, general accounting, and financial compliance, as well as overall financial and operational performance of the Utilities System and Communications System.

This Report was prepared by NewGen Strategies and Solutions, LLC (NewGen), and covers the fiscal year (FY) 2015 (November 1, 2014 to October 31, 2015). The contents of this Report are intended to provide engineering and management information to bond holders, LUS, LCG, and interested parties. It is our understanding that LCG places copies of this Report on file with the Chief Operating Officer, Bond Fund Trustee, LUS, and others. Appendices A, B, C, and D include a comprehensive list and summary of the continuing disclosures and updated financial and operational performance for the Utilities System, Communications System, and LPPA as required in the Bond Ordinances.

The information and analyses presented herein are representative of information made available to NewGen as of the date of this Report, observations of the systems, and interviews conducted with LUS and LCG staff in February 2016. NewGen's analyses, conclusions, and opinions relied on independent review of information provided to us by others in the form of audits, reports, budgets, projections, and interviews as disclosed in this Report. NewGen has not independently verified the accuracy of information provided and has assumed that information provided is accurate and representative of the financial and operating condition of the Utilities System and Communications System.

## Overall Performance

LUS served more than 65,000 electric customers, 55,000 water customers, and 43,000 wastewater customers in 2015 while the Communications System served over 16,000 customers. Customer growth on the Utilities System is stable with observed customer growth averaging 1% per year since 2011. Communications System customer growth continues with growth averaging 10% per year since 2011.

LUS generated a total of $229 million of revenues in FY 2015, with the majority of the revenue ($182 million) from the electric services. FY 2015 revenues were approximately 7.7% lower than 2014, with the electric revenues 9.8% lower primarily driven by significantly lower purchased power costs and related reductions in pass-through revenues. The water and wastewater revenues increased by 2.8% and 0.8% respectively, from the previous year. The debt service coverage ratio (DSCR) for the Utilities System remains strong at 3.0 for the combined Electric, Water, and Wastewater Systems. The minimum DSCR requirement for the Utilities System is 1.0.

The Communications System revenues increased to $33.8 million in 2015, up 6.9% from 2014. The DSCR for the Communications System increased to 1.8 from 1.5 in 2014. The minimum DSCR requirement for the Communications System is 1.0.

In general, the Utilities System financial performance aligned with the LCG Adopted Operating and Capital Budget FY 2015–2016 (as provided in 2015 Budget) budgeted projections. The Utilities System FY 2015 actual revenues and expenses were lower than budgeted. The Utilities System collected $231 million in operating and miscellaneous revenues compared to the budgeted $238 million. The difference is primarily attributable to the lower purchased power costs, which are passed through and recovered in the Fuel Charge (FC). Other operations and maintenance (O&M) expenses were lower than budget due to lower generator and equipment maintenance, contract labor expenses, personnel salary expenses, as well as multiple other adjustments. Other Income (Expenses) were higher than budget primarily due to an increase in normal capital.

In general, the Communications System's revenue performance was slightly less than budgeted. The Communications System collected $34 million in operating and miscellaneous revenues in 2015, as compared to the budgeted $37 million. However, expenses were also lower than budgeted by 1.2%. While the Communications System actual financial performance was under budget, it still exceeded DSRC requirements and continued to increase its net revenues.

Rates for the Electric, Water, and Wastewater Systems remain competitive for residential and commercial customers. In fact, LUS' residential electric rates and residential and commercial water rates are among the lowest in the state. The Communications System offers Internet service packages that are of significantly higher quality (e.g., higher speeds) at lower prices when compared to local competitors. The Communications System has a competitive advantage in Internet services within the City.

## Findings and Recommendations

Based upon our information and assumptions relied upon, as included in this Report, we are of the opinion:

- Based on our visual observation and review of the Utilities System and Communications System, we find the Utilities System and Communications System to be in generally good condition and maintained properly in accordance with prudent utility and industry practices.
- Historically, the Utilities System capital improvement program (CIP) has been sufficient to sustain and improve the integrity and reliability of the system. The current CIP reflects certain deferred projects, which are not expected to have a material impact on the sufficiency of the CIP to maintain system reliability.
- Revenues from the Utilities System were sufficient to meet all financial obligations including operating expenses, LUS and LPPA debt service, capital improvements, in lieu of tax (ILOT) payments, and required reserves.
- The Electric System became a Midcontinent Independent System Operator (MISO) participant in December 2013. MISO has significantly benefited and improved LUS' power supply economics, operations, and reliability, as well as eliminated prior transmission constraint issues. LUS has also realized greater flexibility in dispatching Rodemacher Unit 2 and its overall power supply mix. Since joining MISO, LUS' generation plant utilization has declined, as market prices are generally lower than the peaking unit costs to generate power.
- The Doc Bonin and the Curtis Rodemacher generating stations are currently economically obsolete. Curtis Rodemacher has been retired for several years and decommissioning efforts have been initiated in the past. Doc Bonin is currently not operating and has been designated as a power station in economic suspension within MISO. In anticipation of the cost associated with fully decommissioning both power stations, LUS should establish a decommissioning reserve to cover the future costs of dismantling these units. Reserve requirements and annual funding of such a reserve would be based on a decommission study. LUS should conduct a decommission study as the basis for funding such a reserve. The term for the Doc Bonin economic suspension ends on June 29, 2017 and may not be extended. At that time, LUS must extend existing capacity contracts or construct new generation capacity to meet MISO requirements.
- Water sales to wholesale customers have remained steady to increasing over the past five years. As wholesale water sales continue and are projected to increase, it will place added pressure on the distribution system, which could accelerate capital upgrades. In addition to capital upgrades, additional wholesale customer sales volume management may be required to maintain adequate pressure in the system.
- Biosolids disposal from wastewater treatment continues to be a near term issue LUS must address if the current lessors of the land used for disposal begin cancelling agreements, and/or additional outlying package treatment plants are integrated with the Wastewater System. LUS will continue evaluating alternative sludge treatment options and the potential purchase of land for disposal. Where possible, the existing

year-to-year leases with 30-day notices for cancellation should be renegotiated to longer-term staggered leases with longer notice periods for cancellation.

- As wastewater collection and transmission infrastructure continues to age, infiltration/inflow (I&I) and system overflows will remain an important infrastructure issue. Efforts to address and control I&I and overflows should continue to be a priority.
- The Utilities System maintained a combined 3.0 DSCR while the Communications System achieved a 1.8 DSCR. Both the Utilities System and Communications System minimum DSCR are 1.0.
- The Communications System operates in a highly competitive market, and faces significant business risks associated with pricing, customer turnover, market penetration, and technological obsolescence. In this competitive environment, the Communications System has increased its customer base and market penetration, demonstrating its ability to operate successfully in a competitive industry.
- The continued maturity of the Communications System was reflected in an increase in the bond rating from the Standard & Poor's (S&P) from an A to an A+ during the Communications System 2015 Refunding.
- At the current customer level, the Communications System generates sufficient revenues to meet O&M expense, annual debt service, capital improvements, inter-utility loan payments, imputed taxes, and all other financial obligations. Given that a majority of Communications System costs are fixed and do not vary when new customers are added to the system, revenues associated with customer growth above current levels will further improve the system's ability to meet future debt service obligations.
- On July 21, 2015, the Council unanimously approved an ordinance to revise the ILOT calculation for the Communications System. This ordinance recognizes that the Communications System operates in a competitive environment and the current ILOT calculation is a greater expense than the current Imputed Tax. With the approval of this ordinance, the Communications System will now be required to pay an ILOT amount equal to Imputed Taxes. The Imputed Tax payment will be made to LUS and the City for years 2016 through 2020 as prescribed in the ordinance. After 2020, 100% of Imputed Tax payments will go to the City. The reduced financial obligation will increase cash available for the Communication System's capital improvement projects and reserves, thereby reducing pressure to raise rates in the future and helping to maintain a level playing field with competitors. The Utilities System's Residual Balance available for Communications Debt Service was sufficient to meet Communications System debt service if a Credit Event had occurred in FY 2015. The 2015 Utilities System Residual Balance achieved a coverage ratio of 3.9 as compared to the Communications System debt obligations.
- Staffing and succession planning remains a material issue for LUS and all municipally-owned utilities across the United States (U.S.). LUS is also constrained by civil service policies and therefore lags the competition in salaries. Compared with the regional oil and gas industry, LUS' advantages come down to job stability, location, quality of life, and home time. A consistent approach and plan to replacing retirees and their knowledge base is key to the future success of the utility.

- Staffing issues are also at risk for the Communications System due to the extremely competitive nature of the business and the potential for employees to make significantly greater salaries in the marketplace. Other human resources issues include performance recognition, overtime, and personnel being at the highest applicable pay grade with no further advancement potential.

Additional and more detailed findings and recommendations are found within each Section of the Report.

## Revenue Bond History and Ratings

LUS has a long and successful history of repaying bond holders. The following table lists the historical and outstanding Bonds since 1949.

Table ES-1
LUS Related Bonds Summary

| Date Issued | Retired/ Outstanding | Authorized Amount | Application of Proceeds |
|---|---|---|---|
| Utilities System | | | |
| 1949 – 1958 | Retired | $18,000,000 | Steam-electric generating plant improvements and extensions to the Utilities System |
| 1962 –1965 | Retired | $12,500,000 | Improvements and extensions to the Utilities System |
| 1966 – 1969 | Retired | $19,800,000 | Addition to electric generation, water and wastewater treatment capacity, and extensions and improvements |
| 1973 – 1976 | Retired | $39,000,000 | Addition to electric generation capacity and extensions, as well as additions and improvements to the Utilities System |
| 1978 – 1981 | Retired | $26,000,000 | Additions to the electric transmission system and extensions and improvements to the electric, water distribution, and wastewater collection systems |
| 1983 – 1996 | Retired | $40,400,000 | Additions, extensions, and improvements to the Utilities System, and acquisition of electric distribution customers |
| 2004 | Retired during FY 2014 | $183,990,000 | Addition to electric generation capacity and extensions, and wastewater improvements |
| 2010 | Outstanding | $86,080,000 | Improvements to the Electric System to alleviate the Acadian Load Pocket, development of Advanced Metering Infrastructure (AMI) to benefit the Electric and Water Systems, and collection improvements for the Wastewater System |
| 2012 | Outstanding | $153,960,000 | Advanced refunding of a portion of 2004 Bonds, Reserve Fund |
| Lafayette Public Power Authority | | | |
| 2007 | Outstanding | $34,045,000 | Purchase of two aluminum rail car trains and other improvements to Rodemacher Unit 2 |
| 2012 | Outstanding | $65,100,000 | Installation of Mercury and Air Toxic Standard (MATS) equipment, Selective Non-Catalytic Reduction (SNCR), and other improvements to Rodemacher Unit 2 |
| 2015 | Outstanding | $29,035,000 | Refunded $28,325,000 million of the 2007 Bonds |

Table ES-1
LUS Related Bonds Summary

| Date Issued | Retired/ Outstanding | Authorized Amount | Application of Proceeds |
|---|---|---|---|
| Communications System | | | |
| 2007 | Retired during FY 2015 | $110,405,000 | Creation of the Communications System to provide retail telephone, cable television (CATV), and Internet service to the residents of the City |
| 2012 | Outstanding | $14,595,000 | Improvements to the Communications System to provide retail telephone, CATV, and Internet service to the residents of the City |
| 2015 | Outstanding | $91,600,000 | Refunded $96,855,000 of the Series 2007 Bonds |

Source: Official Statements

The most recent bond ratings for debt issuances are included below. As the Communications System's financial performance continues to improve, it may lead to improved ratings for current and future Communications System bonds. During the Communications System 2015 Refunding, the S&P bond rating improved from an A to an A+ as shown in Table ES-2.

The rating agencies typically review LUS and the City's credit rating with each debt issue. If the City or LUS has not recently issued debt (e.g. within a two-year period) the agencies will perform a review and surveillance of the City and LUS performance to update credit ratings.

Table ES-2
Recent Bond Ratings

| Bond Issue | S&P Rating (1) | Moody's Rating (2) |
|---|---|---|
| LUS: Utilities Revenue Refunding Bonds 2012 | AA- | A1 |
| LPPA: Electric Revenue Refunding Bonds 2015 | AA- | A1 |
| Communications System: Revenue Refunding Bonds 2015 | A+ | A3 |

(1) S&P ratings scale: highest: 'AAA', lowest 'D'; '+' and '-' are used to rate relative standing within a rating category (e.g. AA+ or B-).
(2) Moody's ratings scale: highest 'Aaa', lowest 'C'; '1', '2', and '3', 1 is high, 3 is low, are used to rate relative standing within a rating category (e.g. Aa1 or A3).

# SECTION 1
# SCOPE OF REVIEW

The Electric, Water, and Wastewater Systems (collectively the Utilities System) bond ordinance, and Communications System bond ordinance (collectively, the Bond Ordinances) set forth specific duties and responsibilities of the Consulting Engineer, which include advising Lafayette Utilities System (LUS) on its appointment of Chief Operating Officer, providing continuous engineering counsel to the Lafayette City-Parish Consolidated Government (Lafayette Consolidated Government or LCG) in connection with operations of the Utilities System and Communications System, advising on rate revisions, and preparing an annual comprehensive report (specifically, this Consulting Engineer's Comprehensive Annual Report or Report) on the operations of LUS after the close of each fiscal year (FY).

On February 16, 2015, LCG retained NewGen Strategies and Solutions, LLC (NewGen) as the LUS Consulting Engineer. This Section of our Report describes the responsibilities of the Consulting Engineer with respect to the development of an annual comprehensive report for the Utilities System and Communications System. Although the responsibilities of the Consulting Engineer have historically not changed, the analyses undertaken by NewGen in the performance of our due diligence review of LUS are different from prior reviews conducted by other firms. Therefore, the organization, content, conclusions, and recommendations contained within this Report may differ from those included in reports prior to 2014.

## 1.1 Requirements of Bond Ordinance

Utilities System and Communications System outstanding bonds, shown in Table ES-1, are governed by nearly identical Bond Ordinances. The Utilities System is governed by Article VII-Covenants of the Issuer of the Utilities System bond ordinance. The Communications System is governed by Article VIII-General Covenants of the Issuer of the Communications System bond ordinance. The Consulting Engineer is governed by Article VIII-Consulting Engineer of the Utilities System bond ordinance and Article IX-Consulting Engineer of the Communications System bond ordinance. These articles are pertinent to the content of this Report. A summary of each article is as follows:

### Utilities System – Article VII-General Covenants of the Issuer

Article VII of the Utilities System bond ordinances list 12 covenants of LUS (Issuer), as follows:

- Section 7.1 – Operation Covenant where, among other things, the Issuer agrees to operate the Utilities System in a businesslike manner.
- Section 7.2 – Maintenance of Utilities System, Disposition where, among other things, the Issuer agrees to maintain the Utilities System and all parts thereof in good condition and will operate the same in an efficient and economical manner.
- Section 7.3 – Maintenance of Utilities System, Disposition where, among other things, the Issuer agrees to maintain the Utilities System and all part thereof in good condition and will operate the same in an efficient and economical manner.

- Section 7.4 – Obligation to Connect Sewerage Users where, among other things, the Issuer agrees to require every owner, tenant, or occupant of each lot or parcel of land to connect with the Utilities system and to cease to use any other method for the disposal of sewage, sewage water, or other polluting matter.
- Section 7.5 – No Free Service where, among other things, the Issuer will not permit free water, electricity, or sewage service to be supplied by the Utilities System.
- Section 7.6 – Operating Budget where, among other things, before the first day of each FY the Governing Body shall prepare, approve, and adopt in the manner prescribed by law….a detailed budget of the Revenues, Bond Service Requirement,…and Cost of Operations and Maintenance (O&M) for the next succeeding FY.
- Section 7.7 – Rate Covenant where, among other things, the Issuer will fix, charge, and collects such rates, rentals, fees, and charges for the use of and for the services and products provided by the Utilities System.
- Section 7.8 – Books and Records where, among other things, the Issuer shall keep separately identifiable financial books, records, accounts, and data concerning the operation of the Utilities System.
- Section 7.9– Reports and Annual Audits where, among other things, the Issuer shall require that an annual audit of the accounts and records with respect to the Utilities System be completed as soon as reasonably practicable at the end of the FY by a qualified independent certified public accountant.
- Section 7.10– Insurance and Condemnation Awards where, among other things, the Issuer shall carry adequate fire, windstorm, explosion, and other hazard insurance on the components of the Utilities System. The Issuer may, upon appropriate authorization by its Governing Body, self-insure against such risks on a sound actuarial basis.
- Section 7.11– Enforcement of Collections where, among other things, the Issuer will diligently enforce and collect the fees, rates, rentals, and other charges for the use of the products, services, and facilities of the Utilities System.
- Section 7.12– Additions to Utilities System where, among other things, the Issuer may add to the Utilities System any facilities or equipment purchased, acquired, or constructed for the purpose of improving or renovating any element of the then-existing Utilities System.

## Utilities System – Article VIII-Consulting Engineer

Article VIII of the Utilities System bond ordinance lists three requirements of the Consulting Engineer as follows:

- Section 8.1 – Consulting Engineer, where the Issuer shall retain a Consulting Engineer for the purpose of providing the Issuer immediate and continuous counsel and advice regarding the Utilities System. It shall be the further duty of the Consulting Engineer to advise the Issuer in its appointment of a Chief Operating Officer of the Utilities System and the Issuer agrees that it will not appoint anyone as Chief Operating Officer that has not been approved by the Consulting Engineer.

- Section 8.2 – Comprehensive Annual Report, where the Consulting Engineer shall prepare within 180 days after the close of each FY a comprehensive report… upon the operations of the Communications System and the Utilities System during the preceding year, the maintenance of the properties, the efficiency of the management of the property, the proper and adequate keeping of books of account and record, the adherence to budget and budgetary control provisions, the adherence to all the provisions of the Ordinance, and all other things having a bearing upon the efficient and profitable operations of the Communications System and the Utilities System, and shall include whatever criticism of any phase of the operation of the Communications System and the Utilities System the Consulting Engineer may deem proper, and such recommendation as to changes in operation and the making of repairs, renewals, replacements, extensions, betterments, and improvements as the Consulting Engineer may deem proper including recommended changes in organization, pay scales, and risk management practices. Copies of such report shall be placed on file with the Chief Operating Officer and shall be open to inspection by any Owners of any of the Bonds. Such report shall also contain the Consulting Engineer's recommendations as to personnel practices and policy and his analysis of the ability of the Utilities System to function in the present and forecasted environments.
- Section 8.3 – Recommendation as to Rate Revision, where it shall further be the duty of the Consulting Engineer to advise the Issuer as to any revision of rates and charges, and the Issuer agrees to make no downward revision in it rates and charges for services (except fuel adjustment charges), which are not approved by the Consulting Engineer.

### Purpose of this Report

The purpose of the Report is to fulfill Article VIII – Section 8.2 as described above and to comply with Electronic Municipal Market Access (EMMA) reporting requirements. EMMA is a resource for investors and is operated by the Municipal Securities Rulemaking Board (MSRB). The MSRB is a primary regulator of municipal markets. The MSRB establishes rules that securities firms, banks, and municipal advisors must follow when engaging in municipal securities transactions and advising investors and state and local governments. Section 8 – Continuing Disclosures with Appendix A – Continuing Disclosures-Utilities System, Appendix B – Continuing Disclosures-Lafayette Public Power Authority (LPPA), Appendix C – Continuing Disclosures- Communications System, and Appendix D – Financial and Statistical Data meet the EMMA reporting requirement.

## 1.2 Report Organization

Outstanding LUS debt obligations are supported by two distinct revenue pledges. The Utilities System's revenues are pledged to meet debt service obligations associated with the Utilities System Series 2010 and 2012 revenue bonds. Communications System revenues are pledged to meet debt service obligations associated with the Communications System Series 2007, 2012 and 2015 revenue bonds. Given these two distinct pledges, we have organized our Report as follows:

- Section 1 – Scope of Review, as presented within this Section.
- Section 2 – Governance, Organization, Management, and Revenue Pledge describes the LUS organizational structure and management team, which oversees the operation of

the Utilities System and Communications System including the governance and shared services provided by LCG.

- Section 3 – Utilities System provides an overview of the combined electric, water, and wastewater operations that comprise the Utilities System including historical financial performance.
- Section 4 – Electric System provides an in-depth review of electric system operations, system condition, rate comparisons, performance benchmarking, and financial performance and contribution to the Utilities System revenue pledge.
- Section 5 – Water System provides an in-depth review of water system operations, system condition, rate comparisons, and financial performance and contribution to the Utilities System revenue pledge.
- Section 6 – Wastewater System provides an in-depth review of wastewater system operations, system condition, rate comparisons, and financial performance and contribution to the Utilities System revenue pledge.
- Section 7 – Communications System provides an in-depth review of the LUS Internet, telephone, and cables businesses including an assessment of market share, service offerings, price competitiveness, and financial performance in support of the Communications System revenue pledge.
- Section 8 – Continuing Disclosure provides an overview of EMMA and the required continuing disclosures, with Appendices A, B, and C providing updated financial information in a format similar to that presented in official statements of outstanding bond issues of the Utilities System, Communications System, and LPPA.

# SECTION 2
# GOVERNANCE, ORGANIZATION, MANAGEMENT, AND REVENUE PLEDGE

The Lafayette Parish (the Parish) electorate and the City of Lafayette, Louisiana (City) adopted the Home Rule Charter (Charter) to consolidate the City and Parish governmental functions. The Charter also defined the new LCG departmental structure. LCG manages and operates the Utilities System and Communications System through its departmental structure. The Utilities Department is primarily responsible for the Utilities System and Communications System management and operations; however, other LCG departments provide vital functions to LUS operations, including the Office of Finance and Management, the Department of Information Services and Technology, and the Legal Department. The City owns the Utilities System and Communications System's assets. LCG operates on a FY, beginning November 1st and ending on October 31st of the following year.

## 2.1 Governance

LCG includes a City-Parish Mayor-President and nine City-Parish Council members (Council), elected by the Parish to four-year terms of office. During FY 2015, Council members were as follows:

Table 2-1
LCG Parish-Council Members

| Council Member | Term |
|---|---|
| Joey Durel– City-Parish Mayor-President | 2012–2015 |
| Kevin Naquin – District 1 | 2012–2015 |
| Jay Castille – District 2 | 2012–2015 |
| Brandon Shelvin– District 3 | 2012–2015 |
| Kenneth P. Boudreaux – District 4 | 2012–2015 |
| Jared Bellard – District 5 | 2012–2015 |
| Andy Naquin– District 6 | 2012–2015 |
| Donald L. Bertrand– District 7 | 2012–2015 |
| Keith Patin– District 8 | 2012–2015 |
| William G. Theriot – District 9 | 2012–2015 |

Source: LCG website

In addition to being the governing authority for the City and Parish of Lafayette, the Council is also the governing authority of LPPA. LPPA is a political subdivision specifically created for the purpose of financing electric generating facilities to provide power to the City's Electric System.

LPPA then provides the output of these generating facilities by way of wholesale power sales to LUS.

The City is the owner of the LUS Electric System (including generation, transmission, and distribution facilities), the Water System (including supply, treatment, distribution, and storage facilities), and the Wastewater System (including wastewater collection and treatment facilities) (collectively, the Utilities System), as well as the Communications System. Upon consolidation of the City and Parish governing authorities into LCG, it was specifically recognized that the Charter should accommodate for the governing of LUS, which is a City utility system. As a result, the Charter created the Lafayette Public Utilities Authority (LPUA) as the governing authority of the Utilities Department. The Charter further provides that Council members whose districts include 60% or more of citizens residing within City boundaries also serve as LPUA members. LCG was created in the Charter as enabled by the electorate of 1992.

The City-Parish Mayor-President and Chief Administrative Officer supervise the administration of all departments, offices, and agencies of LCG, except as may otherwise be provided by the Charter. Certain departments of LCG are involved in day-to-day management and operation of LUS. The Communications System consists of a separate Communications Services Enterprise Fund with a distinct set of accounts, funds, and bond pledge. The Electric System, Water System, and Wastewater System are financed by the Utilities System revenue bonds. The Communications System is financed by the Communications System revenue bonds.

The Communications System offers an array of services in the competitive market including fiber leases, wholesale broadband, and retail customer services. In the retail market, the Communications System offers the "triple play" of services. The "triple play" is a common term in the industry that refers to cable television (CATV), telephone, and Internet data services. The backbone of the system includes a 125-mile fiber backbone with direct connections to national, major Tier 1 broadband providers. The retail portion of the system includes over 800 miles of overhead and underground fiber lines along city streets, along with associated equipment. The system also consists of a major headend facility, including satellite dishes and electronics, along with backup power and connection to at least three long haul connections with major Internet carriers.

## 2.2 Operating and Capital Budgeting

The Council approves the LCG Operating and Capital Budget annually. Each spring, the budgeting process begins with LUS preparing and submitting their proposed operating and capital budget to LCG. The budget may then be adjusted or presented to the Council for approval. Per the Charter requirements, the budget must be presented to the Council at least 90 days prior to the beginning of each FY and adopted no later than the second to last regular meeting of the FY.

The operating portion of the budget contains projections of revenues and expenses. Each division within LUS estimates their expenses for the upcoming FY and submits their estimates to LUS management. LUS management then compiles each divisions' projections and submits the document to LCG.

Each year, the Utilities System and Communications System develop a five-year capital improvement program (CIP), referred to by LUS as the five-year Capital Outlay Program. The CIP is reviewed, updated, and budgeted annually.

### Organization

LCG, LUS, LPPA, LPUA, Communications System, and Utilities System organizational structure is shown in Figure 2-1.

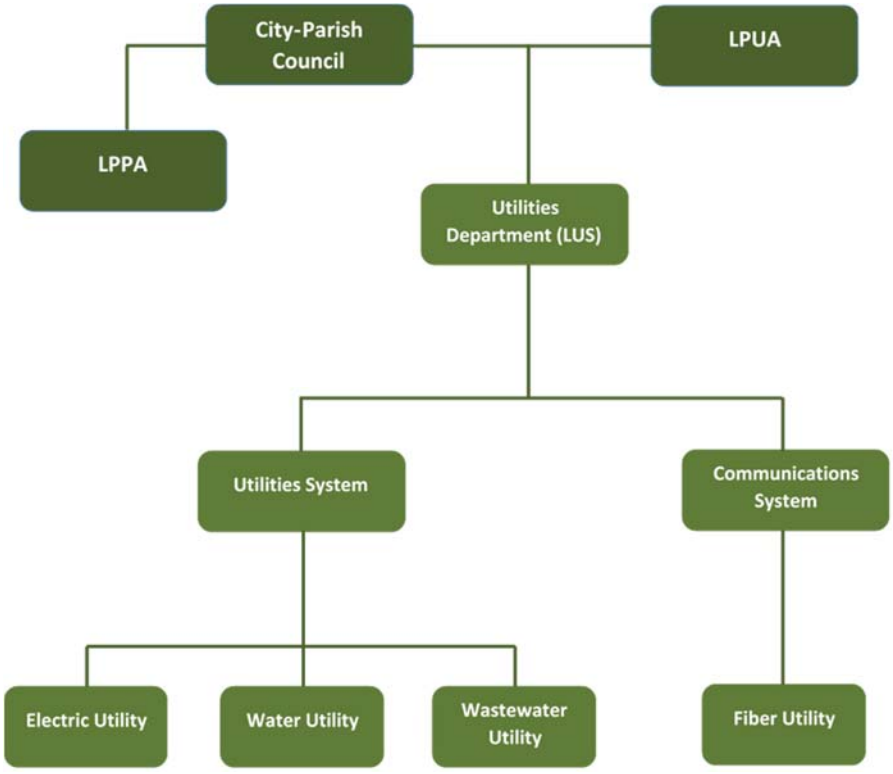


Figure 2-1: LCG and LUS Organizational Chart

## 2.3 Shared Services

LCG provides numerous services to various City-Parish departments including the Utilities Department. The costs of these services are shared by the various departments through an allocation process that is updated periodically. During FY 2015, the Utilities Department received services from LCG in the areas of accounting, payroll, budgeting, legal, printing, insurance, healthcare, information-technology (IT), human resources (HR), facility maintenance, vehicle maintenance, purchasing, and civil service activities.

## 2.4 Insurance

The Risk Management Division within the Department of Finance is the insurance company for LCG. The Risk Management Division's function is to protect City resources by minimizing risks and stabilizing insurance costs in an economical manner that preserves assets and protects against accidents or loss. The LCG Insurance Company provides coverage in the following

areas: Group Health/Life, Property & Casualty Claims, Safety/Loss Control, and City-Parish-Nurse Wellness.

The Group Health/Life Section is self-insured and self-administered. LCG has a flex funded plan for life insurance. LCG also has Flexible Spending Accounts and retirement preparation.

The Property & Casualty Claims section is self-insured and self-administered for all lines of coverage including auto and general liability, error and omissions, and property. Workers Compensation was self-insured and self-administered until September 1, 2015. Since September 1, 2015, workers compensation has been handled by a third party administrator.

The Safety/Loss Control section identifies potential risks to LCG employees and makes recommendations on eliminating or decreasing these risks. This section reviews all job-related injuries and vehicle accidents, facilitates safety meetings, conducts job site inspections, inspects LCG property, and oversees the Safety Award Program.

The City-Parish Nurse/Wellness section is responsible for the health and well-being of LCG employees including physicals, health screens, and vaccinations. This section also sees employees for job related injuries and oversees the Hazardous Materials and Lead Abatement medical surveillance program.

According to the LCG Risk and Insurance Manager, Ms. Suzanne Siner, LCG is in compliance with Governmental Accounting Standards Board 10, Reporting for Risk Financing and Related Issues for public entities. Table 2-2 shows five years of historical insurance related expenditures and recoveries from the Risk Management Fund for the Utilities System and Communications System. In the case that another party caused the accident or injury, the Recovery shown in Table 2-2 represents money received from the responsible party.

Table 2-2
Utilities System and Communications System
Insurance Transactions

| Transactions | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Utilities System | | | | | |
| Payments | $1,347,212 | $1,261,558 | $1,372,906 | $462,400 | $841,623 |
| Recovery | 623,378 | 490,557 | 193,031 | 233,032 | 501,349 |
| Net Transactions | $723,834 | $771,001 | $1,179,875 | $229,368 | $340,274 |
| Communications System | | | | | |
| Payments | NA | $36,810 | $25,712 | $2,217 | $2,615 |
| Recovery | NA | 5,910 | 0 | 1,555 | 0 |
| Net Transactions | NA | $30,900 | $25,712 | $662 | $2,615 |

Source: Suzanne Siner, LCG

## 2.5 Service Territory

The Utilities System serves electric, water, and wastewater customers primarily within the City limits. The Utilities System also serves certain electric, water, and wastewater customers

residing in the Parish but outside the City limits. Currently, LUS serves approximately 66,000 electric accounts, 55,000 water accounts, and 44,000 wastewater accounts.

LUS has entered into an agreement with the local rural electric cooperative, Southwest Louisiana Electric Membership Corporation (SLEMCO) defining an "area of influence" surrounding the City limits in which LUS may acquire SLEMCO customers and serve new electric customers. The agreement defines the numbers of customers that can be acquired and specifies the payment for acquired customers.

LUS serves retail water customers inside and outside the City limits while providing wholesale water for other Parish water distribution companies.

LUS serves wastewater customer inside and outside the City limits. In addition, LUS serves localized (e.g., residential subdivision) packaged wastewater treatment systems.

Communications System services are generally offered only within the City limits. At the end of FY 2015 the Communications System served approximately 34 wholesale accounts and over 16,000 retail accounts with CATV, telephone, or Internet data, or some combination of the three. The Communications System continues to show notable positive growth each year.

## 2.6 Management and Organization

The Utilities Director is appointed by the City-Parish Mayor-President, subject to approval by LPUA and the Consulting Engineer.

As a Department of LCG, LUS is managed and operated in accordance with conditions included in bond resolutions and covenants. Of critical importance is the "Flow of Funds" that specifies how operating margins resulting from LUS operations are to be treated. Margins from LUS operations are first required to meet debt service obligations, then a formulaic approach is applied to determine amounts for capital improvements and replacements funding, and the payment amount to the LCG General Fund as in lieu of taxes (ILOT). LPUA has the responsibility to determine rates, approve the LUS budget, and issue debt as approved by the City-Parish Mayor-President and Council.

### Utilities System Organizational Structure

The Utilities Director is responsible for the management and operations of LUS, consistent with the provision of services to LUS from other LCG departments mentioned above. The Charter gives specific direction to duties of the Utilities Director to oversee and manage the following:

- Production and distribution of electricity;
- Water production, treatment, and distribution;
- Sewerage collection, treatment, and disposal;
- Utility engineering services;
- Supervision of contract construction work for the Utilities System;
- Maintaining utility equipment in cooperation with the central garage;
- Reading of utility meters; and

- Other such activities as may be directed by the City-Parish Mayor-President as necessary or incidental to the operation of the Utilities System.

The current Utilities Director is Mr. Terry Huval. Mr. Huval graduated from the University of Louisiana at Lafayette with a B.S. in Electrical Engineering, and has served as Utilities Director since December of 1994. He is also a registered Professional Engineer in the states of Louisiana and Texas. Terry has also served as Past Chair of the American Public Power Association (APPA) and currently serves on the Louisiana Professional Engineering and Land Surveying Board.

The Utilities System has eight functional areas reporting to the Utilities Director. These functional areas include Support Services, Customer Service, Environmental Compliance, Power Production, Electric Operations, Water Operations, Wastewater Operations, and Engineering as shown below.

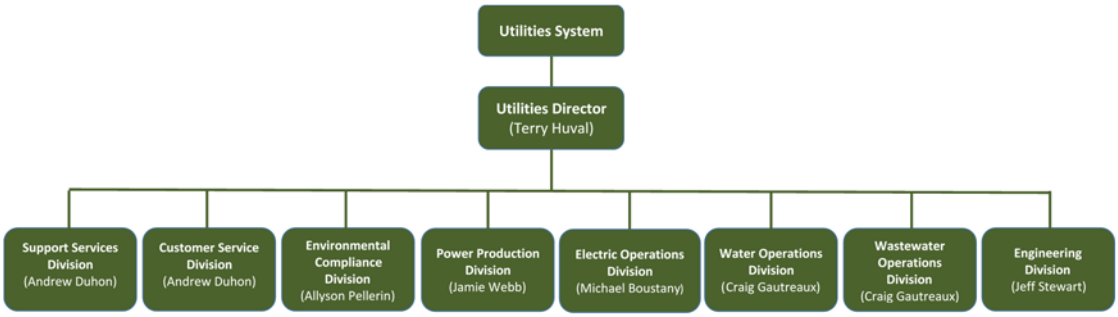


Figure 2-2: Utilities System Organizational Chart

Division managers reporting to the Utilities Director include*:*

- ***Andrew Duhon*** *– Customer & Support Services Manager*

  Mr. Duhon has 35 years of experience in the accounting field (10 years with various private and government entities and 25 years with the Utilities System). He received a Bachelor of Arts degree from the University of Louisiana-Lafayette and is an inactive certified public accountant. Mr. Duhon is responsible for various support and customer service functions within the Utilities Department including financial monitoring and planning, rates, revenue assurance, employee development, meter services, utility conservation, customer service, business support services, and administration support services.

- ***Allyson Pellerin*** *– Environmental Compliance Manager*

  Ms. Pellerin has been in the environmental field with the Utilities System for 23 years, serving as the Environmental Compliance Manager for the past 15 years. Her education includes a Bachelor of Science in general studies/natural sciences with major course study in microbiology from the University of Louisiana-Lafayette. Ms. Pellerin is responsible for ensuring environmental compliance of all LUS business operations associated with the electric transmission and distribution, water, and wastewater operations.

- ***Jamie Webb*** *– Power Production Manager*

  Ms. Webb has 27 years of experience in the electric utility industry. She received a Bachelor of Electrical Engineering degree from the University of Louisiana-Lafayette.

Ms. Webb is responsible for the day-to-day management and operation of the Doc Bonin, T. J. Labbé, and Hargis Hebert power plants.

- ***Michael Boustany*** – *Electric Operations Manager*

  Mr. Boustany has spent his 32-year career in the electric power industry with LUS, working in distribution, transmission, substation engineering, control systems, and communications. He is a registered Professional Engineer in Louisiana. Mr. Boustany is responsible for the day-to-day operation of the electric transmission and distribution system including Transmission and Distribution Operations, Field Operations, Energy Control, Substations and Communication, Facilities Management, and Warehouse.

- ***Craig Gautreaux*** – *Water and Wastewater Operations Manager*

  Mr. Gautreaux has 35 years of experience in the civil engineering and wastewater operations industry (5 years with University of Louisiana-Lafayette, 5 years with a private consulting firm, and 25 years with the Utilities System). He has a Masters Degree in civil engineering. Mr. Gautreaux is responsible for the day-to-day operation of the water and wastewater systems including Water Production, Water Distribution Operations, Wastewater Treatment, and Wastewater Collection.

- ***Jeff Stewart*** – *Engineering & Power Supply Manager*

  Mr. Stewart has over 13 years of experience in the public utility industry. He is a registered Professional Engineer in Louisiana. Mr. Stewart is responsible for the supervision all day-to-day engineering activities including Civil Engineering, Power Marketing, System Engineering and Substation Engineering, Network Engineering, and Environmental Compliance associated with power generation.

## Utilities System Staffing

For the Utilities System, overall staffing levels are at budgeted levels. However, the Utilities System has four vacant positions that are authorized and available to the Utilities Director. As indicated in the manning Table 2-3, is at or near budgeted levels. Power Production Division adopted staffing levels are four positions less than projected; however, this reduction is due to the continued reduction of operations of the Doc Bonin plant as described in Section 4. The adopted decrease in support services is associated with attrition in meter readers due to the Advanced Metering Infrastructure (AMI) system.

Table 2-3
Lafayette Consolidated Government
2015 Budget
Manning Table

| Utilities System | Personnel | | |
|---|---|---|---|
| | Current | Projected | Adopted |
| Director's Office | 2 | 2 | 2 |
| Support Services | 25 | 25 | 26 |
| Customer Service | 44 | 44 | 44 |
| Environmental Compliance | 17 | 17 | 17 |
| Power Production | 46 | 46 | 41 |
| Electric Operations | 94 | 94 | 94 |
| Water Operations | 68 | 68 | 68 |
| Wastewater Operations | 98 | 98 | 98 |
| Engineering | 77 | 77 | 77 |
| Total Utilities System | 471 | 471 | 467 |

Source: 2015 Budget

## Communications System Organization Structure

The Director of the Utilities is responsible for operation and management of the Communications System. Communications Systems employees and facilities are organized separately from other LUS utility operations; however, several services such as engineering, accounting, billing, and reporting functions are shared among the Communications and Utilities Systems. In accordance with the requirement to maintain separate Utilities System and Communications System funds, all costs associated with these services are accounted for separately.

The Communications System includes approximately 60 employees, reporting to 5 functional areas: Administration and Support, Operations, Warehouse, Business Support Services, and Engineering as shown below.

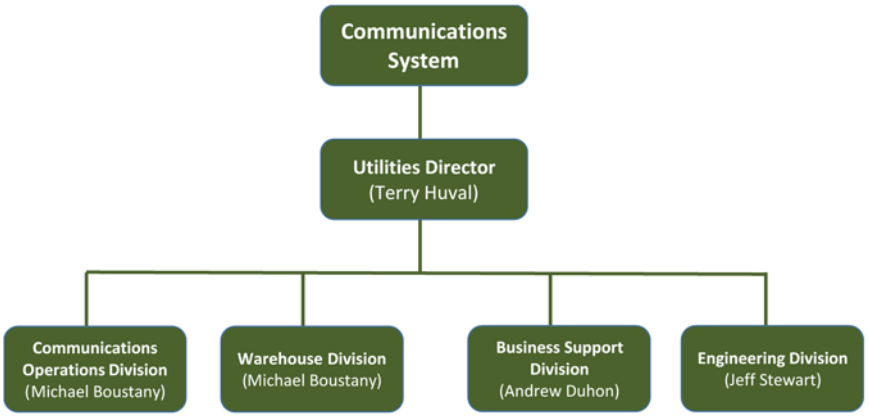


Figure 2-3: Communications System Organizational Chart

Division managers reporting to the Utilities Director include

- ***Michael Boustany*** – *Communications Operations and Warehouse Manager*

  Mr. Boustany is responsible for Communications System fiber and warehouse operations.

- ***Andrew Duhon*** – *Administration & Support and Business Support Manager*

  Mr. Duhon is responsible for various support and customer service functions within the Communications Department including financial monitoring and planning, rates, revenue assurance, sales and marketing, customer service, business support services, and administration support services.

- ***Jeff Stewart*** – *Engineering Manager*

  Mr. Stewart is responsible for Communications Engineering.

  - ***Teles Fremin*** – *Chief Communications Engineer*

    Ms. Fremin has over 14 years of experience in the public utility industry. She is a Professional Engineer and has her Bachelor of Science in Electrical Engineering from the University of Louisiana at Lafayette. Ms. Fremin is responsible for all day-to-day system component operation and reports to Mr. Stewart.

## Communications System Staffing

For the Communications System, current staffing levels are near budgeted levels with three vacant positions. As indicated in the manning table below, LUS is planning to increase staff by three positions. This increase is in recognition of a growing customer base and needs in Operations and Engineering.

Table 2-4
Lafayette Consolidated Government
2015 Budget
Manning Table by Communications System Department

| Communications System | Personnel | | |
|---|---|---|---|
| | Current | Projected | Adopted |
| Administration and Support | 3 | 3 | 3 |
| Operations | 33 | 33 | 34 |
| Warehouse | 3 | 3 | 3 |
| Business Support Services | 6 | 6 | 7 |
| Engineering | 16 | 16 | 17 |
| Total Communications System Department | 61 | 61 | 64 |

Source: 2015 Budget

## Pay Scale Review

The Utilities Department annually administers employee performance reviews and salary planning. Salary adjustments take effect on November 1st of each year. Compensation parameters are associated with the job titles and job descriptions, which specify skill and responsibility levels of various employees. Both Utilities System and Communications System's employees are compensated under the same job description and pay scale matrix. To benchmark the Utilities Department compensation against readily available industry data, NewGen reviews compensation parameters pertaining to the job descriptions listed below.

- Electric Utility
  - Chief Electrical Engineer
  - Electrical Engineer III
  - Lineman II
  - Power Plant Technician
- Water and Wastewater Utility
  - Water/Wastewater Operations Manager
  - Water Plant/Waste Plant Operator

Our review indicates that the competitiveness of LUS compensation for Electric System positions vary by position with some positions at market compensation levels and some below. For the two Water and Wastewater Utility positions reviewed, current compensation appears to be substantially below the market compensation values.

Our review did not take into consideration other benefits commonly included in a compensation comparison such as retirement plans, healthcare benefits, and paid vacation. Also, it is important to note that observed employee turnover has been low within the Utilities Department. The low turnover rate may illustrate qualitative and non-salary benefits associated with LUS positions that may hold a material value to many employees and/or applicants.

The Communications System Internet, telephone, and CATV service markets are competitive. National telecommunications firms such as Cox Communications, Dish, and AT&T/DirecTV each offer services within the City limits. As the Communications System continues to grow and mature, the marketability of key staff will increase accordingly, giving these employees alternative employment options with competitive service providers within the Parish. The Utilities Department compensation program must recognize this competitive reality with key Communications System positions and structure compensation packages that retain these key employees and expertise.

# SECTION 3
# UTILITIES SYSTEM

## 3.1 System Descriptions

The Utilities System operates Electric, Water, and Wastewater Systems. The Electric System operates power generation, transmission, distribution, and customer assets. The largest portion of LUS power generation capacity is provided by wholesale sales from LPPA. LPPA, thus LCG, is a 50% owner of Rodemacher Unit 2, which provides all of LPPA's wholesale power supply to LUS. The Water System includes raw water treatment plants, distribution system, and customer assets. The Wastewater System includes sewage treatment plants, collection piping, and customer assets.

### Customers

LUS serves customers primarily within the City limits. Each utility provides services to certain customers outside of the City limits and wholesale customers. As of the end of FY 2015, LUS served 65,847 electric customers, 55,109 water customers, and 43,550 wastewater customers, respectively. Combined LUS customer growth since 2011 averaged 1.0% per year. Table 3-1 includes the historical customers served by each utility.

Table 3-1
Utilities System
Historical Number of Customers

| Year | Electric | Water | Wastewater |
|---|---|---|---|
| 2011 | 63,531 | 52,749 | 41,928 |
| 2012 | 63,911 | 53,088 | 42,049 |
| 2013 | 64,496 | 53,926 | 42,586 |
| 2014 | 65,262 | 54,637 | 43,068 |
| 2015 | 65,847 | 55,109 | 43,550 |

Source: LUS Financial and Operating Statements, audited

### Historical Revenues

LUS generated a total of $229,298,195 of operating and other revenues in FY 2015 comprised of $182,044,163 from electric services, $18,284,817 from water services, and $28,969,216 from wastewater services. FY 2015 revenues were approximately 7.7% lower than 2014, with the electric revenues 9.8% lower. Water and wastewater revenues increased by 2.8% and 0.8%, respectively, from the previous year.

Table 3-2 includes historical revenues for each utility service.

Table 3-2
Utilities System
Historical Revenues

| Year | Electric Operating Revenues (1) | Water Operating Revenues (2) | Wastewater Operating Revenues (3) | Total Operating Revenue |
|---|---|---|---|---|
| 2011 | $190,901,871 | $18,662,652 | $29,878,197 | $239,442,720 |
| 2012 | $174,890,121 | $17,803,423 | $29,313,577 | $222,007,121 |
| 2013 | $188,071,217 | $17,559,754 | $28,893,980 | $234,524,951 |
| 2014 | $201,891,247 | $17,783,466 | $28,735,575 | $248,410,288 |
| 2015 | $182,044,163 | $18,284,817 | $28,969,216 | $229,298,195 |

Source: LUS Financial and Operating Statements, audited
(1) Electric Total Operating Revenues include revenue from base rates, fuel adjustments charges, interest income, and other miscellaneous revenues.
(2) Water Total Operating Revenues include revenue from rates, interest income, and other miscellaneous revenues.
(3) Wastewater Total Operating Revenues include revenue from rates, interest income, and other miscellaneous revenues.

## Historical Utilities Debt Service Coverage Ratio

Utilities System FY 2015 debt service includes the Series 2010 Bonds and Series 2012 Bonds. The debt service increased in 2013 as a result of the Series 2004 principal payments increasing and the issuance of the Series 2012 Bonds. Table 3-3 shows historical debt service and the associated debt service coverage ratio (DSCR). The DSCR exceeds the minimum requirement of 1.0.

Table 3-3
Utilities System
Historical Debt Service Coverage

| Year | Operating Revenues (1) | Operating Expenses (2) | Balance Available for Debt Service | Debt Service (3) | Debt Service Coverage Ratio |
|---|---|---|---|---|---|
| 2011 | $239,442,720 | $180,840,724 | $58,601,996 | $14,245,228 | 4.1 |
| 2012 | $222,007,121 | $166,165,173 | $55,841,948 | $15,311,868 | 3.6 |
| 2013 | $234,524,951 | $168,415,411 | $66,109,540 | $22,917,286 | 2.9 |
| 2014 | $248,410,288 | $177,466,560 | $70,943,728 | $23,333,915 | 3.0 |
| 2015 | $229,298,195 | $160,672,843 | $68,625,352 | $22,924,293 | 3.0 |

Source: LUS Financial and Operating Statements, audited
(1) Includes interest income and other miscellaneous income.
(2) O&M and other expenses include customer service, and administrative and general costs. Operating expenses do not include ILOT, normal capital, special equipment, and other miscellaneous expenses.
(3) Debt service includes the Series 2004 Bonds, Series 2010 Bonds, and Series 2012 Bonds.

## 3.2 Rate Adjustments

LPUA regulates the rates and charges for the Utilities System. Current rates are described in the LCG Code of Ordinances, Article III – Rates and Charges, Division 1 – Generally. The Electric System rate structure includes base rates (customer charge and commodity charge) and a monthly Fuel Charge (FC) (Schedule FC). The Utilities Director regulates the FC on a month-to-month basis until the Utilities Director determines that eligible costs warrant an adjustment to the FC rate. The Utilities Director may adjust the FC rate monthly to ensure that the charge adequately recovers eligible costs as closely as possible. The FC includes the following items: Midcontinent Independent System Operator (MISO) market purchases less market sales, a portion of purchased power related transmission costs, LPPA fuel and fuel handling costs, reagent costs, Mercury and Air Toxic Standard (MATS) O&M costs, debt service associated with the rail cars, debt service associated with the MATS project, LUS fuel costs, hydro purchased power costs, capacity contract costs, and The Energy Authority (TEA) costs.

Table 3-4 below provides the historical rate increases approved by the LPUA. LUS conducted a rate study in 2009, which showed that the rates for the Electric, Water, and Wastewater Systems were insufficiently recovering all costs. As a result, rates were increased in 2010 and 2011. The Utilities System has not adjusted base rates since FY 2011, as these adjusted rates were anticipated to adequately recover LUS costs for a period of five additional years. The rates were designed to collect sufficient revenues to meet all operating costs, debt service coverage requirements, ILOT requirements, maintain reserves, and fund capital expenses.

LUS is currently performing a full cost of service and rate study for each of the electric, water, and wastewater utilities. The study is expected to be completed in July 2016 with rates effective November 1, 2016.

Table 3-4
Utilities System
Rate Adjustments

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Electric Retail | 10% | 0% | 0% | 0% | 0% |
| Water Retail | 9% | 0% | 0% | 0% | 0% |
| Wastewater Retail | 18% | 0% | 0% | 0% | 0% |

## 3.3 Operating and Capital Budget

As explained in Section 2.2, the Utilities System prepares and submits their proposed operating and capital budget to LCG. The operating portion of the budget contains projections of revenues and expenses for the upcoming FY.

The CIP, as contained in the 2015 Budget, is shown in Table 3-5 and totals $102.73 million over the five-year period. The Electric System five-year CIP totals $41.8 million.

The Water System five-year CIP totals $14.04 million of which the largest capital projects include the installation of pressure filters and building rehabilitation at water treatment facilities. These projects represent approximately $3.95 million of the five-year total.

The Wastewater System five-year CIP is a significant amount of the Utilities System CIP and represents 41% of the $102.73 million total. The Wastewater System five-year CIP totals $46.9 million. The largest capital projects are the South Sewage Treatment Plant (SSTP) expansion, SSTP odor control, and sludge handling improvements, which represent approximately $22.6 million of the Wastewater total CIP.

The five-year CIP includes deferred projects totaling $3.1 million of Electric System, $0.5 million of Water System, and $5.38 million of Wastewater System Projects. The total deferred project amount of approximately $9 million of a total five-year $112 million CIP is a result of near term available cash projections developed by LCG during the most recent budgeting process. Historically, the Utilities System CIP has been sufficient to sustain and improve the integrity and reliability of the system. The current CIP reflects certain deferred projects, which are not expected to have a material impact on the sufficiency of the CIP to maintain system reliability.

Table 3-5
Utilities System
Projected CIP (1)

| | 2015 | 2016 | 2017 | 2018 | 2019 | Total |
|---|---|---|---|---|---|---|
| Electric System | | | | | | |
| Acquisitions | $0 | $0 | $3,000,000 | $0 | $0 | $3,000,000 |
| Production | 1,460,000 | 610,000 | 310,000 | 10,000 | 10,000 | 2,400,000 |
| Distribution | 1,110,000 | 435,000 | 905,000 | 210,000 | 110,000 | 2,770,000 |
| Substation | 2,990,000 | 460,000 | 2,460,000 | 9,810,000 | 7,360,000 | 23,080,000 |
| Transmission | 1,960,000 | 485,000 | 1,995,000 | 1,010,000 | 3,070,000 | 8,520,000 |
| General Plant | 610,000 | 160,000 | 935,000 | 310,000 | 10,000 | 2,025,000 |
| Total Electric | $8,130,000 | $2,150,000 | $9,605,000 | $11,350,000 | $10,560,000 | $41,795,000 |
| Water System | | | | | | |
| Production | $260,000 | $60,000 | $1,625,000 | $4,710,000 | $60,000 | $6,715,000 |
| Distribution | 1,525,000 | 2,405,000 | 1,750,000 | 1,385,000 | 260,000 | 7,325,000 |
| Total Water | $1,785,000 | $2,465,000 | $3,375,000 | $6,095,000 | $320,000 | $14,040,000 |
| Wastewater System | | | | | | |
| Treatment | $1,810,000 | $910,000 | $19,685,000 | $7,635,000 | $1,710,000 | $31,750,000 |
| Collection | 2,745,000 | 4,440,000 | 3,040,000 | 1,450,000 | 3,470,000 | 15,145,000 |
| Total Wastewater | $4,555,000 | $5,350,000 | $22,725,000 | $9,085,000 | $5,180,000 | $46,895,000 |
| Total Capital Program | $14,470,000 | $9,965,000 | $35,705,000 | $26,530,000 | $16,060,000 | $102,730,000 |

Source: 2015 Budget
(1) Amounts are in 2015 dollars

## Utilities System's Budget to Actual Performance

In general, the Utilities System's actual 2015 financial performance aligned with the 2015 Budget with the major variances in variable operating accounts, which are managed, with the FC. Table 3-6 summarizes the key Utilities System budget and actual accounts for FY 2015.

Table 3-6
Utilities System
Comparison of Budget to Actual Results – FY 2015

| | Budget | Actual | Difference | Difference |
|---|---|---|---|---|
| Operating Revenues | | | | |
| Electric Retail Sales | $89,975,032 | $92,626,681 | $2,651,649 | 2.9% |
| Electric Retail Fuel Adj. | 94,528,157 | 84,910,901 | (9,617,256) | (10.2%) |
| Electric Wholesale Sales | 0 | 179,301 | 179,301 | NA |
| Water Sales | 18,477,454 | 18,028,081 | (449,373) | (2.4%) |
| Wastewater Sales | 29,627,799 | 28,791,165 | (836,634) | (2.8%) |
| Interest Income | 500,000 | 513,479 | 13,479 | 2.7% |
| Miscellaneous Other | 4,500,000 | 4,913,393 | 413,393 | 9.2% |
| Billing for Services | 450,000 | 731,781 | 281,781 | 62.6% |
| Total Operating Revenue | $238,058,442 | $230,694,781 | ($7,363,661) | (3.1%) |
| Operating Expenses | | | | |
| Purchased Power LPPA | $71,322,637 | $51,723,772 | ($19,598,865) | (27.5%) |
| Purchased Power Other | 0 | 3,493,850 | 3,493,850 | NA |
| Purchased Power MISO | 101,695,038 | 62,181,834 | (39,513,204) | (38.9%) |
| Purchased Power MISO Sales | (73,309,961) | (29,667,313) | 43,642,648 | (59.5%) |
| Production Fuel | 2,493,447 | 984,565 | (1,508,882) | (60.5%) |
| Other O&M | 80,601,272 | 73,342,813 | (7,258,459) | (9.0%) |
| ILOT | 22,250,000 | 22,847,494 | 597,494 | 2.7% |
| Total Operating Expenses | $205,052,433 | $184,907,016 | ($20,145,417) | (9.8%) |
| Other Income (Expenses) | | | | |
| Normal Capital | ($5,896,500) | ($8,367,469) | ($2,470,969) | 41.9% |
| Special Equipment | (2,212,040) | (1,644,649) | 567,391 | (25.7%) |
| Principal from Internal Loans | 75,000 | 0 | (75,000) | (100.0%) |
| Interest from Internal Loans | 1,111,927 | 903,440 | (208,487) | (18.8%) |
| Grants | 961,667 | 1,095,363 | 133,696 | 13.9% |
| Interest on Long-Term Debt (1) | (11,424,293) | (10,623,334) | 800,960 | (7.0%) |
| Principal on Long-Term Debt | (11,500,000) | (11,500,000) | 0 | 0.0% |
| Total Other | ($28,884,239) | ($30,136,648) | ($1,252,409) | 4.3% |
| Cash Available for Capital | $4,121,770 | $15,651,117 | $11,529,347 | 279.7% |

Source: LCG
(1) A portion of the long-term interest is capitalized in relation to the 2010 Series Bonds.

The Utilities System FY 2015 actual revenues and expenses were lower than budgeted. The Utilities System collected $231 million in revenues compared to the budgeted $238 million. This difference in revenues is primarily attributable to lower FC revenue collection. Billing for services represent reimbursements for work orders. In 2015, LCG budgets $450,000 as a placeholder as this expense is not under their control and is difficult to predict.

The purchased power and fuel expenses reflect the lower costs related to energy expenses passed through the FC. LUS is somewhat insulated and protected from the often changing and volatile fuel and purchased power expenses, as these expenses are passed through to customers on a periodic and 'one-to-one' basis. Other O&M expenses were lower than budget due to lower generator and equipment maintenance, contract labor expenses, personnel salary expenses as well as multiple other adjustments. Other Income (Expenses) were higher than budget primarily due to an increase in normal capital.

## 3.4 Utilities System Shared Services

Utilities System shared services are provided by the Customer Service & Support Service divisions. Among other things, these divisions offer financial planning, rates, meter services, customer service, and administration and business support services. The cost of these services are assigned and shared across the Electric, Water, and Wastewater Systems in the establishment of rates and charges.

The Utilities System has two customer service centers, one of which is located at City Hall. A new customer service center is being built on the north side of the City. The new customer service center will have multiple drive through lanes to provide quick and easy access. Payment of all utility bills will be accepted at the new location.

Customers may pay their bill by mail, phone, online, drop box, or in person. LUS also accepts automatic bank or credit card payments. Additionally, LUS offers budget billing in which customers may make the same monthly payments with a true up at the end of the 12-month period.

Depending on the services each customer receives, their bill may include the following services: electric, water, wastewater, recycling, and/or garbage collection. In addition to their utilities billing, LUS also performs the City's recycling and garbage collection billing and is reimbursed for the costs.

To make the customer service function more efficient, customer service representatives and cashiers are cross-trained to handle both the Utilities System and Communications System customer service needs. As of February 2016, the customer service staff is sufficient with very little turnover. Generally, positions become vacant as existing employees are promoted.

## 3.5 In Lieu of Tax

The Utilities System ILOT calculation provides for an ILOT payment of up to 12% of non-fuel revenue. The non-fuel revenues are the gross receipts less fuel costs and other miscellaneous items. To be eligible to make the ILOT payment, the Utilities System must first pass an ILOT Test. The purpose of the test is to ensure that the Utilities System has sufficient cash to meet capital obligations. If cash available after debt service, less 7.5% of the non-fuel revenues is greater than 12% of the non-fuel revenues, the Utilities System passes the test and makes the

ILOT payment to the City. Should the Utilities System fail the ILOT test, the Utilities System pays an amount equal to the amount of cash available after debt service, less 7.5% of the non-fuel revenues.

ILOT payments by municipally owned utilities are commonly used by local governments across the country to collect taxes and/or franchise fees that would be collected if an investor-owned utility were operating the utility franchises within the city. APPA publishes the *Payments and Contributions by Public Power Distribution Systems to State and Local Governments* biannually. The most recently available report was published in 2014 utilizing 2012 data from 210 public power systems across the country. The report states that the median ILOT paid to local governments, as a percent of electric operating revenues, was 5.5%. For utilities in the West South Central region, as defined by APPA and including LUS, the median ILOT as a percentage of electric operating revenues was 6.5%. LUS pays, on average, 9.2% of the operating revenues to LCG, which is higher than the national and regional ILOT reported by APPA. Table 3-7 summarizes LUS' historical ILOT payments to LCG.

Table 3-7
Utilities System
Historical ILOT Payments

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| ILOT Paid | $19,199,649 | $21,596,096 | $22,131,617 | $22,073,833 | $22,847,494 |
| Total Operating Revenues | $239,442,720 | $222,007,121 | $234,524,951 | $248,410,288 | $229,298,195 |
| ILOT as a % of Revenues | 8.0% | 9.7% | 9.4% | 8.9% | 10.0% |

Source: LUS Financial and Operating Statements, audited

## 3.6 Accounting and Financial Statements

The accounting responsibilities for the Utilities System is managed and performed by LCG, including the selection of accounting software and related financial reporting. LCG prepares monthly Financial and Operating Statements for the Utilities System. These monthly statements include a balance sheet, income statement, and detailed revenues and expenses by utility. As part of LCG, the Utilities System follows the same FY with an ending date of October 31st. The audit for each FY is generally not available until April of the following year.

### Balance Sheet

A historical balance sheet summary is shown below in Table 3-8. LUS' Total Assets have increased approximately $29 million over the last five years primarily due to an increase in plant. Notes Receivable in 2013 reflects a prior period adjustment related to the Communications System imputed tax payment. The Deferred Debits increased significantly in 2013 as a result of the Series 2012 Bonds issue. The Series 2012 Refunding Bonds included a large premium, which was amortized in the Deferred Debits. The Deferred Debits increased in 2015 primarily due to GASB 68, which requires state and local government to record net pension liability.

The long-term debt has decreased over the five-year period by approximately $50 million. In 2012, the 2004 Bonds were refunded, resulting in lower long-term debt, as shown on the 2013 balance sheet. Corresponding to the refunding bond premium, the long-term liabilities increased in 2013 as well. In 2015, the long-term liabilities increased by $25 million due to GASB 68 which requires state and local governments to record net pension liability. Overall, the Retained Earnings has increased by $38 million over the last five years.

Table 3-8
Utilities System
Comparative Balance Sheet

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Total Assets | | | | | |
| Utility Plant (1) | $523,031,003 | $555,261,378 | $570,516,066 | $573,113,520 | $573,057,425 |
| Bond and Special Funds | 171,137,559 | 139,512,264 | 127,452,475 | 130,777,798 | 136,488,144 |
| Current Assets | 8,807,061 | 8,576,845 | 8,678,870 | 9,711,223 | 9,161,599 |
| Accounts Receivable | 28,381,036 | 29,803,271 | 31,604,074 | 28,913,398 | 24,582,490 |
| Reserve for Uncollectible Accounts | (1,027,796) | (1,149,296) | (1,282,193) | (1,184,446) | (1,023,757) |
| Notes Receivable | 29,521,491 | 31,431,044 | 27,848,160 | 27,798,160 | 27,723,160 |
| Inventories | 7,619,240 | 7,525,614 | 7,634,029 | 7,959,322 | 7,864,446 |
| Deferred Debits | 2,998,510 | 3,577,670 | 16,648,414 | 13,478,290 | 21,301,983 |
| Total Assets | $770,468,102 | $774,538,789 | $789,099,896 | $790,567,265 | $799,155,490 |
| Total Liabilities & Equity | | | | | |
| Long Term Debt | $276,510,000 | $274,935,000 | $249,220,000 | $237,865,000 | $226,365,000 |
| Current Liabilities | 27,869,816 | 23,506,566 | 26,345,595 | 25,708,228 | 24,471,474 |
| Long Term Liabilities | 7,552,699 | 7,049,228 | 31,528,007 | 28,498,808 | 51,363,714 |
| Retained Earnings | 458,535,588 | 469,047,995 | 482,006,295 | 498,495,230 | 496,955,303 |
| Total Liabilities & Fund Equity | $770,468,102 | $774,538,789 | $789,099,896 | $790,567,265 | $799,155,491 |

Source: LUS Financial and Operating Statements, audited
(1) Utility Plant does not include electric acquisition gross plant or accumulated depreciation.

## Fund Balances

Article V of the Bond Ordinances dictates LUS' funds and accounts and defines the 'Flow of Funds.' Article V creates the following funds: Receipts Fund, Operating Fund, Sinking Fund, Reserve Fund, and Capital Additions Fund. In addition, funds may be created as new bonds are issued. Table 3-9 below summarized the beginning balance, receipts, disbursements, and ending balances of the required funds. As seen in Table 3-9, the Total Fund Balances increased by $4.8 million or 3.5% in 2015. Figure 3-1 illustrates the LUS Flow of Funds.

Table 3-9
Utilities System
Fund Balances as of October 31, 2015 ($1,000)

| | Receipts Fund | Operating Fund | Bond & Interest Fund | Capital Additions Fund | Bond Reserve Fund | 2010 Construction Fund | Total |
|---|---|---|---|---|---|---|---|
| Beginning Balance | $1,686 | $8,013 | $0 | $91,769 | $23,640 | $7,394 | $132,502 |
| Receipts | 246,305 | 189,420 | 22,924 | 50,421 | 0 | 1,606 | 510,676 |
| Disbursements | 246,926 | 189,352 | 22,924 | 41,088 | 0 | 5,601 | 505,891 |
| Ending Balance | $1,065 | $8,081 | $0 | $101,102 | $23,640 | $3,399 | $137,287 |

Source: LCG

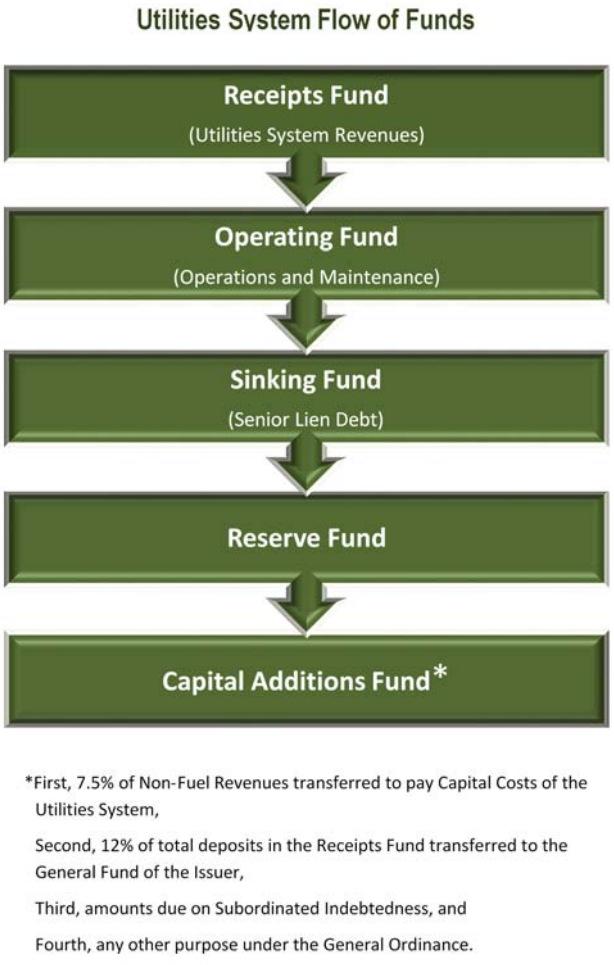


Figure 3-1: LUS Flow of Funds

## Income Statement

Table 3-10 shows the comparative income statement. Since 2011, the revenues and expenses have varied primarily due to the varying fuel and purchased power costs. The Net Operating Revenues have generally increased over the last five years. Other Income has varied over the years as fund balances and interest rates changed. The Net Income remained positive over the five-year period.

Table 3-10
Utilities System
Comparative Income Statement

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Operating Revenues | $237,552,264 | $220,734,370 | $232,281,011 | $247,097,098 | $228,021,885 |
| Operating Expenses | 180,840,724 | 166,165,173 | 168,415,411 | 177,466,560 | 160,672,843 |
| Net Operating Revenues | $56,711,540 | $54,569,197 | $63,865,600 | $69,630,538 | $67,349,042 |
| Depreciation | $17,716,330 | $19,376,753 | $20,978,328 | $22,130,030 | $22,881,380 |
| Net Operating Revenues after Depreciation | $38,995,210 | $35,192,444 | $42,887,272 | $47,500,508 | $44,467,661 |
| Other Income | | | | | |
| Interest Income | $1,890,648 | $1,273,167 | $2,243,940 | $1,313,230 | $1,426,311 |
| Unrealized Gain/Loss on Inv. | 0 | 0 | 0 | 30,750 | 91,526 |
| Amortization of Debt Premium | 290,521 | 503,471 | 2,608,147 | 3,029,199 | 3,028,445 |
| Water Tapping Fees | 47,900 | 86,100 | 105,100 | 104,100 | 107,420 |
| Communications Lease Income | 0 | 0 | 0 | 97,073 | 36,952 |
| Contributions in Aid of Construction | (8,361) | 0 | 7,135 | 0 | 0 |
| Misc. Non-Operating Revenue | 1,843,038 | 8,869,047 | 5,408,764 | 2,877,693 | 3,414,729 |
| Total Other Income | $4,063,747 | $10,731,784 | $10,373,086 | $7,452,045 | $8,105,384 |
| Other Expenses | | | | | |
| Loss on Disposition of Property | $15,621 | $0 | $0 | $250,980 | $313,714 |
| Interest Expense | 11,227,182 | 11,042,341 | 9,438,459 | 9,180,021 | 10,623,334 |
| Amortizations | 1,940,080 | 1,957,407 | 3,030,662 | 2,916,327 | 2,675,715 |
| Interest on Customer Deposits (1) | 0 | 0 | 13,831 | 11,746 | 3,206 |
| Tax Collections/Non-Operating | 154,016 | 308,182 | 322,829 | 0 | 0 |
| Misc. Non-Operating Expense | 449,800 | 788,059 | 1,830,478 | 1,921,605 | 1,383,331 |
| Total Other Expenses | $13,786,699 | $14,095,989 | $14,636,258 | $14,280,680 | $14,999,299 |
| Net Income Before ILOT | $29,272,258 | $31,828,239 | $38,624,100 | $40,671,873 | $37,573,746 |
| ILOT | 19,199,649 | 21,596,096 | 22,131,617 | 22,073,833 | 22,847,494 |
| Net Income | $10,072,609 | $10,232,143 | $16,492,483 | $18,598,040 | $14,726,252 |

Source: LUS Financial and Operating Statements, audited
(1) A portion of the long-term interest is capitalized in relation to the 2010 Series Bonds.

## Cash Flow

Cash flow is an important indicator of municipal utility financial health. Municipal utilities typically operate on a Cash Basis, which excludes non-cash expenses, such as depreciation, but includes other cash expenses, such as principal payments associated with debt service and capital improvements. Since municipally owned utilities are primarily concerned with accumulating sufficient cash balances to meet operating expenses, debt service, capital improvements, and other obligations, the financial results are presented on a Cash Basis.

Table 3-11 shows the change in cash due to operations and ILOT for the Utilities System over the period 2011–2015. These numbers indicate that current Utilities System rates are adequate in meeting operating expenses, debt service, normal capital and special equipment, and ILOT payment obligations of the Utilities System. The remaining five-year cumulative net margin of approximately $71 million was available for capital additions or reserves.

Table 3-11
Utilities System
Comparative Cash Flow

| | 2011 | 2012 | 2013 | 2014 | 2015 | Five-Year Total |
|---|---|---|---|---|---|---|
| Operating Revenues | $237,552,264 | $220,734,370 | $232,281,011 | $247,097,098 | $228,021,885 | $1,165,686,627 |
| Operating Expenses | 180,840,724 | 166,165,173 | 168,415,411 | 177,466,560 | 160,672,843 | 853,560,711 |
| Net Operating Revenues | $56,711,540 | $54,569,197 | $63,865,600 | $69,630,538 | $67,349,042 | $312,125,916 |
| Debt Service | $14,245,228 | $15,311,868 | $22,917,286 | $23,333,915 | $22,924,293 | $98,732,589 |
| Balance After Debt Service | $42,466,312 | $39,257,329 | $40,948,314 | $46,296,623 | $44,424,749 | $213,393,327 |
| Less Normal Capital & Special Equipment | $4,893,471 | $2,384,671 | $8,447,681 | $8,512,201 | $10,001,798 | $34,239,822 |
| Less ILOT | 19,199,649 | 21,596,096 | 22,131,617 | 22,073,833 | 22,847,494 | 107,848,689 |
| Change in Cash due to Operations & ILOT | $18,373,001 | $15,276,339 | $10,369,431 | $15,710,549 | $11,575,457 | $71,304,816 |

Source: LUS Financial and Operating Statements, audited

Descriptions of the Electric, Water, and Wastewater Systems are included in the following Sections. Each Section includes details regarding customer sales or consumption, facilities, operations, regulatory impacts, and competitive benchmarking of services.

# SECTION 4
# ELECTRIC SYSTEM

The City owns and operates an Electric System providing reliable power to more than 65,000 customers. LUS operates power generation, transmission, substation, distribution, and customer facilities within and outside its service territory. The Electric System retail sales for 2015 were 2,050 megawatt-hours (MWh), 1.2% higher than 2014. Table 4-1 shows the historical Electric System sales.

Table 4-1
Electric System
Historical Retail and Wholesale Sales

| | Retail Sales (MWh) | Wholesale Sales (MWh) (1) | Total Sales (MWh) |
|---|---|---|---|
| 2011 | 2,024,762 | 230,531 | 2,255,293 |
| 2012 | 1,970,448 | 132,272 | 2,102,720 |
| 2013 | 1,979,136 | 37,151 | 2,016,287 |
| 2014 | 2,027,115 | 1,014,675 | 3,041,789 |
| 2015 | 2,050,434 | 1,100,385 | 3,150,820 |

Source: LUS Financial and Operating Statements, audited
(1) LUS makes wholesale sales with the LUS owned generating units and with LUS' contracted hydropower. Wholesale sales lower system purchases from MISO.

Since LUS became a full market participant as a Local Balancing Authority in 2013, TEA has been designated to handle day-ahead schedules. MISO membership has required LUS to modify the methods and processes the utility uses to purchase and sell power. Joining MISO contributed to the significant changes in Wholesale Sales from 2013 to 2015 as shown in Table 4-1.

As shown in Table 4-2, retail sales by customer class as of October 31, 2015 indicate that residential and commercial customers represent approximately 91% of Electric System sales. LUS commercial customer base is diverse, as no single customer represents more than 3% of LUS retail revenues.

Table 4-2
Electric System
Customer Class Statistics as of October 31, 2015

| | Number of Customers | Percent of Total | Sales (kWh) | Percent of Total |
|---|---|---|---|---|
| Residential | 53,421 | 81.1% | 823,909,988 | 40.2% |
| Residential - Outside the City | 924 | 1.4% | 16,809,015 | 0.8% |
| Commercial with Demand - Small | 7,690 | 11.7% | 202,344,146 | 9.9% |
| Commercial Small and Large - Outside of City | 164 | 0.2% | 13,264,858 | 0.6% |
| Commercial with Demand - Large | 1,238 | 1.9% | 814,460,823 | 39.7% |
| Private Security Lighting | 1,744 | 2.6% | 6,918,221 | 0.3% |
| Street Lighting | 1 | 0.0% | 14,557,600 | 0.7% |
| Schools and Churches | 418 | 0.6% | 56,217,670 | 2.7% |
| Schools and Churches - Outside the City | 1 | 0.0% | 728,000 | 0.0% |
| University of Louisiana - Lafayette | 74 | 0.1% | 66,722,987 | 3.3% |
| Interdepartmental | 171 | 0.3% | 34,501,081 | 1.7% |
| Total Meters In Service | 65,847 | 100% | 2,050,434,389 | 100% |

Source: LUS October 2015 Financial and Operating Statements

## 4.1 Production and Power Supply

The Electric System peak demand occurs in the summer and was 486 megawatts (MW) in 2015. LUS operates three power generation plants, while LPPA represents LUS' interest in a fourth power generating unit, Rodemacher Unit 2.

LUS generates electricity with three natural gas-fired generating plants located within the Parish, and the LPPA owned Rodemacher Unit 2 coal-fired generating plant located approximately 100 miles northwest of Lafayette near Boyce, Louisiana. LPPA holds a 50% ownership in Rodemacher Unit 2, which is operated by Cleco Corporation (Cleco).

LUS is fully integrated into the MISO market through which it purchases additional electricity requirements and sells excess generation. LUS is party to a Resource Management Agreement (RMA) with TEA to market LUS' excess electric energy and capacity and to purchase power to meet the requirements of its customers, as required.

The following table and figure show the contribution of each of the generation stations to the Electric System over the past five years.

Table 4-3
Electric System
Electric Generation by Plant (kWh)

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Doc Bonin | 525,506 | 484,016 | 139,796 | 0 | 0 |
| T. J. Labbé | 177,384 | 41,139 | 63,519 | 13,417 | 6,696 |
| Hargis Hebert | 153,259 | 27,787 | 47,016 | 12,540 | 14,120 |
| Rodemacher Unit 2(1) | 1,304,363 | 1,251,331 | 1,299,249 | 1,185,928 | 1,100,385 |
| Total Generation | 2,160,512 | 1,804,273 | 1,549,580 | 1,211,885 | 1,121,201 |

Source: LUS Financial and Operating Statements, audited; LPPA Manager's Monthly Report, audited
(1) LPPA Portion

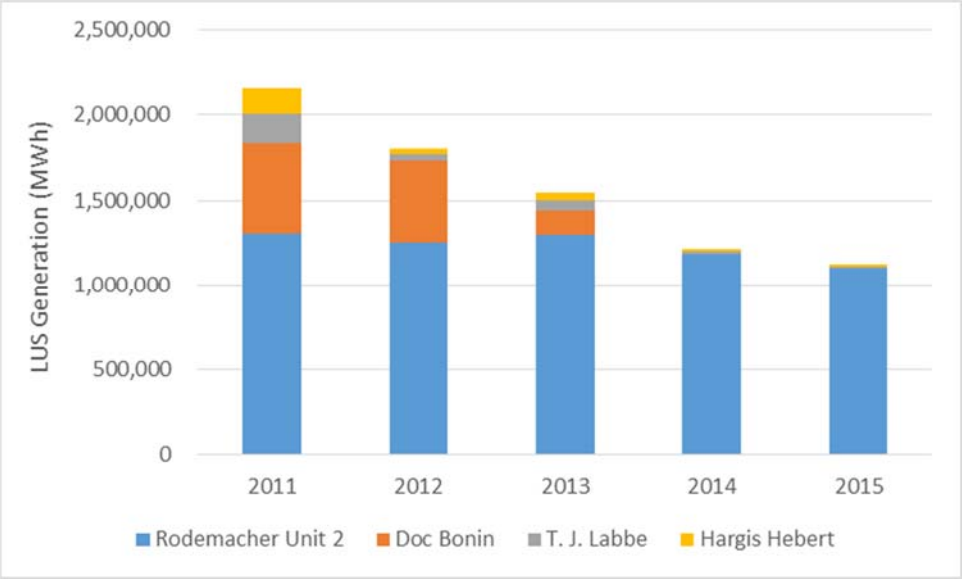


Figure 4-1: Electric Generation by Plant

As LUS joined MISO at the end of 2013, it modified the methods and processes by which the Electric System generates, purchases, and sells power. In collaboration with TEA, LUS purchases power to meet load from the MISO market on an hourly basis. Simultaneously, LUS generation assets are economically dispatched into the market creating wholesale power sales for LUS. As seen in Figure 4-1, the generation at most LUS plants has been impacted by joining the MISO market as LUS now has access to lower cost market power. Doc Bonin operations have also been eliminated due to its current status in economic suspension. Due to this access to lower cost power, elimination of the historical transmission congestion issues, and the status of Doc Bonin, the utilization of the Doc Bonin, Hargis Hebert, and T.J. Labbé peaking plants has decreased significantly since 2013. This access to lower cost power and economic benefit is realized by LUS customers through lower fuel clause charges and rates.

Table 4-4 shows the LUS electric generating capacity by plant. All plants with the exception of Rodemacher Unit 2 are directly owned and operated by LCG. LPPA owns a 50% share of Rodemacher Unit 2, which is operated by Cleco.

Table 4-4
Electric System
LUS Generating Capacity by Plant

| Total Unit | Gross Capacity (MW) | Available Capacity (MW) | Fuel |
|---|---|---|---|
| Doc Bonin Plant Total (1) | 285 | 0 | Gas/Oil |
| T. J. Labbé Plant Total | 100 | 100 | Gas |
| Hargis-Hébert Plant Total | 100 | 100 | Gas |
| Rodemacher Unit 2 (LPPA) | 261 | 261 | Coal |
| Total of All Units | 746 | 461 | |

(1) All of the Doc Bonin Plant units are unavailable and not offered into the MISO market through June 29, 2017 under the terms of a Suspended Operations Agreement, which began on June 29, 2014. These units are economically suspended and could be available for emergency power generation after approximately two months of preparation.

## Doc Bonin Plant

The Doc Bonin Plant consists of three natural gas-fired generating units. Each unit includes a conventional utility boiler, steam turbine generator, and the necessary auxiliary equipment. Heat rejection for each unit is provided by a dedicated mechanical draft cooling tower. The Water System provides makeup water for the cooling tower and supplies the plant's water treatment system for boiler water.

Unit 1 began commercial operation in 1964 and has a nameplate capacity of 54 MW. The Unit 1 boiler is a conventional utility boiler, manufactured by Babcock & Wilcox, capable of providing steam at 1,250 pound per square inch (psi) to the Westinghouse non-reheat, tandem compound bottom exhaust, steam turbine. Unit 1 is interconnected to the LUS transmission system at 69 kilovolts (kV).

Unit 2 began commercial operation in 1970 and has a nameplate capacity of 100 MW. The Unit 2 boiler is a conventional utility boiler, manufactured by Combustion Engineering, capable of providing steam at 1,800 psi to the General Electric tandem compound, bottom exhaust, steam turbine. Unit 2 is interconnected to the LUS transmission system at 69 kV.

Unit 3 began commercial operation in 1976 and has a nameplate capacity of 187 MW. The Unit 3 boiler is a conventional boiler manufactured by Babcock & Wilcox capable of providing steam at 1,800 psi to the General Electric tandem compound, bottom exhaust, steam turbine. Unit 3 is interconnected to the transmission system at 138 kV.

All of the Doc Bonin Plant units are currently unavailable and not offered into the MISO market through June 29, 2017 under the terms of a Suspended Operations Agreement, which began on June 29, 2014. These units are economically suspended and could be available for emergency power generation after approximately two months of preparation.

As economic conditions change in MISO, LUS will reevaluate the utilization of the Doc Bonin Plant in the utility's overall power supply portfolio; however, MISO notified LUS that Doc Bonin may not remain in economic suspension after the expiration of the agreement (i.e. June 29, 2017).

The Doc Bonin and the Curtis Rodemacher generating plants were deemed economically obsolete. Curtis Rodemacher has been retired for several years and decommissioning efforts have been initiated in the past. In anticipation of the cost associated with fully decommissioning both power stations, LUS should establish a decommissioning reserve to cover the future costs of dismantling these units. Reserve requirements and annual funding of such a reserve would be based on a decommission study.

The Curtis Rodemacher generating station remains retired with LUS performing routine maintenance, upkeep, and site monitoring. Site monitoring and remediation includes periodic soil sampling and lead paint removal. LCG must retain ownership of the site due to the co-location of a large, critical substation at the site and related security needs. Periodic costs associated with site monitoring and upkeep will continue, as needed, to maintain ownership and compliance.

LUS has engaged a consultant to review and evaluate Doc Bonin and assess a range of options for decommissioning and/or retirement of the facility. The consultant will identify options and align recommendations with capacity needs and strategy for LUS operations within MISO. The current economic suspension status for Doc Bonin will likely continue in addition to the contracts for MISO capacity requirements to allow for the decommissioning evaluation beyond the current contract ending in 2017. The results of the study are expected to allow for the development of the decommissioning reserve requirements.

## Doc Bonin Plant - Environmental Permits and Compliance

Table 4-5
Electric System
Doc Bonin Plant Key Permits

| Permit | Regulatory Agency | Status |
|---|---|---|
| Title V Permit<br>Part 70 Operating Permit | LDEQ | Permit No. 1520-00002-V2<br>Expiration date: December 19, 2016 |
| Title IV Permit<br>Acid Rain Program Permit | LDEQ | Permit No. 1520-00002-IV2<br>Expiration date: December 16, 2016 |
| LPDES Permit | LDEQ | Permit No. LA0005711<br>Expiration date: August 1, 2019 |
| Clean Air Interstate Rule<br>CAIR Permit | LDEQ | Permit No. 1520-00002-IR0<br>Expiration date: December 19, 2016 |

### *Air Permit*

The Doc Bonin Plant's Title IV and Title V Permit renewals were approved in 2011 and are set to expire on December 19, 2016. The permits allow for the burning of natural gas and No. 2 fuel oil in all three Doc Bonin units with a limitation of 150 hours per year of oil firing in Unit 2.

However, plant staff indicated that oil-firing capability has been disabled and oil burning is not anticipated in the near future.

All three units have a Continuous Emissions Monitoring (CEM) System installed. Annual CEM Relative Accuracy Test Audit (RATA) testing is not required since the units are out of service and are in suspended operation mode through June 29, 2017.

## *Clean Air Interstate Rule and Cross State Air Pollution Rule – CSPAR $NO_X$ Allocations*

In July 2011, the United States (U.S.) Environmental Protection Agency (EPA) finalized the Cross State Air Pollution Rule (CSAPR) to replace the existing Clean Air Interstate Rule (CAIR). In August 2012, the U.S. Court of Appeals for the District of Columbia Circuit invalidated CSAPR. On April 29, 2014, the U.S. Supreme Court reversed the Court of Appeals, upholding all aspects of the rule that had resulted in the Court of Appeals' invalidation. The U.S. Supreme Court remanded CSAPR to the Court of Appeals for further proceedings. On November 21, 2014, the U.S. EPA issued an interim final rule amending CSAPR compliance deadlines to align with the October 23, 2014 ruling that granted the U.S. EPA's motion to lift the stay of CSAPR and delay its deadlines for three years. The interim final rule provides that the compliance with CSAPR Phase 1 emissions budgets are now required in 2015 and 2016 and compliance with Phase 2 will be required in 2017 and beyond.

Under CSAPR, each facility is assigned an allocation of nitrogen oxide ($NO_X$) (tons), which may be emitted during the Ozone Season (May – September). In the event that the facility exceeds the limit during the Ozone Season, additional allowances may be withdrawn from the Plant owner's banked allowances or allowances may be purchased. The 2015 through 2020 annual CSAPR $NO_X$ Allocations for the Doc Bonin Plant units are as follows:

Table 4-6
Electric System
Doc Bonin $NO_X$ Emission Allocations

| Unit | $NO_X$ Allocation (tons) |
|---|---|
| Doc Bonin Unit 1 | 7 |
| Doc Bonin Unit 2 | 84 |
| Doc Bonin Unit 3 | 93 |

## *Compliance*

Doc Bonin Plant has not had any exceedances or Notice of Violations (NOVs) in the past year.

In 2010 a Compliance Order and Notice of Potential Penalty was received due to failed stack tests dated October 18, 2007 on Unit 1 and October 15, 2009 on Unit 3. Test results indicated that the units exceeded their carbon monoxide (CO) permit limits. A Settlement Agreement was issued on February 25, 2014 with a monetary penalty in the amount of $2,800. The penalty was paid and the issue was finalized and closed on November 25, 2014.

Table 4-7 summarizes the key operating statistics for the Doc Bonin Plant over the past five years. The 2014 generation statics reflect its suspended status.

Table 4-7
Electric System
Doc Bonin Plant Operating Statistics

| Item | 2011 | 2012 | 2013 | 2014 | 2015 | Five-Year Average |
|---|---|---|---|---|---|---|
| Units 1 through 3 | | | | | | |
| Gross Capacity (MW) | 285 | 285 | 285 | 285 | 285 | 285 |
| Total Gross Generation (MWh) | 572,835 | 523,854 | 156,856 | 0 | 0 | 250,709 |
| Total Net Generation (MWh) | 526,993 | 484,016 | 85,793 | 0 | 0 | 219,360 |
| Total Gas Usage (MMBtu) | 6,114,318 | 5,340,044 | 1,735,707 | 0 | 0 | 2,638,014 |
| Net Heat Rate (Btu/kWh) | 11,602 | 11,033 | 20,231 | NA | NA | 14,289 |
| Gross Capacity Factor (%) | 22.9% | 21.0% | 6.3% | 0.0% | 0.0% | 10.0% |
| Availability Factor (%) | 58.6% | 64.8% | 55.8% | 0.0% | 0.0% | 35.8% |
| Forced Outage Rate (%) | 7.7% | 36.9% | 40.2% | 0.0% | 0.0% | 17.0% |
| Number of Starts | 11 | 4 | 3 | 0 | 0 | 4 |

Source: Jamie Webb, LUS

## T. J. Labbé Plant

The T. J. Labbé Plant began operation in 2005 and consists of two natural gas-fired 48 MW General Electric model LM6000PC SPRINT combustion turbine generators (CTG). Three 50% gas compressors were installed to boost the incoming natural gas delivery pressure to the required levels. LUS and T. J. Labbé Plant staff indicated the compressors are not currently required to operate, as the natural gas supplier's delivery pressure is higher than the CTGs design inlet pressure. Pressure regulators reduce the delivery pressure to the required inlet levels at the CTG. The CTGs are capable of starting and reaching base load generation levels within 10 minutes. The plant is staffed 24-hours per day, seven days a week. While the plant is staffed full-time, the CTGs are capable of remote startup and monitoring from the Doc Bonin Plant staff. The T. J. Labbé Plant is connected to the LUS transmission system at 230 kV. The plant also includes a 600 kilowatt (kW) emergency generator for black start capability. The T. J. Labbé Plant began commercial operation in 2005.

The LM6000 CTG is an aero-derivative natural gas turbine that is commonly used in the power generation industry. The first LM6000 CTG was introduced in 1991 and began commercial operations in 1992. The two LM6000 CTGs are equipped with supplemental inlet air cooling and compressor intercooling using a proprietary GE SPRay INTercooled system called "SPRINT."

The SPRINT system injects atomized water at two locations in the turbine. This lowers the compressor discharge temperature, allowing power enhancement in part by increasing the mass airflow by cooling the air during the compression process. This system allows the CTGs to optimize output over a wide range of ambient conditions.

GE has significant experience with the LM6000 gas turbines, with over 21 million operating hours on over 1,000 units.

Each CTG system includes a chilled water system for inlet air cooling. The power output of all CTGs is sensitive to ambient temperatures. As ambient temperatures increase, the gross power output decreases with the decrease in ambient air density. Inlet cooling systems are commonly used to reduce temperatures in order to maintain power output at high ambient temperatures. The chilled water systems include a chiller skid, which is capable of providing sufficient inlet air chilling to maintain optimum inlet air conditions (50 degrees Fahrenheit (°F)) up to an ambient temperature of 90°F.

Each combustion turbine package includes a gas turbine generator, unit enclosures, support structures, an air inlet system, an exhaust outlet, lube oil systems, a fire protection system, a control system, a water wash system, drawings, data and manuals, and a training package. In addition, each combustion turbine also includes a water injection system for emissions control, the SPRINT power augmentation package, inlet air chilling, air filtration, fin fan lube oil coolers, electro-hydraulic start system, and inlet heating system. These are the standard GE supplied LM6000PC packages.

Each of the CTGs is capable of producing approximately 48 MW. The following table lists typical performance of LM6000PC Sprint engines at typical winter and summer conditions. The output and heat rate number are inclusive of typical auxiliary loads. Table 4-8 shows the typical performance of the LM6000 units installed at the T. J. Labbé Plant.

Table 4-8
Electric System
Typical LM6000 PC Sprint Performance

| Parameter | Natural Gas |
|---|---|
| Net Output, kW (summer 90 °F) | 48,500 |
| Net Heat Rate, Btu/kWh, HHV (summer) | 10,140 |
| Net Output, kW (winter 20 °F) | 49,300 |
| Net Heat Rate, Btu/kWh, HHV (winter) | 9,770 |
| $NO_X$ water flow (lbs./hr.) | 19,973 |
| SPRINT water flow (lbs./hr.) | 10,505 |
| $NO_X$ Emissions, ppmvd @ 15% O2 | 25 |

Table 4-9 summarizes the historical operating statistics for the T. J. Labbé Plant. Both units at T. J. Labbé were operated less in 2015 than in 2014 based on dispatch in the MISO market.

Table 4-9
Electric System
T. J. Labbé Plant Historical Operating Statistics

| Generation Statistics | 2011 | 2012 | 2013 | 2014 | 2015 | Five-Year Average |
|---|---|---|---|---|---|---|
| Unit 1 | | | | | | |
| Gross Generation (MWh) | 151,490 | 22,314 | 28,598 | 10,378 | 3,808 | 43,318 |
| Net Generation (MWh) | 149,500 | 21,711 | 25,154 | 9,714 | 3,253 | 41,866 |
| Unit Capacity Factor (%) | 36.03% | 5.31% | 6.80% | 2.31% | 0.78% | 10.25% |
| Unit Service Factor (%) | 72.00% | 7.00% | 9.00% | 4.64% | 1.86% | 18.90% |
| Unit Starts | 35 | 63 | 49 | 35 | 25 | 41 |
| Availability Factor (%) | 94.00% | 84.00% | 95.00% | 95.01% | 95.05% | 92.61% |
| Forced Outage Rate (%) | 2.70% | 39.80% | 1.80% | 4.33% | 0.88% | 9.90% |
| Unit 2 | | | | | | |
| Gross Generation (MWh) | 35,373 | 21,269 | 39,163 | 4,844 | 4,627 | 21,055 |
| Net Generation (MWh) | 32,741 | 19,428 | 38,793 | 3,707 | 3,445 | 19,623 |
| Unit Capacity Factor (%) | 8.41% | 5.06% | 9.31% | 0.88% | 0.83% | 4.90% |
| Unit Service Factor (%) | 17.00% | 7.00% | 12.00% | 2.50% | 2.49% | 8.20% |
| Unit Starts | 50 | 64 | 79 | 32 | 30 | 51 |
| Availability Factor (%) | 99.00% | 87.00% | 99.00% | 92.99% | 94.53% | 94.50% |
| Forced Outage Rate (%) | 1.80% | 2.70% | 1.50% | 44.40% | 0.70% | 10.22% |
| Plant Total | | | | | | |
| Net Generation (MWh) | 182,241 | 41,139 | 63,947 | 13,421 | 6,697 | 61,489 |
| Fuel Consumed (MMBtu) | 2,201,988 | 655,900 | 706,006 | 169,181 | 102,712 | 767,157 |
| Avg. Net Heat Rate (Btu/kWh) | 12,414 | 15,944 | 11,044 | 12,605 | 12,421 | 12,886 |

Source: Jamie Webb, LUS

### T. J. Labbé Plant - Environmental Permits and Compliance

Table 4-10 summarizes the key environmental permits for the T. J. Labbé Plant.

Table 4-10
Electric System
T. J. Labbé Plant Key Permits

| Permit | Regulatory Agency | Status |
|---|---|---|
| Title V Permit<br>Part 70 Operating Permit | LDEQ | Permit No. 1520-00128-V2<br>Expiration date: June 25, 2018 |
| Title IV Permit<br>Acid Rain Program | LDEQ | Permit No. 1520-00128-IV2<br>Expiration date: June 25, 2018 |

#### *Air Permit*

The T. J. Labbé Plant's Title IV and Title V Permit renewals were approved in 2013 and are set to expire on June 25, 2018. The permits allow for the burning of natural gas only. Each of the CTGs has a CEM System installed to monitor unit emissions. Annual CEM RATA testing is required.

#### *CSAPR $NO_X$ Allocations (Ozone Season only)*

The 2015 through 2020 annual CSAPR $NO_X$ Allocations for the T. J. Labbé units are as follows:

Table 4-11
Electric System
T. J. Labbé Plant $NO_X$ Emission Allocations

| Unit | $NO_X$ Allocation (Tons) |
|---|---|
| T. J. Labbé Unit 1 | 27 |
| T. J. Labbé Unit 2 | 15 |

#### *Compliance*

LUS staff has indicated that the T. J. Labbé Plant has not had any exceedances or NOVs in the past year and all required semi-annual and annual compliance reports have been submitted to the Louisiana Department of Environmental Quality (LDEQ).

## Hargis-Hébert Plant

The Hargis-Hébert Plant began commercial operation in 2006 and is nearly identical to the T. J. Labbé Plant with two natural gas-fired 48 MW General Electric model LM6000PC SPRINT CTGs (see LM6000PC SPRINT details above). Natural gas compressors are not installed at Hargis-Hébert Plant because the incoming natural gas delivery pressure is greater than the CTGs design inlet pressure. The Hargis-Hébert Plant CTGs have the additional capability of providing voltage support to the transmission grid through a specially designed clutch system,

which was originally installed on each of the CTGs allowing the gas turbine to be shut down and uncoupled from the generator while the generator remains synchronized to the grid to supply or absorb reactive power. The CTGs are capable of starting and reaching base load generation levels within 10 minutes. As with the T. J. Labbé Plant, the Hargis-Hébert Plant is staffed full-time, but is capable of remote startup and monitoring from the Doc Bonin Plant. The Hargis-Hébert Plant is connected to the LUS transmission system at 69 kV. The plant has a 600 kW emergency generator for black start capability. The Hargis-Hébert Plant began commercial operation in 2006.

Table 4-12 summarizes the historical operating statistics for the Hargis-Herbert Plant. Similar to the T. J. Labbé Plant, the Hargis-Hébert Plant operated more in 2015 than in 2014 based on dispatch in the MISO market.

Table 4-12
Electric System
Hargis-Hébert Plant Operating Statistics

| Generation Statistics | 2011 | 2012 | 2013 | 2014 | 2015 | Five-Year Average |
|---|---|---|---|---|---|---|
| Unit 1 | | | | | | |
| Gross Generation (MWh) | 87,168 | 22,728 | 29,312 | 7,338 | 7,446 | 30,798 |
| Net Generation (MWh) | 86,027 | 22,162 | 29,006 | 6,803 | 6,867 | 30,173 |
| Unit Capacity Factor (%) | 20.73% | 5.41% | 6.97% | 1.62% | 1.67% | 7.28% |
| Unit Service Factor (%) | 29.00% | 6.00% | 8.00% | 3.81% | 3.69% | 10.10% |
| Unit Starts | 166 | 56 | 39 | 41 | 41 | 69 |
| Availability Factor (%) | 95.00% | 89.00% | 96.00% | 90.24% | 89.00% | 91.85% |
| Forced Outage Rate (%) | 1.00% | 54.80% | 13.80% | 11.02% | 0.08% | 16.14% |
| Unit 2 | | | | | | |
| Gross Generation (MWh) | 70,334 | 7,174 | 19,330 | 6,988 | 8,638 | 22,493 |
| Net Generation (MWh) | 65,716 | 5,624 | 17,583 | 5,744 | 7,251 | 20,384 |
| Unit Capacity Factor (%) | 16.73% | 1.71% | 4.60% | 1.37% | 1.80% | 5.24% |
| Unit Service Factor (%) | 20.00% | 2.00% | 6.00% | 3.80% | 3.94% | 7.15% |
| Unit Starts | 110 | 19 | 37 | 40 | 37 | 49 |
| Availability Factor (%) | 96.00% | 66.00% | 97.00% | 93.64% | 89.03% | 88.33% |
| Forced Outage Rate (%) | 4.50% | 8.90% | 7.10% | 1.96% | 0.97% | 4.69% |
| Plant Total | | | | | | |
| Net Generation (MWh) | 151,742 | 27,786 | 46,589 | 12,547 | 14,118 | 50,557 |
| Fuel Consumed (MMBtu) | 1,602,632 | 297,321 | 509,688 | 169,544 | 183,321 | 552,501 |
| Avg. Net Heat Rate (Btu/kWh) | 10,562 | 10,700 | 12,070 | 13,514 | 11,659 | 11,701 |

Source: Jamie Webb, LUS

### Hargis-Hébert Plant- Environmental Permits and Compliance

Table 4-13 summarizes the key environmental permits for the Hargis-Hébert Plant.

Table 4-13
Electric System
Hargis-Hébert Plant Key Permits

| Permit | Regulatory Agency | Status |
|---|---|---|
| Title V Permit<br>Part 70 Operating Permit | LDEQ | Permit No. 1520-00031-V2<br>Expiration date: June 25, 2018 |
| Title IV Permit<br>Acid Rain Program | LDEQ | Permit No. 1520-00131-IV2<br>Expiration date: June 25, 2018 |

#### *Air Permit*

The Hargis-Hébert Plant's Title IV and Title V Permit renewals were approved in 2013 and are set to expire on June 25, 2018. The permits allow for the burning of natural gas only. Each of the Hargis-Hébert CTGs has a CEM System installed to monitor unit emissions. Annual CEM RATA testing is required.

#### *CSAPR $NO_X$ Allocations (Ozone Season only)*

The 2015 through 2020 annual CSAPR $NO_X$ Allocations for the Hargis-Hébert units are as follows:

Table 4-14
Electric System
Hargis-Hébert Plant $NO_X$ Emission Allocations

| Unit | $NO_X$ Allocation (Tons) |
|---|---|
| Hargis-Hébert Unit 1 | 22 |
| Hargis-Hébert Unit 2 | 17 |

#### *Compliance*

LUS staff has indicated that the Hargis-Hébert Plant has not had any exceedances or NOVs in the past year and all required semi-annual and annual compliance reports have been submitted to LDEQ.

## Rodemacher Unit 2

Rodemacher Unit 2 is a 523 MW coal-fired generating station located at the Brame Energy Center near Boyce, Louisiana. Rodemacher Unit 2 is jointly owned by LPPA (50%), Cleco (30%), and Louisiana Energy and Power Authority (LEPA) (20%) (the Joint Owners). The Agreement for Joint Ownership, Construction, and Operation (Joint Ownership Agreement) dated June 30, 1977, as amended, established the joint ownership of Rodemacher Unit 2. The Joint

Owners share the output of Rodemacher Unit 2 based on the relative ownership percentages. LPPA's ownership share of Rodemacher Unit 2 is 261.5 MW of capacity and the related energy output. The Joint Ownership Agreement will remain in effect through June 30, 2032.

LPPA and the City entered into a Power Sales Contract (PSC) on May 1, 1977 in which LPPA agrees to sell and the City agrees to purchase 100% of LPPA's share of the capacity and energy produced by Rodemacher Unit 2. According to the PSC, the LPPA costs are passed to LUS as purchased power costs, which are considered operating expenses. As a result of being defined as operating expenses, the LPPA expenses have priority over LUS debt. These contractual terms provide a higher level of security on the LPPA debt service than if the City had issued the debt. The PSC expires on August 31, 2047.

Rodemacher Unit 2 began commercial operation in 1982 and is operated by Cleco. On October 20, 2014, Cleco announced it was being acquired by Macquarie Infrastructure and Real Assets, Inc. (Macquarie) pending Louisiana Public Service Commission (LPSC) approval. On March 28, 2016, LPSC granted final approval to the acquisition. Per LUS staff, the acquisition is not expected to materially impact the operating agreements, performance, or personnel associated with Rodemacher Unit 2.

Major equipment at Rodemacher Unit 2 includes a Foster Wheeler conventional pulverized coal steam boiler, with a steam rating of 3,800,000 pounds per hour at 2,500 pounds per square inch gauge (psig) and a main steam and reheat temperature of 1,005°F, and a General Electric reheat steam turbine generator with bottom exhaust.

Lake Rodemacher supplies the cooling water for the steam turbine condenser and plant. Lake Rodemacher is a man-made lake located within the boundaries of the 6,000-acre Brame Energy Center site. An electrostatic precipitator, with a 99.5% efficiency rating when burning coal, is utilized for fly ash removal. The addition of a Selective Non-Catalytic Reduction (SNCR) System with urea injection improved $NO_X$ control in 2013.

The plant recently completed installation of a dry absorbent injection system for acid gas control; a fabric filter baghouse for metallic particulate control; and induced-draft (ID) booster fans as a result of the U.S. EPA MATS requirements.

Table 4-15 summarizes the historical operating statistics for Rodemacher Unit 2.

Table 4-15
LPPA
Historical Rodemacher Unit 2 Operating Statistics

| Generation Statistics | 2011 | 2012 | 2013 | 2014 | 2015 | Five-Year Average |
|---|---|---|---|---|---|---|
| Gross Generation (MWh) | 3,433,091 | 2,858,332 | 3,047,012 | 2,568,621 | 2,253,136 | 2,832,038 |
| Station Service (MWh) | 237,591 | 225,368 | 222,149 | 170,853 | 235,204 | 218,233 |
| Net Generation (MWh) | 3,195,500 | 2,632,964 | 2,824,863 | 2,397,768 | 2,017,932 | 2,613,805 |
| Station Service (%) | 6.90% | 7.90% | 7.30% | 6.70% | 10.44% | 7.85% |
| Net Capacity Factor (%) (1) | 69.80% | 61.70% | 66.40% | 55.80% | 46.94% | 60.13% |
| Hours Available | 7,934 | 7,933 | 7,515 | 5,626 | 7,580 | 7,318 |
| Net Unit Heat Rate (Btu/kWh) | 10,754 | 11,077 | 10,975 | 11,040 | 11,306 | 11,030 |
| Availability Factor (%) (2) | 90.70% | 90.30% | 85.80% | 64.20% | 86.53% | 83.51% |
| Forced Outage Factor (%) (3) | 1.70% | 2.50% | 5.80% | 1.30% | 3.24% | 2.91% |
| Scheduled Outage Factor (%) | 7.60% | 7.20% | 8.40% | 34.50% | 10.23% | 13.59% |

Source: LPPA Manager's Monthly Reports, audited
(1) Net Capacity Factor is the net energy produced over the year as a fraction of the maximum generation for the year.
(2) Availability Factor reflects the fraction of the year in which Rodemacher Unit 2 was available without any outages.
(3) Forced Outage Factor reflects the fraction of the year in which Rodemacher Unit 2 was not available due to forced outages.

In general, Rodemacher Unit 2's operations have remained steady for the past five years, as expected for a base load type of generating facility. However, in 2014, there was a significant increase in the unit's schedule outage time associated with the emissions upgrades. The recent decrease in Rodemacher Unit 2's generation and capacity factor are primarily driven by MISO participation and access to the market.

On February 16, 2012, the U.S. EPA issued the final ruling titled *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units*, commonly referred to as MATS. To comply with the MATS requirements, Rodemacher Unit 2 installed a dry absorbent injection system for acid gas control; a fabric filter baghouse for metallic particulate control; and ID Booster Fans.

Coal is supplied by Arch Coal Sales Inc. and primarily sourced from the Powder River Basin in Wyoming. LPPA owns two unit trains that deliver the coal to the plant from Wyoming. Cleco coordinates the deliveries in conjunction with their unit trains.

Coal is sourced from the Powder River Basin in Wyoming. LPPA owns two unit trains that deliver the coal to the plant from Wyoming. Cleco coordinates the deliveries in conjunction with their unit trains.

Most of the coal combustion residue (e.g., flyash and bottom ash) from the Rodemacher Unit 2 is currently removed from the site by truck and sold for beneficial reuse on a regular basis. On

December 8, 2014, U.S. EPA finalized the Coal Combustion Residue Rule. The final rule classifies coal ash as solid waste rather than hazardous waste. Classifying coal residue as solid waste eliminates potential increased disposal costs associated with special handling, transportation, and disposal requirements for hazardous waste. As a result of the latest U.S. EPA ruling, Rodemacher Unit 2 will continue marketing and selling their coal ash for beneficial use. Additional information regarding the Coal Combustion Residue Rule is discussed in the Rodemacher Environmental Compliance Section below.

## U.S. EPA Clean Air Act Greenhouse Gas Regulations

On October 23, 2015, U.S. EPA finalized the Clean Power Plan (CPP): carbon dioxide ($CO_2$) emission guidelines for existing power plants. The CPP will regulate greenhouse gas (GHG) emissions associated with Electric System generation. On February 9, 2016, the U.S. Supreme Court granted a stay on the CPP. Under the stay, the EPA cannot take actions to implement or enforce the CPP until pending legal challenges are resolved in the courts. The DC Circuit Court of Appeals will hear the case in June 2016, with a decision late summer or fall; appeals to the U.S. Supreme Court are anticipated. As such, the outcome is uncertain.

The implementation and financial impacts of the CPP are evolving and currently unknown. Currently, all operating expenses associated with environmental compliance are included in the Electric System FC and passed through to customers. Historically, major capital expenditures associated with environmental compliance have been funded with bonds.

### *New Source Performance Standards*

On October 23, 2015, U.S. EPA also published the final New Source Performance Standard (NSPS) designed to reduce carbon pollution from new power plants. This regulation, which only applies to new facilities, limits coal fired power plant $CO_2$ emissions to 1,400 lb/MWh (gross). Traditional coal fired power plants cannot meet this limit without some form of $CO_2$ abatement, such as carbon capture and sequestration. Existing plants that commenced construction per the definition at 40 Code of Federal Regulations (CFR) Subpart 60 prior to January 8, 2014 are not subject to the rule. Rodemacher Unit 2 commenced construction prior to January 8, 2014, and as such, is not subject to the rule.

### *Clean Power Plan Emission Guidelines*

If implemented, the CPP requires each state to submit an implementation plan to incorporate the $CO_2$ guidelines for existing power plants. Louisiana's goal is a 30.7% reduction on a rate basis (units of GHG per MWh), or by 17.7% on a mass basis (mass in tons GHG), by 2030, using 2012 as the baseline. Clean Air Act Section 111(d) is the basis for the regulation, and under this section, state standards for existing sources must reflect the level of emissions performance achievable through the application of the best system of emission reduction (BSER), with significant flexibility in the design of their plans.

EPA has suggested three "Building Blocks" that states may utilize to achieve their state-specific emission targets:

1. Efficiency improvements at existing coal fired power plants
2. Increased generation from natural gas combined cycle plants
3. Increased generation from renewable and other low- or zero-carbon sources

Regarding Building Block 1, the final rule suggests that existing coal-fired units can achieve heat rate improvements in the range of 2.1% to 4.3%. States may develop plans using all or some of these approaches.

In addition, the final rule allows for "trading-ready" plans, meaning that States or regions can create market trading programs for $CO_2$ similar to the $NO_X$ and sulfur dioxide ($SO_2$) programs already being used under CSAPR. Louisiana has not yet decided on its approach; the LDEQ website indicates that the agency will solicit public input via listening sessions.

The timeline for planning and implementation is long-term as written, and will be even longer term with the current delay. As noted on the LDEQ website, the CPP may be substantially modified or vacated in its entirety.

## Rodemacher Unit 2- Environmental Permits and Compliance

Table 4-16 summarizes the key environmental permits for Rodemacher Unit 2.

Table 4-16
LPPA
Rodemacher Unit 2 Key Permits

| Permit | Regulatory Agency | Status |
|---|---|---|
| Title V Permit<br>Part 70 Operating Permit | LDEQ | Permit No. 2360-00030-V2<br>Expiration date: October 14, 2018 |
| Title IV Permit<br>Acid Rain Program Permit | U.S. EPA | Permit No. 2360-00030-IV4<br>Expiration date: October 14, 2018 |
| Clean Air Interstate<br>Rule CAIR Permit | LDEQ | Permit No, 2360-00030-IR0<br>Expiration date: October 14, 2018 |
| LPDES Permit | LDEQ | Permit No. LA0008036<br>Expiration date: October 1, 2019 |
| Solid Waste Standard<br>Type I Permit<br>For metal cleaning waste pond, bottom ash pond and flyash pond | LDEQ | Permit No, P005R1<br>Expiration date: May 22, 2017 |
| Solid Waste Standard<br>Type I Permit<br>For coal sedimentation pond | LDEQ | Permit No. P-0062<br>Expiration date: May 22, 2017 |
| Radioactive Material License | LDEQ | License No. LA-3719-L01<br>Expiration Date: May 31, 2018 |
| Spill Prevention Control and Countermeasure Plan (SPCC) | U.S. EPA | Latest revision: December 2013 |
| Facility Response Plan | U.S. EPA | Latest revision: December 2013 |
| Hazardous Waste Generator | U.S. EPA | Permit No. LAD071941611 |

## National Ambient Air Quality Standards

The Clean Air Act requires U.S. EPA to set National Ambient Air Quality Standards (NAAQS) to protect the public health and the environment. Ambient air quality monitoring and air dispersion models are used to monitor air quality in a region or predict concentrations of pollutants for a given area. When pollution exceeds an allowable air quality standard, an area may be designated as a "Nonattainment Area," which typically requires emissions reductions from sources within the region and more restrictive permit limits for new sources. Rapides Parish and the surrounding region in Northern Louisiana is currently designated as "Attainment" for all criteria pollutants. Therefore, the more stringent nonattainment area regulations do not apply to Rodemacher Unit 2 under the current NAAQS.

In addition to implementing the NAAQS, U.S. EPA must update the standards every five years to keep pace with new developments in health and science. Standards for $NO_X$ (1-hour), PM2.5, $SO_2$ (1-hour), and ozone have all been updated within the past five years, and Rapides Parish continues to meet the standards. If future updates to the NAAQS result in a nonattainment area designation, LDEQ would evaluate emission sources in the region and emissions reductions at Rodemacher Unit 2 could be required.

## Air Emissions and Opacity Limitations

The Rodemacher Unit 2 Title IV and Title V Permit renewals were approved in 2013 and are set to expire on October 14, 2018. The permits allow for the burning of coal, natural gas, and No. 2 fuel oil in Unit 2. However, coal is the predominant fuel.

The unit has a CEM System installed; annual CEM RATA testing is required.

## CSAPR $NO_X$ Allocations (Ozone Season only)

In July 2011, the U.S. EPA finalized CSAPR to replace the existing CAIR. In August 2012, the U.S. Court of Appeals for the District of Columbia Circuit invalidated CSAPR. On April 29, 2014, the U.S Supreme Court reversed the Court of Appeals, upholding all aspects of the rule that had resulted in the Court of Appeals' invalidation. The U.S. Supreme Court remanded CSAPR to the Court of Appeals for further proceedings. On November 21, 2014, the U.S. EPA issued an interim final rule amending CSAPR compliance deadlines to align with the October 23, 2014 ruling that granted U.S. EPA's motion to lift the stay of CSAPR and delay its deadlines for three years. The interim final rule provides that the compliance with CSAPR Phase 1 emissions budgets are required in 2015 and 2016 and compliance with Phase 2 will be required in 2017 and beyond.

Under CSAPR, each facility is assigned an allocation of $NO_X$ (tons), which may be emitted during the Ozone Season (May – September). In the event that the facility exceeds the limit during the Ozone Season, additional allowances may be withdrawn from the owner's banked allowances or allowances may be purchased. The 2015 CSAPR $NO_X$ allocation for the Rodemacher Unit 2 is 1,102 tons.

CSAPR is not expected to impact operations at Rodemacher Unit 2 as the allocation is equivalent to recent emissions history and improved performance from the SNCR installation. As of December 31, 2014, the quantity of banked CAIR allowances was 722 of which 483 are allocated to LPPA.

The 2015 through 2020 annual CSAPR $NO_X$ allocations for Rodemacher Unit No. 2 are as follows:

Table 4-17
LPPA
Rodemacher Unit 2 $NO_X$ Emission Allocations

| Unit | $NO_X$ Allocation (Tons) |
|---|---|
| Rodemacher Unit 2 | 1,102 |

## Compliance

Rodemacher Unit 2 reports compliance with the opacity requirements 99.95% of the time in the past year. Problems complying with the opacity limits that had been experienced prior to 2010 apparently have been addressed satisfactorily. LUS staff indicates that there are no outstanding NOVs for non-compliance with opacity limits.

$NO_X$ emissions under the Rodemacher Unit 2 Title IV Permit are limited to 0.46 lb/MMBtu. In addition, Rodemacher Unit 2 is allocated $NO_X$ allowances under CSAPR, which applies to $NO_X$ emissions during the Ozone Season (May through September).

Rodemacher Unit 2's historical $NO_X$ emissions have been below permitted levels. The operation of Rodemacher Unit 2 will not be restricted due to the $NO_X$ emission limits of the Title IV Permit. The $NO_X$ permit limit is 0.46 lb/MMBtu, while the average annual $NO_X$ emission rate has been less than 0.20 lb/MMBtu in each of the past six years. During the Ozone Season, Rodemacher Unit 2 $NO_X$ emissions that exceed CSAPR allocations of 1,102 tons would require purchase of additional allowances in the established market or transfer of allowances from another of the Owner's facilities.

Emissions sources that fall under the Regional Haze Rule must be evaluated for their effect on pertinent Class I areas and possibly require further evaluation for the necessity of installing Best Available Retrofit Technology (BART). While the CSAPR is considered BART for NOx, Louisiana sources need to show BART for $SO_2$ emissions. This topic is discussed further below under Regional Haze Rule.

## Air Permit – Acid Rain Program

The U.S. EPA issued a Title IV permit, which addresses the Acid Rain Program provisions of the Clean Air Act as applicable to Rodemacher Unit 2. The Acid Rain Program established (1) a trading system for $SO_2$ allowances, which are allocated to each facility, and (2) $NO_X$ emission limits for coal-fired units.

Each $SO_2$ allowance is equal to one ton of $SO_2$ emissions. If the facility emits more than the allocated $SO_2$ allowances it may purchase additional allowances in the established market or may transfer allowances from another of the Owner's facilities. Emission allowances may be banked, transferred, purchased, or sold. The Rodemacher Unit 2 receives an annual allocation of 18,212 $SO_2$ allowances (tons). LPPA's share of the total $SO_2$ allocation is based on its ownership interest in the facility.

Table 4-18
LPPA
Rodemacher Unit 2 $SO_2$ Emissions

| Year | Annual Average (lb/MMBtu) | Permit Limit (lb/MMBtu) | Total Annual (tons/yr.) | Annual Allocation (tons/yr.) |
|---|---|---|---|---|
| 2012 | 0.62 | 1.2 | 9,098 | 18,212 |
| 2013 | 0.56 | 1.2 | 9,127 | 18,212 |
| 2014 | 0.58 | 1.2 | 6,456 | 18,212 |
| 2015 | 0.30 | 1.2 | 3,657 | 18,212 |

Rodemacher Unit 2's historical $SO_2$ emissions have been below permitted levels. The operation of Rodemacher Unit 2 will not be restricted due to the $SO_2$ emission limits of the air permit due to the fact that the plant currently burns, and is expected to continue to burn, 0.7% sulfur coal. Total $SO_2$ emissions are directly related to the sulfur content of the coal. The average annual $SO_2$ emission rate over the past six years has been approximately 50% less than the permit limit of 1.2 pounds per million British thermal units (lb/MMBtu).

$NO_X$ emissions under the Rodemacher Unit 2 Title IV Permit are limited to 0.46 lb/MMBtu. In addition, Rodemacher Unit 2 is allocated $NO_X$ allowances under CSAPR, which limits the $NO_X$ emissions during the ozone season.

Table 4-19
LPPA
Rodemacher Unit 2 $NO_X$ Emissions

| Year | Annual Average (lb/MMBtu) | Permit Limit (lb/MMBtu) | Total Annual (tons/yr.) | Ozone Season (tons/yr.) |
|---|---|---|---|---|
| 2012 | 0.17 | 0.46 | 2,463 | 1,006 |
| 2013 | 0.18 | 0.46 | 2,636 | 1,053 |
| 2014 | 0.19 | 0.46 | 2,212 | 1,116 |
| 2015 | 0.14 | 0.45 | 1,754 | 845 |

### *Regional Haze Rule*

The Regional Haze Rule requires certain existing large stationary emissions sources, such as coal-fired power generation units, to install BART to improve visibility at certain National Parks designated as Class I areas. Under the rule, certain types of older sources may be required to install BART to control particulate matter, $SO_2$, and $NO_X$ emissions. Some of the effects of the Regional Haze Rule could require Rodemacher Unit 2 to install newer and cleaner technologies, as well as include additional controls for these emissions. In 2012, the U.S. EPA issued a final action allowing states participating in the CSAPR trading program to use those programs instead of source specific BART to meet the requirements for the Regional Haze Rule.

The Regional Haze Rule was eventually superseded by the approval of the CSAPR in 2014. However, the CSAPR, which in Louisiana only applies to $NO_X$ emissions during the ozone season, recently replaced CAIR, and CAIR previously applied to annual emissions of $SO_2$ and $NO_X$. CAIR annual $SO_2$ and $NO_X$ emissions requirements, while CSAPR only applies to ozone season specific $NO_X$ emissions limits. Previously, sources that were complying with the CAIR annual $SO_2$ and $NO_X$ regulations were considered by the U.S. EPA to be in compliance with the Regional Haze Rule. Now, sources will only comply with $NO_X$ control under CSAPR. These sources are no longer included in the $SO_2$ program and may not be considered by U.S. EPA to have an $SO_2$ control equivalent to BART. As a result, those emission sources that fall under Regional Haze Rule must be evaluated for their effect on pertinent Class I areas and possibly require further evaluation for the necessity of installing BART.

Preliminary modeling is performed to determine the impact on visibility on Class I areas; then BART analysis is performed using more refined inputs taking into consideration site-specific data reflecting existing conditions. The analysis considers the existing impairment of the Class I area and economic impacts to the facility, resulting in a dollar per incremental visibility improvement for each pollution control scenario evaluated. Emission control equipment, such as scrubbers, would need to be economically feasible according to the BART standards. As of September 2015, a BART analysis is currently underway for Rodemacher Unit 2. If dispersion modeling demonstrates that Rodemacher Unit 2 causes visibility impairment, the BART analysis will determine the extent of pollution control required to reduce impacts below the significance threshold. The outcome of the BART analysis may require additional upgrades to the facility. To date, many BART evaluations resulted in no change or additional emissions controls as the upgrades did not meet the economically feasible criteria. As the Rodemacher Unit 2 analysis is currently underway, it is not known what the potential emissions controls may be, if any at all.

### *Mercury and Air Toxics Standard*

On February 16, 2012, the U.S. EPA issued the final ruling titled *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units*, commonly referred to as MATS. To comply with the MATS requirements, Rodemacher Unit 2 has completed the installation of a dry absorbent injection system for acid gas control; a fabric filter baghouse for metallic particulate control; and ID Booster Fans. As of the date of this report, all of the new equipment and systems are functioning properly. The results of contract guarantee testing indicates that the equipment is operating as per design to meet the MATS requirements.

On June 29, 2015, the U.S. Supreme Court effectively remanded the U.S. EPA's MATS requirements to the District of Columbia Circuit Court. The U.S. Supreme Court's decision did not prohibit the U.S. EPA from regulating mercury emissions; however, it did require the U.S. EPA to consider costs for those plants yet to meet the MATS requirements. The U.S. EPA subsequently submitted revised cost/benefit analyses, which was approved by the DC Circuit Court. In December of 2015, the U.S. Supreme Court refused to grant a stay on MATS, thus MATS will be fully implemented. The court rulings on MATS do not affect Rodemacher Unit 2, as it is has completed an upgrade and meets MATS requirements.

As noted above, emission control additions at Rodemacher Unit 2 have been installed for compliance with CSAPR and MATS. The Utilities System's share of the capital cost for installation of these controls was $74 million. These estimated costs are not included in the Utilities System CIP, as these costs have been funded within LPPA.

### Cooling Water Supply and 316(b) Regulation

Circulating water for the cooling tower and boiler makeup is pumped from Lake Rodemacher by circulating water pumps located at the screened water intake. Rainfall runoff from around Lake Rodemacher provides makeup for water lost to evaporation. LDEQ has issued an opinion that Lake Rodemacher is not subject to the requirements of 316(b) because it was constructed for support of the power plant operations and is not considered "waters of the state." To the best of our knowledge, U.S. EPA has not opined or ruled otherwise.

### Wastewater Permit

The Louisiana Pollution Discharge Elimination System (LPDES) Permit was renewed by LDEQ on October 1, 2014, with an expiration October 1, 2019, and covers the entire Brame Energy Center. The permit is required for discharges of wastewater and stormwater to surface waters. The permit establishes monitoring, reporting, and recordkeeping requirements, as well as limitations on emissions. The permitted discharge points, all of which are not exclusively used for Rodemacher Unit 2 effluent, are:

- Outfall 001 – Cooling pond discharge, including coal sedimentation pond effluent, seal well overflow, bottom ash and secondary settling pond effluent, chemical metal cleaning waste, clarifier sludge sedimentation pond effluent, and low volume wastewaters
- Outfall R-02 – Coal sedimentation pond effluent
- Outfall R-03 – Units 1 and 2 seal well effluent and general plant washdown effluent.

Based on our discussions with plant staff we are not aware of any outstanding NOVs or any material compliance issues with the LPDES Permit.

### Wastewater Effluent Standards

A 2009 study performed by the U.S. EPA determined that the 1982 steam electric power generating effluent guidelines do not adequately address the pollutants being discharged and have not kept pace with changes in the electric power industry. The U.S. EPA evaluated the technologies and costs to remove those metals and identified the best available technology to affect their control in coal-fired power plant effluent. The U.S. EPA proposed more stringent limits for new metals and parameters for individual wastewater streams generated by steam electric power plants, with emphasis on coal-fired power plants. The U.S. EPA proposed the power plant Effluent Limitation Guidelines (ELGs) for coal-fired steam electric plants and accepted comments on the rule until September 20, 2013.

The U.S. EPA finalized the rule on September 30, 2015. The rule sets federal limits on the levels of toxic metals discharged in wastewater. The rule establishes new requirements for power plant wastewater streams including flue gas desulfurization, fly ash, bottom ash, flue gas mercury control, and gasification of fuels such as coal and petroleum coke. The effluent limit requirements must be incorporated into the plants LPDES permits. Power plants must comply with the rule between years 2018 and 2023 depending on when the plant needs a new Clean

Water Act permit. During LDEQ's development of the Brame Energy Center's LPDES permit renewal, LDEQ incorporated applicable aspects of U. S. EPA's Guidance Document on this subject. LDEQ will appropriately implement the recently approved guidelines in LPDES permits for the affected facilities.

### *Coal Combustion Residue*

Most of the Rodemacher Unit 2 coal combustion residue (e.g. flyash and bottom ash) is removed on a regular basis from the site by truck and sold for beneficial use. On December 19, 2014, the U.S. EPA finalized the Coal Combustion Residue (CCR) Rule and it was published on April 17, 2015 in the Federal Register. Rodemacher Unit 2 has two surface impoundments; the Fly Ash Pond and the Bottom Ash Pond, to which the CCR Rule applies. The rule became effective 180 days after publication in the Federal Register. The final rule classifies coal ash as solid waste rather than hazardous waste. Classifying coal residue as a solid waste eliminates potential increased disposal costs associated with special handling, transportation, and disposal requirements for hazardous waste. As a result of the latest U.S. EPA ruling, Rodemacher Unit 2 continues marketing and selling their coal ash for beneficial use.

The rule establishes technical requirements for CCR landfills and surface impoundments. In addition, the rule redefines beneficial use. Note that the rule does not affect beneficial use applications started before the effective date of the rule. Beneficial use applications started after the effective date of the new rule will need to be evaluated according to new definitions of beneficial use and disposal. The rule defines beneficial use as needing to meet the following criteria:

1. The CCR must provide a functional benefit;

2. The CCR must substitute for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices such as extraction;

3. The use of CCRs must meet relevant product specifications, regulatory standards, or design standards when available, and when such standards are not available, CCRs are not used in excess quantities; and

4. When un-encapsulated use of CCRs involves placement on the land of 12,400 tons or more in non-roadway applications, the user must demonstrate and keep records, and provide such documentation upon request, that environmental releases to ground water, surface water, soil and air are comparable to or lower than those from analogous products made without CCRs, or that environmental releases to ground water, surface water, soil, and air will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.

The new criteria for "beneficial use" excludes the use of CCR in large-scale placement or fill, such as mine fills, as a beneficial use.

The final rule establishes minimum national criteria for CCR landfills, CCR surface impoundments, and all lateral expansions of CCR units including location restrictions, liner design criteria, structural integrity requirements, operating criteria, groundwater monitoring and corrective action requirements, closure and post-closure care requirements, and

recordkeeping, notification, and Internet posting requirements. CCR surface impoundments that do not receive CCR after the effective date of the rule, but still contain water, will be subject to all applicable regulatory requirements. Regulatory requirements must be met unless the owner or operator of the facility dewaters and installs a final cover system on these inactive units no later than three years from publication of the rule.

Cleco is in the process of establishing a CCR Compliance Program, which will involve all of the needed steps to comply with the CCR Rule. A CCR Groundwater Monitoring Program is in place to determine the integrity of the liners in the Flyash and Bottom Ash Ponds as required by the CCR Rule. Cleco has budgeted in excess of $13 million in its Construction Budget to be spent over a three-year period (2018–2020) for the retrofit of the Rodemacher Unit 2 surface impoundment liners.

### *Oil Storage and Spill Prevention*

The Spill Prevention and Control (SPC) / Spill Prevention Control and Countermeasures (SPCC) plan for the Brame Energy Center was prepared in accordance with the requirements of the SPC regulations of the LDEQ and the SPCC regulations of the U.S. EPA. The SPC regulations are codified under Title 33, Part IX Chapter 9 of the Louisiana Administrative Code (LAC 33:IX.Chapter 9). The SPCC regulations are contained in Title 40, Part 112 of the Code of Federal Regulations (40 CFR Part 112). The purpose and scope of the SPC regulation is to establish requirements for contingency planning and implementation of operating procedures and best management practices to prevent and control the discharge of pollutants resulting from spill events. The regulation defines a “spill event” as the accidental or unauthorized leaking or releasing of a substance from its intended container or conveyance structure that has the potential to be discharged or results in a discharge to the waters of the State of Louisiana. The purpose of the SPCC regulation is to establish procedures, methods, equipment, and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities. The purpose of SPCC Plan is to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire prevention, and pollution prevention rules, so as to form a comprehensive balanced federal/state spill prevention program to minimize the potential for oil discharges.

The facility response plan (FRP) regulation (40 CFR Section 112.20) requires the owners or operators of facilities that may reasonably be expected to cause substantial harm to the environment by discharging oil to prepare an FRP.

Brame Energy Center’s FRP addresses the concerns of 40 CFR 112.20.f.1.ii; the facility's total oil storage capacity is greater than or equal to 1 million gallons. LPPA has no ownership interest in, or liability for, the fuel oil storage tanks located on the Brame Energy Center site.

## Rodemacher Transmission

Cleco owns five 230 kV transmission lines that transmit power out of the Rodemacher Unit 2 switching station and interconnect to the transmission grid. Four lines extend to the towns of Clarence, Leesville, Rapides, and St. Landry. The fifth line extends from the Brame Energy Center to Sherwood. Two 230 kV lines extend from Sherwood to the Pineville-Rapides 230 kV line. LUS is interconnected with the area’s transmission grid through its 138 and 230 kV lines to Cleco and Energy Gulf States Louisiana, LLC.

The Joint Ownership Agreement Exhibit V-A dated November 15, 1982 originally provided for transmission service from Rodemacher Unit 2. A new Transmission Service Agreement (TSA) in January 1991 between LPPA, the City, and Cleco terminated and replaced the original agreement with the Electric System Interconnection Agreement (ESIA), Service Schedule FTS. Per the TSA, Cleco is to provide firm transmission service to the City's interconnection points with Cleco.

## Fuel Supply

### Natural Gas

Natural gas for the Doc Bonin, T. J. Labbé, and Hargis-Hébert Plants is provided under a base contract between Atmos Energy Marketing, LLC and TEA, acting on the behalf of LUS. The agreement was signed in February 2004 and automatically extends for 12-months following the end of the Delivery Period, unless terminated by either party. The latest Transaction Confirmation #7, for a Firm Supply of up to 20,000 MMBtu per day, establishes monthly and daily rates based on Henry Hub indices, plus 20 cents ($0.20) per MMBtu, plus Gulf South Pipelines current transmission tariff, plus taxes or assessments.

Natural gas supply to the Doc Bonin Plant is via a 10 mile long, 10-inch gas supply line, owned by LUS that connects to the Texas Gas Transmission Corporation and the Columbia Gulf Transmission Company pipeline.

Natural gas is supplied to the T. J. Labbé Plant through an expansion pipeline that is approximately one-half mile long and is connected to the 10-inch gas supply line serving the Doc Bonin Plant.

Natural gas to the Hargis-Hébert Plant is supplied form an interconnection to the east-west Gulf South Pipeline Company, LP system located between Louisiana Highway 89 and Commission Boulevard. Gulf South operates and maintains the 10-inch lateral, which terminates at the metering station located on the Hargis-Hébert Plant property.

### Coal for Rodemacher Unit 2

Coal from the Powder River Basin in Wyoming is the predominant fuel used at Rodemacher Unit 2. Coal is supplied under three contracts: Arch Coal Sales Company Inc., Peabody CoalSales LLC, and Rio Tinto Energy America. LPPA owns two unit trains that deliver the coal to the plant from Wyoming. Cleco coordinates the deliveries in conjunction with their unit trains. Coal price adjustments are based on sulfur content in the coal and the heating value (British Thermal Units per pound (Btu/lb)) of the delivered coal.

The Joint Owners manage their own coal inventory and Cleco manages the physical operations related to coal. LPPA also monitors the content and level of coal inventory. LPPA's inventory value is calculated on a moving average basis. After each change in inventory, the cost per ton is recalculated. LPPA's target is 60 days of storage. As of October 31, 2015, LPPA's coal storage is 220,608 tons, or approximately 89 days at the historical five year Average Capacity Factor of 60%. LPPA continues to manage coal deliveries to achieve the target of 60 days storage. The high coal inventory is directly related to the duration of the recent scheduled outage associated with environmental upgrades to meet MATS requirements.

An annual physical observation of the coal inventory is performed based on an aerial photographic survey and density measurements. An adjustment to inventory occurs when the survey indicates a variance in the results of the physical inventory of at least plus or minus 3%.

### Hydro Purchased Power

LUS has a long-term contract with the Southwestern Power Administration for U.S. Department of Energy hydro power. The bilateral agreement is for 22,320 MWh annually and ends June 1, 2018. The hydropower is generated by 24 Corps of Engineers dams in the region.

### Capacity Contracts

MISO's resource adequacy is based on the system coincident peak and reserves. As a MISO participant, LUS is required to maintain its relative share of capacity and reserves. With the economic suspension status of Bonin, LUS does not have sufficient capacity to meet the MISO requirements. As such, LUS contracted for 40 MW of capacity through May of 2020. The term for the Doc Bonin economic suspension ends on June 29, 2017 and may not be extended. At that time, LUS must extend existing capacity contracts or construct new generation capacity to meet MISO requirements.

## 4.2 Transmission and Distribution

The Electric System has 45 miles of transmission lines and 979 miles of distribution lines. Transmission facilities operate at 69 kV, 138 kV, and 230 kV interconnecting with Entergy (at 230kV and 138kV) and Cleco (at 230 kV and 69 kV) systems. LPPA, the City, and Cleco have a TSA signed in January 1991 to provide firm transmission service from Rodemacher Unit 2 to the City's interconnection points with Cleco.

Transmission substation facilities are at 230 kV, 138 kV, and 69 kV. The 230 kV transmission system includes 16 miles of line with interconnections to Cleco and Entergy. The 138 kV system equipment at the Doc Bonin Plant Substation connects to Entergy, as well as autotransformers to the 230 kV and 69 kV busses. The 69 kV transmission system consists of 28 miles of line. Fourteen distribution substations serve the 82 feeders on the LUS 13.8 kV distribution system.

Existing transmission circuits are on a range of structure types including wood poles and steel towers. Typical new transmission circuits will use galvanized steel poles. There were no transmission circuit improvements in 2015.

The 979 miles of distribution include 474 miles of overhead and 505 miles of underground lines (13.8 kV). Overhead distribution poles are primarily creosote-treated southern yellow pine, with light-duty steel poles for corners or areas where guying is not possible. Distribution circuit improvements in 2015 included:

- Completed feeders out of La Neuville Substation.
- Completed a feeder for Costco Development out of Flanders Substation.
- Finished replacing getaway cables at Flanders and Elks Substations.

All distribution facilities serving new subdivisions and commercial developments are underground. New underground cable is typically aluminum. All underground cable is

installed in conduit with the exception of segments purchased from the local cooperative utility, SLEMCO. LUS is not aggressively pursuing conversion of overhead to underground facilities due to the significant costs incurred for the conversion.

The transmission and distribution systems utilize dedicated fiber optic cables for secure communication and protection. Distribution capacitor bank controls and recloser controls are connected to the operations center via the fiber system.

## 4.3 Advanced Metering Infrastructure

LUS has completed the implementation of an AMI for its electric customers. It is also piloting a new project utilizing the existing Elster AMI to determine how customers may interact in real time with the Electric System. In 2015, LUS began integrating the AMI data into new planning and system modeling software to analyze distribution system performance in order to optimize investment in improvements.

In addition to the AMI metering system, the top 10 commercial customer meters are tested annually and new meters are spot checked upon receipt.

## 4.4 Historical Capital Improvement Program

LUS uses a capital work order system to track capital expenses. The historical capital shown in Table 4-20 reflects investment in infrastructure funded by the Series 2010 Bonds and retained earnings. The Series 2010 Bonds were issued for multiple projects including the Acadiana Load Pocket transmission project and AMI projects.

Table 4-20
Electric System
Historical CIP

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Normal Capital & Special Equipment | $3,514,410 | $1,538,740 | $5,613,028 | $5,115,415 | $6,418,252 |
| Series 2010 Bonds | 12,631,493 | 20,351,646 | 11,129,481 | 4,138,917 | 3,225,065 |
| Retained Earnings | 3,091,059 | 2,656,008 | 2,680,489 | 7,928,337 | 4,284,528 |
| Total Electric Capital | $19,236,961 | $24,546,394 | $19,422,998 | $17,182,668 | $13,927,846 |

Source: LUS, Status of Construction Work Order Reports

## 4.5 Operations and Related Performance

LUS is a member of MISO, which provides reliability and wholesale market grid operation for interconnected utilities in the Midwest region of the U.S. LUS is a Local Balancing Authority within the MISO Balancing Authority footprint.

Prior to 2014, transmission congestion issues negatively affected LUS operations. These issues included requirements to run a portion of the T. J. Labbé and Hargis-Hébert Plant's combustion turbines without market-competitive reimbursement. The completion of a significant

transmission project with Cleco and Entergy in 2012, as well as the transition to MISO control and scheduling in 2013, have effectively eliminated transmission congestion issues to date, including curtailments and reduced requirements to run local generation.

TEA is registered as LUS' Market Participant in MISO and was instrumental in smoothing the transition to MISO and successful integration. TEA develops strategies for energy market participation to be evaluated and approved by LUS, as well as provides feedback on how the selected strategies worked compared to alternative strategies.

## Reliability

System Operations staff and policies regarding system reliability and asset maintenance and replacement are proactive and consistent.

Reliability metrics (Institute of Electrical and Electronics Engineers (IEEE) Standard 1366-2012 – IEEE Guide for Electric Power Distribution Reliability Indices) are calculated for the entire distribution system as well as individual substations and feeders, including:

- System Average Interruption Duration Index (SAIDI) – indicates the total duration of interruption for the average customer during a predefined period of time.
- System Average Interruption Frequency Index (SAIFI) – indicates how often the average customer experiences a sustained interruption over a predefined period of time.
- Customer Average Interruption Duration Index (CAIDI) – represents the average time required to restore service over a predefined period of time.
- Momentary Average Interruption Frequency Index (MAIFI) – indicates the average frequency of momentary interruptions over a predefined period of time. Momentary interruptions are defined by industry standards as being less than five minutes in duration.

Table 4-21
Electric System
LUS Reliability Indices – Calendar Year

| Year | SAIDI (1) | SAIFI | CAIDI (1) | MAIFI |
|---|---|---|---|---|
| 2011 | 44.5 | 1.02 | 43.5 | 0.84 |
| 2012 | 43.9 | 0.87 | 50.3 | 1.05 |
| 2013 | 30.5 | 0.66 | 46.0 | 0.96 |
| 2014 | 61.4 (3) | 0.97 (3) | 63.2 (3) | 0.93 (3) |
| 2015 | 49.5 | 0.88 | 56.1 | 0.93 |
| National Median (2) | 120-130 | 1.2 | 100-108 | NA |

(1) Minutes per year.
(2) Approximate, as reported from 2000–2009 in LBNL-5268E, Ernest Orlando Lawrence Berkeley National Laboratory, "An Examination of Temporal Trends in Electricity Reliability Based on Reports from U.S. Electric Utilities," Eto, J. H., LaCommare, K. H., Larsen, P., Todd, A., Fisher, E., January 2012.
(3) Vehicle Accidents (57), 1.3M customer minutes (34% overall of customer-minutes).

LUS performance on all four reported indices is consistent and significantly better than the typical median performance reported by utilities across the nation from 2000–2009. Performance improved in 2015 over 2014, reflecting continuing operations and a decrease in externally caused outages, such as vehicle crashes, which are not within the utility's control.

In 2012, LUS began utilizing the fiber connections from the Communications System to monitor its electric system, allowing it to immediately detect power outage occurrences and locations. This initial version of the LUS outage detection system enabled LUS operators to more quickly detect power outages and more accurately direct field personal to the location of the cause of the outage. Utilization of this technology has significantly reduced the outage durations, as reflected in improved SAIDI results since that time. The recently installed AMI (Smart Grid) includes an additional Outage Management System (OMS) offering additional features, such as notification of customers by phone, text or email as to outage occurrences and estimated time for restoration of power. This advanced system will also alert customers to dramatic increases in consumption of utility services, due to water leaks or other uncharacteristic use. The utilization of technology is a key element to maintaining and improving LUS' customer satisfaction levels.

LUS has adopted a direct and prescriptive approach to improving reliability performance: each year the distribution operations group addresses the five worst performing feeders as determined by these reliability indices. Performance issues are pinpointed and addressed, including equipment, tree trimming, covered equipment jumpers, and protection coordination. These feeders are then tracked for the next two years to assess the effectiveness of the improvements.

Customers are more sensitive to "blinks" on feeders as their reliance on the Electric System has evolved. LUS utilizes a fuse burning philosophy to isolate faulted feeder segments and reduce blinks to upstream customers, improving SAIFI performance. Automatic reclosers are applied at large taps and in heavily treed areas to provide sectionalizing capability and automatically restore service in the event of a temporary fault, improving SAIDI values. Transmission line reclosing is applied on some of the 69 kV lines and has been an effective tool for rapid restoration.

LUS contracts with Osmose to inspect and treat wood poles as well as checking ground impedances to ensure reliable operation of the distribution system. All poles holding LUS wires or fiber, including those owned by other entities, are inspected on an eight-year cycle. LUS owned poles are treated or replaced as necessary; other entities owning poles found deficient are notified of those specific issues. Ground impedance is maintained at 5 ohms or less to ensure protective device operation and safe grounding conditions. 1,444 poles were treated, 1,906 poles inspected, and 180 poles replaced in 2015.

Regular, detailed inspection and infrared thermal imaging of underground distribution facilities has been improved with a defined process that was updated in 2014. Main 600 amps switchgear is inspected annually; pad-mount transformers throughout the system and underground distribution feeder cables exiting substations are covered on an eight-year cycle. Nine distribution feeders were imaged in 2015, including inspection of all underground components, 793 transformers, and 80 primary cabinets. This inspection work generated 22 work orders for repairs, 20 of which were completed in FY 2015.

Distribution substations, including transformers and transmission equipment, are visually inspected monthly. Substation transformers are assessed by Doble Engineering (Doble) on a

periodic basis. Doble provides recommendations for determining and extending useful life or replacing units. Streetlights are presently being relamped on a four-year program.

Maintenance work is performed by in-house crews, ensuring consistency and detailed knowledge of the system. Pole climbing is taught and required of line crewmembers. O&M rolling stock and equipment on average are replaced after 10 years in service.

New construction is typically performed by contractors, providing an efficient, project-centered approach that allows LUS to maintain consistent in-house staffing levels. Contractors are approved for a two-year period, then go through a refresher training program to be eligible for the next two-year period.

The City is divided into zones for vehicle assignments for greater efficiency in normal work management. A work management system creates service tickets for changing out, adding, or removing physical equipment during normal conditions.

The Distribution System Dispatch Center (Dispatch Center) is responsible for addressing customer calls and dispatching and tracking crews. The Dispatch Center utilizes an Elster AMI system as the primary means for detecting and tracking outages, supplemented with customer call tracking. LUS' OMS is overlaid on the City's Geographic Information System (GIS) and creates outage tickets for crew assignments. Crew locations are tracked with truck-mounted GPS, enabling the dispatchers to adjust quickly to changing conditions with real time information. The OMS tracks outage locations over time to prioritize maintenance/replacement work and determine system reliability indices.

Overhead and underground rights-of-way are managed by a full-time arborist. This individual is responsible for managing all live oaks as well as general tree-trimming and right-of-way clearing. Distribution system tree-trimming is on a four-year cycle, covering approximately 100 line miles per year. The 230 kV transmission system is completely covered on an annual basis; the 69 kV system is reviewed and addressed on an "as best as possible" basis.

## Safety

Each division within the Electric System has a safety representative and full support from upper management. A separate group evaluates all incidents to report on causes and measures to improve safety. LUS has adopted the APPA Safety Manual. A new fall arrest safety program commenced in March 2015.

Operations' analysis indicates that evacuation of LUS facilities and yards may be necessary in the event of a serious train incident adjacent to the main office. LUS is working to establish a remote site in the City for alternate system operations, equipment staging, and material storage to address this contingency.

## SCADA System

The Dispatch Center is responsible for addressing customer calls, dispatching, and tracking crews. The Dispatch Center utilizes the Elster AMI system as the primary means for detecting and tracking outages, supplemented with customer call tracking. The OMS tracks outage locations over time to prioritize maintenance/replacement work and determine system reliability indices.

The Energy Control System (ECS) monitors assets from each of the Utilities' services including 14 electric substations, 2 water wells, 5 water towers, and approximately 30 sewer lift stations. LUS is planning to fully integrate all lift stations with the supervisory control and data acquisition (SCADA) system as approximately 90 stations are near or have fiber run to the equipment.

The fully redundant SCADA system relies on the original fiber network LUS installed and used to provide communications services to customers in the City. The SCADA system utilizes a dedicated, isolated, and secure network on the fiber ring including dedicated hardware and software. Additional security measures on the SCADA system include periodic maintenance based on North American Electric Reliability Corporation (NERC) requirements and constant monitoring. External connections are made through dedicated switches including firewalls with all computers connected to the network monitored for intrusion. The Back-up Control Center (BCC) includes all EMS, SCADA, and associated equipment required for emergency operation or loss of the main ECS. The BCC is served by back-up, emergency power systems including an engine generator and uninterruptible power supplies (UPS), which are exercised and tested monthly to ensure reliability.

SCADA system updates in 2015 included:

- Addition of equipment for secure remote connections for all virtual private network (VPN) traffic to the SCADA EMS Network.
- Upgraded to Nexpose for all security patching and change control NERC CIP processes.
- Added new firewalls that support integrated Sourcefire IDS/IPS.
- Implemented new NERC CIP processes for version 5 and identified Bulk Electric System (BES) Cyber Assets. Added new server and laptop for maintenance of newly identified BES Cyber Assets.
- Began process with LUS Fiber to add new networking equipment to ensure redundancy at all of LAFA's substation RTUs.

### System Security

In addition to cyber security discussed below, LUS physical security includes the use of security cameras, card swipes, and key pads at critical facilities. In 2015, LUS:

- Expanded the Physical Security Perimeters for newly identified BES Cyber Assets.
- Moved the MISO XML listener to a more secure location within LUS' Electronic Security Perimeter.

## 4.6 Regulatory and Environmental Compliance and Issues

The Electric System's most recent NERC audit in the fall of 2014 was successful and did not indicate any violations of applicable NERC standards. Southwest Power Pool (SPP) is LUS' compliance enforcement authority.

Individual personnel are assigned to the following categories within the LUS compliance division: 1) NERC compliance; 2) Spills, spill prevention control and countermeasure plans, and

remediation; and 3) air quality. Compliance staff are provided education and training, as standards are updated/created; and the staff participates in NERC reliability conferences.

Specific NERC Protection and Control (PRC) compliance is scheduled and tracked by LUS on Microsoft SharePoint, a web-based document management system. An outside consultant assists LUS with verification of the applicability of the various standards, while LUS maintains in-house Subject Matter Experts (SME). All compliance processes and procedures are prepared by the SMEs.

LUS has established Policies, Guidelines, and Procedures (PGPs) that comply with testing and maintenance requirements set forth by NERC standards. LUS policy is for SMEs to perform periodic review of the PGPs in order to keep the testing and maintenance practices in line with changing standards.

LUS has established PRC testing intervals for substation and transmission line equipment including: microprocessor relays every five years; electromechanical relays every two years; high voltage circuit breakers every five years; power transformers every five years; and station battery systems every week, month, quarter, year, with a five-year load test.

### Permits and Approvals

All environmental permits and related regulatory impacts for the LUS and LPPA owned power generation plants were discussed previously within this Section.

## 4.7 Contracts

In addition to interconnection agreements for transmission services, fuel supply arrangements mentioned above, and LUS' membership in MISO as a market participant, LUS maintains a number of contracts and agreements important to its day-to-day utility operations. Among the day-to-day operations contracts are agreements relating to maintenance of key equipment, testing services, customer acquisitions, and certain analysis functions.

Table 4-22
Utilities System
Contracts and Agreements

| Contracts & Agreements Between | Date Signed/Renewed | Termination Date | Provisions |
|---|---|---|---|
| LPPA – Cleco, LEPA | November 15, 1982 | June 30, 2032 or end of useful life | Joint ownership of Rodemacher Unit 2 |
| 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 |
| LCG – Cleco | 1991 | August 29, 2021 (1) | Interconnection agreement for delivery of power |

Table 4-22
Utilities System
Contracts and Agreements

| Contracts & Agreements Between | Date Signed/Renewed | Termination Date | Provisions |
|---|---|---|---|
| LUS – SWEPCO | May 1, 1994 | Terminated on August 10, 2013 due to joining MISO | Interchange agreement for electric transmission. |
| LCG – LPPA | May 1, 1997 | August 31, 2047 or when Bonds have been paid | Purchase of power from LPPA's 50% share in Rodemacher Unit 2 |
| LUS – Cloud Peak Energy | December 11, 2002 | Upon 180 days' notice | Purchase of coal for Rodemacher Unit 2 |
| LCG – Southwestern Power Administration (SPA) | January 1, 2004 | May 31, 2018 | Purchase of Hydro Power |
| LUS – SLEMCO | September 10, 2004 | September 10, 2019 | Customer acquisition agreement |
| LUS – Peabody Coalsales, LLC | November 7, 2007 | 60 days written notice | Purchase of coal for Rodemacher Unit 2 |
| LUS – Arch Coal Sales, Inc. | August 4, 2009 | Upon 30 days' notice | Purchase of coal for Rodemacher Unit 2 |
| TEA – Crosstex | January 1, 2010 | Month-to-month | Emergency supply of natural gas for LUS generating facilities |
| LUS – GE | May 1, 2012 | December 31, 2018 | CT Maintenance Services |
| LCG – Entergy Gulf States | June 22, 2012 | June 21, 2032 | Interconnection agreement for delivery of power |
| LCG – MISO | December 26, 2012 | 2 years from Effective Date, thereafter 1 year terms | Agreement between Local Balancing Authorities and MISO |
| LCG – Other Transmission | January 4, 2013 | Coincides with MISO Owners Agreement | Supplemental Agreement between Transmission Facilities Owners and MISO regarding Independent System Operator (ISO) services and functions |
| LCG – MISO | February 4, 2013 | Coincides with MISO Owners Agreement | Agency Agreement for Open Access Transmission Service |
| LCG – Other Transmission Facilities Owners | February 4, 2013 | 30 years from the earliest Effective Date for any signatory, thereafter 5 year terms | Agreement of Transmission Facilities Owners to Organize MISO |
| LUS – TEA | June 1, 2013 | Upon 6-months' notice, but not prior to 48 months after the Effective Date | Power and Fuel Marketing |
| TEA – ATMOS | July 1, 2015 | June 30, 2016 (2) | Supply of natural gas for Hargis Hébert Plant facilities |
| LUS – MISO | August 1, 2013 | Upon 30 day notice | Agreement to procure satellite phone link |
| LUS – SPP | August 9, 2013 | Upon mutual agreement | Firm point-to-point transmission service |

Table 4-22
Utilities System
Contracts and Agreements

| Contracts & Agreements Between | Date Signed/Renewed | Termination Date | Provisions |
|---|---|---|---|
| LUS – MISO | September 25, 2013 | 2 years from Effective Date, thereafter 1 year terms | Modeling, Data, and Analysis reliability standards compliance obligations |
| LUS – Other Transmission Facilities Owners | December 10, 2013 | 5 years from Effective Date, thereafter 1 year term | Settlement Agreement between Transmission Owners and MISO on Filing Rights |
| LUS – TEA | March 12, 2015 | May 2016 | 40 MW of capacity from June 2015 – May 2016 |
| LUS – NRG | July 10, 2015 | May 2020 | 40 MW of capacity from June 2015 – May 2016 |
| TEA – ATMOS | August 12, 2015 | June 30, 2016 (3) | Supply of natural gas for Doc Bonin Plant and T. J. Labbé Plant |

(1) Notice of termination was not given within 3 years of initial expiration. Therefore, term was automatically extended for five years.
(2) Automatic 1-year extension.
(3) Evergreen/Rollover provision.

## 4.8 Competition/Benchmarking

LUS' residential electric rates have historically been among the lowest in the state and surrounding region. The following tables and figures compare the average residential and commercial rates for the majority electric providers in the region.

Table 4-23
Electric System
Residential Rate Comparison

| Utility | Average $/kWh (1) |
|---|---|
| LUS | $0.0870 |
| Morgan City | $0.0892 |
| Shreveport (2) | $0.0898 |
| Lake Charles (3) | $0.0929 |
| Baton Rouge (3) | $0.0929 |
| New Orleans (4) | $0.0971 |
| Alexandria | $0.1038 |
| New Iberia (5) | $0.1171 |

Source: LUS as of date 3/15/2016
(1) Based upon 1,000 kWh per month consumption.
(2) Served by SWEPCO.
(3) Served by Entergy Gulf States.
(4) Served by Entergy New Orleans.
(5) Served by Cleco.

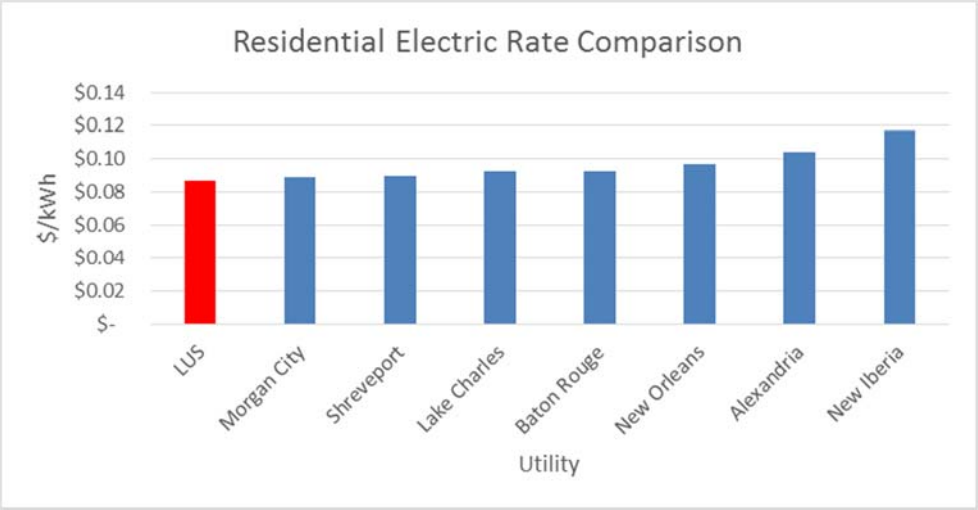


Figure 4-2: Electric System – Residential Rate Comparison

Table 4-24
Electric System
Commercial Rate Comparison

| Utility | Average $/kWh [1] |
|---|---|
| Alexandria | $0.0420 |
| Lake Charles [3] | $0.0766 |
| Baton Rouge [3] | $0.0766 |
| Morgan City | $0.0776 |
| Shreveport [2] | $0.0798 |
| New Orleans [4] | $0.0876 |
| New Iberia [5] | $0.0921 |
| LUS | $0.0930 |

Source: NewGen as of date 3/15/2016

(1) Based upon an average customer of 131 kW demand and 48,144 kWh per month.
(2) Served by SWEPCO.
(3) Served by Entergy Gulf States.
(4) Served by Entergy New Orleans.
(5) Served by Cleco.

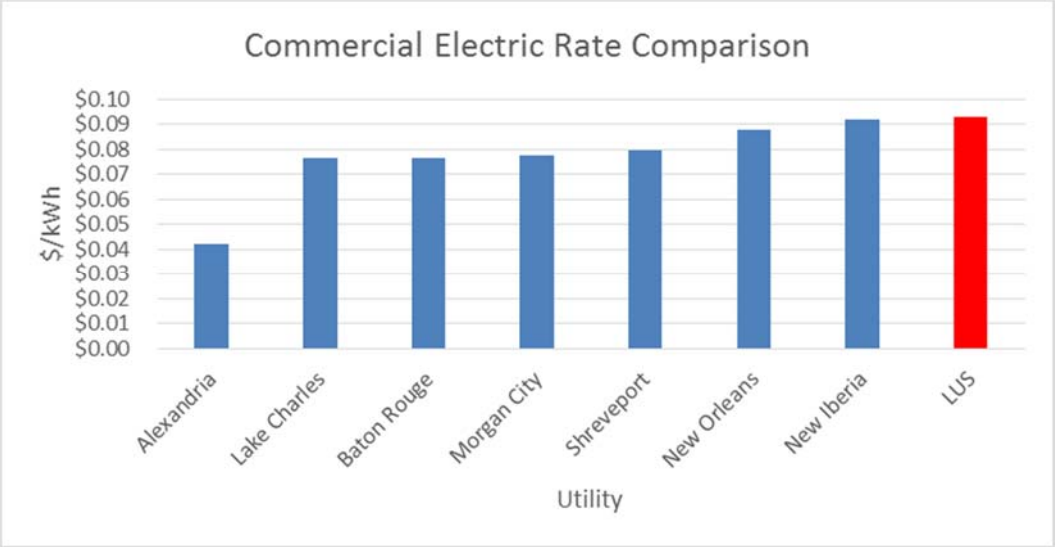


Figure 4-3: Electric System – Commercial Rate Comparison

## Benchmarking Financial and Operating Statistics

Table 4-25 benchmarks selected financial and operating ratios for LUS with other large municipal electric utilities nationwide. The data was provided by the *APPA Financial and Operation Ratios of Public Power Utilities, 2014 Data published November of 2015*. The APPA report contains data based on region of the U.S. and based on the number of electric customers served by the utility. For the purposes of our analysis, we used the Southwest region, which includes Louisiana and hereafter referred to as "Regional." For the customer

range, we used the APPA range of 50,000 to 100,000 customers, hereafter referred to as "National." The results are shown below in Table 4-25. If possible, the comparisons were made based on the Electric System only. However, for some balance sheet items, the comparison was made based on the utility as a whole, including the Water and Wastewater Systems.

LUS' Electric Revenue per kWh and were lower than the National average and equal to the Regional average. LUS' Debt to Total Assets were lower than the National and Regional averages. LUS' total O&M Expenses per kWh sold were lower than the National and Regional averages. Combined, these metrics help illustrate LUS as a financially stable utility with prudent levels of debt, operating efficiently with competitive and often lower retail rates.

LUS' Debt Service Coverage was higher than the National and Regional averages. LUS' Net Income per Revenue Dollar was higher than the National and Regional averages. The DSCR and net income metrics further illustrate LUS' financial stability and health.

Table 4-25
Electric System
Benchmarked Electric Utility Operating Ratios

| Statistics | Basis | National | Regional | LUS | |
|---|---|---|---|---|---|
| | | 2014 | 2014 | 2014 | 2015 |
| Revenue per kWh – All Retail Customers | Elec | $0.104 | $0.087 | $0.097 | $0.087 |
| Debt to Total Assets | Total LUS | 0.490 | 0.442 | 0.369 | 0.378 |
| Operating Ratio (Electric specific) | Elec | 0.785 | 0.866 | 0.729 | 0.714 |
| Current Ratio | Total LUS | 2.8 | 3.54 | 2.6 | 2.5 |
| Times Interest Earned | Elec | 1.8 | 2.3 | 8.0 | 6.7 |
| Debt Service Coverage | Elec | 2.4 | 2.8 | 3.3 | 3.2 |
| Net Income per Revenue Dollar ($) | Elec | $0.0190 | $0.0540 | $0.0896 | $0.0763 |
| Uncollectible Accounts per Revenue Dollar ($) | Total LUS | $0.0017 | $0.0023 | $0.0048 | $0.0045 |
| Total O&M Expense per kWh Sold | Elec | $0.0790 | $0.0700 | $0.0726 | $0.0634 |
| System Load Factor | Elec | 55% | 58% | 52% | 50% |

## 4.9 Historical Financial Performance

Electric System debt service includes the Series 2010 Bonds and Series 2012 Bonds. Table 4-26 shows historical debt service and the associated DSCR. The DSCR exceeds the minimum requirement of 1.0.

Table 4-26
Electric System
Historical Debt Service Coverage

| Year | Operating Revenues (1) | Operating Expenses (2) | Balance Available for Debt Service | Debt Service (3) | Debt Service Coverage Ratio |
|---|---|---|---|---|---|
| 2011 | $190,901,871 | $153,771,698 | $37,130,173 | $9,985,087 | 3.7 |
| 2012 | $174,890,121 | $137,884,929 | $37,005,192 | $10,740,043 | 3.4 |
| 2013 | $188,071,217 | $140,161,855 | $47,909,362 | $16,497,762 | 2.9 |
| 2014 | $201,891,247 | $147,087,876 | $54,803,370 | $16,852,621 | 3.3 |
| 2015 | $182,044,163 | $130,006,922 | $52,037,241 | $16,500,796 | 3.2 |

Source: LUS Financial and Operating Statements, audited
(1) Includes interest income and other miscellaneous income.
(2) O&M and other expenses include customer service, and administrative and general costs. Operating expenses do not include ILOT normal capital and special equipment, and other miscellaneous expenses.
(3) Debt service includes the Series 2004 Bonds, Series 2010 Bonds, and Series 2012 Bonds.

### Rate Structure

The Electric System rate structure includes base rates (customer, demand, and energy charges) and a pass through rate, the FC. The Electric System services customers inside the City limits and outside of the City limits.

#### Base Rates

The Electric System customer classes include residential, commercial, industrial, schools and churches, street lights, and special contract customers. All customers are charged a monthly Customer or Service Charge, Energy Charge, and the FC. Large customers are also charged a demand charge.

#### Fuel Charge

The monthly FC (Schedule FC) continues on a month-to-month basis until the Utilities Director determines eligible costs warrant an adjustment to the current charge.

Schedule FC passes fuel, purchased power, and other eligible costs directly to customers. This mechanism protects LUS from the financial risk associated with unforeseen and potentially detrimental volatility in power costs that may be associated with the MISO market.

Currently, all operating expenses associated with environmental compliance, fuel, and purchased power are included in the FC and passed through to customers. The FC includes

the following items: MISO market purchases less market sales, transmission associated with purchased power, LPPA fuel and fuel handling costs, LPPA rail car debt service, LPPA MATS debt service, LPPA MATS O&M, LPPA reagents, LUS fuel costs, hydro purchased power contract, and TEA costs.

As of the end of FY 2015, LUS has collected revenues through the FC in excess of eligible costs by approximately $12.5 million. During FY 2015, Ordinance No. O-078-2015 directed LUS to return up to $4.0 million of the excess revenue.

Table 4-27
Electric System
Rate Schedules

| Rate Class | Serves | Effective Date | Customer Charge ($/month) | Demand Charge ($/kW) | Non Fuel Energy Charge ($/kWh) |
|---|---|---|---|---|---|
| R-1 | Residential | Nov 2010 | $6.00 | $0.00 | $0.04010 |
| R-1-O | Residential Non-City | Nov 2010 | $6.60 | $0.00 | $0.04411 |
| C-1 | Small Commercial | Nov 2010 | $10.00 | $0.00 | $0.05710 |
| C-2 | Large Commercial | Nov 2010 | $50.00 | $8.50 | $0.01892 |

Source: LUS Rate Schedules

## Revenue Analysis

Table 4-28 shows the historical revenue collected from base rates and the FC. The FC is adjusted as needed to recover the fuel and purchased power costs. As shown below, the base rate revenue is relatively stable on a per kWh basis, while the FC revenue fluctuates. Figure 4-4 shows the historical revenues on a per kWh basis.

Table 4-28
Electric System
Historical Base Rate and Fuel Charge Revenue Detail

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Revenues | | | | | |
| Retail Sales- Base Rate | $90,791,982 | $88,556,974 | $88,860,207 | $91,749,309 | $92,626,681 |
| Retail Sales- Fuel Charge | 87,783,625 | 76,824,304 | 93,158,373 | 105,375,603 | 84,910,901 |
| Total | $178,575,608 | $165,381,279 | $182,018,580 | $197,124,912 | $177,537,582 |
| Energy Sales | | | | | |
| Retail Sales (MWh) | 2,024,762 | 1,970,448 | 1,979,136 | 2,027,115 | 2,050,434 |
| Revenue per kWh | | | | | |
| Retail Sales- Base Rate | $0.0448 | $0.0449 | $0.0449 | $0.0453 | $0.0452 |
| Retail Sales- Fuel Clause | 0.0434 | 0.0390 | 0.0471 | 0.0520 | 0.0414 |
| Total | $0.0882 | $0.0839 | $0.0920 | $0.0972 | $0.0866 |

Source: LUS Financial and Operating Statements, audited


Figure 4-4: Electric Base Rates and FC Revenues per kWh of Sales

## Electric Revenue Statistics

Table 4-29 shows the Electric System base rate revenues. Since 2011, the increase in total retail base rate revenues has average 0.5% annually.

The number of customers has consistently increased at approximately 0.9% per year with the highest customer growth in the Commercial customer class. The revenue per customer since 2011 has decreased at approximately 0.4% per year driven by lower FC related costs and revenues.

The total retail energy sales have remained relatively flat with 0.3% average annual growth. The energy sales per customer on average decreased by 0.6% per year. The residential class

has decreased their usage per customer on average by 1.2% per year. Increases in appliance efficiency and energy conservation measures contribute to this decrease and reflect broader energy and electric utility trends in the U.S.

The revenue per kWh has remained relatively flat since 2011.

Table 4-29
Electric System
Base Rate Revenue Statistics

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Revenues | | | | | |
| Residential | $37,969,742 | $36,284,670 | $36,401,598 | $37,712,108 | $37,788,166 |
| Commercial | 45,510,019 | 44,985,738 | 45,049,339 | 46,520,135 | 47,192,693 |
| Schools & Churches | 4,449,242 | 4,499,240 | 4,609,317 | 4,669,261 | 4,817,122 |
| Other | 2,862,980 | 2,787,327 | 2,799,952 | 2,847,805 | 2,828,700 |
| Total | $90,791,982 | $88,556,974 | $88,860,207 | $91,749,309 | $92,626,681 |
| Number of Customers | | | | | |
| Residential | 52,481 | 52,788 | 53,309 | 53,884 | 54,345 |
| Commercial | 8,684 | 8,734 | 8,799 | 8,972 | 9,092 |
| Schools & Churches | 477 | 498 | 506 | 507 | 494 |
| Other | 1,889 | 1,891 | 1,881 | 1,900 | 1,916 |
| Total | 63,531 | 63,911 | 64,496 | 65,262 | 65,847 |
| Revenue per Customer | | | | | |
| Residential | $724 | $687 | $683 | $700 | $695 |
| Commercial | 5,240 | 5,151 | 5,120 | 5,185 | 5,191 |
| Schools & Churches | 9,321 | 9,033 | 9,111 | 9,217 | 9,759 |
| Other | 1,515 | 1,474 | 1,488 | 1,499 | 1,476 |
| Total ($/Customer) | $1,429 | $1,386 | $1,378 | $1,406 | $1,407 |
| Sales (kWh) | | | | | |
| Residential | 851,273,220 | 806,919,488 | 813,690,008 | 840,540,908 | 840,719,003 |
| Commercial | 1,003,009,524 | 991,742,866 | 987,001,925 | 1,009,864,890 | 1,030,069,827 |
| Schools & Churches | 112,504,779 | 115,467,953 | 122,095,405 | 118,426,044 | 123,668,657 |
| Other | 57,974,454 | 56,317,996 | 56,348,166 | 58,282,823 | 55,976,902 |
| Total | 2,024,761,977 | 1,970,448,303 | 1,979,135,504 | 2,027,114,665 | 2,050,434,389 |
| Sales (kWh) per Customer | | | | | |
| Residential | 16,221 | 15,286 | 15,264 | 15,599 | 15,470 |
| Commercial | 115,495 | 113,551 | 112,170 | 112,556 | 113,295 |
| Schools & Churches | 235,694 | 231,825 | 241,335 | 233,774 | 250,553 |
| Other | 30,688 | 29,776 | 29,950 | 30,681 | 29,210 |
| Total | 31,870 | 30,831 | 30,686 | 31,061 | 31,139 |
| Revenue per kWh | | | | | |
| Residential | $0.0446 | $0.0450 | $0.0447 | $0.0449 | $0.0449 |
| Commercial | 0.0454 | 0.0454 | 0.0456 | 0.0461 | 0.0458 |
| Schools & Churches | 0.0395 | 0.0390 | 0.0378 | 0.0394 | 0.0390 |
| Other | 0.0494 | 0.0495 | 0.0497 | 0.0489 | 0.0505 |
| Total ($/kWh) | $0.0448 | $0.0449 | $0.0449 | $0.0453 | $0.0452 |

Source: LUS Financial and Operating Statements, audited

## Expense Analysis

Table 4-30 below shows the historical electric operating expenses separated between fixed and variable expense. Variable operating expenses include fuel cost, LPPA fuel cost, and purchased power. Fixed operating expenses include fixed production expenses, transmission, distribution, customer service, and administrative and general expenses. Historically, the variable expenses have averaged 57% of the total expenses. Figure 4-5 shows the historical breakdown graphically.

Table 4-30
Electric System
Historical Fixed and Variable Expense Summary

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Variable Expenses | | | | | |
| Fuel Cost - LUS | $43,803,924 | $18,535,522 | $11,562,524 | $1,906,092 | $985,639 |
| Purchased Power Other | 9,415,304 | 16,705,045 | 24,477,797 | 4,720,733 | 3,493,850 |
| Purchased Power LPPA Fuel | 40,968,583 | 42,059,893 | 42,482,048 | 37,201,705 | 33,966,979 |
| Purchased Power MISO | 0 | 0 | 0 | 79,392,491 | 62,181,834 |
| Purchased Power MISO Sales | 0 | 0 | 0 | (39,221,191) | (29,667,313) |
| Total Variable - Production | $94,187,811 | $77,300,461 | $78,522,369 | $83,999,830 | $70,960,989 |
| Fixed Expenses | | | | | |
| Production - Fixed | $32,917,284 | $30,896,771 | $30,789,894 | $29,573,186 | $25,947,482 |
| Transmission | 5,794,629 | 5,791,094 | 6,601,198 | 7,543,561 | 7,405,920 |
| Distribution | 8,173,816 | 9,431,893 | 10,118,173 | 11,042,653 | 11,899,551 |
| Customer | 2,794,579 | 3,237,859 | 2,889,502 | 2,807,800 | 2,744,901 |
| A&G | 9,903,580 | 11,226,852 | 11,240,720 | 12,120,845 | 11,048,079 |
| Total Fixed | $59,583,887 | $60,584,469 | $61,639,487 | $63,088,046 | $59,045,932 |
| Total Fixed & Variable | $153,771,698 | $137,884,929 | $140,161,855 | $147,087,876 | $130,006,922 |
| Percent Variable | 61% | 56% | 56% | 57% | 55% |
| Percent Fixed | 39% | 44% | 44% | 43% | 45% |

Source: LUS Financial and Operating Statements, audited

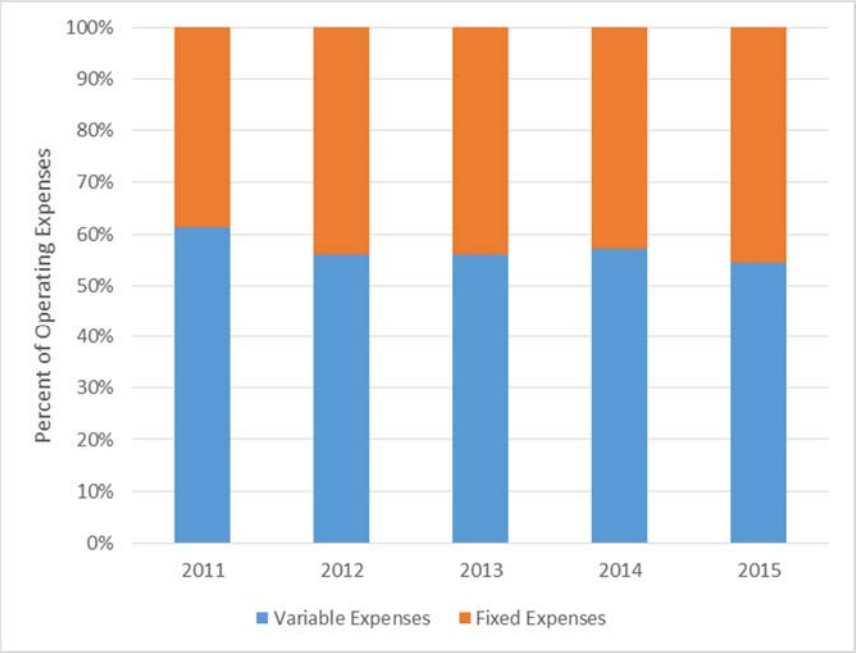


Figure 4-5: Fixed and Variable Breakdown of LUS Expenses

### Recovery of Costs

Fixed and variable costs are recovered through the rates charged to customers. Customers are charged fixed base rates including a customer charge and demand charge. Customers are also charged variable rates including the energy rate and the FC pass through rate.

Based on the 2015 billing data provided by LUS, the customer, demand, energy, and FC collected approximately $6 million, $19 million, $65 million, and $82 million, respectively. Although approximately 43% of LUS' costs are fixed over the five-year average in Table 4-30, only 14% of revenues are collected through fixed charges. Approximately 86% of retail revenues are recovered through variable rates.

## 4.10 Findings and Recommendations

- The Doc Bonin and the Curtis Rodemacher plants are currently economically obsolete. Curtis Rodemacher Plant has been retired for several years and decommissioning efforts have been initiated in the past. Doc Bonin Plant is currently not operating and has been designated as a power station in economic suspension within MISO. In anticipation of the cost associated with fully decommissioning both power stations, LUS should establish a decommissioning reserve to cover the future costs of dismantling these units. Reserve requirements and annual funding of such a reserve would be based on a decommission study. LUS should conduct a decommission study as the basis for funding the reserve and include the costs in the planned 2016 rate study.
- LUS' Electric System is highly reliable with reliability indices (i.e. SAIDI/SAIFI) significantly lower than the national average for electric utilities.
- Historically, the Utilities System CIP has been sufficient to sustain and improve the integrity and reliability of the system. The current CIP reflects certain deferred projects,

which are not expected to have a material impact on the sufficiency of the CIP to maintain system reliability.

- As the Electric System became a MISO participant in December 2013, it has significantly benefited and improved LUS' power supply economics, operations, reliability, and eliminated prior transmission constraint issues. LUS has also realized greater flexibility in dispatching Rodemacher Unit 2 and its overall power supply mix.
- The organizational structure and management in the Electric System engineering and operations areas continue to facilitate staff empowerment, offer employees additional responsibilities, and encourage career growth.
- A consistent approach to addressing the issue of replacing retirees and their knowledge base is key to the future success of the utility. Unfortunately, the problem is widespread for utilities across the country, further reducing the pool of available, qualified personnel. LUS is also constrained by civil service policies and therefore lags the competition in salaries. Compared with the regional oil and gas industry, LUS' advantages come down to job stability, location, quality of life, and home time.
- In terms of eliminating or re-allocating vacant positions, a personnel "slot" can move laterally or be down-graded within a utility division without Council approval. However, any reorganization (reducing plant manning, for example) requires civil service and Council approval. As a result, LUS may be limited and less flexible in hiring staff as needed in response to market changes or customer needs.
- Important needs for staffing continue to include high voltage linemen, with five apprentice positions presently open; as of October 31, 2015, the ECS/NERC training coordinator position was filled, which is critical to keeping staff up to date on compliance and safety issues.
- Even with the deferral of capital projects in the 2015 Budget, operations personnel are confident that they can prioritize and address all critical capital items in that period.
- LUS management assigns a high priority to environmental and regulatory compliance and is very approachable by compliance staff.
- Due to LUS joining MISO, historical budgeting and planning tools are no longer useful. The Power Marketing group has a current need for new more sophisticated tools that will support the development of long-term forecasts and plans that project the dispatch of LUS power resources and LUS power costs. This need could be addressed by support from outside consultants on a periodic basis
- LUS' Electric System operating, expense, debt, revenue, and related ratios reflect a financially stable and healthy utility that is currently offering competitive, lower than market average rates.
- Electric System revenue collection mechanisms are misaligned with the cost structure. While approximately 43% of LUS' costs are fixed over the five year average, only 14% of revenues are collected through fixed charges. Approximately 86% of retail revenues are recovered through variable rates. Although this misalignment has been historically common in the industry, many utilities are pursuing strategies that improve the collection of fixed cost through rates. These strategies reflect market trends where end-users become increasingly interested in renewable energy alternatives and energy

conservation. Historically LUS customers' interest in renewable energy alternatives and energy conservation has been limited, but this could change over time. Therefore, we recommend that in future rate proceedings, LUS improve fixed cost recovery mechanisms in its Electric System rate structure.

# SECTION 5
# WATER SYSTEM

LUS provides potable water to approximately 55,109 residential, commercial, industrial, and wholesale customer accounts. LUS' responsibilities include raw water supply, water treatment, transmission, and distribution of finished potable water, metering, and sales. LUS obtains all of its raw water supply needs from the Chicot aquifer. The Water System includes two water treatment facilities, 20 wells, elevated and ground treated-water storage, and 1,112 miles of distribution piping.

Water System total sales in 2015 were 1.4% higher than 2014, driven by an increase in wholesale water sales. Historical Water System volume sales are show in Table 5-1.

Table 5-1
Water System
Historical Retail and Wholesale Sales

| Year | Retail Sales (1,000 gallons) | Wholesale Sales (1,000 gallons) | Total Sales (1,000 gallons) |
|---|---|---|---|
| 2011 | 5,826,291 | 1,846,090 | 7,672,381 |
| 2012 | 5,743,099 | 1,858,479 | 7,601,578 |
| 2013 | 5,494,648 | 1,893,375 | 7,388,023 |
| 2014 | 5,426,408 | 2,004,355 | 7,430,763 |
| 2015 | 5,419,758 | 2,116,545 | 7,536,303 |

Source: LUS Financial and Operating Statements, audited

## 5.1 Water Supply

LUS' sole raw water supply is the Chicot aquifer, a confined aquifer that supplies water for public water systems (14%); aquaculture (17%); irrigation (58%); and industry, power generation, and other uses (11%). The Chicot aquifer is designated as a "sole-source" aquifer for all or parts of 15 parishes in Louisiana and parts of Texas. The Chicot aquifer is designated a sole source by the U.S. EPA, thus, special consideration for federal permitting of projects that could adversely affect it are required.

Studies conducted by the LDEQ indicate that the water quality of the Chicot aquifer generally does not exceed the maximum contaminant levels (MCL) for pollutants listed in the federal primary drinking water standards. The Chicot raw water supply is treated by multi-step purification process at water treatment facilities that are monitored 24-hours a day by LUS operators, and certified by Louisiana Department of Health and Hospitals (LA DHH) to ensure that all water delivered to its customers is safe to drink, and is of acceptable secondary quality.

## 5.2 Water Treatment and Production

The Water System includes 2 water treatment facilities (the South and North Water Treatment Plants), and a total of 20 ground water wells to provide raw water for treatment, as well as supplemental volume and pressure to the system. The South Water Plant (SWP) has a capacity of 24 million gallons per day (MGD) and the North Water Plant (NWP) has a capacity of 21.5 MGD. Both the NWP and SWP use coagulation, sedimentation, and filtration to remove iron and manganese with lime-softening for hardness reduction and hypochlorite for finished water disinfection. Table 5-2 shows the Water Treatment Capacity by facility.

Table 5-2
Water System
Treatment Facilities(1)

| Facility | Capacity (MGD) (1) |
|---|---|
| North Water Plant | 20.8 |
| South Water Plant | 23.0 |
| Well No. 23 | 1.4 |
| Well No. 24 | 1.5 |
| Well No. 25 | 2.2 |
| Well No. 26 | 2.1 |
| Total Plant Capacity | 51.0 |
| Total Effective Plant Capacity | 31.4 (2) |

Source: LUS
(1) Plant treatment capacity is less than total well production capacity.
(2) Highest recorded production.

Sixteen deep well pumps located at the SWP and NWP provide the raw water supply for treatment at both facilities. The remaining four pumps are located remote from the treatment plants and provide additional volume and pressure to the system. Each well has a surface-mount motor and is tested and inspected for pumping capacity and drawdown once per year. Each well is also dismantled and inspected for the operational condition of the pumps, motors, line shafts, line bearings, and condition of the casing. These tests are conducted by an independent private contractor.

Water Well Nos. 24 and 26, located at the Gloria Switch remote site, provide supplemental volume and pressure to the northern end of the distribution system. Treatment at this site consists of application of potassium permanganate followed by six pressure filters, and hypochlorite is added for disinfection. Finished water is stored in a ground storage tank and delivered to the system with high-service pumps.

Water Well Nos. 23 and 25, located at the Commission Boulevard remote site, provide additional volume and pressure to the wholesale users on the Southern end of the distribution system including Broussard, Youngsville, and Milton. The Commission Boulevard site also includes the Fabacher Field re-boost facilities consisting of a 2.0 million gallon (MG) ground storage tank and high service pumps that are used to improve pressure conditions at the outer

limits of the distribution system. Treatment at the Commission Boulevard site is currently limited to the addition of a polymer to serve as a sequestering agent, and hypochlorite generation facilities to provide disinfection. Water Well Nos. 23 and 25 have a high amount of naturally occurring ammonia, and LUS has purchased approximately eight acres adjacent to this site for the construction of ammonia removal facilities. Design and construction of these additional facilities is included in the LUS five-year CIP.

Water production facilities are provided with on-site backup electric generation facilities that are adequate to sustain an acceptable level of water production in the event of power failures or other catastrophic events. The SWP is equipped with full power generation capacity capable of maintaining full production output, while the NWP is equipped sufficiently to provide approximately 60% of production output.

## 5.3 Water Distribution and Storage

The water distribution system consists of 1,112 miles of pipe and the treated water storage totals approximately 15.25 MG. LUS also utilizes the Communications System assets and fiber connections to manage, monitor, and control the water flows and storage volumes on the Water System. The treated water storage includes 4.3 MG of elevated storage and 10.95 MG of ground storage, including finished water and booster pumping station clear wells. LUS is currently evaluating the need for additional water storage facilities on the north end of the distribution system to provide operational flexibility and support growth. When considering the construction of additional treated water storage capacity, LUS prefers ground storage with high-service pumps over elevated water storage due to increased operational flexibility, and the ability to maintain a more stable chlorine residual. As with other operating components of the Water System, consideration of providing additional capacity components is weighed against such factors as budget constraints, capital outlay funding mechanisms, and population growth trends.

As the geographical service area and customer base have increased over the past several years, there has not been a corresponding increase in the amount and size of distribution lines. Current capacity and water pressure in the system is adequate. However, the past lack of distribution piping investment may become a limiting factor in the ability of LUS to provide sufficient water volume and pressure to meet the demands from future residential and commercial development. LUS has plans to address these future limitations and meet future capacity and pressure needs by constructing additional distribution improvements outlined in the CIP. Distribution improvements budgeted in the CIP for FY's 2015 to 2019 total $7,325,000.

In addition to the planned distribution system investments to serve growth, water meter installation fees likely also require review and updating. The fees charged for water meter installations appear to have remained static since Ordinance 94-152 was passed in 1996. LUS personnel report that the actual costs to purchase and install water meters of the varying sizes required for new customers greatly exceeds the current fees charged. In addition, the fees charged do not take into consideration the location of meter installations relative to the distribution main being accessed, the surface conditions, and whether or not the meter being installed is on the same side or the opposite side of the roadway as the main where the meter is being installed. LUS should consider evaluating the cost of service for new meter installations to the system.

The following table summarizes the growth in water distribution infrastructure over the past five years.

Table 5-3
Water System
Water Distribution System Assets(1)

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Miles of Main Lines | 1,064 | 1,067 | 1,078 | 1,087 | 1,112 |
| Number of Valves | 21,512 | 21,638 | 22,167 | 22,493 | 22,793 |
| Number of Hydrants | 6,205 | 6,244 | 6,306 | 6,413 | 6,464 |

Source: LUS
(1) Includes LUS contract service to Water District North

## 5.4 Advanced Metering Infrastructure

LUS completed the implementation of AMI for its water customers. Compared to the Electric System AMI deployment, which has been highly successful, the similar deployment for the Water System has experienced a relatively high level of malfunctions and meter failures. Although the meters are recording the water usage, the meters are not communicating the water usage to LUS for billing. Currently Elster (the meter manufacturer) is paying for manual meter reads to ensure uninterrupted water billing for LUS. Elster is actively replacing malfunctioning meter modules in an effort to resolve performance problems. The replacement of the malfunctioning AMI water meters is expected to be completed in 2016; however, the schedule is dependent on the availability of replacement meters from the manufacturer.

While AMI water meter replacements continue, the system has benefited customers and the Water System by assisting with customer high bill complaints. When a customer contacts LUS concerning a high water bill, the LUS customer service agent can access the AMI meter information through the fiber system to accurately detect the periods of higher water consumption. This often allows the customer to recall the incident and related bill impact.

## 5.5 Historical Capital Improvement Program

LUS uses a capital work order system to track capital expenses. Historical capital improvements program expenditures shown in Table 5-4 reflect investments in infrastructure funded by the Series 2010 Bonds, and retained earnings. The Series 2010 Bonds were used for the Water System AMI projects and improvements to the water production system.

Table 5-4
Water System
Historical CIP

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Normal Capital & Special Equipment | $662,983 | $704,254 | $1,426,612 | $1,980,021 | $1,485,601 |
| Series 2010 Bonds | 783,054 | 13,519,806 | 4,573,547 | 1,295,471 | 148,260 |
| Retained Earnings | 169,002 | 36,838 | 1,234,893 | 2,199,043 | 1,485,157 |
| Total Capital | $1,615,039 | $14,260,898 | $7,235,051 | $5,474,535 | $3,119,019 |

Source: LUS, Status of Construction Work Order Reports.

## 5.6 Operations and Related Performance

Although the two water plants are each capable of producing over 20 MGD of treated water, the total amount of water delivered to customers is constrained by the distribution system limitations of maintaining acceptable pressure and sustained chlorine residual. LUS operates the two treatment plants for base load water treatment capacity with each plant producing an average of 10 to 12 MGD. The remote wells located at the Gloria Switch and the Commission Boulevard sites are used to supplement the flow at the extremities of the system to improve the pressure and capacity limitations on the distribution system. In 2015, the system average day demand was 22.7 MGD, with a peak-day demand of 31.4 MGD. This peak-day demand is the highest recorded by LUS, and should this trend continue, will require LUS to identify improvements to storage and distribution infrastructure that may be necessary to maintain adequate pressure throughout the system.

The lost and not accounted for water decreased from 9.0% of total treated water in 2014 to 6.4 % in 2015. Table 5-5 shows the recent lost and not accounted for water volumes.

Table 5-5
Water System
Water Lost and Not Accounted for Volumes

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Not Accounted For | 6.6% | 7.5% | 11.0% | 9.0% | 6.4% |

Source: LUS Financial and Operating Statements, audited

The amount of lost and not accounted for water is within the range of acceptable industry standards of 15%, but this number may be affected by the ongoing issues with the installation and performance of the AMI meters. In addition, much of the unaccounted-for water is primarily due to line flushing for hydrants, and for compliance with the LA DHH Emergency Rule. Responding to insurance requirements, the Fire Department flushes hydrants twice per year. Fire hydrants are required to be tested by Property Insurance Association of Louisiana (PIAL) in order to obtain or retain a higher fire insurance rating for the City. In addition, the

2013 LA DHH Emergency Rule established to protect Water Systems from the effects of the Naegleria fowleri amoeba has resulted in significant increases in flushing due to the requirement to maintain 0.5 milligram per liter (mg/l) of free or total chlorine to all extremities of the distribution system.

## 5.7 Regulatory and Environmental Compliance and Issues

LUS reports that the water treatment plants and supplemental wells are currently in compliance with all operating permits, and meet all applicable drinking water standards of the Safe Drinking Water Act. The NWP permit to discharge wastewater associated with the treatment of potable water is current and effective through July 1, 2016, at which point it is automatically renewed. The SWP permit to discharge wastewater from the treatment of potable water, stormwater, and sanitary wastewater is current and effective through November 1, 2019.

In November 2013, an LA DHH Emergency Rule for distribution systems went in to effect (which remains in effect at the time of this report) requiring all publicly owned water systems to maintain a minimum 0.5 mg/l chlorine residual throughout the piping distribution system. This requirement is based solely on the presence of the deadly Naegleria fowleri amoeba, which was detected in two water systems within the State of Louisiana. LA DHH had previously reduced the minimum chlorine residual from 0.2 mg/l to a trace amount, meaning any amount is acceptable, due to the potential of generating cancer-causing agents as a by-product of chlorination. Finally, the Water System has implemented the management and enforcement of 2014 LA DHH regulations for backflow prevention for individual users; however, these backflow prevention regulations were taken out of effect by LA DHH in December 2015. As the regulations may be re-implemented in future years as an Emergency Rule, LUS continues to maintain its backflow prevention program.

The tables below include excerpts from the 2014 Water Quality Report for LUS.

Table 5-6
Water System
Violations of Drinking Water Regulations.

| Type | Category | Analysis | Compliance Period |
|---|---|---|---|
| Inadequate Minimum Chlorine Residual | TT | Residual Chlorine | 2/1/2014 – 2/28/2014, 3/1/2014 – 3/31/2014 |

Table 5-7
Water System
Monitored at Customer's Tap

| Substance | Major Source in Drinking Water | U.S. EPA Designated Action Level (requires treatment) at 90th Percentile | LUS Results at 80th Percentile Testing |
|---|---|---|---|
| Lead | Corrosion of household plumbing systems; Erosion of natural deposits | 15 ppb | 1 ppb or less (1) |

(1) No individual sample exceeded the Action Level.

Table 5-8
Water System
Contaminants Monitored in the Water Distribution System

| DBP Contaminants | Typical Source | Maximum Contaminant Level | Maximum Contaminant Level Goal | LRAA | Range | Location |
|---|---|---|---|---|---|---|
| Haloacetic Acids (HAA5) | By-product of drinking water chlorination | 60 ppb | 0 | 8 ppb | 1.8 – 13.1 ppb | Ambassador Caffery & W. Congress |
| Haloacetic Acids (HAA5) | By-product of drinking water chlorination | 60 ppb | 0 | 9 ppb | 3.0 – 12.2 ppb | Gloria Switch Rd. & Arbor |
| Haloacetic Acids (HAA5) | By-product of drinking water chlorination | 60 ppb | 0 | 8 ppb | 1.9 – 14.2 ppb | Kaliste Saloom & E. Broussard |
| Haloacetic Acids (HAA5) | By-product of drinking water chlorination | 60 ppb | 0 | 7 ppb | 1.8 – 15 ppb | Thomas Nolans & Brigante |
| Haloacetic Acids (HAA5) | By-product of drinking water chlorination | 60 ppb | 0 | 7 ppb | 1.5 – 8.8 ppb | Vennard & Valley View |
| Haloacetic Acids (HAA5) | By-product of drinking water chlorination | 60 ppb | 0 | 8 ppb | 1.4 – 20.2 ppb | Walker & Doc Bonin |
| Total Trihalomethanes (TTHM) | By-product of drinking water chlorination | 80 ppb | 0 | 8 ppb | 1.0 – 11.3 ppb | Ambassador Caffery & W. Congress |
| Total Trihalomethanes (TTHM) | By-product of drinking water chlorination | 80 ppb | 0 | 8 ppb | 1.9 – 12.7 ppb | Gloria Switch Rd. & Arbor |

Table 5-8
Water System
Contaminants Monitored in the Water Distribution System

| DBP Contaminants | Typical Source | Maximum Contaminant Level | Maximum Contaminant Level Goal | LRAA | Range | Location |
|---|---|---|---|---|---|---|
| Total Trihalomethanes (TTHM) | By-product of drinking water chlorination | 80 ppb | 0 | 8 ppb | 1.7 – 11.2ppb | Kaliste Saloom & E. Broussard |
| Total Trihalomethanes (TTHM) | By-product of drinking water chlorination | 80 ppb | 0 | 4 ppb | 1.4 – 10.2 ppb | Thomas Nolans & Brigante |
| Total Trihalomethanes (TTHM) | By-product of drinking water chlorination | 80 ppb | 0 | 6 ppb | 1.2 – 9.0 ppb | Vennard & Valley View |
| Total Trihalomethanes (TTHM) | By-product of drinking water chlorination | 80 ppb | 0 | 4 ppb | 1.2 – 8.2 ppb | Walker & Doc Bonin |

Table 5-9
Water System
Microbiologicals Monitored in the Water System

| Microbiologicals | Typical Source | Maximum Contaminant Level | Maximum Contaminant Level Goal | Result |
|---|---|---|---|---|
| Coliform | Naturally present in the environment | MCL: Systems that collect 40 or more samples per month – no more than 5% positive monthly samples | 0 | In the month of January, 0.81% of samples returned as positive |

Table 5-10
Water System
Substances Monitored Before Any Treatment

| Substance | Major Source in Drinking Water | U.S. EPA Designated Contaminant Level | U.S. EPA Designated Max Contaminant Level Goal | LUS Range | LUS Max |
|---|---|---|---|---|---|
| Arsenic | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes | 10 ppb | 0 ppb | 2 ppb | 2 ppb |
| Fluoride | Erosion of natural deposits; Discharge from fertilizer and aluminum factories | 4 ppm | 4 ppm | 0.3 ppm | 0.3 ppm |
| 2-ethylhexyl Phthalate | Discharge from rubber and chemical factories | 6 ppb | 0 ppb | 0.69 ppb | 0.69 ppb |

## 5.8 Contracts

In addition to the Water System within the City limits, LUS operates and maintains water distribution facilities outside the City limits as a wholesale provider. Wholesale services are provided in accordance with contracts between LCG and the district customers. LCG has six wholesale contracts serving seven specific customers, including two water districts and five neighboring water systems or cities. These six wholesale contracts include Water District North, Water District South, the City of Scott, the City of Broussard, Milton Water System, and the Town of Youngsville. Water service to Water District North customers is billed by LCG in the name of the Water District North consistent with the applicable rate schedules. Both the North and South Water Districts construct their own additions and extensions according to standards set by LUS.

These wholesale customers represented 28% of the total water volume and 24% of total water sales in 2015. While the wholesale customer portion of total Water System sales volume has increased over the past five years, the portion of total revenues has remained stable. Each of the contracts is a long-term contract between 25 and 40 years in length, with the exception of the City of Scott and the City of Broussard. The City of Broussard contract is set to expire in 2020, while the City of Scott contract will expire in 2022. The remaining contracts are set to expire after 2031.

As of September 2015, one wholesale customer is pursuing an alternate water source and intends to self-produce all water needs by 2018. Tables 5-11 and 5-12 summarize the historical wholesale water volume sales and revenues by customer.

Table 5-11
Water System
Wholesale Water Sales by Customer (1,000 gallons)

| Wholesale Customer | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| City of Scott | 324,086 | 311,687 | 303,163 | 317,223 | 323,792 |
| Water District North | 462,651 | 434,875 | 447,185 | 454,474 | 458,144 |
| City of Broussard | 134,461 | 210,752 | 223,410 | 236,643 | 245,222 |
| Water District South | 332,830 | 320,711 | 286,076 | 301,352 | 305,657 |
| Milton Water System | 226,708 | 200,614 | 217,106 | 221,717 | 242,354 |
| Town of Youngsville | 183,976 | 175,531 | 206,380 | 252,036 | 306,747 |
| Water District North – Wholesale | 181,378 | 204,309 | 210,055 | 220,900 | 234,629 |
| Total Wholesale Water Sales | 1,846,090 | 1,858,479 | 1,893,375 | 2,004,345 | 2,116,545 |
| Total Water Sales (Wholesale and Retail) | 7,672,381 | 7,601,578 | 7,388,023 | 7,430,763 | 7,536,303 |
| Percent of Total Sales from Wholesale | 24% | 24% | 26% | 27% | 28% |

Source: LUS Financial and Operating Statements, audited

Table 5-12
Water System
Wholesale Water Revenues by Customer

| Customer | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| City of Scott | $544,014 | $549,046 | $541,993 | $615,448 | $637,536 |
| Water District North | 1,132,562 | 1,132,361 | 1,126,195 | 1,188,663 | 1,208,192 |
| City of Broussard | 1,045,442 | 358,508 | 134,284 | 448,489 | 472,174 |
| Water District South | 545,076 | 545,570 | 507,673 | 572,712 | 584,882 |
| Milton Water System | 371,598 | 376,443 | 379,217 | 425,974 | 463,288 |
| Town of Youngsville | 302,351 | 310,367 | 363,542 | 490,485 | 589,515 |
| Water District North-Wholesale | 300,550 | 418,541 | 372,510 | 422,504 | 450,483 |
| Total Wholesale Water Revenues | $4,241,593 | $3,690,835 | $3,425,414 | $4,164,275 | $4,406,071 |
| Total Water Revenues (Wholesale and Retail) | $18,525,544 | $17,704,385 | $17,394,122 | $17,746,170 | $18,028,081 |
| % of Total Revenues from Wholesale | 23% | 21% | 20% | 23% | 24% |

Source: LUS Financial and Operating Statements, audited

Table 5-13 summarizes the terms of each wholesale customer agreement.

Table 5-13
Water System
Wholesale Water Contract Terms

| Customer | Contract Date | Term (Yrs.) | Termination |
|---|---|---|---|
| Water District North – Full Service – Phase 1, 2, 3, 4 (NE area, NW area, Scott area) | October 17, 2002 | 30 | October 17, 2032 |
| Water District North - Wholesale | October 17, 2002 | 30 | October 17, 2032 |
| City of Scott | May 28, 1997 | 25 | May 28, 2022 |
| City of Broussard | March 5, 1998 | | July 31, 2020 |
| Milton Water System | April 28, 1997 | 40 | April 28, 2037 |
| City of Carencro (1) | March 28, 1980 | | |
| Town of Youngsville | December 24, 1998 | 40 | December 24, 2038 |
| Water District South | August 21, 1997 | 40 | August 21, 2037 |

Source: LUS
(1) Letter Agreement with the City of Carencro to provide them with water on an emergency back-up basis. The rate charged will be the same as the current City of Scott rate. As per information received from LUS Water System, LUS has supplied water to the City of Carencro under this letter agreement fewer than five times.

## 5.9 Competition/Benchmarking

LUS' residential water rates have historically been among the lowest in the state and surrounding region. The following tables compare the average residential and commercial rates for selected water utilities in the region.

Table 5-14
Water System
Residential Rate Comparison

| Utility | Average $/1,000 gallon (1) |
|---|---|
| LUS | $2.20 |
| Alexandria | $2.73 |
| Morgan City | $2.78 |
| Lake Charles | $3.30 |
| Shreveport | $3.84 |
| Baton Rouge | $4.23 |
| New Iberia | $4.27 |
| New Orleans | $5.98 |

Source: LUS
(1) Assumes monthly water consumption of 7,000 gallons per month.

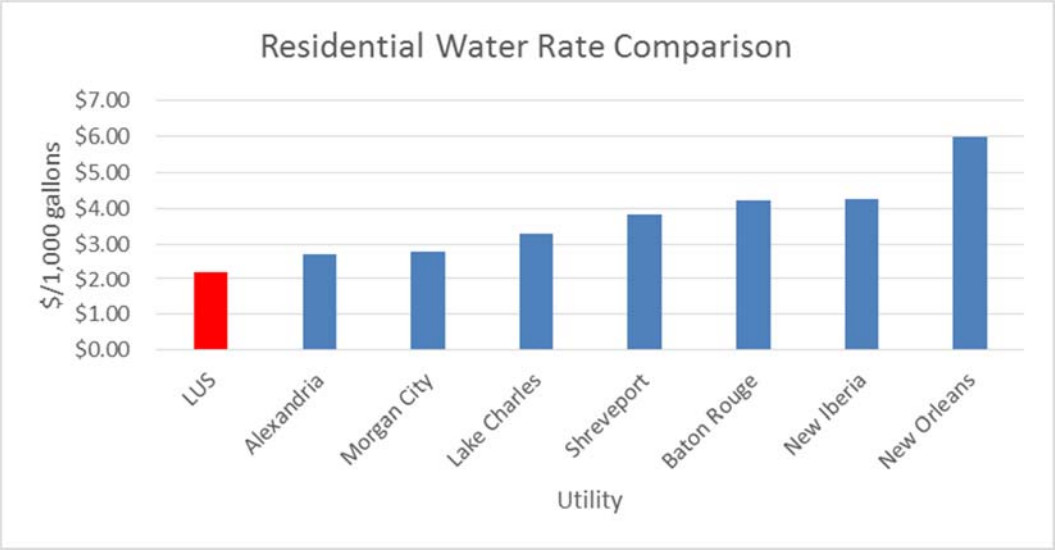


Figure 5-1: Water System – Residential Rate Comparison

Table 5-15
Water System
Commercial Rate Comparison

| Utility | Average $/1,000 gallons (1) |
|---|---|
| LUS | $2.50 |
| Morgan City | $2.61 |
| Alexandria | $3.07 |
| Shreveport | $3.68 |
| Baton Rouge | $3.87 |
| New Iberia | $4.12 |
| Lake Charles | $4.15 |
| New Orleans | $6.65 |

Source: LUS
(1) Assumes monthly consumption of 30,000 gallons and a 2-inch meter.

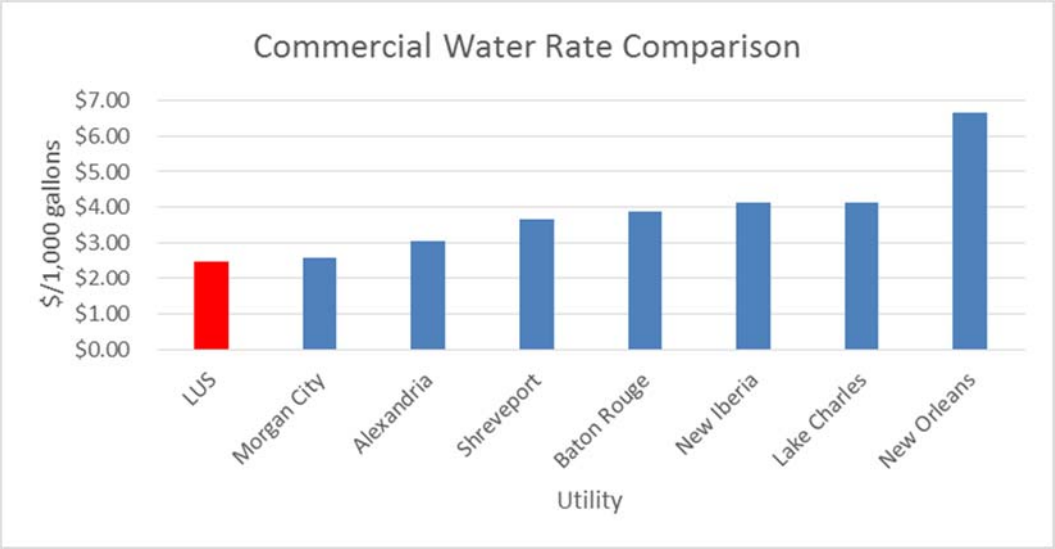


Figure 5-2: Water System – Commercial Rate Comparison

## Benchmarking Financial and Operating Statistics

Table 5-16 benchmarks selected financial and operating ratios for LUS with other large municipal water utilities nationwide. The data was provided by the *AWWA Benchmarking Performance Indicators for Water and Wastewater, 2013 Data published 2015*. The AWWA report contains data based on regions of the U.S. and based on the number of water customers served by the utility. For the purposes of our analysis, we used the U.S. South region, which includes Louisiana and hereafter referred to as "Regional." In addition, the AWWA report contains an aggregate of Water utilities in the U.S. and Canada and hereafter referred to as "National." The results are shown below in Table 5-16. If possible, the comparisons were made based on the Water System only. However, for some balance sheet items, the LUS data was available for the combined Electric, Water, and Wastewater Utilities System and hereafter referred to as "Combined." The AWWA benchmark data for "Combined" includes only water and wastewater utilities.

As shown in Table 5-16, LUS has a healthy Debt to Total Equity compared to the National and Regional averages. LUS' current and historical DSCR is significantly above that of the National and Regional average for water utilities. LUS' operating costs on a MGD basis are considerable lower than the regional average.

Table 5-16
Water System
Benchmarked Water Utility Operating Ratios

| Statistic | Basis | National | Regional | LUS | | |
|---|---|---|---|---|---|---|
| | | 2013 | 2013 | 2013 | 2014 | 2015 |
| Operational Costs per MGD | Water | $2,176 | $2,259 | $1,433 | $1,581 | $1,620 |
| Debt to Equity (Total Assets) | Combined | 0.36 | 0.41 | 0.32 | 0.30 | 0.28 |
| Operating Ratio (O&M cost/ Operating revenue) | Water | 0.69 | 0.55 | 0.69 | 0.73 | 0.73 |
| Operating Ratio (O&M cost/ Operating revenue) | Combined | 0.01 | 0.55 | 0.74 | 0.73 | 0.72 |
| Cash Reserve Days (1) | Combined | 259 | 236 | 42 | 49 | 44 |
| Debt Service Coverage | Water | 1.5 | 2.2 | 3.1 | 2.7 | 2.9 |
| Debt Service Coverage | Combined | 1.4 | 1.4 | 2.9 | 3.0 | 3.0 |

(1) Based on total O&M for Electric, Water, and Wastewater Systems less fuel and purchased power expenses.

## 5.10 Historical Financial Performance

Current Water System debt service includes the Series 2010 Bonds and Series 2012 Bonds. Table 5-17 shows historical debt service and the associated DSCR. The DSCR exceeds the minimum requirement of 1.0.

Table 5-17
Water System
Historical Financial Performance

| Year | Operating Revenues (1) | Operating Expenses (2) | Balance Available for Debt Service | Debt Service (3) | Debt Service Coverage Ratio |
|---|---|---|---|---|---|
| 2011 | $18,662,652 | $11,783,706 | $6,878,946 | $1,030,394 | 6.7 |
| 2012 | $17,803,423 | $12,136,044 | $5,667,379 | $1,160,387 | 4.9 |
| 2013 | $17,559,754 | $11,948,312 | $5,611,442 | $1,802,140 | 3.1 |
| 2014 | $17,783,466 | $12,950,303 | $4,833,163 | $1,809,191 | 2.7 |
| 2015 | $18,284,817 | $13,099,239 | $5,185,577 | $1,802,076 | 2.9 |

Source: LUS Financial and Operating Statements, audited
(1) Includes interest income and other miscellaneous income.
(2) O&M and other expenses include customer service, and administrative and general costs. Operating expenses do not include ILOT normal capital and special equipment, and other miscellaneous expenses.
(3) Debt service includes the Series 2004 Bonds, Series 2010 Bonds, and Series 2012 Bonds.

## Rate Structure

The Water System services retail and wholesale customers. Wholesale customers accounted for 24% of the water revenues in 2015.

### Retail

The Water System serves customers inside the City limits and outside of the City limits. The Water System customer classes include residential, commercial, schools and churches, and special contract customers for bulk water. The Water System rate structure for retail customers include a customer charge based on the meter size and commodity charges based on usage. The Residential customers have seasonal rates with an inclining block rate structure during the summer months of April through November.

### Wholesale

The Water System serves wholesale customers outside of the City limits on a contract basis.

Table 5-18
Water System
Retail Rate Schedules

| Rate Class | Serves | Effective Date | Meter Size (inches) | Customer Charge ($/month) | Winter Commodity Rate ($/1,000 gallons) | Summer Commodity Rate Tier 1 ($/1,000 gallons) | Summer Commodity Rate Tier 2 ($/1,000 gallons) | Monthly Commodity Rate ($/1,000 gallons) |
|---|---|---|---|---|---|---|---|---|
| W-1 | Residential | Nov 2010 | 3/4 | 4.25 | 1.59 | 1.59 | 2.54 | NA |
| | | | 1 | 7.25 | 1.59 | 1.59 | 2.54 | NA |
| | | | 1 1/2 | 14.00 | 1.59 | 1.59 | 2.54 | NA |
| | | | 2 | 22.50 | 1.59 | 1.59 | 2.54 | NA |
| | | | 3 | 42.50 | 1.59 | 1.59 | 2.54 | NA |
| | | | 4 | 71.00 | 1.59 | 1.59 | 2.54 | NA |
| | | | 6 | 141.50 | 1.59 | 1.59 | 2.54 | NA |
| | | | 8 | 226.50 | 1.59 | 1.59 | 2.54 | NA |
| W-1-O | Residential Non-City | Nov 2010 | 3/4 | 8.50 | 3.18 | 3.18 | 5.08 | NA |
| | | | 1 | 14.50 | 3.18 | 3.18 | 5.08 | NA |
| | | | 1 1/2 | 28.00 | 3.18 | 3.18 | 5.08 | NA |
| | | | 2 | 45.00 | 3.18 | 3.18 | 5.08 | NA |
| W-2 | Commercial | Nov 2010 | 3/4 | 4.25 | NA | NA | NA | 1.75 |
| | | | 1 | 7.25 | NA | NA | NA | 1.75 |
| | | | 1 1/2 | 14.00 | NA | NA | NA | 1.75 |
| | | | 2 | 22.50 | NA | NA | NA | 1.75 |
| | | | 3 | 42.50 | NA | NA | NA | 1.75 |
| | | | 4 | 71.00 | NA | NA | NA | 1.75 |
| | | | 6 | 141.50 | NA | NA | NA | 1.75 |
| | | | 8 | 226.50 | NA | NA | NA | 1.75 |
| W-2-O | Commercial Non-City | Nov 2010 | 3/4 | 8.50 | NA | NA | NA | 3.50 |
| | | | 1 | 14.50 | NA | NA | NA | 3.50 |
| | | | 1 1/2 | 28.00 | NA | NA | NA | 3.50 |
| | | | 2 | 45.00 | NA | NA | NA | 3.50 |

Source: LUS Rate Schedules

## Water Retail Revenue Statistics

Table 5-19 shows the Water System revenues. Since 2011, the total retail revenues have decreased by an average annual rate of 1.2%.

The number of customers has consistently increased at approximately 1.0% per year with the highest customer growth in the residential customer class. The revenue per customer since 2011 has also steadily decreased at 2.2% annually.

The total retail gallon sales have decreased by average of 1.8% annually. The gallon sales per customer have also decreased overall by 2.8%. The residential class has decreased their usage per customer on average by 3.3% per year. Increases in plumbing fixture efficiency and conservation measures are likely contributing to this decrease.

Since 2011, the revenue per gallon has slightly increased at 0.6% per year.

Table 5-19
Water System
Retail Revenues by Class

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Revenues | | | | | |
| Residential | $7,871,680 | $7,435,833 | $7,401,378 | $7,295,912 | $7,463,132 |
| Commercial | 5,273,552 | 5,421,822 | 5,360,595 | 5,211,797 | 5,091,137 |
| Schools & Churches | 458,702 | 475,915 | 445,175 | 443,622 | 461,676 |
| Other | 253,032 | 158,269 | 163,199 | 167,679 | 191,849 |
| Total | $13,856,966 | $13,491,838 | $13,370,347 | $13,119,010 | $13,207,794 |
| Number of Customers | | | | | |
| Residential | 40,095 | 40,300 | 40,979 | 41,463 | 41,825 |
| Commercial | 6,275 | 6,316 | 6,386 | 6,448 | 6,451 |
| Schools & Churches | 294 | 302 | 298 | 299 | 290 |
| Other | 290 | 281 | 282 | 284 | 285 |
| Total | 46,954 | 47,199 | 47,945 | 48,495 | 48,851 |
| Revenue per Customer | | | | | |
| Residential | $196 | $185 | $181 | $176 | $178 |
| Commercial | 840 | 858 | 839 | 808 | 789 |
| Schools & Churches | 1,563 | 1,577 | 1,492 | 1,483 | 1,592 |
| Other | 873 | 563 | 579 | 590 | 674 |
| Total ($/Customer) | $295 | $286 | $279 | $271 | $270 |
| Sales (1,000 gallons) | | | | | |
| Residential | 3,043,430 | 2,861,325 | 2,824,456 | 2,744,325 | 2,779,361 |
| Commercial | 2,438,967 | 2,571,372 | 2,383,034 | 2,388,538 | 2,342,305 |
| Schools & Churches | 217,345 | 236,972 | 213,571 | 216,425 | 210,700 |
| Other | 126,549 | 73,430 | 73,587 | 77,120 | 87,392 |
| Total | 5,826,291 | 5,743,099 | 5,494,648 | 5,426,408 | 5,419,758 |
| Sales (1,000 gallons) per Customer | | | | | |
| Residential | 76 | 71 | 69 | 66 | 66 |
| Commercial | 389 | 407 | 373 | 370 | 363 |

Table 5-19
Water System
Retail Revenues by Class

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Schools & Churches | 741 | 785 | 716 | 724 | 726 |
| Other | 437 | 261 | 261 | 271 | 307 |
| Total | 124 | 122 | 115 | 112 | 111 |
| Revenue per 1,000 gallons | | | | | |
| Residential | $2.59 | $2.60 | $2.62 | $2.66 | $2.69 |
| Commercial | 2.16 | 2.11 | 2.25 | 2.18 | 2.17 |
| Schools & Churches | 2.11 | 2.01 | 2.08 | 2.05 | 2.19 |
| Other | 2.00 | 2.16 | 2.22 | 2.17 | 2.20 |
| Total ($/1,000 Gallons) | $2.38 | $2.35 | $2.43 | $2.42 | $2.44 |

Source: LUS Financial and Operating Statements, audited

## Expense Analysis

Table 5-20 shows the historical water operating expenses separated between fixed and variable expense. Variable operating expenses include purchased power costs embedded in the Power and Pumping expense account and chemical costs embedded in the Purification expense account. Fixed operating expenses include source of supply, fixed costs embedded in both the Power and Pumping and Purification expense accounts, Distribution, Customer Service, and Administrative and General expenses. Historically, the variable expenses averaged 21% of the total expenses.

The Water System retail sales are affected by weather. Seasonal water sales increase during hot or dry summers and decrease during cool or wet summers. The volatility in the weather combined with a seasonal rate structure may affect the volatility in the revenues. However, as shown in Table 5-20, the expenses are largely fixed and do not vary with the weather. As a result, there is pressure on the water rates to adequately recover revenues during years with cool or wet summers.

Table 5-20
Water System
Historical Fixed and Variable Expense Summary

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Variable Expenses | | | | | |
| Power & Pumping | $483,356 | $521,379 | $567,455 | $593,307 | $514,060 |
| Purification | 1,934,914 | 1,918,190 | 1,828,790 | 2,308,416 | 2,452,455 |
| Total Variable Expenses | $2,418,270 | $2,439,569 | $2,396,245 | $2,901,723 | $2,966,515 |
| Fixed Expenses | | | | | |
| Source of Supply | $173,612 | $169,170 | $188,329 | $186,174 | $169,594 |
| Power & Pumping | 272,614 | 305,082 | 430,958 | 323,339 | 313,576 |
| Purification | 1,394,498 | 1,384,245 | 1,387,306 | 1,579,886 | 1,703,658 |
| Distribution | 2,374,829 | 2,283,844 | 2,225,306 | 2,312,791 | 2,297,316 |
| Customer | 1,216,414 | 1,304,443 | 1,161,549 | 1,084,155 | 1,158,987 |
| A&G | 3,933,468 | 4,249,690 | 4,158,620 | 4,562,251 | 4,489,593 |
| Total Fixed | $9,365,436 | $9,696,475 | $9,552,067 | $10,048,596 | $10,132,724 |
| Total Fixed & Variable | $11,783,706 | $12,136,044 | $11,948,312 | $12,950,319 | $13,099,239 |
| Percent Variable | 21% | 20% | 20% | 22% | 23% |
| Percent Fixed | 79% | 80% | 80% | 78% | 77% |

Source: LUS Financial and Operating Statements, audited

## 5.11 Findings and Recommendations

- Water sales to wholesale customers have remained steady to increasing over the past five years. As wholesale water sales continue and are projected to increase, it will place added pressure on the distribution system, which could accelerate the need for capital upgrades. In addition to capital upgrades, additional wholesale customer sales volume management may be required to maintain adequate pressure in the system.
- Wholesale water sales have increased at a rate about four times that of total production. It is clear wholesale customers have required an increasing percentage of the total water produced and this trend is expected to continue. This will place continued pressure on the distribution system and could adversely affect LUS retail customers. Therefore, coordination with wholesale customers and adequate planning for improvements to the LUS system and the wholesale customers' systems is necessary to protect the interests of retail customers.
- If the City of Broussard discontinues purchasing water from LUS when the contract expires in 2020, there will be a reduction in the amount of wholesale volume sales as well as a reduction in corresponding revenues. LUS should consider the implications of this potential reduction in wholesale water volumes relative to the timing of any required improvements needed at the Commission Boulevard site to accommodate additional growth and water sales in this service area.

- Wholesale water sales represent approximately 28.1% of total water sales volume, yet only 24.4% of total water sales revenue. LUS should evaluate the cost of service for all levels of customers to determine the appropriate rate structure to ensure that the revenue requirements for each customer base are in place.
- Although staffing levels were not reported to be an issue, a succession plan should be implemented to ensure knowledgeable operators and maintenance personnel are developed. Several key management personnel and certified operators can or will retire within the next five years. LUS should develop a succession plan to ensure the continued operation of the water/wastewater operations with as much operational continuity as possible, and with as little loss of institutional knowledge as possible. LUS reports that staffing levels are reviewed annually, and that a program of screening and cross-training to identify individuals that exhibit technical proficiency and leadership skills is in place.
- LUS has completed the integration of SCADA and plant controls, which has resulted in streamlined operational efficiency, and has allowed for maximum utilization of operations personnel.
- At the time of this report, the State of Louisiana has rescinded the requirements of the backflow prevention program. However, LUS has already achieved compliance with the mandate, and will continue to follow these requirements in the likely event of the State of Louisiana implementing an emergency rule to systems for continuation of the program.
- Compared to the Electric System AMI deployment, which has been highly successful, the similar deployment for the Water System has experienced a relatively high level of malfunctions and meter failures. While Elster continues to read all meters at no cost to the Water System, LUS should continue to work with Elster to resolve this issue.
- The fees charged for water meter installations appear to have remained static since 1996. LUS personnel report that the actual costs to purchase and install water meters of the varying sizes required for new customers greatly exceeds the current fees charged. In addition, the fees charged do not take into consideration the location of meter installations relative to the distribution main being accessed, the surface conditions, and whether or not the meter being installed is on the same side or opposite side of the roadway as the main where the meter is being installed. LUS should consider evaluating the cost of service for new meter installations to the system.

# SECTION 6
# WASTEWATER SYSTEM

LUS provides wastewater services to 43,521 customers. The Wastewater System is comprised of a wastewater collection system, four wastewater treatment plants at various locations throughout the City, and waste sludge management and disposal facilities. The total combined permitted treatment capacity for the four plants is 18.5 MGD. In addition, LUS is responsible for integrating small, community-type package wastewater treatment plants into the main LUS Wastewater System. These package plants serve subdivisions and rural areas that are not currently in the LUS service area.

Wastewater System collection volumes increased in 2015 by 4.7% from 2014 collection volumes. Collection volumes in 2015 are consistent with observed collection volumes over the 2011–2014 historical period. Historical Wastewater System collection volumes are shown in Table 6-1.

Table 6-1
Wastewater System
Historical Retail Collection

| Year | Retail Collection (1,000 gallons) [1] |
|---|---|
| 2011 | 5,190,182 |
| 2012 | 5,448,397 |
| 2013 | 5,730,473 |
| 2014 | 5,476,065 |
| 2015 | 5,734,225 |

Source: LUS Financial and Operating Statements, audited
(1) The Wastewater System does not provide wholesale service.

## 6.1 Wastewater Treatment

The four main wastewater treatment plants include the SSTP, the East Sewage Treatment Plant (ESTP), the Ambassador Caffery Treatment Plant (ACTP), and the Northeast Treatment Plant (NETP). Table 6-2 summarizes the Wastewater System treatment capacity.

Table 6-2
Wastewater System
Wastewater Treatment Average Day Treatment Loads

| | Reported 2015 (1) | Permitted Capacity |
|---|---|---|
| South Plant | 5.45 | 7.0 |
| East Plant | 3.25 | 4.0 |
| Ambassador Caffery Plant | 5.89 | 6.0 (2) |
| Northeast Plant | 1.13 | 1.5 |
| Totals | 15.72 | 18.5 |

Source: LUS
(1) Average day hydraulic loads are not adjusted to dry weather conditions and therefore include infiltration.
(2) Permitted capacity remains at 6.0 MGD but plant treatment capacity is 9.25 MGD.

### South Sewage Treatment Plant

The SSTP is an activated sludge facility with a permitted capacity of 7.0 MGD, but is currently operating at an average flow of 5.0 MGD. There is approximately 5.0 MG of on-site wet-weather retention capacity. Sludge is treated through aerobic digesters and transported off-site for disposal at the LUS sludge disposal land farm.

The SSTP is LUS' least efficient WWTP, but following the recent purchase of additional land surrounding the existing site, it is also the only treatment facility with sufficient acreage available for construction of additional retention and treatment facilities. LUS plans to expand the existing SSTP in order to be able to serve growth in the system, and to assimilate the potential addition of packaged plants in the area. The planned expansion will increase the capacity of the SSTP from 7.0 MGD to a total capacity of 12.0 MGD.

Design plans have been prepared for construction of the expansion project, and design and construction of other projects to address such issues as expansion of influent head-works capacity, odor control, wet-weather flow retention or side-stream storage requirements, and increased sludge treatment capacity, all of which are included in the five-year CIP. The contract for improvements to the sludge handling at the SSTP is expected to bid during the summer of 2016. Other considerations for maximizing the treatment capacity at the SSTP include reconfiguration of existing treatment from extended aeration to Sequencing Batch Reactors (SBRs), and blending retained flow with treated discharge in accordance with U.S. EPA rules and guidelines.

### East Sewage Treatment Plant

The ESTP has a permitted capacity of 4.0 MGD, and uses an extended aeration oxidation ditch treatment process, with a 3.0 MG wet-weather retention buffer tank. Sludge is treated using anaerobic digesters that operate on time and temperature, and achieve up to 27% solids. In 2015, the boiler used for heating the digester was repaired. LUS has a series of projects planned to rebuild the existing sludge digestion facilities, and to recover sludge digestion facilities that were previously abandoned. Fortunately, the abandoned tankage and structure remain intact and are capable of being refitted and restored to full operation.

### Ambassador Caffery Boulevard Treatment Plant

The ACTP is a 6.5 MGD treatment plant originally constructed with rotating biological contactors (RBCs) and an oxidation ditch. However, the RBC process has since been refitted and replaced with SBR's. LUS staff finds the SBR system to be extremely efficient, easily processing varying flow ranges. Although the permit for ACTP will remain at 6.5 MGD, the SBR system installed will treat up to 9.0 MGD as a peak or max flow. The volatile solids resulting from the SBR process are very close to a Class B waste level without additional treatment. The system uses screw presses instead of belt presses to prepare the sludge for transport to the sludge disposal land farm. In 2015, a 24-inch force main from the ACTP to the SSTP was completed, which provides operational flexibility should wastewater flows need to be diverted from the ACTP.

### Northeast Treatment Plant

The NETP is an oxidation ditch treatment facility with 1.5 MGD permitted capacity. The plant is connected to a 25.0 MG wet-weather retention basin used as a buffer during wet weather events due to high infiltration/inflow (I&I) of the collection system.

## 6.2 Wastewater Collection

The collection system consists of 568 miles of gravity sewer collector pipes and interceptors, 12,145 sanitary sewer manholes, 176 sanitary sewer lift stations, and 81 miles of sewer force mains. Table 6-3 summarizes the Wastewater System collection system infrastructure.

Table 6-3
Wastewater System
Wastewater Collection System Infrastructure

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Number of Connections | 41,928 | 42,476 | 42,891 | 43,068 | 43,521 |
| Miles of Pipe (1) | 571 | 621 | 630 | 637 | 649 |
| Number of Manholes | 11,431 | 11,635 | 11,813 | 11,937 | 12,145 |
| Number of Lift Stations | 145 | 152 | 157 | 164 | 176 |

Source: LUS
(1) Combined length of gravity collection lines and sewer force mains. Does not include service laterals.

As the City area is relatively flat, with little to no elevation relief, the wastewater collection system requires a significant number of lift stations to pump and re-pump wastewater to the four treatment plants. The 176 sanitary sewer lift stations consist of approximately 30% Gorman Rupp style suction lift stations, and 60% submersible stations of various makes and descriptions. The increase of 12 new lift stations in 2015 is due to new development throughout the LUS Wastewater System service area. As new development requests for inclusion into the Wastewater System that include sewer lift station facilities are submitted to LUS, LUS Engineering evaluates the opportunities to connect the development to existing collection basins, or to upgrade existing facilities to consolidate existing lift stations.

LUS attempts to standardize their control panel requirements for lift stations, but developers criticize the higher cost of the equipment that LUS requests. LUS attempts to balance the support of development with optimizing Wastewater System efficiency. A majority of the lift stations include the ability to communicate with the operations center, via SCADA, for reporting outages, operating conditions, and flow data to the operators. Fiber optic cables have been run to approximately 90 lift station sites. Another 51 are connected via Mission dialers, and the remaining sites require field verification by operators. LUS plans to continue installing fiber optic/SCADA communication capabilities in the future. Once all the lift stations are connected to the fiber system and fitted with SCADA, LUS can substantially improve proactive controlling and monitoring the operation of its lift stations, especially in response to heavy rain conditions. This increased fiber/SCADA communication will significantly reduce customer inconveniences, and the cost of claims due to sewer system backups.

LUS is also charged with the responsibility of assimilating small, community-type package wastewater treatment plants into the Wastewater System. These package plants are increasingly utilized to serve subdivisions and rural areas that are not currently in the LUS service area. To date, eight package wastewater treatment plants are now operated and maintained as LUS' Wastewater System infrastructure, with four additional packaged plants likely to be added by the end of 2016 and one expected in 2017 for a total of 13. LUS anticipates that the capacity of the existing Wastewater System is sufficient to integrate up to approximately 15 package plants. Additional packaged plant integration capacity will be provided by the future SSTP and Wastewater System expansions.

## 6.3 Historical Capital Improvement Program

LUS uses a capital work order system to track capital expenses. The historical capital shown in Table 6-4 reflects investment in infrastructure funded by the Series 2010 Bonds, and retained earnings. The 2010 Bonds were issued for wastewater collection system improvements (lift stations/interceptors).

Table 6-4
Wastewater System
Historical CIP

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Normal Cap & Spec Equipment | $716,078 | $141,677 | $1,408,042 | $1,416,765 | $2,097,944 |
| Series 2010 Bonds | 3,524,831 | 7,023,329 | 5,982,907 | 933,223 | 2,984,526 |
| Retained Earnings | 873,555 | 175,978 | 2,490,121 | 1,554,647 | 2,174,335 |
| Total Capital | $5,114,465 | $7,340,984 | $9,881,071 | $3,904,635 | $7,256,805 |

Source: LUS, Status of Construction Work Order Reports.

## 6.4 Operations and Related Performance

In 2014, the average daily wastewater volume treated by the four plants was 15.0 MGD. The average operating volumes treated by the four plants is less than each plant's permitted capacity except ACTP. ACTP's average wastewater flow is at its permitted level of 6.0 MGD. While the flows are at the permitted level, the SBR system at ACTP is capable of treating up to 9.0 MGD as a peak or maximum flow. At times, the ACTP treats wastewater flows above its permitted levels in times of emergency operations or diversions to replace or repair other plant or collection system infrastructure. This situation occurred five times in 2015.

These infrequent periods of flows exceeding ACTP's permitted levels are within the plant's treatment capacity limits and does not inhibit or negatively impact the Wastewater System's operations. It is not uncommon for wastewater utilities to occasionally exceed permitted discharge limits for brief periods of time during such events as emergency operations, accommodating repairs and replacements in the system, or during excessive precipitation events.

The Wastewater System must manage significant I&I issues with the wastewater collection system and thus the treatment plants. This is a common issue for wastewater utilities in the southeast and across the U.S., especially in aging systems such as LUS'. LUS periodically addresses I&I issues at the most problematic areas through its renewal and replacement system. LUS continues to maintain a periodic Closed Circuit Television Video (CCTV) inspection program using remote cameras to inspect pipes for replacement. The CCTV work is performed by two professional service providers and represents approximately $300,000 per year in the annual Wastewater System O&M expense budget.

### Biosolids Beneficial Reuse Land Application Program

LUS disposes of biosolids, the sludge byproduct of water and wastewater treatment plant operation, to privately owned farmland disposal sites leased by LUS. LUS biosolids operations are permitted under LDEQ Biosolids/Sewage Sludge Landfarming/Beneficial Reuse Permit No. LASS021025. Waste sludge generated at each of the wastewater treatment units is treated to Class B biosolids standards prior to transport to the disposal site. LUS reports that all required quarterly, semiannual, and annual reports were submitted to LDEQ during 2014.

Waste sludge is transported and land applied to privately owned land farms that are under lease to LUS for that purpose. Each of the leased locations is an active farming operation. LUS is required to accommodate their farming activities such as crop and livestock rotation, and access to farming operations during inclement weather. This arrangement makes it necessary for LUS to secure more acreage than is actually required for actual biosolids disposal. LUS currently leases approximately 2,700 acres for sludge disposal, with year-to-year leases that each include a 30-day notice end-of-lease clause.

LUS has evaluated purchasing and owning land to dispose of the biosolids to eliminate the reliance on the multiple active farm leases, which could be cancelled with 30-day notice. As LUS currently treats biosolids to Class B sludge, disposal requires approximately 300 acres of land. While potential land has been identified, LUS has not yet pursued the purchase of a 300-acre site. If the land purchase is not feasible, LUS would be driven to generate Class A biosolids, and then find properties suitable for sludge application as a soil amendment rather than as a fertilizer component. Class A sludge treatment relegates the biosolids useless as a fertilizer, thus would be disposed of as a soil amendment.

## 6.5 Regulatory and Environmental Compliance and Issues

LUS has environmental compliance and testing staff to provide direct environmental compliance support for the Water and Wastewater Systems. The Environmental Department is an independent operating unit providing regulatory compliance, industrial pretreatment program administration, and analytical services relative to the analysis of drinking water quality, wastewater discharge quality analysis, and biosolids disposal and reuse.

The testing lab is certified by the State of Louisiana to run the majority of the tests necessary for potable water quality reports and wastewater discharge monitoring reports (DMR). Some exceptions to this include specialty testing such as Whole Effluent Toxicity, toxicity characteristic leaching procedures (TCLP), HAA5, and TTHM. Environmental staff reports that current staffing levels are adequate to provide all required testing and reporting, but acknowledge that future changes in regulations, operations, and/or service area may require additional personnel. In the near term, environmental staff has implemented in-house training, cross-training, and knowledge-based management programs to address succession planning for retiring employees and possible staff constraints.

All wastewater systems in Louisiana are required to file an annual Municipal Water Pollution Prevention (MWPP) audit report for each operating facility. These reports, among other things, compare the design hydraulic and biological treatment capacity of each plant with the actual conditions to identify plant design capacity exceedances. In 2015, LUS exceeded the design flow capacity at SSTP two times, ESTP three times, and ACTP five times, but did not exceed the biological loading at any of the treatment plants. The flow exceedances at SSTP and ESTP were due to excessive rainfall events that overwhelmed the system. Planned improvements to wet-weather holding facilities and head-works facilities will help to alleviate capacity exceedances. A portion of the five flow exceedances at ACTP were due to temporary diversion of wastewater from the SSTP to ACTP to facilitate construction improvements to the collection system. Once completed, the diversion will cease and all flows will return to SSTP. The completion of the 24-inch force main from ACTP to SSTP will also contribute to managing and reducing the number of exceedances each year. Each of the exceedances are reported to LDEQ when they occur, and when LUS knows that there will be an excursion due to repairs or

replacement, the utility coordinates with LDEQ, as required in their NPDES discharge permit. Table 6-5 shows the number of months during which the design capacity of each plant was exceeded over the past five years.

Table 6-5
Wastewater System
Number of Months Design Capacity was Exceeded

| Plant | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Flow | | | | | |
| South Plant | 0 | 0 | 1 | 0 | 2 |
| East Plant | 0 | 0 | 1 | 0 | 3 |
| Ambassador Caffery Plant | 5 | 9 (1) | 4 (1) | 6 (1) | 5 (1) |
| Northeast Plant | 0 | 0 | 0 | 0 | 0 |
| Biological Loading | | | | | |
| South Plant | 0 | 0 | 0 | 1 | 0 |
| East Plant | 0 | 0 | 0 | 0 | 0 |
| Ambassador Caffery Plant | 0 | 0 | 0 | 0 | 0 |
| Northeast Plant | 0 | 0 | 0 | 0 | 0 |

Source: LUS
(1) Flow exceedances are due in part to 1.5 MGD rerouted from SSTP to ACTP via the Verot School Rd. lift station to facilitate construction of improvements to the Old Maurice L.S. and the 24-inch F.M. This project was completed in 2015, and 2.0 MGD will be rerouted from ACTP back to SSTP.

The Clean Water Act of 1972 (CWA) requires all states to participate in the National Pollutant Discharge Elimination System (NPDES), and to file DMRs regarding wastewater quality at the point of discharge or introduction into the environment. The Vermilion River is considered oxygen deficient; therefore, LUS must comply with the limitations established for the release of carbonaceous biological oxygen demand (CBOD) and ammonia nitrogen ($NH_3$) into the river. Discharge permits are issued to LUS for each operating unit by the LDEQ that reflect the total maximum daily loading (TMDL) standards set for the Vermilion River in 2003.

All LUS wastewater treatment plants were re-permitted in October and November 2015 at 10 mg/l CBOD, 15 mg/l TSS, and 5 mg/l $NH_3$. The LPDES permits are valid for five years. The quality of various discharge parameters of each treatment unit are recorded on DMRs and submitted monthly to LDEQ. The 2014 DMRs for the various treatment plants and operating units indicate all operating units were in compliance with NPDES discharge limits, no notices of violation of effluent limits were received, LUS is current with all fees and report submittals, and there were no public complaints received in 2015.

## Spill Prevention Control and Countermeasure Plans

Water and wastewater treatment facilities that are proximate to waters of the U.S., and subject to spills of oils, fuel, or other controlled substances, and having a storage capacity of more than 1,320 gallons at a single facility must have an SPCC plan prepared in accordance

with state and federal regulations. SPCC plans have been prepared and implemented in accordance with state and federal requirements for each water and wastewater treatment site.

Several potential future environmental regulatory issues may affect LUS wastewater operations. The U.S. EPA is currently evaluating whether dental amalgam from dentist offices should be considered a categorical discharge or remain managed by best management practices. If dentist office discharges are classified as categorical then LUS will likely require one or two additional environmental compliance staff to work exclusively in the area of testing and reporting on the many dental offices within its service territory. Changes to pretreatment regulations regarding metal finishing businesses may also require additional personnel and resources.

### Wastewater Pretreatment Program

LUS continues to maintain a wastewater pretreatment program that is applicable to certain customers discharging to the LUS collection system. Many of the requirements contained in the program are industry-accepted best practices meant to reduce the loading at the treatment facilities. An example is the reduction of oils and grease into the Wastewater System. This program is currently maintained by the LUS Environmental Services Department.

## 6.6 Contracts

LUS is currently under contract for wastewater O&M for the Grossie Avenue area. This area includes a small number of customers served by a separately owned wastewater collection system. This agreement was made in 1995 via a U.S. Department of Housing and Urban Development grant. Flows from the approximately 50 customers are treated at the ESTP. The 40-year agreement expires in August 2035.

## 6.7 Competition/Benchmarking

LUS' residential wastewater rates have historically been among the highest in the state and surrounding region. The following tables and figures compare the average residential and commercial rates for selected wastewater utilities in the region.

Table 6-6
Wastewater System
Residential Rate Comparison

| Utility | Average $/1,000 gallon (1) |
|---|---|
| Alexandria | $2.20 |
| Morgan City | $2.78 |
| Lake Charles | $4.33 |
| New Iberia | $4.78 |
| Baton Rouge | $5.45 |
| LUS | $6.45 |
| Shreveport | $7.23 |
| New Orleans | $7.70 |

Source: LUS
(1) Assumes monthly water consumption of 7,000 gallons per month

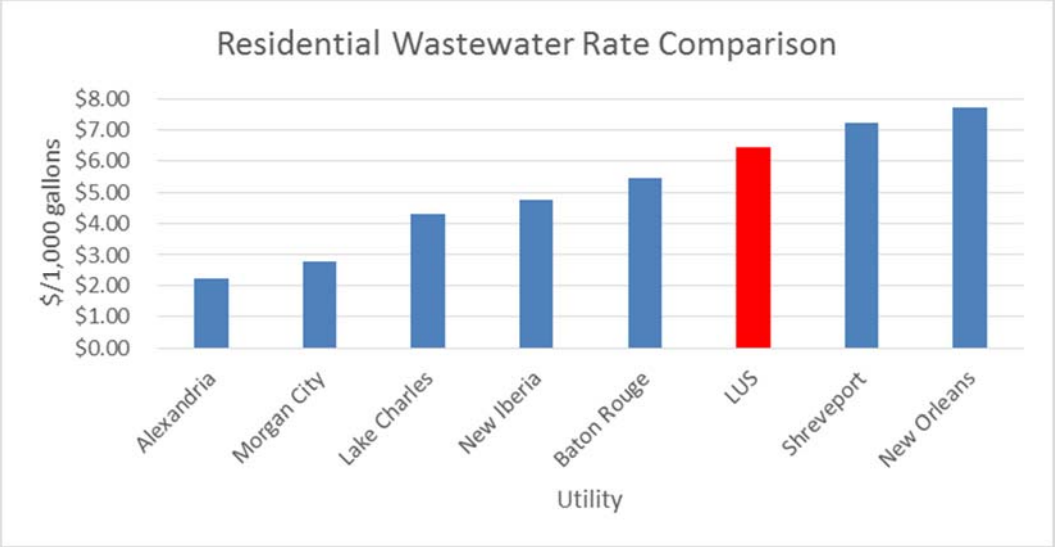


Figure 6-1: Wastewater System – Residential Rate Comparison

Table 6-7
Wastewater System
Commercial Rate Comparison

| Utility | Average $/1,000 gallon (1) |
|---|---|
| Alexandria | $2.12 |
| Morgan City | $2.78 |
| Lake Charles | $3.88 |
| LUS | $6.20 |
| Shreveport | $6.54 |
| Baton Rouge | $7.06 |
| New Orleans | $9.00 |

Source: LUS
(1) Assumes monthly consumption of 30,000 gallons and a 20-inch meter.

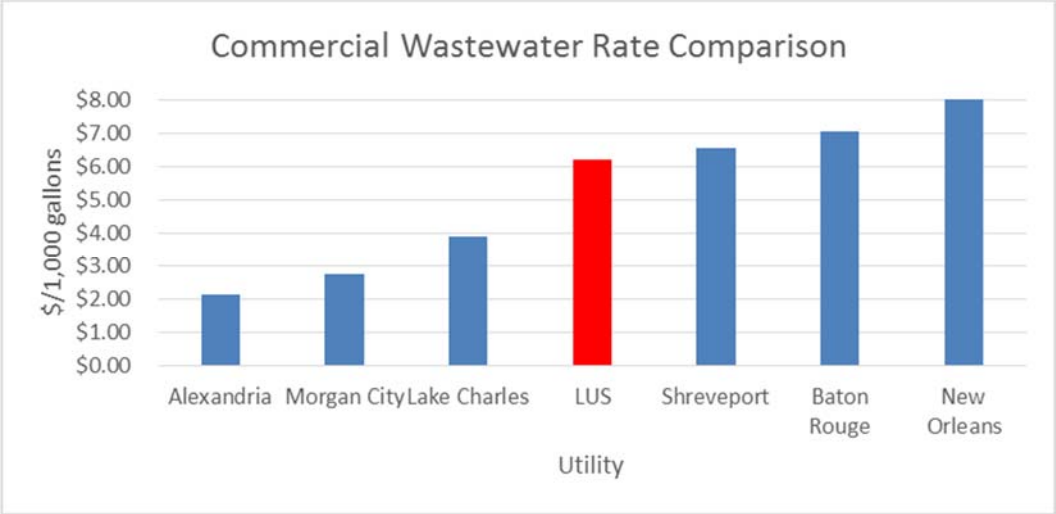


Figure 6-2: Wastewater System – Commercial Rate Comparison

## Benchmarking Financial and Operating Statistics

Table 6-8 benchmarks selected financial and operating ratios for LUS with other large municipal wastewater utilities nationwide. The data was provided by the AWWA Benchmarking Performance Indicators for Water and Wastewater, 2013 Data published 2015. The AWWA report contains data based on regions of the U.S. and based on the number of wastewater customers served by the utility. For the purposes of our analysis, we used the U.S. South region, which includes Louisiana and hereafter referred to as "Regional." In addition, the AWWA report contains an aggregate of Wastewater utilities in the U.S. and Canada and hereafter referred to as "National." If possible, the comparisons were made based on the Wastewater System only. However, for some balance sheet items, the LUS data was available for the combined Electric, Water, and Wastewater Systems and hereafter referred to

as "Combined." The AWWA benchmark data for Combined includes only water and wastewater utilities.

As shown in Table 6-8, LUS has a healthy Debt to Total Equity compared to the National and Regional averages. LUS' current and historical DSCR is significantly above that of the National and Regional average for wastewater utilities. However, LUS' operating costs are higher than regional and national averages, which also contributes to higher operating ratios and reduced cash reserve levels.

Table 6-8
Wastewater System
Benchmarked Wastewater Utility Operating Ratios

| | | National | Regional | LUS | | |
|---|---|---|---|---|---|---|
| Statistic | Basis | 2013 | 2013 | 2013 | 2014 | 2015 |
| Operational Costs per MGD | Wastewater | $1,945 | $2,405 | $2,845 | $3,183 | $3,063 |
| Debt to Equity (Total Assets) | Combined | 0.36 | 0.41 | 0.32 | 0.30 | 0.28 |
| Operating Ratio (O&M cost/ Operating revenue) | Wastewater | 0.51 | 0.56 | 0.57 | 0.62 | 0.62 |
| Operating Ratio (O&M cost/ Operating revenue) | Combined | 0.61 | 0.55 | 0.74 | 0.73 | 0.72 |
| Cash Reserve Days (1) | Combined | 259 | 236 | 42 | 49 | 44 |
| Debt Service Coverage | Wastewater | 1.43 | 1.32 | 2.73 | 2.42 | 2.47 |
| Debt Service Coverage | Combined | 1.42 | 1.43 | 2.88 | 3.04 | 2.99 |

(1) Based on total O&M for Electric, Water, and Wastewater Systems less fuel and purchased power expenses.

## 6.8 Historical Financial Performance

Current Wastewater System debt service includes the Series 1996 LDEQ debt, Series 2010 Bonds, and Series 2012 Bonds. Table 6-8 shows historical debt service and the associated DSCR. The DSCR exceeds the minimum requirement of 1.0.

Table 6-9
Wastewater System
Historical Financial Performance

| Year | Operating Revenues (1) | Operating Expenses (2) | Balance Available for Debt Service | Debt Service (3) | Debt Service Coverage Ratio |
|---|---|---|---|---|---|
| 2011 | $29,878,197 | $15,285,320 | $14,592,877 | $3,229,747 | 4.5 |
| 2012 | $29,313,577 | $16,144,199 | $13,169,378 | $3,411,437 | 3.9 |
| 2013 | $28,893,980 | $16,305,244 | $12,588,736 | $4,617,384 | 2.7 |
| 2014 | $28,735,575 | $17,428,365 | $11,307,211 | $4,672,103 | 2.4 |
| 2015 | $28,969,216 | $17,566,682 | $11,402,534 | $4,621,420 | 2.5 |

Source: LUS Financial and Operating Statements, audited
(1) Includes interest income and other miscellaneous income.
(2) O&M and other expenses include customer service, and administrative and general costs. Operating expenses do not include ILOT, normal capital, special equipment, and other miscellaneous expenses.
(3) Debt service includes the 1996 LDEQ debt, the Series 2004 Bonds, Series 2010 Bonds, and Series 2012 Bonds.

### Rate Structure

The Wastewater System services retail customers inside the City limits and outside of the City limits. The Wastewater System customer classes include residential and commercial.

The Wastewater System rate structure includes a customer charge and volumetric charges. The volumetric charges are based on the season and on the customers' water consumption. Customers are charged for their actual usage during the months of December through March. For the summer months, generally the usage is calculated on the average of the four preceding winter months (December – March) usage. However, the usage may not be less than 75% of the actual water consumption for the current month. Adjustments may be made by LUS as needed.

Table 6-10
Wastewater System
Rate Schedules

| Rate Class | Serves | Effective Date | Customer Charge ($/month) | Monthly Volumetric Charge ($/1,000 gallons) |
|---|---|---|---|---|
| S-1 | Residential | Nov 2010 | $6.49 | $5.52 |
| S-1-O | Residential Non-City | Nov 2010 | $6.72 | $6.79 |
| S-2 | Commercial | Nov 2010 | $16.14 | $5.66 |
| S-2-O | Commercial Non-City | Nov 2010 | $24.31 | $6.51 |

Source: LUS Rate Schedules

## Wastewater Revenue Statistics

Table 6-10 shows the Wastewater System revenues. Since 2011, the total retail revenues have decreased by an average annual rate of 0.9%.

The number of customers has consistently increased at approximately 0.9% per year with the highest customer growth in the residential customer class. The revenue per customer since 2011 has steadily decreased at 1.8%.

The total retail gallon intake has increased by average of 2.5% annually. The gallon intake per customer has also increased overall by 1.6% aligning with water consumption increases per customer.

Since 2011, the revenue per gallon has decreased at 3.3% per year.

Table 6-11
Wastewater System
Retail Revenues by Class

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Revenues | | | | | |
| Residential | $15,947,740 | $15,407,570 | $15,248,092 | $15,239,932 | $15,383,027 |
| Commercial | 12,099,756 | 12,214,595 | 11,899,444 | 11,829,389 | 11,631,865 |
| Schools & Churches | 1,034,691 | 1,110,237 | 1,067,615 | 1,074,254 | 1,080,667 |
| Other | 244,789 | 129,268 | 167,412 | 172,821 | 209,198 |
| Total | $29,326,976 | $28,861,669 | $28,382,562 | $28,316,395 | $28,304,757 |
| Number of Customers | | | | | |
| Residential | 36,416 | 36,539 | 37,060 | 37,494 | 37,919 |
| Commercial | 5,140 | 5,135 | 5,154 | 5,201 | 5,238 |
| Schools & Churches | 252 | 259 | 258 | 259 | 252 |
| Other | 121 | 116 | 115 | 115 | 114 |
| Total | 41,928 | 42,049 | 42,586 | 43,068 | 43,521 |
| Revenue per Customer | | | | | |
| Residential | $438 | $422 | $411 | $406 | $406 |
| Commercial | 2,354 | 2,379 | 2,309 | 2,275 | 2,221 |
| Schools & Churches | 4,114 | 4,292 | 4,146 | 4,154 | 4,294 |
| Other | 2,031 | 1,115 | 1,453 | 1,502 | 1,843 |
| Total | $699 | $686 | $666 | $657 | $650 |
| Intake (1000 gallons) | 5,190,182 | 5,448,397 | 5,730,473 | 5,476,065 | 5,734,225 |
| Intake (1000 gallons) per Customer | 124 | 130 | 135 | 127 | 132 |
| Revenue per (1000 gallons) Intake | $5.65 | $5.30 | $4.95 | $5.17 | $4.94 |

Source: LUS Financial and Operating Statements, audited

## Expense Analysis

Table 6-12 below shows the historical wastewater operating expenses separated between fixed and variable expense. Variable operating expenses include purchased power costs embedded in the Collection expense account and chemicals embedded in the Treatment expense account. Fixed operating expenses include fixed costs embedded in Collection, Treatment, Customer Service, and Administrative and General expense accounts. Historically, the variable expenses have averaged 10% of the total expenses while fixed expenses average 90%.

As the Water System retail sales are affected by weather, so are the Wastewater System sales. The volatility in the weather may affect the volatility in the revenues. However, as shown in Table 6-12, the expenses are largely fixed and do not vary with the weather. As a result, there is pressure on the wastewater rates to adequately recover revenues during any type of weather.

Table 6-12
Wastewater System
Historical Fixed and Variable Expense Summary

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Variable Expenses | | | | | |
| Collection | $307,891 | $296,710 | $360,500 | $382,017 | $365,217 |
| Treatment | 1,380,800 | 1,377,004 | 1,331,869 | 1,466,968 | 1,391,904 |
| Total Variable Expenses | $1,688,691 | $1,673,714 | $1,692,369 | $1,848,984 | $1,757,121 |
| Fixed Expenses | | | | | |
| Collection | $3,233,055 | $3,147,379 | $3,575,038 | $3,498,088 | $3,722,893 |
| Treatment | 4,316,369 | 4,485,606 | 4,569,081 | 5,346,618 | 5,265,725 |
| Customer | 899,558 | 1,279,553 | 1,260,125 | 1,161,544 | 1,208,820 |
| A&G | 5,147,647 | 5,557,947 | 5,208,631 | 5,573,130 | 5,612,123 |
| Total Fixed Expenses | $13,596,629 | $14,470,485 | $14,612,875 | $15,579,380 | $15,809,562 |
| Total Fixed & Variable | $15,285,320 | $16,144,199 | $16,305,244 | $17,428,365 | $17,566,682 |
| Percent Variable | 11% | 10% | 10% | 11% | 10% |
| Percent Fixed | 89% | 90% | 90% | 89% | 90% |

Source: LUS Financial and Operating Statements, audited

## 6.9 Findings and Recommendations

- As wastewater collection and transmission infrastructure continues to age, I&I and system overflows will remain an important infrastructure issue. Efforts to address and control I&I and overflows should continue to be a priority.
- Historically, certain environmental reports, including DMRs, MWPPs, biosolids reports, and overflow and spill reports, were initiated, signed, and submitted by a single individual. In 2015, LUS ensured a separation of duties for these environmental reporting procedures. LUS has also began on-line submittals of certain environmental reports, such as DMRs, through the LDEQ E-DMR electronic submittal process.
- LUS staff reports that water meter flow data required to assess water and wastewater billing rates to customers within a wholesale customer's service area is not provided to LUS by the wholesale customer in certain instances. LUS should pursue agreements with wholesale customers that will require delivery of all flow data necessary for LUS to perform accurate billing to customers within the service area of the wholesale customer.
- SCADA control and feedback from the operating units, especially lift stations, has not been fully implemented, although progress was made in 2015. Although SCADA is not critical to the actual function of the operating units, O&M efforts, data collection used in developing reports, and maximization of personnel time and performance can be greatly enhanced by completing SCADA installations.

- Biosolids disposal continues to be a near term issue that LUS must address if the lessors of the land begin cancelling agreements, and as additional outlying package treatment plants are integrated with the Wastewater System. LUS should continue to evaluate sludge treatment and disposal options such as:
  - Continuing to treat sludge to Class B standards versus Class A standards.
  - Continuing sludge disposal on leased land versus purchased land; third-party sales as a disposal option; or a combination of all three.
- Until such time as sludge treatment and sludge disposal options can be clarified, the current lease agreements for land necessary for sludge disposal land applications should be reviewed and updated to reflect long-term leases that will ensure that sufficient surface acreage is available to meet long-term sludge disposal requirements. Since the existing land leases are not favorable towards LUS regarding a long-term option for land application of biosolids, LUS advises that the following factors should be taken into consideration:
  - The lead time required to convert from generating Class B sludge to Class A sludge would likely take three to four years. This includes planning, permitting, design, procurement of equipment, and construction.
  - The cost for equipment necessary to generate Class A sludge would be in the $4.0 million range.
  - The cost for lime required in the Class A process will be in the $1.0 million per year range.
  - The process to purchase property will take anywhere from one to two years, depending if LUS can find suitable properties available within a reasonable proximity, and if the property can be purchased without having to go through the condemnation process.
  - If a significant number of existing leases are cancelled before suitable arrangements can be made for alternate application sites, LUS may be forced to dispose of the biosolids in a landfill certified to handle Class B biosolids.
- Existing collection and transmission infrastructure necessary to assimilate outlying wastewater package plants into the Wastewater System, and to accommodate the flow from expected population growth is currently insufficient to properly handle such growth. LUS should consider an update to the Wastewater Master Plan that will identify collection system capacity improvements projects, wastewater treatment system capacity improvements, regulatory compliance projects, and system O&M projects for a minimum 20-year planning period. Such planning will enable LUS to update and supplement the existing CIP.
- Although staffing levels were not reported to be an issue, several key management personnel and certified operators can or will retire within the next five years. LUS should develop a succession plan to ensure the continued operation of the water/wastewater operations with as much operational continuity as possible, and with as little loss of institutional knowledge as possible. LUS reports that staffing levels are

reviewed annually, and that a program of screening and cross-training to identify individuals that exhibit technical proficiency and leadership skills is in place.

# SECTION 8
# CONTINUING DISCLOSURES

Any governmental entity that issues bonds must enter into a continuing disclosure agreement to be in compliance with the Securities and Exchange Commission (SEC) Rule 15c2-12. As part of the continuing disclosure agreement, the Issuer promises to provide certain annual financial information and material event notices to the public. These filings must be made electronically at the EMMA portal (www.emma.msrb.org). Please refer to Appendix A for the Utilities System Continuing Disclosures, Appendix B for the LPPA Continuing Disclosures, and Appendix C for The Communications System Continuing Disclosures. Each appendix contains a table that cross references the required information with tables in this report.

# Appendix A
# CONTINUING DISCLOSURES – UTILITIES SYSTEM

## Introduction

Any governmental entity that issues bonds must enter into a continuing disclosure agreement to be in compliance with the SEC Rule 15c2-12. As part of the continuing disclosure agreement, the issuer promises to provide certain annual financial information and material event notices to the public. These filings must be made electronically at the EMMA portal (www.emma.msrb.org).

The Utilities System has the following outstanding debt as of October 31, 2015:

- Utilities Revenue Bonds, Series 2010
- Utilities Revenue Bonds, Series 2012

The continuing disclosure agreement for the outstanding bonds requires that specific tables contained in the Official Statements must be updated annually. This section contains the required tables. This section contains forward looking financial statements based on NewGen current expectations and projections about future events and financial trends regarding the Utilities System. Projections as contained herein reflect estimates of what might occur in the future based on the information available to us as of the date of this Report. NewGen cannot predict the future or guarantee future financial performance of the Utilities System. To the extent that assumptions used in these projections vary from those actually observed, financial performance as presented herein will vary from actual performance. NewGen prepared a 10-year projection of financial and operating data for each of the Electric, Water, and Wastewater Systems. Projections are based on NewGen's review of historical operating results, the approved 2016 Budget, visual observations of the Utilities System assets, and other assumptions and considerations as listed in the Report. The projections prepared by NewGen are for the Projected Period of November 1, 2015 through October 31, 2025. LUS provided actual historical data for the FY 2011 through FY 2015.

## Information and Assumptions Relied Upon

The projected operating results for the Utilities System rely upon the following information and assumptions gather in the course of NewGen's review.

1. NewGen assumed LUS will operate and maintain the Utilities System following prudent utility practices. Prudent utility practices means practices, methods, and acts that would be expected to accomplish the desired results in a workmanlike manner consistent with applicable laws and other government requirements and reliability, safety, and environmental protection.

2. NewGen assumed LUS will hire and maintain competent personnel. If needed, LUS will provide training to personnel to ensure the safety and reliability of the utility.

3. NewGen assumed LUS will maintain and renew any required permits or approvals related to the utility including power, water, and wastewater treatment plants and sites.

4. NewGen assumed there will not be further regulation of LUS facilities that require major capital expenditures for LUS to be in compliance.

5. NewGen assumed the Rodemacher Unit 2, Hargis-Hébert Plant, and T. J. Labbé Plant will be maintained and operated in good condition throughout the Projected Period.

6. LUS retained a consultant to perform an Integrated Resource Plan (IRP). The plan will be completed during FY 2016 and LUS expects the IRP to provide a recommendation regarding the status of the Doc Bonin Plant and suggestions regarding the procurement of future generation. For the purpose of projections, NewGen assumed that the Doc Bonin Plant will be decommissioned to grade during the FYs 2017 and 2018 at a cost of $6 million. NewGen did not assume the construction and operation of any new power plants.

7. NewGen assumed the water treatment plants, wells, and system will be maintained and operated in good condition throughout the Projected Period.

8. NewGen assumed the wastewater treatment plants and system will be maintained and operated in good condition throughout the Projected Period.

9. NewGen assumed that all existing contracts will be honored.

10. NewGen assumed standard operating procedure for LUS and did not include the effects of any event outside of LUS' control including force majeure.

11. NewGen assumed LUS will have adequate coal, natural gas, and water supply for operation of the power plants.

12. NewGen assumed LUS will have adequate water supply from the Chicot aquifer to meet the customers' needs.

13. NewGen assumed that LUS will be a market participant in MISO including providing capacity and meeting all other operational and financial requirements.

14. NewGen assumed adequate transmission access in MISO to buy and sell power as needed.

15. Utilities System financial and operating data was provided by LUS, LCG, LPPA, interviews with LUS, LCG, and Cleco staff, and visual observations of the Utilities System facilities. Data provided by LUS, LCG, LPPA, and Cleco includes historical financial and operating data for years 2011–2015, 2016 Budget, and an LPPA Operating and Capital Budget.

16. For MISO market purchases and sales, NewGen relied upon a MISO hourly price forecast developed by Ventyx in the fall of 2015. Using this forecast, assumptions pertaining to the dispatch of LUS' generating units were developed. These assumptions were the basis for projecting LUS fuel costs associated with Rodemacher Unit 2, T. J. Labbé, and Hargis-Hébert generating plants. The structure of

LUS electric rates enables the direct pass through of MISO power supply costs to customers.

17. Future costs associated with emissions or potential environmental compliance have not been included in the projected operating results. All operating expenses associated with environmental compliance are included in the Electric System FC rate and passed through to customers.

18. The Projected Period includes approximately $6 million in capital associated with compliance with the Clean Power Plan for LPPA's 50% share of Rodemacher Unit No. 2.

19. NewGen relied upon the most recent semi-annual Blue Chip Economic Indicator projection of GDP, dated March 2016. The GDP was used to escalate O&M expenses and capital. Per the Blue Chip forecast, the GDP is projected to be 2.1% over the Projected Period.

20. NewGen relied upon LCG's projected interest rates for short-term and long-term investments.

21. Projected coupon rates associated with future Utilities System bonds were based on the Bloomberg Municipal Bond Index and adjusted using the Blue Chip forecast of the 10-year U.S. Treasury Department Bond. NewGen assumed that future bond terms are 30 years with levelized annual debt service.

## Projected Operating Results Assumptions

Although there are many variables that influence Utilities System projected operating results, a few key variables have an important influence on the financial integrity of the systems. These variables include growth in:

- Electric and water sales
- Adequacy of rates and rate structure
- Capital additions and improvements associated with the Utilities System

Sustained growth in electric and water sales reduces the frequency of rate increases and provides an increasing revenue stream. The Electric System rate structure includes base rates and a monthly FC (Schedule FC). The monthly FC continues on a month-to-month basis until which time the Utilities Director determines that eligible costs warrant an adjustment to the current charge. Schedule FC passes fuel, purchased power, and other eligible costs directly to customers. This mechanism protects LUS from the financial risk associated with unforeseen and potentially detrimental volatility in power costs that may be associated with the MISO market.

The Utilities System is capital intensive. Each system must be maintained and expanded to meet customer growth and increasing demands. This ensures a high level of reliability.

## Revenue Projection

Historically, electric and water sales have shown steady growth as described earlier in this Report. Projected operating results assume that electric sales will grow at an average annual

rate of approximately 1.9% over the Projected Period. Water retail sales project growth at an average annual rate of approximately 1.0%, and wholesale sales project growth at an average annual rate of approximately 3.8% over the Projected Period. Wastewater sales are a function of water sales.

The revenue projection assumes periodic rate increases. Rate increases are required to meet system operating costs, debt service coverage, capital planning requirements, the ILOT test, and minimum cash reserve requirements.

## Expense Projection

The Utilities System's single largest expense is related to electric purchased power and the power generation function. The projection of purchased power expenses is based on a MISO power market forecast developed by Ventyx. Using this forecast, assumptions pertaining to the dispatch of LUS' generating units were developed. These assumptions were the basis for projecting LUS fuel costs associated with the Rodemacher Unit 2, T. J. Labbé, and Hargis-Hébert Plants. Electric System production expenses include LPPA costs.

The structure of LUS electric rates and Schedule FC enables the direct pass through of MISO power supply costs, eligible LPPA costs, and other eligible costs and credits to customers. The Utilities Director may adjust Schedule FC monthly to ensure that the charge adequately recovers eligible costs as closely as possible. LPPA fuel, O&M expenses, debt service associated with MATS upgrades, and debt service associated with rail cars are included in the FC calculation. Over the Projected Period, approximately 85% of LPPA debt service is passed through Schedule FC. LUS Electric System base rates recover the remaining LPPA debt service obligation.

Other Electric System operating expenses include transmission, distribution, customer, and A&G expenses.

Water System operating expenses include production, distribution, customer, and A&G expenses. Water production is the largest expense for the Water System. Wastewater System operating expenses include treatment, collection, customer, and A&G. Wastewater treatment is the largest expense for the Wastewater System.

## Debt Service

Utilities System debt service includes the Series 1996 LDEQ debt, Series 2010 Bonds, and Series 2012 Bonds. New debt service includes bond issues in years 2017, 2019, 2021, 2023, and 2025. Projected operating results assume future bond issues to meet Utilities System capital requirements. The projected debt service coverage ratio exceeds the minimum requirement of 1.0x.

## Other Expenses

Other expense items include ILOT, normal capital and special equipment, and other miscellaneous expenses. Normal capital and special equipment are projected based on historical data.

## In Lieu of Tax

The Utilities System ILOT calculation provides for an ILOT payment equal to 12% of Non-fuel Revenues. The Non-fuel Revenues are the Gross Receipts less fuel costs and other miscellaneous items. To be eligible to make the ILOT payment, the Utilities System must first pass an ILOT Test. The ILOT test ensures that the Utilities System retains sufficient cash to meet capital obligations. If cash available after payment of operating expenses and debt service, less 7.5% of the Non-fuel Revenues, is greater than 12% of the Non-fuel Revenues, the Utilities System passes the test and makes the ILOT payment to the City. Should the Utilities System fail the ILOT test, the Utilities System pays the cash available after debt service less 7.5% of the Non-fuel Revenues.

## Capital Improvement Program

During the Projected Period, the Utilities System CIP reflects capital projects designed to upgrade, renew, and expand the system to meet customer growth requirements. The tables contained in this report are based on the 2016 Budget. However, for the projections, certain adjustments were made based on information provided by LUS.

## Bond Reserve Fund and Cash Available

Cash available reflects remaining funds available to the Utilities System once all other credit obligations of the Utilities System are satisfied. For the Utilities System, LUS has established a financial objective that requires a minimum cash balance of $8,000,000 to be held in an Operation and Maintenance Fund. The Operation and Maintenance Fund resides in the Operating Fund providing a cash reserve to meet system O&M expense requirements. Once O&M expense and debt service obligations are met by LUS, accumulated cash balances are held in a Capital Additions Fund and are applicable to capital projects or other lawful uses. The Projected Period assumes that capital additions for the Utilities System will be paid with a combination of cash balances available in the Capital Additions Fund and new debt.

# Cross Reference

In an effort to minimize duplication of data, the following table is provided to assist in cross referencing the information contained in the Continuing Disclosures with the information contained in this Report.

City of Lafayette, Utilities Revenue Refunding Bonds, Series 2010

| Official Statement Section | Official Statement Page | Official Statement Table Title | Report Reference |
|---|---|---|---|
| Trends in Finances, page 32-34 | 33 | Lafayette City-Parish Consolidated Government, Lafayette Utilities System Income Statements | Table A-1 |
| | 35 | Historical Debt Service Coverage Calculation | Table 3-3 |

City of Lafayette, Utilities Revenue Refunding Bonds, Series 2012

| Official Statement Section | Official Statement Page | Official Statement Table Title | Report Reference |
|---|---|---|---|
| Trends in Finance, page 35 | 35 | Lafayette City-Parish Consolidated Government, Lafayette Utilities System Income Statements | Table A-1 |
| | 36 | Historical Debt Service Coverage Calculation | Table 3-3 |

Table A-1
Utilities System LUS Income Statements

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Operating Revenues | | | | | |
| Electric | $101,602,013 | $97,060,235 | $93,111,312 | $95,395,327 | $96,291,739 |
| Electric Retail Fuel Adjustment | 87,783,625 | 76,824,304 | 93,158,373 | 105,375,603 | 84,910,901 |
| Water | 18,525,544 | 17,704,385 | 17,394,122 | 17,746,170 | 18,028,081 |
| Wastewater | 29,640,890 | 29,145,030 | 28,617,205 | 28,579,957 | 28,791,165 |
| Fiber | 192 | 415 | 0 | 40 | 0 |
| Total Operating Revenues | $237,552,264 | $220,734,370 | $232,281,011 | $247,097,098 | $228,021,885 |
| Operating Expenses | | | | | |
| Electric Fuel & Purch Power | $117,267,093 | $93,334,902 | $96,443,791 | $105,679,639 | $88,717,783 |
| Electric Other Production | 9,838,002 | 14,862,330 | 12,868,472 | 7,893,377 | 8,190,689 |
| Other Electric | 26,666,603 | 29,687,697 | 30,849,592 | 33,514,860 | 33,098,450 |
| Water | 11,783,706 | 12,136,044 | 11,948,312 | 12,950,319 | 13,099,239 |
| Wastewater | 15,285,320 | 16,144,199 | 16,305,244 | 17,428,365 | 17,566,682 |
| Fiber | 0 | 0 | 0 | 0 | 0 |
| Total Operating Expenses | $180,840,724 | $166,165,173 | $168,415,411 | $177,466,560 | $160,672,843 |
| Net Operating Revenues | $56,711,540 | $54,569,197 | $63,865,600 | $69,630,538 | $67,349,042 |
| Depreciation | $17,716,330 | $19,376,753 | $20,978,328 | $22,130,030 | $22,881,380 |
| Other Income | | | | | |
| Interest Income | $1,890,648 | $1,273,167 | $2,243,940 | $1,313,230 | $1,426,311 |
| Unrealized Gain/Loss on Invs | 0 | 0 | 0 | 30,750 | 91,526 |
| Amortization of Debt Premium | 290,521 | 503,471 | 2,608,147 | 3,029,199 | 3,028,445 |
| Water Tapping Fees | 47,900 | 86,100 | 105,100 | 104,100 | 107,420 |
| Communications Lease Income | 0 | 0 | 0 | 97,073 | 36,952 |
| Contributions in Aid of Construction | (8,361) | 0 | 7,135 | 0 | 0 |
| Misc. Non-Operating Revenue | 1,843,038 | 8,869,047 | 5,408,764 | 2,877,693 | 3,414,729 |
| Total Other Income | $4,063,747 | $10,731,784 | $10,373,086 | $7,452,045 | $8,105,384 |
| Other Expenses | | | | | |
| Loss on Disposition of Property | $15,621 | $0 | $0 | $250,980 | $313,714 |
| Interest Expense | 11,227,182 | 11,042,341 | 9,438,459 | 9,180,021 | 10,623,334 |
| Amortization on Plant | 1,735,578 | 1,735,578 | 1,735,581 | 1,646,801 | 1,406,190 |
| Amortization - Other | 204,502 | 221,828 | 1,295,081 | 1,269,526 | 1,269,525 |
| Interest on Customer Deposits | 0 | 0 | 13,831 | 11,746 | 3,206 |
| Tax Collections/Non-Operating | 154,016 | 308,182 | 322,829 | 0 | 0 |
| Misc. Non-Operating Expense | 449,800 | 788,059 | 1,830,478 | 1,921,605 | 1,383,331 |

Table A-1
Utilities System LUS Income Statements

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Total Other Expenses | $13,786,699 | $14,095,989 | $14,636,258 | $14,280,680 | $14,999,299 |
| Net Income Before in Lieu of Tax | $29,272,258 | $31,828,239 | $38,624,100 | $40,671,873 | $37,573,746 |
| ILOT | $19,199,649 | $21,596,096 | $22,131,617 | $22,073,833 | $22,847,494 |
| Net Income | $10,072,609 | $10,232,143 | $16,492,483 | $18,598,040 | $14,726,252 |
| Net Position, Beginning | $448,462,980 | $458,815,851 | $465,513,812 | $479,897,190 | $479,897,190 |
| Net Position, Ending | $458,535,587 | $469,047,994 | $482,006,336 | $498,495,230 | $493,845,954 |

# Appendix B
# CONTINUING DISCLOSURES - LPPA

## Introduction

Any governmental entity that issues bonds must enter into a continuing disclosure agreement to be in compliance with the SEC Rule 15c2-12. As part of the continuing disclosure agreement, the issuer promises to provide certain annual financial information and material event notices to the public. These filings must be made electronically at the EMMA portal (www.emma.msrb.org).

LPPA has the following outstanding debt as of October 31, 2015:

- Electric Revenue Bonds, Series 2007
- Electric Revenue Bonds, Series 2012
- Electric Revenue Refunding Bonds, Series 2015

At the beginning of FY 2016, LPPA refunded the majority of the Series 2007 bonds. The continuing disclosures for the Electric Revenue Refunding Bonds, Series 2015, are also contained in this Report.

The continuing disclosure agreement for the outstanding bonds requires that specific tables contained in the Official Statements must be updated annually. This section contains the required tables. This section contains forward looking financial statements based on our current expectations and projections about future events and financial trends regarding LPPA. Projections as contained herein reflect estimates of what may occur in the future based on the information available to us as of the date of this Report. NewGen cannot predict the future or guarantee future financial performance of LPPA. To the extent that assumptions used in these projections vary from those actually observed, financial performance as presented herein will vary from actual performance. NewGen prepared a 10-year projection of financial and operating data for LPPA. Projections are based on our review of historical operating results, Cleco's budget, visual observations of LPPA assets, and other assumptions and considerations as listed in the Report. The projections prepared by NewGen are for the Projected Period of November 1, 2015 through October 31, 2025 (the Projected Period). LPPA provided actual historical data for FY 2011 through FY 2015.

## Information and Assumptions Relied Upon

Although there are many variables that influence LPPA's projected operating results, a few key variables have an important influence on the financial integrity of the systems. These variables include growth in:

- LUS electric sales growth
- Electric System rate structure
- Capital additions and improvements associated with LPPA

The Electric System growth is expected to remain steady with an average annual increase in energy sales of approximately 1.9% through the Projected Period. Growth and related rate revenues maintain LUS' ability to meet debt service requirements.

All LPPA costs are paid by LUS. The LPPA costs are treated as purchased power costs to LUS. The Electric System rate structure includes an FC that passes certain costs directly to customers. The rate structure allows a significant portion of the LPPA costs to be recovered through the FC. The FC passes through any fuel or environmental related costs to the customers without the need for a formal rate increase and Council approval. The following LPPA costs are passed through the LUS FC: fuel cost, MATS O&M costs, debt service associated with the rail cars and debt service associated with the MATS project. The remainder of the LPPA expenses are recovered through the electric base rates (customer charge, demand charge, energy charge). Over the Projected Period, there are no base rate increases associated with the Electric System.

The Projected Period includes approximately $6 million in capital associated with compliance with the Clean Power Plan for LPPA's 50% share of Rodemacher Unit No. 2. However, capital improvement plans are reviewed periodically and are subject to change based on evolving operational and federal regulatory requirements.

## Revenue Projection

LPPA projected revenues reflect the full cost recovery per the PCA. Therefore, revenues are equivalent to debt service, capital, and meeting reserve requirements.

## Expense Projection

LPPA's single largest expense is fuel. Rodemacher Unit 2 is projected to have an average capacity factor of 51% over the Projected Period. The capacity factor varies based on schedule outages and forecast MISO market prices. In December 2013, LUS became a full MISO market participant as a Local Balancing Authority, with TEA designated to handle day-ahead schedules. Since becoming a MISO participant, LUS now generates power for and purchases power from the MISO market. LUS has the ability to schedule Rodemacher Unit 2 operation at certain levels to meet LUS load or other contractual obligations. Available capacity above the scheduled amount may be economically dispatched into the MISO market. A further discussion on MISO can be found under Utilities System-Electric System description within this Report.

The 2015 Rodemacher Unit 2 actual annual average coal price was escalated based on the 2015 Energy Information Administration (EIA) Short-term Energy Outlook coal price forecast. These assumptions were the basis for projecting LPPA fuel costs associated with the Rodemacher Unit 2. For Rodemacher Unit 2, NewGen relied upon a MISO hourly price forecast developed by Ventyx in the fall of 2015. All other Operating Expenses were escalated at inflation.

## Debt Service

An important LPPA non-fuel cost is related to debt service. Over the Projected Period, approximately 85% of LPPA debt service is passed through the LUS FC. LPPA fuel, O&M expenses, and debt service associated with MATS upgrades, and debt service associated with

rail cars are included in the LUS FC calculation. LUS Electric System base rates recover the remaining LPPA debt service obligation.

LPPA debt service includes the Series 2007 Bonds and Series 2012 Bonds. Projected operating results assume no future bond issues to meet LPPA capital requirements. The debt service coverage ratio meets the minimum requirement of 1.0. Because LUS pays 100% of LPPA costs, Operating Revenues, provided exclusively from LUS, generally equal Operating Costs. The extent that debt service coverage is greater than 1.0, any available cash is applied to capital improvement projects.

Bond monies associated with Series 2007 Bonds and Series 2012 Bonds have been used to purchase aluminum rail cars, install environmental controls to comply with MATS, $NO_x$, and $SO_2$ requirements, and other capital improvements required to maintain the operation and availability of Rodemacher Unit 2.

## Capital Improvement Program

During the Projected Period, the LPPA CIP reflects capital projects designed to maintain the assets for reliability. The capital projects include CCR compliance, primary and secondary air heater cold end baskets, replace reheater tubing sections, replace control system, low pressure blade replacement, and other projects related to reliability or improving performance.

## Bond Reserve Fund and Cash Available

LPPA's current Bond Reserve Fund Balance is approximately $9.7 million as required by the bond ordinance. With the refunding of the Series 2007 Bonds, the new Bond Reserve Fund requirement will be approximately $9.4 million for Series 2012 and 2015 Bonds. LPPA also maintains a Reserved and Contingency Fund of approximately $5.3 million and a Fuel Cost Stability Fund of approximately $4.5 million.

# Cross Reference

In an effort to minimize duplication of data, the following table is provided to assist in cross referencing the information contained in the Continuing Disclosures with the information contained in this Report.

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Table B-1
Debt Service Requirements

| | Series 2007 Bonds | | Series 2012 Bonds | | Series 2015 Bonds | | Total Debt Service Requirement | | |
|---|---|---|---|---|---|---|---|---|---|
| Due Date | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Total |
| 11/1/2014 | $605,000 | $737,078 | $2,255,000 | $1,362,975 | $0 | $0 | $2,860,000 | $2,100,053 | $4,960,053 |
| 5/1/2015 | 0 | 724,978 | 0 | 1,329,150 | 0 | 0 | 0 | 2,054,128 | 2,054,128 |
| 11/1/2015 | 630,000 | 724,978 | 2,325,000 | 1,329,150 | 0 | 0 | 2,955,000 | 2,054,128 | 5,009,128 |
| 5/1/2016 | 0 | 26,900 | 0 | 1,282,650 | 0 | 532,936 | 0 | 1,842,486 | 1,842,486 |
| 11/1/2016 | 660,000 | 26,900 | 2,415,000 | 1,282,650 | 90,000 | 571,003 | 3,165,000 | 1,880,553 | 5,045,553 |
| 5/1/2017 | 0 | 13,700 | 0 | 1,234,350 | 0 | 570,103 | 0 | 1,818,153 | 1,818,153 |
| 11/1/2017 | 685,000 | 13,700 | 2,510,000 | 1,234,350 | 95,000 | 570,103 | 3,290,000 | 1,818,153 | 5,108,153 |
| 5/1/2018 | 0 | 0 | 0 | 1,184,150 | 0 | 569,153 | 0 | 1,753,303 | 1,753,303 |
| 11/1/2018 | 0 | 0 | 2,610,000 | 1,184,150 | 800,000 | 569,153 | 3,410,000 | 1,753,303 | 5,163,303 |
| 5/1/2019 | 0 | 0 | 0 | 1,131,950 | 0 | 561,153 | 0 | 1,693,103 | 1,693,103 |
| 11/1/2019 | 0 | 0 | 2,715,000 | 1,131,950 | 815,000 | 561,153 | 3,530,000 | 1,693,103 | 5,223,103 |
| 5/1/2020 | 0 | 0 | 0 | 1,104,800 | 0 | 548,928 | 0 | 1,653,728 | 1,653,728 |
| 11/1/2020 | 0 | 0 | 2,770,000 | 1,104,800 | 845,000 | 548,928 | 3,615,000 | 1,653,728 | 5,268,728 |
| 5/1/2021 | 0 | 0 | 0 | 1,049,400 | 0 | 536,253 | 0 | 1,585,653 | 1,585,653 |
| 11/1/2021 | 0 | 0 | 2,880,000 | 1,049,400 | 865,000 | 536,253 | 3,745,000 | 1,585,653 | 5,330,653 |
| 5/1/2022 | 0 | 0 | 0 | 991,800 | 0 | 523,278 | 0 | 1,515,078 | 1,515,078 |
| 11/1/2022 | 0 | 0 | 2,995,000 | 991,800 | 900,000 | 523,278 | 3,895,000 | 1,515,078 | 5,410,078 |
| 5/1/2023 | 0 | 0 | 0 | 916,925 | 0 | 505,278 | 0 | 1,422,203 | 1,422,203 |
| 11/1/2023 | 0 | 0 | 3,145,000 | 916,925 | 930,000 | 505,278 | 4,075,000 | 1,422,203 | 5,497,203 |
| 5/1/2024 | $0 | $0 | $0 | $854,025 | $0 | $486,678 | $0 | $1,340,703 | $1,340,703 |

Table B-1
Debt Service Requirements

| | Series 2007 Bonds | | Series 2012 Bonds | | Series 2015 Bonds | | Total Debt Service Requirement | | |
|---|---|---|---|---|---|---|---|---|---|
| Due Date | Principal | Interest | Principal | Interest | Principal | Interest | Principal | Interest | Total |
| 11/1/2024 | 0 | 0 | 3,275,000 | 854,025 | 970,000 | 486,678 | 4,245,000 | 1,340,703 | 5,585,703 |
| 5/1/2025 | 0 | 0 | 0 | 772,150 | 0 | 467,278 | 0 | 1,239,428 | 1,239,428 |
| 11/1/2025 | 0 | 0 | 3,435,000 | 772,150 | 1,010,000 | 467,278 | 4,445,000 | 1,239,428 | 5,684,428 |
| 5/1/2026 | 0 | 0 | 0 | 686,275 | 0 | 442,028 | 0 | 1,128,303 | 1,128,303 |
| 11/1/2026 | 0 | 0 | 3,610,000 | 686,275 | 1,065,000 | 442,028 | 4,675,000 | 1,128,303 | 5,803,303 |
| 5/1/2027 | 0 | 0 | 0 | 596,025 | 0 | 415,403 | 0 | 1,011,428 | 1,011,428 |
| 11/1/2027 | 0 | 0 | 3,790,000 | 596,025 | 1,105,000 | 415,403 | 4,895,000 | 1,011,428 | 5,906,428 |
| 5/1/2028 | 0 | 0 | 0 | 501,275 | 0 | 398,828 | 0 | 900,103 | 900,103 |
| 11/1/2028 | 0 | 0 | 3,980,000 | 501,275 | 1,140,000 | 398,828 | 5,120,000 | 900,103 | 6,020,103 |
| 5/1/2029 | 0 | 0 | 0 | 401,775 | 0 | 381,016 | 0 | 782,791 | 782,791 |
| 11/1/2029 | 0 | 0 | 4,175,000 | 401,775 | 4,325,000 | 381,016 | 8,500,000 | 782,791 | 9,282,791 |
| 5/1/2030 | 0 | 0 | 0 | 297,400 | 0 | 272,891 | 0 | 570,291 | 570,291 |
| 11/1/2030 | 0 | 0 | 4,385,000 | 297,400 | 4,505,000 | 272,891 | 8,890,000 | 570,291 | 9,460,291 |
| 5/1/2031 | 0 | 0 | 0 | 231,625 | 0 | 199,684 | 0 | 431,309 | 431,309 |
| 11/1/2031 | 0 | 0 | 4,520,000 | 231,625 | 4,690,000 | 199,684 | 9,210,000 | 431,309 | 9,641,309 |
| 5/1/2032 | 0 | 0 | 0 | 118,625 | 0 | 82,434 | 0 | 201,059 | 201,059 |
| 11/1/2032 | 0 | 0 | 4,745,000 | 118,625 | 4,885,000 | 82,434 | 9,630,000 | 201,059 | 9,831,059 |
| 5/1/2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11/1/2033 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table B-2
Annual Operating Expenses – LPPA's Share of Unit No. 2

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| LPPA Share (MWh) | 1,304,363 | 1,251,331 | 1,299,249 | 1,185,928 | 1,100,385 |
| Fuel | $40,968,583 | $42,059,893 | $42,482,048 | $37,201,705 | $33,966,979 |
| Operations | 2,417,592 | 2,372,222 | 2,457,540 | 2,311,923 | 2,577,179 |
| Maintenance | 4,661,790 | 4,124,193 | 5,723,382 | 9,767,676 | 5,611,524 |
| Administrative & General | 2,497,759 | 2,280,771 | 2,744,974 | 2,649,166 | 2,639,075 |
| Total Operating Expenses | $50,545,723 | $50,837,080 | $53,407,944 | $51,930,471 | $44,794,758 |
| Total Operating Expenses $/MWh | 38.75 | 40.63 | 41.11 | 43.79 | 40.71 |
| Total Operating Expenses Less Fuel $/MWh | 7.34 | 7.01 | 8.41 | 12.42 | 9.84 |

Table B-3
LPPA Historical Revenues, Expense, Balances Available for Debt Service

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Total Operating Revenues | $64,047,865 | $58,094,335 | $60,403,471 | $58,881,514 | $51,723,772 |
| Total Operating Expenses | 50,545,723 | 50,837,080 | 53,407,944 | 51,930,471 | 44,794,758 |
| Net Operating Revenues | $13,502,142 | $7,257,255 | $6,995,527 | $6,951,044 | $6,929,015 |
| Other Income | $190,783 | $277,343 | $105,502 | $79,783 | $109,427 |
| Balance Available for Debt Service | $13,692,925 | $7,534,598 | $7,101,030 | $7,030,826 | $7,038,442 |
| Debt Service | $13,211,961 | $6,786,640 | $7,057,640 | $7,060,106 | $7,063,256 |
| Balance After Debt Service | $480,964 | $747,959 | $43,390 | ($29,280) | ($24,814) |

Table B-4
Summary Statements of Revenues, Expenses, and Changes in Fund Net Position

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Operating Revenues | | | | | |
| Sales of Electric Energy | | | | | |
| City of Lafayette (LUS) | $64,047,865 | $58,094,335 | $60,403,471 | $58,881,514 | $51,723,772 |
| Operating Expenses | | | | | |
| Production | $48,047,964 | $48,556,308 | $50,662,970 | $49,281,305 | $42,155,683 |
| Administrative & General | 2,497,759 | 2,280,771 | 2,744,974 | 2,649,166 | 2,639,075 |
| Depreciation | 669,941 | 1,730,705 | 2,154,909 | 1,799,880 | 1,423,481 |
| Total Operating Expenses | $51,215,664 | $52,567,785 | $55,562,852 | $53,730,351 | $46,218,239 |
| Non Operating Revenues (Expenses) | | | | | |
| Other | $0 | $0 | $64 | $0 | $0 |
| Investment Earnings | 344,575 | 122,934 | 149,362 | 69,455 | 80,513 |
| Interest on Long Term Debt | (1,607,620) | (1,016,824) | (3,912,640) | (4,200,106) | (4,108,256) |
| Gain (Loss) on Disposition of Property | (117,212) | (158,389) | (2,694) | (89,914) | 0 |
| Total | ($1,380,257) | ($1,052,279) | ($3,765,908) | ($4,220,565) | ($4,027,743) |
| Net Income (Loss) for the Period | $11,451,943 | $4,474,271 | $1,074,711 | $930,598 | $1,477,790 |
| Fund Net Position Beginning | $51,283,544 | $62,230,056 | $67,688,857 | $67,842,718 | $69,305,675 |
| Fund Net Position, End of Year | $62,735,487 | $66,704,327 | $68,763,568 | $68,773,316 | $70,783,465 |

Table B-5
Summary Statements of Cash Flows

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Cash Flows from Operating Activities | | | | | |
| Receipts from customers | $63,911,254 | $63,164,113 | $55,157,891 | $58,881,514 | $51,723,772 |
| Payments to suppliers for goods & services | (46,152,344) | (54,137,875) | (56,755,015) | (41,029,452) | (42,928,870) |
| Payments to employees and for employee related costs | (390,851) | (409,130) | (420,225) | (413,944) | (382,355) |
| Net cash provided (used) by operating activities | $17,368,059 | $8,617,108 | ($2,017,349) | $17,438,118 | $8,412,547 |
| Cash Flows from Capital and Related Financing Activities | | | | | |
| Proceeds from Issuance of Bonds | $0 | $0 | $65,100,000 | $0 | $0 |
| Premium on issuance on bonds | 0 | 0 | 10,327,627 | 0 | 0 |
| Principal payments on bonds | (12,365,000) | (13,030,000) | (7,235,000) | (6,005,000) | (2,955,000) |
| Interest Paid | (2,769,071) | (2,157,076) | (2,683,187) | (6,351,072) | (4,108,256) |
| Debt issuance costs | 0 | (52,917) | (738,231) | 0 | (155,131) |
| Preliminary survey investigation costs paid | (485,954) | (1,528,517) | 0 | 0 | 0 |
| Proceeds from redesignation of capital assets | 0 | 0 | 0 | 0 | 0 |
| Purchase and construction of capital assets | (880,603) | (3,793,865) | (18,567,243) | (41,841,533) | (13,316,634) |
| Net cash provided (used) by capital and related financing activity | ($16,500,628) | ($20,562,375) | $46,203,966 | ($54,197,605) | ($20,535,021) |
| Cash Flows from Investing Activities | | | | | |
| Sales (purchases) of investments - net | $31,122 | $6,473,528 | ($717,384) | $0 | $0 |
| Interest Earnings | 175,299 | 301,224 | 136,376 | 76,041 | 96,958 |
| Other | 0 | 0 | 0 | 0 | 0 |
| Net Cash provided by investing activities | $206,421 | $6,774,752 | ($581,008) | $76,041 | $96,958 |
| Net increase (decrease) in cash and cash equivalents | $1,073,852 | ($5,170,515) | $43,605,609 | ($36,683,446) | ($12,025,516) |
| Cash and cash equivalents, beginning of year | $41,814,602 | $42,888,454 | $37,717,939 | $81,323,548 | $44,640,102 |
| Cash and cash equivalents, end of year | $42,888,454 | $37,717,939 | $81,323,548 | $44,640,102 | $32,614,586 |

Table B-6
Utilities System Historical Electric System Net Requirements

| Year | Energy (MWh) | Peak (MW) | Load Factor |
|---|---|---|---|
| 2011 | 2,173,831 | 469 | 53% |
| 2012 | 2,111,517 | 474 | 51% |
| 2013 | 2,071,816 | 458 | 51% |
| 2014 | 2,099,005 | 460 | 52% |
| 2015 | 2,110,335 | 486 | 50% |

Table B-7
Largest Customers (Electric)

| Customer | Type of Business | 2015 Revenues |
|---|---|---|
| University of Louisiana | Higher Education | $3,991,176 |
| Lafayette General Hospital | Health Care | 2,673,668 |
| Our Lady of Lourdes Hospital | Health Care | 1,886,690 |
| Laf. Consolidated Gov't - StreetLights | Government | 1,554,252 |
| Stuller Settings, Inc | Jewelry Manufacturing | 949,901 |
| Acadiana Mall | Shopping Center | 799,108 |
| International Paper | Paper Products | 735,575 |
| Catalyst Recover | Refining / Petrochemical | 682,717 |
| University Hospital & Clinics | Health Care | 664,002 |
| Regional Medical Center of Acadiana | Health Care | $607,600 |

Table B-8
Largest Customers (Water)

| Customer | Type of Business | 2015 Revenues |
|---|---|---|
| University of Louisiana | Higher Education | $241,803 |
| Lafayette General Hospital | Health Care | 116,656 |
| Our Lady of Lourdes Hospital | Health Care | 94,476 |
| Borden Company | Dairy Products | 70,609 |
| Lafayette Parish Correction Center | Correction Facility | 64,823 |
| Bayou Shadows Apartments | Apartment Complex | 60,575 |
| Regional Medical Center of Acadiana | Health Care | 43,386 |
| Advanced Polymer Systems | Polymer Manufacturer | 36,239 |
| South Point Apartments | Apartment Complex | 33,479 |
| Women's and Children's Hospital | Health Care | $32,638 |

Table B-9
Largest Customers (Wastewater)

| Customer | Type of Business | 2015 Revenues |
|---|---|---|
| University of Louisiana | Higher Education | $615,487 |
| Bayou Shadows Apartments | Apartment Complex | 447,729 |
| Lafayette General Hospital | Health Care | 177,610 |
| Borden Company | Dairy Products | 260,068 |
| Lafayette Parish Correctional Center | Correctional Facility | 141,871 |
| Our Lady Of Lourdes | Health Care | 126,750 |
| Cypress Shadows I & II Apartments | Apartment Complex | 122,198 |
| South Point Apartments | Apartment Complex | 104,172 |
| Pinhook South Apartments | Apartment Complex | 96,839 |
| Magnolia View Mobile Home Park | Mobile Home Park | $87,208 |

Table B-10
Summary Statement of Revenue, Expenses, and Changes in Fund Net Position, City of Lafayette Utilities System, Five Years Ending October 31

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Operating Revenues | | | | | |
| Charges for Services | $232,146,147 | $215,887,924 | $228,128,999 | $242,884,655 | $223,635,506 |
| Miscellaneous | 5,889,913 | 5,286,648 | 5,140,741 | 4,796,423 | 5,012,799 |
| Total Operating Revenues | $238,036,060 | $221,174,572 | $233,269,740 | $247,681,078 | $228,648,305 |
| Operating Expenses | | | | | |
| Production, Collection, & Cost of Services | $134,905,036 | $115,939,388 | $117,650,639 | $122,444,243 | $106,150,834 |
| Transmission, Distribution & Treatment | 22,066,378 | 23,341,508 | 24,853,589 | 27,674,617 | 28,292,560 |
| Administrative & General & Customer | 23,869,752 | 26,852,309 | 25,911,143 | 27,347,702 | 26,229,450 |
| ILOT | 19,199,649 | 21,596,096 | 22,131,617 | 22,073,833 | 22,847,494 |
| Depreciation & Amortization on Plant | 19,451,908 | 21,112,331 | 22,713,909 | 23,776,831 | 24,287,570 |
| Total Operating Expenses | $219,492,723 | $208,841,632 | $213,260,896 | $223,317,225 | $207,807,908 |
| Operating Income | $18,543,337 | $12,332,940 | $20,008,843 | $24,363,852 | $20,840,397 |
| Non-Operating Revenues (Expenses) | | | | | |
| Investment Earnings | $1,936,842 | $1,184,124 | $1,843,960 | $1,343,980 | $1,517,837 |
| Interest Expense | (10,989,023) | (10,770,301) | (8,139,223) | (7,432,094) | (8,867,619) |
| Gain (Loss) on sale/disposal of assets | (216,119) | (93,772) | (192,820) | (250,980) | (313,714) |
| Federal Grant Revenue | 0 | 7,119,896 | 2,730,634 | 656,112 | 932,987 |
| Hurricane | 0 | (253,536) | | | |
| Non-employer pensions contributions | | | | | 524,936 |
| Other | 575,440 | 221,252 | 233,994 | (82,830) | 91,428 |
| Total Non-Operating Revenues (Expenses) | ($8,692,860) | ($2,592,337) | ($3,523,455) | ($5,765,812) | ($6,114,145) |
| Income Before Contributions | $9,850,477 | $9,740,603 | $16,485,388 | $18,598,040 | $14,726,252 |
| Capital Contributions | $222,130 | $491,540 | $7,135 | $0 | $0 |
| Change in Net Position | $10,072,607 | $10,232,143 | $16,492,524 | $18,598,040 | $14,726,252 |
| Net Position, Beginning | $448,462,980 | $458,815,851 | $465,513,812 | $479,897,190 | $482,229,051 |
| Net Position, Ending | $458,535,587 | $469,047,994 | $482,006,336 | $498,495,230 | $496,955,303 |

Table B-11
Utilities System Electric Sales and Revenue

| Year | Retail Sales (MWh) | Retail Sales: Base Rate Revenue | Retail Sales: FC Revenue | Other Revenue | Total Operating Revenue |
|---|---|---|---|---|---|
| 2011 | 2,024,762 | $90,791,982 | $87,783,625 | $6,181,259 | $184,756,866 |
| 2012 | 1,970,448 | 88,556,974 | 76,824,304 | 5,046,540 | 170,427,818 |
| 2013 | 1,979,136 | 88,860,207 | 93,158,373 | 5,120,541 | 187,139,121 |
| 2014 | 2,027,115 | 91,749,309 | 105,375,603 | 4,606,272 | 201,731,184 |
| 2015 | 2,050,434 | 92,626,681 | 84,910,901 | 4,327,280 | 181,864,861 |
| 2016 | 2,086,267 | 94,500,258 | 84,723,293 | 4,330,415 | 183,553,965 |
| 2017 | 2,123,416 | 95,831,666 | 89,693,089 | 4,557,606 | 190,082,361 |
| 2018 | 2,162,493 | 97,196,339 | 99,582,805 | 4,520,948 | 201,300,092 |
| 2019 | 2,203,138 | 98,600,440 | 109,055,336 | 4,527,436 | 212,183,211 |
| 2020 | 2,245,049 | 100,037,356 | 116,877,262 | 4,350,565 | 221,265,183 |
| 2021 | 2,287,725 | 101,491,239 | 126,351,047 | 4,198,170 | 232,040,456 |
| 2022 | 2,331,366 | 102,974,212 | 134,892,846 | 4,293,620 | 242,160,678 |
| 2023 | 2,375,782 | 104,487,421 | 143,948,660 | 4,264,801 | 252,700,882 |
| 2024 | 2,420,903 | 106,023,068 | 152,250,614 | 4,221,609 | 262,495,292 |
| 2025 | 2,466,750 | $107,583,005 | $160,486,747 | $4,178,845 | $272,248,597 |
| Average Growth | 1.9% | 1.5% | 7.4% | -0.4% | 4.5% |

Table B-12
Electric System Historical and Projected Operating Expenses

| Year | Production | Transmission | Distribution | Customer Accounts, Service & Sales | Administrative & General | Total Operating Expenses |
|---|---|---|---|---|---|---|
| 2011 | $127,105,095 | $5,794,629 | $8,173,816 | $2,794,579 | $9,903,580 | $153,771,698 |
| 2012 | 108,197,232 | 5,791,094 | 9,431,893 | 3,237,859 | 11,226,852 | 137,884,929 |
| 2013 | 109,312,263 | 6,601,198 | 10,118,173 | 2,889,502 | 11,240,720 | 140,161,855 |
| 2014 | 113,573,016 | 7,543,561 | 11,042,653 | 2,807,800 | 12,120,845 | 147,087,876 |
| 2015 | 96,908,471 | 7,405,920 | 11,899,551 | 2,744,901 | 11,048,079 | 130,006,922 |
| 2016 | 101,976,010 | 8,153,219 | 12,149,441 | 2,813,904 | 11,231,288 | 136,323,862 |
| 2017 | 107,210,130 | 8,333,825 | 12,404,580 | 2,884,924 | 11,467,145 | 142,300,605 |
| 2018 | 115,414,667 | 8,518,874 | 12,665,076 | 2,958,032 | 11,707,955 | 151,264,603 |
| 2019 | 124,983,649 | 8,932,082 | 12,931,042 | 3,033,301 | 11,953,822 | 161,833,896 |
| 2020 | 139,054,247 | 9,156,297 | 13,202,594 | 3,110,808 | 12,204,852 | 176,728,800 |
| 2021 | 144,595,372 | 9,365,105 | 13,479,849 | 3,190,634 | 12,461,154 | 183,092,114 |
| 2022 | 153,915,663 | 9,754,519 | 13,762,926 | 3,272,860 | 12,722,839 | 193,428,806 |
| 2023 | 163,451,286 | 11,089,524 | 14,051,947 | 3,357,575 | 12,990,018 | 204,940,350 |
| 2024 | 171,629,893 | 11,340,956 | 14,347,038 | 3,444,868 | 13,262,809 | 214,025,564 |
| 2025 | $180,667,900 | $11,598,458 | $14,648,326 | $3,534,833 | $13,541,328 | $223,990,844 |
| Average Growth | 6.6% | 4.0% | 2.1% | 2.6% | 2.1% | 5.7% |

Table B-13
Wastewater Retail Sales and Revenue

| Year | Retail Sales (1,000 gallons) | Retail Sales Revenue | Other Revenue | Total Operating Revenue |
|---|---|---|---|---|
| 2011 | 5,190,182 | $29,326,976 | $551,221 | $29,878,197 |
| 2012 | 5,448,397 | 28,861,669 | 451,908 | 29,313,577 |
| 2013 | 5,730,473 | 28,382,562 | 511,418 | 28,893,980 |
| 2014 | 5,476,065 | 28,316,395 | 419,180 | 28,735,575 |
| 2015 | 5,734,225 | 28,304,757 | 664,459 | 28,969,216 |
| 2016 | 5,686,244 | 29,568,467 | 527,009 | 30,095,476 |
| 2017 | 5,742,876 | 30,781,813 | 564,744 | 31,346,558 |
| 2018 | 5,800,072 | 32,016,395 | 622,283 | 32,638,679 |
| 2019 | 5,857,837 | 32,335,261 | 696,491 | 33,031,752 |
| 2020 | 5,916,178 | 32,657,303 | 683,985 | 33,341,288 |
| 2021 | 5,975,100 | 32,982,552 | 673,533 | 33,656,085 |
| 2022 | 6,034,609 | 34,638,655 | 673,073 | 35,311,728 |
| 2023 | 6,094,710 | 34,983,637 | 677,049 | 35,660,686 |
| 2024 | 6,155,410 | 35,332,055 | 682,434 | 36,014,489 |
| 2025 | 6,216,715 | $35,683,944 | $676,297 | $36,360,241 |

Table B-14
Wastewater System Projected Operating Expenses

| Year | Treatment | Collection | Customer Accounting, Collecting, Service and Info | Administrative & General | Total Operating Expenses |
|---|---|---|---|---|---|
| 2011 | $5,697,169 | $3,540,946 | $899,558 | $5,147,647 | $15,285,320 |
| 2012 | 5,862,610 | 3,444,089 | 1,279,553 | 5,557,947 | 16,144,199 |
| 2013 | 5,900,950 | 3,935,538 | 1,260,125 | 5,208,631 | 16,305,244 |
| 2014 | 6,813,586 | 3,880,104 | 1,161,544 | 5,573,130 | 17,428,365 |
| 2015 | 6,657,629 | 4,088,110 | 1,208,820 | 5,612,123 | 17,566,682 |
| 2016 | 6,759,166 | 4,155,609 | 1,238,236 | 5,678,650 | 17,831,662 |
| 2017 | 6,911,894 | 4,250,229 | 1,268,472 | 5,797,902 | 18,228,496 |
| 2018 | 7,087,042 | 4,363,166 | 1,299,554 | 5,919,658 | 18,669,419 |
| 2019 | 7,262,804 | 4,476,603 | 1,331,511 | 6,043,970 | 19,114,888 |
| 2020 | 7,434,437 | 4,585,979 | 1,364,372 | 6,170,894 | 19,555,682 |
| 2021 | 7,615,308 | 4,703,154 | 1,398,168 | 6,300,483 | 20,017,113 |
| 2022 | 7,795,192 | 4,818,753 | 1,432,932 | 6,432,793 | 20,479,670 |
| 2023 | 7,979,911 | 4,938,099 | 1,468,695 | 6,567,881 | 20,954,586 |
| 2024 | 8,164,660 | 5,056,457 | 1,505,493 | 6,705,807 | 21,432,417 |
| 2025 | $8,352,224 | $5,176,385 | $1,543,362 | $6,846,629 | $21,918,600 |

Table B-15
Water Retail and Wholesale Sales and Revenue

| Year | Retail Sales (1,000 gallons) | Wholesale Sales (1,000 gallons) | Retail Sales Revenue | Wholesale Sales Revenue | Other Revenue | Total Operating Revenue |
|---|---|---|---|---|---|---|
| 2011 | 5,826,291 | 1,846,090 | $13,856,966 | $4,241,593 | $564,094 | $18,662,652 |
| 2012 | 5,743,099 | 1,858,479 | 13,491,838 | 3,690,835 | 620,750 | 17,803,423 |
| 2013 | 5,494,648 | 1,893,375 | 13,370,347 | 3,425,414 | 763,993 | 17,559,754 |
| 2014 | 5,426,408 | 2,004,355 | 13,119,010 | 4,164,275 | 500,181 | 17,783,466 |
| 2015 | 5,419,758 | 2,116,545 | 13,207,794 | 4,406,071 | 670,952 | 18,284,817 |
| 2016 | 5,754,811 | 2,191,480 | 13,811,546 | 5,024,976 | 531,764 | 19,368,286 |
| 2017 | 5,812,126 | 2,301,483 | 14,355,950 | 5,862,970 | 536,071 | 20,754,991 |
| 2018 | 5,870,011 | 2,421,749 | 14,792,429 | 6,266,888 | 575,627 | 21,634,943 |
| 2019 | 5,928,473 | 2,553,523 | 14,939,753 | 6,603,028 | 600,406 | 22,143,187 |
| 2020 | 5,987,518 | 2,615,710 | 15,088,545 | 6,726,333 | 600,090 | 22,414,969 |
| 2021 | 6,047,150 | 2,507,829 | 15,238,819 | 6,337,985 | 620,953 | 22,197,757 |
| 2022 | 6,107,377 | 2,630,776 | 15,695,958 | 6,644,089 | 627,351 | 22,967,397 |
| 2023 | 6,168,203 | 2,762,981 | 15,852,282 | 6,972,714 | 636,088 | 23,461,083 |
| 2024 | 6,229,635 | 2,905,242 | 16,010,162 | 7,325,785 | 644,735 | 23,980,683 |
| 2025 | 6,291,679 | 3,058,433 | $16,169,614 | $7,705,407 | $651,432 | $24,526,453 |

Table B-16
Water System Historical and Projected Operating Expenses

| Year | Production Related | Distribution | Customer Accounting, Collecting, Service and Info | Administrative & General | Total Operating Expenses |
|---|---|---|---|---|---|
| 2011 | $4,258,995 | $2,374,829 | $1,216,414 | $3,933,468 | $11,783,706 |
| 2012 | 4,298,067 | 2,283,844 | 1,304,443 | 4,249,690 | 12,136,044 |
| 2013 | 4,402,838 | 2,225,306 | 1,161,549 | 4,158,620 | 11,948,312 |
| 2014 | 4,991,122 | 2,312,791 | 1,084,155 | 4,562,251 | 12,950,319 |
| 2015 | 5,153,344 | 2,297,316 | 1,158,987 | 4,489,593 | 13,099,239 |
| 2016 | 5,419,560 | 2,347,512 | 1,186,258 | 4,539,073 | 13,492,403 |
| 2017 | 5,609,756 | 2,398,824 | 1,214,247 | 4,634,394 | 13,857,221 |
| 2018 | 5,822,389 | 2,451,276 | 1,242,978 | 4,731,716 | 14,248,359 |
| 2019 | 6,044,983 | 2,504,894 | 1,272,475 | 4,831,082 | 14,653,434 |
| 2020 | 6,238,996 | 2,559,704 | 1,302,760 | 4,932,535 | 15,033,995 |
| 2021 | 6,365,124 | 2,615,735 | 1,333,860 | 5,036,118 | 15,350,836 |
| 2022 | 6,597,896 | 2,673,013 | 1,365,799 | 5,141,876 | 15,778,585 |
| 2023 | 6,843,253 | 2,731,567 | 1,398,606 | 5,249,856 | 16,223,282 |
| 2024 | 7,098,963 | 2,791,427 | 1,432,308 | 5,360,103 | 16,682,801 |
| 2025 | $7,367,748 | $2,852,621 | $1,466,934 | $5,472,665 | $17,159,969 |

Table C-6
Utilities System Historical and Projected Number of Customers by System

| Year | Electric | Water | Wastewater |
|---|---|---|---|
| Historical | | | |
| 2011 | 63,531 | 52,749 | 41,928 |
| 2012 | 63,911 | 53,088 | 42,049 |
| 2013 | 64,496 | 53,926 | 42,586 |
| 2014 | 65,262 | 54,637 | 43,068 |
| 2015 | 65,847 | 55,109 | 43,521 |
| Projected | | | |
| 2016 | 66,851 | 55,717 | 43,955 |
| 2017 | 67,807 | 56,332 | 44,393 |
| 2018 | 68,703 | 56,955 | 44,835 |
| 2019 | 69,535 | 57,585 | 45,281 |
| 2020 | 70,319 | 58,222 | 45,732 |
| 2021 | 71,065 | 58,860 | 46,188 |
| 2022 | 71,782 | 59,513 | 46,648 |
| 2023 | 72,441 | 60,173 | 47,112 |
| 2024 | 73,055 | 60,842 | 47,582 |
| 2025 | 73,637 | 61,518 | 48,055 |
| Average Growth | 1.1% | 1.1% | 1.0% |

Table C-7
Historical Operating Results

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Operating Revenues | | | | | |
| Electric System | | | | | |
| Base Rate - Electric | $90,791,982 | $88,556,974 | $88,860,207 | $91,749,309 | $92,626,681 |
| Fuel Charge - Electric | 87,783,625 | 76,824,304 | 93,158,373 | 105,375,603 | 84,910,901 |
| Wholesale Sales | 6,145,005 | 4,462,303 | 932,096 | 160,062 | 179,301 |
| Other Revenues | 6,181,259 | 5,046,540 | 5,120,541 | 4,606,272 | 4,327,280 |
| Water | | | | | |
| Retail Sales | 13,856,966 | 13,491,838 | 13,370,347 | 13,119,010 | 13,207,794 |
| Wholesale Sales | 4,241,593 | 3,690,835 | 3,425,414 | 4,164,275 | 4,406,071 |
| Other Revenues | 274,217 | 198,076 | 331,264 | 74,592 | 513,472 |
| Wastewater | | | | | |
| Retail Sales | 29,326,976 | 28,861,669 | 28,382,562 | 28,316,395 | 28,304,757 |
| Other Revenues | 551,221 | 451,908 | 511,418 | 419,180 | 664,459 |
| Fiber | 192 | 415 | 0 | 40 | 0 |
| Total Operating Revenues | $239,153,035 | $221,584,863 | $234,092,222 | $247,984,739 | $229,140,716 |
| Operating Expenses | | | | | |
| Electric System | | | | | |
| Generation | $9,838,002 | $14,862,330 | $12,868,472 | $7,893,377 | $8,190,689 |
| Fuel - Gas Generation | 43,803,924 | 18,535,522 | 11,562,524 | 1,906,092 | 985,639 |
| Purchased Power LPPA | 64,047,865 | 58,094,335 | 60,403,471 | 58,881,514 | 51,723,772 |
| Purchased Power Other | 9,415,304 | 16,705,045 | 24,477,797 | 44,892,033 | 36,008,371 |
| Other | 26,666,603 | 29,687,697 | 30,849,592 | 33,514,860 | 33,098,450 |
| Water | 11,783,706 | 12,136,044 | 11,948,312 | 12,950,319 | 13,099,239 |
| Wastewater | 15,285,320 | 16,144,199 | 16,305,244 | 17,428,365 | 17,566,682 |
| Fiber | 0 | 0 | 0 | 0 | 0 |
| Total Operating Expenses | $180,840,724 | $166,165,173 | $168,415,411 | $177,466,560 | $160,672,843 |
| Balance Available for Debt Service | $58,312,311 | $55,419,690 | $65,676,811 | $70,518,178 | $68,467,873 |
| Debt Service | $14,245,228 | $15,311,868 | $22,917,286 | $23,333,915 | $22,924,293 |
| Debt Service Coverage Ratio | 4.1 | 3.6 | 2.9 | 3.0 | 3.0 |
| Balance After Debt Service | $44,067,084 | $40,107,822 | $42,759,525 | $47,184,263 | $45,543,580 |
| Other Income | | | | | |
| Interest Income | Included above | | | | |
| Water Tapping Fees | $47,900 | $86,100 | $105,100 | $104,100 | $107,420 |
| Communications Lease Income | 0 | 0 | 0 | 97,073 | 36,952 |
| Contributions in Aid of Construction | (8,361) | 0 | 7,135 | 0 | 0 |

Table C-7
Historical Operating Results

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Misc. Non-Operating Revenue | 1,843,038 | 8,869,047 | 5,408,764 | 2,877,693 | 3,414,729 |
| Total Other Income | $1,882,578 | $8,955,147 | $5,520,999 | $3,078,866 | $3,559,102 |
| Other Expenses | | | | | |
| Interest on Customer Deposits | $0 | $0 | $13,831 | $11,746 | $3,206 |
| Tax Collections/Non Operating | 154,016 | 308,182 | 322,829 | 0 | 0 |
| Misc Non-Operating Expense | 449,800 | 788,059 | 1,830,478 | 1,921,605 | 1,383,331 |
| Total Other Expenses | $603,816 | $1,096,241 | $2,167,138 | $1,933,351 | $1,386,537 |
| Payment in Lieu of Tax | $19,199,649 | $21,596,096 | $22,131,617 | $22,073,833 | $22,847,494 |
| Bond Reserve & Capital Additions | $26,146,196 | $26,370,632 | $23,981,769 | $26,255,945 | $24,868,651 |

Table C-8
Utilities System Revenues and Debt Service Coverage Ratios

| Year | Operating Revenues | Operating Expenses | Net Revenues Available for Debt Service | Debt Service | Balance Available After Debt Service | Debt Service Coverage Ratio |
|---|---|---|---|---|---|---|
| 2016 | $233,200,794 | $167,647,927 | $65,552,867 | $22,925,238 | $42,627,629 | 2.9 |
| 2017 | 242,370,820 | 174,386,321 | 67,984,499 | 23,557,965 | 44,426,535 | 2.9 |
| 2018 | 255,764,550 | 184,182,381 | 71,582,169 | 23,371,476 | 48,210,693 | 3.1 |
| 2019 | 267,552,994 | 195,602,217 | 71,950,777 | 23,934,825 | 48,015,952 | 3.0 |
| 2020 | 277,220,375 | 211,318,477 | 65,901,898 | 24,784,169 | 41,117,729 | 2.7 |
| 2021 | 288,097,411 | 218,460,064 | 69,637,347 | 24,919,905 | 44,717,442 | 2.8 |
| 2022 | 300,647,182 | 229,687,061 | 70,960,121 | 25,116,895 | 45,843,226 | 2.8 |
| 2023 | 312,034,385 | 242,118,218 | 69,916,167 | 25,479,947 | 44,436,220 | 2.7 |
| 2024 | 322,706,643 | 252,140,781 | 70,565,862 | 26,000,972 | 44,564,890 | 2.7 |
| 2025 | $333,356,010 | $263,069,413 | $70,286,597 | $26,449,903 | $43,836,694 | 2.7 |

# Appendix D
# FINANCIAL & STATISTICAL DATA

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**

**Population of City of Lafayette**

| Year | Population |
|---|---|
| 1940 | 19,210 |
| 1950 | 33,541 |
| 1960 | 40,400 |
| 1970 | 68,908 |
| 1980 | 81,961 |
| 1990 | 94,440 |
| 2000 | 110,257 |
| 2007 | 112,199 |
| 2008 | 111,088 |
| 2009 | 112,640 |
| 2010 | 120,623 |
| 2013 | 122,510 |
| 2014 | 126,066 |
| 2015 | 125,321 * |

**Projected Figure*

Sources: U.S. Census Bureau and Lafayette Economic Development Authority

**Assessed Value of Taxable Property of the City**

(All dollars in thousands)

| Fiscal Year | Assessed Value | Fiscal Year | Assessed Value |
|---|---|---|---|
| 1996 | 388,979 | 2006 | 826,075 |
| 1997 | 471,750 | 2007 | 864,797 |
| 1998 | 503,704 | 2008 | 905,005 |
| 1999 | 542,680 | 2009 | 1,129,670 |
| 2000 | 552,896 | 2010 | 1,167,335 |
| 2001 | 584,023 | 2011 | 1,178,154 |
| 2002 | 673,318 | 2012 | 1,220,334 |
| 2003 | 692,626 | 2013 | 1,306,098 |
| 2004 | 716,544 | 2014 | 1,381,041 |
| 2005 | 785,937 | 2015 | 1,461,552 |

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**

| Classification of Property | 2015 Assessed Valuation |
|---|---|
| Real Estate | $1,687,073,372 |
| Personal Property | 681,766,952 |
| Public Service Property | 78,653,750 |
| Total | $2,447,494,074 |

Source: Lafayette Parish Assessor's Office

**Millage Rates**

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|
| **Parishwide Taxes:** | | | | | | | |
| Schools | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 | 4.59 |
| School District No. 1 - | | | | | | | |
| Special | 7.27 | 7.27 | 7.27 | 7.27 | 7.27 | 7.27 | 7.27 |
| Special School Improvements | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| School 1985 Operation | 16.70 | 16.70 | 16.70 | 16.70 | 16.70 | 16.70 | 16.70 |
| Courthouse & Jail Maintenance | 2.34 | 2.34 | 2.34 | 2.34 | 2.34 | 2.34 | 2.34 |
| Library (2007-2016) | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| Library (2009-2018) | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 | 1.61 |
| Library (2003-2012) | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Health Unit Maintenance | 0.99 | 0.99 | 0.99 | 0.94 | N/A | 1.61 | 0.80 |
| Juvenile Detention Maintenance | 1.17 | 1.17 | 1.17 | 1.17 | 1.17 | 1.17 | 1.17 |
| Lafayette Economic Development Authority | 1.92 | 1.92 | 1.92 | 1.82 | 1.82 | 1.82 | 1.82 |
| Assessment District | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 | 1.56 |
| Law Enforcement | 16.79 | 16.79 | 16.79 | 16.79 | 16.79 | 16.79 | 16.79 |
| Airport Maintenance | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 | 1.71 |
| Minimum Security Maintenance | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 |
| Bridges and Maintenance | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 | 4.17 |
| Lafayette Parish Bayou Vermillion - | | | | | | | |
| Bond & Interest | 0.20 | 0.20 | 0.10 | 0.10 | 0.10 | 0.10 | 0.00 |
| Maintenance | 0.75 | 0.75 | 0.75 | 0.71 | 0.75 | 0.75 | 0.75 |
| Drainage Maintenance | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 | 3.34 |
| Public Improvement Bonds | 3.40 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 2.75 |
| Teche-Vermillion Water District | 1.26 | 1.26 | 1.50 | 1.45 | 1.45 | 1.50 | 1.50 |
| Mosquito Abatement & Control | 1.50 | 1.50 | 1.50 | 1.50 | 0.50 | 1.50 | 1.50 |
| **Other Parish and Municipal Taxes:** | | | | | | | |
| Parish Tax (Inside Municipalities) | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 |
| Parish Tax (Outside Municipalities) | 3.05 | 3.05 | 3.05 | 3.05 | 3.05 | 3.05 | 3.05 |
| Lafayette Centre Development District | 10.91 | 10.91 | 10.91 | 9.60 | 10.91 | 10.91 | 11.24 |
| **City of Lafayette** | **17.84** | **17.94** | **17.94** | **17.94** | **17.94** | **17.94** | **17.94** |

Sources: Lafayette Parish Assessor and Lafayette Consolidated Government

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**

## Leading Taxpayers

The ten largest property taxpayers of the City and their 2015 assessed valuations follow:

| | Name of Taxpayer | Type of Business | 2015 Assessed Valuation |
|---|---|---|---|
| 1. | Frank's Casing Crew & Rental Tools | Oilfield Service | $26,665,014 |
| 2. | PHI Inc | Oilfield Service | 24,974,185 |
| 3. | Stuller | Manufacturing | 16,133,510 |
| 4. | AT&T/ Bellsouth | Telecommunications | 15,486,166 |
| 5. | Iberia Bank | Commercial Banking | 13,927,608 |
| 6. | Halliburton | Oilfield Service | 12,206,416 |
| 7. | Schlumberger | Oilfield Service | 11,705,908 |
| 8. | Walmart/Sam's | Retail Services | 10,783,557 |
| 9. | HCA Regional Health System | Healthcare | 10,682,487 |
| 10. | J P Morgan Chase | Commercial Banking | 9,911,890 |
| | | | $152,476,741 * |

* Approximately 10.44% of the 2015 assessed valuation of the City.

Source: Lafayette Consolidated Government

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**CASH AND INVESTMENTS**
**BALANCES AS OF OCTOBER, 2015**

| | | | CASH AND INVESTMENTS |
|---|---|---|---|
| | **General Operating Funds:** | | |
| 101 | General Fund-City | $ | 36,527,284 |
| 102 | Property Tax Escrow Fund | | 24,603 |
| 105 | General Fund-Parish | | 3,196,570 |
| 126 | Grants-Federal | | (384,611) |
| 127 | Grants-State | | (748,250) |
| 162 | Community Development | | (160,094) |
| 163 | Home Programs | | (100,755) |
| 164 | Urban Infill Home Program | | 834,813 |
| 165 | Emergency Shelter Grant | | (11,497) |
| 170 | WIA Grants | | (149,048) |
| 171 | HUD Housing Loan Prog | | 80,519 |
| 180 | FTA Planning Grants | | 0 |
| 181 | FHWA Plan Grants | | (23,301) |
| 185 | FHWA I-49 Grant | | (2,324) |
| 187 | FTA Capital | | 203,800 |
| 189 | DOTD Travel Management | | (53,852) |
| 201 | Recreation & Parks | | 0 |
| 202 | Natural History Museum | | 0 |
| 203 | Municipal Transit System | | (345,373) |
| 204 & 205 | Heymann Performing Arts Center | | 5,297 |
| 206 | Animal Control Shelter | | 2,016,484 |
| 207 | Traffic Safety | | 187,914 |
| 209 | Combined Golf Courses | | 26,913 |
| 252 | State Seized/Forfeited Property | | 12,156 |
| 253 | Fed Narc Seized /Forfeited Property | | 13,344 |
| 255 | Criminal Non-support | | (137,875) |
| 260 | Road & Bridge Maintenance | | 10,648,200 |
| 261 | Drainage Maintenance | | 13,486,494 |
| 262 | Correctional Center | | 0 |
| 263 | Library Fund | | 36,191,955 |
| 264 | Courthouse Complex | | 6,664,665 |
| 265 | Juvenile Detention Facility | | 3,540,424 |
| 266 | Public Health Unit | | 688,649 |

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**CASH AND INVESTMENTS**
**BALANCES AS OF OCTOBER, 2015**

| | | | CASH AND INVESTMENTS |
|---|---|---|---|
| 267 | War Memorial building | | 0 |
| 268 | Criminal Court | | 0 |
| 269 | Combined Public Health | | 10,622,430 |
| 270 | Coroner | | 0 |
| 271 | Mosquito Abatement | | 1,147,037 |
| 272 | Justice Department Federal Equitable Sharing Fund | | 491,507 |
| 277 | Court Services Fund | | (35,296) |
| 297 | Parking Program | | (17,845) |
| 299 | Codes & Permits | | 1,265,999 |
| 550 | Environmental Services | | (441,215) |
| 551 | CNG Service Station | | 6,100 |
| 601 | Payroll | | 4,745,530 |
| 605 | Unemployment Compensation | | (1,482) |
| 606 | Metro Code Retirement Account | | 0 |
| 607 | Group Hospitalization | | 12,957,077 |
| 640 | Hurricane Katrina | | 115,729 |
| 641 | Hurricane Rita | | 331,383 |
| 643 | Hurricane Gustav | | (1,149,908) |
| 644 | Hurricane Isaac | | (196,711) |
| 701 | Central Printing | | (146,012) |
| 702 | Central Vehicle Maintenance | | 1,132,833 |
| | **Total General Operating Funds** | $ | **143,060,262** |
| | **Debt Service Funds:** | | |
| 215 | 1961 City Sales Tax Trust Fund | $ | 78 |
| 222 | 1985 City Sales Tax Trust Fund | | 0 |
| 290 | TIF City Sales Tax Trust Fund-MM101 | | 635,895 |
| 291 | TIF City Sales Tax Trust Fund-MM103 | | 942,688 |
| 302 | 1961 Sales Tax Bond Sinking Fund | | 7,313,052 |
| 303 | 1961 Sales Tax Bond Reserve Fund | | 16,585,288 |
| 304 | 1985 Sales Tax Bond Sinking Fund | | 4,133,831 |
| 305 | 1985 Sales Tax Reserve Fund | | 12,494,416 |
| 356 | Contingency Sinking-Parish | | 4,248,576 |
| 357 | 2011 Certificates of Indebt | | 174,021 |
| 358 | 2012 Limited Tax Refund | | 7,650 |
| 801 | Consolidated Sewerage Sinking Fund | | 321,992 |
| 821 | Consolidated Paving Districts Sinking Fund | | 413,119 |
| | **Total Debt Service Funds** | $ | **47,270,606** |

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**CASH AND INVESTMENTS**
**BALANCES AS OF OCTOBER, 2015**

| | | | CASH AND INVESTMENTS |
|---|---|---|---|
| | **Construction Funds:** | | |
| 401 | Sales Tax Capital Improvement Fund | $ | 39,990,156 |
| 404 | 2001 Parish General Obligation Bonds | | 88,363 |
| 407 | 2010 Parish General Obligation Bonds | | 8,214,082 |
| 417 | 1993 Sales Tax Bond Construction | | 21,542 |
| 434 | 2007A Sales Tax Bond Construction | | 6,079 |
| 435 | 2007B Sales Tax Bond Construction | | 449,428 |
| 436 | 2009A Sales Tax Bond Construction | | 8,219,355 |
| 437 | 2009B Sales Tax Bond Construction | | 13,840,808 |
| 438 | 2010 Sales Tax Bond Construction | | 18,354,436 |
| 440 | 2013 Sales Tax Bond Construction | | 12,451,430 |
| | **Total Construction Funds** | $ | **101,635,680** |
| | **Other:** | | |
| 602 | Firemen Pension & Relief | $ | 0 |
| 603 | Police Pension & Relief | | 0 |
| 614 | Risk Management | | 2,293,489 |
| | **Total Other** | $ | **2,293,489** |

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**CASH AND INVESTMENTS**
**BALANCES AS OF OCTOBER, 2015**

| | | | CASH AND INVESTMENTS |
|---|---|---|---|
| | **Utility System Funds:** | | |
| 501 | Receipts Fund | $ | 757,953 |
| 502 | Operation and Maintenance | | 7,235,847 |
| 503 | Bond & Interest | | 0 |
| 504 | Capital Additions Fund | | 101,100,917 |
| 505 | Security Deposit Fund | | 8,426,306 |
| 506 | Bond Reserve Fund | | 23,633,701 |
| 530 | 2010 Bond Construction Fund | | 3,399,593 |
| | **Total Utilities System Funds** | $ | **144,554,317** |
| | **LPPA Funds:** | | |
| 520 | LPPA Revenue Fund | $ | 12,695,493 |
| 521 | LPPA Operating Fund | | 7,617,641 |
| 522 | LPPA Fuel Cost Stability Fund | | 4,500,000 |
| 523 | LPPA Bond Reserve Fund | | 9,694,050 |
| 524 | LPPA Reserve & Contingency Fund | | 5,283,318 |
| 525 | LPPA Bond Interest & Principal Fund | | 21,409 |
| 526 | LPPA 2007 Bond Construction Fund | | 0 |
| 527 | LPPA 2012 Bond Construction Fund | | 2,476,474 |
| | **Total LPPA Funds** | $ | **42,288,385** |
| | **Communications System Funds:** | | |
| 531 | Receipts Account | $ | 84,054 |
| 532 | Operating Account | | 2,249,475 |
| 533 | Debt Service Account | | 0 |
| 535 | 2012A Bond Account | | 33,128 |
| 536 | 2012B Bond Account | | 66,560 |
| 537 | Capital Additions Account | | 4,015,206 |
| 538 | Security Deposits Account | | 120,444 |
| 539 | 2007 Bond Construction Account | | 0 |
| | **Total Communications System Funds** | $ | **6,568,868** |
| | **TOTAL ALL FUNDS** | $ | **487,671,606** |

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**
**ECONOMIC INDICATORS**

**Per Capita Personal Income**

| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|---|
| Lafayette Parish | $ 43,016 | $ 45,939 | $ 47,184 | $ 52,028 | $ 50,015 | $ 51,608 |
| Louisiana | 36,348 | 37,227 | 38,506 | 40,527 | 40,819 | 42,030 |
| United States | 39,376 | 40,277 | 42,453 | 44,266 | 44,438 | 46,049 |

**Effective Buying Income**

**Median Household**
**Effective Buying Income**

| Year | Lafayette Parish | City of Lafayette | Louisiana | Nation |
|---|---|---|---|---|
| 2014 | $ 51,060 | $ 47,521 | $ 44,555 | $ 53,657 |

**Employment**

| Year | Labor Force | Employment | Unemployment | Parish Rate | State Rate |
|---|---|---|---|---|---|
| 2000 | 97,296 | 93,576 | 3,720 | 3.8 | 5.0 |
| 2001 | 99,779 | 95,858 | 3,921 | 3.9 | 5.4 |
| 2002 | 98,393 | 94,021 | 4,372 | 4.4 | 5.9 |
| 2003 | 98,015 | 93,388 | 4,627 | 4.7 | 6.2 |
| 2004 | 98,729 | 94,633 | 4,096 | 4.1 | 5.5 |
| 2005 | 104,531 | 99,393 | 5,138 | 4.9 | 6.7 |
| 2006 | 107,321 | 104,331 | 2,990 | 2.8 | 3.9 |
| 2007 | 109,628 | 106,741 | 2,887 | 2.6 | 3.8 |
| 2008 | 112,272 | 108,865 | 3,407 | 3.0 | 4.4 |
| 2009 | 111,806 | 106,286 | 5,520 | 4.9 | 6.6 |
| 2010 | 113,352 | 106,781 | 6,571 | 5.8 | 7.5 |
| 2011 | 114,282 | 107,967 | 6,315 | 5.5 | 7.3 |
| 2012 | 117,262 | 111,949 | 5,313 | 4.5 | 6.4 |
| 2013 | 119,526 | 113,992 | 5,534 | 4.6 | 6.4 |
| 2014 | 121,654 | 115,656 | 5,998 | 4.9 | 6.4 |
| 2015 | 122,023 | 115,223 | 6,800 | 5.6 | 6.2 |

Source: Louisiana Department of Labor

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**

**The preliminary figures for the Parish for January 2016 were reported as follows:**

| Year | Labor Force | Employment | Unemployment | Parish Rate | State Rate |
|---|---|---|---|---|---|
| January 2016 | 115,515 | 108,424 | 7,091 | 6.1 | *6.3 |

* The seasonally adjusted rate was 5.9

Source: Louisiana Department of Labor

**The following table show the composition of the employed work force in the Lafayette MSA.**

**Non-Farm Wage and Salary Employment by Major Industry**
**(Employees in Thousands)**

| | January 2014 | January 2015 | January 2016 |
|---|---|---|---|
| Mining | 23.4 | 23.1 | 17.0 |
| Construction | 11.1 | 10.9 | 11.6 |
| Manufacturing | 20.1 | 19.6 | 16 |
| Trade, Transporation, & Utilities | 42.9 | 44.1 | 43.1 |
| Information | 3.0 | 2.7 | 2.7 |
| Financial Activities | 12.2 | 11.9 | 10.7 |
| Professional And Business Services | 23 | 23.4 | 21.9 |
| Educational and health Services | 29.6 | 29.4 | 29.7 |
| Leisure and Hospitality | 20.6 | 21.2 | 21.7 |
| Other Services | 6.6 | 7.5 | 7.4 |
| Government | 25.3 | 25.5 | 25.7 |
| Total | 217.8 | 219.1 | 207.5 |

Source: U.S. Bureau of Labor Statistics

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**
**ANNUAL AVERAGE LAFAYETTE PARISH CONCURRENT ECONOMIC INDICATORS 2011, 2012, 2013, 2014 AND THIRD QUARTER 2015**
(All data not seasonally adjusted)

| | 2011 | 2012 | 2013 | 2014 | 2015:3 |
|---|---|---|---|---|---|
| **EMPLOYMENT** | | | | | |
| **Total** | **133,634** | **137,564** | **139,937** | **141,663** | **136,689** |
| Accommodation and Food Services | 12,293 | 12,816 | 13,379 | 14,154 | 14,395 |
| Administrative and Waste Services | 5,948 | 5,566 | 6,363 | 6,584 | 6,620 |
| Agriculture,Forestry, Fishing, and Hunting | 84 | 90 | 94 | 89 | 84 |
| Arts, Entertainment, and Recreation | 2,098 | 2,154 | 2,153 | 2,228 | 2,353 |
| Construction | 6,061 | 6,407 | 6,528 | 6,579 | 7,039 |
| Educational Services | 7,894 | 7,924 | 7,942 | 7,894 | 7,458 |
| Finance & Insurance | 3,065 | 3,093 | 3,139 | 3,200 | 3,269 |
| Health Care and Social Services | 20,501 | 20,683 | 20,855 | 20,336 | 20,667 |
| Information | 2,667 | 2,557 | 2,630 | 2,561 | 2,431 |
| Management of Companies and Enterprises | 2,760 | 2,926 | 2,991 | 3,180 | 3,067 |
| Manufacturing | 9,053 | 9,110 | 9,849 | 10,051 | 9,027 |
| Mining | 15,069 | 16,392 | 15,866 | 16,415 | 13,096 |
| Other Services, except Public Administration | 3,097 | 3,215 | 3,201 | 3,201 | 3,240 |
| Professional & Technical Services | 7,744 | 8,649 | 8,886 | 8,835 | 8,276 |
| Public Administration | 3,543 | 3,559 | 3,560 | 3,592 | 3,671 |
| Real Estate and Rental and Leasing | 4,272 | 4,477 | 4,382 | 4,082 | 3,463 |
| Retail Trade | 16,115 | 16,267 | 16,685 | 17,163 | 17,678 |
| Transportation & Warehousing. | 3,486 | 3,772 | 3,984 | 3,779 | 3,423 |
| Utilities | 506 | 500 | 495 | 462 | 459 |
| Wholesale Trade | 7,302 | 7,352 | 6,882 | 7,250 | 6,948 |

| | Annual | Annual | Annual | Annual | Quarterly |
|---|---|---|---|---|---|
| **EARNINGS ($ in Thousands)** | | | | | |
| **Total** | **$6,179,069** | **$6,588,106** | **$6,749,064** | **$7,127,334** | **$1,634,486** |
| Accommodation and Food Services | 201,022 | 214,474 | 231,234 | 248,865 | 61,886 |
| Administrative and Waste Services | 205,143 | 187,917 | 231,118 | 245,497 | 84,873 |
| Agriculture,Forestry, Fishing, and Hunting | 2,619 | 3,327 | 4,426 | 3,630 | 983 |
| Arts, Entertainment, and Recreation | 33,075 | 32,334 | 33,495 | 34,720 | 9,160 |
| Construction | 296,947 | 314,765 | 327,843 | 351,041 | 96,544 |
| Educational Services | 319,168 | 320,637 | 321,588 | 322,979 | 76,916 |
| Finance & Insurance | 178,139 | 190,872 | 202,634 | 221,910 | 51,541 |
| Health Care and Social Services | 815,086 | 842,580 | 872,397 | 891,176 | 234,317 |
| Information | 111,399 | 115,670 | 118,913 | 122,866 | 27,553 |
| Management of Companies and Enterprises | 171,747 | 201,693 | 259,200 | 301,173 | 61,362 |
| Manufacturing | 504,273 | 508,459 | 530,805 | 569,632 | 120,229 |
| Mining | 1,305,546 | 1,451,170 | 1,389,066 | 1,507,778 | 283,900 |
| Other Services, except Public Administration | 101,681 | 111,314 | 114,294 | 116,983 | 28,471 |
| Professional & Technical Services | 472,445 | 543,361 | 565,915 | 593,471 | 131,134 |
| Public Administration | 168,000 | 165,719 | 163,666 | 172,111 | 44,128 |
| Real Estate and Rental and Leasing | 280,074 | 290,430 | 285,238 | 265,335 | 50,313 |
| Retail Trade | 423,154 | 460,014 | 463,407 | 485,057 | 124,827 |
| Transportation & Warehousing. | 157,785 | 175,701 | 197,766 | 196,204 | 42,590 |
| Utilities | 26,709 | 26,591 | 26,389 | 26,421 | 6,048 |
| Wholesale Trade | 401,572 | 429,333 | 408,262 | 449,027 | 97,331 |

Source: Louisiana Department of Labor

**LAFAYETTE CONSOLIDATED GOVERNMENT**
**REVENUE BONDS CONTINUING DISCLOSURE**

**The names of the largest employers located in Lafayette Parish are as follows:**

| | Name of Employer | Type of Business | Approximate No. of Employees |
|---|---|---|---|
| 1. | Lafayette Parish School System | Education | 4,586 |
| 2. | Lafayette General Health | Health Care | 4,026 |
| 3. | Wood Group Production Services | Oil and Gas | 2,990 |
| 4. | Lafayette Consolidated Government | Public Administration | 2,500 |
| 5. | University of Louisiana-Lafayette | Education | 2,006 |
| 6. | WHC Inc | Oil and Gas | 1,700 |
| 7. | Wal-Mart Stores, Inc. | Retail Trade | 1,642 |
| 8. | Our Lady of Lourdes Reg Med Ctr | Health Care | 1,533 |
| 9. | Schlumberger | Oil and Gas | 1,244 |
| 10. | Stuller Inc. | Manufacturing | 1,210 |

Source: Lafayette Economic Development Authority

**Banking Facilities**

The Lafayette Parish are is served by the following banks:

**Banks**

American Bank & Trust Company
BancorpSouth Bank
Bank of Sunset & Trust Company
Business First Bank
Capital One, National Association
Community First Bank
Crescent Bank & Trust
Farmers-Merchants Bank & Trust Company
Farmers State Bank & Trust Company
First National Bank
First National Developments
Gulf Coat Bank
Home Bank
IBERIABANK
Investar Bank
JD Bank
JPMorgan Chase Bank, National Association
M C Bank & Trust Co.
MidSouht Bank, N.A.
Palm Desert National Bank
Rayne State Bank & Trust Co
Regions Bank
South Louisiana Bank
St. Landry Bank & Trust Company
St. Martin Bank & Trust Company
Tri-Parish Bank
Washington State Bank
Wells Fargo Bank
Whitney Bank
Woodforest National Bank

## STATEMENT OF DIRECT, OVERLAPPING, UNDERLYING AND PARTIALLY UNDERLYING BONDED DEBT AS OF FEBRUARY 2, 2016

**(The accompanying notes are an integral part of this statement.)**

| Notes | Name of Issuer & Issue | Interest Rates (%) | Dated Date | Final Maturity Date | Principal Outstanding | Principal Amount Due Within One Year |
|---|---|---|---|---|---|---|
| (1) | **Direct Debt of the City of Lafayette, State of Louisiana** | | | | | |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series 2006B | 4.0-4.35 | 9/07/06 | 3/01/25 | $ 7,585,000 | $ 520,000 |
| (2) | Public Improvement Sales Tax Bonds, Series 2007A | 4.25-7.0 | 8/01/07 | 3/01/32 | 14,105,000* | 535,000 |
| (2) | Public Improvement Sales Tax Bonds, Series 2011 | 2.0-5.0 | 6/28/11 | 3/01/36 | 26,945,000 | 410,000 |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series ST-2011A | 3.0-5.0 | 6/01/11 | 3/01/26 | 13,520,000 | 925,000 |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series ST-2011C | 2.0-5.0 | 12/08/11 | 3/01/27 | 6,865,000 | 515,000 |
| (2) | Taxable Public Improvement Sales Tax Build America Bonds, Series 2009A | 4.99-7.08 | 8/18/09 | 3/01/33 | 25,380,000 | 1,010,000 |
| (2) | Taxable Public Improvement Sales Tax Recovery Zone Economic Development Bonds, Series 2009A | 7.23 | 8/18/09 | 3/01/34 | 3,640,000 | (a) |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series ST-2012A | 2.0-4.0 | 6/01/12 | 3/01/28 | 8,835,000 | 1,515,000 |
| (2) | Public Improvement Sales Tax Bonds, Series 2013 | 2.0-5.0 | 6/21/13 | 3/01/38 | 14,880,000 | 420,000 |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series 2014A | 3.0-5.0 | 10/17/14 | 3/01/30 | 17,060,000 | 765,000 |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series 2014C | 5.0 | 12/05/14 | 3/01/24 | 23,930,000 | 2,345,000 |
| (2) | Public Improvement Sales Tax Refunding Bonds, Series 2015A | 2.43 | 12/18/15 | 3/01/25 | 3,550,000 | 0 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series 2004A | 4.0-4.3 | 5/01/04 | 5/01/20 | 1,390,000[2] | 255,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series 2006A | 4.0-5.0 | 9/07/06 | 5/01/25 | 9,400,000[3] | 785,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series 2006C | 4.0-5.0 | 11/30/06 | 5/01/23 | 20,415,000[4] | 2,130,000 |
| (3) | Public Improvement Sales Tax Bonds, Series 2007B | 4.5-5.25 | 8/01/07 | 5/01/32 | 1,760,000 | 65,000 |
| (3) | Taxable Public Improvement Sales Tax Build America Bonds, Series 2009B | 4.99-7.23 | 8/18/09 | 5/01/34 | 22,865,000 | 825,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series ST-2011B | 3.0-4.25 | 6/01/11 | 5/01/26 | 9,615,000 | 715,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series ST-2011D | 3.0-5.0 | 12/08/11 | 5/01/27 | 9,920,000 | 690,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series ST-2012B | 2.0-5.0 | 6/01/12 | 5/01/28 | 12,815,000 | 800,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series 2014B | 2.0-3.375 | 9/26/14 | 5/01/30 | 1,815,000 | 95,000 |
| (3) | Public Improvement Sales Tax Refunding Bonds, Series 2015 | 5.00 | 2/06/15 | 5/01/24 | 11,825,000 | 1,380,000 |
| (4) | Utilities Revenue Bonds, Series 1996 | 2.95 | 8/22/96 | 11/01/17 | 2,275,000 | 1,120,000 |
| (4) | Utilities Revenue Bonds, Series 2010 | 3.75-5.0 | 12/15/10 | 11/01/35 | 79,140,000 | 2,505,000 |
| (4) | Utilities Revenue Refunding Bonds, Series 2012 | 4.0-5.0 | 1/11/13 | 11/01/28 | 144,950,000 | 8,330,000 |
| (5) | Certificates of Indebtedness, Series 2011 | 3.65 | 5/11/11 | 5/01/26 | 4,750,000 | 345,000 |
| (6) | Communications System Revenue Bonds, Series 2007 | 4.125-5.0 | 6/28/07 | 11/01/17 | 8,065,000 | 3,940,000 |
| (6) | Communications System Revenue Bonds, Series 2012A | 4.0-5.0 | 1/26/12 | 11/01/31 | 7,595,000 | 0 |
| (6) | Taxable Communications System Revenue Bonds, Series 2012B | 5.0-6.0 | 1/26/12 | 11/01/31 | 7,000,000 | 0 |
| (6) | Communications System Revenue Refunding Bonds, Series 2015 | 2.0-5.0 | 8/21/15 | 11/01/31 | 91,600,000 | 940,000 |
| (7) | Taxable Limited Tax Refunding Bond, Series 2012 | 3.75 | 3/02/12 | 5/01/28 | 35,500,000 | 2,155,000 |

* *Includes $13,010,000 of bonds to be refunded.*

*(2) Includes $1,390,000 of bonds to be refunded by the proposed Public Improvement Sales Tax Refunding Bonds, Series 2016A, sold but not yet delivered.*
*(3) Includes $8,615,000 of bonds to be refunded by the proposed Public Improvement Sales Tax Refunding Bonds, Series 2016A, sold but not yet delivered.*
*(4) Includes $18,285,000 of bonds to be refunded by the proposed Public Improvement Sales Tax Refunding Bonds, Series 2016A, sold but not yet delivered.*

*(a) Various amounts are required to be deposited annually into a sinking fund.*

| Notes | Name of Issuer & Issue | Interest Rates (%) | Dated Date | Final Maturity Date | Principal Outstanding | Principal Amount Due Within One Year |
|---|---|---|---|---|---|---|
| (8) | **Overlapping Debt of the Parish of Lafayette, State of Louisiana** | | | | | |
| (9) | General Obligation Bonds, Series 2010 | 2.25-5.0 | 1/12/11 | 3/01/35 | $22,765,000 | $ 710,000 |
| (9) | General Obligation Refunding Bonds, Series 2010 | 2.25-5.0 | 1/12/11 | 3/01/26 | 9,970,000 | 715,000 |
| (9) | General Obligation Refunding Bonds, Series 2012 | 3.0-4.0 | 5/03/12 | 3/01/28 | 15,345,000 | 890,000 |
| (9) | General Obligation Refunding Bonds, Series 2014 | 2.0-5.0 | 8/01/14 | 3/01/30 | 11,000,000 | 530,000 |
| (10) | **Overlapping Debt of the Parish School Board of the Parish of Lafayette, State of Louisiana** | | | | | |
| (5) | Certificates of Indebtedness, Series 2007 | 3.61 | 12/17/07 | 11/01/17 | 1,555,000 | 760,000 |
| (5) | Refunding Certificates of Indebtedness, Series 2010 | 3.06 | 12/29/10 | 11/01/23 | 2,247,000 | 250,000 |
| (5) | Certificate of Indebtedness, Series 2015 | 2.2 | 8/17/15 | 11/01/22 | 10,000,000 | 1,315,000 |
| (12) | Public School Refunding Bonds, Series 2008 | 4.0-5.0 | 6/30/08 | 4/01/19 | 23,150,000 | 5,375,000 |
| (12) | Public School Refunding Bonds, Series 2010 | 3.0-4.0 | 5/27/10 | 4/01/21 | 5,150,000 | 785,000 |
| (13) | Limited Tax Bonds (Taxable QSCB), Series 2009 | 0.8 | 12/11/09 | 10/01/24 | 10,000,000 | (a) |
| (13) | Limited Tax Bonds (Taxable QSCB), Series 2011 | 0 | 3/01/11 | 10/01/26 | 10,000,000 | (a) |
| (13) | Limited Tax Bonds (Taxable QSCB), Series 2012 | 0 | 4/03/12 | 3/01/27 | 1,460,775 | (a) |
| (13) | Limited Tax Revenue Bonds, Series 2012A | 2.0-5.0 | 1/04/13 | 3/01/32 | 27,660,000 | 1,225,000 |
| (14) | **Overlapping Debt of the Law Enforcement District of the Parish of Lafayette, State of Louisiana** | | | | | |
| (15) | Limited Tax Revenue Bonds, Series 2012 | 2.0-4.0 | 3/01/12 | 3/01/32 | 18,870,000 | 775,000 |
| (16) | **Underlying Debt of Lafayette Public Power Authority** | | | | | |
| (17) | Electric Revenue Bonds, Series 2007 | 4.0-5.0 | 12/06/07 | 11/01/17 | 1,345,000 | 660,000 |
| (17) | Electric Revenue Bonds, Series 2012 | 2.0-5.0 | 12/21/12 | 11/01/32 | 57,995,000 | 2,415,000 |
| (17) | Electric Revenue Refunding Bonds, Series 2015 | 2.0-5.0 | 11/13/15 | 11/01/32 | 29,035,000 | 90,000 |
| (18) | **Partially Underlying Debt of Lafayette Parish Waterworks District North, Lafayette Parish, Louisiana** | | | | | |
| (19) | Water Revenue Refunding Bonds, Series 2013 | 2.95 | 1/29/13 | 10/01/27 | 4,054,000 | 341,000 |
| (20) | **Partially Underlying Debt of Lafayette Parish Waterworks District South, Lafayette Parish, Louisiana** | | | | | |
| (19) | Water Revenue Refunding Bonds, Series 2011 | 2.9 | 12/21/11 | 8/01/21 | 2,128,000 | 338,000 |
| (19) | Water Revenue Bonds, Series 2013 | 3.2 | 8/08/13 | 8/01/28 | 1,460,000 | 20,000 |

*(a) Various amounts are required to be deposited annually into a sinking fund.*

**NOTES**

(1) The 2015 total assessed valuation of the City of Lafayette, State of Louisiana is approximately $1,460,184,953, all of which is taxable for municipal purposes.

(2) Payable solely from and secured by an irrevocable pledge and dedication of the avails or proceeds of the special 1% sales and use tax being levied and collected by the issuer, pursuant to elections held in the issuer on May 13, 1961, November 20, 1965, March 22, 1977, and July 21, 2001, subject only to the prior payment of the reasonable and necessary costs and expenses of collecting and administering the tax.

(3) Payable solely from and secured by an irrevocable pledge and dedication of the avails or proceeds of the special 1% sales and use tax now being levied and collected by the issuer, pursuant to elections held in the issuer on May 4, 1985, November 15, 1997, and July 21, 2001, subject only to the prior payment of the reasonable and necessary costs and expenses of collecting and administering the tax.

(4) Payable as to principal and interest, solely from the income and revenues to be derived from the operation of the Lafayette Utilities System, subject only to the prior payment of the reasonable expenses of administration, operation and maintenance of the Lafayette Utilities System.

(5) Secured by and payable solely from an irrevocable pledge and dedication of the excess of annual revenues of the issuer above statutory, necessary and usual charges in each of the fiscal years during which the obligations and any parity obligations are outstanding.

(6) The Bonds shall be special obligations of the issuer, payable first, from the net income and revenues of the Communications System and second, to the amount necessary, from a secondary or subordinate pledge of the revenues of the Utilities System.

(7) Secured by and payable from an irrevocable pledge and dedication of the funds to be derived by the issuer from the levy and collection of a special tax of 5.42 mills (such rate being subject to adjustment from time to time due to reassessment), which the issuer is authorized to impose and collect in each year. Said special tax is authorized to be levied on all the property subject to taxation within the corporate boundaries of the issuer.

(8) The 2015 total assessed valuation of the Parish of Lafayette, State of Louisiana is approximately $2,447,494,074, of which approximately $2,081,902,895 is taxable.

(9) Secured by and payable from unlimited *ad valorem* taxation.

(10) The 2015 total assessed valuation of the Parish School Board of the Parish of Lafayette, State of Louisiana is approximately $2,447,494,074, of which approximately $2,081,902,895 is taxable.

(11) Payable from available funds of the Parish School Board of the Parish of Lafayette, State of Louisiana.

(12) Secured by and payable solely from an irrevocable pledge and dedication of the avails or net proceeds of the 1% sales and use tax being levied and collected by the issuer, in compliance with a special election held within the Parish of Lafayette, State of Louisiana on September 18, 1965.

(13) Secured by and payable from an irrevocable pledge and dedication of the funds to be derived by the issuer from the levy and collection of a special tax of 4.59 mills (such rate being subject to adjustment from time to time due to reassessment) authorized to be levied each year on all the property subject to taxation within the corporate boundaries of the issuer.

(14) The 2015 total assessed valuation of the Law Enforcement District of the Parish of Lafayette, State of Louisiana is approximately $2,447,494,074, of which approximately $2,081,902,895 is taxable.

(15) Secured by and payable from an irrevocable pledge and dedication of the annual revenues of a special *ad valorem* tax of 8.03 mills (such rate being subject to adjustment from time to time due to reassessment) within the issuer, authorized to be imposed and collected each year on all the property subject to taxation within the corporate boundaries of the issuer.

(16) The Lafayette Public Power Authority is parishwide, and levied no *ad valorem* taxes in 2015.

(17) Secured by a pledge of project power revenues of the Lafayette Public Power Authority attributable to the project after payment of operating expenses.

(18) Lafayette Parish Waterworks District North of the Parish of Lafayette, State of Louisiana includes an area lying to the North of the Township line between Township 9 South and Township 10 South, except those areas included in any municipality or other water district, and except certain areas adjacent to the City of Lafayette. The District levied no *ad valorem* taxes in 2015.

(19) Payable solely from the income and revenues derived or to be derived from the operation of the waterworks system of the issuer, subject only to the prior payment of the reasonable and necessary expenses of operating and maintaining the system.

(20) Lafayette Parish Waterworks District South of the Parish of Lafayette, State of Louisiana includes an area lying to the South of the Township line between Township 9 South and Township 10 South, except those areas included in any municipality or other water district and/or certain water systems, and except certain areas adjacent to the City of Lafayette. The District levied no *ad valorem* taxes in 2015.

*(NOTE: The above statement excludes the outstanding indebtedness of the Lafayette Airport Commission, the Lafayette Economic Development Authority [formerly the Lafayette Harbor, Terminal and Industrial Development District], the Lafayette Public Trust Financing Authority, Lafayette Industrial Development Board, Lafayette I-10 Corridor District at Mile Marker 103, District No. 4 Regional Planning and Development Commission, and all operating and capital leases.)*

**SUMMARY DEBT STATEMENT AS OF FEBRUARY 2, 2016**

**A. Debt of the City of Lafayette**

| Type of Obligation | Principal Outstanding |
|---|---|
| Sales Tax Bonds | $268,115,000 |
| Utilities Revenue Bonds | $226,365,000 |
| Communications System Revenue Bonds | $114,260,000 |
| Taxable Revenue Bonds | $35,500,000 |
| Certificates of Indebtedness | $4,750,000 |

**B. Debt of the Parish of Lafayette**

| Type of Obligation | Principal Outstanding |
|---|---|
| Unlimited Ad Valorem Tax Bonds | $59,080,000 |

**C. Debt of the Lafayette Parish School Board**

| Type of Obligation | Principal Outstanding |
|---|---|
| Sales Tax Bonds | $77,420,775 |
| Certificates of Indebtedness | $13,802,000 |

**D. District Bonded Debt**

| Type of Obligation | Principal Outstanding |
|---|---|
| *Unlimited Ad Valorem Tax Bonds* | |
| Lafayette Parish Law Enforcement District | $18,870,000 |

**E. Debt of the Lafayette Public Power Authority**

| Type of Obligation | Principal Outstanding |
|---|---|
| Electric Revenue Bonds | $88,375,000 |

**F. Partially Underlying Debt of the Lafayette Parish Waterworks District North**

| Type of Obligation | Principal Outstanding |
|---|---|
| Water Revenue Bonds | $4,054,000 |

**G. Partially Underlying Debt of the Lafayette Parish Waterworks District South**

| Type of Obligation | Principal Outstanding |
|---|---|
| Water Revenue Bonds | $3,588,000 |

*(NOTE: The above statement excludes the outstanding indebtedness of the Lafayette Airport Commission, the Lafayette Economic Development Authority [formerly the Lafayette Harbor, Terminal and Industrial Development District], the Lafayette Public Trust Financing Authority, Lafayette Industrial Development Board, Lafayette I-10 Corridor District at Mile Marker 103, District No. 4 Regional Planning and Development Commission, and all operating and capital leases.)*