
MEMPHIS LIGHT, GAS AND WATER

Fiscal Year (FY) 19 Business Consulting Services

October 23, 2019

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FY19 Business Consulting Services

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INTRODUCTION

Executive Summary

Project Introduction

Memphis Light, Gas and Water (MLGW) engaged Baker Tilly Virchow Krause, LLP (Baker Tilly), to perform an operational and organizational review of MLGW's overall operations and structure. The focus of the study was to critically examine MLGW's organizational structure, operational procedures, policies, processes, and asset and infrastructure investment plans to identify areas of improvement. To understand MLGW's overall operations and organizational structure, the following key business units were examined by the study:

- Electric, Gas, and Water Engineering and Operations
- Electric, Gas, and Water Construction and Maintenance
- Customer Service - Field Services
- Metering, Billing, and Credit
- Community Offices
- Customer Call Center
- Corporate Communications and Economic Development
- Internal Audit
- Legal
- Finance and Accounting
- Information Technology
- Procurement, Contracts, and Inventory
- Transportation and Fleet
- Facilities
- Security
- Safety
- Human Resources, Training, and Insurance

In addition to Baker Tilly's operational and organizational assessment, the engineering firm HDR was engaged as a subcontractor to perform an assessment of MLGW's infrastructure investment needs. Baker Tilly's portion of the project will be referred to as "Part 1", and HDR's portion will be referred to as "Part 2".

Part 1 of the assessment was divided into two (2) phases, one that focuses on planning and data collection, and the other on analysis and reporting. These two phases are described below.

Phase One focused on planning, data collection, and documentation for the current operations. This included data gathering and documentation of current operations, identification of the business processes, and review of policies and procedures. To that end, the primary objectives of Phase One were to:

- Identify the current operational processes, policies, organizational structure, and understand current pain points by conducting in-person individual or group interviews;
- Conduct an operational analysis to identify operational efficiencies, gaps, and opportunities for process improvement of MLGW operations;
- Identify opportunities for cost savings, risk reduction, and service enhancement; and
- Outline current "best in class" processes in place.

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As part of Phase Two, Baker Tilly conducted an analysis using industry standards, interviews, document review, best practice, and research. Baker Tilly provided MLGW with recommendations to achieve its strategic objectives. Specifically, Baker Tilly provided the following for Phase Two:

- Identified high-impact improvement areas through a detailed gap analysis of current operations and desired future state;
- Aligned efforts of those improvement areas through the identification of current “best in class” industry standards;
- Identified and quantified areas where efforts are duplicated and could be streamlined;
- Analyzed benchmarking data and research to support recommendations;
- Identified observations in key focus areas; and
- Prepared recommendations of key observations with justification and potential implementation strategies.

Part 2 focused on independently assessing and verifying MLGW’s planned investment into electric, gas and water infrastructure. Baker Tilly collaborated with HDR to provide the condition assessment of MLGW’s utility infrastructure. To that end, the primary objectives of Part 2 were to:

- Identify investments that deliver value, comply with regulatory requirements, optimize resources, and mitigate risks;
- Identify operational best practices;
- Identify strengths, weaknesses and risks in current operations and systems;
- Identify performance metrics to improve transparency and accountability;
- Identify continuous improvement strategies; and
- Develop a comprehensive business plan consistent with MLGW’s goals.

Part Two is issued under separate cover.

Summary of Observations

This report contains observations in the following broad areas:

Priority Area	Summary of Observations	Cost Reduction	Revenue	Risk Mitigation	Strategy - Operational
Staffing Levels	Based on a high-level review of the organizational charts, there may be opportunities to more evenly distribute staffing and reduce redundancies in the organization.	✓			
FMLA	Having managers, supervisors, or other staff handling the approval process may be a violation of HIPAA privacy rules.	✓		✓	
Inventory	Evaluation and refining proper inventory levels for stock and non-stock items may help reduce inventory carrying cost.	✓			

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Priority Area	Summary of Observations	Cost Reduction	Revenue	Risk Mitigation	Strategy - Operational
Fleet Management	There are opportunities to assess the necessity of vehicles and alternative options to reduce costs on vehicle sales and managing equipment.	✓			
Workers' Compensation	A more formalized process to analyze workers compensation claims can allow MLGW to better identify trends and potential cost-saving measures.	✓		✓	
Technology Planning	There is an opportunity to make more informed decisions around IT investments, aligned with MLGW priorities and strategic objectives.	✓			✓
Technology – IT Operations	Exploring cloud-based storage solutions can result in the reduction of operating costs and mitigate data risk in the event of natural disasters.	✓		✓	✓
Procurement	There are opportunities to streamline the procurement process to reduce significant delays and lag time.			✓	✓
Collaboration & Communication	Departments are functioning in siloes across the organization.				✓
Human Capital Management	There is a significant knowledge gap between many supervisor to manager levels, putting the organization at high risk for workforce planning. The job evaluation process is also creating additional workload on staff that may not be necessary.	✓		✓	✓
Customer Care Policy	The Customer Care Policy may be more lenient than the industry norm, resulting in reduced revenue recovery.	✓	✓		✓

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Priority Area	Summary of Observations	Cost Reduction	Revenue	Risk Mitigation	Strategy - Operational
Customer Engineering	There are instances when Commercial/Residential Customer Engineers are performing design functions on behalf of the developers/potential customers in which costs may not be fully recouped.		✓		
Community Offices	There are five community offices with varying traffic flows and usage by the customers that can be evaluated to inform decisions for continuing to operate the facilities.	✓			

We do not recommend that MLGW attempt to implement all the recommendations in this report at the same time. Therefore, recommendations are assigned either a High or Medium priority, as well as an implementation timeframe. The table below contains a count of recommendations by category.

	Implement within six (6) months	Implement within six (6) to 18 months	Implement after 18 months
High Priority	3	3	4
Medium Priority	1	4	0
Low Priority	12		

Sustained Organizational Improvement

The bulk of the recommendations in this report focus on a specific process or system improvement to be addressed within the next two years. These operational improvements will provide MLGW with short term cost reductions and process improvements. However, to create long-term organizational resiliency that can withstand fiscal, environmental and political pressures, the organization must focus on longer-term strategic organizational improvement activities. These activities are outlined at a high level below but discussed in more detail in the recommendations throughout this report. If organizational priority is given to these initiatives, cost reduction, process improvement, and enhanced customer services will be a natural and sustained result.

Human Capital and Performance Management

Human capital is one of the organization's largest investments and biggest risks. Therefore, organizational priority should be given to the leadership of this important function. We recommend that MLGW keep human capital and performance management at the heart of its strategy. Specifically:

- Update position descriptions to reflect current job duties and the skills, knowledge and experience to perform the job.
- Conduct compensation and classification reviews at least every three years.
- Engrain performance management and accountability into the MLGW culture. MLGW has been successful in engraining the concept and culture of safety into the organization, so similar tactics used in that effort will be beneficial in this effort. This starts with meaningful performance management and mentoring to include preparing managers and supervisors to take on the responsibility for the management of the organization's most valuable assets.

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- Develop Key Performance Indicators (KPIs) for every area of operations. Monitor, manage and hold employees accountable for this performance. These can start as basic indicators and develop with more time as the organization becomes more data mature.

Continuous Process Improvement

Over time, processes can become unwieldy, and organizations often get stuck in the “that’s the way it’s always been done” mentality. Implementation of a continuous improvement program instills a culture of innovation and problem-solving in the organization that reaps long-term organizational benefits that a siloed review of individual processes cannot compete with. Specifically, we recommend that MLGW:

- Develop a Continuous Improvement Roadmap outlining functional areas for which to conduct a detailed organizational and operational review, complete with a timeline for the start and completion of each functional area
- Design and implement continuous improvement tools for each functional area, including dashboards with KPIs, employee barometers, regular stand-up meetings, regular root cause analysis meetings, review of policies & procedures, demand and capacity analysis, and skills gap assessments
- Determine the definition of a successful implementation and complete a regular performance audit of continuous improvement-enable functional areas based on adherence to continuous improvement methodology and KPIs

Technology

Technology is the bedrock that enables process efficiency and the use of data in performance management. In large organizations with limited resources, it is essential that the organization is rigorous about the prioritization of IT investment and that deviation from those priorities is justified. We recommend that MLGW:

- Implement a best practice IT governance and strategic planning program. Progress against the strategic plan should be monitored regularly. IT investment to include IT purchases and IT personnel labor hours should be in alignment with the overarching plan.
- Prioritize remediation of open Oracle issues
- Invest in formalizing project management for IT projects and related talent and skillsets

Baker Tilly Contact Information

We are pleased to have had the opportunity to serve as a strategic partner to MLGW on this project. The Baker Tilly project team would like to thank the MLGW project sponsors, the project steering committee, staff and stakeholders for their participation in this project and all of the effort dedicated to producing this report. We look forward to continuing to serve as your valued business advisor.

Should you have any questions regarding this report, please do not hesitate to reach out. Contact information is provided below.

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Project Scope

Baker Tilly was engaged to evaluate MLGW's organizational structure, overall operations, policies, processes, and asset and infrastructure plans. Our analysis and methodology were designed to examine and address operational and organizational issues to determine if there are opportunities to increase efficiency, enhance productivity, reduce expenditures and operational costs, improve asset utilization, increase revenue, and enhance cash flow and position of overall MLGW functions while considering industry best practices. The goal of the study is to provide a roadmap that allows MLGW to align operations to its overall goals and objectives for improved service delivery.

Project Methodology

To achieve the project objectives, we conducted the following activities:

- Reviewed key documentation, including workflows, organizational charts, process documents, and operational policies and procedures
- Held on-site interviews with representatives from key MLGW business units
- Based on the outcomes of interviews, analysis and documentation review, documented initial observations of potential high impact areas
- Conducted comparable benchmarking survey resulting in responses from four respondents. The list of organizations that the survey was distributed to are available in [Appendix A](#).
- Reviewed publically available comparable information such as financial statements, customer care policies, etc.
- Conducted further analysis and research to validate the observations and recommendations found in this report and tailor recommendations

Report Structure

As part of the report development, the observations and recommendations were reviewed with the MLGW Steering Committee. The MLGW Steering Committees' response to the observations and recommendations provided additional insight into key focus areas and any nuances or additional factors to take into consideration in the development of detailed recommendations.

Considering MLGW's feedback and the focus of the assessment, the observations and recommendations are organized in the following categories: alignment with best practices, high priority areas of improvement, and other lower priority observations. Each high priority observation and recommendation align with one or more impact areas: cost reduction, revenue enhancement, risk mitigation, and strategy and operations. The observations and recommendations within this report are supplemented with next steps for implementation.

We do not recommend that MLGW attempt to implement all recommendations at once. Therefore, each recommendation contains an implementation timeframe of either within six (6) months, within six (6) months to 18 months, or after 18 months. MLGW should focus attention and resources on implementing recommendations that are listed as a high priority and have an implementation timeframe of within six (6) months.

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Impact Areas Key:

Impact Area:	Definition
<i>Cost Reduction</i>	Opportunity for reducing operating expenses in order to enhance net operating income without having a negative impact on the quality of service.
<i>Revenue</i>	Opportunity to increase operating and non-operating revenues before any costs or expenses are considered.
<i>Risk Mitigation</i>	The area where steps can be taken to reduce the negative effects on business continuity.
<i>Strategy - Operational</i>	The area where actions can be implemented to better allocate resources and contribute to MLGW's overall strategy and service delivery.

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ALIGNMENT WITH BEST PRACTICE

Alignment with Best Practice

During the course of our review, the Baker Tilly team noted several areas of strength at MLGW. These are listed below in no particular order.

Organization – Wide:

- New organization structure has dismantled some silos that existed and positively aligned operations
- Commercial Driver's License (CDL) licensing management and driving courses provided through MLGW University/Corporate Safety are value-adding and a good in-house resource
- Generally speaking, organizational turnover with seasonal staff is low
- Engineering & Operations groups are adept at maintaining MLGW's aging infrastructure
- Safety is evidently ingrained in the culture of the organization and viewed as a top priority
- There is a strong sense of "volunteerism" in the organization and a strong commitment to the residents and businesses of Shelby County that MLGW serves
- New vision and focus on the "MLGW Way" has promoted a more positive and engaging culture that has improved employee morale for which it was noted even customers had noticed a difference

Function Specific:

Communications and External Affairs

- Employees are cross-trained to ensure consistency and continuity of staffing
- Automated technology is utilized for social media and various request processes which have helped with streamlining and efficiencies

Corporate Safety

- Vehicle accidents and injuries have dropped 30% in the last five years
- Facility and building inspections occur with regular frequency

Customer Care

- Leadership is dedicated to the success of this area and has already undertaken multiple efforts to improve efficiency and productivity which have resulted in benefits internally and to customers

Customer and Community Services

- An employee reward and recognition process was adopted to promote good performance
- There is an express line at the centers for quick issues which allow customers to avoid long waits in these situations

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ALIGNMENT WITH BEST PRACTICE

Electric Engineering & Operations

- As evidenced in the 2019 Electric Capital Budget and Reliability Enhancement Program, a data-driven process was utilized to prioritize capital improvement projects and spending to improve reliability indices

Facilities Management

- Daily safety meetings are conducted with foremen and technicians each morning
- Preventative maintenance is performed on all assets

Fleet Operations

- Types of vehicles and equipment purchased are standardized which creates efficiencies in maintenance work and allows for transfers across departments

Gas Engineering & Operations

- The Liquefied Natural Gas (LNG) plant produces approximately \$6.3 million in revenue annually (per MLGW's FY18 financial statements)
- In conjunction with Information Services, the Gas operations group has developed a gas leak survey application to improve process inefficiency and have more reliable data

Information Services

- IT leadership regularly communicates with senior management and the Board and keeps them apprised of cybersecurity and other key technology risks and updates
- Many applications developed by IT have increased efficiency and productivity throughout the organization

Internal Audit

- Advisory projects are performed to provide recommendations for process efficiencies and effectiveness, which provide additional value to management

Procurement

- Supplier diversity is valued and prioritized at MLGW. Statistics are tracked and reported on regularly

Treasury

- Bloomberg is utilized when possible for purchasing commercial paper which eliminates the need to go through investment managers

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Staffing Levels

Impact Areas:



Baker Tilly Observations:

Baker Tilly conducted industry organization and comparable entity benchmarking in order to assess the appropriateness of MLGW’s staffing levels. Among benchmarking of peer utilities and industry best practices, MLGW maintains a low customer to FTE ratio overall. This indicates that MLGW may be able to reduce staffing levels.

Benchmarking is not an exact science, and the benchmarking conducted for this report is only comparing MLGW staffing levels to customers served and ratios to internal staff. This does not take into account factors that may increase staffing levels, such as an aging infrastructure, the physical size of the utility service area, the demographics of the customer base, or numerous other considerations. While there are obvious limitations to benchmarking, that does not limit its usefulness in pinpointing areas for process improvement and cost savings. The paragraphs below outline the benchmarking analysis conducted and how MLGW can interpret and implement the results.

Industry and Comparable Benchmarking

Baker Tilly compared MLGW’s Customer to FTE ratio to benchmarks of the American Public Power Association (APPA), American Gas Association (AGA), and the American Water Works Association (AWWA). Baker Tilly also compared MLGW’s Customer to FTE ratio to peer utilities surveyed through a benchmarking survey. These benchmarks allowed Baker Tilly to clearly identify the high levels of staffing at MLGW.

To have comparable results for electric, gas and water, Baker Tilly first assigned all employees who provide direct service to electric, gas or water. The remaining employees were allocated to a service line based on the ratio of electric, gas or water FTE to total FTE. Subsequently, comparing these ratios to the industry benchmarks informs the expected organizational FTE based on the industry benchmarks. See the table below for details.

Table 1 – Industry Benchmarking

	MLGW FTE	MLGW Customers (2018)	MLGW Customers/FTE	Industry Benchmark Customers/FTE	Expected Organizational FTE based on Industry Benchmark	% reduction
Electric	1,766	429,499	243	306	1,404	
Gas	647	312,552	483	485	644	
Water	466	254,222	546	484	525	
Total	2,879¹				2,573	10.62%

According to the industry benchmarks, MLGW has almost 11%, or 306 more employees than expected based on the benchmarking organizations.

¹ MLGW has 2,961 FTE. For benchmarking purposes we excluded commissioners and street lighting personnel from this analysis and used in FTE of 2,879. Street lighting personnel were excluded because they are not always found within municipal electric entities.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

A similar process was conducted with peer utilities surveyed in a benchmarking survey. Baker Tilly gathered the number of customers and FTE for four peer utilities that responded to the survey. Using the data provided by survey participants, Baker Tilly was able to complete a similar exercise in comparison. The details are shown in the table below.

Table 2 – Peer Utility Benchmarking

Comparable Benchmarks	
Comparable 1 Customers/FTE	297
Comparable 2 Customers/FTE	308
Comparable 3 Customers/FTE	447
Comparable 4 Customers/FTE	547
Average Comparable Customers/FTE	400
MLGW Customers/FTE ²	346
Expected Organizational FTE based on Comparable Benchmark	2,492
% Reduction	13.43%

Based on the comparable benchmarks, MLGW has almost 13%, or 387 more employees than expected.

Baker Tilly further segmented the comparable benchmarking analysis by high-level focus area to provide insight into specific areas where MLGW may have more staff as compared to the peer comparables. Table 3, below, looks specifically at the “internal service” functions of finance, human resources and information technology and compares the ratio of FTE to 100 organizational employees.

Table 3 – Internal Service FTE per 100 Employees

	Comparable 1	Comparable 2	Comparable 3	Comparable 4	Average	MLGW
Finance and Accounting	4.79	4.71	2.34	3.32	3.79	2.33
Human Resources	1.82	0.22	1.69	3.08	1.70	2.30
Information Technology	8.27	7.96	5.81	7.11	7.29	3.70

MLGW is below the comparable benchmark in the areas of finance and accounting and information technology. MLGW is higher than the average of the comparable benchmarks for human resources. This is consistent with industry benchmarks explored in further detail in the FMLA recommendation section.

² Street Lighting Personnel and Commissioners are not included in this analysis as not all electric utilities would consider this function in their benchmarking responses

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Table 4 summarizes employee levels per 1,000 customers. It is important to note that there is a much higher variability in the way that engineering, maintenance and customer services staff are categorized between organizations than there is for functions such as human resources, information technology and finance. Therefore, a comparable organization may classify construction or engineering staff differently than MLGW.

Table 4 – Operational FTE per 1,000 Customers

	Comparable 1	Comparable 2	Comparable 3	Comparable 4	Average	MLGW
Engineering and Operations	0.12	0.12	0.57	1.10	0.47	0.50
Water Quality Control (if applicable)	0.17	0.09	0.02	-	0.09	0.01
Construction Design	0.09	0.12	0.00	0.08	0.07	0.07
Maintenance and Operations	0.49	1.75	1.20	-	1.15	0.90
Customer Services	0.40	0.57	0.26	0.44	0.42	0.62

MLGW is above the average of the comparables in the areas of Customer Services and Engineering and Operations and in line with average of the comparables for Construction Design.

Finally, Baker Tilly compared MLGW administrative and clerical support staff ratio to peer comparable ratios. The ratio is based on the number of administrative and clerical staff as a percentage of total organizational employees. Results are outlined in Table 5.

Table 5 – Administrative and Clerical Support Ratios

	Comparable 1	Comparable 2	Comparable 3	Comparable 4	Average	MLGW
Administrative and Clerical Staff as a percentage of Organizational Employees	9%	4%	6%	18%	9%	6%

MLGW has a slightly lower level of administrative and clerical staff as compared to the average of the peer comparables.

Baker Tilly Recommendation:

Baker Tilly recommends decreasing headcount throughout the organization through means of attrition and/or specific reductions in staff based on further analysis.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Baker Tilly Recommendation Detail:

A significant reduction in staffing levels cannot be accomplished without addressing processes and technology inefficiencies. If MLGW maintains processes that are inefficient, or technology that does not meet the needs of its users, a high headcount will be necessary to maintain current service levels. Baker Tilly recommends adopting a Continuous Improvement Management methodology and a best practice IT governance and strategic planning program, as stated in the overall recommendations of this report. These will address the process and technology elements of sustainable change.

Additionally, when making changes in these areas, MLGW must ensure that changes are addressed in areas that align with the organization’s strategic priorities. If changes are made to areas outside of MLGW’s strategic priority, the organization is at risk for placing resources in areas that do not advance MLGW’s vision and mission. Key performance indicators aligned with MLGW’s goals should be created for each department in order to evaluate and monitor the effect of lowering staffing levels and to ensure changes are benefiting MLGW’s overall strategy.

Finally, MLGW must carefully consider the impact that reductions in staffing levels may have on any infrastructure improvement plans recommend in Part 2 of this project.

Implementation of a reduction in staffing levels by 11%-13% to meet the industry and comparable benchmarks would result in total cost savings of approximately \$30M-\$36M for MLGW.

Table 6 – Cost Savings of Reduced FTE

Range of Cost Savings	Current ³	11% Reduction	Savings	13% Reduction	Savings
Budgeted Salary	\$204,101,066	\$181,649,949	\$22,451,117	\$177,567,927	\$26,533,139
Fica	\$2,770,361	\$2,465,621	\$304,740	\$2,410,214	\$360,147
Healthcare	\$38,191,404	\$33,990,349	\$4,201,054	\$33,226,521	\$4,964,882
Workers’ Comp	\$3,957,658	\$3,522,316	\$435,342	\$3,443,163	\$514,496
Pension	\$22,756,536	\$20,253,317	\$2,503,219	\$19,798,186	\$2,958,350
Other	\$3,957,658	\$3,522,316	\$435,342	\$3,443,163	\$514,496
Total	\$275,734,683	\$245,403,868	\$30,330,815	\$239,889,174	\$35,845,509

Specific positions or divisions for staff reduction are not addressed in this recommendation as that is beyond the scope of this project. However, based on the benchmarking analysis conducted as part of this observation, the areas of human resources and customer services may be areas for initial additional analysis and potential reduction.

Fiscal Impact: \$30M - \$35M over multiple fiscal years

Implementation Steps:

- Prioritize remediation of systems issues
- Prioritize implementation of a Continuous Improvement or other process improvement program
- Identify budgeted positions which are eligible for retirement within the next three years

³ Salaries for Street Lighting Personnel and Commissioners have been removed as they were not included in the benchmarking analysis

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

- Identify positions that could no longer be budgeted once vacant due to retirement or other attrition
- Conduct detailed benchmarking analyses in areas of concern. Identify positions which can be eliminated prior to vacancy due to retirement or other attrition

Baker Tilly Recommended Implementation Time Frame:

- More than 18 months

Priority: High

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

FMLA

Impact Areas:



Baker Tilly Observations:

Across interviews, MLGW employees have expressed an increased workload and burden around handling employee FMLA processing. Baker Tilly observed several opportunities to streamline MLGW's processes, transition the responsibility of FMLA duties to adhere to privacy rules, and overall reduce costs for the organization through better management of FMLA processing. Our observations are listed below, in no particular order:

- **Observation 1:** MLGW's HR Policy #22-13 regarding sick leave, short term disability, and long term disability approval - at the moment, managers/supervisors are in charge of ensuring that the leave request and all relevant forms are completed properly by employees. This process is inefficient, and tasks are not necessarily appropriate for manager/supervisor-level staff as it can be relatively time-consuming and distract from their normal duties. In addition, having managers/supervisors handling the sick leave approval process may be a violation of HIPAA privacy rules.
- **Observation 2:** The Acting People Services Vice President, as well as the Director of Customer Care, stated that on average, approximately 30% of the call center staff are absent due to FMLA claims. High FMLA claim levels may be resulting in high overtime costs as well as high staffing levels to compensate for necessary coverage.
- **Observation 3:** The current HR Policy (i.e., Policy #22-13) for sick leave request/approval requires managers/supervisors to manage the process for in-take of qualifying medical reasons associated with FMLA claims. The managers/supervisors not only forward these claims to People Services for review of FMLA approval, but they are also required to track hours manually for their employees. Having managers/supervisors perform these duties may be a violation of ADA privacy rules. This is based on our initial understanding of the process. Follow up interviews will be conducted to ensure that this is indeed the workflow related to FMLA

Baker Tilly Recommendation:

MLGW should transition all responsibility of FMLA processing for the organization to People Services. Supervisors should be limited to managing time while an employee is on leave, and coordinating with People Services once an employee is cleared to return to work.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Baker Tilly Recommendation Detail:

To determine if MLGW was spending an appropriate amount of time and resources on FMLA-related requests, we performed an analysis of the average salary for each position dedicated towards FMLA tasks. Baker Tilly distributed a survey to MLGW managers and supervisors to quantify an estimate of how many hours are dedicated towards FMLA. The average amount of hours per month was multiplied by 12 to calculate an annual estimate, and compared against the hourly salary rate per position. The hourly rates were multiplied by the number of supervisors and managers to receive a total cost estimate for MLGW. This analysis resulted in an estimate that MLGW is spending approximately \$260k in labor costs for managers and \$320k in labor costs for supervisors to process FMLA per year.

In addition to the resource analysis, we asked other utilities to provide the number of full-time equivalents (FTE) they have dedicated to FMLA related tasks. The survey respondents had an average of 1 FTE allotted to FMLA processing. Best practices indicate that roughly one Human Resource staff are needed for every 100 personnel at an organization⁴. With MLGW’s total employee count of 3,050, and 70 FTEs for HR, MLGW has enough resources within this department to absorb all FMLA responsibilities without budgeting additional personnel.

Table 7 – Best Practice Comparison for HR Staffing

	Best Practice	Current MLGW
Ratio of HR Personnel for Employee Count (Per 100 Employees)	1.03	2.29
HR Staffing Level For Employee Count of 3,050	31.5	70

From a process standpoint, we completed benchmarking research to identify best practices in how FMLA should be coordinated and managed to maintain the integrity of the process and adhere to the FMLA Policies noted in the observations section above. Two workflows are presented on the following pages: one capturing MLGW’s current process, and the other showing the best practice for FMLA processing.

⁴ Page 2, 2015 SHRM Report “How Organizational Staff Size Influences HR Metrics”

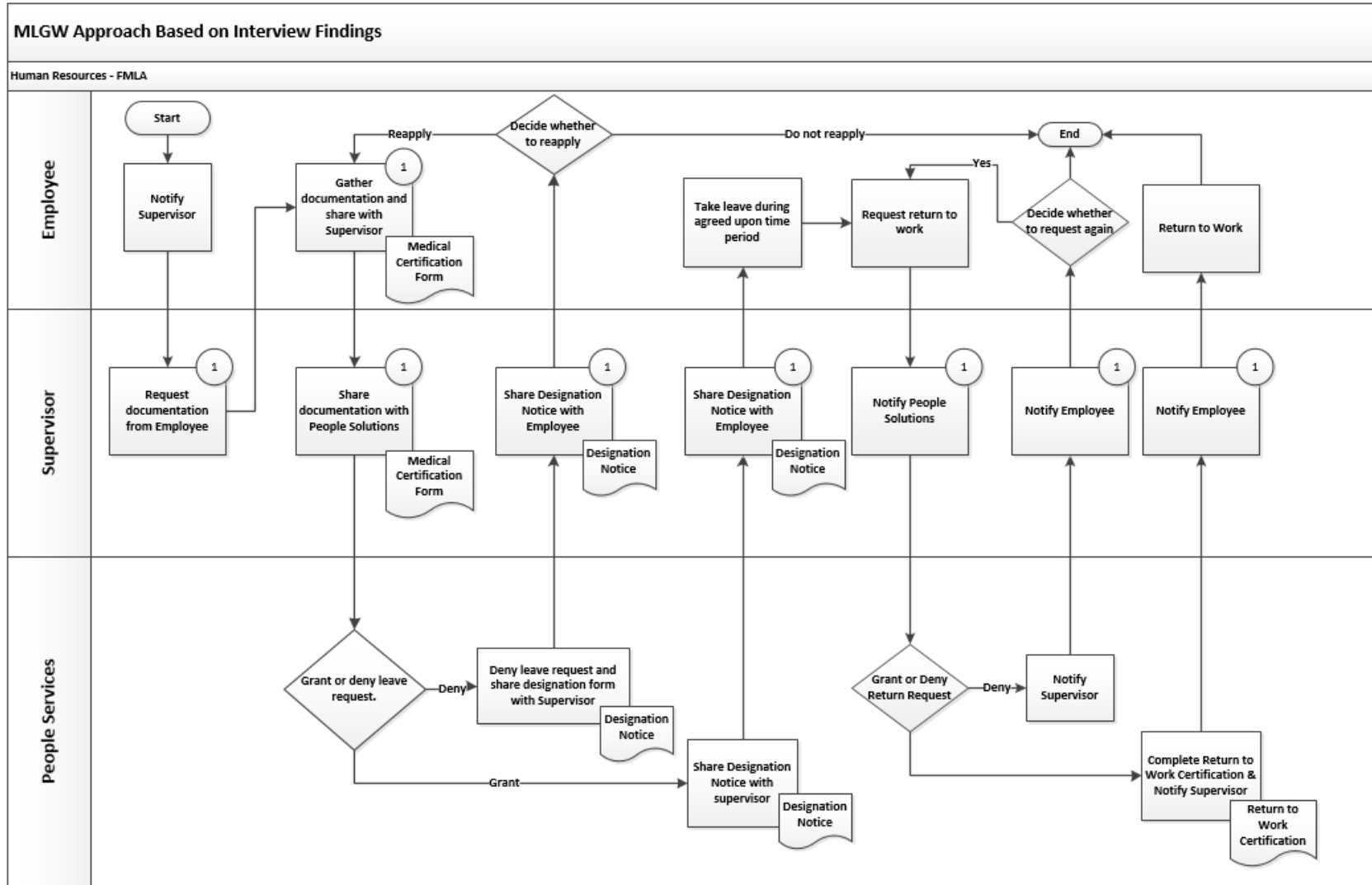
<https://www.shrm.org/ResourcesAndTools/business-solutions/Documents/Organizational%20Staff%20Size.pdf>

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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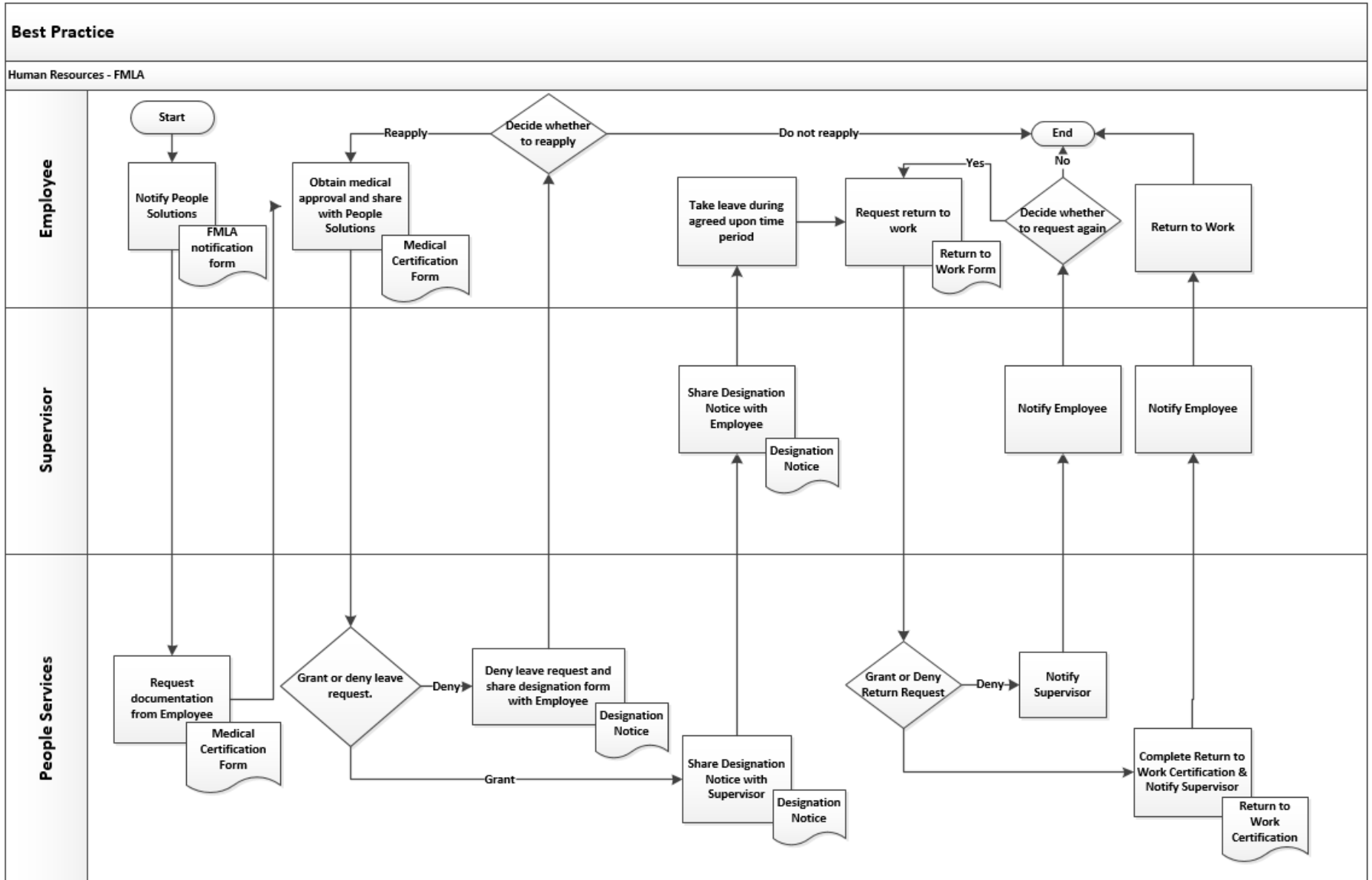
Process Note:

- 1 During the clerical focus group, it was identified that some department clerks are filling in paperwork on behalf of supervisors and acting as a liaison between the supervisor, employee, People Services, insurance company, and medical provider in order to complete FMLA documentation.

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When comparing the best practice workflow to MLGW's current process, it is evident that MLGW depends on supervisors to carry out numerous processing tasks in addition to reviewing an employee's timesheet such as determining an employee's eligibility, coordinating with the employee, notifying human resources, and restoring an employee to the appropriate position upon return to work. From interviews, Baker Tilly also identified instances in which supervisors were not able to take on this level of responsibility, FMLA tasks would be delegated to administrative positions/clerks.

From a policy standpoint, MLGW supervisors should not be involved in handling or reviewing employee's personal health records since this could be a violation of HIPPA privacy rules. Human Resources would be the appropriate department to handle any verification of eligibility, coordination with doctors and insurance companies, and evaluations of an employee's ability to return to work. The involvement of MLGW supervisors should be limited to managing an employee's timesheet and coordinating with HR to restore the employee to the same or equivalent position once the employee has been cleared for return to work.

Additional details for FMLA best practices are highlighted below:

1. Initiating the FMLA Leave Request

- The employee must notify MLGW within 30 calendar days prior to an FMLA-qualifying absence or two calendar days after the start of the absence
- After the 48-hour reporting deadline, the manager has up to 2 weeks to report an employee's absence to HR (People Services)
- MLGW may automatically deny leave requests outside of reporting deadlines
- Before taking FMLA leave or as soon as possible, employees should request forms from HR
- HR requests that employees complete leave request form (optional).

2. Eligibility and Certification of Health Care Provider

- MLGW must send the employee the following forms within 5 business days: Eligibility Notification Rights & Responsibilities and Certification of Health Care Provider
- The employee must complete Medical certification forms and return to HR within 15 calendar days.

3. FMLA Determination

- HR receives completed Medical Certification forms and makes a determination within five days
- If the form is not received within 5 days, MLGW will deny the claim and send a notice to the employee.
- A denied claim may be overturned if completed paperwork is received.

4. FMLA Notification

- HR sends determination notification to the employee and manager within # business days of receiving completed paperwork.

5. Case Management

- HR to remain in contact with the employee during a leave

6. Return to Work

- Before returning to work, an employee must acquire a return to work form from a healthcare provider. The employee must give this to HR.
- The employee must also complete a personal certification. This document asks employees to verify that they took time off for the reason stated prior to their departure.

Fiscal Impact: Soft cost reduction of approximately \$585,476 in labor costs for managers and supervisors if responsibility for processing FMLA is transitioned to HR. Cost savings are representative of the reduction in hours spent on FMLA processing and not an FTE reduction.

This cost estimate was determined with the following assumptions:

- 1) Information provided on the survey is accurately portrayed
- 2) There are 51 managers and 130 supervisors at MLGW and all managers / supervisors complete FMLA processing
- 3) The average salary was calculated based on full-time managers and supervisors

Impact Areas Key			
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Implementation Steps:

- Reassign responsibility for FMLA processing to People Services. Determine 1 – 2 staff responsible for managing and processing FMLA
- Standardize FMLA processes to serve the entire organization while complying with FMLA policy and HIPPA privacy rules
- Provide training to People Services staff on FMLA regulations and best practices
- Provide training to managers and supervisors on their new involvement and responsibilities within FMLA processing
- Provide communication and training to employees on how they should be requesting and coordinating with People Services for FMLA requests

Baker Tilly Recommended Implementation Time Frame:

- Within six (6) months to 18 months.

Priority: **High**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

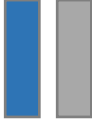
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Procurement

Impact Areas:



Baker Tilly Findings:

Per its FY18 Annual Report, MLGW spent \$192M related to procurement, which represents nearly 20% of MLGW's overall operating budget. Baker Tilly observed that while there are many procurement best practices in place, there are several opportunities for improvement. Our observations are listed below in no particular order:

- **Observation 1:** MLGW must receive approval from both the Board of Commissioners and the City Council for any procurement above \$50,000. Based on our experience working with other municipal utilities and a review of comparable organizations, this threshold is too low and adds considerable time to the procurement process which impacts not only the competitive pricing MLGW receives, but also the ability to complete planned work resulting in customer service issues.
- **Observation 2:** All Engineering & Operations groups and Construction & Maintenance groups have indicated an issue of significant delays or material lag time associated with requests/requisitions of stock items with existing inventory ID numbers to support work orders (both on the maintenance and capital side), especially for parts that are deemed to be used frequently (e.g., meters, sockets, couplings, valves). This not only leads to inefficiencies in terms of Construction & Maintenance Crew productivity, but also ultimately an inability for MLGW to deliver to the customers/end-users.
- **Observation 3:** Procurement manages the master copies of the contracts. As such, the Legal Services team cannot ensure the integrity of the contracts' version control and needs to read the full contract terms for each contract, even when starting from the MLGW base. This results in an inefficient use of General Counsel's time and contributes to increased timelines during the RFP process and when sending vendors preliminary contracts for review.
- **Observation 4:** Targeted timeframe for contract turnaround is 247 days. There are potential opportunities to streamline the process to reduce the timeframe. Interviews indicated that long contract review timeframes have broad reaching business operation effects, including high inventory counts and business interruptions.
- **Observation 5:** MLGW values contracting with minority and women-owned businesses (MBE/WBE) and local businesses (LBE). While both programs are valuable, they add to the length of MLGW's procurement process, reduce competitiveness in the bidding process and may not have the desired impact. Baker Tilly received anecdotes that the lengthy procurement process sometimes forces bidders to drop out and other bidders to increase their prices in anticipation of a lengthy procurement process. Additionally, MLGW provides a 5% discount off the bid price, for purposes of bid evaluation and selection, which adds additional cost to MLGW's procurements. In 2018, total sheltered market spend was approximately \$11.9M which was spent with only 11 firms. Spending with the top five of the 11 firms was almost \$10.8M or 91% of the total sheltered market spend. These same five firms also competed in non-sheltered market procurements, adding to approximately \$8.5M additional spend with these five firms. Therefore, the sheltered-market and local business programs, are benefitting a very small number of local business while at the same time limiting competitive procurement.

Impact Areas Key			
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Baker Tilly Recommendations:

We recommend that MLGW make several changes to the procurement process to increase efficiencies and reduce the overall timeframe of the procurement process, specifically:

1. The threshold for procurement approvals by the Utility Board of Commissioners should be raised to at least \$500,000. The City Council should not be required to approve MLGW procurements but should be provided a quarterly report which details payments made by MLGW.
2. MLGW should not eliminate its Supplier Diversity Program or local business program as this is an obvious point of pride for the organization. However, the organizational emphasis should be placed on accepting the lowest responsible bid and not on obtaining local and minority participation. Additionally, the process for reviewing if a procurement is eligible for a supplier diversity requirement should be streamlined to reduce the review process timeline.
3. MLGW Counsel identified that retaining the master contracts within the General Counsel office will allow the attorneys to maintain version control. Baker Tilly recommends making this operations process change. By doing so, attorneys will be able to read/edit only pertinent terms and conditions for the specific contracts and will, therefore, reduce review times and turn-around time to procurement.

Baker Tilly Recommendation Detail:

Procurement Threshold

As part of the comparable survey issued, respondents identified procurement thresholds for both their utility board / commission and their City Council / County Board if applicable. The results of these responses are outlined in Table 8 on the following page.

Impact Areas Key			
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Table 8 – Procurement Threshold Benchmarking Results

Comparable Entity	Question 1: What is your organization's procurement dollar value threshold of purchases that must be approved by the utility board?	Question 2: What is your organization's procurement dollar value threshold of purchases that must be approved by the City Council / County Board?
1	We do not have purchases that must be approved by the Board. However, within the Board Financials, Board Members are notified of professional service contracts (area, description, vendor, and contract amount) for contracts exceeding \$100,000.	See the answer from the previous table. This entity is not subject to City Council oversight.
2	The Utility Advisory Board does not approve purchases.	Purchases over \$100,000.00 must be approved by the City Commission unless it falls under several defined circumstances where purchases are exempt from approval.
3	Purchases are not approved by the Board of Commissioners by project. The annual budget is approved by the Board, and purchases are made in accordance with Procurement Procedures (adopted via Board Resolution) and Guidelines (approved by the President and CEO).	Only long term debt issues are approved by City Council.
4	N/A - we do not have a dollar threshold that requires board approval	N/A

The comparable responses clearly show that MLGW's current \$50,000 approval threshold is low. Only one entity indicated that purchases must be approved by the City Council and that threshold was \$100,000 with carve out exemptions. That entity's current procurement policy states that the \$100,000 approval threshold does not apply to the following:

- Change orders not increasing the price by more than 10% of the original contract amount.
- Purchase of fuel for operation plants and equipment or for the delivery or customer services, including petroleum products and fuel oil for generation; coal meeting environmental requirements at the lowest delivered price per BTU available and the transportation thereof; and natural gas and liquefied petroleum gas at the lowest delivered price per BTU available and the transportation thereof; also natural gas rebates.
- Purchases of materials, equipment or services used for the operation and maintenance of utility plants, distribution and collection facilities, substations, lift stations, gate stations, and purchases of standard materials.
- Purchases for the repair and maintenance of system-wide computer software and hardware.
- Purchases for or related to the expansion, operation or maintenance of the fiber optic of other telecommunication systems and contracts for telecommunication access, transport, and other services.
- Purchases for maintenance of fleet equipment and used vehicles.
- Materials, equipment or services purchased under public agency cooperative purchasing contracts, agreements or consortiums.
- Utility services when the subject utility is the only available source of such service.
- Emergency purchases.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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- Purchases and contracts for construction projects when the cost of the construction project does not exceed \$300,000.

These exceptions account for many of the purchases above \$100,000 that would be relevant to the utility enterprise.

Finally, in Baker Tilly's experience working with municipally owned utilities, the \$50,000 procurement threshold is lower than we would expect to see.

Based on both the comparable survey results and Baker Tilly's knowledge of industry best practice, we recommend that the Board of Commissioners approve procurements in excess of \$500,000 and that the City Council does not approve purchases but is provided a report of all payments made on at least a quarterly basis. Under this method, the City Council still has insight into the level and nature of procurement conducted by MLGW.

The largest advantage of raising the procurement threshold is that it will reduce MLGW's procurement timeframe. This can have the following positive residual results:

- MLGW can more quickly purchase supplies and materials to complete projects which impacts customer service and system integrity;
- MLGW can take advantage of more competitively priced bids where pricing may expire/change based on the marketplace; and
- MLGW can improve inventory stocking practices with the assurance that critical items and minimum stock levels can be replenished in a timely manner.

Supplier Diversity

It was evident from interviews and through annual reports and other documentation that MLGW takes great pride in its supplier diversity and local market procurement program. We recognize the importance of such programs and do not recommend that MLGW disband these programs. It was also evident, however, that these programs have created significant delays in the procurement process and that MLGW has prioritized its supplier diversity program and local business programs ahead of obtaining the lowest responsible bid for its procurements.

Due to the potential to shorten the procurement timeframe and to reduce overall costs to MLGW, we recommend that MLGW continue to promote participation by and use of diverse suppliers and local vendors but that vendors are weighted more heavily in the bid tabulation/scoring process for their ability to responsibly and cost effectively provide goods and services to MLGW. This means that MBE/WBE and local small businesses would receive an additional increase in bid score rather than having an additional timeframe, cost allowance, or customized diversity goal. For example, MLGW procurement documents may state that vendors who are MBE/WBE qualified or who are sub-contracting at least 15% of total project costs to an MBE/WBE, and meet all of MLGW's minimum requirements, will receive an additional 5% on top of their base score. This reduces the need to have Supplier Diversity review and establish a diversity goal for every contract, reducing the procurement timeline by at least two weeks. This also allows procurements to be more competitive while not discouraging the participation of diverse suppliers. Specially, Baker Tilly recommends that MLGW:

- Remove the sheltered market component of the local business program and simply promote local business involvement by providing an additional percentage to be added to the base bid score if they are a certified local business;
- Remove the 5% up to \$100,000 cost allowance for local businesses; emphasis should be placed on awarding contracts to the lowest responsible bidder;
- Remove the customer designation of supplier diversity goals and create a standard supplier diversity goal based on contract type, which can be waived in certain circumstances;
- Promote supplier diversity by awarding bidders an additional percentage to be added to the base bid score if they meet the standard supplier diversity goal.

Impact Areas Key			
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Fiscal Impact: MLGW will experience cost savings by implementing these recommendations by means of increased competition and shorter procurement timeframes. Specific cost savings cannot be estimated.

Implementation Steps:

- Work with the Board of Commissioners and the City Council to update procurement thresholds
- Update Accounts Payable processes to include the production of a quarterly warrant report of all payments
- Update procurement templates for new MBE/WBE/LSB scoring requirements

Baker Tilly Recommended Implementation Time Frame:

- Less than 6 months

Priority: High

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Inventory

Impact Areas:



Baker Tilly Observations:

Baker Tilly makes several observations that pertain to the overall life-cycle process of inventory management:

- **Observation 1:** Due to the lengthy lead time from the point of initial purchase requisition of materials to physical receipt into the Storerooms, there is a general sense of relatively high inventory levels for some stock items. While the Materials and Supplies value contributes to the current assets on MLGW's balance sheet, it remains an "opportunity" cost in that too high a level of inventory carrying costs can adversely affect the utility's asset utilization.

This issue was confirmed through interviews with the Storerooms and Purchasing divisions as the higher levels of inventory was intended to be a contingency in case there were any procurement issues and delays associated with the Oracle Inspire implementation. However, the issue now appears to be that some of the Storerooms are essentially over-capacity in terms of shelving space, which inhibits the ability for Construction and Maintenance (C&M) crew to perform staging for jobs pertaining to work orders.

Evaluation and refining proper inventory levels for stock items may help reduce this inventory carrying cost. This would need to go hand-in-hand with reducing bottle-necks/lags associated with overall procurement processes.

- **Observation 2:** While there is an issue of some inventory stock items having higher quantities, it would also appear that there is an issue of some common use critical items (e.g., valve, couplings, bulbs, etc.) that have a tendency to be depleted quickly.

While there is a min/max feature that is utilized in the Oracle Inventory system, there may be opportunities to refine the min/max levels to alleviate the issue of common use critical items being depleted in the Storerooms.

- **Observation 3:** Related to certain common use critical items being depleted, interviews with C&M crew indicated that there are issues when they place requisitions in Oracle for items/materials from Storerooms associated with Work Order job packets. While there is coordination with the Planning Coordinators regarding the creation of job packets for work orders to determine the quantity of items associated with job packets, sometimes this does not translate to a request for stock items that have low quantity.

When the C&M crew arrive to the Storerooms to retrieve items for work orders, there are times when the proper quantity of items are not available and does not allow for the crew to perform their work orders. This has a major negative impact on crew productivity and with completing work orders.

- **Observation 4:** While there is a formalized process for crews to pick up inventory after business hours (i.e., a crew member should complete a ticket in Oracle, then will be granted access to grab the inventory), crew members are not consistently completing tickets, which results in inaccurate inventory counts and a retroactive reconciliation. Related to this, the overall job close-out process can be formalized as in some cases, the inventory of stock items are not reduced until the job work order has been 'closed out' by the crew. This also seems to impact the charging of Crew time to work orders until the Foreman has released the work order.

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- **Observation 5:** Training exists for C&M crew members to process returns to Storerooms. However, the procedures are not enforced by crew managers and Storeroom personnel on a consistent basis, which results in an inaccurate inventory count and potential loss of inventory.

Baker Tilly Recommendation:

Baker Tilly's recommendation is four-fold:

1. Baker Tilly recommends completing a detailed analysis regarding the minimum inventory levels that MLGW is comfortable carrying. This may involve calculating a necessary safety stock based on the lead times of storeroom inventory (i.e., the time between issuance of a purchase requisition to the time inventory is stocked on shelves) and usage of each item. This could also be informed by comparing Annual Carrying Costs to the total administrative supply chain costs to determine the appropriate balance of administrative overhead to inventory balance.
2. Baker Tilly also recommends calculating an economic order quantity to determine the order quantity and frequency for which ordering costs and carrying costs are minimized. While there is further potential for a detailed, in-depth analysis, Baker Tilly calculated a carrying cost based on the inventory balance and cost of capital.
3. Baker Tilly recommends that MLGW evaluate the min/max feature within Oracle to account for seasonality of certain work orders/projects (e.g., summer months versus winter months), the timing of existing projects, and lead times of stock items.
4. As it relates to process improvements, Baker Tilly recommends that MLGW address the procurement bottle-neck issues by determining which stock items are "critical" or common use to determine whether these items can be procured by multiple vendors to alleviate the stock shortage. Additionally, MLGW should formalize the item requisition and work order close-out process to determine when such activities trigger any stock quantity reductions and any gaps associated with incomplete processes.

Baker Tilly Recommendation Detail:

Baker Tilly has provided general guidance on the various factors that go into calculating the inventory balance.

Inventory Annual Carrying Cost:

In order to determine MLGW's inventory annual carrying costs, Baker Tilly calculated MLGW's weighted average cost of capital (WACC) based on the total outstanding long-term debt and equity (i.e., net position) reported at the end of FY18. From a traditional investor-owned utility (IOU) ratemaking perspective, the WACC is often used as the overall rate of return (ROR) that an IOU needs to meet its contractual obligations to debt and preferred stock investors and ROR expectations of common stock investors. In the context of MLGW's inventory, computing MLGW's WACC is used to help determine the annual inventory carrying cost associated with MLGW's inventory balance.⁵

⁵ For the purpose of simplicity, we are computing a single WACC for MLGW instead of individually for each utility division.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Baker Tilly calculated the WACC based on the weighted capital structure components (i.e., long-term debt, equity) by their respective percentages in the appropriate capital structure and multiplying these ratios by their respective cost rates. The cost rates for long-term debt were based on the weighted average interest rate for the outstanding debt, and the return on equity was stipulated based on industry standards for municipal utilities that employ a rate of return ratemaking approach. A return on equity of 6% reflects the increased risk associated with equity risk compared to that of bond risk, but it is less than the typical return on equity for electric distribution and gas distribution IOUs, which are around 9.5%.⁶ Baker Tilly calculated MLGW's WACC to be 5.57%, which is summarized in the following table.

Table 9 – WACC Calculation

Capital Structure Component	Balance per MLGW's FY2018 Annual Report	Ratio to Total Capital	Cost	Weighted Cost
E - Long-term debt	\$ 202,189,000	10.82%	3.82%	0.04%
G - Long-term debt	86,111,000	4.61%	4.00%	0.18%
W - Long-term debt	67,040,000	3.59%	3.29%	0.12%
E - Equity	911,581,000	48.77%	6.00%	2.92%
G - Equity	361,066,000	19.32%	6.00%	1.16%
W - Equity	241,032,000	12.90%	6.00%	0.77%
Total Capital	\$ 1,869,019,000	100.00%		5.57%

Baker Tilly used the WACC to calculate the inventory annual carrying costs based on the year-end 2018 inventory balances for Electric, Gas, and Water. The following table includes details regarding Baker Tilly's calculation of MLGW's Inventory Annual Carrying Cost.

Table 10 – Inventory Annual Carrying Costs

Division	2018 Inventory Balance	Annual Carrying Cost
Electric	\$ 34,418,935	\$ 1,918,157
Gas	8,529,322	475,337
Water	5,052,224	281,559
Total	\$ 48,000,481	\$ 2,675,053

The computed total of approximately \$2.7 million represents MLGW's annual carrying cost for its inventory levels at year-end 2018. This value can be compared to MLGW's total annual stores overhead costs for the purposes of determining the contribution that inventory carrying costs comprise the total annual stores overhead cost. The administrative stores overhead costs is defined by the utility and may consist of components such as: inventory carrying costs, warehouse costs (including utilities, maintenance), stores personnel salaries, stores personnel overhead, purchasing/supply chain allocation, depreciation value of facilities, property tax equivalent of facilities, depreciation on equipment.⁷ While there is no stated industry average for an appropriate annual carrying cost and stores overhead cost, a potential concern for too high of an inventory level would be if the inventory carrying cost exceeded the collective value of all other stores overhead cost components.

⁶ <https://www.spglobal.com/marketintelligence/en/news-insights/research/average-u-s-electric-gas-roe-authorizations-in-h1-18-down-from-2017>

⁷ As the data is not readily available and would require too many stated assumptions, Baker Tilly did not compute the annual stores overhead cost.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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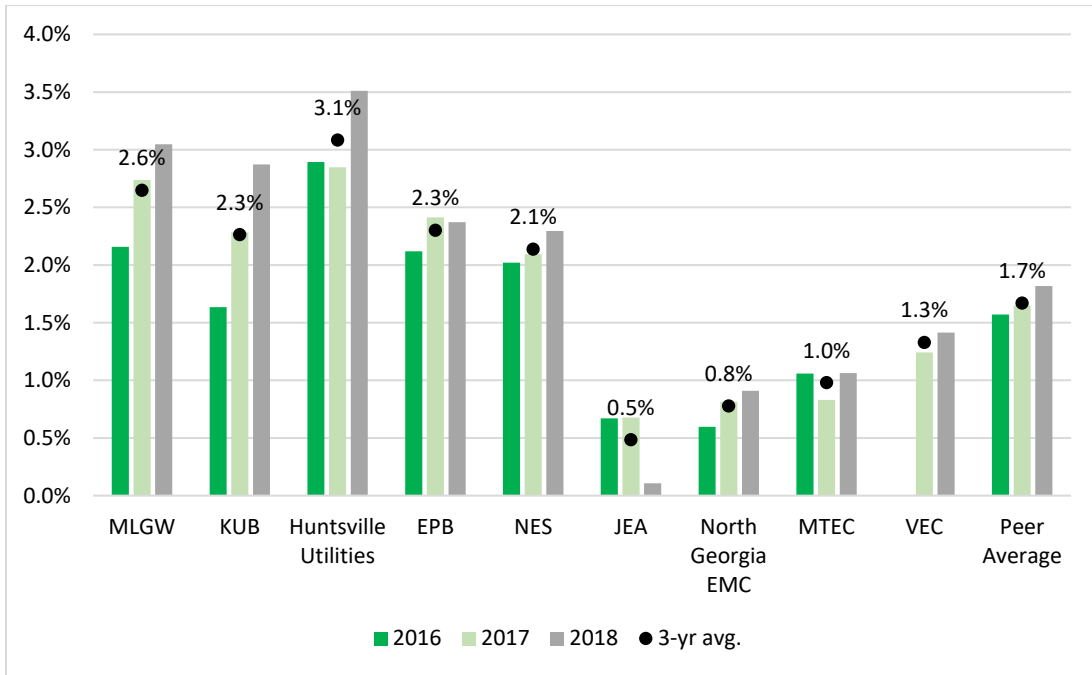
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To further illustrate the need for a detailed determination of inventory levels, Baker Tilly completed a review of Inventory to Net Plant in Service Ratios across multiple peer utilities, as described in the following sub-section.⁸

Inventory to Net Plant in Service Comparison:

One such metric that can be used for MLGW to reassess its inventory levels is the ratio between inventory balance to that of the net plant in service. The relationship between materials and supplies and that of net plant in-service is that once items have been removed from inventory and are either part of construction work in progress (CWIP) or placed in-service, then they contribute to a utility’s net capital asset value. It should be noted that some of the materials and supply inventory levels are dictated by utilities’ financial policies. For instance, IOUs generally have infrastructure cost recovery mechanisms approved from state public regulatory agencies that would allow for recovery and return on capital costs during CWIP that affects their financial policy on inventory/materials and supply balance. As such, any IOUs with such approved mechanisms were removed from this comparative analysis. Baker Tilly calculated the ratios for each utility division separately, given that these ratios may differ for certain utility services.

Figure 1 – Ratio of Electric Inventory Balance to Net Plant in Service



⁸ Noted exceptions: Volunteer Electric Cooperative’s (VEC) 2016 financial statements were not available, and thus only years 2017 and 2018 were included analysis. City Utilities of Springfield’s financial details were not broken out by utility service and thus not included in this analysis.

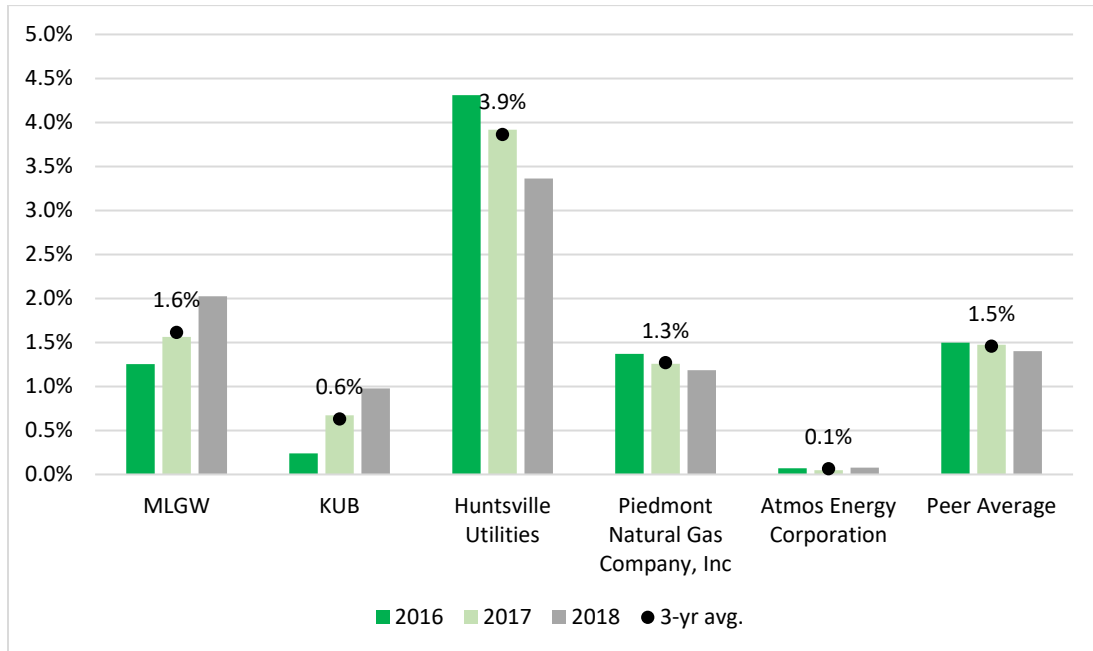
Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Figure 2 – Ratio of Gas Inventory Balance to Net Plant in Service⁹



⁹ While we included Huntsville Utilities' electric, gas, and water utility financials in this analysis, the overall capital expenditures for Huntsville was relatively low in years 2017 and 2018 and their overall long-term debt obligation for revenue bonds to finance capital projects was at a level far lower than other utilities.

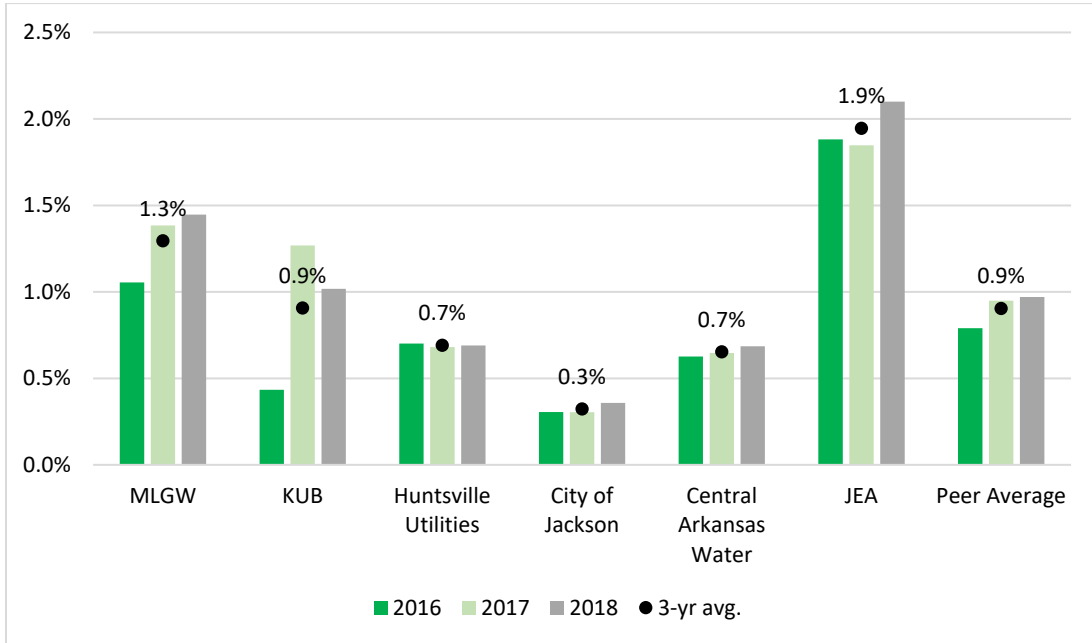
Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Figure 3 – Ratio of Water Inventory Balance to Net Plant in Service¹⁰



MLGW’s inventory balance levels relative to net plant in service across all utility divisions have been steadily increasing since year-end 2016. This may have a relationship to overall capital expenditures during the same time-frames as well.

Based on the peer utility comparison analysis alone, MLGW’s ratio of inventory to net plant in service balance is slightly higher than that of its peers for each of the three utility divisions. These values are simply meant to give MLGW an idea of the inventory balance levels that it may consider reducing to be at a similar level as its peers. It should be noted that the amount of asset additions/disposal activity in a single year can have a large impact on the overall plant in service value. In addition, the capital expenditure levels can also have an impact on the net plant in service value. While we tried to include that in the overall analysis, due to the timing considerations associated with capital spending and cost treatment (i.e., some capital projects may be multi-year and costs are not always capitalized based on actual construction progress completion), it was not possible to perform a direct comparative analysis.

Fiscal Impact: Potential to reduce inventory balance to a level that MLGW is comfortable for its operations, combined with various process improvements that would address gaps in the procurement, item requisition, and work order close-out processes.

Implementation Steps:

Baker Tilly recommends that MLGW implement the above-stated recommendations jointly as they are inter-related and would affect the overall inventory management life-cycle process. The following figure provides a summarized illustration of how implementing these changes in tandem could result in an overall reduced inventory balance.

¹⁰ Noted exceptions: JEA’s financial combine both water and wastewater utility funds and wastewater is affected by EPA and state-wide regulatory initiatives through the Florida Department of Environmental Production (PDEP) for pollutant discharge, which may have resulted in higher capital spending for wastewater treatment facilities compared to water. Nashville Metro Water Service’s (water) financial statements does not separate out its water capital assets from overall assets and thus was not included.

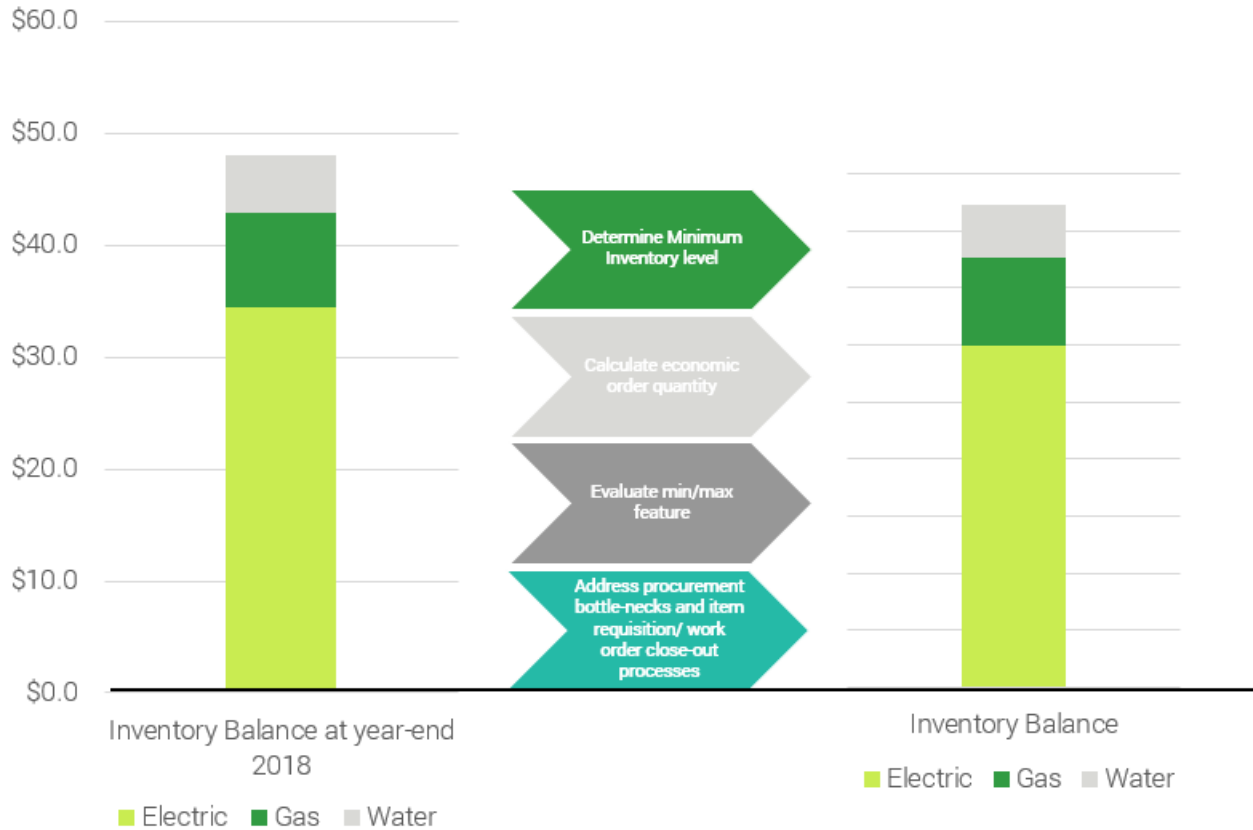
Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Figure 4 – Illustration of Inventory Recommendations/Implementation Steps



Baker Tilly Recommended Implementation Time Frame:

- Less than 6 months

Priority: High

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Fleet Management

Impact Areas:



Baker Tilly Observations:

Throughout interviews, Baker Tilly made the following observations that are areas of improvement to streamline Fleet Management at MLGW:

- **Observation 1:** As indicated during our interviews, MLGW manages approximately 700+ vehicles (inclusive of the motor pool). There is an opportunity to assess the necessity of the vehicles, and if alternative transportation options are available (i.e., Mileage reimbursement vs. MLGW fleet).
- **Observation 2:** MLGW manages approximately 2,440 pieces of equipment and vehicles. Potential efficiencies are available through evaluation of the equipment usage hours or work order hours.
- **Observation 3:** Employees are not required to provide a business justification for the use of company vehicles through the motor pool. This potentially results in additional miles on vehicles that increase vehicle operating costs.
- **Observation 4:** There may be an opportunity for Fleet to save on vehicle sales. Currently, vehicles are only sold at public auction, which incurs related fees and generally is sold at lower prices.

Baker Tilly Recommendation:

In reference to Observations 1 and 3 – Baker Tilly completed an analysis to determine if MLGW would have a cost reduction by moving to mileage reimbursement rather than maintaining a motor pool it was determined that the mileage reimbursement costs would, in fact, be greater. With this understanding, MLGW should consider implementing strong policies and internal controls to ensure that the motor pool is being used most efficiently. This may include requiring employees to provide a business justification to ensure the efficient use of company vehicles and reduce mileage costs.

In reference to Observation 2, Baker Tilly completed a comparison of vehicles and equipment to the utilities that responded to the benchmarking survey and found that MLGW has a slightly higher ratio of equipment and vehicles to customers. We recommend that MLGW conduct a thorough analysis of fleet and vehicles as there are likely savings that could be realized through a reduction in vehicles and equipment.

In reference to Observation 4, MLGW may consider internal vehicle sales to employees, which would have the advantage of faster receipt of proceeds, higher residuals, and savings on auction and transportation fees.

Baker Tilly Recommendation Detail:

In order to analyze the costs associated with provided mileage reimbursement versus maintaining a motor pool, a population of 60 motor pool vehicles were analyzed; however this can be expanded to include a larger population of MLGW's motor vehicles and equipment.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

The analysis included calculating the total cost of maintaining a vehicle (not include the sale of a vehicle or asset depreciation or insurance coverage), and multiplying this by the amount of vehicles in the motor pool. Mileage reimbursement was then calculated using a GSA standard rate of \$0.55/mile. This analysis showed that MLGW would not benefit from providing mileage reimbursement rather than maintaining a motor pool. Since the costs associated with mileage reimbursement would be higher than MLGW is currently spending, it is recommended that MLGW implement stronger policies to effectively track the need for vehicle usage. MLGW is recommended to develop a standardized vehicle use request form which captures justification for using the vehicle, estimated time of use, and approval.

While Baker Tilly was not able to complete a comprehensive analysis of MLGW’s equipment usage hours, a high level benchmarking comparison is detailed below, which captures the combined number of vehicles and equipment at MLGW versus the comparable organizations. Since there may be slight discrepancies in how other utilities define their vehicles and equipment, such as the classification of a bucket truck, the total number of vehicles and equipment were combined in the table below. Additionally, the varying number of customers for each organization was leveled by determining the number of vehicles and equipment on a per 100 customers basis.

Table 11 – Number of Vehicles & Equipment by Customer Count

Organization ¹¹	# Customers ¹²	# of Vehicles & Equipment	Vehicles & Equipment/ 100 Customers
1 (E, G, W)	281,630	634	0.23
2 (E, G, W)	207,000	626	0.30
3 (E, G, W)	390,010	751	0.19
4 (E)	231,000	268	0.12
Average of Utilities:	277,410	570	0.21
MLGW	996,273	2,283¹³	0.23

Based on the data above, MLGW is slightly higher than its comparables in terms of the total average number of vehicles and equipment on a per customer count basis. Baker Tilly recommends that MLGW conduct a deeper dive analysis to understand any differences when looking at vehicles and equipment separately. This analysis can allow MLGW to determine if the organization can benefit from cost savings if there were a reduction in either fleet category.

Fiscal Impact:

- The fiscal impact of equipment usage and vehicle sales was not determined at this time but further analysis by MLGW would likely produce cost savings.
- A deeper dive analysis is needed to determine the amount of savings MLGW would benefit from if there were a reduction in the number of vehicles or equipment. Some of the factors this separate analysis would need to take into consideration include maintenance costs, vehicle depreciation, vehicle / equipment usage, etc.
- It would cost MLGW approximately \$30,166 more for the mileage reimbursement approach rather than maintaining a motor pool.

Implementation Steps:

¹¹ The services provided by each comparable organization are listed as follows: Electric (E), Gas (G), or Water (W).

¹² The number of customers represented in this table is a sum of the services provided by each comparable organization.

¹³ This total number can be further broken down for MLGW as follows: 847 vehicles, 1,436 equipment.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

- Develop and implement more internal controls for usage of the motor pool
- Evaluate the hours of usage for equipment to determine if there are additional cost savings available if MLGW rented equipment based on need
- Explore advantages and disadvantages to conducting internal vehicle sales for MLGW

Baker Tilly Recommended Implementation Time Frame:

- Less than 6 months

Priority: **Medium**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Workers' Compensation

Impact Areas:



Baker Tilly Observations:

Baker Tilly noted the following observations related to Workers' Compensation, which can provide MLGW with opportunities to streamline processes and reduce costs:

- **Observation 1:** The claims team uses the Applicant Tracking System (ATS) system and a third party administrator to track all workers' compensation claims. If they notice trends in the claims that come through, the General Counsel will notify the Corporate Safety Director or the corresponding Vice President of the team member. In addition to the third party administrator, the Corporate Safety Unit is manually tracking claims data for Occupational Safety and Health Administration (OSHA) reporting. There is an opportunity to formalize the analysis of the worker's comp claims to better streamline processes, identify trends and implement potential cost-saving measures.
- **Observation 2:** There may be an opportunity to reduce workers' compensation costs through a reduction in the volume of claims and the review of employee classifications.

Baker Tilly Recommendation:

MLGW should remove the redundancy of tasks between the Workers' Compensation Department and Safety department so staff can spend this time and effort on developing trainings, making equipment modifications, etc. to prevent common types of injuries, and ultimately reduce the costs associated with workers' compensation claims. Additionally, MLGW should explore tools to enhance the data collection and reporting of workers' compensation data to make more informed data-driven decisions long term.

Baker Tilly Recommendation Detail:

Baker Tilly identified an area of redundancy around the documentation of workers' compensation claims. It was determined through interviews that both the Safety Department, as well as Workers' Compensation (through the third-party administrator) are spending time and effort to document claims for their own reporting. The database maintained by the third-party administrator captures similar information to the data that is manually tracked by Safety in order to comply with OSHA reporting. This gap between the two departments is leading to a redundancy of tasks and an extra manual burden on staff for similar outcomes. This gap in communication between departments has also limited the organization from creating more informed and data-driven Safety trainings which can ultimately reduce the costs of claims through prevention. MLGW should work on breaking these siloes and enhancing the collaboration between the two departments so staff are relieved of duplicate work and can focus their time on other areas.

While claims data is being captured by a third-party administrator, MLGW can better formalize the analysis of workers' comp claims to better inform the organization on how to prevent these types of injuries, and thus reduce the cost of claims long-term. Currently, an actuarial report is being developed using this data to examine self-insured workers and estimate unpaid loss and allocated loss adjustment expenses. Moving forward, in addition to this report, MLGW should explore other tools to enhance the consolidation and reporting of trend data to better identify cost-saving measures.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Using the data provided by MLGW’s third-party administrator, it was determined that the most common nature of injury for claims are strains (indicated by code 52). The total incurred amount for claims related to strains is approximately \$719k, and the total paid amount is approximately \$683k. If MLGW were to reduce the claims related to strains by at least 5 – 10%, it could in a cost reduction of \$34k - \$68k.

Fiscal Impact: A 5 – 10% reduction in the most common area of claims (strains) could yield cost savings of approximately \$34k - \$68k.

Implementation Steps:

- Identify areas of redundancy between Workers’ Compensation and Safety and determine roles and responsibilities for both departments.
- Explore data reporting tools to create trend data which can better inform Safety trainings

Baker Tilly Recommended Implementation Time Frame:

- Remove redundancy of tasks and explore tools for reporting trend data within six (6) months to eighteen (18) months.

Priority: **Medium**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

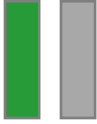
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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Technology Planning

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** There is no formal IT strategy or strategic planning process for technology, and IT projects or initiatives are not always prioritized to focus on the most value-added for the organization. It was also noted that some IT projects are scrapped mid-project to focus on other initiatives, which results in wasted time and resources.
- **Observation 2:** There is not a formal process in place to provide oversight of all IT projects and activities, nor is there a consistent process for initiation, review, approval, and prioritization of new project requests.

Baker Tilly Recommendation:

Develop a formal IT strategy and a portfolio management process for IT project prioritization and oversight.

Baker Tilly Recommendation Detail:

MLGW should define, document, and communicate an IT strategy and IT strategic planning process. The goal is to develop and fully integrate IT strategies and objectives in alignment and support of the entity-wide strategies and objectives of MLGW. Key components of this process include the following:

- Gain an understanding of MLGW's entity-wide strategy and identify how IT can best support the strategy.
- Based on the above, identify specific objectives, confirm with stakeholder departments that these IT objectives align with the organization's strategy, and prioritize objectives.
- Formally document objectives and related responsibilities, and communicate IT strategy internally and across the organization.
- Proactively assess and continually monitor how IT activities and responsibilities align with IT strategic objectives. To do this, critical success factors, along with key performance indicators (KPIs), should be identified and used to track and measure progress against the plan.

In addition, a formal project portfolio management process should be implemented to provide oversight of all IT projects and initiatives. The creation of a portfolio management process includes establishing an IT steering committee to oversee projects and ensure risks are managed, creating a formal project request and approval process, developing a strategy for prioritization of IT initiatives and projects, and monitoring project progress. Portfolio management is essentially an organized methodology to prioritize, track and measure the success of multiple projects running concurrently.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

A sustainable portfolio management flow should be defined with clear inputs and outputs established and developed for each of the following phases:

1. Idea Generation
2. Idea Evaluation
3. Prioritization
4. Scheduling
5. Delivery
6. Benefits Realization

An IT steering committee, led by IT, should be established to include individuals from both within IT and key stakeholder representation across the organization to provide governance for the portfolio management process. MLGW should consider including a non-IT representative from each department. Including members outside of IT allows for a cross-functional understanding of current IT projects, resource constraints, priorities and a more holistic view of the organization as a whole. The committee would be responsible for reviewing and approving new IT related project proposals, tracking projects in process and confirming that projects have met their intended objectives prior to closure.

Key components of a portfolio management process include the following:

- Project authorization, tracking and closure will be centralized through the IT steering committee.
- All IT project requests will go through a formal request process and must be evaluated and approved by the IT steering committee.
- The IT steering committee will define a strategy/methodology for the prioritization of IT projects.
- Project requests submitted through a standard form, to include a business case requirement.
- Projects must be prioritized and aligned with budget and resource availability prior to being started.

Key benefits resulting from a formal IT portfolio management process and IT steering committee include:

- Prioritization of IT investments that are most valuable and beneficial to the organization as a whole
- Risk management oversight for IT projects and initiatives
- Standardization and strategic alignment of IT investments

Fiscal Impact: Opportunities to better align IT investments with MLGW strategic priorities for strategically informed spending and avoid wasted costs and resources on unnecessary and imprudent IT investments.

Implementation Steps:

- IT Strategy
 - Refer to key components of the IT strategic planning process identified above
- IT Portfolio Management
 - Establish an IT steering committee
 - Develop and define the portfolio management process
 - Define strategy for prioritizing IT projects
 - Develop a formal IT project request process
 - Develop IT project portfolio

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

- Implement and communicate IT portfolio management process and requirements to the organization

Baker Tilly Recommended Implementation Time Frame:

- IT Strategic Planning – Less than 6 months
- IT Portfolio Management – More than 18 months

Priority: High

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

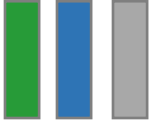
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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Technology - IT Operations

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** MLGW’s Information Services (IT) department almost exclusively maintains on-premises data storage. This creates a risk of data loss in the event of a disaster impacting MLGW’s data centers, which are all located in the Memphis regional area.
- **Observation 2:** There are several system issues and processes which are not designed to leverage system use that create inefficiencies at MLGW. For example:
 - There are approximately 600 change requests for Oracle functionality, which has resulted in inefficient work-arounds, a lack of accurate data in some areas, and overall dissatisfaction with the system, which is a key driver of low system use even when issues are resolved.
 - Corporate Safety is unable to use Oracle to track PPE assigned to employees and the required testing dates for that PPE. This is being tracked manually, which requires approximately 24 hours of work per week each for three employees.
 - Lack of integration between CIS and Oracle and poor processes and collaboration between working groups result in several inefficiencies in customer service turn-ons. Three examples notated were that 1) The meter technicians may get a service order to turn on service at a property that is still under construction and CCC staff are not aware of/don't check the status of the construction work order prior to generating the service order 2) For inspections that CRE receives from code enforcement that have not been vacant for more than 365 days, CRE flags the account for inspection so that service can be turned back on but there may actually be issues at the property that prevent service from being turned on 3) customers knowingly/unknowingly are routed to the trouble crew after hours who will respond to turn on service when service should not actually be turned on at the property.

Baker Tilly Recommendation:

1. Baker Tilly recommends MLGW consider the use of cloud-based storage solutions to reduce the risk of data loss and the opportunity to reduce operating costs related to on-premises storage management.
2. MLGW must prioritize remediating the open Oracle issues and must leverage other supporting systems and establishing integration where possible and necessary.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Baker Tilly Recommendation Detail:

Cloud Based Storage

For the purposes of disaster recovery planning, it would be prudent for MLGW to consider utilizing cloud-based storage solutions so that data is backed up in a remote location and can be retrieved at any time. Cloud solutions provide more flexibility for disaster recovery purposes by allowing various options for backup, storage, and restoration and are relatively low cost. Beyond disaster recovery planning, there is also an opportunity to reduce current operating costs by transitioning certain data to the cloud. There are significant costs MLGW incurs for on-premises storage management such as hardware and software costs, maintenance costs, facilities operations costs, and labor costs. Cloud solutions can reduce or eliminate these costs, and allows for more scalability to the organization's data storage needs over time versus requiring additional capital for hardware and increased operating costs when more storage is needed.

As a government entity, MLGW has public and confidential data with varying levels of criticality to operations. MLGW will need to balance opportunities for disaster recovery strengthening and cost savings related to moving data to the cloud with data security concerns to determine what type of information the organization is comfortable with moving to the cloud and/or what level or type of services will be needed. MLGW should identify and define the data which will be (1) transitioned to the cloud, (2) backed up in the cloud, or (3) maintained on-premises only.

In order to do so, MLGW will need to develop and implement a data classification process. Data classification consists of categorizing stored data based on sensitivity and criticality to operations in order to manage data in a way that aligns with its value to the organization. This process will require MLGW to conduct a risk assessment on data across the organization, classify data, identify where data resides and identify the data owners. From the perspective of cloud computing, having classified data will allow for better decision making regarding which data to put in the cloud and the type and level of cloud services to be used per data type.

When moving forward with cloud services, MLGW should ensure terms in service agreements and service level agreements (SLAs), especially as it relates to availability and uptime, align with data classifications and data needs. MLGW will also want to ensure proper controls are in place by the service provider and any subservice organizations (through review of Service Organization Controls (SOC) report) to mitigate the key risks related to data storage including loss of confidentiality, loss of integrity, and loss of availability.

MLGW should also implement controls on their end to further mitigate against these risks. Benchmarking research with other utilities indicated that most respondents (three out of four) maintain both on-premises and cloud storage, and those with cloud storage have implemented controls around data security including encryption of data, restricted access, restricted entry points (internal corporate networks), SIEM solution for monitoring access and anomalies, two-factor authentication, file sharing restrictions, and data storage restrictions. Those benchmarking responses are presented below.

Table 12 – Cloud Benchmarking Responses

Comparable Entity	How does your organization maintain server storage (on-site), cloud-based, etc.?	(If cloud-based), what high-level controls do you have in place to maintain the data security of your cloud-based storage solution?
1	Mixed. On-premise storage for most needs. Cloud storage for specific data types based upon business needs as well as end-user productivity solutions.	Ensure locality of data: ensure locality of data and restrict access to US citizens with screening. Restrict entry points: strong preference for internal corporate networks. SIEM Solution: monitors access and detect anomalies.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Comparable Entity	How does your organization maintain server storage (on-site), cloud-based, etc.?	(If cloud-based), what high-level controls do you have in place to maintain the data security of your cloud-based storage solution?
2	Mixed: On-premise storage (storage arrays) for most needs. Microsoft Office 365 One Drive for some needs.	Restrictions on the types of data that can be stored. Prohibit file sharing with external users. 2-factor authentication. Prohibit local copies outside of the corporate network.
3	Mixed: On-premise data stored and replicated in two separate data centers. Cloud for data repositories approved by IT management.	Data encrypted in flight and at rest
4	On-premise	N/A

For additional guidance and best practices related to cloud computing, refer to the National Institute of Standards and Technology (NIST) publications NIST SP 800-145 and 800-146.

System Improvements

As part of the strategy outlined in the Technology Planning section, MLGW should prioritize remediation of the open Oracle issues. This may mean investing in additional vendor support and the recruitment and retention of in-house IT personnel to personnel to devote to the effort. If any new positions are hired, we recommend hiring temporary positions as additional support will no longer be needed after issues have been remediated. This temporary investment will improve long term efficiencies and enable MLGW to reduce total labor hours and potential personnel levels. For two of the examples identified in the observations section, Baker Tilly quantified potential cost savings. Although minimal, it is important to note that this is just the quantification for two of the potentially hundreds of system improvements which would result in cost savings.

- *PPE tracking:* MLGW is spending approximately \$57,000 annually to manually track PPE information, including which employee the equipment is assigned to and what the testing date is. The analysis included multiplying the estimated annual hours spent by three employees by their fully-loaded salary.
- *Service Orders:* When meter technicians receive a service order to turn on service at a property which is still under construction, they waste labor hours responding to the service order. Based on the average time of responding to these work orders, and the labor rate for the individuals who are responding, this costs MLGW approximately \$2,600 in labor hours annually. There are additional costs associated with this system issue/deficiency that is associated with crews responding to turn service on at locations where inspections have not been performed as service cannot be established and for trouble crews who respond after hours to turn on service for a customer where they have been turned off for non-payment or where service cannot yet be established due to construction or another issue.

Fiscal Impact: Cost savings for cloud based storage cannot be determined at this time as it will be dependent on various factors such as the amount of data to be transitioned to the cloud versus maintained on-premises, the specific type of services to be procured for various types of data, and cloud service provider and related fees, among others.

Cost savings for system issues cannot be fully quantified due to the amount of potential improvements. Cost savings for the two examples identified represent nearly \$60,000 in soft savings for labor hours.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Implementation Steps:

Cloud Based Storage

- Perform a risk assessment and formally define and classify data based on sensitivity and business impact.
- Determine and develop a cloud transition plan for the various data types, including a plan for migrating and interacting with data that will be in the cloud.
- Thoroughly review the service agreement and SLA terms with the cloud service provider to align with data classifications and needs.
- Ensure key controls are in place and operating effectively both for the cloud service provider and within MLGW to mitigate the risks of data integrity, confidentiality, and availability.

System Improvements

- Work with IT to estimate the investment required to fast-track remediation of Oracle improvements.
- Prioritize system integrations and remediation of issues in non-Oracle systems.

Baker Tilly Recommended Implementation Time Frame:

- More than 18 months

Priority: **High**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Collaboration & Communication

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** A trend identified throughout multiple interviews was that MLGW can improve upon their current ways of collaborating and communicating within and across departments. Part of the gap stems from the recent reorganization and having employees in new roles. The staff has indicated that it has taken time to understand their new role and how the changes affect interactions with customers.

In terms of communication, MLGW needs to have a general understanding of how upstream decisions have downstream effects. One example of a disconnect in communication is between Engineering Design and Construction, when C&M crew have been using S2 pedestals instead of S1, because they are easier to wire. However, S2 pedestals require larger meters, so meters were installed that were larger than needed, some of which were not smart meters.

Another example identified through an interview is when facilities was not notified when final approval is made for new budgeted positions, which makes internal management of office materials difficult. This often results in introducing new projects (such as building a new office space), which is not originally anticipated in the facilities budget.

Baker Tilly Recommendation:

Develop a tone at the top to cultivate a culture of collaboration and communication at MLGW, and affirm this cultural change through developing relationships between department heads and identifying areas where processes can be streamlined to improve the customer experience. Management should identify ways to communicate the larger picture to staff, and how their job functions align with the larger customer experience to help staff understand how their decisions can have multiple downstream effects.

Baker Tilly Recommendation Detail:

Management should assess and identify areas in which the customer experience can be enhanced and streamlined, and identify all the stakeholders / departments that are involved in order to better streamline these processes. Developing relationships among department heads can also have a significant influence on how departments collaborate and can foster a sense of collective responsibility for MLGW's success.

MLGW should identify specific roles, responsibilities, and department functions within the organization to streamline processes and reduce any areas of overlap. For budgeting related processes, key stakeholders should be identified and included in communications to prevent unexpected changes and budgetary impacts.

Trainings can provide support to staff in better understanding of the larger organization and the impact of their decisions on a day-to-day basis. Through training and opening up more channels for communication, staff should be able to resolve inconsistencies and identify gaps, such as the scenario with the S2 pedestal.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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In summary, focusing on a culture of collaboration and communication within MLGW can help resolve some of the communication gaps and create a more effective work environment. By identifying areas where departments can work together, MLGW can provide customers with a streamlined “one company” experience.

Fiscal Impact: Not determined at this time.

Implementation Steps:

- Develop a strategy for improving collaboration and communication from the top
- Assess areas in which the customer experience can be more streamlined through the collaboration of multiple departments at MLGW. Identify these departments and gather department heads to clarify roles, responsibilities, and formalized department agreements.
- Formalize agreements between departments involved in similar processes and train staff on their roles, responsibilities, and the impact of their day-to-day functions.
- Create effective communication channels to obtain feedback and improve processes as needed

Baker Tilly Recommended Implementation Time Frame:

- Complete strategy and approach for creating a culture of collaboration within six (6) to 18 months.

Priority: **Medium**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

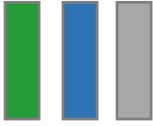
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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Human Capital Management

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** Interviewees noted that there is a significant skill/knowledge gap between many supervisor to manager levels and that this gap is one of the highest risks for the organization's workforce planning. Additionally, interviewees indicated that a high percentage of MLGW's workforce is or will soon be eligible for retirement.
- **Observation 2:** Baker Tilly identified that there is an opportunity to conduct job evaluations more efficiently. Currently, People Services staff are not just obtaining descriptions and job responsibilities for a given role from the employee and getting approval from supervisors, but are also spending time shadowing jobs anywhere from a day to a full week for a given position. Additionally, job descriptions can take up to six months to update according to interviews, lengthening the overall hiring process. Job descriptions are updated ad hoc without regular review due to a lack of capacity.
- **Observation 3:** People Services leadership and staff noted that compensation was not competitive and that salary creep restricts the organization's ability to provide salary increases. People Services leadership and staff were also not aware of when the last compensation analysis was conducted. Compensation that is misaligned with the market can result in poor retention of employees and difficulty in recruiting for specialty positions. Currently, compensation is not regularly measured against peers. This hinders the organization's ability to complete its mission and can also lead to long "vacancy floats" and high employee turnover which can have significant cost impacts on the organization. Additionally, MLGW does not have a strategic compensation philosophy to know whether to lead, meet or lag the market and how benefits levels effect a total compensation philosophy. Finally. Upon review of MLGW's total benefits rate (36.2% of salary), we found this to be inline with industry standards.

Baker Tilly Recommendation:

MLGW should conduct a skills gap assessment throughout the organization to better inform and gather an understanding of all of the skills that are necessary for each function in a given department. These skills should be evaluated for high, medium, and low criticality. Current job descriptions and surveys will be valuable for this exercise. MLGW should then identify the proficiency of each employee for each skill to gain an understanding of where a department is at risk for knowledge loss and where cross-training opportunities can occur.

For observations 2 and 3 related to human capital management, MLGW should conduct a classification and compensation study which includes job description development within scope. Benefits from regularly conducting classification and compensation studies can include: ensuring alignment with market opportunities, updating job descriptions and simplifying the classification structure, and identifying clear paths for career progression. This study should factor in benefits levels as part of a total compensation strategy.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Baker Tilly Recommendation Detail:

In order to carry out a successful skills gap assessment, Baker Tilly recommends the following detailed approach:

1. Determine Functions and Skills

- a. Meet with departmental leadership to determine the high-level functions of the department
- b. Meet with middle management of the department to determine the necessary skills for each function
 - i. Reference job descriptions for individual skills (while they may not be aligned to high-level functions)
- c. Identify criticality for each skill (high, medium, low)

2. Skills Rating

- a. Managers review functions/skills and rate themselves and their employees on a 0-4 scale (see legend for rating definitions)
 - i. Reiterate that this is not a performance rating (a high performer with low tenure may lack skills/expertise, whereas an employee with functional expertise may still be a low performer)

3. Calibration

- a. Managers meet for a calibration session to review employee ratings and ensure skill ratings are consistent
- b. Departmental leadership reviews and calibrates manager ratings as necessary

4. Analysis and Recommendation

- a. Calculate the averages for each skill, function, employee and team (if applicable)
- b. Analyze the skills that have the lowest average rating
- c. Determine the criticality of low-rated skills
- d. Identify skill deficiencies by function, employee and/or team
- e. Complete recommendations for cross-training and hiring based on skill gaps and criticality

The following Skills Matrix can be used as an example of a skills gap assessment tool:

Legend

- 0 Cannot perform this skill/is not familiar with this skill
- 1 Can perform this skill, regularly needing assistance
- 2 Can perform this skill, occasionally needing assistance
- 3 Is proficient in this skill, rarely needing assistance
- 4 Is proficient in this skill and can train others in this skill

	Function 1			Function 2			Function 3			Employee Average	Team Average
	Skill 1	Skill 2	Skill 3	Skill 1	Skill 2	Skill 3	Skill 1	Skill 2	Skill 3		
Criticality	HIGH	MED	LOW	HIGH	HIGH	MED	LOW	HIGH	LOW		
Employee 1	3	2	3	3	4	3	0	1	1	2	
Employee 2	2	2	1	2	3	2	1	1	0	2	
Team 1 Employee 3	1	1	2	4	4	4	4	4	4	3	2
Employee 4	0	0	0	2	2	2	1	1	1	1	
Team 2 Employee 5	2	3	3	3	3	2	1	2	2	2	
Employee 6	3	3	2	3	3	3	2	1	2	2	2
Employee 7	2	3	2	3	4	3	1	1	1	2	
Employee 8	1	1	1	2	3	3	0	0	0	1	
Team 3 Employee 9	3	2	3	3	3	3	1	2	2	2	2
Skill Average	2	2	2	3	3	3	1	1	1		
Function Average	2			3			1				

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As it relates to performance management, due to the size and complexity of the organization, MLGW currently has over 800 job descriptions that require additional work and a burden on staff to update and maintain. Having a lengthy process to update job positions can result in confusion for staff on their assigned duties and responsibilities and wasted time that can be spent on meaningful tasks that can benefit the organization.

There is an opportunity for MLGW to regularly update job descriptions to accurately reflect duties, knowledge, and skills, regularly measure against peers and determine a market strategy for compensation. This action should be informed through a classification and compensation study, which will provide MLGW with a direction on determining the appropriate classification and minimum qualifications needed for positions across the organization. By creating a robust and standardized structure, People Services can better focus their time and effort on verifying job descriptions with supervisors, rather than taking on a burdensome six-month process to fully understand the role and responsibilities of each position.

Fiscal Impact: Not determined at this time.

Implementation Steps:

- Determine functions and critical skills across the organization and rate employees on each of the skills
- Calibrate the skills rating and identify gaps/opportunities for training
- Develop an organizational compensation philosophy designed to meet, lag or lead the market with exceptions for niche/difficult to recruit positions
- Acquire a third-party vendor to conduct a classification and compensation study for the organization and update job descriptions

Baker Tilly Recommended Implementation Time Frame:

- Complete skills gap assessment and the classification and compensation study should be completed within six (6) months to eighteen (18) months.

Priority: **Medium**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

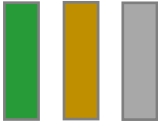
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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Customer Care Policy

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** Multiple interviewees indicated that the customer care policy may be more lenient than the industry norm, resulting in reduced revenue recovery. In Baker Tilly’s review of MLGW’s customer care policy, we found it to be overly complex and to be more favorable to customers than the standard policy. Interviewees also indicated anecdotally that the customer billing system cannot handle the complexity of MLGW’s customer care policy, leading to inaccuracy in customer account balances and the need to employ additional staff in order to counsel customers on payment options.

Baker Tilly Recommendation:

MLGW should simplify the customer care policy and update it to align more closely with industry standards. Streamlining and updating the customer care policy can have the following benefits:

- Enable the customer billing system to be programmed to reflect MLGW’s payment plan, customer classification and deposit rules to ensure that an accurate customer balance is always reflected;
- Reduce the need for one-on-one customer counseling on payment plan options which would enable a reduction in community service centers, and reductions in staff;
- Potentially increase revenue recovery.

Recommendations on specific updates are included within the recommendation details.

Baker Tilly Recommendation Detail:

Baker Tilly reviewed available billing and customer service policies for the following entities while researching this recommendation:

- Alabama Power
- American Water Company
- Atlanta Gas Light
- Atmos Energy
- CenterPoint Energy Arkansas
- Central Arkansas Water
- Chattanooga Gas Company
- City of Jackson, MS
- City Utilities (Springfield, MO)
- Electric Power Board of Chattanooga
- Entergy Arkansas
- Entergy Mississippi
- Georgia Power
- Huntsville Utilities
- Jacksonville Energy
- Knoxville Utilities
- Metro Water Service
- Middle Tennessee Electric Cooperative
- Nashville Electric Service
- North Georgia EMC
- Piedmont Natural Gas Company
- TECO Energy
- Volunteer Electric Cooperative

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Table 14, below provides a very high level summary of the comparable research and Baker Tilly’s associated recommendations. [Appendix B](#) contains detail for each comparable entity researched. Baker Tilly’s review and recommendations are based on policies for residential customers.

Table 13 – Overview of Comparable Residential Customer Billing Policies

Deposits	
MLGW Customer Care Policy	<p>Deposits are required and based on a credit score and an MLGW defined credit rating (A, B, C rated customer). A-rated customers are not required to pay a deposit. B rated customers are required to pay a \$200 deposit and a residential customer who has exhibited utility tampering/diversion is required to pay a \$400 deposit with \$100 due immediately. Deposits may be paid in installments.</p> <p>Deposits will be refunded within 30 days if a customer meets 9 requirements indicated in the customer care policy. Otherwise, the deposit will be refunded when the customer terminates services.</p> <p>Deposit requirements are waived in the following circumstances:</p> <ul style="list-style-type: none"> - > 60 years or receiving disability from the social security administration (SSA) - Letter of reference from another utility within 12 months - Good credit history for 24 months and then reconnects service within 12 months under the same name - Customers with a deposit on another account with 24 months of good credit history; only one additional account allowed
Summary of Comparables	<p>The majority of the comparables use a credit score for new customers and a credit score and payment history for existing customers setting up new accounts.</p> <p>MLGW issues refunds for deposits after 30 days; the majority of the comparables issue refunds after at least 12 months or upon the termination of service.</p> <p>Deposit amounts are in line with available comparable information.</p>
Baker Tilly Recommendation	<p>MLGW should consider simplifying the deposit requirements by checking credit ratings and reviewing customer payment history for the past 24 months. Deposits should be required for customers who fall below the credit rating threshold and who have had a history of delinquent payment or utility tampering within 24 months.</p> <p>MLGW should simplify the deposit refund policy by issuing deposit refunds at the termination of services and after all outstanding charges have been applied.</p>
Late Fees	
MLGW Customer Care Policy	<p>5% late fee issued on 13th day past due</p> <p>Late fee allowance - MLGW will waive the difference between the net amount and gross amount of the bill after the net date expires.</p>
Summary of Comparables	<p>Late fees were in line with MLGW late fees and the majority of late fees were 5% with the next most common assessment of 1.5%</p> <p>No other policies reviewed had a late fee allowance.</p>
Baker Tilly Recommendation	<p>MLGW should maintain late fee assessments of 5%.</p> <p>MLGW should consider removing the late fee allowance from the customer care policy.</p>

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Payment Arrangements	
MLGW Customer Care Policy	<p>-Traditional Payment Arrangement - extension of due date based on balance, % of cutoff notice amount</p> <p>-Extended Due Date Payment - due date is extended to cut off date</p> <p>-Second Payment Arrangement - customers pay 50% of the balance on their first payment arrangement, then the remaining balance is due 2 days before the due date of the next bill. Documentation of hardship can result in approval of a second payment arrangement without payment on the 1st payment arrangement</p> <p>-Deferred Payment Plan - Must meet eligibility requirements. Must pay 25% of the total amount due upon entry. Amounts from \$500-\$2,500 can be paid over a 10-month installment period with monthly payments not exceeding \$199.99.</p>
Summary of Comparables	The majority of comparables had a single payment plan option which consisted of an extension on the due date and an installment plan.
Baker Tilly Recommendation	MLGW should simplify the available payment plan options by offering a single payment plan which allows for one 30-day extension, with a percentage of the current amount due at the end of the 30-day extension before the payment plan can be activated.
Other	
MLGW Customer Care Policy	<p>Net Due Date Program: available for retired / fixed income customers. These individuals can request a due date change to align with their check.</p> <p>Budget Billing: MLGW analyzes customer's previous year's total usage, adjusts for rate changes and weather conditions, and divides the total into twelve monthly installments.</p> <p>OnTrack: The program provides energy and financial information to customers in need of help.</p>
Summary of Comparables	Most comparables offered an option for levelized / budget billing.
Baker Tilly Recommendation	MLGW should maintain the budget billing program.

Fiscal Impact: Implementation could result or contribute to cost savings for reduced staffing levels because of decreased labor effort in managing and tracking customer payment plans and customer ratings. Revenue enhancement could be realized for payment recovery through deposits that are held longer than 30-days for customers that become delinquent.

Implementation Steps:

- Form a steering committee of MLGW leadership and customer care leadership to finalize strategy for revision of the customer care policy.
- Work with IT to make any required updates to formulas and workflows within the customer billing system.
- Create a detailed communication plan to communicate policy changes internally and to customers.
- Train customer service staff on the updated customer care policy.
- Communicate policy changes to the public several months before implementation.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Baker Tilly Recommended Implementation Time Frame:

- 6 – 18 months

Priority: **High**

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Customer Engineering

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** Beyond known connection/service-related charges (i.e. schedule of charges) and contributions in aid of construction (CIAC), there are instances when the Commercial and Residential Engineering (CRE) teams are performing additional design functions on behalf of the developers/ customers in which costs (i.e., labor, materials, equipment) may not be fully recouped when they could have been charged. Upon reviewing the schedule of charges (SOC) calculation workbooks, it would appear that MLGW is including estimated labor, materials, and equipment and additional loaders (i.e., administrative and general, market changes and contingencies) to recover costs for service-related requests and some design services. However, the Land & Mapping Team is not charging customers for (1) public records requests (i.e., map/data requests, address certificates, address changes) and (2) the CRE team is not charging for customer redesign fees. While there is a standard “redesign fee” on a per lot basis for electric, gas, and water residential subdivisions, it does not appear that MLGW charges developers/customers when they make these requests for redesign to MLGW.
- **Observation 2:** Currently, the Builder Services team spends a significant amount of time taking calls from developers/customers for applications/requests associated with new construction installations. This places a burden on the team to gather critical data fields that would have a large bearing on the potential revenue credit calculation. While there is an online portal for new customer service applications¹⁴, there does not exist a similar online portal page for construction services or an option to obtain application forms online. There may be an opportunity for long-term cost savings by expediting the review process.

Baker Tilly Recommendation:

- MLGW should consider charging for both public records requests and customer redesign fees. This would allow the Land & Mapping teams to CRE teams to better recoup the costs for services that in the past has not been recovered from developers/customers.
- Regarding Builder Services’ current issue with a large volume of phone calls, MLGW should consider developing an online new construction application portal that would help automate the intake of construction services application data instead of based solely on the “call center.” While there would be a cost to develop this application portal, this would alleviate some of the burden placed on the Builder Services team to field calls and gather critical data. By using an online application portal, the Builder Services team and members of the CRE teams can also directly access and review the construction applications. In addition, this would require the customers/developers agreeing to MLGW’s stated terms and conditions.

Baker Tilly Recommendation Detail:

Based on data provided by MLGW, Baker Tilly was able to quantify the total potential annual revenues for charging for public records requests and customer redesign fees.

¹⁴ <https://service.mlgw.org/serviceforms/start.php>

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Fiscal Impact: Potential annual increase of \$53,089 annually broken down by: (1) public service requests of \$23,061 and (2) redesign fees of \$30,028.¹⁵

Implementation Steps:

- For both public service requests and redesign fees, MLGW should determine a way to charge these fees to existing customers. In the case of non-existing customers or developers, MLGW should develop a payment intake process to require payment for these services prior to continuing providing services.
- In addition, MLGW should develop standardized redesign fees for all the various types of work orders that were received based on 2018-2019. These include redesign charges for general power service, relocation at customer's request, JT, etc.
- Related to construction service applications, MLGW should develop an online application portal to automate the intake of information for the request of construction services. Examples of other utilities' application websites include:
 - <https://www.tep.com/construction-applications/>
 - <https://lge-ku.com/business/lge-builderdeveloper-relations>
 - <https://www.nipsco.com/partner-with-us/builders-and-developers/builder-request-form>

Baker Tilly Recommended Implementation Time Frame:

- 6 – 18 months.

Priority: **Medium**

¹⁵ The estimate of redesign fees is estimated based on an annual average of occurrences between 2018 and 2019 work orders; 2019 was pro-rated to be a full-year figure. The estimate is very conservative because many work orders for redesign fees were not listed in the 2017 SOC calculation workbook and thus an average was utilized based on existing charges.

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Community Offices

Impact Areas:



Baker Tilly Observations:

- **Observation 1:** MLGW currently has five community offices with varying traffic flows and usage by customers. In comparison, peer utilities with similar geographical boundaries typically have one or two community offices. With the option for customers to pay remotely or at authorized paying agents, MLGW is incurring significant overhead expenses in order to maintain five community offices. MLGW is incurring the cost of supervisors, staff, security, equipment, materials, building expenses and more without the number of customers to justify these expenses.
- **Observation 2:** Community offices operate at an inconsistent level of efficiency across locations. When considering the number of staff that exist at each community office and the number of customers each community office serves, there is a large variation between the numbers of customers per staff member from location to location. Also, when considering the overhead costs for each community office, there is a large variation in the overhead cost per customer across locations.

Baker Tilly Recommendation:

Baker Tilly recommends closing at least one community office (CO) per year until only two community offices remain; Main CO and Lamar CO. Each closure of a community office would result in significant overhead cost savings, including fully-loaded labor, materials, equipment and more. Community office closures would also be beneficial as it would encourage customers to pay remotely, incurring less overhead costs.

In the first year, Baker Tilly recommends closing the Millington CO. The Millington CO has the second highest overhead cost per customer. The Main CO has the highest cost per customer, however, Baker Tilly recommends maintaining this community office due to its central location and proximity to the headquarters. Additionally, the Main CO processes the highest amount of credit counseling customers, which is a customer base less likely to switch to an online or telephone transaction, and this office has the capacity to absorb additional customers. The closure of Millington CO would result in at least \$540,000 of overhead savings.

In the second year, Baker Tilly recommends closing the North CO. The North CO is the second most inefficient office in terms of transactions per teller. It is also the third highest overhead cost per transaction after Millington and Main. The closure of North CO would result in at least about \$1,467,000 of overhead savings.

Lastly, Baker Tilly recommends closing the Whitehaven CO in the third year. Whitehaven CO processes almost 60,000 fewer transactions a year than North CO. The closure of Whitehaven would result in at least \$1,340,000 of overhead savings.

If MLGW notices that customers are migrating towards remote payments at high rates after community office closures, Baker Tilly recommends considering the closure of Lamar CO in the fourth year. Remote payments are preferable to in-person payments as remote payments are cheaper to administer, but Baker Tilly recognizes the need to have an in-person option for those who need additional assistance.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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Baker Tilly Recommendation Detail:

When considering the efficiency of each community office, Baker Tilly needed to understand the overhead costs, annual demand, and capacity at each community office. Baker Tilly also compared the number of community offices at other peer utilities.

Regarding the number of community offices at other peer utilities centered on a single city (excluding those peer utilities covering a broader region), Baker Tilly confirmed that most utilities have only one or two community offices. See the table below for details regarding the number of community offices for peer utilities. Note that only peer utilities similar in geographical were used in this analysis.

Table 14 – Community Offices for Peer Utilities

Peer Utility	# of COs
Gainesville Regional Utilities (E,G,W)	2
Knoxville Utilities Board (E,G,W)	2
Nashville Electric Service (E)	1
Nashville Metro Water Service (W)	1
Electric Power Board of Chattanooga (E)	3
Huntsville Utilities (E, G, W)	4
City Utilities (E, G)	1
Jacksonville Energy Authority (E, W)	1
City of Jackson, MS (W)	1
Average	2

In order to determine the efficiency and potential cost savings of each community office, Baker Tilly first calculated the overhead at each community office. MLGW provided the cost of equipment, labor, materials and other overhead costs for each community office. In addition, Baker Tilly allocated the cost of Tellers based on the assumption that tellers are staffed to each community office proportional to the community office's revenue. Baker Tilly also allocated the cost of other miscellaneous items such as contracted services, bank fees, armored car fees, and more. Lastly, Baker Tilly included the cost of 2.5 security personnel at each community office. The overhead for each community office can be found in the table below.

Table 15 – Overhead Costs per Community Office

CO	Total OH
Lamar	\$ 1,575,000
North	\$ 1,467,000
Whitehaven	\$ 1,340,000
Main	\$ 1,860,000
Millington	\$ 540,000
Total	\$6,782,000

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Baker Tilly then determined the demand of each community office based on the number of annual customers served, and the capacity of each community office based on the number of Credit Counselors and Tellers available. This detailed information is in the table below.

Table 16 – Demand and Capacity of Community Offices

CO	Annual Teller Transactions	Annual Credit Counselor Customers	Tellers	Credit Counselors
Lamar	312,433	37,965	8	9
North	255,728	36,579	7	8
Whitehaven	259,375	32,697	7	7
Main	148,863	42,282	6	15
Millington	79,698	11,389	2	3

Using overhead costs and demand/capacity information, Baker Tilly calculated the efficiency of each community office through customers served per employee and overhead costs per customer. See below for the results of these calculations.

Table 17 – Community Office Efficiency Calculations

CO	Transactions per Teller	Customers per Credit Counselor	OH Cost per Transactions
Lamar	39,054	4,218	\$4.49
North	36,533	4,572	\$5.01
Whitehaven	37,054	4,671	\$4.60
Main	24,811	2,819	\$9.71
Millington	39,849	3,796	\$5.95

Lamar is the most efficient in terms of cost per transaction. Millington is the most efficient in transactions per teller and Whitehaven is the most efficient in customers per credit counselor. When applying the efficiency of Millington and Whitehaven to the other community offices, it is possible to estimate the existing additional capacity at each community office. The table below shows that estimate of additional capacity.

Table 18 – Additional Capacity per Community Office

CO	Potential Annual Teller Transactions	Potential Annual Credit Co. Customers	Additional Customer Transaction Capacity	Underutilized Tellers	Underutilized Credit Counselors
Lamar	318,792	42,039	10,433	0.16	0.9
North	278,943	37,368	24,004	0.58	0.2
Whitehaven	278,943	32,697	19,568	0.49	0.00
Main	239,094	70,065	118,014	2.26	5.9
Millington	79,698	14,013	2,624	0.00	0.6
		Total	174,643	3	8

Using these assumptions, MLGW has additional capacity for 174,643 customer transactions annually, given the current staffing levels. Or in other words, MLGW has 11 employees across all locations that are being underutilized. Therefore,

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the closure of community offices would help remedy this excess operational capacity even without an increase of remote customers.

Fiscal Impact: Each office closure would result in savings equivalent to the total cost of overhead plus the proceeds from the building sale. The overhead costs for each community office are shown again in the table below. The potential savings for closures is the sum of the total overhead for each closure. Assuming that Main CO was the only community office to not close, the potential savings would be at least \$4,922,000.

Table 19 – Overhead Costs per Community Office

CO	Total OH
Lamar	\$ 1,575,000
North	\$ 1,467,000
Whitehaven	\$ 1,340,000
Main	\$ 1,860,000
Millington	\$ 540,000

Implementation Steps:

- Ensure the effectiveness of technological payment options, such as kiosks, online payments, IVR payments
- Simplify the customer care policy to require less in-person counseling as outlined in “Customer Care Policy” recommendation
- Close Millington CO in year 1
- Close North CO in year 2
- Close Whitehaven CO in year 3
- If conversion rates to remote payment methods increase, close Lamar CO in year 4

Baker Tilly Recommended Implementation Time Frame:

- 6 – 18 months for first closure, more than 18 months for subsequent closures

Priority: High

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Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Other Observations – Low Priority:

During this review, Baker Tilly noted additional observations that were deemed to be a lower priority during the MLGW Steering Committee review. Due to the timeline of this engagement, the observations below could not be explored in detail; however, MLGW is encouraged to explore these observations further in cases where there may be additional cost reduction, revenue, risk mitigation, or strategy.

Table 20 – Summary of Low Priority Observations and Recommendations

Focus Area	Summary of Observations	Recommendation
Customer Service	The Customer Service Director indicated that there are currently eight shifts within customer service. She is evaluating consolidating the shifts to 2-3 shifts to reduce overall overtime costs.	As part of the analysis to modify the customer service work shifts, we recommend that the Customer Service Director consider the following factors to optimize resource utilization: <ul style="list-style-type: none"> – Daily workload averages as well as seasonal accommodations (i.e., high volume times per day of the week, day of the month and month of the year). – Accommodate for workload variations to increase coverage during historically high volume periods (seasonally or daily) – Align shift lengths with workload needs (i.e., potentially overlapping shifts during high volume periods or reducing daily shift times while increasing shift days to accommodate daily high volumes)
Safety	Per OSHA mandate, high voltage personal protective equipment (PPE) must be tested at least once every 6 months in an accredited laboratory with certain voltage level equipment. The current equipment that MLGW utilizes is very old and in the event of equipment failure, MLGW would need to quickly procure laboratory equipment or outsource to a contractor. In addition, this may require the usage of a different facility to house the laboratory equipment. MLGW may explore utilizing existing space at one of its existing facilities as a cost mitigating measure.	As MLGW is required to adhere to the PPE testing requirements, it should determine the estimated equipment failure date and start the initial process for procurement (i.e., specifications) or start to engage in initial conversations with contractors who can handle this on their behalf. If MLGW determines that it is most beneficial to continue testing equipment itself, then it should explore the reduced costs of housing the new laboratory testing equipment at an existing facility.
Compensatory Time	Interviews indicated that at least one department tracks compensatory time within the department, but it is not centrally tracked or accrued, nor is it paid out should the employee leave. Standardized and centralized tracking of comp time is a best practice to adhere to federal regulations of compensatory time.	Compensatory (comp) time is regulated by the Fair Labor Standards Act (FLSA). The Act requires that comp time be earned at no less than time-and-a-half and be paid out at the same rate. To best track and ensure compliance with FLSA requirements, we recommend that MLGW centrally tracks (via the payroll system) all compensatory time accrual and usage.

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Focus Area	Summary of Observations	Recommendation
Land Mapping	Currently performing address maintenance/tracking services and serving as a land database for all of Shelby County. This translates to MLGW being the single point of contact for obtaining, verifying, and changing property address details. At the moment, there seems to be no charging mechanism for MLGW performing these services for Shelby County residents and businesses.	In conjunction with the observation and recommendations made in Customer Engineering, MLGW should be evaluating all services that it provides to MLGW customers and Shelby County residents and determine the schedule of charges. For payment intake, MLGW should also be determining whether payments can be applied to customers' utility bills.
Dark Fiber Lease	Based on interviews with process owners, MLGW currently has an existing dark fiber system/backbone that may be used on a limited basis. While MLGW has, in the past, explored how this could be a viable business for large end-users to tap into, there are inherent system limitations. Namely, MLGW's existing fiber network consists of primarily fiber strand counts between 6 – 84 and the fiber strands are connected primarily to MLGW's substations and MLGW office locations (e.g., North Service Center, Central Shops, Hickory Hills). If MLGW were to provide fiber to end-users, this would require developing a 192 count electric engineering standard. In addition, MLGW would need to be cognizant of the fact that many of the existing fiber strands are at large electric substations and would require workarounds for both the additional construction/trenching work and NERC CIP compliance considerations.	Before MLGW makes any decisions on whether to pursue the dark fiber lease, it should also consider the cost-benefit feasibility of operating a more robust fiber network, both for its internal operations and for potential end-users. If MLGW is interested in exploring a future business opportunity for providing fiber, it would also need to develop a 192 count standard for upgrading its existing dark fiber network.
Claims for Damaged Assets	The claims team pursues claims against individuals or entities that have damaged MLGW assets. The General Counsel is currently assessing the balance of time/resources required compared to returns collected.	To better optimize resource utilization for claims, we recommend that the General Counsel track recovered revenue by claim type at each stage of various contact points (i.e., Revenue recovered after first left, second letter, call, etc.) Additionally, tracking a rough estimate of staff time dedicated to each stage by the claim will enable the General Council to understand the average staff time cost/claim to prioritize the best use of staff resources.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Focus Area	Summary of Observations	Recommendation
Share the Pennies Program	MLGW's Share the Pennies program allows customers to round up on their bill and provide the funding to low-income homeowners for weatherization to increase energy efficiency. Information Services (IT) has developed a custom application to manage and track weatherization jobs funded through this program.	There may be potential to market this application to other utilities as an additional revenue source. IT should first determine through the overall strategic IT planning process if this venture aligns with the department and organization's priorities, and if resources are available. Additionally, market research and business planning should be conducted to determine market viability including assessing, at a minimum, market volume, competitors/similar applications, potential customer need, application lifespan, economic viability and pricing/margins, and lastly, tasks and estimated resources required to prepare, market, and manage this effort.
Payment Kiosks	Payment kiosks have been inactive for over a year due to vendor issues and vendor's inability to continue to support the system. There is an opportunity for MLGW to reduce customer service workload by putting the kiosks back in service	It is our understanding that MLGW plans to re-introduce kiosks in 2020 at the service centers. When re-introducing the kiosk usage, we recommend that MLGW consider offering 24/7 access and prioritize the introduction of the kiosks at locations with high cash and check transaction volumes. Additionally, if the accounts will be credited immediately, the kiosks may serve as good technology usage for the MLGW pay-as-you-go customers.
Fuel Consumption	Due to relatively low levels of fuel consumption at the existing CNG fueling stations, there would appear to be a net income loss with the CNG business. Baker Tilly did not speak directly with the process owners of this area. It is our understanding that MLGW is aware of the net income loss associated with the CNG fueling business, whereas the LNG business has had positive cash flow.	Baker Tilly did not have an opportunity to speak directly with the process owners to understand the issues regarding some of the financial impact of the CNG fueling stations. If the desire is to understand the long-term feasibility of this operations, MLGW may consider all the costs/benefits associated with operating its CNG fueling stations and fleet. This may require reevaluating initial projections and comparing to historical trends and projecting future supply.
Oracle Helpdesk Tickets	During interviews, it was noted that there is a significant backlog of IT helpdesk tickets related to Oracle issues following the implementation. The IT department indicates there are approximately 600 open tickets that they are working through but do not have the capacity to resolve and closeout this volume of tickets. IT has requested additional staffing to help support the workload but had been denied.	In the absence of additional staffing, the IT department should assess current tasks and priorities to determine if resources can be shifted from other tasks/projects or more time dedicated to resolving these tickets. More formalized IT strategic planning and IT portfolio management (per the recommendation in Technology Planning above) will help to prioritize resources in the future.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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OPERATIONAL AND ORGANIZATIONAL ASSESSMENT – FINDINGS AND RECOMMENDATIONS

Focus Area	Summary of Observations	Recommendation
IT Project Management	<p>There is no Project Management methodology in place at MLGW.</p> <p>The typical IT project management metrics that Baker Tilly expected to find are not being measured. These metrics extend beyond the budgeted and actual hours spent on IT related activities. A typical IT department should track detailed metrics, which include Estimate to Complete (ETC) at the task level, progress to completion, and cost and timeline variance.</p>	<p>MLGW should implement standardized project management requirements for all projects. Consistent management and reporting of key metrics will help support the effective management of limited resources and support the needs of higher level portfolio management.</p>
Enterprise Risk Management	<p>Although internal audit conducts an annual risk assessment that engages management and leaders throughout the organization for the annual audit plan, there is an opportunity to formalize enterprise risk management processes and have management take more ownership over risk management activities. It was also noted the annual risk assessment conducted by Internal audit has not been performed in recent years due to the reorganization and significant changes in management, however Internal Audit plans to start again this coming year.</p>	<p>To formalize enterprise risk management within the organization, a senior management level committee should be established for oversight, an ERM methodology/plan and risk management policies should be developed and documented, and roles and responsibilities need to be clearly defined.</p> <p>Risk management should be ingrained in day to day operations, but formal risk discussions should take place at least annually.</p>

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Appendix A: Benchmarking Survey

Baker Tilly developed a comparable benchmarking survey to learn about other utility's resource levels as well as service expectations and best practices as it relates specifically to Customer Service, IT, HR, Fleet Management, Inventory Management, Finance and Procurement. The survey was distributed to sixteen (16) utilities, which are noted below. Baker Tilly received a total of four (4) responses.

- Atmos Energy Corporation
- Central Arkansas Water
- City of Jackson, MS
- City Utilities, Springfield Missouri
- Electric Power Board of Chattanooga
- Entergy Mississippi
- Gainesville Regional Utilities, Gainesville Florida
- Huntsville Utilities
- Jacksonville Energy Authority
- Knoxville Utilities Board, Knoxville Tennessee
- Metro Water Service
- Middle Tennessee Electric Cooperative, Murfreesboro Tennessee
- Nashville Electric Service
- North Georgia
- Piedmont Natural Gas Company
- Volunteer Electric Cooperative

The summary of the survey results are displayed below.

Organization-Wide Questions:

How many employees does your organizations have?					
Organization	1	2	3	4	MLGW
FTE	949.5	892.3	1,031.5	422.0	2,961.0
Full Time	938.0		1,030.0		2,872.0
Part Time	23.0		3.0		178.0

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How many customers do you have?					
Organization	1	2	3	4	MLGW
Electric	115,400	98,000	207,228	231,000	429,499
Gas	83,640	36,000	102,874		312,552
Water	82,590	73,000	79,908		254,222
Wastewater		65,000	71,281		
Telecom		2,500			
Total (All)	281,630	274,500	461,291	231,000	996,273
Total (E, G, W)	281,630	207,000	390,010		996,273

What major functions do you have outsourced?
Summary
Tree Trimming (n=3)
Power Plant / Generation Unit Maintenance (n=2)
Vegetation Management (n=2)
Line Crews (n=2)
Legal / Consulting Services (n=2)
Electrician Work (n=1)
Engineering Consulting Services (n=1)
Environmental/Regulatory Testing And Services (n=1)
IT Installation/ Maintenance (n=1)
Natural Gas/Water Extension And Maintenance (n=1)
Plumbing (n=1)
Underground Facility Locating Services (n=1)
Human Resources (n=1)
Invoice Printing/Mailing (n=1)
After Hours Call Center (n=1)

Human Resources Questions:

How many FTE do you have in administrative or clerical roles?					
Organization	1	2	3	4	MLGW
Administrative	37.5	27	2	6	41
Clerical	53	8	63	69	133.5
Total	90.5	35	65	75	174.5

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How many full-time equivalents does your organization have dedicated to FMLA - related tasks?

Organization	1	2	3	4
FTE	1	N/A	1	1*

* Employee is responsible for benefit administration.

What is your workers compensation claims closure ratio?

Organization	1	2	3	4
Claims Closure Ratio	N/A	N/A	N/A	4 closed / 2 open

What is your workers compensation Experience Modification Rate (MOD rate or EMR)?

Organization	1	2	3	4
MOD / ERM	0.85	N/A	N/A	0.89

How frequently does your organization complete class and compensation studies?

Organization	1	2	3	4
Comp. Study Frequency	Every 5 Years	N/A	Annually	Annually

Please indicate which employee groups are unionized (yes/no) and the name of their union(s).

Organization	1		2		3		4		MLGW	
	Yes/No	Union Name	Yes/No	Union Name	Yes/No	Union Name	Yes/No	Union Name	Yes/No	Union Name
Meter Readers	Yes	IBEW	Yes	CWA	No	N/A	Yes	IBEW	Yes	IBEW
Field Services / Maintenance & Operations	Yes	IBEW	Yes	CWA	No	N/A	No	N/A	Yes	IBEW
Construction	Yes	Laborers' International Union of North America for Water	Yes	CWA	Yes	IBEW	Yes	IBEW	Yes	IBEW
Engineers	Note*	N/A	No	N/A	No	N/A	No	N/A	Note***	N/A
Customer Service Reps / Call Center	Yes	IBEW	Yes	CWA	No	N/A	No	N/A	Yes	IBEW
Tellers / Cashiers	Yes	IBEW	Yes	CWA	No	N/A	No	N/A	Yes	IBEW
Administrative Assistants	Note**	N/A	Yes	CWA	No	N/A	No	N/A	Note****	N/A
Fleet Services	Yes	Amalgamated Transit Union	Yes	CWA	No	N/A	No	N/A	Yes	IBEW
Building Services	Yes	IBEW	Yes	CWA	No	N/A	No	N/A	Yes	IBEW
Materials Handlers	Yes	IBEW	Yes	CWA	No	N/A	No	N/A	Yes	IBEW

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Notes				
*	Engineers are non-union but non-supervisory technicians and designers are covered by IBEW			
**	Senior CSR positions are covered in the same group as the Customer Service Reps in the row above so we should be set			
***	Generally, engineers are not unionized but some technician positions are covered by IBEW			
****	Administrative Assistants and Secretaries are non-union but non-HR clerk positions are covered by IBEW			

Please indicate the FTE count for the following work areas.					
Organization	1	2	3	4	MLGW
Engineering	34	24	221	253	496
Water Quality	48.5	18	8	N/A	13
Construction Design	24.5	24	N/A	19	67.5*
Maintenance and Operations	139	362	468	N/A	900.5
Customer Services	113	118.25	101	101	613
Finance and Accounting	46	42	25	14	71
Human Resources	17.5	2	18	13	70
Information Technology	79.5	71	62	30	113

Notes	
*	Includes commercial and residential engineering

Information Technology Questions:

How does your organization maintain server storage (on-site), cloud-based, etc.?					
Organization	1	2	3	4	MLGW
On-Site (only)				X*	X
Cloud (only)					
Mixed	X	X	X		

Notes	
*	Organization 4 has a number of SANs (3Par and Nimble) and MSAs (HPE). The SANs and MSAs are primarily used for virtual infrastructure, file storage, VDI, and backups. They are currently planning to move VDI and some backups to one or more cloud providers.

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If cloud based, what high level controls do you have in place to maintain the data security of your cloud-based storage solution?

Response Summary

Access and data restrictions, 2 factor authentication, sharing restrictions, data encryption, limited pattern and file type recognition.

Customer Service Questions:

How many community offices does your organization have?

Organization	1	2	3	4	MLGW
Offices	1	1	2	7	5

How do you notify customers when your workers will arrive to the premise?

Organization	1	2	3	4
Notification Method	Notify customer during initial setup call with CSR. Alternatives include automated voice messaging, door tags, face-to-face, and public hearings	Customers schedule work online. Here, customers receive a date of visit and an estimated time frame. Notify customers during phone scheduling.	Notify customer during initial scheduling action (phone or online). Automated call for meter reading with access concerns.	Phone call before any meter work. Door-to-door for vegetation management. Phone call for vegetation management if door-to-door is unsuccessful.

What methods do you use to communicate directly with customers?

Organization	1	2	3	4
Communication Method	Phone, Iv, Lobby, Email, Website, Customer Portal, Bill Messaging, Bill Inserts, Facebook, Instagram, Twitter, LinkedIn	Bill Inserts, Bill Messages, Facebook, Twitter, Tnstagram, Youtube, Vimeo, Radio Ads, Print Ads, Digital Ads, Tv Ads (During Storms), Utility Website, Newspaper Editorials, Community Events, Robocalls, Email Campaigns, Surveys	USPS Letters, USPS Postcards, Bill Messages, Automated Phone Calls, Text Messages, Emails	Phone, Email, In-Person

Fleet Questions:¹⁶

How many vehicles (not including motorized equipment) does your organization have in total?

Organization	1	2	3	4	MLGW
Vehicles	346	422	574	251	847

¹⁶ For purposes of our fleet benchmarking analysis, Baker Tilly combined the total number of vehicles and motorized equipment given the slight discrepancy in how utilities categorize certain type of fleet (e.g., bucket trucks).

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How many pieces of motorized equipment (not including vehicles) does your organization have in total?

Organization	1	2	3	4	MLGW
Equipment	288	204	177	17	1436

Does your organization have a motor pool? If yes, what is your targeted annual average mileage per vehicle?

Organization	1	2	3	4	MLGW
Motor Pool	No	Yes	Yes	No	Yes
Annual Mileage Target	N/A	N/A	N/A	N/A	N/A

Notes

Organization 3 has 4 motor pool vehicles that drove 38,982 miles the last fiscal year, for an average of 9,745 miles per vehicle. The least driven vehicle drove 6,437 miles, while the most driven vehicle drove 14,743 miles.

Finance Questions:

Does your organization obtain revenues through dark fiber leases based on an existing unused fiber system/backbone?

Organization	1	2	3	4
Dark Fiber Leases	Yes	No	No	No

Procurement Questions:

What is your organization's procurement dollar value threshold of purchases that must be approved by the Utility Board?

Organization	1	2	3	4
Dollar Value Threshold	Purchases not approved by Utility Board. Board Members are notified of professional service contracts (area, description, vendor, and contract amount) for contracts exceeding \$100,000.	The Utility Board does not approve purchases.	The Utility Board does not approve purchases.	N/A - do not have a dollar threshold that requires board approval.

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What is your organization's procurement dollar value threshold of purchases that must be approved by the City Council / County Board?

Organization	1	2	3	4
Dollar Value Threshold	Purchases not approved by board. Board Members are notified of professional service contracts (area, description, vendor, and contract amount) for contracts exceeding \$100,000.	Purchases over \$100,000.00 must be approved the City Commission unless it falls under several defined circumstances where purchases are exempt from approval.	Only long term debt issues are approved by City Council.	N/A - do not have a dollar threshold that requires board approval.

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Appendix B: Customer Care Policy Research

	Knoxville Utilities Board	Nashville Electric Service	Metro Water Service
Deposits			
Deposit Required?	Yes (only residential)	Yes	Yes
Deposit decision based on	Credit score KUB defined policy	Credit Score and NES history	Credit Score
Deposit amounts	Water-\$300 Electric-\$300 Gas-\$200	- Irrevocable Letter of Credit may be posted by any commercial customer for a minimum of three (3) years in lieu of a cash deposit.- Indemnity Bond may be posted by any commercial customer for a minimum of three (3) years in lieu of a cash deposit. (min \$1000)- Amounts are not outlined in policy	- Residential customers establishing new service or transferring service shall be required to pay a non-refundable initiation fee. A deposit may be required when deemed necessary based on personal credit history-Water and Sewerage - \$100-Water only - \$50-New Commercial customers establishing service shall be required to pay a deposit- Deposits for commercial customers is based on meter size or twice an average monthly bill
	Cases of hardship-Customers may pay deposit in installments	Not Listed	Not Listed
Refund terms	- Customer achieves 18 months of consecutive payments without carrying a past due balance or being turned off for non-payment of bill	- Deposits will be automatically applied to the account or refunded after satisfactory payment history is established, or if the account is terminated. - Commercial deposits will be held for a minimum of 36 months. Deposits will automatically be applied to the account after satisfactory payment history is established or upon termination of service.	-Residential customers in good standing with Metro Water Services after 12 consecutive billing periods will no longer be required to maintain a deposit. - Commercial customers in good standing with Metro Water Services after 24 consecutive billing periods will no longer be required to maintain a deposit. Cash deposits will be automatically refunded.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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	Knoxville Utilities Board	Nashville Electric Service	Metro Water Service
Exceptions to Deposit	- Deposit requirement may be waived for new or existing residential customers based on the customer's credit score- Non-residential customers shall not be required to provide a monetary security deposit if (1) the customer, at the customer's expense, participates in and retains eligibility in a KUB approved utility insurance program, until service to such customer is terminated, or (2) the customer, at the customer's expense, furnishes KUB, and maintains in full force and effect until service to such customer is terminated, a certificate of deposit assignment, a bank letter of credit, or a surety bond guaranteeing the payment of all the obligations to KUB for utility or other services furnished by KUB	- Good credit history- Deposits on residential accounts may be transferred if the account name remains the same and only the account address is changed.- Deposits on commercial and industrial accounts may be transferred for customers whose contract demand is less than or equal to 50 kW if the account name remains the same and only the account address is changed.	- Good credit rating
Late Fees			
Date of Late Fee Assessment	15th day past due	Not listed	20th day pas due
Late Fee Amount / %	<p>Residential For bills rendered to residential customers, an additional five percent (5%) shall apply to any unpaid amount of the bill.</p> <p>All Others For bills rendered to non-residential customers, there shall be added to the bill an amount equal to five percent (5%) of the first \$250 of the unpaid balance, plus one and one half percent (1 ½%) of any unpaid balance exceeding \$250.</p>	5%	5%

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Cost Reduction	Revenue	Risk Management	Strategy - Operational

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	Knoxville Utilities Board	Nashville Electric Service	Metro Water Service
Late Fee Allowance	Not Listed	The due date is automatically extended by the system by two (2) days for payments received through the mail and five (5) days for payments made at a paying agent, kiosk or electronically. Service Advisors may reverse up to (2) late charges in one (1) calendar year.	Not Listed
Payment			
Cash-only	Not Listed	Not Listed	Not Listed
Payment Arrangements	No Listed	<p>- Arrangements for Partial Payments/Credit Extensions Customers may have 30 day bills extended until the net due date of the current bill. Once a payment arrangement is broken, the account is subject to immediate disconnection. Partial payments which are less than any credit extension agreement, or which do not pay the account arrearage in full by the pre-arranged due date, will subject the account to an interruption of service. Payment of all overdue amounts or satisfactory payment arrangements must be made before service will be provided at a different address.</p>	<p>- Payment Plan Arrangement Consumer must present satisfactory and sufficient documentation supporting reasons for extension. The customer will pay a minimum of one half of all the amount due and the payment arrangement will be made for the remaining balance. The planned payment amount will be due with the regular monthly bill. Failure to pay either of these amounts by the due date will result in termination of the payment plan and the plan will not be reestablished</p>

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	Knoxville Utilities Board	Nashville Electric Service	Metro Water Service
Other	Levelized Billing- KUB recalculates your payment each month based on your latest 12 months of history. Monthly payment will vary but will represent a true average.	Balanced Billing- Customers may request that their utility bill be recalculated each month based on a rolling average. During the 12th month, the cost of actual usage will be compared to the total paid for the year. NEAT Program- Customers may elect to have their bill payments electronically debited from their bank accounts on the net due date.	
	Electric Power Board of Chattanooga	Huntsville Utilities	Middle Tennessee Electric Cooperative
Deposits			
Deposit Required?	Yes	Yes	Yes
Deposit decision based on	Credit Score	Credit Score, HU history, and Guarantee	Credit Score
Deposit amounts	<ul style="list-style-type: none"> - For residential customers, the deposit will not exceed two times the residential class average monthly bill. - For a non-residential customer, the deposit will not exceed two times the highest projected monthly bill for the non-residential customer, as determined by EPB. -Initial deposit \$200 	<ul style="list-style-type: none"> - The standard deposit amount for a residential account is \$300. \$100 reduced deposit. -Security deposits are required for non-residential customers. A deposit or suitable guarantee not exceeding twice the highest bill may be required. Non-residential accounts will be reviewed annually to ensure the deposit is sufficient based on consumption. 	<ul style="list-style-type: none"> - Not to exceed twice the highest estimated monthly bill. - \$300 - Moderate risk \$150 - Low risk \$0
	Not Listed	Not Listed	Not Listed

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	Electric Power Board of Chattanooga	Huntsville Utilities	Middle Tennessee Electric Cooperative
Refund terms	<ul style="list-style-type: none"> - Security deposit – plus interest – may be refunded upon your request after 12 months of continuous service and a good payment record.- Disconnect your service before the deposit is refunded, the full amount of the deposit and any accrued interest will be applied toward the final bill. Any amount remaining will be refunded. 	<ul style="list-style-type: none"> - Service for three years with excellent payment history, \$200 of the \$300 deposited will be credited to the customer’s account. 	<ul style="list-style-type: none"> -Termination of service, MTEMCO may apply deposit against unpaid bill, and if any balance remains after application is made, balance shall be refunded. - For residential members, MTEMCO may also refund or apply deposit against unpaid bills after the member has made 24 consecutive, on-time monthly payments.
Exceptions to Deposit	<ul style="list-style-type: none"> - Satisfactory credit rating may have the deposit waived or billed on the first month’s bill. Customers with less than satisfactory credit will be required to pay a deposit in advance. -A letter of reference from your previous utility may serve in place of a security deposit. Letters must be printed on the utility’s letterhead, authorized by a company official, less than six months old and include a good record of payment for at least 12 months. - A co-signer (or guarantor) who is an existing EPB Electric Power customer with a good payment record for at least 12 months may serve in place of a security deposit. 	<p>No Exceptions noted. There is always a deposit required.</p>	<ul style="list-style-type: none"> - Guarantees deemed acceptable by MTEMCO may be accepted in lieu of a deposit at MTEMCO’s sole discretion. - Low credit risk

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	Electric Power Board of Chattanooga	Huntsville Utilities	Middle Tennessee Electric Cooperative
Late Fees			
Date of Late Fee Assessment	16 day past due	15th day past due	15th day past due
Late Fee Amount / %	Late fee is 5% on the first \$250.00 of the amount owed, and 1% on the remaining balance above \$250.00.	A late fee of 5% will be applied to any amount not paid by the due date that is under \$250 and a 1% late fee will be applied to any amount over \$250 for each service.	5%
Late Fee Allowance	Not Listed	Not Listed	Not Listed
	Electric Power Board of Chattanooga	Huntsville Utilities	Middle Tennessee Electric Cooperative
Payment			
Cash-only	Not Listed	Customers who have had three returned checks will have their account placed on a "cash only" basis.	Not Listed
Payment Arrangements	- Payment Plan Arrangement Contact EPB prior to payment for discussion and setup.	- Payment Plan Arrangement Customers will be provided, whenever possible, with the opportunity to enter into an installment plan to allow them to keep their monthly bills current and pay off any balance in arrears over an agreed period of time. Documents do not outline specific details.	No content for payment arrangements was identified.
Other	Levelized Billing- Average monthly bills. Power Share program provides services to families in need.		Variable billing- Same as levelized billing, monthly average bill based on previous year.

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	North Georgia EMC	Alabama Power	Piedmont Natural Gas Company
Deposits			
Deposit Required?	Yes	Yes	Unable to obtain required information. Any information that was found is inputted.
Deposit decision based on	Credit score	Not Listed	Not Listed
Deposit amounts	-Not to be more than twice the average monthly bill.	- A cash deposit, amounting to approximately twice the estimated monthly bill, or, in lieu thereof, an irrevocable letter of credit or a surety bond for a similar amount from an approved institution may be required.	Not Listed
	Not Listed	Not Listed	Not Listed
Refund terms	-Residential deposits may be refunded after twelve (12) months if consumer's payment record does not reflect any past due amounts, cut off notices, appearance on cut off list, actual cut off or returned payments within the most recent 12 months.-Non-Residential Deposits received applicants/consumers will be refunded upon termination of service.	-Customer deposits securing residential accounts will be refunded by crediting the amount of the deposit plus interest to the electric service bill after the deposit has been held for a period of twenty-four (24) months, provided that there have not been any delinquent payments in the last twelve (12) months.	Not Listed

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	North Georgia EMC	Alabama Power	Piedmont Natural Gas Company
Exceptions to Deposit	<p>-The applicant is a member in good standing with respect to other electric service accounts and has not appeared on the disconnect for non-payment list, or have been disconnected for other reasons, with respect to such account(s) in the last twelve (12) months.</p> <p>-No "returned checks" have been received from the applicant for other electric service accounts during the past twelve (12) months.</p> <p>-The applicant can provide a letter of credit from his/her most recent electric service supplier showing not more than one (1) late payment in the last twelve months of service and no unpaid balance.-The applicant is a former member of the Cooperative who, when membership was terminated, was a member in good standing and left no unpaid balance, and no "returned checks" were received during the last 12 months of service.</p> <p>-Credit score evaluation. Satisfactory credit score level.</p>	Not Listed	Not Listed
Late Fees			
Date of Late Fee Assessment	15th day pas due	Not Listed but refer to Chattanooga and Georgia Power (21st)	
Late Fee Amount / %		The greater of 1.5% of amount due for delinquent service or \$2.00.	5%
Late Fee Allowance	Not Listed	Not Listed	Not Listed

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	North Georgia EMC	Alabama Power	Piedmont Natural Gas Company
Payment			
Cash-only	Not Listed	Not Listed	Not Listed
Payment Arrangements		- Extension - May extend time for a delinquent account to make a payment. Extensions will be made without prejudice. -Payment Arrangements - Based on your account history they may offer a Payment Arrangement, late fees may apply. Multiple payments can be made as long as the agreed amount is paid by the arrangement date.	Not Listed
Other		Levelized billing	Equal Payment Plan- Same as levelized payment plan.
	Chattanooga Gas Company	American Water Company	Volunteer Electric Cooperative
Deposits			
Deposit Required?	Yes	Unable to obtain information. The California website has rules outlined but they may only be specific to that state.	Yes
Deposit decision based on	Credit Score	Not Listed	Not Listed

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	Chattanooga Gas Company	American Water Company	Volunteer Electric Cooperative
Deposit amounts	<ul style="list-style-type: none"> - Deposits will be required from those residential Customers whose credit history dictates that a deposit is needed. All other residential Customers will not be required to provide a deposit. - Payment security deposit will be required of all commercial and industrial Customers. - May require a deposit not more in amount than the maximum charge for two (2) consecutive billing periods. 	Not Listed	Not Listed
	Not Listed	Not Listed	Not Listed
Refund terms	- Any deposit which is required to be provided by a customer shall only be refunded upon the discontinuation of service.	Not Listed	Not Listed
Exceptions to Deposit	Not Listed	Not Listed	Not Listed
Late Fees			
Date of Late Fee Assessment	21st day past due, 16th day past due for commercial	Not Listed	Not Listed
Late Fee Amount / %	5%	Not Listed	Not Listed
Late Fee Allowance	Not Listed	Not Listed	Not Listed
Payment			
Cash-only	Not Listed	Not Listed	Not Listed
Payment Arrangements	Not Listed	Not Listed	Not Listed
Other			

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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APPENDICES

	Georgia Power	Atlanta Gas Light	City Utilities (Springfield)
Deposits			
Deposit Required?	Yes	No "Unless otherwise provided in the Tariff, the policy of the Company is not to require a deposit from a new, prior or existing Residential Customer."	Yes
Deposit decision based on	Not Listed	Credit	Insufficient evidence that bills for service will be paid promptly
Deposit amounts	Approximately twice the estimated monthly bill. The Company reserves the right increase original deposit, if at any time in the judgment of the Company such deposit or increase is necessary for its full protection.	Not Listed	Amount determined by General Manager, not to exceed three times the highest bill for one billing period
	Not Listed	Not Listed	Not Listed
Refund terms	- Upon discontinuance of service , the Utility shall promptly and automatically refund the Customer's deposits plus accrued interest on the balance. - After 24 month of consecutive service at the same location, a resident with a history of regularly and promptly paying their bill shall have their deposit refunded plus interest accrued. - At the discretion of the Utility , deposits (plus accrued interest) can be refunded to Customers before the 24 month period.	Upon discontinuance of service, once all Customer payment have been made, the Company shall return the deposit plus accrued interest.	Refunds occur at the termination of service after all Customer charges have been paid or earlier as determined by the General Manager.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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	Georgia Power	Atlanta Gas Light	City Utilities (Springfield)
Exceptions to Deposit	N/A	Not Listed	The Services and Regulations policy states that "City Utilities may require of any Customer evidence satisfactory to itself that all bills for such Service rendered or to be rendered will be paid prompt." The policy does not define "evidence satisfactory to itself" further.
Late Fees			
Date of Late Fee Assessment	21st day past due	1st day after due date	17th day past due, the City has the right to cancel service
Late Fee Amount / %	1.5% but not less than \$2	1% but not less than \$10	Required to pay gross bill plus an amount not to exceed 10%
Late Fee Allowance	Not Listed	Not Listed	Not Listed
Payment			
Cash-only	Not Listed	Not Listed	Section 6 (Payment of Bills) Paragraph F states, the Utility may charge customers an insufficient funds charge with an amount determined by the Board. In such instances, the Utility may require payment in cash.

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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	Georgia Power	Atlanta Gas Light	City Utilities (Springfield)
Payment Arrangements	<p>-Payment arrangements are offered on a case-by-case basis and require a phone call or in person visit.</p> <p>-Assistance from Georgia Power Income-qualified senior citizen discount: Georgia Power customers 65 years or older with low-income can receive a discount.</p> <p>-Convenience Programs: Budget Billing and Flat Bill</p>	<p>- Assistance from Georgia Power Income-qualified senior citizen discount: Georgia Power customers 65 years or older with low-income can receive a discount.</p> <p>- Third Party Assistance: Project Share: donation based assistance for residents facing emergencies and challenging economic times United Way: non-profit external assistance Low Income Home Energy Assistance Program: State of GA program</p>	<p>City Utilities advertises two strategies to assist customers:</p> <p>- First, they offer a Level Pay program to make payments more predictable</p> <p>- Second, they encourage customers to call before their bill is due to request a payment arrangement.</p>
Other	Budget Billing		Level Pay - monthly level pay amount based on average actual bills during the last 12 months
	Jacksonville Energy	TECO	Entergy MS
Deposits			
Deposit Required?	Yes	Yes	Yes
Deposit decision based on	Point system determines the "internal credit reduction." New customers start with a perfect score of 1000 and infraction reduce that score between 50-750 points. The lower the JEA credit score, the higher the deposit. For example: tampering and fraud (750), first dishonored payment (100), second dishonored payment (200), broken payment arrangement (50).	Not Listed	Deposit seems to be standard, not taking into account credit.

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	Jacksonville Energy	TECO	Entergy MS
Deposit amounts	Electric: \$200, Water and Sewer: \$100, Water-only: \$50	Twice the average monthly billing at customer's location	Standard Residential Deposit: \$200
	Not Listed	Not Listed	Not Listed
Refund terms	<p>After 24 months of continuous service and maintaining a good JEA credit score, the deposit amount and any accrued interest may be applied to the Customer's account balance.</p> <p>If a customer discontinues service, the deposit and any interest earned will be applied to the final bill and, if applicable, a refund check will be issued within four to six weeks.</p>	Not Listed	The deposit with accrued interest will be credited to a customer's final bill after discontinuance of service and any remaining amount will be refunded.
Exceptions to Deposit	JEA will waive the deposits for residential customers willing to submit full and legitimate credit information, including their Social Security number, to facilitate credit inquiries. "If the customer meets our policy requirements, their deposit may be waived."	The deposit requirement may be waived after a 'positive' credit check. A deposit may be waived after 24 months of service and regular payments.	Not Listed
Late Fees			
Date of Late Fee Assessment			
Late Fee Amount / %	1.50%	For past due amount greater than \$10, the late payment charge is the greater of \$5 or 1.5%	For past due amount greater than \$10, the late payment charge is the greater of \$5 or 1.5%
Late Fee Allowance	Not Listed	Not Listed	Not Listed

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	Jacksonville Energy	TECO	Entergy MS
Payment			
Cash-only	Not Listed	Not Listed	Not Listed
Payment Arrangements	Customers can apply for short-term payment extensions and longer-term payment arrangements. The website lists 10 factors that JEA considers before offering financial assistance. These factors include payment history, length of time as a JEA customer, bankruptcy status, evidence of fraud, and evidence of tampering.	- Due Date Plus: Customer on fixed incomes can delay payment up to 52 days.	- Payment Extensions: Customers can request extensions via phone or online account. Additional details not available. - Deferred Payment: customers can request this type of plan. Additional details not available. - Billing Payment Assistance Agencies: Entergy directs customers to a variety of 3rd party resources.
Other	MyBudget Levelized Billing - evens out monthly utility bill by taking rolling average of previous 12 bills. Pay-as-you-go Billing: customers pay as little or as much as they want, when they want	TECO directs customers to the following payment assistance services: Florida 2-1-1, Low Income Energy Assistance Program, Emergency Home Energy Assistance for the Elderly Program, FEMA	Level Billing- monthly bill is an average of past bills Pick a Date: customers can choose the day of the month they pay each month

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	Atmos Energy	City of Jackson, MS	Entergy Arkansas
Deposits			
Deposit Required?	Yes	Yes	Yes
Deposit decision based on	Present Customers: If any present Customer has been delinquent in the payment of any two consecutive bills, or has been delinquent three or more times within the preceding twelve months, or if the Company has reason to believe that a Customer is a questionable credit risk, such Customer may be required to make a cash deposit or comparable arrangement in order to establish credit. New Customers: Credit	Not Listed	For existing customers, Entergy considers payment history.
Deposit amounts	An amount equal to an estimated billing period	Shall not exceed an amount equivalent to a single estimated average bill	New Customer may pay \$220 (twice the state average)
	Not Listed	Not Listed	Not Listed
Refund terms	The company promptly refunds deposits (with accrued interest) that have been held for 24 months unless the customer committed one of three infractions (e.g., disconnections for non-payment, disconnections for fraud, etc.)	Deposit plus accrued interest is deposited in customer's account after third consecutive year of service and regular payment.	Deposit refunded to customer after 12 months of consecutive on-time payments
Exceptions to Deposit	Not mentioned in tariff	Customer over the age of 60 with a reasonable payment pattern.	Not located

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	Atmos Energy	City of Jackson, MS	Entergy Arkansas
Late Fees			
Date of Late Fee Assessment	1st day after due date	Not located	22 days after issuance. Days after due date.
Late Fee Amount / %	5%	Not located	Cannot exceed 10% of the first \$30 and 2% of the remainder
Late Fee Allowance	Not Listed	Not located	Not located
Payment			
Cash-only	Not Listed	Not Listed	Not Listed
Payment Arrangements	Atmos Energy's payment arrangements differ based on state. For example, the Atmos Energy - Colorado Tariff outlines levelized billing, installment plans, and payment arrangements for customers with medical certification. In contrast, the Atmos Energy - Tennessee Tariff does not reference any payment arrangements.	The City directs customers to 3rd party assistance, but it does not provide payment arrangements	- Delayed Payment Arrangements: customer pays 1/4 of bill as down payment and agreed upon amounts plus the regular bill for 3 months- Extensions: extend the due day up to 30 calendar days. Payment extensions are granted on a case-by-case basis. Customers are asked to call a 1-800 number to explain their situation to a representative.- Extended due date: applies to customers on fixed incomes. Aligns the payment period with their paycheck.
Other	Levelized Budget Billing-monthly bill is an average of past bills		Equal Pay Billing Level Billing Option

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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	CenterPoint Energy Arkansas	Central Arkansas Water	
Deposits			
Deposit Required?	Yes	Yes	
Deposit decision based on	Not Listed	Not Listed	
Deposit amounts	Shall not exceed estimated two months billing	Approx. 2 month average bill	
	Not Listed	Not Listed	
Refund terms	Review the necessity of deposit annually and will refund when it is deemed unnecessary	Deposit refunded to customer after 12 months of consecutive on-time payments or at the end of service assuming all outstanding payments have been made	
Exceptions to Deposit	Not Listed	CAW waives the deposit for customers who sign up for the Automatic Debit Payment Program.	
Late Fees			
Date of Late Fee Assessment	1st day after due date	Not Listed	
Late Fee Amount / %	Unpaid gas amounts over \$10 are charged a late payment fee of 1.5 percent (18 percent annual percentage rate) or \$1 minimum on the next billing date shown on your bill	Not Listed	
Late Fee Allowance	Not Listed	Not Listed	

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational

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	CenterPoint Energy Arkansas	Central Arkansas Water	
Payment			
Cash-only	Not Listed	Not Listed	
Payment Arrangements	Offer payment arrangements on a case-by-case basis. Accessing more information requires an account login.	Offer payment arrangements on a case-by-case basis. Accessing more information requires a call to customer service or a visit to a service location.	
Other	Average Monthly Billing- monthly bill based on average of previous bills		

Impact Areas Key			
Cost Reduction	Revenue	Risk Management	Strategy - Operational