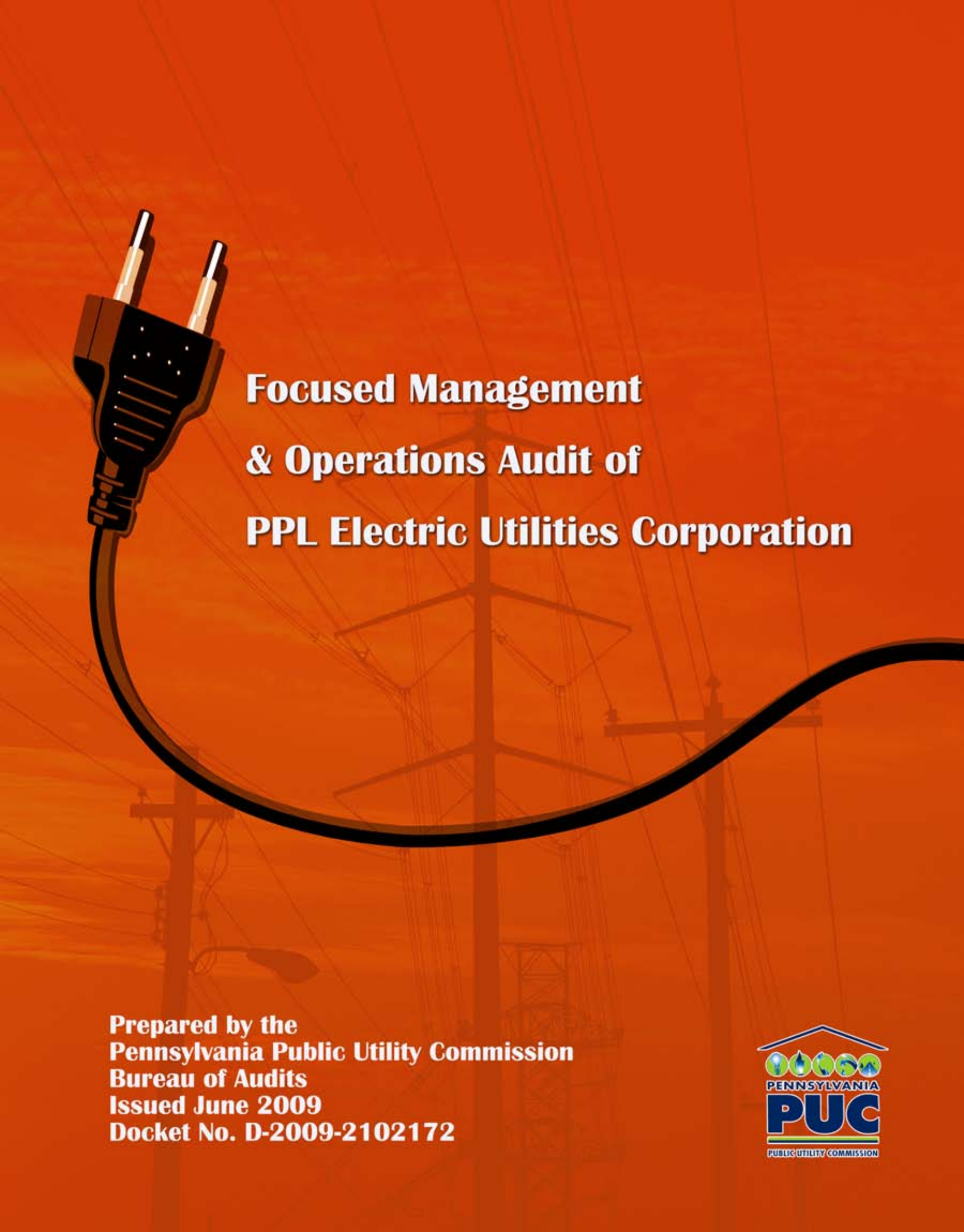

Focused Management & Operations Audit of PPL Electric Utilities Corporation

Prepared by the
Pennsylvania Public Utility Commission
Bureau of Audits
Issued June 2009
Docket No. D-2009-2102172

PENNSYLVANIA PUC
PUBLIC UTILITY COMMISSION

PPL ELECTRIC UTILITIES CORPORATION
FOCUSED MANAGEMENT AND OPERATIONS AUDIT

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I. INTRODUCTION

In accordance with the Pennsylvania Public Utility Commission's (PUC or Commission) program to identify improvements in the management and operations of fixed utilities under its jurisdiction, it was determined that a focused management and operations audit should be conducted of the PPL Electric Utilities Corporation (PPL Electric Utilities or Company). Management and operational reviews, which are required of certain utility companies pursuant to 66 Pa. C.S. §516(a), come under the Commission's general administrative power and authority to supervise and regulate all public utilities in the Commonwealth, under 66 Pa. C.S. §501(b). More specifically, the Commission can investigate and examine the condition and management of any public utility, under 66 Pa. C.S. §331(a).

This report represents the written product of the focused management and operations audit and contains the resultant findings and recommendations for improvement in the management and operations of PPL Electric Utilities. The findings presented in the report identify areas and aspects where weaknesses or deficiencies exist. In all cases, recommendations have been offered to improve, correct, or eliminate these conditions. The final and most important step in the management audit process is to initiate actions toward implementation of the recommendations.

A. Objectives and Scope

The objectives of this focused management and operations audit were threefold:

- To provide the Commission, Company, and the public with an assessment of the efficiency and effectiveness of the Company's operations, management methods, organization, practices, and procedures.

- To identify opportunities for improvement and develop recommendations to address those opportunities.

- To provide an information base for future regulatory and other inquires into the management and operations of PPL Electric Utilities.

The scope of this audit was limited to certain areas of the Company as explained in Section B, Audit Approach. It is noteworthy that the audit did not include a review of PPL Gas Utilities Corporation's operations due to the pending sale of this company to UGI Utilities Inc. which was ultimately approved by the PUC on August 21, 2008, at Docket No. A-2008-2034045.

B. Audit Approach

This focused management and operations audit was performed by the Management Audit Staff of the PUC's Bureau of Audits (Audit Staff). The audit process began with a pre-field work analysis as outlined below:

- A five-year internal trend and ratio analysis (see Appendices A and B) was completed using financial and operational data obtained from the Company, Commission, and other available sources. This analysis, which focused on the period 2003-2007, was supplemented by comparisons to a panel of electric utilities for the same period (see Appendix C).

- Input was solicited from Commission Bureaus and Offices, certain external parties, and the Company regarding any concerns or issues they would like to have addressed during the course of our review.

- Prior management and operations audits, follow-up management efficiency investigations, implementation plans, implementation plan progress reports, other Commission-conducted audits, diversity reports, and other available documents were reviewed.

Information from the above steps was used to initially focus the Audit Staff's work efforts in the field. Specifically, the following areas or functions were selected for an in-depth analysis and are included in this report:

- Executive Management and Organizational Structure
- Corporate Governance
- Affiliated Interests and Cost Allocations
- Financial Management
- Operations and Electric Reliability
- Public Utility Emergency Preparedness
- Materials Management
- Customer Service
- Fleet Management
- Human Resources
- Diversity
- Risk Management

The pre-field work analysis should not be construed as a comprehensive evaluation of the management or operations in the functional areas not selected for in-depth examination. Had we conducted a thorough review of those areas, weaknesses or deficiencies may have come to our attention that was not identified in the limited pre-field work review.

The actual fieldwork began on June 25, 2008 and continued intermittently through December 16, 2008. The principal components of the fact gathering process included:

- Interviews with Company personnel and other Commission bureaus.

- Analysis of records, documents, and reports of a financial and operational nature. This analysis focused primarily on the period 2003-2007, and the year 2008 as available.

- Visits to the customer contact center, service centers, load control facilities, dispatch center, linemen training center, as well as observation of selected work practices.

C. Functional Area Ratings

For the functions or areas of the Company that were selected for in-depth examination, the Audit Staff rated its actual operating or performance level relative to the expected performance level at the time of the audit. This expected performance level is the state at which each area or function should be operating given the Utility's resources and general operating environment. Expected performance is not a "cutting edge" operating condition; rather, it is management of an area or function such that it produces reasonably expected operating results.

Presented below are the evaluative categories utilized to rate each function or area's actual operating or performance level relative to its expected performance level:

- Meets Expected Performance Level
- Minor Improvement Necessary
- Moderate Improvement Necessary
- Significant Improvement Necessary
- Major Improvement Necessary

Our ratings for the functions or areas reviewed in-depth can be found in Exhibit I – 1.

Exhibit I – 1
PPL Electric Utilities Corporation
Focused Management and Operations Audit
Functional Rating Summary

Functional Area	Meets Expected Performance Level	Minor Improvement Necessary	Moderate Improvement Necessary	Significant Improvement Necessary	Major Improvement Necessary
Executive Management and Organizational Structure	X				
Corporate Governance	X				
Affiliated Interests and Cost Allocations			X		
Financial Management	X				
Operations and Electric Reliability			X		
Public Utility Emergency Preparedness		X			
Materials Management			X		
Customer Service		X			
Fleet Management			X		
Human Resources		X			
Diversity			X		
Risk Management	X				

D. Recommendation Summary

Chapters III through XIV provide findings, conclusion, and recommendations for each function or area reviewed in-depth during this focused audit. Exhibit I – 2 summarizes the recommendations with the following priority assessments for implementation:

- HIGH PRIORITY – Implementation of the recommendation would result in significant cost savings, major service improvements, and/or substantial improvements in management practices and performance. These recommendations should be implemented as soon as practical.

- MEDIUM PRIORITY – Implementation of the recommendation would result in important cost savings, service improvements, and/or meaningful improvements in management practices and performance. Implementation of these recommendations should begin within 12 months.

- LOW PRIORITY – Implementation of the recommendation could potentially enhance cost controls, service improvements, and/or management practices and

performance. Implementation of these recommendations should begin within 18 months.

These priorities were assigned based on the Audit Staff's assessment of the potential impact of the recommendations and the Company's available resources.

PPL Electric Utilities Corporation
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Summary of Recommendations

Chapter/Section Title	Recommendation	Page Number	Priority
III. EXECUTIVE MANAGEMENT AND ORGANIZATIONAL STRUCTURE			
	None	19	None
IV. CORPORATE GOVERNANCE			
	None	26	None
V. AFFILIATED INTERESTS AND COST ALLOCATIONS			
	1. Submit for Commission review and approval an updated contract or agreement for each affiliate that PPL Electric Utilities receives services from or provides services to, which should include information regarding the services to be received or performed and a description of the cost allocation methodology that will be applied.	34	High
	2. Compare the internal cost of services provided between PPL Electric Utilities and their corporate affiliates to market rates on a periodic basis and document the actual savings realized from any resultant changes.	34	Medium
VI. FINANCIAL MANAGEMENT			
	None	39	None

PPL Electric Utilities Corporation
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Summary of Recommendations

Chapter/Section Title	Recommendation	Page Number	Priority
VII. OPERATIONS AND ELECTRIC RELIABILITY			
	1. Reevaluate the feasibility of the current distribution line inspection program and consider expanding foot patrols to regions, circuits, or areas that may benefit from a more aggressive approach based on a cost/benefit analysis.	62	Medium
	2. Strive to reduce the number of outages caused by equipment failure and non trimming related trees in order to improve overall SAIDI and SAIFI reliability indices.	62	Medium
	3. Perform an assessment to more fully utilize the capabilities of CASCADE.	62	Medium
	4. Computerize the substation, transmission, and distribution inspection forms and processes.	62	Medium
	5. Strive to reduce the number of customers experiencing multiple service interruptions per year.	62	Medium
	6. Create a business case to further identify requirements or resources for integrating the advanced meter infrastructure with the outage management system.	62	Medium
	7. Create and adhere to a process for timely notification to all departments of planned and extended unplanned outages.	62	Medium

PPL Electric Utilities Corporation
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Summary of Recommendations

Chapter/Section Title	Recommendation	Page Number	Priority
VIII. PUBLIC UTILITY EMERGENCY PREPAREDNESS			
	1. Develop a risk management program to effectively identify, assess, and mitigate cyber risks to its IS infrastructure.	67	Medium
IX. MATERIALS MANAGEMENT			
	1. Improve inventory cycle count accuracy.	77	Medium
	2. Provide sufficient lead times for Supply Chain to procure and provision material requests.	77	High
	3. Strive to optimize inventory levels and increase turnover to at least 3.0.	77	Medium
	4. More closely align material requests with material needs.	77	Medium
X. CUSTOMER SERVICE			
	1. Expand efforts to reduce customer terminations and bad debt expense by increasing education and customer outreach regarding the termination process particularly for delinquent customers.	85	Medium
	2. Strive to improve customer communication efforts and decrease the Company response time to customer's emails.	85	Low

PPL Electric Utilities Corporation
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Summary of Recommendations

Chapter/Section Title	Recommendation	Page Number	Priority
XI. FLEET MANAGEMENT			
	1. Modify the FleetAnywhere/FleetFocus system to separately track PPL Electric Utilities' vehicle operating, maintenance, and fuel costs from other business lines.	97	High
	2. Develop and maintain Key Performance Indicators (KPIs) for each vehicle class and track actual performance against the KPIs.	97	Medium
	3. Perform, and periodically update, a Lifecycle Cost Analysis to support the life cycles used to determine PPL Electric Utilities' vehicle and equipment purchase cycle matrix.	97	High
	4. Expeditiously implement the recommendations contained in the Transportation Manpower/Maintenance Strategy.	97	Medium
XII. HUMAN RESOURCES			
	1. Complete efforts to develop, document, and implement an effective ongoing succession plan for all PPL Electric Utilities executive management positions.	102	Medium

PPL Electric Utilities Corporation
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Summary of Recommendations

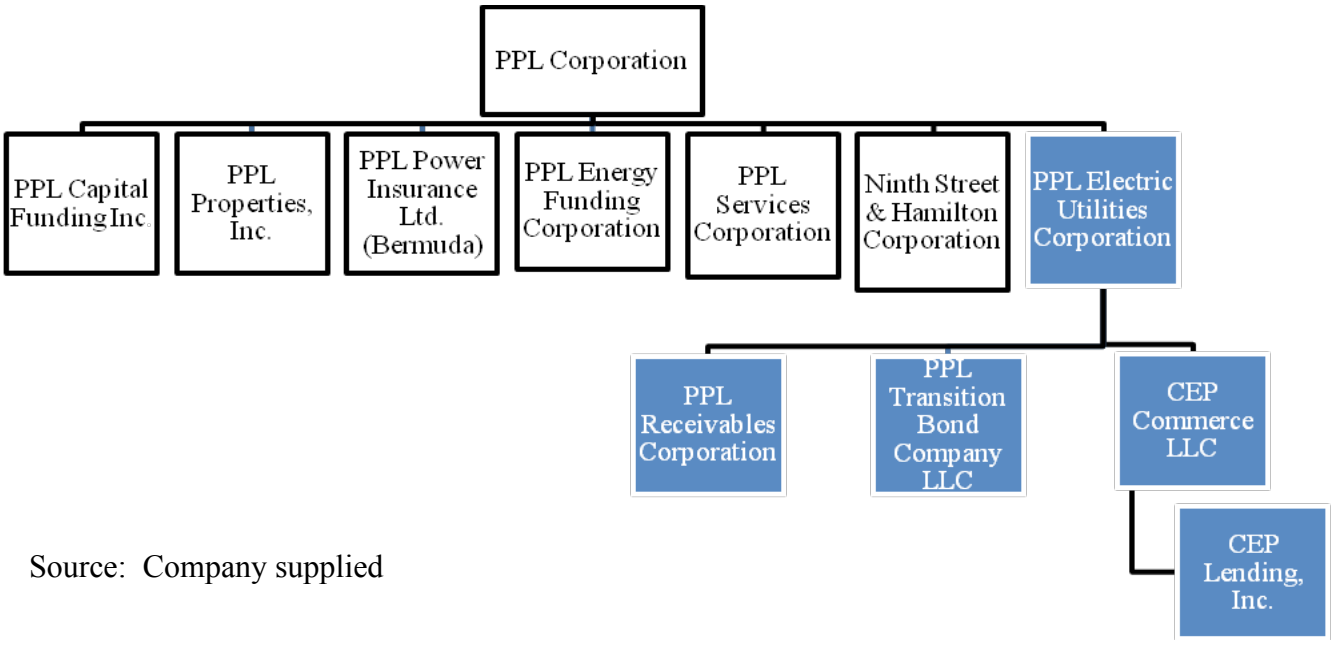
Chapter/Section Title	Recommendation	Page Number	Priority
XIII. DIVERSITY			
	1. Strive to attain full utilization of women and minorities in all job categories.	111	Medium
	2. Increase the emphasis on procurement from minority owned and persons with disabilities owned businesses within PPL Electric Utilities' supplier diversity program and set realistic annual and long range target levels.	111	Medium
XIV. RISK MANAGEMENT			
	None	114	None

II. BACKGROUND

PPL Electric Utilities Corporation (PPL Electric Utilities or Company) is an electric transmission and distribution company that is headquartered in Allentown, Pennsylvania. PPL Corporation (PPL or Corporation) owns all of the Company's outstanding common stock, which represents 99% of the Company's outstanding voting shares. Public shareowners of Series Preferred Stock and 4½% Preferred Stock hold the remaining voting shares. PPL Electric Utilities was incorporated in Pennsylvania in 1919 and provides service to approximately 1.4 million customers located in a 10,000 square-mile area covering all or parts of 29 counties in central and eastern Pennsylvania. The Company has approximately 40,000 miles of transmission and distribution lines in its system. PPL Electric Utilities employs approximately 2,200 employees. A discussion of staffing levels and executive management is included in Chapter III Executive Management and Organizational Structure.

In addition to PPL Electric Utilities, the Corporation holds ownership of, or equity interest in numerous affiliated companies. The Corporation is traded on the New York Stock Exchange under the symbol 'PPL', and as of December 31, 2008, Standard & Poor's classified PPL's credit rating as BBB and its outlook as stable and PPL Electric Utilities credit rating as A- with a stable outlook. PPL's seven first tier subsidiaries of PPL and PPL Electric Utilities' four subsidiaries are shown on Exhibit II-1.

Exhibit II – 1
PPL Corporation
Organization Chart
as of February 27, 2008



Source: Company supplied

PPL Electric Utilities served approximate 1.4 million residential, commercial and industrial customers during 2007. Residential customers comprised approximately 87% of the total customer base, accounted for approximately 37% of the total megawatt hours sold and provided approximately 39% of the total annual revenue. Commercial customers comprised approximately 12% of the customer base, accounted for approximately 35% of the total megawatt hours sold and provided approximately 34% of the total annual revenue. Industrial customers comprised less than 1% of the customer base, accounted for approximately 25% of the megawatt hours sold and provided approximately 17% of the total annual revenue. The remaining approximate 3% of megawatt hours sold and 10% of revenue represent the net amount of wholesale sales, other sales and miscellaneous revenues. Exhibit II-2 summarizes PPL Electric Utilities' customer statistics for 2007.

Exhibit II – 2
PPL Electric Utilities Corporation
Customer Base Statistics
2007

Customer Type	Number of Customers	% of Customers	Volume of Usage (MWHs)	% of Sales	Operating Revenue $'s	% of Revenue
Residential	1,211,000	87%	14,568,000	37%	1,388,126,000	39%
Commercial	168,000	12%	13,881,311	35%	1,193,960,000	34%
Industrial	4,600	>1%	9,633,424	25%	597,200,000	17%

Source: 2007 PPL Electric Utilities Corporation Annual Report

A major upcoming issue for PPL Electric Utilities and its customers is the expiration of the Company's generation rate caps that will occur for its Provider of Last Resort (POLR) customers on December 31, 2009. As a result of the Electricity Generation Customer Choice and Competition Act that became effective January 1997, the Pennsylvania Public Utility Commission (PUC or Commission) approved a settlement agreement regarding PPL Electric Utilities' restructuring plan in August 1998, at R-00973954. The PPL Electric Utilities restructuring settlement included a generation rate cap until the end of 2009 and provided that the Company would serve as the POLR for its non-shopping customers through December 31, 2009. By Order entered May 17, 2007, at P-00062227, the Commission approved the Company's Competitive Bridge Plan (CBP) setting forth the process for obtaining its POLR energy supply for 2010. The CBP provided for the Company to procure generation supply through a series of six competitive bid solicitations over the years 2007-2009 to enable it to diversify the price risk of obtaining power for customers.

In an effort to help to mitigate further the impact of pending price increases on residential and small commercial customers, PPL Electric Utilities proposed a Rate Stabilization Plan (RSP) to permit customers an option to phase in the increasing cost of electricity by making additional/advanced payments on their electricity bills. The RSP settlement petition as approved by the Commission on August 7, 2008, at P-2008-2021776, provides that the funds from the additional payments, plus interest, will be applied in 2010, 2011, and 2012 to the bills of the customers who voluntarily participate in the program to help mitigate the impact of rate increases resulting from the rate cap expiration.

Additionally, on December 4, 2008, the PUC approved a demand side response rate for eligible PPL Electric Utilities' customers. The program will enable eligible customers to lower their electric bill by shifting electricity usage from on-peak periods when wholesale electricity demands and energy prices are higher to off-peak periods when demand and prices are lower.

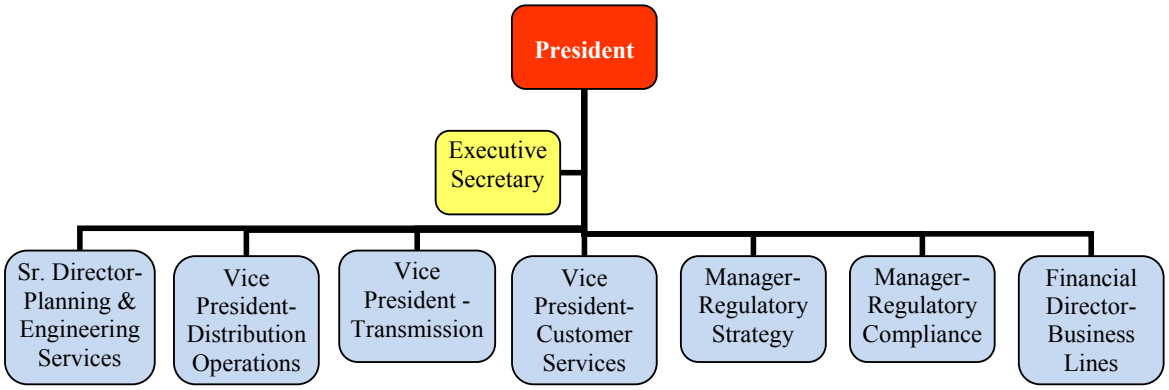
PPL's natural gas and propane distribution subsidiary, PPL Gas Utilities Corporation (PPL Gas Utilities), was sold to UGI Utilities Inc. during 2008. The PUC approved the transfer on August 21, 2008, at Docket No. A-2008-2034045. This sale is not expected to result in any significant cost savings or loss of management knowledge from PPL or PPL Electric Utilities as PPL Gas Utilities was a stand-alone entity operating with separate management, employees, facilities, call center, etc.

III. EXECUTIVE MANAGEMENT & ORGANIZATIONAL STRUCTURE

Background

The members of PPL Electric Utilities Corporation's (PPL Electric Utilities or Company) executive management team are shown in Exhibit III–1. The Company President also serves on the PPL Electric Utilities' Board of Directors. A discussion related to the Board of Directors for PPL Electric Utilities is provided in Chapter IV – Corporate Governance. Two Officers, the President and the Financial Director-Business Lines, have held their current positions for relatively short periods of time. The President of PPL Electric Utilities acquired his current position in April 2007 and the Financial Director-Business Lines was hired on July 30, 2007.

Exhibit III – 1
PPL Electric Utilities
Executive Management Team
As of October 31, 2008



Source: General Data Request GD-6

The specific responsibilities of the Senior Director-Planning & Engineering Services, Vice President-Distribution Operations, and Vice President-Transmission are summarized in Chapter VII – Electric Operations and Reliability and the responsibilities of the Vice President-Customer Services are summarized in Chapter X – Customer Service. Other responsibilities for positions in Exhibit III-1 are as follows:

- Manager-Regulatory Strategy is responsible for responding to legislative, regulatory, and public policy issues and developing long-term strategy;

- Manager-Regulatory Compliance is responsible for rate design, regulatory reporting, load forecasting, provider of last resort (POLR) supplier coordination, etc.; and
- Financial Director-Business Lines is responsible for budgeting, reporting and analysis, business planning, benchmarking, and non-metered revenue management/opportunities.

PPL Electric Utilities' executive management team is assisted by the following PPL Services Corporation (PPL Services) departments:

- Information Services
- External Affairs
- Human Resources
- Finance
- Supply Chain
- Legal
- Risk Management
- Internal Audit
- Facilities Management
- Environmental Management

PPL Services also provides these and other services to PPL Corporation (PPL or Corporation) subsidiaries both regulated and unregulated. Further discussion regarding PPL Services is contained in Chapter V – Affiliated Relationships.

PPL Electric Utilities develops strategic plan initiatives that are updated annually which are used to formulate its five year business plan. The annual review allows the Company to respond to changing business conditions with modifications as needed. This defined business planning cycle allows the Company to identify future opportunities and evaluate strategic alternatives, prioritize initiatives, set performance improvement objectives, and establish pay-for-performance metrics. The plan is linked to the overall PPL corporate strategy and final approval rests with the PPL Electric Utilities' President.

Strategic plan teams consisting of upper and middle management and external consultants are charged with performing data analysis, industry comparisons, issue prioritization, creation of a vision, and strategic direction. Input is also solicited from the rank and file (i.e., bargaining unit employees). Key issues defined in the strategic plan include:

- Transmission expansion opportunities
- SmartGrid opportunities
- Energy efficiency and demand response
- Safety performance and culture

- Rate mitigation
- Aging infrastructure
- Reliability and operational effectiveness
- Employee attraction, satisfaction, and mutual commitment

PPL Electric Utilities' corporate goals are monitored on a continual basis by PPL Corporation executive management. The Company's upper management goals are reviewed by the PPL Electric Utilities' Board of Directors. The PPL Electric Utilities' President reviews each department's performance against their goals on a monthly basis.

The Audit Staff evaluated PPL Electric Utilities' staffing levels and spans of control. Exhibit III – 2, lists the Company's total staffing levels for the period 2004 through May 31, 2008. As indicated, the total number of employees increased from 2,215 in 2004 to 2,241 as of May 31, 2008 or a modest 1.2% increase. In 2007, a study of staffing levels and spans of control conducted by Mercer Consulting established a target level of 2,377 employees for PPL Electric Utilities. Based on the determined need of 2,377 employees, the Company was operating with 136 less optimum number of employees as of May 31, 2008. The Company indicated that the number of active employees is driven by business conditions and management decisions. To further monitor staffing levels, the Financial Director prepares a monthly staffing summary that includes both bargaining unit and management positions. The report is reviewed by the PPL Electric Utilities' President.

Exhibit III – 2
PPL Electric Utilities
Staffing Levels
For the Period 2004 to May 31, 2008

2004	2005	2006	2007	May 31, 2008	Percentage change 2004 to 5/31/08
2,215	2,239	2,202	2,237	2,241	1.2%

Source: Data Request No. EM-2

Exhibit III – 3 lists the spans of control for current management/supervisory positions. For maximum organizational efficiency and effectiveness, a company should generally aim for spans of control between 1:4 and 1:9. As of October 2008, less than half (i.e., 47%) of PPL Electric Utilities' reporting relationships fall within that range.

Exhibit III – 3
PPL Electric Utilities Corporation
Span of Control Analysis
As of October 16, 2008

	Reporting Relationships	
Reporting Ratio	**Number**	**Percentage**
1:1	20	7.4%
1:2	13	4.8%
1:3	19	7.0%
Sub Totals	**52**	**19.2%**
1:4	20	7.3%
1:5	28	10.3%
1:6	25	9.2%
1:7	19	7.0%
1:8	21	7.7%
1:9	15	5.5%
Sub Totals	**128**	**47.0%**
1:10	16	5.9%
1:11	11	4.0%
1:12	8	2.9%
1:13	15	5.5%
1:14	11	4.0%
1:15	7	2.6%
1:16	9	3.3%
1:17	8	2.9%
1:18	3	1.1%
1:19	2	0.7%
1:20	1	0.4%
1:22	1	0.4%
Sub Totals	**92**	**33.8%**
Totals	**272**	**100.0%**

Source: Data Request No. EM-9

As noted above, the Company monitors spans of control and reviews the various functions of its management personnel and determines whether existing spans of control are acceptable based upon current operating needs. Documentation was provided for each employee in the low span of control category (justification was also provided for positions with a high span of control, 1:10 or greater). Justifications for management personnel with less than four direct reports include:

- Working directly with external parties (i.e., contractors, agencies, case workers, etc.)
- Specialty areas and technical expertise.
- Geographical constraints.
- Limited-time assignment for a special project.

The Company's justifications, supported by documentation, for its narrow spans of control appear reasonable and appropriate.

PPL Electric Utilities participates in and has adopted the executive compensation plans offered by PPL to officers of its major operating subsidiaries. The executive compensation program consists of direct compensation (i.e., salary, annual cash incentive award, and long-term incentive award), indirect compensation (i.e., retirement income plans), and special compensation (i.e., hiring and retention compensation, severance pay, etc.). PPL's compensation philosophy is to offer a competitive direct compensation program similar to that of companies of similar size and complexity including companies with which PPL competes for talent. The Company's direct compensation is generally targeted to be at the median of the energy services market for like size companies. Incentive awards are based on a set of defined goals comprising earnings per share, business unit goals (e.g., financial, customer service, response time, etc.), and individual goals. Annual competitive data provided by compensation consultant Towers Perrin is utilized to set executive salary levels and incentive awards. To determine competitive data, Towers Perrin uses its published compensation surveys including Executive Compensation Database and Long-Term Incentive Report, Energy Services Industry Executive Compensation Database, and Benchmark Compensation Survey of Energy Trading and Marketing Positions.

The salary of the PPL Electric Utilities' President is recommended by PPL's Chief Executive Officer (CEO) and Chief Operating Officer (COO) and requires the approval of the PPL Board of Directors' Compensation, Governance and Nominating Committee (CGNC). Compensation for PPL Electric Utilities' executive management is recommended by the Company's President and must be approved by the PPL Corporate Leadership Council (CLC). The CLC is comprised of PPL's CEO, COO, Chief Financial Officer, and General Counsel. In addition to determining salary and cash incentive compensation, the CLC also has the authority to make restricted stock unit and stock option awards.

Findings and Conclusions

Our examination of Executive Management and Organizational Structure included a review of corporate organization charts; staffing levels and spans of control; the roles and responsibilities of executive management; strategic and five year business plan;

and executive compensation. Based on our review of Executive Management and Organizational Structure, no specific evidence came to our attention that would lead the Audit Staff to believe that the areas reviewed were not being addressed adequately.

Recommendation

None.

IV. CORPORATE GOVERNANCE

Background

As discussed in Chapter II – Background, PPL Electric Utilities Corporation (PPL Electric Utilities) is a subsidiary of PPL Corporation (PPL), a diversified utility holding company. PPL is a publicly traded company listed on the New York Stock Exchange under the symbol, "PPL." Therefore, PPL is subject to the corporate governance requirements contained in both the Sarbanes-Oxley Act of 2002 (SOX) and the corporate governance rules of the New York Stock Exchange (NYSE Rules).

In August 2002, the Audit Staff released a survey report entitled "A Review of Corporate Governance Controls and Audit-Related Practices Pertaining to the Financial Reporting Process Survey", which summarized and evaluated the corporate governance practices of 27 regulated Pennsylvania utilities and developed a list of preferred corporate governance controls and audit related practices. In this audit, the Audit Staff has reviewed the current status of corporate governance practices at PPL in relation to Sarbanes-Oxley requirements, NYSE Rules, and the preferred corporate governance controls and audit related practices.

PPL has an 11-member Board of Directors (Board) composed of the Chairman, the President and Chief Executive Officer (Pres./CEO) of PPL, and ten independent Board members. The average tenure of the Directors as of December 31, 2008 is 7.5 years including one of the Directors having been recently appointed in June 2008. The Board has adopted Independence Guidelines as part of PPL's corporate governance policies to assist it in determining director independence in accordance with NYSE and Securities and Exchange Commission (SEC) requirements. In its Proxy Statement released to shareholders, dated April 10, 2008, the Board determined, based on its guidelines, that nine of the ten board members were independent. Soon thereafter, the Board was expanded to eleven members with the addition of another independent member on June 17, 2008.

The PPL Board conducts its business by using the following five committees:

- Audit Committee is responsible for assisting the Board in its oversight of the financial statements, compliance with legal and regulatory requirements, the independent auditor's qualifications and independence, and the performance of the independent auditor's and PPL Services Corporation's internal audit staff, including the appointment, compensation, retention and oversight of any independent registered public accounting firm. The Audit Committee is comprised of four independent members and met eight times during 2007.

- Compensation, Governance and Nominating Committee is responsible for reviewing and evaluating the performance of the chief executive officer and other senior officers of the company and its subsidiaries, reviewing management's succession planning, identifying and recommending candidates for election to the Board, and developing and recommending corporate governance guidelines to the Board. The Compensation, Governance and Nominating Committee is comprised of four independent members and met four times during 2007.

- Executive Committee acts on behalf of the Board when the Board is not in session. The Executive Committee is comprised of four members, three independent members and the Pres./CEO, and met six times during 2007.

- Finance Committee is responsible for reviewing and approving annually the business plan for the Company, approving specific Company financings and corporate financial policies, authorizing certain capital expenditures and authorizing acquisitions and dispositions in excess of $25 million. The Finance Committee is comprised of five independent members and met five times during 2007.

- Nuclear Oversight Committee is responsible for assisting the Board of Directors in the fulfillment of its responsibilities for oversight of the Company's nuclear function and advising Company management on nuclear matters. The Nuclear Oversight Committee is comprised of four independent members and met three times in 2007.

The Audit Committee operates pursuant to a written charter consistent with the applicable standards of the NYSE and the SEC. As required by the SEC under its final rules issued in January 2003, a public company must disclose in its annual report that it has or does not have at least one audit committee financial expert. Pursuant to Section 303A.07 of the NYSE's Listed Company Manual, each member of the Audit Committee must be financially literate, or must become financially literate, within a reasonable period of time after his or her appointment to the Audit Committee. In addition, at least one member of the Audit Committee must have accounting or related financial management expertise. The Audit Committee Charter is reviewed annually and updated accordingly. The Audit Committee undergoes an annual performance evaluation by the Board. The evaluation compares the performance of the Audit Committee with the requirements of its written charter.

The Audit Committee also meets annually with the General Manager, Corporate Audit Services (PPL Services Corporation's Internal Audit Department) and its independent registered public accounting firm, Ernst & Young LLP (E&Y), to review and approve the overall scope and plans for their respective audits. The Audit Committee

also meets quarterly with the General Manager, Corporate Audit Services and E&Y, with and without management present, to discuss audit results, their evaluations of internal controls and the overall quality of PPL's financial reporting.

Among the requirements of the Sarbanes-Oxley Act of 2002 is for the Audit Committee to establish procedures for:

- the receipt, retention, and treatment of complaints regarding accounting, internal accounting controls, or auditing matters; and

- the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.

In response, during 2003, PPL issued Policy No. 111 "Handling Complaints, Concerns and Inquiries to the Office of Business Ethics and Compliance." This policy states, among other things, that:

- PPL's Office of Business Ethics and Compliance will handle all contacts in a timely and impartial manner that protects the confidentiality of the individual.

- PPL will never discriminate against, nor tolerate retaliation toward, employees who raise concerns.

- It is unacceptable to knowingly make false reports.

PPL provides access to its *EthicsHelpline*, which is an anonymous 24-hour telephone service employees can use to report violations of Company policies or to seek guidance on those policies, including accounting issues. The *EthicsHelpline* is staffed from 9 a.m. to 5 p.m. EST on Mondays through Friday; at other times, messages can be left on its answering machine. PPL's Director of Business Ethics and Compliance is responsible for the administration of the *EthicsHelpline.* There is no method for identifying a caller to the *EthicsHelpline*. Employees also can make anonymous reports via mail or choose to identify themselves via email submissions.

The Compensation, Governance and Nominating, Executive, Finance and Nuclear Oversight Committees also operate pursuant to written charters consistent with the applicable standards of the NYSE and the SEC. The respective charters are reviewed annually and updated accordingly. The Committees undergo an annual performance evaluation that is reviewed by the Board. The evaluation compares the performance of the Committee with the requirements of its respective written charter.

All corporate governance guidelines and related documents are available for review by the shareholders and public at large by visiting www.pplweb.com. Documents available at the website include:

- Charters for the Audit, Compensation, Governance and Nominating, Executive, Finance and Nuclear Oversight Committees;

- Guidelines for Corporate Governance;

- Standards of Conduct and Integrity;

- Director Independence Guidelines; and

- Composition, make-up, and credentials of each Board member and Committee.

At PPL the internal audit function is performed by PPL Services Corporate Audit Services for PPL Electric Utilities and all other PPL subsidiaries. This Department is headed by the General Manager, Corporate Audit Services (General Manager). The General Manager reports directly to the PPL Audit Committee and the Chairman, Pres./ CEO of PPL. The Audit Committee's concurrence is needed for the appointment or removal of the General Manager. The Chairman, Pres./CEO is responsible for the performance evaluation and time-off approvals of the General Manager.

The Corporate Audit Services Audit Charter is reviewed and approved on an annual basis by the Audit Committee and PPL's Corporate Leadership Council (comprised of the Chief Executive Officer, Chief Financial Officer, Chief Operating Officer and General Counsel of PPL). The General Manager has direct access to the Audit Committee and attends each Audit Committee meeting. Additionally, the General Manager provides the Audit Committee a quarterly report that summarizes all the completed audits, including significant findings, and key audits in progress. The Audit Committee also receives a quarterly status report on the achievement of the Department's performance goals and objectives for the current year.

Currently, Corporate Audit Services has 20 staff members, including the General Manager. All of the internal auditors are members of the Institute of Internal Auditors (IIA) and are required to comply with the IIA Code of Ethics, in addition to the PPL Standards of Conduct and Integrity. The internal auditors meet the International Standards for the Professional Practice of Internal Auditing of the IIA.

The primary objective of Corporate Audit Services is to assess business risks, improve business processes, and assist PPL and its subsidiaries' management in establishing and maintaining internal controls. Corporate Audit Services' annual internal audit (IA) plan is developed using a risk-based approach. The General Manager solicits audit requests from various sources, such as the Audit Committee and officers of each company. The IA plan is submitted to PPL's Corporate Leadership Council and the Audit Committee for review and approval.

Due to the fact that the IA plan is risk-based on the entire corporation, there is no set number of audits that are required for PPL Electric Utilities exclusively each year. However, each year that was reviewed by the Audit Staff did have IAs performed solely on PPL Electric Utilities. Examples of some of the PPL Electric Utilities IAs completed are:

- PPL Electric Utilities Informal Complaint Process
- PPL Electric Utilities Distribution Tree Trimming Process
- PPL Electric Utilities Winter Service Termination Process
- PPL Electric Utilities Field Services' Performance Metrics
- Review of PPL Electric Utilities' Accounting Processes and Controls Over Contractor Payments

Other noteworthy audits performed on a PPL wide-basis include:

- Quarterly Disclosure Controls and Procedures (2004-2008)
- Results of Corporate Audit Services Evaluation of Internal Control Over Financial Reporting (2005-2008)
- Corporate Services to Affiliated Companies (2005 and 2008)
- PPL Corporation's Compliance to the Sarbanes-Oxley Act of 2002 (2007)

Audit reports are distributed to the management of the area audited. A few months after the report is issued, the Audit team follows up with the responsible parties to ensure implementation of recommendations. If Corporate Audit Services finds unsatisfactory progress, senior management is notified for further action. The Audit Committee is given a summary of each IA report.

PPL Electric Utilities does not hire its own independent auditor, but rather the external audit function is performed for all of PPL by the same auditor. In 2005, PPL adopted Policy #107 "Use of the Company's Independent Auditor, Audit Partner Rotations, and Periodic Solicitation of Proposals." This policy addresses some of the corporate governance requirements of the Sarbanes-Oxley Act of 2002, such as precluding the use of the Company's independent auditor for certain services (i.e., actuarial services, bookkeeping, financial information systems design, etc.) and the requirement of the audit partner rotation. Specifically, the policy requires:

- The solicitation of proposals for the independent financial statement audits at least once every seven years in order to ensure high quality audit services at a competitive price.

- The advanced approval by the PPL Vice President & Controller and the General Manager, Corporate Audit Services for the use of the Company's independent auditor to perform services. Additionally, such requests are subject to pre-approval by the Audit Committee.

- The lead partner and concurring or reviewing partners assigned to the Company's audit engagement to rotate after five years of service.

In accordance with this policy, PPL solicited bids for an independent auditor to audit the Company's 2005 financial statements. After a careful review process and approval by the Audit Committee, Ernst & Young was chosen to be the independent auditor until the next solicitation of proposals in 2012 or sooner if the Audit Committee desires. The Company's previous independent auditor had been PricewaterhouseCoopers from 1995 through 2005.

PPL Electric Utilities has a six member Board of Directors comprised of the PPL President and Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Operating Officer (COO), and General Counsel; the PPL Electric Utilities President; and one independent director. PPL Electric Utilities, being a direct consolidated subsidiary of PPL and not having common equity securities listed with the New York Stock Exchange, is not required to have a majority of independent directors nor an audit committee. PPL Electric Utilities has an Executive Committee that acts on behalf of the full Board on matters that do not require full Board approval. The three members of the Executive Committee are: PPL's CEO, PPL's CFO and PPL Electric Utilities' President. PPL owns all of the outstanding shares of PPL Electric Utilities' common stock and has a quorum and voting power for the purpose of election of Directors of the Company. However, the PPL Electric Utilities' Board acts independently in the governance of the Company. The Company's ring-fencing provisions (see Chapter V – Affiliated Interests and Cost Allocations) and PPL's Standards of Conduct and Integrity, which are applicable to all Board members and employees of the company and its subsidiaries, helps insure independence.

Findings and Conclusions

Our examination of the Corporate Governance function included a review of PPL's Boards of Directors' organization including committee structure and charters; Board fee structure; Director independence; documents related to principles of corporate governance; policies, practices, and procedures related to internal management controls; relationships with the independent auditor, performance of non-audit services by the independent auditor and policies related to rotation of audit firms; internal audit function; business conduct and ethics codes; annual reports; etc. Based on our review, it appears that proper controls are in place and that the Corporate Governance related functions are being performed in a satisfactory manner.

Recommendation

None.

V. AFFILIATED INTERESTS AND COST ALLOCATIONS

Background

This chapter presents the results of the Audit Staff's review of the nature and extent of transactions between PPL Electric Utilities Corporation (PPL Electric Utilities) and its affiliates. As discussed in Chapter II - Background, PPL Electric Utilities is a wholly-owned subsidiary of PPL Corporation (PPL or Corporation). PPL has several unregulated affiliates, the largest of which is PPL Services Corporation (PPL Services). PPL Services was created in July 2000 to provide certain centralized services to PPL Electric Utilities and other PPL subsidiaries.

PPL Electric Utilities has an affiliated interest (AI) agreement on file with the Commission. The AI agreement, approved on March 30, 1995, contains a general summary of the services provided between Pennsylvania Power and Light Company (now known as PPL Electric Utilities Corporation), PP&L Resources (now known as PPL Corporation), and all subsidiary and affiliated companies of PPL Resources.

The centralized services provided by PPL Services to PPL Electric Utilities include: auditing, facilities management, external affairs, human resources, supply chain, legal, risk management, environmental management, information technology, and financial. Other affiliates provide PPL Electric Utilities the following services: miscellaneous billing services, supplier coordination services, Provider of Last Resort (POLR) supply requirements, and facilities management.

PPL Electric Utilities also provides certain services to PPL Services as well as other regulated and unregulated affiliates. These services include labor, transportation services, office space, etc. A summary of affiliate charges to and from PPL Electric Utilities during fiscal years 2005 through 2007 is shown on Exhibit V-1. The 79% ($775,000) increase in services provided to PPL Electric Utilities from PPL Energy Services from 2006 and 2007 is due to increases in heating, ventilation and air conditioning installation, maintenance and upgrades, but it is not expected to be a recurring incremental cost. Additionally, PPL Electric Utilities' costs to purchase power from PPL Energy Plus increased by approximately $211 million to meet PPL Electric Utilities provider of last resort load requirements. However, the cost of support provided by PPL Services to PPL Electric Utilities, excluding the impact of a $10.8 million insurance recovery which reduced expense in 2007, has remained relatively flat during the same period. Also $4.2 million of the $6.2 million decline in support charges from PPL Electric Utilities to its affiliates from 2005 to 2007 is a result of lower vehicle leasing charges due to PPL Electric Utilities owning its vehicles since 2006 rather than leasing them from PPL Services Corp.

PPL Electric Utilities
Summary of Affiliate Charges
For Calendar Years Ended December 31, 2005 - 2007

Affiliate	2005	Percent	2006	Percent	2007	Percent
	$	%	$	%	$	%
Affiliate Support to PPL Electric						
PPL Services	120,775,000	7.0	129,502,000	7.0	112,130,000	5.8
PPL Solutions	1,329,000	0.1	1,193,000	0.1	1,186,000	0.1
PPL Energy Services	942,000	0.1	981,000	0.1	1,756,000	0.1
PPL EnergyPlus *	1,590,276,000	92.8	1,708,335,000	92.8	1,809,791,000	94.0
Total Charges From Affiliates	1,713,322,000	100.0	1,840,011,000	100.0	1,924,863,000	100.0
Charges from PPL Electric to Affiliates						
PPL Services	9,616,000	43.5	10,962,000	47.5	8,687,000	54.8
PPL Solutions	348,000	1.6	447,000	1.9	224,000	1.4
PPL Energy Services	337,000	1.5	344,000	1.5	141,000	0.9
PPL EnergyPlus	1,000	0.0	1,000	0.0	0	0.0
PPL Fossil and Hydro Generation	5,113,000	23.1	5,002,000	21.7	2,431,000	15.3
PPL Susquehanna LLC	1,424,000	6.4	1,538,000	6.7	1,696,000	10.7
PPL Gas Utilities and Propane	5,259,000	23.8	4,781,000	20.7	2,684,000	16.9
Total Charges To Affiliates	22,098,000	100.0	23,075,000	100.0	15,863,000	100.0
Net Affiliate Charges to PPL Electric	1,691,224,000		1,816,936,000		1,909,000,000	

* Purchased power to supply PPL Electric's Provider of Last Resort load
Source: Data Request Nos. AI-4 and AI-16.

When feasible, PPL Services' costs are directly charged. However, when identification of direct charges is not possible, PPL Services utilizes a three-factor methodology to allocate indirect costs to its affiliates. The three-factor allocation percentage is derived by first determining each affiliate's proportion of capitalization, operation and maintenance expense, and number of employees, as of June 30th of that year, relative to its affiliates also receiving services from PPL Services. These three percentages are then averaged for each affiliate. For simplification, affiliates with a three-factor average allocation rate of less than 1% do not receive any cost allocation. The excess percentages resulting from not allocating to these affiliates are added to the non-regulated affiliates only, such that PPL Electric Utilities does not receive any of these additional charges.

The next step in setting the annual indirect cost allocation rates is for each support group within PPL Services to analyze its indirect costs. Some of the support groups (i.e., Human Resources, External Affairs, etc.) provide specialized services that not all the affiliates receive. Therefore, it is necessary to determine the percentage of services the support group provides to the affiliates as a whole and the percentage of specialized services it provides to a particular group of affiliates. In these cases, a weighted multi-factor allocation is calculated. This is done by multiplying the affiliate's three-factor average allocation rate (as described in the previous paragraph) by the percentage of service being received by all the affiliates as a whole and the percentage of service being received by a group of affiliates and then averaging the percentages. This weighted multi-factor allocation is the allocation rate that will be utilized by the support group to allocate indirect costs to that affiliate. Otherwise, if a blended rate is not applicable, the original three-factor average allocation rate is utilized by the support group (i.e., Risk Management, Environmental Management, etc.) to allocate indirect costs.

PPL Electric Utilities directly charges its affiliates the fully loaded cost (i.e., includes overhead) for services it provides. There are no instances of indirect cost allocations for charges from PPL Electric to its affiliates.

Ring-fencing is the term used to describe efforts which are intended to insulate a regulated utility from the potentially riskier activities of unregulated affiliates. The objective is to ensure the financial stability of the utility and the reliability of its service. In 2001, PPL Electric Utilities announced a strategic initiative, designed to substantially reduce its business and financial risk profile, by limiting its business activities to the transmission and distribution of electricity and businesses related to or arising out of the electric transmission and distribution businesses. Included below are some of the steps taken under this initiative:

- Adopting amendments to their Articles of Incorporation and Bylaws that contain corporate governance and operating provisions designed to reinforce corporate separateness from affiliated companies by:

- Requiring separate assets, books and records of account.

- Requiring an arm's-length relationship with its affiliates.

- Appointing an independent director to its Board of Directors and requiring the unanimous consent of its Board of Directors to amend these corporate governance amendments of the Articles of Incorporation and Bylaws.

- Appointing an independent compliance administrator to semi-annually review PPL Electric Utilities' compliance with these new corporate governance amendments.

- Using debt securities covenants designed to limit financial risks such as:

  - Restricting the utility's ability to issue additional debt securities.

  - Suspending declarations of dividends on common stock if the independent compliance administrator has delivered a notice of noncompliance.

The enhancements to PPL Electric Utilities' legal separation from its affiliates is intended to minimize the risk that a court would order its assets and liabilities to be consolidated with those of PPL Corporation or another affiliate in the event that PPL Corporation or another affiliate were to become a debtor in a bankruptcy case.

Regulations at 52 Pa. Code §54.121-123 addresses competitive safeguards for electric utilities. The purpose of these safeguards is to assure the provision of direct access on equal and nondiscriminatory terms to all customers and electric generation suppliers (EGSs), prevent discrimination in rates, terms or conditions of service by electric distribution companies, prevent the cross subsidization of service amongst customers, customer classes or between related electric distribution companies and EGSs, to forbid unfair or deceptive practices by electric generation companies and EGSs, and to establish and maintain an effective and vibrant competitive market in the purchase and sale of retail electric energy. EGSs and electric distribution companies (EDC) must comply with certain requirements that address items such as:

- Preferential treatment in the processing of retail generation supply service requests,

- Dissemination or disclosure of customer information,

- False or deceptive advertising, and

- Dispute resolution process.

Through the application of its PPL Generation Supplier Coordination Tariff issued on October 21, 1998, PPL Electric Utilities ensures a proper interface with all EGSs in its service area. The tariff sets forth the basic requirements for interactions and coordination between PPL Electric Utilities and the EGSs. To ensure Company-wide awareness of the competitive safeguard requirements, PPL Electric Utilities' employees are required to participate in biannual refresher training on the *Standards of Conduct and Integrity.* In addition, PPL Electric Utilities has issued two corporate policies and a handbook to implement the safeguards.

Findings and Conclusions

Our examination of the Affiliated Interests and Cost Allocations functions focused primarily on a review of the cost allocation methodologies; compliance with existing cost allocation policies, practices, and procedures; ring-fencing efforts; and an examination of affiliated interest agreements and inter-company transactions. Based on our review, the Company should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its affiliated interests and cost allocation function by addressing the following:

1. The Company's approved Affiliated Interest Agreement does not reflect its current allocation methodologies and corporate structure.

The most recent affiliated interest agreement that PPL Electric Utilities had submitted for Commission review at the time of our fieldwork had been approved in March of 1995, or more than 13 years ago. This agreement deals in broad terms with cost allocations between Pennsylvania Power and Light Company (now known as PPL Electric Utilities) and PPL Resources, Inc. (now known as PPL Corporation). However, since 1995 significant corporate structural changes have occurred including:

- Name changes for both the electric company and its parent;
- Acquisition of numerous subsidiaries including PPL Montana;
- The creation of the service company, PPL Services, which provides services previously provided by PPL Resources to all PPL affiliates, in 2000; and
- A change in allocation method for indirect costs from a single factor allocation (based on affiliate capitalization) to a three factor allocation (based on average

capitalization, operation and maintenance expense, and number of employee percentages).

The Commission approved affiliated interest agreement does not specify a methodology to be used for cost allocations. Instead, the agreement simply states that costs will be distributed either directly or indirectly by an unspecified allocation method.

Agreements between a regulated utility and its affiliates need to be approved by the Commission. The authority to approve contracts between public utilities and their affiliates comes under the Commission's general authority to regulate public utilities in the Commonwealth at 66 Pa. C.S. § 2102(a) and (b), which state, in part, that:

> **(a) General rule** - No contract or arrangement providing for the furnishing of management, supervisory, construction, engineering, accounting, legal, financial, or similar services . . . between a public utility and any affiliated interest shall be valid or effective unless and until such a contract or arrangement has received the written approval of the commission . . .
> **(b) Filing and action on contract** - It shall be the duty of every public utility to file with the commission a verified copy of any such contract or arrangement, or a verified summary as described in subsection (a) of any such written contract or arrangement . . . The commission shall approve such contract or arrangement made or entered into after the effective date of this section only if it shall clearly appear and be established upon investigation that it is reasonable and consistent with the public interest . . . No such contract or arrangement shall receive the commission's approval unless satisfactory proof is submitted to the commission of the cost to the affiliated interest of rendering the services or of furnishing the property or service described herein to the public utility. No proof shall be satisfactory within the meaning of the foregoing sentence unless it includes the original (or verified copies) of the relevant cost records and other relevant accounts of the affiliated interest . . . . .

Therefore, PPL Electric Utilities should file an affiliated interest agreement for each affiliate company that it provides services to or receives services from. Each AI agreement should identify specific services provided between the specific affiliates rather than a single broad affiliate interest agreement that covers the entire corporation and could include any companies that may or may not have a relationship with PPL Electric Utilities. Any specific agreements between affiliates for services should be filed and approved by the Commission, as necessary, to reflect current allocation methodology, services provided, and any changes in corporate structure which may affect any current agreements on file.

2. PPL has not adequately completed implementation of improvement opportunities identified in its extensive 2003 study of corporate services and related recommendations.

The Bureau of Audits' 2002 Focused Management and Operations Audit Report of PPL Electric Utilities Corporation, North Penn Gas Company and PFG Gas, Inc. issued at Docket Nos. D-01MGT001, D-01MGT004, and D-01MGT020, Public Meeting of June 27, 2002, included a recommendation in Chapter VII, Recommendation No. 3 that a study be completed to compare market rates to the costs of services provided by PPL Services, to its affiliates including its regulated affiliates. As a result of this audit recommendation, PPL completed a study of its corporate services in 2003. The study included potential PPL Electric Utilities operation and maintenance savings (charged back to the business lines as direct or indirect support costs), as well as other potential savings for PPL Corporation that are not billed from PPL Electric Utilities to the business lines. As discussed in Finding and Conclusion No. 15 in the Audit Staff's report on the 2006 Management Efficiency Investigation at Docket Numbers D-05MEI001, D-05MEI049, and D-05MEI050, Public Meeting of April 20, 2006, the study identified cost reduction opportunities that if implemented would result in a potential savings of $30 million corporate-wide with approximately $8 million impacting PPL Electric and Gas Utilities based on the allocation of costs for services provided from PPL Services.

As part of the Audit Staff's current review, efforts were made to substantiate the actions taken by PPL in pursuing and realizing the cost reduction opportunities identified in the 2003 study; however, documentation to support the implementation of any cost saving opportunities was not provided. PPL Services simply asserts that corporate-wide budgets were reduced by the amount of each savings opportunity identified in the study, and no additional follow-up was required to ensure that the recommendations were implemented by the service groups. However, the true impact is actual cost incurred not a change in budget amounts. Unfortunately the Company has made no attempt to document the actual cost impact resulting from any changes it made in response to the study results.

As stated in the June 1999 Survey, Analysis, and Transfer Pricing Policies report issued by Deloitte & Touche for the Edison Electric Institute:

> .... Market prices should be the benchmark for transfer prices whenever they are readily determinable and reflective of a competitive market …. Market prices meet the fairness test since all similarly situated affiliated and non-affiliated market participants would pay the same price for the same services.

The Audit Staff strongly agrees that it would be good business practice to

periodically compare the costs of services provided between affiliates to market rates. While PPL's Human Resources department performing a compensation study every two years to verify that wages and benefits provided to employees are in line with market rates for those positions is a good first step, the Company should also periodically solicit competitive bids or rate quotes to assure that the ultimate costs for specific departmental functions are reasonable and that services from affiliates are provided on a least cost basis.

Recommendations

1. **Submit for Commission review and approval an updated contract or agreement for each affiliate that PPL Electric Utilities receives services from or provides services to, which should include information regarding the services to be received or performed and a description of the cost allocation methodology that will be applied.**

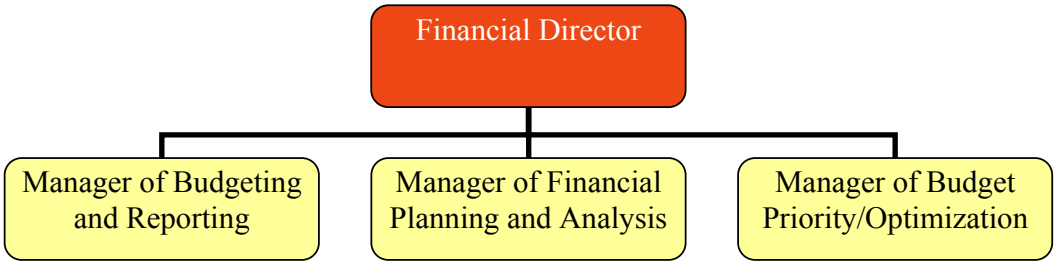
2. **Compare the internal cost of services provided between PPL Electric Utilities and their corporate affiliates to market rates on a periodic basis and document the actual savings realized from any resultant changes.**

VI. FINANCIAL MANAGEMENT

Background

The PPL Electric Utilities Corporation (PPL Electric Utilities or Company) Finance Department consists of three groups: Budgeting and Reporting, Financial Planning and Analysis, and Prioritization and Optimization. PPL Electric Utilities' Finance Department, as shown in Exhibit VI – 1, is overseen by the Company's Financial Director. There are three groups that report to the Financial Director: Budgeting and Reporting (oversees budget reporting and forecasting), Financial Planning and Analysis (performs strategic planning and financial analysis), and Prioritization and Optimization (responsible for cost/benefits prioritization and process management)

Exhibit VI – 1
PPL Electric Utilities
Financial Management Organization Chart
As of June 2008



Source: Data Request GD-1

PPL Electric Utilities' Budgeting and Reporting group is responsible for compiling the Company's annual budgets. In mid-March the Company begins work on its five-year capital and operating budgets. PPL Electric Utilities uses its most recent budget with relevant increases and decreases to reflect their anticipated internal costs and costs from affiliates, which are compiled by PPL Services' Financial Planning group, as a starting point for its capital and operating budgets. The President of PPL Electric Utilities and top level directors review the budgets several times with the Company's Finance Department before they are finalized and then submitted to PPL Corporation (PPL) around mid-September. The Finance Committee of the PPL Board of Directors approves the consolidated PPL budget in December.

The capital budget is based on improvement projects, planned replacements, and major equipment purchases, which the Company's Prioritization and Optimization group

determines to be high priority. Capital projects are not to be initiated unless funding is approved in the capital budget. If unanticipated projects or project overruns occur, a request for a reallocation of budgeted funds from one project to another must be made to the Prioritization and Optimization group. Approvals for trade-offs are based on priority of the affected projects.

All budget variances are reviewed monthly within the Budgeting and Reporting group of PPL Electric Utilities' Finance Department. The Finance Department compiles a monthly performance report for PPL Electric Utilities' management which provides explanations that are supplied by the departments responsible for any capital and operating budget variance without being subject to a specific threshold. The Project Management group within PPL Electric Utilities' Planning and Engineering Services department oversees capital projects and looks at capital budget variances periodically. Additionally the Project Management group maintains documentation about the completion of projects including budget variances. Budget variances are supplied to the Finance Department monthly for inclusion on the performance report.

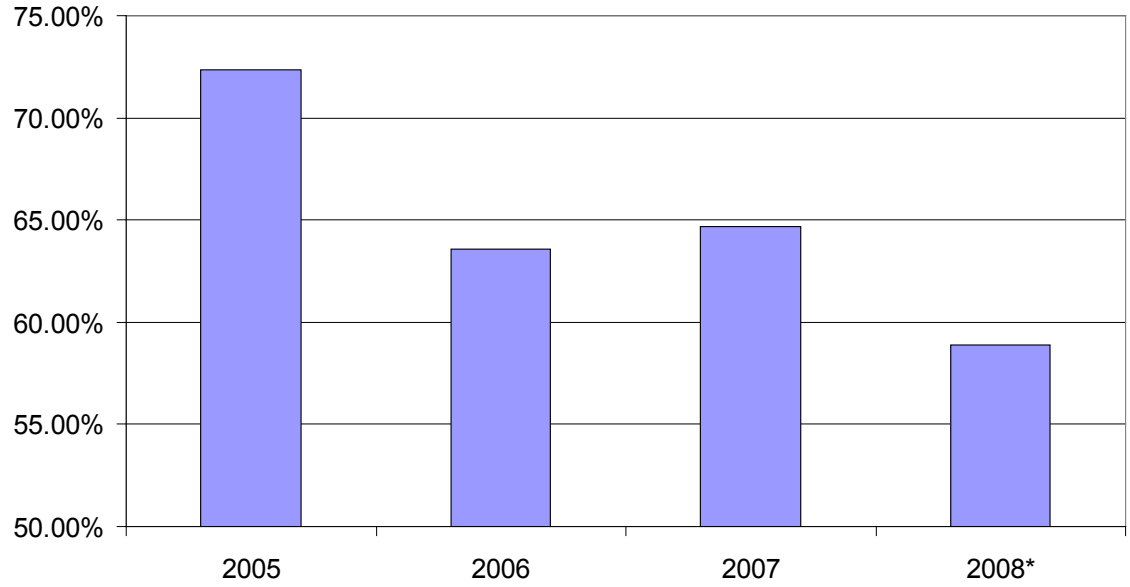
PPL Electric Utilities declared preferred stock and common stock dividends every quarter during the time being examined in this audit (i.e., 2005 through 3rd quarter 2008). PPL Electric Utilities adheres to the *Capitalization and Dividend Guidelines* which is updated each year by PPL Services' Chief Financial Officer and Treasurer. The current capital structure guidelines are: 45% to 55% debt and 55% to 45% equity. The current dividend guideline is 55% to 70% of the prior quarter's net income plus special dividends. A special dividend is an extraordinary distribution used to reduce the overall amount of equity in the capitalization structure without impacting credit quality. All dividend payouts by PPL Electric Utilities must be approved and declared by its Board of Directors.

The common stock dividend is used by PPL for general corporate purposes, including meeting its cash flow needs. It should be noted that PPL Electric Utilities may not pay dividends on its common stock, unless full dividends have been paid on the 6.25% Series Preference Stock for the then-current dividend period. Additionally, as part of PPL Electric Utilities' ring-fencing measures (see Chapter V – Affiliated Relationships for further discussion) PPL Electric Utilities' 2001 Senior Secured Bond Indenture restricts common stock dividend payments in the event PPL Electric Utilities fails to comply with certain requirements included in its Articles of Incorporation and Bylaws to maintain separateness from PPL and its subsidiaries or fails to meet interest coverage ratios.

Exhibit VI – 2 illustrates PPL Electric Utilities' common stock dividend payments from 2005 through 3rd quarter 2008, expressed as a percentage of the relevant quarter's net income. PPL Electric Utilities recognizes that 2005 was slightly above the 55% to 70% dividend guidelines, however it notes that the prior year was under the guidelines at

approximately 45%. Nonetheless, when taking into consideration the overall payout over the multi-year period, the payout ratio is within the guidelines.

Exhibit VI – 2
PPL Electric Utilities
Common Stock Dividend Payments
2005 to 2008



* 9 months ended September 30, 2008
Source: Data Request FM-33 and SEC filed documents (10-Ks and 10-Qs)

PPL Electric Utilities has established policies for short-term and long-term borrowing and investment programs. PPL Electric Utilities issues Senior Secured Bonds to meet its long-term debt financing requirements. Typically, the terms of the bonds are between 10 and 30 years. As of December 31, 2007, PPL Electric Utilities had $1,279,000,000 in long-term debt. A Securities Certificate issued by the Pennsylvania Public Utility Commission is requested by PPL Electric Utilities for authorization to issue long-term debt to fund the construction or acquisition of long-term utility property. For short-term borrowing, PPL Electric Utilities maintains a list of approved Securities Dealers and a list of approved Commercial Banks established by the Finance Section of PPL Services and approved by the Treasurer. As of December 31, 2007, PPL Electric Utilities had $41 million in short-term debt.

A majority of PPL Electric Utilities' employees are eligible for a non-contributory defined benefit pension plan. PPL Electric Utilities participates in a pension plan sponsored by PPL Services. PPL Electric Utilities is allocated a portion of the funded

status and costs of the pension plan based upon the dollars invested. For the year ended December 31, 2007, PPL Electric Utilities' allocated portion of the net periodic defined benefit costs, which was charged to operating expense, was $17 million. The Pension Protection Act of 2006 requires companies to be 100% funded by 2011. The phase-in schedule expects companies to be at least 92% funded in 2008, 94% funded in 2009, and 100% funded in 2011. As shown in Exhibit VI – 3, PPL Services sponsored pension plan was 101.05% funded as of December 31, 2007 which was the most recent information available at the time the audit was conducted.

Exhibit VI – 3
PPL Services Sponsored Pension Plan
Pension Obligation
As of December 31, 2007

	Accumulated Pension Obligation
Pension Obligation	$2,189,000,000
Pension Assets at fair value	$2,212,000,000
Percent funded	101.05%

Sources: S&P 500 2007 Report: Pensions and Other Post Employment Benefits and SEC filed document (10-K)

It should be noted that in 2007 a risk assessment of the pension plan was performed. A key recommendation resulting from the risk assessment was to change the investment allocation to a more risk adverse position that was later approved by the PPL Board of Directors in 2008. When the Company was asked how the recent downturn in the stock market was affecting the pension plan, it was stated that the funded status of the pension plan depended on the movement in interest rates, which impacts the value of liabilities in the plan. At that point it was unclear how the interaction between changes in equity values and interest rates would impact the funded status of the pension plan. The Company is scheduled to have its annual pension actuarial valuation performed during the first quarter of 2009. Furthermore, the Company believes that any losses incurred during 2008 will be manageable.

Findings and Conclusions

Our examination of the Financial Management function focused primarily on a review of accounting policies and procedures, the capital and operating budget process, budget variance tracking and reporting, long and short-term financing policies

and activities, and the pension program. Based on our review, it appears that proper controls are in place and that the Financial Management function is being performed in a satisfactory manner.

Recommendations

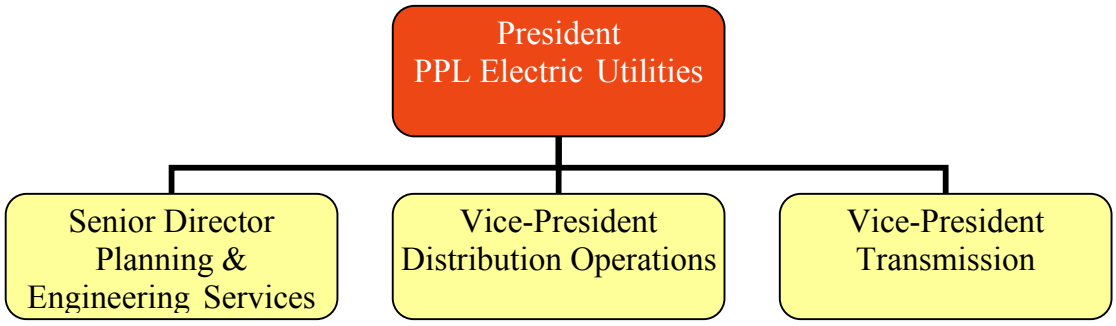
None.

VII. OPERATIONS AND ELECTRIC RELIABILITY

Background

In 2007, PPL Electric Utilities provided 39,286,863 Mega-Watt hours to approximately 1.4 million customers across 29 counties in eastern and central Pennsylvania. The Company has a radial distribution system encompassing about 44,000 miles of overhead and underground distribution line and an additional 4,900 miles of transmission line. PPL Electric Utilities' transmission system is part of the Pennsylvania, New Jersey, Maryland Regional Transmission Organization (PJM). Exhibit VII – 1 depicts the various departments responsible for PPL Electric Utilities' transmission and distribution (T&D) operations.

Exhibit VII – 1
PPL Electric Utilities
Transmission & Distribution Organizational Chart
As of June 2008



Source: Data Request GD-1

Planning and Engineering Services

The Planning and Engineering Services Department includes the following groups: distribution planning, system reliability and work scope, system maintenance, design and engineering, project management and estimating, technology development, and application support. These groups ultimately provide support for field personnel and are typically considered centralized but fully integrated functions. Distribution planning is responsible for analyzing load growth and customer usage trends and assuring that the distribution system will be able to provide the needed future distribution demand. However, if new facilities are required, it would be the responsibility of the Design and Engineering group. In fact, Design and Engineering are responsible for all design work except for the service connections for most residential customers.

` The System Reliability and Work Scope Group handles a large variety of issues related to PPL Electric's reliability management practices and procedures. For the system reliability aspect, this group is responsible for tracking and reporting System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), Customer Average Interruption Duration Index (CAIDI) and Momentary Average Interruption Frequency Index (MAIFI) data on a system-wide basis. Moreover, this group is also accountable for tracking and reporting the number of outages or cases of trouble, number of customer interruptions and customer minutes interrupted (CMI) by each outage cause. Regarding the work scope aspect, this group tries to create a tie between the amounts of dollars spent on inspection and maintenance activities and the results achieved, including reliability impacts. In order to support PPL Electric Utilities' overall reliability management metrics structure, the System Reliability and Work Scope group also measures and monitors several other reliability metrics such as transmission and distribution system vegetation management work, worst performing circuits, storm data, etc. Monthly, the resulting reports are reviewed by management.

The System Maintenance group is responsible for creating/setting the inspection criteria for distribution, substation, and transmission facilities. The actual field inspections and maintenance work is performed by Field Services within the Distribution Operations Department. However, the System Maintenance Group, with the aid of the engineering group, sets the maintenance intervals and performance indicators for maintenance activities. When Field Service identifies a potential maintenance problem, system maintenance is responsible for analyzing and then scheduling a work request to perform the job. PPL Electric Utilities is transitioning to a new maintenance database that will manage and trend maintenance activities for transmission and substation equipment (or larger, routine maintenance equipment) referred to as CASCADE. On the other hand, maintenance of distribution equipment is generally considered to be "run to failure" (or run until the equipment is replaced) but PPL Electric Utilities is currently working on completing a Maintenance Basis Database, a database independent of CASCADE. The database is a maintenance optimization plan for distribution equipment, enabling PPL Electric Utilities to identify potential faulty equipment, establishment of a capital replacement program (if warranted), or other trends affecting small distribution equipment.

As of 2008 , the Vegetation Management group fell under the System Maintenance group and was responsible for all vegetation management matters such as: Vegetation management program specification development, vegetation management budgeting and expenditure tracking, collection of contractor work schedules, and contract management of distribution and transmission line clearance activities, etc. PPL Electric's line clearance trimming cycles on overhead primary distribution lines are four years for urban circuits (>35 customers per mile) and six years for rural circuits (<35 customer per mile).. Primary overhead distribution lines are not inspected at set intervals for its tree trimming program; however, PPL Electric Utilities has a process for rating circuits that need to

be trimmed in the following year. This rating process is based on vegetation influence of various circuit performance factors such as SAIFI, customer minutes interrupted, and other circuit characteristics such as trim cycle status and the number of industrial customers and critical customers.

Transmission line vegetation clearance activities are based on scopes of work as determined by regularly scheduled surveys. Transmission lines are aerially patrolled on an annual basis during the May/June timeframe. Ground surveys for bulk power (230kV and 500kV) are performed every three years and surveys for 69kV and 138kV lines are performed every four to six years. The information gathered from the combination of ground surveys and aerial patrol activities is then used to generate an annual scope of work to maintain transmission system reliability.

Although most vegetation management contracts are unit based, PPL Electric Utilities also maintains contractual provisions to incorporate work based on time and material such as hot spotting, storm work, and capital work such as line extensions, etc. PPL Electric Utilities participates in Pennsylvania's Municipal Tree Replacement Program and the Urban Forestry Council. Furthermore, PPL Electric Utilities has obtained the Tree Line USA designation, an award recognizing utilities that demonstrate practices that protect and enhance community forests, from the National Arbor Day Foundation for 2003 to 2007. Moreover, although it was not an active participant as of June 2008, PPL Electric Utilities is also a member of the Environmental Protection Agency's Pesticide Environmental Stewardship Program. Additionally, in accordance with the North American Electric Reliability Council's (NERC) Standard FAC-003-1, PPL Electric Utilities has maintained a Transmission Vegetation Management Program (TVMP) to "improve the reliability of the electric transmission system by preventing outages from vegetation located on transmission right of way (ROW) and minimizing outages from vegetation located adjacent to the ROW."

Large capital projects are managed by the Project Management and Estimating group. Typically, projects will be assigned a project manager if they are complex or over $1 million. On average, 10% of capital projects require a project manager which accounts for 90% of the capital budget. Projects are identified by Transmission or Distribution Planning and then assigned to the Project Management group to prepare an estimate. Once the project is budgeted and prioritized, the project manager monitors the project from cradle to grave. During various phases and/or changes, the project manager must present any changes to a Project Review Committee and, if needed, for the appropriate financial approvals.

Distribution Operations

The Distribution Operations Department includes such areas as resource management, emergency planning, safety training and work methods, system shops,

mobile projects, human performance, and regional operations. Distribution Operations is split into six geographical regions which include Lehigh, Harrisburg, Central, Lancaster, Susquehanna, and Northeast. Each region is responsible for the everyday operation of its respective distribution system. Moreover, regional personnel's responsibilities also include field management, design of most residential services, mapping, regional reliability, and resource management. Primarily, Distribution Operations is responsible for all field operations which require support from safety and human performance functions. These two groups focus on the safe performance and training of field personnel. Overall operation related staffing has remained relatively constant over the past five years. In addition, PPL Electric Utilities' efforts in attracting and retaining talent were found to be satisfactory. For more information refer to the background section of Chapter XII – Human Resources.

PPL Electric Utilities is currently implementing a mobile operation management (MOM) project. MOM enables dispatchers to assign work to Field Services which in turn provide updates to the dispatchers through a mobile system. In addition, MOM provides Field Services with GPS capabilities as well as computerized mapping and records of facilities. PPL Electric Utilities completed the first phase of the project in June 2008 by utilizing MOM to dispatch troublemen (the Company's term for troubleshooters). The second phase, which was anticipated to be completed by November 2008, will have all linemen using MOM. The final phase will allow all field service personnel to use MOM and even make it possible for customer service representatives to schedule customer connect/disconnect requests through MOM.

Transmission

The Transmission Department is comprised of the transmission regulatory affairs group, transmission planning group, system operations group, and transmission expansion group. At PPL Electric Utilities, transmission line voltages are defined as 69 kV and above. Many of the duties within the Transmission Department interface with other transmission owners, PJM Interconnection (a regional transmission organization that coordinates bulk power transfers for 13 states and the District of Columbia including Pennsylvania), and regulatory agencies such as the Federal Energy Regulatory Commission. However, distribution and transmission system operation is also located within this Department and their responsibility is to dispatch emerging work and to monitor transmission and distribution performance. PPL Electric Utilities currently has four distribution operating centers with one of the distribution operating centers also managing transmission operations. However, PPL Electric Utilities plans to consolidate to two operating centers (an east and a west) by the second quarter of 2009.

Findings and Conclusions

Our examination of the Transmission and Distribution organization included a review of vegetation management, electric reliability, maintenance policies and procedures, staffing levels, etc. Based on our review, the Company should devote additional efforts to improving the efficiency and/or effectiveness of its electric system operations by addressing the following:

1. There are opportunities for PPL Electric Utilities to improve its use of distribution foot patrols.

PPL Electric Utilities foot patrol and infrared inspection activity is summarized in Exhibit VII-2. Historically, PPL Electric had an internal procedure to conduct foot patrols based on a three year schedule. However, after a detailed cost benefit analysis study conducted in 2004 to optimize distribution line inspections, PPL Electric Utilities now performs foot patrols/inspections of distribution lines based upon an analysis of various circuit performance indicators in each region. This process emphasizes the visual inspection of facilities and surrounding areas (i.e., vegetation, vulnerability to traffic, etc.) on the worst performing circuits of each region. This approach allows the Company to focus time and resources on areas that have historically caused the most problems. The Audit Staff agrees with PPL Electric Utilities efforts to remediate these worst performing lines but notes that there may be additional distribution facilities that could benefit from foot patrols.

Exhibit VII – 2
PPL Electric Utilities
Foot Patrol and Infrared Inspections of Distribution Lines
2006, 2007, and January-October 2008

Activity	2006	2007	Jan- Oct 2008
Total Infrared Inspections (miles)	2,579	2,839	2,372
Total Foot Patrols (miles)	2,655	1,487	2,525
Miles of Multiphase Distribution Lines	8,441		
Miles of Primary Distribution Lines	27,900		
Percent of System Infrared Inspected	30.6%	33.6%	28.1%
Percent of System Foot Patrolled	9.51%	5.33%	9.05%

Source: Data Request EO-34

By basing the entire distribution line foot patrols on worst performing circuits, the Company has created a proactive approach to improving reliability based on historical performance. In other words, a circuit must have already performed poorly (i.e., outages, voltage problems, etc.) to qualify for foot patrols. In contrast, equipment failures,

vegetation growth, and vulnerability could be prevented by identifying and repairing problems through a comprehensive preventative maintenance program including foot patrols and thermovision[1] inspections. Another way to reduce the risk of equipment failures is to proactively replace aging and deteriorating equipment based upon an asset health assessment.

Distribution line inspections such as foot patrols and infrared imaging compete for limited funds and manpower with other maintenance activities. In fact, in 2007, PPL Electric Utilities reduced the amount of miles patrolled by foot in order to fund higher priority line maintenance. Ideally, any effective proactive preventative maintenance program such as foot patrols should be based on asset management (such as information from the Maintenance Basis Database noted earlier), risk mitigation, and financial prudence and not be constricted solely to restorative efforts. With this risk-based approach to distribution foot patrols, PPL Electric Utilities would be able to more readily identify circuits, regions, or areas to proactively prevent outages and improve the reliability of the distribution system.

In addition, on May 22, 2008, at Docket No. L-00040167, the Pennsylvania Public Utility Commission adopted a Final Inspection and Maintenance Rulemaking Order which was approved by the Pennsylvania Independent Regulatory Review Commission on August 7, 2008. As a result 52 Pa. Code Chapter 57 was expanded to add inspection, maintenance, repair, and replacement standards (I&M Standards) for electric distribution companies. The I&M Standards at 52 Pa. Code §57.198(N)(4) have set intervals for visual inspection of distribution overhead lines to be conducted at least once every one to two years (with an alternative for the EDC to petition the Commission with justification for a different schedule). Electric distribution companies (EDCs) will be required to file their first biennial plan on October 1, 2009 or October 1, 2010 depending on the EDC grouping. The first biennial plan will be in effect for calendar years 2011 and 2012 or 2012 and 2013 depending on the filed plan date. Biennial plans, including any deviation from the adopted standards, must be approved by the Commission's Bureau of Conservation Economics and Energy Planning. Therefore, EDCs will have 15 months after their biennial plans are approved to implement policies and procedures to conform with the I&M standards. Although, PPL Electric Utilities does not need to comply with the I&M Standards until 2011-2013, any waiver from the established one to two year inspection schedule must be based on a cost-benefit analysis that demonstrates an informative, proactive, and comprehensive approach to distribution line inspections.

[1]Thermovision is a technology that allows for infrared (or temperature) inspections/recordings. The temperature profile of equipment can often identify microscopic or minor deficiencies otherwise undetectable by the naked eye.

2. The Company's outages caused by equipment failure and trees not related to trimming issues have consistently been more frequent than outages due to other causes.

On December 16, 1999, the Commission entered a Final Order at Docket No. M-00991220, establishing reliability benchmarks and standards for Pennsylvania EDCs. These PUC-established benchmarks for SAIFI, SAIDI, and CAIDI were based on the average performance of each EDC during 1994-1998. In 2004, the Commission modified the benchmarks, standards and the reporting requirements of the EDCs. Large EDCs, such as PPL Electric Utilities, are required to maintain standards for a rolling 3-year period within 10% of their PUC-established benchmark and for a rolling 12-month period within 20% of the benchmark. The intent of this two-tiered approach to setting standards is to allow for some variability in performance over a short period of time while pushing for performance near the benchmark level over a longer period of time. Reliability is considered to be within a reasonable range when actual results fall between the benchmark and the standards.

Exhibit VII – 3 shows PPL Electric Utilities' reliability performance for SAIFI, SAIDI and CAIDI from 2004 through 2007 and January - November 2008, the corresponding PUC-established benchmark and the rolling 12-month and 3-year standards. Historically, PPL Electric Utilities has been a good SAIFI performing company; except for 2006 which was primarily due to bad storms (excluding major events which are excluded from the Company's performance). System-wide, the Company's SAIFI performance has stayed below the rolling 12-month standard, but has slightly exceeded its rolling 3-year standard. PPL Electric Utilities' CAIDI exceeded the benchmark in 2004, 2006 and 2008 but consistently stayed below the rolling 12-month and 3-year standard from 2004 through 2007. For the most part, the Company's SAIDI has stayed below the 12-month and 3-year standard; except in 2006 which, as aforementioned, was a bad storm year.

Exhibit VII – 3
PPL Electric Utilities
System-wide Reliability Indices
2004 to 2008

	2004	2005	2006	2007	2008*	Benchmark	Rolling	3-year Average	Rolling 3-year Standard
SAIFI	1.09	0.96	1.27	1.11	0.97	0.98	1.18	1.12	1.08
SAIDI	173	121	208	146	166	142	205	173	172
CAIDI	159	125	164	140	172	145	174	159	160

* - Reflects performance from January – November 2008.
Source: Data Request ER-3 and ER-35

PPL Electric Utilities tracks tree related outages by two separate categories: outages that are due to inadequate trimming (code 30) and outages that are not trimming related (code 35). Trimming related outages are caused by branches that break off less than 15 feet above the conductor and create phase-to-phase or phase-to-neutral contact or by branches that would normally be trimmed but due to insufficient trimming or excessive tree growth between trim cycles grew into the line. Non-trimming related outages are usually caused by trees falling into the line that are either on the edge of or outside the right of way (ROW). Branches that break off greater than 15 feet above the conductor and fall into the line are also considered non-trimming related. Moreover, non-trimming related outages are frequently caused by storms with strong winds that blow branches from outside the Company's ROW into the overhead lines, and these outages are generally considered to be beyond the direct control of the utility.

PPL Electric Utilities' storm data from 2002 through September 2008 is summarized in Exhibit VII – 4. As depicted in Exhibit VII – 4, the Company experienced bad storm years in 2006, 2007, and YTD 2008 which was the main contributing factor to outages that were caused by trees that were not trimming related. At PPL Electric Utilities, non-reportable storms are those storms where outages met the Company's storm criteria but did not qualify as PUC reportable. An event meets PPL Electric Utilities' storm criteria when an area has 12 – 15 simultaneous cases of trouble that contacts related to it are taken out of the Customer Contact Center (CCC) and handled by the storm emergency room.

Exhibit VII – 4
PPL Electric Utilities
Storm Data
2002 – 2008

	2002	2003	2004	2005	2006	2007	2008*
Non-reportable	12	8	14	9	19	22	17
PUC reportable	7	1	4	4	9	5	5
PUC Major Event	1	4	0	1	0	1	0
Total	**20**	**13**	**18**	**14**	**28**	**28**	**22**

*Reflects storm data from January – September 2008.
Source: Data Request ER-34

As illustrated in Exhibit VII – 4, PPL Electric Utilities has had more non-reportable storms since 2002 than any other storm category. PUC reportable storms are those storms where at least 2,500 customers are out of service for six hours or more. PUC Major Events are those storms that affect 10% or more of PPL Electric Utilities' total customer base. The effects of the Major Events, upon PUC's approval, are excluded from the reliability metrics' results.

PPL Electric Utilities is aware of the fact that a majority of its tree related outages are due to trees that are beyond the Company's ROW and that a majority of these outages occur during extreme weather conditions. In addition, there were situations where PPL Electric Utilities had circuits with performance issues (i.e., worst performing circuits (WPCs)), being caused by trees from outside the ROW. As a result, PPL Electric Utilities implemented the Hazard Tree Removal Program in order to identify and proactively remove trees along these feeders and consequently attempt to reduce the non trimming related outages. This program was initiated in the Harrisburg region towards the end of 2007 but was not implemented in the other regions until 2008. Moreover, in 2008, PPL Electric Utilities created a separate line item in its Vegetation Management (VM) budget for this program. By October 2008, the Company had expended approximately $1.6 million of the $1.7 million that had been budgeted for that year. Hazard trees are either marked for trimming on maps before the tree crews go out or are marked for removal as the crews progress along the circuits. According to the Company, over 10,000 hazard trees were removed in 2008. In addition to the Hazard Tree Removal Program, PPL Electric Utilities has started gathering tree fall-in information and providing that data to regional foresters in order to reduce tree related outages and in particular non-trimming related outages.

The number of outages in each region that were caused by trees that were outside the Company's ROW or non-trimming related are shown in Exhibit VII – 5. As evident

in Exhibit VII – 5, non-trimming related outages in the Harrisburg region decreased in 2008. It appears that this could have been partially due to the fact that towards the end of 2007, PPL Electric Utilities began implementation of the Hazard Tree Removal Program in the Harrisburg Region.

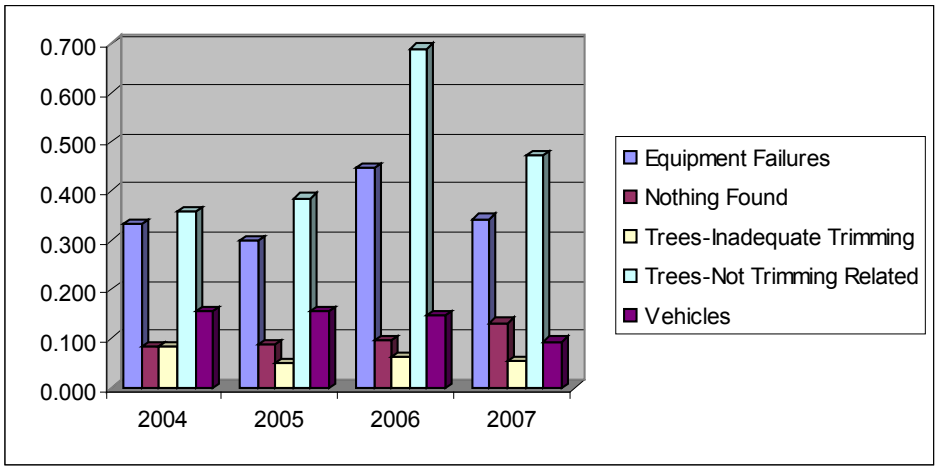
Exhibit VII – 5
PPL Electric Utilities
Outages Due To Trees – Not Trimming Related
2004 to 2008

Region	2004	2005	2006	2007	2008*	% Change 2004 to 2007
Lehigh	425	372	753	500	873	17.6%
Northeast	763	883	1,556	929	1,124	21.7%
Central	275	304	522	506	371	84.0%
Susquehanna	518	666	782	726	897	40.1%
Harrisburg	693	369	723	645	489	-6.9%
Lancaster	387	260	665	461	768	19.1%

*annualized from actual results through September 2008.
Source: Data Request ER-19, ER-35 and ER-35a

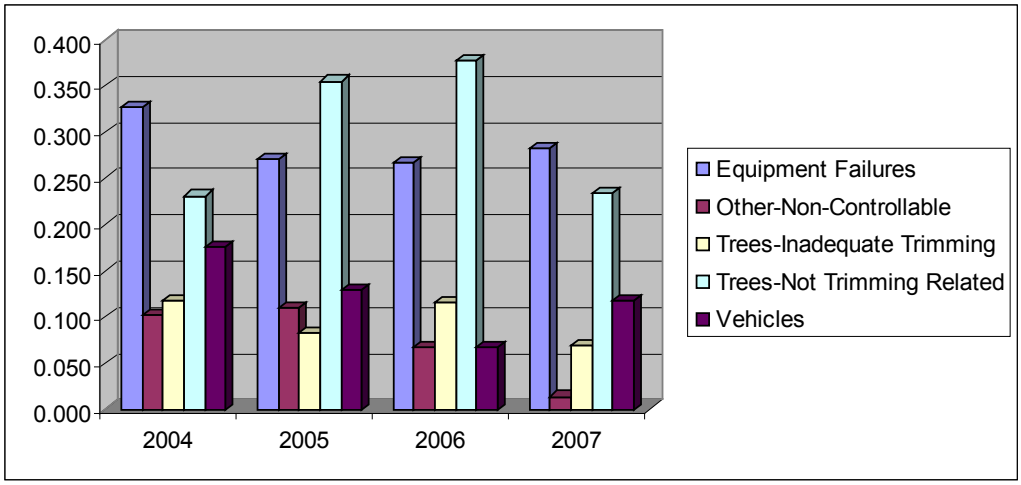
On a regional basis, as shown in Exhibit VII – 6 and VII – 7, outages due to equipment failure and trees that are outside the ROW have been most prominent in the Northeast and Susquehanna regions, and have significantly contributed to each region's respective SAIFI. Furthermore, as evident from Exhibits VII – 8, VII – 9 and VII – 10, outages due to trees that are outside the Company's ROW have been most prominent in Northeast, Central and Susquehanna regions and they have contributed the most towards each region's respective SAIDI.

Exhibit VII – 6
PPL Electric Utilities
Impact of Outage Causes on SAIFI in the Northeast Region
2004 to 2007



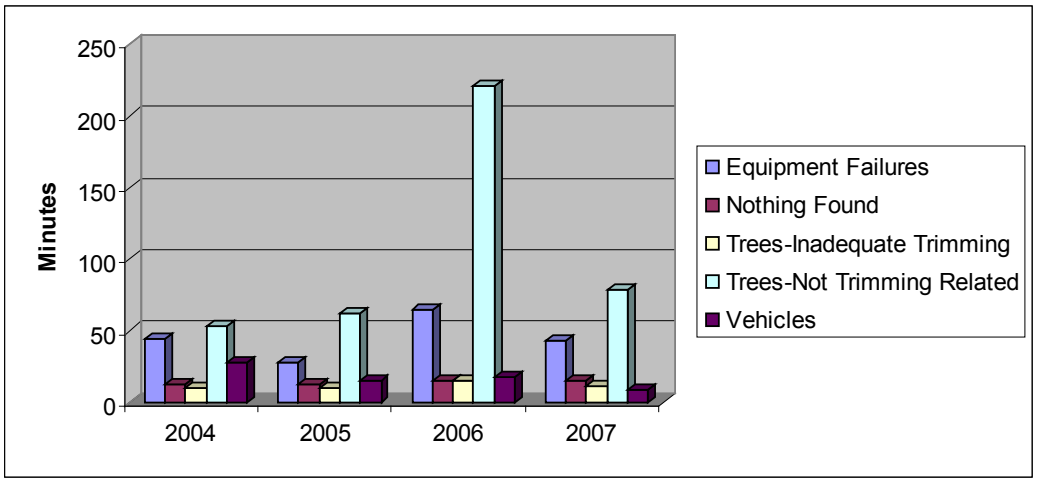
Source: Data Request ER-4a and Auditor Analysis

Exhibit VII – 7
PPL Electric Utilities
Impact of Outage Causes on SAIFI in the Susquehanna Region
2004 to 2007



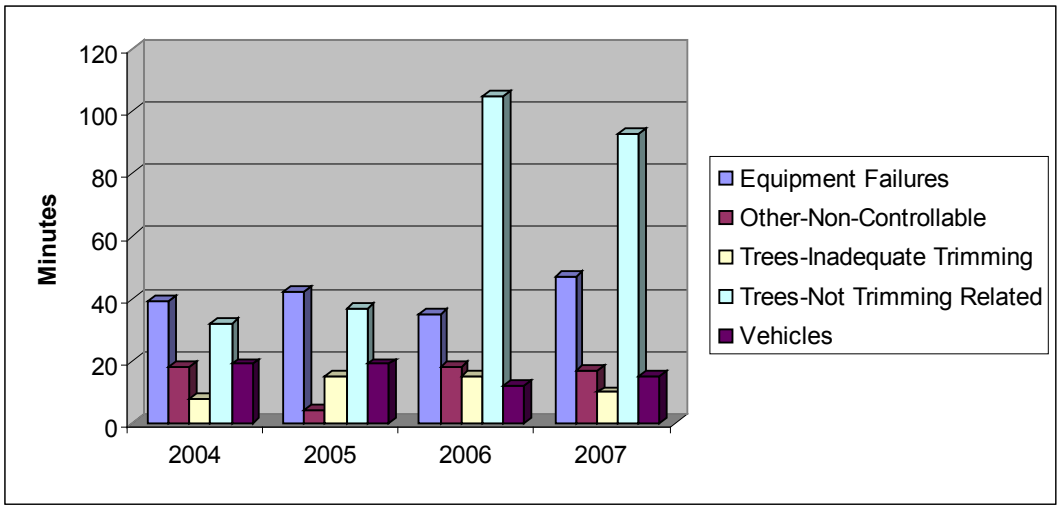
Source: Data Request ER-4a and Auditor Analysis

Exhibit VII – 8
PPL Electric Utilities
Impact of Outage Causes on SAIDI in the Northeast Region
2004 to 2007



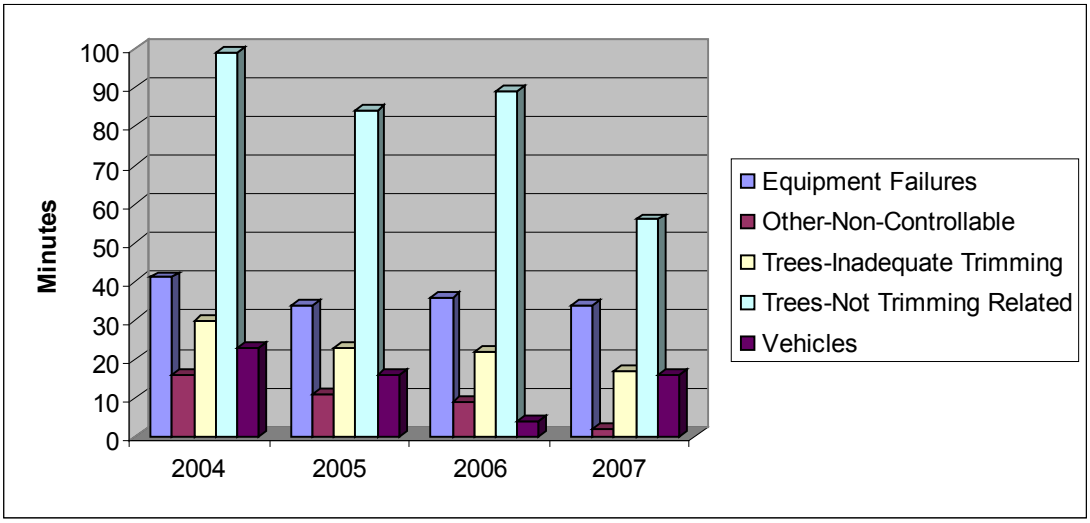
Source: Data Request ER-4a and Auditor Analysis

Exhibit VII – 9
PPL Electric Utilities
Impact of Outage Causes on SAIDI in the Central Region
2004 to 2007



Source: Data Request ER-4a and Auditor Analysis

Exhibit VII – 10
PPL Electric Utilities
Impact of Outage Causes on SAIDI in the Susquehanna Region
2004 to 2007



Source: Data Request ER-4a and Auditor Analysis

PPL Electric Utilities' system-wide outage causes during 2004-2007 are shown in Exhibit VII – 11 and how they affect the overall SAIDI and SAIFI indices. PPL Electric Utilities tracks outage data by 14 causal factors each of which is shown in Exhibit VII – 11. Equipment failure related outages and outages due to trees not trimming related contribute a large percentage towards the annual SAIFI and SAIDI values as shown in Exhibit VII – 11. The Company indicated that outages due to equipment failure are mainly weather related. Additionally, as evident from Exhibits VII – 12 and VII – 13, equipment failure and trees not trimming related have contributed significantly towards system wide SAIFI and SAIDI numbers.

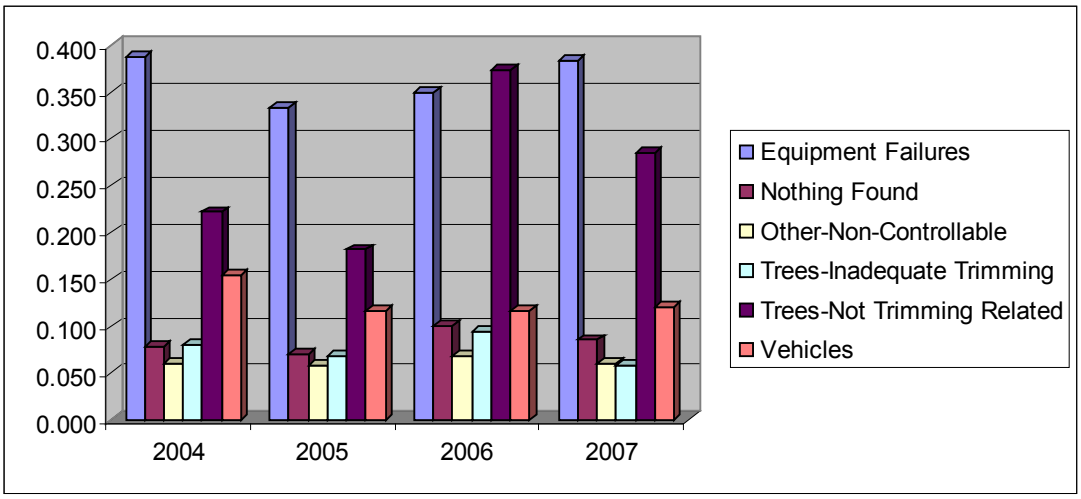
Exhibit VII – 11
PPL Electric Utilities
Effect of Outage Causes on System-wide SAIFI and SAIDI
2004 to 2007

Outage Causes	SAIFI[2]				SAIDI[3]			
	2004	2005	2006	2007	2004	2005	2006	2007
Animals	0.044	0.056	0.070	0.060	4	5	6	4
Contact/Dig-in	0.008	0.012	0.024	0.015	1	1	2	1
Directed by Non PPL Authority	0.037	0.036	0.033	0.007	4	2	3	0
Equipment Failures	0.388	0.334	0.350	0.384	47	35	43	48
Improper Design	0.000	0.000	0.000	0.000	0	0	0	0
Improper Installation	n/a	n/a	0.000	0.005	n/a	n/a	0	0
Improper Operation	0.004	0.001	0.001	0.008	0	0	0	0
Nothing Found	0.079	0.071	0.101	0.086	8	7	11	8
Other-Controllable	0.009	0.018	0.013	0.020	1	1	1	2
Other-Non Controllable	0.061	0.058	0.069	0.061	10	7	9	7
Other-Public	0.002	0.010	0.020	0.005	0	1	2	1
Trees-Inadequate Trimming	0.080	0.069	0.095	0.058	19	13	19	11
Trees-Not Trimming Related	0.222	0.182	0.374	0.285	57	35	96	55
Vehicles	0.155	0.117	0.117	0.121	21	14	13	18
Total	1.089	0.964	1.267	1.115	172	121	205	155

Source: Data Request ER-4a and ER-35a

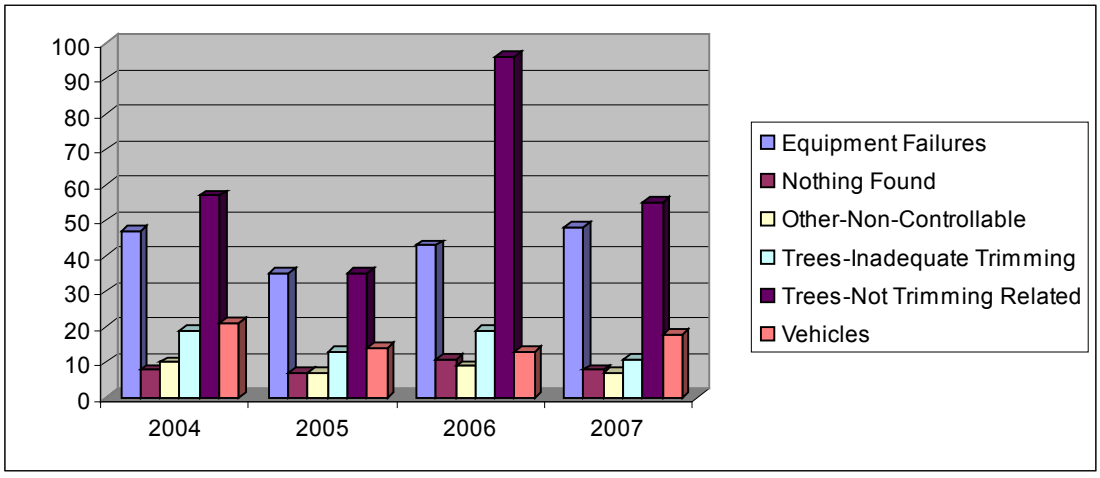
[2] Indicates average frequency of sustained interruptions per customer
[3] Indicates average time the customers are interrupted

Exhibit VII – 12
PPL Electric Utilities
Impact of Outage Causes on System-wide SAIFI
2004 to 2007



Source: Data Request ER-4a and Auditor Analysis

Exhibit VII – 13
PPL Electric Utilities
Impact of Outage Causes on System-wide SAIDI
2004 to 2007



Source: Data Request ER-4a and Auditor Analysis

As shown in Exhibit VII – 14, equipment failures and trees not trimming related have consistently contributed over 50% towards SAIFI and SAIDI.

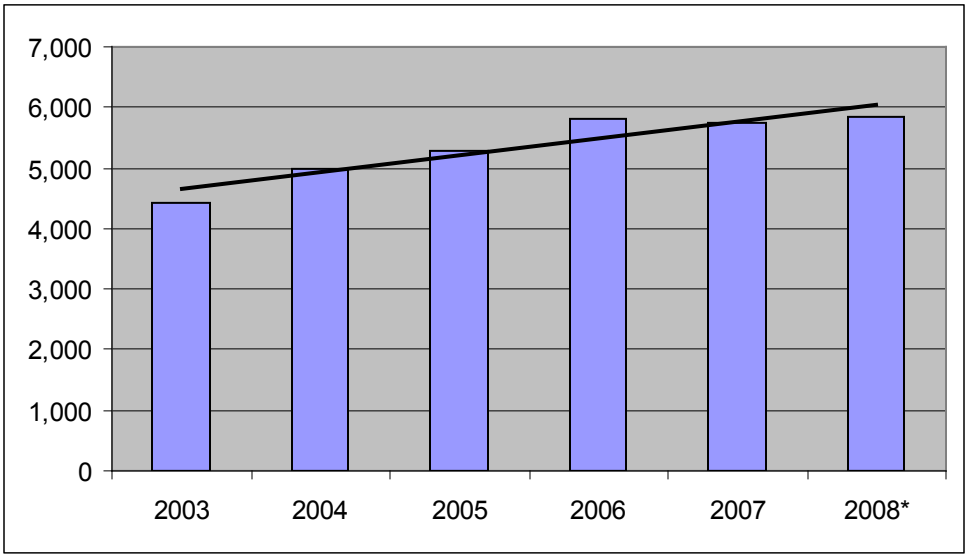
Exhibit VII – 14
PPL Electric Utilities
Contribution of Equipment Failure and Trees Not Trimming Related Outage Causes towards total SAIFI and SAIDI
2004 to 2007

	2004	2005	2006	2007
Contribution towards total SAIFI	56%	53%	57%	60%
Contribution towards total SAIDI	60%	58%	68%	66%

Source: Data Request ER-4a and Auditor Analysis

Exhibits VII – 15 shows the number of outages that were caused due to equipment failure whereas Exhibit VII – 16 shows the number of outages that were caused due to trees not trimming related. As apparent from the trend lines in both exhibits, the number of outages for each of these causal factors has been consistently increasing over the years 2003 to 2008[4].

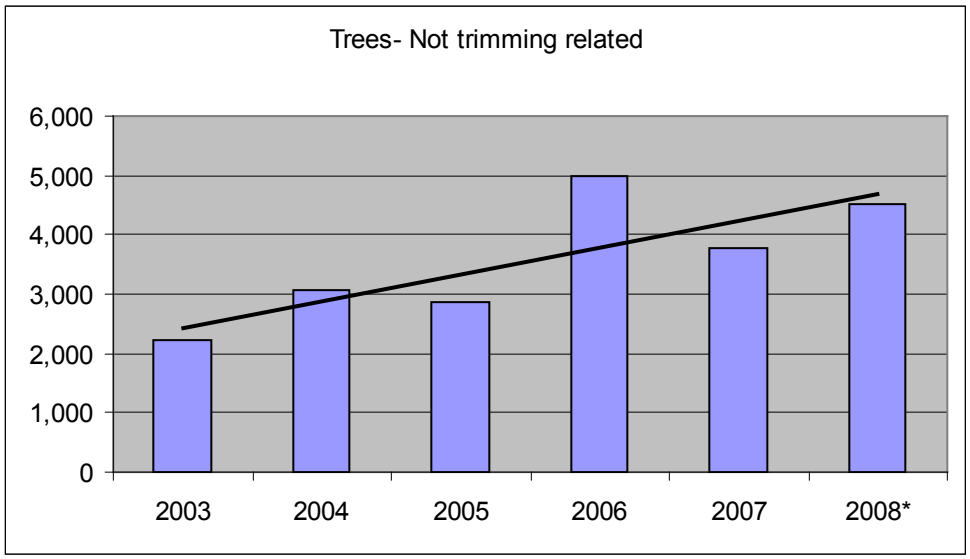
Exhibit VII – 15
PPL Electric Utilities
Outages Due to Equipment Failure
2004 to 2008



*annualized from actual results through September 2008.
Source: Data Request ER-4 and ER-35a

[4] Outages due to storm activity have not been excluded when determining these trends.

Exhibit VII – 16
PPL Electric Utilities
Outages Due to Trees not Trimming Related
2004 to 2008



*annualized from actual results through September 2008.

Source: Data Request ER-4 and ER-35a

In accordance with 66 Pa. C.S. § 1501 and as part of their public service obligation, EDCs are required to undertake prudent operational measures to avoid outages that are preventable at a reasonable cost, and to inspect, repair, and maintain their facilities in a manner consistent with prudent utility practices. By methodically reducing outages due to equipment failure and trees not trimming related, the Company could achieve reliability performance that is closer to its PUC benchmarks.

3. PPL Electric Utilities is not fully utilizing the capabilities of its new comprehensive equipment inventory and data management software.

PPL Electric Utilities initiated replacement of its legacy Substation Maintenance System and Transmission Maintenance Program with CASCADE in January 2008. CASCADE is a comprehensive software program that maintains equipment inventory data, equipment failure history, and condition or health of the equipment. It has the capability to automatically generate specific maintenance related work requests based on triggers or predictive variables.

The Company has plans to finish populating CASCADE by the end of 2008 and once fully implemented (i.e., substation equipment has already been fully defined and transmission equipment was planned to be finished by the end of 2008) CASCADE will

be PPL Electric Utilities' primary maintenance program for all transmission, substation, and protection and control facilities. To that effect, all reoccurring preventative maintenance as well as corrective maintenance activities will be initiated through CASCADE. During implementation, PPL Electric Utilities' primary focus has been on populating CASCADE's database with consistent and essential equipment attributes. During the implementation phase, the CASCADE project lead was also serving as CASCADE's administrator which has limited the effectiveness of the project lead in identifying and pursuing additional applications or uses.

The CASCADE project team is aware of additional uses; however, PPL Electric Utilities has no plans for implementing all possible uses and efficiencies that CASCADE offers. An example of potential increased efficiencies available through CASCADE is the ability to automatically generate work requests once a specific trigger is met. PPL Electric Utilities is using this feature for time based maintenance but is not and does not have any plans to use it for larger equipment performance or "trigger" based maintenance requirements. Currently, the trigger points for maintenance of large equipment is initiated by maintenance engineers upon review of information from the System Control and Data Acquisition system (SCADA) or field inspection reports. However, CASCADE could be configured to receive operational activity from the SCADA system and then automatically generate the work request. Another potential use is CASCADE's risk tool that has the capability to factor risk into maintenance schedules. A risk management approach to maintenance would enable the Company to concentrate on areas that are most advantageous to system reliability, equipment health, and criticality.

Unused functions within software provide an opportunity area for additional optimization and increased productivity. Ideally, any function that provides a benefit or an efficiency gain should be explored and utilized if practical. Based upon the Audit Staff's review, it appears that CASCADE has the potential to provide additional benefits that can automate some of the manually generated work requests and help PPL Electric Utilities initiate a more effective risk management and cost effective approach to system maintenance.

4. PPL Electric Utilities is still using manual substation, transmission, and distribution inspection forms.

PPL Electric Utilities performs periodic inspections of its substation, transmission, and distribution facilities. These inspections are performed by field personnel who report the results and observations on standardized inspection forms. These forms are manually completed and submitted to maintenance engineers for review. Manual inspection forms can be inefficient and potentially misleading because of communication problems, difficulty in reading handwriting, or incomplete inspection forms. These conditions

could potentially result in poor maintenance activities and require additional time and effort to correct. Therefore, automating the inspection process should provide increased efficiency, ease of record retention, and inter-department communication which will reduce non productive time.

PPL Electric Utilities' focus has been on finalizing the implementation of MOM (as discussed in the background section of this chapter); however, there are additional tangential benefits that can be achieved through the MOM platform. The MOM program will provide most PPL Electric Utilities employees with a dedicated computer and communication backbone. Moreover, employees in the MOM project already received basic computer training eliminating a costly component of computerization. Although the current manual process has worked in the past, many utilities are moving away from time consuming manual processes into more efficient automated procedures. These types of automated processes often save time and money depending on the usefulness and efficiency of the integrated system and could provide a platform for additional improvements.

5. PPL Electric Utilities has not consistently achieved its annual goal of minimizing multiple customer interruptions.

In 2003, the Institute of Electrical and Electronics Engineers (IEEE) Standard 1366 introduced a new index called CEMI, or customers experiencing multiple interruptions that specifically measures the percentage of overall customers that have experienced more than a specific number of interruptions. This was the first time that a reliability index looked at the full spectrum of customer interruptions rather than system averages. CEMI can be a good indic circuits[5]. rtions of the system that have experienced reliability challenges such as worst performing circuits . Efforts to decrease this index also have the propensity to decrease the number of customer complaints.

PPL Electric Utilities has internal goals striving to contain the number of customers experiencing multiple interruptions. Exhibit VII – 17 shows the annual CEMI goals for 2005 to 2008 and the actual number of customers that experienced multiple interruptions for that year. The Company has projected that the number of customers experiencing three or more interruptions during the year to be 65,685 by the end of 2008. An examination of Exhibit VII – 17 reveals that PPL Electric Utilities has consistently been falling short of its CEMI goals which was partially attributable to greater than average storm activity in 2006, 2007 and 2008.

[5] The Company includes CEMI data when evaluating its worst performing circuits.

Exhibit VII – 17
PPL Electric Utilities
Annual CEMI Goals and Actual Results
2005 to 2008

Category	Number of Customers Experiencing Three or More Interruptions			
	2005	2006	2007	2008
CEMI goals	62,000	58,000	58,000	65,000
Actual CEMI	62,236	107,414	72,211	28,139*

* - Reflects actual results from January through August 2008.
Source: Data Request ER-24a and ER-24b

Exhibit VII – 18 depicts by number of interruptions the number of customers that have experienced multiple interruptions during the years 2007 and 2008 (through August). PPL Electric Utilities' goal is to have no customers experience 10 or more sustained outages per year, but as evident in Exhibit VII – 18, 39 customers experienced 10 or more interruptions in 2007 and 23 customers during the first eight months of 2008.

Exhibit VII – 18
PPL Electric Utilities
Customers Experiencing Multiple Interruptions
2007 and 2008

Year	4 times	5 times	6 times	7 times	8 times	9 times	10 times	11 times	Totals
2007	41,423	17,078	7,847	3,870	1,518	436	38	1	72,211
2008*	20,541	5,569	1,714	217	73	2	20	3	28,139

* - January – August 2008
Source: Data Requests ER-24, ER-24a and ER-24b

The list of circuits with customers experiencing multiple interruptions is distributed monthly to employees responsible for managing their assigned circuits in order to identify and prioritize which circuits require remedial action. The System Reliability and Work Scope group is also working with the Information Services Department (ISD) to create CEMI alerts (i.e., e-mails, pagers, etc.) for real-time conditional reporting. Additionally, PPL Electric Utilities has implemented six initiatives from 2006 to 2008 which collectively are estimated to reduce overall SAIDI by approximately 9 minutes which could potentially help reduce CEMI as well. These initiatives include:

- Creating new regional Troublemen positions

- Increasing VM budget by approximately $1.2 million per year
- Installing protective/sectionalizing devices
- Increasing line maintenance inspections
- Installing additional intelligent sectionalizing
- Restore before Repair process (i.e., restoring as many customers via isolating/ sectionalizing before attempting repair)

PPL Electric Utilities should strive to reduce the number of customers experiencing multiple interruptions which could subsequently help improve reliability indices, specifically SAIFI and SAIDI. Outages on the worst performing circuits are usually due to a variety of causes such as animals, equipment failure, and trees not trimming related. Despite the fact that the Company has developed initiatives to remediate issues associated with worst performing circuits, the CEMI reliability data has remained fairly high. Efforts to reduce equipment failures and trees not trimming related outages should in turn reduce the incidents of multiple customer interruptions.

6. PPL Electric Utilities does not preemptively identify outages.

PPL Electric Utilities currently uses its Outage Management System (OMS) to aid in identifying power outages. However, PPL Electric Utilities' outage identification process still requires a customer to notify the Company of a power loss. Once an outage call is recorded in the OMS, it performs an analysis to determine the extent of the outage and the device that operated. The OMS will actively "ping[6]" meters to determine if customers surrounding a reported outage have power. This enables the system to confirm the predicted protective device that is out-of-service. Field crews are then dispatched to the device that was predicted out-of-service. The fact is many customers do not call the utility when they have an outage. Nonetheless, a key component for PPL Electric Utilities to identify outages is still the customer's call. In 2007, only 19% of customers called PPL Electric Utilities when they experienced an outage.

Some electric distribution companies are moving to preemptively identify outages. Distribution systems which identify outages independent of customer reporting are considered next generation systems employing key components of a smart grid. A way that distribution companies can identify outages is through the use of "last gasp" meter technology. Some meter applications automatically send a signal (or a last gasp) as they lose power.

[6]The meter is pinged by sending a signal to the meter asking the meter to respond. If the meter responds it has power but if it doesn't either the meter is broken or it is without power.

PPL Electric Utilities' meter infrastructure does not have the last gasp capability; however, its metering system does provide a solid backbone and opportunity to employ a smart grid technology and a method to preemptively identify outages. Currently, PPL Electric Utilities routinely performs hourly meter reads. To secure the hourly meter reads, PPL Electric Utilities polls the meters every 8 hours (e.g., as of September 2008, PPL Electric Utilities had a 96% hourly read success rate). Any meter without a read is investigated by the AMR group after a specified period of time (i.e.- 15 days) based upon failing to communicate readings. This process should be evaluated to determine if the time period can be modified to operate in conjunction with an outage in the OMS system. Although hourly reads do not provide a contiguous stream of data for system monitoring, the meter read data could provide a platform for preemptively identifying outages if integrated with the OMS. In this fashion, any "meter no reads" could generate the outage analysis component of the OMS or if the problem is a meter malfunction, dispatch a technician for meter replacement within a reasonable period.

By preemptively identifying outages, PPL Electric Utilities could decrease the customers' exposure to outages by restoring service to customers even when they are away from home thus potentially shortening and/or eliminating customers exposure to outages thereby improving customer satisfaction. Identifying outages preemptively may not have a direct impact on electric reliability performance; however, it would provide PPL Electric Utilities with more flexibility in outage management as well as increasing customer satisfaction. It could also provide a greater efficiency for outage management and communication between departments.

7. PPL Electric Utilities' operation departments are not consistently notifying the Customer Service Department of scheduled power outages.

Meter reads are instrumental in the Customer Service Department for generating customer's bills and providing up-to-date information to customers. However, a successful meter read requires both the system to have power and an unobstructed path of communication for data transfer. Without either component, the meters will not provide this data. Fortunately, PPL Electric Utilities does have additional methods to obtain meter reads if a network problem arises. For example, PPL Electric Utilities can use a mobile unit to capture the meter reads if the communication network is compromised or make meter reads before a planned power outage. However, these tools can only work if they are in place before the network or grid is brought down.

In at least two cases during 2008, the Operation's Department did not inform the Customer Service Department of substation outages. As a result, 1,305 monthly billing reads were lost forcing estimated bills for these customers. In addition, this instance directly affected Customer Service's key performance indicators for estimated

billing levels. PPL Electric Utilities has become aware of the communication gap and is working to revise its procedures; however, communication between departments is an important part of distribution operations.

Poor communication could cause meter reads to be lost or delayed which ultimately impacts the ability to accurately and timely bill customers. In addition, customer service representatives (CSR) need current information for responding to customers who may be without power and are asking for information. An informed CSR will be able to provide a better update of the situation or data which in turn should increase customer satisfaction.

Recommendations

1. **Reevaluate the feasibility of the current distribution line inspection program and consider expanding foot patrols to regions, circuits, or areas that may benefit from a more aggressive approach based on a cost/benefit analysis.**

2. **Strive to reduce the number of outages caused by equipment failure and non-trimming related trees in order to improve overall SAIDI and SAIFI reliability indices.**

3. **Perform an assessment to more fully utilize the capabilities of CASCADE.**

4. **Computerize the substation, transmission, and distribution inspection forms and processes.**

5. **Strive to reduce the number of customers experiencing multiple service interruptions per year.**

6. **Create a business case to further identify requirements or resources for integrating the advanced metering infrastructure with the outage management system.**

7. **Create and adhere to a process for timely notification to all departments of planned and extended unplanned outages.**

VIII. PUBLIC UTILITY EMERGENCY PREPAREDNESS

Background

Society has come to depend on the high reliability and ubiquity of electricity as an essential source for various aspects of life such as national security, communications, finance, heating, cooling, lighting, entertainment, leisure, etc. Consumers have grown to expect that electricity will be available at the flick of a switch. What is not expected is a natural disaster or a terrorist or cyber attack wiping out power to thousands or even millions of customers. The big picture concern is how vulnerable is our electricity system to such attacks and what can be done to reduce this threat. Emergency preparedness has become a headline issue for the U.S. especially after the events of September 11, 2001. There have been several additional issues such as the Madrid train bombings in March, 2004 and the London subway bombings in July, 2005 that have accentuated the need to raise the level of security in the Unites States. Moreover, utilities are being scrutinized increasingly for their response to emergencies.

In May 1998, The White House released the Presidential Decision Directive 63 (PDD-63) "Protecting America's Critical Infrastructure" that clearly laid out the President's intent to "take all necessary measures to swiftly eliminate any significant vulnerability to both physical and cyber attacks on our critical infrastructures". PDD-63 officially identifies "electricity" as a critical infrastructure. As a result of this directive, the Department of Energy (DOE) was designated to be the lead agency for the energy sectors, which in turn designated the North American Reliability Council (NERC) as the Sector Coordinator for the Electricity Sector.

Effective June 11, 2005, PUC regulations at 52 Pa. Code § 101.1 – 101.7 require jurisdictional utilities to develop and maintain appropriate written physical security, cyber security, emergency response, and business continuity plans to protect the Commonwealth's infrastructure and ensure safe, continuous and reliable utility service. More specifically, in accordance with 52 Pa. Code § 101.4, jurisdictional utilities are required to file a Self Certification Form with the Commission on an annual basis. Exhibit VIII – 1 lists the 12 questions that utilities are required to answer when submitting these forms to the PUC.

Exhibit VIII – 1
Public Utility Security Planning and Readiness Self Certification Form

Item No.	Classification	Response (Yes – No – N/A*)
1	Does your company have a physical security plan?	
2	Has your physical security plan been reviewed and updated in the past year?	
3	Is your physical security plan tested annually?	
4	Does your company have a cyber security plan?	
5	Has your cyber security plan been reviewed and updated in the past year?	
6	Is your cyber security plan tested annually?	
7	Does your company have an emergency response plan?	
8	Has your emergency response plan been reviewed and updated in the past year?	
9	Is your emergency response plan tested annually?	
10	Does your company have a business continuity plan?	
11	Has your business continuity plan been reviewed and updated in the past year?	
12	Is your business continuity plan tested annually?	

* Brief explanation needed if supplied as a response

Source: Public Utility Security Planning and Readiness Self Certification Form,
Docket No. M-00031717F0006/L-00040166

PPL Electric Utilities has complied with 52 Pa. Code § 101.3 by documenting and maintaining comprehensive emergency preparedness plans to include physical security plans, cyber security plans, emergency response plans and business continuity plans. The Company has also complied with 52 Pa. Code § 101.4 by filing annual self certification forms with the Commission.

PPL Corporation's Corporate Security (CS) provides security services to PPL Electric Utilities and its five sister companies: PPL Services, PPL Solutions, PPL EnergyPlus, PPL Generation, and PPL Energy Services. One of the primary roles of CS is to deliver these services to all business lines in a timely, efficient manner and to ensure that they are in compliance with all applicable laws and regulations such as the Commission's 52 Pa. Code § 101, the National Infrastructure Protection Plan (NIPP), and the Sector Specific Plans (SSPs). The NIPP and supporting SSPs provide a coordinated approach to critical infrastructure and key resources (CIKR) protection and outlines roles and responsibilities for federal, state, local and private sectors. The NIPP sets national goals and requirements for effective distribution of resources which will help ensure that our economy continues in the event of a terrorist attack or major disaster. The SSPs provide the means by which the NIPP is implemented across all CIKR sectors. This coordinated approach applies federal funding and resources in the most effective manner to manage risk.

CS also provides threat management planning which includes services such as emergency planning, business continuity planning including disaster recovery, and

workforce readiness. In addition to these services, CS provides asset protection services to include access controls (i.e., ID cards, electronic protection systems, etc.), security awareness presentations, contract guard services, federal and local law enforcement liaison, and vulnerability assessments (VAs). CS provides background screening services for new applicants and personnel risk assessments. CS is responsible for making sure that PPL Electric Utilities is in compliance with NERC's Critical Infrastructure Protection (CIP) Standards CIP-001 through CIP-009:

- CIP-001 – Sabotage Reporting
- CIP-002 – Critical Cyber Asset Identification
- CIP-003 – Security Management Controls
- CIP-004 – Personnel and Training (Background checks)
- CIP-005 – Electronic Security perimeters
- CIP-006 – Physical Security of Critical Cyber Assets
- CIP-007 – Systems Security Management
- CIP-008 – Incident Reporting and Response Planning
- CIP-009 – Recovery Plans for Critical Cyber Assets

Nationally, CS is a member of the Leadership team for the Edison Electric Institute (EEI). PPL Corporation participates in the working group for the Critical Infrastructure Protection Committee (CIPC) Physical Security Guidelines. PPL Corporation is a member of InfraGard which is a partnership with the Federal Bureau of Investigation (FBI) and the private sector. InfraGard is an association of businesses, state and local law enforcement agencies, and other participants dedicated to sharing information and intelligence to prevent hostile acts against the United States. In Pennsylvania, PPL Electric Utilities is a member of the Reliability First Committee (RFC) Critical Infrastructure Protection (CIP) Committee and is also on the Pennsylvania Jersey Maryland (PJM) interconnection CIP Security Committee. Additionally, PPL Electric Utilities is a member of the Regional Counter Terrorism Task Force (RCTTF) and is on the Pennsylvania Power and Production Subcommittee.

Findings and Conclusions

Our examination of the Company's Emergency Preparedness included a review of the physical security plan, cyber security plan, emergency response plan, business continuity plan, vulnerability assessment and all associated security measures. Based on our review, the Company should devote additional efforts to improving the efficiency and/or effectiveness of its public utility emergency preparedness practices by addressing the following:

1. PPL Electric Utilities does not have a risk management program for identifying and assessing risk to its information systems (IS) infrastructure.

Every business, regardless of industry, faces a wide variety of risks. These risks come in many forms including financial risks, security risks, and more. One of the most challenging is the risk associated with information systems – cyber risk. Most businesses today use the internet as an integral part of their business operating strategy. Increased electronic use results in new and multifaceted cyber threats such as information and ID theft, computer breaches, etc. According to a Computer Security Institute (CSI)/Federal Bureau of Investigation (FBI) Computer Crime and Security Survey conducted in 2005 (which was based on responses from 700 computer security practitioners in U.S. corporations, government agencies, financial institutions, medical institutions and universities) there were $130 million in reported losses. The top three contributors to these losses were: viruses $43 million, unauthorized access $31 million and theft of proprietary information $31 million. This occurred despite the fact that 96% of respondents used antivirus software and 97% had firewalls in place. Hence, it is imperative to develop and implement a risk management program to protect the Company's computer based information systems from these ever evolving threats. Additionally, as highlighted in the CSI/FBI Computer Crime and Security Survey, unlike the initial stages whereby computer security focused largely on technical issues such as encryption, access controls and intrusion detection systems, more recently, economic, financial and risk management aspects of computer security have also become important concerns in today's organizations.

PPL Services provides cyber security (i.e., virus protection, firewalls, etc.) to PPL Electric Utilities and other affiliate business lines to include business continuity and disaster recovery for information technology (IT), information security, etc. Additionally, the IS Department at PPL Services provides programming and other technical support to PPL Electric Utilities. CS on the other hand provides physical security around these critical cyber assets. CS has also developed comprehensive plans for PPL Electric Utilities to include emergency response plans, mitigation plans, threat response plans, business continuity plans, and restoration and recovery plans. In 2006, CS also performed a vulnerability assessment (VA) for all of PPL Electric Utilities' transmission lines and its transmission and distribution substations. PPL Electric Utilities also has comprehensive disaster recovery plans and physical security plans to protect its critical infrastructure against "outside" threat. Although the Company has been extremely successful in protecting its critical infrastructure from internal and external threats, it currently does not have a risk management program for identifying and assessing risk to its IS computing infrastructure.

In keeping with the North American Reliability Council's "Security Guidelines for the Electricity Sector" dated June 14, 2002, anyone who owns and/or manages information systems and/or services that support the infrastructure of the electric

industry should develop a risk management program. Risk management is the process of identifying risk, assessing risk, and taking steps to mitigate these risks to an acceptable level. It is a proactive ongoing program that addresses issues such as system characterization, impact analysis, risk determination, vulnerability identification, etc. An effective risk management program is an important element of a successful IT security program. Risk can be accepted, mitigated or transferred, but it should never be ignored. PPL Electric Utilities currently does not have a formal risk management program in place but they are reportedly looking to develop one in the near future. By not having a risk management program in place, PPL Electric Utilities is not taking appropriate measures to mitigate risks for the better protection of mission critical information and the IT systems that process, store and carry this information.

Recommendations

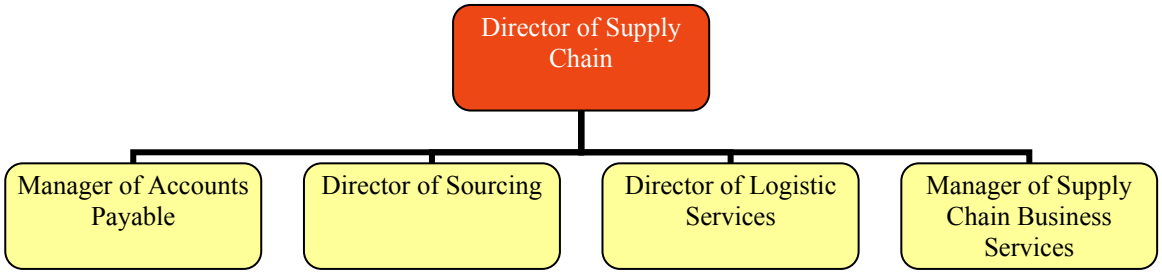
1. Develop a risk management program to effectively identify, assess, and mitigate cyber risks to its IS infrastructure.

IX. MATERIALS MANAGEMENT

Background

Materials management at PPL Electric Utilities is performed by Supply Chain (a business line of PPL Services Corporation). Supply Chain is responsible for purchasing, managing, and issuing materials for both the regulated and unregulated subsidiaries of PPL Corporation. Therefore, Supply Chain and PPL Electric Utilities conduct business based on a service level agreement (SLA). The Director of Supply Chain reports directly to the Chief Operating Officer of PPL Services Corporation. Supply Chain's organization is summarized in Exhibit IX – 1.

Exhibit IX – 1
PPL Electric Utilities
Supply Chain Organizational Chart
As of June 2008



Source: Data Request GD-5

PPL Electric Utilities enters material requests through its work management system (WMS). The WMS automatically communicates with Supply Chain's Passport system (materials management system) generating a pick order for each material request. As part of the SLA, PPL Electric Utilities is required to timely and accurately enter material requests with valid need dates within appropriate supplier and delivery lead times. In response, Logistics Services, the material handling group within Supply Chain, ensures that material is picked, packed and staged, in a timely and accurate manner, and is available when requested by PPL Electric Utilities.

Material purchasing is handled by the Sourcing group within Supply Chain. This group sets the minimum and maximum order points for all material. PPL Electric Utilities provides input on the order points but does not have control to establish actual levels. Instead, Supply Chain uses the Economic Order Quantity calculation to support the ordering points used. Large volume items such as wire, transformers, poles, etc. are managed exclusively by specific buyers. All materials are purchased through Passport

with 85-90% of purchases covered by blanket contracts. The other 10-15% are specialty items that are secured through a request for proposal process.

In order to support Supply Chain's commitment in the SLA, 35 warehouse facilities are strategically placed throughout PPL Electric Utilities' six geographical regions (including 27 locations that are staffed and eight which are unmanned). However, Supply Chain's primary facility is a large central distribution facility (CDF) at Humbolt, Pennsylvania. The CDF is staffed 24-hours a day utilizing a three shift operation. All other warehouses are staffed during regular business hours (7 am to 3:30 pm) with the exception of storm events or emergencies.

Once purchased, most materials are delivered to the CDF for processing or storage. On occasion, materials are shipped directly to other warehouses or job sites depending on the nature of the materials and the specific need. However, from the CDF and a few select larger warehouses like Lancaster, Lehigh, and Harrisburg, material is picked and then shipped to outlying locations. Supply Chain provides direct shipping and pickup of leftover material from the job site.

With inventory moving in and out of warehouses on a regular basis, Supply Chain has implemented the ABC cycle counting methodology. In the ABC method, materials are counted on a rotation based on the activity of the material. At PPL, the most active inventory is counted each year, moderately active inventory is counted every two years, and fairly inactive inventory is counted every three years. However, Supply Chain plans to eliminate the C, or three-year, inventory counting cycle and convert all material to annual or biennial counting.

Supply Chain and PPL Electric Utilities also have a pilot program within the Lehigh region called the two and six pilot. In the pilot, material handlers and field services hold weekly meetings to reaffirm planned work for the next two week period and identify projected material needs for the next six weeks.

Findings and Conclusions

Our examination of the Materials Management function included a review of assigned responsibilities, policies and procedures, information systems, reporting capabilities, inventory control, inventory levels, turnover, and warehouse operations. Based on our review, the Company should devote additional efforts to improving the efficiency and/or effectiveness of its materials management processes by addressing the following:

1. Inventory cycle counts reflect low accuracy rates at many satellite facilities.

As noted earlier, Logistic Services performs cycle counting based on the ABC methodology. If any variance is discovered, the inventory item is counted a second time. If the variance still exists, management can make an adjustment to the physical inventory in Passport. Logistic Service's cumulative cycle counting results up to and including September 2008 is shown in Exhibit IX – 2. Accuracy is defined as the number of item categories that had no variance divided by the total number of item categories inventoried.

Exhibit IX – 2
PPL Electric Utilities
Cycle Count Accuracy
(Number of no variance counts divided by total number of counts)
Cumulative from January through September 2008

	Central Region									
Facility Number	200	225	230	250	275	725	750	751	756	771
Facility Accuracy	86%	63%	97%	47%	73%	56%	85%	53%	36%	100%
Regional Accuracy	83%									
	Lehigh Region					**Northeast Region**				
Facility Number	100	105	108	125	150	774	825	830	850	851
Facility Accuracy	95%	NM[α]	100%	88%	100%	45%	57%	76%	32%	NM[α]
Regional Accuracy	95%					52%				
	Susquehanna Region						**Lancaster Region**			
Facility Number	400	405	410	425	450	475	600	606	625	626
Facility Accuracy	91%	NM[α]	NM[α]	100%	69%	57%	75%	100%	75%	62%
Regional Accuracy	82%						73%			
	Harrisburg Region									
Facility Number	350	500	505	511	512	550	575	Cumulative Satellite Accuracy		
Facility Accuracy	96%	75%	NM[α]	100%	100%	86%	93%			
Regional Accuracy	86%							68%		

α NM = Not Meaningful; Warehouses either did not house material or did not have any cycle count activity
Source: Data Request MM-21

Exhibit IX – 2 indicates that there are few warehouses in which cycle counting accuracy is commendable such as the Allentown and Newport warehouses (i.e., facility numbers 100 and 350, respectively)[7]. However, cumulative satellite accuracy is at 68% in which ten satellite warehouses fall below that mark. PPL Electric Utilities and Supply

[7] Facilities with 100% cycle count accuracy are small in comparison to the mentioned facilities. In addition, some facilities with 100% accuracy had no issues from January through September 2008.

Chain have goals within the SLA for cycle counting accuracy at satellite facilities. These goals as well as actual performance for all satellite facilities are found in Exhibit IX – 3.

Exhibit IX – 3
PPL Electric Utilities
Satellite Facility Accuracy
2006 to October 2008

	2006	2007	2008 (As of Oct. 08)
Goal	58%	68%	65%
Actual	63%	65%	69%

Source: Data Request MM-10 and MM-21

Logistic Services cites unrecorded issues and returns, bad counts, and items not under Logistic Services' control as reasons for the lack of inventory accuracy. In addition, PPL Electric Utilities returned approximately 19% of all material issued[8] in 2007. As material which is returned requires more frequent handling, there is greater potential for inaccuracies. Consequently, inaccurate inventory can lead to a host of different material management problems. For example, requests for materials might go unfilled or be delayed because there is insufficient material on hand to fill a request. In addition, turnover, carrying costs, order quantities, etc. can all be impaired by inventory inaccuracies as well as end-of-year adjustments for lost inventory. Exhibit IX – 4 depicts the dollar amount of cycle count inaccuracies detailed in Exhibit IX – 2.

End-of-year book adjustments are made based on the net inventory adjustments throughout the year. In Exhibit IX – 4, the net adjustments for the system are 1.2% of inventory counted from January through September 2008. By annualizing the data, the end-of-year book adjustment was projected to be approximately $108,700 for 2008. In comparison, PPL Electric Utilities' adjustment of 1.2% is in line with that seen at PECO during a 2007 management audit. Although, the net financial burden is not significant at PPL Electric Utilities, the gross adjustments as shown in Exhibit IX – 4 can range from zero to 355 percent with a system total absolute adjustment of 17 percent. The wide variations in gross inventory adjustments further illustrate the lack of accuracy in inventory management and a potential for much larger net adjustments in the future.

[8]Number represents the amount of inventory returned as a percentage of gross inventory issued excluding tools, gasoline, diesel, hydraulic fluid, emergency stock, and oil.

Exhibit IX – 4
PPL Electric Utilities
Net and Gross Adjustments for Inventory Inaccuracy
Cumulative Counts from January through September 2008

	Central Region									
Facility Number	200	225	230	250	275	725	750	751	756	771
% Net adjustments of total counted	-0.6%	17.0%	0.6%	134.6%	2.8%	7.4%	4.2%	3.8%	96.7%	0.0%
% Gross adjustments of total counted	11.9%	84.9%	4.3%	215.7%	47.4%	106.2%	29.5%	95.3%	327.3%	0.0%
	Lehigh Region					**Northeast Region**				
Facility Number	100	105	108	125	150	774	825	830	850	851
% Net adjustments of total counted	0.8%	NM[α]	0.0%	28.2%	0.0%	13.1%	355.3%	59.8%	NM[α]	NM[α]
% Gross adjustments of total counted	5.2%	NM[α]	0.0%	34.9%	0.0%	106.6%	355.3%	143.0%	NM[α]	NM[α]
	Susquehanna Region						**Lancaster Region**			
Facility Number	400	405	410	425	450	475	600	606	625	626
% Net adjustments of total counted	-1.6%	NM[α]	NM[α]	0.0%	10.9%	-7.5%	12.8%	0.0%	13.4%	-36.6%
% Gross adjustments of total counted	3.9%	NM[α]	NM[α]	0.0%	32.4%	33.6%	36.0%	0.0%	132.8%	75.1%
	Harrisburg Region							**System Total**		
Facility Number	350	500	505	511	512	550	575			
% Net adjustments of total counted	-5.3%	8.9%	NM[α]	0.0%	0.0%	-12.6%	-1.8%	**1.2%**		
% Gross adjustments of total counted	5.5%	37.3%	NM[α]	0.0%	0.0%	14.0%	4.5%	**17.0%**		

α NM = Not Meaningful; Warehouses either did not house material or did not have any cycle count activity
Source: Data Request MM-21

Logistic Services has identified inventory accuracy as an area requiring improvement for 2008 and has instituted several corrective actions. These actions were planned throughout 2008 and included system wide training for material handlers and foremen, a key performance indicator scorecard for monitoring performance and rewriting procedures. Additionally, Logistic Services plans to change its cycle counting practices in 2009 by eliminating the three-year counting cycle and count all material annually or biennially. However, inventory accuracy is a crucial part of efficient and effective inventory management. Therefore, it is imperative that inventory accuracy be improved by any strategy including such tactics as increasing the frequency of inventory counting, more stringent material handling procedures, etc.

2. PPL Electric Utilities frequently does not provide Supply Chain with enough time to provision materials.

Large projects such as new construction or other design jobs can require large amounts of material and/or specialized or non-standard material. These materials must be procured by Supply Chain and staged by Logistic Services in order to timely supply PPL Electric Utilities with the needed materials. These processes take a certain amount of time,

which Supply Chain has established and PPL Electric Utilities has agreed to be five days. Therefore, PPL Electric Utilities should provide material requests (MR) at least five days in advance. Exhibit IX – 5 provides the target as well as actual performance of PPL Electric Utilities' proficiency at submitting MRs five days in advance for design jobs during 2007 and 1st quarter of 2008.

Exhibit IX – 5
PPL Electric Utilities
Design MRs with Lead Times of Greater than or Equal to Five Days
2007 and 1st Quarter 2008

	2007	2008 (Jan-Mar)
Target % of Design Jobs	85%	85%
Actual % of Design Jobs	70%	74%

Source: Data Request MM-10

As can be seen in Exhibit IX – 5, PPL Electric Utilities performance is below the agreed upon performance level for both 2007 and the 1st quarter of 2008. In addition, Exhibit IX – 6 details PPL Electric Utilities' lead time performance for all material requests. However, Exhibit IX – 6 encompasses all material requests which includes emergency or storm related material requests as well as design material requests. During 2007, despite PPL Electric Utilities supplying the appropriate lead time only 50% of the time, Supply Chain has provisioned material by the due date 80% of the time.

Exhibit IX – 6
PPL Electric Utilities
All MRs with Lead Times of Greater than or Equal to Five Days
2007 and 1st Quarter 2008

	Total MR	MRs with lead time ≥ 5 Days	Percent
2007	96,722	44,625	46.1%
2008 (as of 8/3/08)	52,714	26,358	50.0%

Source: Data Request MM-21

Any storm restoration or emergency material requests require a quicker turn around than five days due to the unpredictable nature of storms or emergencies. That same unpredictable aspect of electric service can also delay or influence predictable material requests such as design jobs. In addition, a percentage of design material

requests are for providing electric service to new customers. Since PPL Electric Utilities must be flexible to meet customer expectations and satisfaction, this sometimes causes changes to work schedules and can delay other work. However, both Supply Chain and PPL Electric Utilities have recognized that PPL Electric Utilities must improve its ability to provide design jobs to Supply Chain with enough lead time. As discussed in the Background of this chapter, PPL Electric Utilities and Supply Chain have instituted what is referred to as the "two and six week pilot" in the Lehigh region.

Insufficient lead times do not allow Supply Chain the flexibility it requires for efficient and effective material handling which requires that Supply Chain maintain a larger inventory of material. In addition, Supply Chain may need to expedite the delivery of material in order to fill material requests by a due date imposed by PPL Electric Utilities. Larger inventories result in lower inventory turnover which increases inventory carrying costs, weakens cashflow, decreases inventory accuracy, etc.

3. Inventory turnover is low.

Inventory turnover is calculated by dividing 12-month average inventory levels into annual net inventory issues and excludes safety stock. Therefore, inventory turnover yields the rate at which inventory is "turned" or placed into service. PPL Electric Utilities' inventory turnover for 2005 to 2007 is shown in Exhibit IX – 7.

Exhibit IX – 7
PPL Electric Utilities
Inventory Turnover
2005-2007

	2005	2006	2007
Net Inventory Issues	$43,962,583	$56,619,990	$60,523,520
Average Yearly Inventory Levels[β]	$26,680,443	$27,550,512	$29,314,438
Inventory Turnover	1.65	2.06	2.06

B Average yearly Inventory Levels are based off of a 12-month average.
Source: Data Requests MM-2 and 3

As indicated in Exhibit IX – 7, PPL Electric Utilities' inventory turnover was 2.06 for 2006 and 2007. However, the net inventory issues and average yearly inventory levels in Exhibit IX – 7 include fuels and tools. Gasoline, diesel fuel, hydraulic fluid and oil are usually excluded from inventory turnover since fuels have very high turnover

that skews the overall ratio. Moreover, tools have the opposite effect as fuels. Many specialized tools are needed for repairs and construction of the electric distribution system; however, these tools are usually returned after they are used. Therefore, many tools would have a net inventory issue of zero while still considered part of inventory levels. Exhibit IX – 8 provides PPL Electric Utilities' turnover excluding fuels and tools.

Exhibit IX – 8
PPL Electric Utilities
Adjusted Inventory Turnover
2005-2007

	2005	2006	2007
Net Issues with Exclusions	$30,368,985	$39,662,493	$49,810,933
Inventory levels with exclusions	$23,723,159	$24,664,024	$26,390,758
Turnover	1.28	1.61	1.89

Source: Data Requests MM-29 and 30

Although inventory turnover can be affected by multiple variables; inventory accuracy, material returns and material order lead times, all can play significant roles. As mentioned earlier in Finding IX – 1, inventory inaccuracy can lead to inflated inventory levels in order to compensate for potential errors. In addition, Finding IX – 2 explains that short lead times for material requests drive Supply Chain to hold more inventory stock. PPL Electric Utilities also is returning 19% of the material issued as discussed in Finding IX – 4. By returning large amounts of material, Supply Chain has to cover both the needed materials for a job but also the material that is returned. All these areas have room for improvement and indicate that inventory levels are not maintained at the most effective and efficient level.

Optimization of inventory turnover allows for cost savings, increased accountability, etc. Furthermore, during the course of a recent management audit Schumaker and Company has observed an inventory turnover of 3.7 at PECO[9]. If Supply Chain and PPL Electric Utilities strive to reduce inventory levels and achieve an inventory turnover of 3.0, PPL Electric Utilities could realize a one-time savings of

[9]Schumaker & Company. Stratified Management and Operations Audit of PECO Energy for the Pennsylvania Public Utility Commission Bureau of Audits. Harrisburg: PUC, August 2007.

$9,787,000 in decreased inventory and an average associated recurring annual carrying cost of $1,761,700[10].

4. PPL Electric Utilities is returning large amounts of inventory material to Supply Chain.

PPL Electric Utilities orders materials from Supply Chain in order to perform a work order. After the work order is completed, PPL Electric Utilities returns any leftover material back to Supply Chain. Any returned material is then placed back into Supply Chain's inventory. PPL Electric Utilities' total net inventory issues for 2005 through 2007 are found in Exhibit IX – 7 and adjusted net inventory issues are found within Exhibit IX – 8. However, Exhibit IX – 9 provides the gross issues and returns excluding fuels and tools.

Exhibit IX – 9
PPL Electric Utilities
Inventory Returns Excluding Fuels and Tools
2005-2007

	2005	2006	2007
Gross Issues with exclusions	$39,052,577	$50,069,035	$61,432,680
Inventory Returns excluding fuels and tools	$8,683,592	$10,406,542	$11,621,747
Percentage of Issues that are Returns	22.24%	20.78%	18.92%

Source: Data Requests MM-27 and 30

Subtracting the inventory returns from the gross issues will yield the net issues reported in Exhibit IX – 8. However, as Exhibit IX – 9 illustrates, PPL Electric Utilities consistently is returning large amounts of material or approximately 20% of all material requested to Supply Chain. Materials are returned for a variety of reasons. In some cases, materials already found in the field are reused or still operationally sound. An example would be when a system upgrade results in a smaller/larger piece of equipment replacing an operationally sound piece of equipment. In this situation, the new or slightly used materials are returned to Supply Chain for use at a later date. In addition, there are also situations in which too much material was ordered or material estimates had a built in safety margin.

[10]Assumes carrying costs of 18% or the mid-point of the range between 12-24.5% of inventory value as reported in: Pooler, Victor H., David J. Pooler, and Samuel P. Farney. Global Purchasing and Supply Management: Fulfill the Vision-Second Edition. Norwell: Kluwer Academic Publishers, 2004.

Material returns can have a profound impact on Supply Chain's operation. Returned material has to be manually entered into inventory and Passport resulting in a greater potential for error. In addition, material that should be stored at the central distribution facility could end up, after being returned, at a satellite warehouse. Ultimately, excess returns increases inventory inaccuracies as discussed in Finding IX – 1. In addition, material fill rates could be impacted from excess material. Since excess material would be tied up in previous work requests, the amount of material available for new material requests could be limited.

However, excess material has the greatest impact on inventory turnover. As inventory stock hits a certain minimum value, Passport automatically orders more. Therefore, a particular inventory item could be replenished both through purchasing and material returns resulting in a larger inventory balance than intended. In addition, Supply Chain has to stock additional material in order to accommodate PPL Electric Utilities' ordering habits regardless of material returns. In fact, if PPL Electric Utilities could limit material returns to 5% of gross issues, the inventory turnover for 2007 would have improved from 1.89 to 2.79. This improvement would single handedly account for $8.5 million in reduced inventory of the potential $9.8 million reduction identified in Finding IX – 3.

Ideally, MRs should only request the material necessary to complete a job. On the other hand, ordering excess material for a repair or construction job may be warranted at times in order to maintain efficiencies in restoration of service. However, excess material, whether new or used hinders Supply Chain's ability to optimize material management.

Recommendations

1. **Improve inventory cycle count accuracy.**

2. **Provide sufficient lead times for Supply Chain to procure and provision material requests.**

3. **Strive to optimize inventory levels and increase turnover to at least 3.0.**

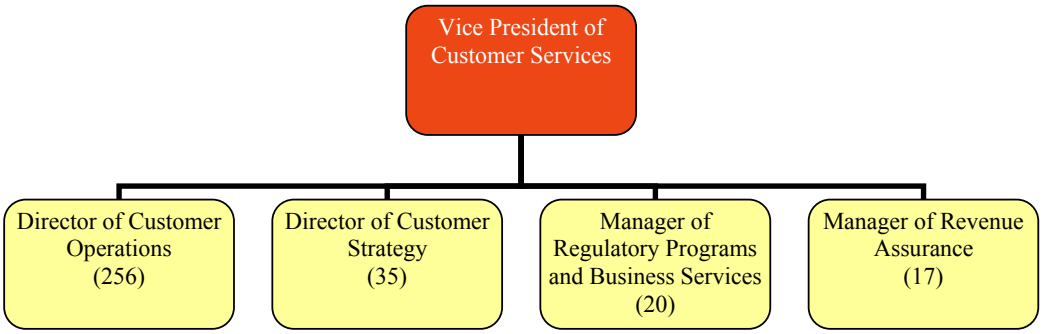
4. **More closely align material requests with material needs.**

X. CUSTOMER SERVICES

Background

PPL Electric Utilities Corporation (PPL Electric Utilities or Company) provides electric service to approximately 1,212,700 residential customers, 168,500 commercial customers and 4,565 industrial customers as of year-end 2007. The Customer Services Department annually generates approximately 16.5 million bills. In addition to the billing functions, the Vice President of Customer Services is responsible for all points of contact with the customer and all customer programs. A summary of PPL Electric Utilities' Customer Service organization chart is shown in Exhibit X – 1.

Exhibit X – 1
PPL Electric Utilities
Customer Services Organizational Chart
As of June 2008



Source: Data Request GD-1

Billing, revenue protection, and collections are the responsibility of the Manager of Revenue Assurance. Bills are automatically generated from the Customer Service System and are electronically transferred to a vendor for mailing. Furthermore, PPL Electric Utilities offers customers a variety of billing and payment options such as budget billing, paperless billing, summary bills for multi-location customers, and the option to select the payment date. Customers can pay their bill via standard mail, at third-party billing centers, over the phone with credit cards or electronic transfer, the internet, or automatic bill payment. PPL Electric Utilities' meter reading process has all but eliminated billing lags as bills are mailed one day after the meter reading is obtained.

PPL Electric Utilities also offers a variety of customer assistance programs for low income customers such as OnTrack, Customer Assistance and Referral Evaluation

Service (CARES), Winter Relief Assistance Program (WRAP), Operation HELP, and Low Income Home Energy Assistance Program (LIHEAP). OnTrack and CARES provide help to customers having trouble paying their electric bills while LIHEAP and Operation HELP are aimed at providing assistance to low income customers with any of their energy costs. In addition, WRAP provides educational awareness and energy audits to help reduce electricity usage and increase energy efficiency of qualified households. PPL Electric Utilities generally relies on social service agencies to qualify customers but the administration of the programs is managed through the Regulatory Programs and Business Services group.

The Manager of Regulatory Programs and Business Services is also responsible for investigating and responding to complaints (both informal and formal), working with the Public Utility Commission (PUC) on payment arrangements, and call monitoring within the Customer Contact Center. As informal or formal complaints are filed with the PUC's Bureau of Consumer Services, PPL Electric Utilities is provided a copy of the complaint and is responsible for providing a written response on the conditions, circumstances, or any other information relevant to the complaint within 30 days. In addition, the Quality Assurance Specialists (QASs) are responsible for monitoring calls to ensure the Customer Service Representatives (CSRs) are handling customers according to company policy. In this role, the QASs also provide training sessions to CSRs on new procedures, contact problem areas, or other call center issues. As a result of the multiple functions the QASs serve, the time it takes PPL Electric Utilities' to respond to customer complaints is longer than the average response times of other regulated electric distribution companies within Pennsylvania; however, its average response times remain under 30 days. Exhibit X – 2 depicts the complaint response time of PPL Electric Utilities and other regulated PA electric distribution companies from 2005 to 2007. Since 2005 PPL Electric Utilities has been able to reduce its response times overall by focusing its efforts on reducing the number of complaints that exceed 30 days without a response. During the audit, it became clear to both Audit Staff and PPL Electric Utilities management that the QAS function required additional personnel in order to further reduce the Company's above industry average response time to customer complaints. Subsequently, PPL Electric Utilities had added three additional staff members by the end of our field work (December 2008) which should improve the long response times and call monitoring efforts.

Exhibit X – 2
Comparison of PPL Electric Utilities Complaint Response Time
to other Major Pennsylvania Electric Distribution Companies
2005-2007

Company	Average Response Time in Days					
	Consumer Complaints			Payment Arrangement Requests		
	2005*	2006	2007	2005*	2006	2007
Allegheny	12.6	16.9	14.1	8.2	15.5	13.8
Duquesne	23.2	18.8	23.6	18.2	14.5	22.7
Met-Ed	15.7	13.3	16.6	2.0	2.2	2.7
PECO	13.0	13.3	20.7	5.3	13.9	13.7
Penelec	14.9	11.7	12.5	1.7	2.8	2.7
Penn Power	12.8	10.8	14.9	1.4	4.4	2.7
Average	**15.4**	**14.1**	**17.1**	**6.1**	**8.8**	**9.7**
PPL	**25.2**	**23.4**	**22.5**	**13.2**	**20.5**	**6.1**

*The 2005 data was calculated using evaluated complaint data whereas the 2006 and 2007 data was calculated using all complaint data
Source: 2005, 2006, and 2007 PUC Utility Consumer Activities Report and Evaluation

The Director of Customer Operations is responsible for all call center activities. PPL Electric Utilities maintains two call centers, one in the Lehigh Valley and one in Scranton The two locations share the call load and calls are automatically routed to the next available CSR regardless of the location of call origination or the caller's need. However, CSRs are arranged in teams with each CSR specializing in certain skill sets which enables them to handle inquires such as billing problems, new connections, etc. This skill based approach allows PPL Electric Utilities to route calls to the most qualified CSR for the particular customer inquiry. In addition, PPL Electric Utilities rotates CSRs between call center activity and support functions. The CSR workload consists of answering calls and completing back office work such as investigating system-identified high bills, conducting customer correspondence, or other support functions. PPL Electric Utilities' call handling performance during 2005-2007 is shown in Exhibit X – 3.

Exhibit X – 3
PPL Electric Utilities
Call Center Performance
2005-2007

Performance Metrics	2005	2006	2007
Average Telephone Busy-out Rate	2%	4%	1%
Average Calls Abandonment Rate	2%	2%	2%
% of calls answered within 30 seconds	80%	79%	83%

Source: Data Request CS-4

The main goal of the Customer Strategy group is to develop tools, options, and various programs/plans to help customers in any capacity. In this fashion, the Director of Customer Strategy is responsible for market research such as customer surveys, marketing, media relations, major accounts, automatic meter infrastructure (AMI), website, and customer education.

PPL Electric Utilities employs an AMI technology for metering purposes. AMI allows the Company to have two-way communications with its meters. In September 2008, PPL Electric Utilities started supplying customers with hourly meter reads which can be viewed online through its website or requested through the Customer Contact Center. In addition, these meters allow operators to "ping", or communicate with, meters to identify if the meter is working and has power.

Customer Strategy is the group that is working on educating customers about the upcoming rate cap expiration. PPL Electric Utilities has held town hall meetings throughout its service territory in the state, as well as, provided advertising/education through bill stuffers, newspapers, radio, and television. Additionally, PPL Electric Utilities is trying to help customers be more energy conscious by offering benefits from a partnership with its e-store which allows customers to save 20% on energy efficient/ improving products. The Company also provided two free compact fluorescence light bulbs or CFLs to any customer utilizing the energy analyzer found on the PPL Electric Utilities website and continues to offer customers a plan to gradually ease into the rate change.

Findings and Conclusions

Our examination of the Customer Services function included a review of the Company's policies and procedures, staffing levels, management and reporting systems, performance levels, customer outreach and programs, call center statistics, etc. Based on our review, the Company should devote additional efforts to improving the efficiency and/or effectiveness of its customer service function by addressing the following:

1. PPL Electric Utilities' bad debt levels, three day customer termination notices, and terminations are all increasing.

Termination of service is governed by statute at 66 Pa.C.S. § 1406 (hereafter referred to as Chapter 14) and by PUC regulation 52 Pa. Code § Chapter 56 (Chapter 56). Both Chapter 14 and Chapter 56 state that when a customer hits a certain past due balance threshold, defined at PPL Electric Utilities as two months and a minimum of $200 overdue, the utility may proceed with its customer termination process. The utility must first send a written notice of potential termination to the customer at least ten days in advance of the termination (hereafter referred as the ten-day notice). If the customer does not respond, the utility is then required to make contact in person or by phone at least three days before the termination date (hereafter referred as the three-day call). If the utility elects to call the customer, it must attempt to do so at least twice. Finally, if the customer still has not paid their bill or entered into a payment arrangement the utility may terminate service (hereafter referred to as a termination order). Nonetheless, the utility is still required to attempt to make contact at the time of termination and leave a post-termination notice.

The customer can end the termination process at any time by paying their outstanding balance plus a late fee or by entering into a qualified payment arrangement with the utility. Chapters 14 and 56 also details some exclusions and exceptions to the above process such as for unsafe conditions, medical problems, low-income customers, winter months, etc. However, all termination activity at PPL Electric Utilities is designed to follow the rules of Chapter 14 and 56 as previously summarized. The number of ten-day notices, three-day calls, termination orders, and terminations issued by PPL Electric Utilities during 2004 through 2007 are shown in Exhibit X – 4.

Exhibit X – 4
PPL Electric Utilities
Termination Statistics
2004-2008

Year	Number of Ten-Day Notices	Number of Three-Day Call Notices	Number of Termination Orders	Number of Terminations
2004	435,804	132,379	54,779	10,957
2005	322,294	157,177	44,885	19,596
2006	436,612	281,387	101,918	23,196
2007	441,442	315,657	127,450	27,418
2008*	500,405	315,651	116,023	37,232

*January through November 2008

Source: Data Requests CS-13, 21 and 38.

The "collection waterfall" in Exhibit X – 4 details an alarming trend found throughout the utility industry indicating that customers are less likely to contact the utility upon receiving a 10-day shut-off notice or upon receiving a 3-day personal contact[11]. In this sense, the customer just cascades or waterfalls down into the next shut-off notice action. PPL Electric Utilities generally issues the same amount of ten-day notices year to year but more and more customers are waiting to resolve non-payment issues until the three-day call notice or eventual termination order. As a result, PPL Electric Utilities experienced a 150% increase in terminations from 2004 to 2007.

Because more customers' services are terminated, more customers close their accounts without reconnection. As a result, PPL Electric Utilities has experienced an increased amount of overdue final bills. PPL Electric Utilities utilizes primary and secondary third-party collection agencies to attempt to collect final overdue balances. If the primary collection agency is unsuccessful, PPL Electric Utilities will transfer that account to a secondary collection agency. The overall success rate for the collection agencies is approximately 12%. Additionally, final overdue balances are reduced when the customers pay the amount due directly to PPL Electric Utilities, or the overdue amount is transferred to customers' new active accounts. The remaining balances of uncollected bills are written off as bad debt. Residential bad debt has increased by 40% from 2005 to 2007 to an overall cost of approximately $23,000,000. Moreover, as part of a 2008 benchmarking study, PPL Electric Utilities' ratio of bad debt expense to total revenue of 0.92% ranked it as a fourth quartile, (i.e., poor) performer within a group of 22 panel companies[12]. Although, regulatory differences can occur between states, a comparison of PPL Electric Utilities' ratio of bad debt expense to six other large electric companies in Pennsylvania additionally indicates that during 2007 PPL was a third quartile performer[13].

Customers default on payments for a variety of reasons from financial hardship to forgetfulness. However, the shift in customers' responsiveness from the ten-day notice into the three-day notice and ultimately termination could be the result of numerous factors beyond the control of PPL Electric Utilities. At any rate, the effects of unpaid bills impact PPL Electric Utilities and the costs are ultimately borne by all ratepayers.

As PPL Electric Utilities is forced to progress to each step of the termination process, there is an increased cost conveyed to the Company and the ratepayer. For example, it costs PPL Electric Utilities just 47.5 cents to generate and mail the ten-day notice but costs an average of $50 per customer when the termination order is issued.

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[11] 2005, 2006, and 2007 Reports on Universal Service Programs and Collections Performance of the Pennsylvania Electric Distribution Companies and Gas Distribution Companies.
[12]Data taken from Data Request ER-40, PPL Electric Utilities Benchmarking Report conducted September 19, 2008.
[13]Information taken from the PUC's *Report on 2007 Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies & Natural Gas Distribution Companies*.

Furthermore, once an account is terminated and transferred to a collection agency, PPL Electric Utilities must pay the collection agency a percentage (i.e., 17% for primary and 23% for secondary) of collected overdue balances. In general, a write off recovers only a small percentage of the unpaid balance.

PPL Electric Utilities cannot control how, when, and if customers pay their bills. In addition, their collection and termination efforts are within regulatory requirements of Chapters 14 and 56. However, the Company has recognized the impact of delinquent bills on ratepayers and is working on ways to potentially reduce terminations. Management is working to optimize the three day call notice in order to maximize the amount of customers that are actually reached by phone. PPL Electric Utilities has also decreased the level of bad debt per termination. In other words, PPL Electric Utilities is becoming more effective at contacting and/or terminating customers with unpaid balances. However, as Exhibit X – 4 indicates, additional efforts are needed to decrease terminations and limit ratepayer exposure to collection and bad debt costs. Nevertheless, there are additional opportunities for PPL Electric Utilities to save money and limit terminations. For example, if less costly modes of communication are more fully utilized such as the Connect Newsletter (which is issued as a bill stuffer and offers news updates related to current PPL Electric Utilities initiatives such as tips on reducing energy usage, good environmental stewardship, etc.) or web notifications, the Company could potentially save time and money. Also, if an additional call, (i.e., after the three day call) is used to reach a customer before the termination order is issued, PPL Electric Utilities can potentially save the difference between the cost of an additional call and the cost to terminate service[14]. In summary, additional education or contacts with customers has the potential to mitigate collection efforts by informing the customer of payment options and programs before accounts become delinquent.

2. PPL Electric Utilities efforts to communicate is rated poorly by its customers.

In addition to providing service, utilities should strive to maintain a good relationship with customers to foster goodwill and improve awareness of company programs and services. PPL Electric Utilities has a large and diverse service territory which impacts the effectiveness of its various advertising campaigns and customer communications. Currently, PPL Electric Utilities' outreach communication with its customers is primarily limited to the Connect Newsletter. Each Connect Newsletter also provides the customer with ways to contact the Company such as: the PPL Electric Utilities website, by telephone, and by mail.

[14] The potential savings would not necessarily be the cost of the termination order minus the cost of the three day notice call due to other conditions such as a potential increase in staffing, time, etc. for performing calls and a potential decrease in staffing, time, etc. for performing termination orders.

While the newsletter is a good method to reach each of its paying customers, printed material is not always an effective means of communication since many customers do not thoroughly read bill stuffers. Customers also have the option to access the Company's website for account information, download the latest newsletter, or learn more about the Company. However, PPL Electric Utilities could use additional techniques such as an expanded web presence or increasing its community presence. For example, PPL Electric Utilities could create a forum on its web site for customers to share stories about energy conservation, which allows customers to feel connected with the Company and energy peers. In addition, PPL Electric Utilities could expand participation in community town hall meetings to stay current with the issues facing customers.

As a specific example, the Company's response to electronic correspondence seems to be declining. Since PPL Electric Utilities began monitoring the number of days it takes to respond to customer e-mails, the average response time has increased from 3.8 days in 2007 to 6.5 days through November 2008. Another factor contributing to PPL Electric Utilities' low customer communication ratings (66%) is the fact that the Company's residential customer satisfaction surveys indicate that even over a short period of time most customers are unable to recall any of the Company's advertising.

Without a variety of methods to provide effective communication to PPL Electric Utilities' diverse service territory, customers may become uninterested, unresponsive, and uninformed about PPL Electric Utilities' efforts and programs resulting in less than favorable customer satisfaction ratings. In addition, without customer education; energy saving practices, initiatives, or support programs could go unnoticed by needy or concerned customers.

Recommendations

1. Expand efforts to reduce customer terminations and bad debt expense by increasing education and customer outreach regarding the termination process particularly for delinquent customers.

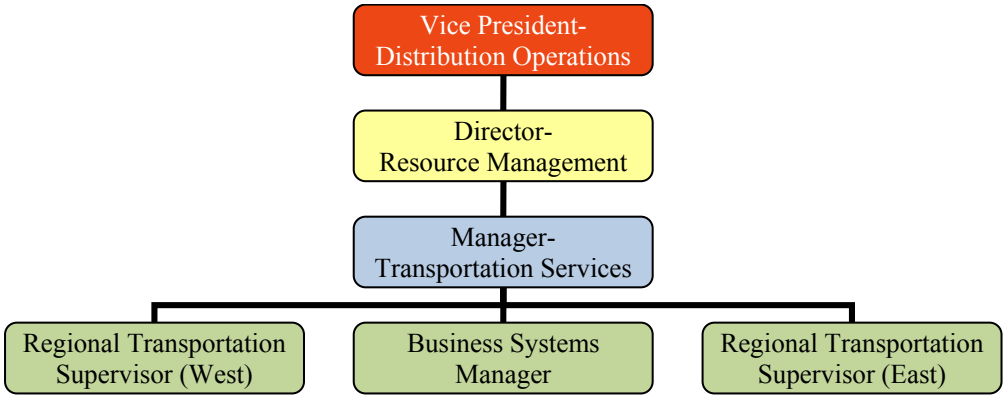
2. Strive to improve customer communication efforts and decrease the Company response time to customer's emails.

XI. FLEET MANAGEMENT

Background

The PPL Electric Utilities Corporation (PPL Electric Utilities or Company) Transportation Services Group is responsible for providing transportation services to the electric distribution company and other affiliates; including PPL Generation, PPL Services Corporation and PPL Energy Services Group. Exhibit XI – 1 shows the organization structure of the Transportation Services Group within PPL Electric Utilities.

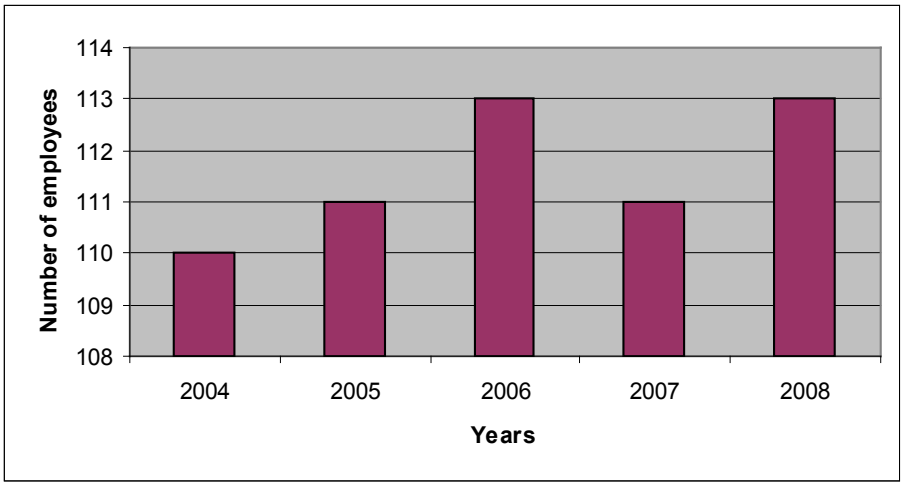
Exhibit XI – 1
PPL Electric Utilities
Transportation Services Organization Chart
As of May 31, 2008



Source: Data Request GD-6

PPL Electric Utilities' eastern service territory includes the Northeast, Central and Lehigh regions while the western portion includes the Harrisburg, Lancaster and Susquehanna regions. As of May 2008, Transportation Services had 113 employees including 14 management personnel. In each of the transportation service territories (east and west), Transportation Services had 49 employees which included Journeyman Mechanics, Transportation Mechanics, Mechanic Leaders, Transportation Handymen, and Material Handlers. As indicated in the organization chart above, each Transportation service territory has a Transportation Supervisor with direct reports that include three shift supervisors, located at each of the main garages. Exhibit XI – 2 shows the staffing level trend chart from 2004 through 2008.

Exhibit XI – 2
PPL Electric Utilities
Transportation Services Staffing Trend
As of May 31, 2008

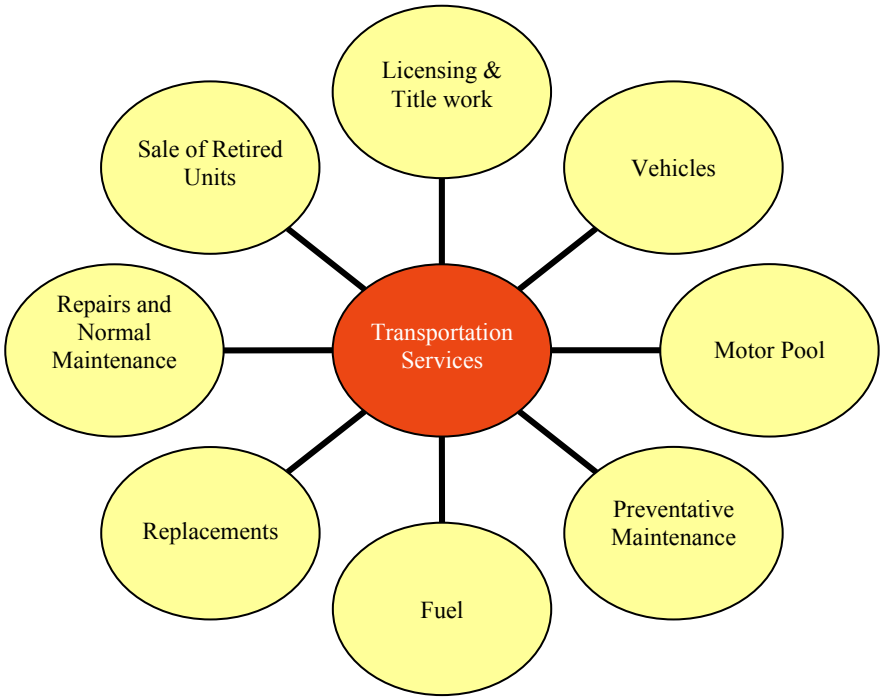


Source: Data Request FT-7

Transportation Services manages fleet maintenance and usage by using the FleetAnywhere/FleetFocus (FleetAF) system developed by Maximus Corporation. FleetAF is a windows-based, client/server software application. Cradle to grave, this application has the ability to track an assortment of fleet related data such as asset management, parts & equipment, work orders, preventative maintenance forecasting, parts/labor costs, etc. Management at various levels reviews the system data at different intervals depending on their individual needs. The FleetAF application also includes numerous other functions such as parts inventory control, vehicle delivery status reporting, vehicle availability, contractor costs by vehicle category, registration renewals, etc. Moreover, this system is integrated with the Business Management System (BMI) where fuel cost data is maintained.

Corrective maintenance (CM) work for some specialty services such as auto body work, transmission work, engine repair, etc. is outsourced. A large portion of repair work is done in-house. Most preventative maintenance (PM) work is performed in-house with outside vendors only used when the amount of work exceeds the available resources. PPL Electric Utilities has its own garages and service facilities where PM is performed. PPL Electric Utilities has a total of 24 total transportation facilities including six main garages (i.e., one in each region), and 14 manned and three unmanned satellites. Satellites are service centers that connect to the main garage for PM, repair work, etc. Each garage is maintained by a shift supervisor and a crew of mechanics. Exhibit XI – 3 illustrates the services provided by Transportation Services.

Exhibit XI – 3
PPL Electric Utilities
Services Provided by Transportation Services
As of May 31, 2008



Source: Interview Request FT-1

As of August 2008, PPL Electric Utilities had 1,225 vehicles in its fleet. A profile of the number of vehicles by vehicle class is shown in Exhibit XI – 4.

Exhibit XI-4
PPL Electric Utilities
Number of Vehicles by Equipment Class and Other Miscellaneous Equipment
As of August 2008

Equipment Class	Number of Vehicles
Class 1 – small vehicles such as sedans, station wagons	60
Class 2 – personnel carriers such as vans, SUV's, pick-up trucks	652
Class 3 – small bucket trucks, walk-in vans, etc.	152
Class 4 – medium and large bucket trucks	355
Class 6 – High reach platform	6
Vehicle Sub-total	**1225**
Miscellaneous Equipment (trailers, air compressors, trenchers, etc.)	621
Total Vehicles and Miscellaneous Equipment	**1,846**

Note: Class 5 is not used by Transportation Services.
Source: Data Requests FT-3 and FT-5; Auditor Analyses

PPL Electric Utilities vehicles are fueled one of three ways: the mobile fueling program (called "wet hose fueling" at PPL Electric Utilities), service center pump stations, or at public fueling stations via Wright Express (WEX) fuel cards. In 2006, PPL Electric Utilities selected a vendor for their mobile fueling program that was contracted to supply ultra low sulfur B20 biodiesel fuel for the Company's light and heavy duty diesel powered vehicles. In order to help ensure that it would meet the Company's needs and objectives, Transportation Services planned and implemented the mobile fueling program on a phase by phase basis. The program was initiated in early 2007 in the Lancaster region followed by the Harrisburg and Lehigh regions later in the year. Hazleton was added in mid 2008 and the final two regions (Northeast and Susquehanna) are planned to be added by December 2008. Under this program, the fleet fueling contractor refuels all diesel powered vehicles, and unleaded fuel vehicles and equipment (that is parked outside), at the Company's work sites during downtime hours. The mobile fueling trucks are equipped with computers that ensure delivery control and accounting. Small stainless steel "IButtons" are placed on bumpers of PPL Electric Utilities vehicles and using a Comlink system the computer reads information from this "IButton" such as the vehicle number and fuel data.

Fuel purchases under the mobile fueling program are based on the current wholesale price for the fuel, plus a per-gallon service/delivery charge. The costs of the mobile fueling program are offset by several benefits including: the elimination of previous refueling time, more accurate data collection, lower administrative costs, improved fuel quality, ability to take advantage of lower fuel prices, eliminating costs

associated with on-site fuel tanks such as permit/licensing fees, maintenance/testing costs, repair costs, inspection fees and cost of government mandated upgrades to tanks and monitoring equipment. Additionally, during storm outages when PPL Electric Utilities and foreign crews are performing storm restoration work, the mobile fueling program facilitates vehicle refueling enabling the crews to spend more time on restoration work. During a storm incident in December 2007, the fleet fueling contractor dispensed over 21,000 gallons of fuel and fueled over 100 vehicles of foreign crew at their hotel during rest periods. In addition to the mobile fueling program, vehicles can also be fueled at pump stations at the Company's individual service centers which use fuel stored in underground storage tanks or at public fueling stations. PPL Electric Utilities is in the process of eliminating these storage tanks by the end of 2009 because the Company contends that the benefits of having the mobile fueling program, as previously listed, outweigh the costs associated with the underground storage tanks. Lastly, WEX cards which are traditional gas station credit cards are primarily used to fuel light vehicles that have "take home" privileges or vehicles that are used for official Company travel purposes.

Transportation Services expenditures are budgeted by four Responsibility Centers which include Transportation Services Administration, Transportation Services East, Transportation Services West, and Transportation Services Clearing for other departments. Transportation Services Administration includes the transportation costs for staff at PPL Electric Utilities headquarters in Allentown and Transportation Services Clearing tracks the costs for other departments (i.e., primarily for fuel purchases). Exhibit XI – 5 shows the combined actual and budgeted operating expenses for all four responsibility centers for 2004 through 2007. As evident from the table, Transportation Services' actual expenditures have been below the budgeted expenditures for three out of the four years but the variance has been quite negligible. Moreover, the considerable drop in the budgeted amount from 2006 to 2007 reflects the August 2006 change in the vehicle acquisition practice from leasing vehicles to purchasing vehicles.

Exhibit XI – 5
PPL Electric Utilities
Total Transportation Services Operating Expenses - Actual versus Budgeted
2004 – 2007

Year	Actual	Budget	Variance (%)
2004	$27,611,190	$28,870,867	(4.4)
2005	$30,464,475	$29,537,252	3.2
2006	$31,351,472	$32,930,514	(4.8)
2007	$20,427,826	$22,543,524	(9.4)

Source: Data Request FT-8; Auditor Analysis

Findings and Conclusions

Our examination of the Fleet Management function included a review of policies and procedures, acquisition practices, vehicle maintenance, vehicle management information systems, benchmarking and fleet costs. Based on our review, the Company should devote additional efforts to improving the efficiency and/or effectiveness of its fleet management practices by addressing the following:

1. The Transportation Services Department does not track vehicle operating, maintenance, and fuel costs by individual business lines.

Transportation Services provides fleet services to five business lines or clients, the largest being PPL Electric Utilities. The fleet services provided are three fold: operating, maintenance, and administrative. Operating services include:

- Fuel maintenance and cost tracking, licensing, title work, etc.;
- Maintenance services which include preventative maintenance, parts/labor costs, equipment maintenance, etc.; and
- Administrative services which include acquisition specifications of new fleet units, vehicle delivery to clients, auctioning of vehicles, disposal of retired fleet units, etc.

Maintenance costs are entered into the FleetAF system by mechanics when preventative maintenance is performed at pre-determined intervals. Operating costs such as licensing and title work are initially entered into the system as well, but fuel costs are entered into the BMI system which in turn interfaces with the FleetAF system. Moreover, maintenance, operating and fuel costs are tracked by vehicle class. Unless there is a shortage of resources and manpower, all preventative maintenance such as oil/filter changes, tire rotation, etc. is performed in-house by Transportation Services' crew of mechanics.

Mechanics perform maintenance on all vehicles irrespective of business line or client. Furthermore, maintenance data for all business lines is collected and maintained jointly in one system making it difficult for Transportation Services to report data by individual client. Consequently, upon request from the Audit Staff, Transportation Services was unable to produce historical vehicle maintenance and operating data related to PPL Electric Utilities.

The Company maintains that Transportation Services currently has no way of separating operating and maintenance costs by each business line because, as aforementioned, mechanics input maintenance costs in the FleetAF system based on vehicle class and not individual business lines. Additionally, fuel costs are also jointly recorded and maintained in the BMI system for all business lines. By not tracking the

maintenance, operating, and fuel costs for each business line; PPL Electric Utilities cannot develop basic performance metrics such as maintenance costs per mile, operating costs per mile, etc. in order to properly assess how effectively its fleet operations are performing and/or being managed. It is important for Transportation Services to segregate the business lines when collecting fleet maintenance and operating costs because it could not only show how each business line's fleet is performing but it could also provide Transportation Services an opportunity to conduct more detailed analysis on each business line's fleet based on this information. Hence, Transportation Services should track vehicle operating and maintenance data, at a minimum, for PPL Electric Utilities, a regulated entity, including but not limited to preventative and corrective maintenance costs, fuel costs, operating costs such as licensing, title work, etc. and other administrative costs.

2. PPL Electric Utilities has not established vehicle performance metrics.

As previously discussed, the only instance when vehicle mileage is gathered and updated in the FleetAF system is when mechanics perform preventative maintenance on the vehicles. Preventative maintenance (PM) schedules vary based on the type of vehicle and maintenance that needs to be performed. For example, light duty vehicles with normal usage are serviced semi-annually whereas heavy duty vehicles and light duty vehicles with high usage are serviced quarterly.

Moreover, daily mileage logs are not maintained by individual driver; however, Transportation Services does track average annual miles driven but the process is not based on a historic calendar year basis. As of late 2008, the Company did not have a process to gather vehicle mileage in the FleetAF system on a consistent calendar based cycle because the system overwrites prior mileage entries with each new entry. Hence, the Company has no way of tracking historic mileage which is the key to developing various performance metrics. Transportation Services, on the other hand, calculates the average annual miles driven by subtracting the initial mileage reading (original reading when a new vehicle is purchased) from the reading when the preventative maintenance is performed and dividing the remainder by the number of months between the time the maintenance was performed to the time the vehicle was purchased. Audit Staff contends that in order to establish appropriate cost performance metrics such as maintenance and repair costs per mile, miles per gallon, etc., Transportation Services should record mileage annually and track it on a historic basis.

Performance metrics are crucial in assessing the reasonableness of the costs of operating and maintaining a vehicle. Without performance metrics the Company cannot adequately and effectively gauge the manner in which their fleet is performing. Additionally, as discussed in Finding and Recommendation No. 1, Transportation Services tracks maintenance and operating costs for all business lines jointly but doesn't

use this data to perform any kind of cost performance metrics to determine the efficiency of vehicles within each vehicle class.

Key Performance Indicators (KPIs) are defined as financial and non-financial metrics used to help an organization define and measure progress toward organizational goals. In particular, KPIs reveal performance in the primary functions for each vehicle category (i.e., sedans, pick-up trucks, sport utility vehicles, bucket trucks, etc.). KPIs also demonstrate performance in areas of interest such as preventative maintenance, scheduled maintenance, etc. The Company should develop and maintain the KPIs for each vehicle class in order to determine the efficiency of its fleet that, at a minimum, includes:

- Maintenance and repair cost per mile or per hour
- Miles per gallon
- Average maintenance expense per vehicle
- Average mileage per vehicle
- Employees per vehicle

Maintenance and repair cost per mile or per hour (depending on the type of vehicle), like miles per gallon, is an important tool in determining the efficiency of equipment within the same vehicle class. Reviewing an annual cost per mile ratio will identify problem vehicles within each category. KPIs such as cost per mile, miles per gallon, etc. are intended to demonstrate performance in a given area, one that should be of interest to management. Transportation Services does not analyze trends in miles per gallon or costs per mile for each vehicle or vehicle class. As a result, no KPIs have been developed which makes it impossible for the Company to effectively evaluate the operations of its fleet. With some additional programming, the FleetAF system has the potential to calculate cost performance indicators when all the costs and mileage amounts are entered into the system. As of late 2008, no fuel costs or consistent mileage readings are entered into the system. In conjunction with data from the FleetAF system, Transportation Services can develop KPIs which could be helpful in monitoring fleet performance and assist management in making repair/replace decisions.

3. Transportation Services has developed a vehicle and equipment purchase cycle matrix for PPL Electric Utilities, however it has not performed a lifecycle cost analysis to support the established life cycles in over ten years.

On an annual basis, Transportation Services evaluates the Company's entire fleet to determine which vehicles should be replaced. This evaluation is based on years in service, accrued mileage, history of maintenance costs, condition of the unit, and attaining the life cycle period. The vehicle and equipment purchase cycle matrix provides life cycles for each vehicle class. This life cycle is a predetermined timeframe

assigned to each class of vehicle and represents the duration of the units expected life in PPL Electric Utilities' fleet.

It is appropriate for expected life cycles to be established for each vehicle type using Lifecycle Cost Analysis (LCA). LCA is an economic evaluation method that determines the total cost of owning and operating a vehicle over a period of time. The economic theory of vehicle replacement states that vehicles should be replaced when the sum of ownership and operating costs is at its lowest historical point. In other words, the optimal point at which to replace the vehicle from an economic perspective is when the total cost curve is at its lowest point.

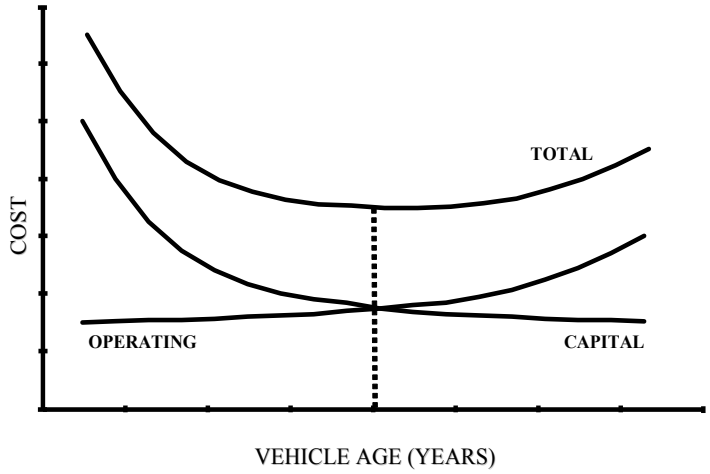
As illustrated in Exhibit XI – 6, the costs in the Company's LCA should include:

- Capital
  - Purchase price
  - Upfitting costs
- Operating costs
  - Maintenance and repair costs
  - Fuel costs
  - Depreciation costs

Up-fitting is essential in the electric utility business and substantial additional costs arise due to the extensive vehicle up-fitting required to customize vehicles such as bucket trucks to meet specific functional demands. Moreover, vehicle up-fitting is an essential element in increasing safety and reducing injuries.

Transportation Services indicated that a lifecycle cost analysis was done over ten years ago but was unable to provide the analysis for review. The Company opined that the life cycle cost analysis results shouldn't have changed in the past ten years because vehicles are made better today than 10-15 years ago, which should potentially result in reduced maintenance and repair costs and lengthen the life cycle. However, this conjecture itself indicates need to update the life cycle analysis as timely replacement of vehicles and equipment is important for controlling fleet maintenance costs, managing total costs of asset ownership, ensuring employee and public safety, etc. Replacing vehicles too soon or too late in the lifecycle could add significant ownership asset costs. By not periodically using a tool like LCA, management may fail to consider all pertinent information when making repair/replace decisions. Additionally, LCA permits fleet management to identify the total costs of purchasing and owning a vehicle over the entire period the vehicle is held in its fleet.

Exhibit XI-6
PPL Electric Utilities
Lifecycle Cost Analysis Curve



Source: Aaron, Connie et. al. "Lifecycle cost analysis and vehicle replacement." at www.mercury-assoc.com

4. Transportation Services utilizes industry standards to measure mechanic productivity goals and has developed, but not yet implemented, strategic recommendations to improve transportation manpower/maintenance efficiency.

To improve competitiveness and support corporate objectives, Transportation Services has developed a Transportation Manpower/Maintenance Strategy in which they reviewed the following initiatives:

- Employee Attrition,
- Manpower to Fleet Ratio Targets, and
- Light Vehicle Maintenance.

Transportation Services is planning to eliminate ten mechanic positions through attrition by 2010, which in turn would reduce mechanic man-hours by approximately 16,330 annually. Projected employee attrition information was provided by PPL Services' Human Resources group with reference to age groups per year and anticipated retirements at age 60 when employees can receive 100% of their accrued pension.

In order to establish manpower to fleet ratio targets, Transportation Services has calculated annual required maintenance hours per maintenance repair unit (MRU). MRUs are equal to the number of vehicles in a class multiplied by the maintenance and repair factor (MRF) for that particular class of vehicles. MRF's are derived from the average annual hours of labor expended on each class of vehicles. Transportation Services assigns a MRF ranging from 1 for sedans and up to 12 for high-reach platform vehicles. The MRFs for all other vehicles are scattered between these two limits depending on the average number of labor hours spent on each vehicle. Consequently, Transportation Services has a total fleet of 2,604 vehicles which translates to 6,448 MRUs. Transportation Services currently has just over 145,000 available mechanic man hours which converts to about 22.5 maintenance hours per MRU (145,000 divided by 6,448).

PPL Electric Utilities compared its annual required maintenance hours per MRU with three other major investor-owned utilities with similar fleets: Southern California Edison, American Electric Power, and Ameron. Data from Utilimarc Inc., a nationally recognized fleet benchmarking and consulting firm, was also used for comparison to PPL Electric Utilities' data. Three of the four comparison groups had 25 maintenance hours per MRU, which indicated that PPL is already below the comparative data even without contracting any light vehicle maintenance.

Transportation Services plans to outsource light vehicle maintenance such as oil changes, inspections, etc. as the mechanic workforce is being reduced. As a result, PPL Electric Utilities projects that it will reduce its annual required maintenance hours by approximately 5,300 hours. This plan is based on a previous recommendation which resulted from the Company's study to review the cost effectiveness of performing the function in-house.

The Company indicated that mechanic productivity is very difficult to compare to other utility fleets due to the variety of measurement units and nonstandard requirements. However, the Audit staff contends that mechanic productivity, or at least trends, can be measured if the proper tools are employed. Mechanic productivity, as seen above, is a critical component of transportation and should be reviewed on a routine basis.

As previously mentioned, Transportation Services has reviewed these initiatives and plans to follow-up on the recommendations over the course of the next few years in order to improve fleet performance. These recommendations include:

- Initiate light vehicle PM strategy to ultimately reduce required hours by approximately 5,300.
- Phase in target of 20 maintenance hours per mechanic which would enable a workforce reduction of 10 mechanics.
- Establish Transportation Mechanic requirement at 79 positions.

It appears that the Company is taking steps in the right direction and Audit Staff would like to encourage timely implementation of the planned changes for improving the Company's fleet operations.

Recommendations

1. **Modify the FleetAnywhere/FleetFocus system to separately track PPL Electric Utilities' vehicle operating, maintenance, and fuel costs from other business lines.**

2. **Develop and maintain Key Performance Indicators (KPIs) for each vehicle class and track actual performance against the KPIs.**

3. **Perform, and periodically update, a Lifecycle Cost Analysis to support the life cycles used to determine PPL Electric Utilities' vehicle and equipment purchase cycle matrix.**

4. **Expeditiously implement the recommendations contained in the Transportation Manpower/Maintenance Strategy.**

XII. HUMAN RESOURCE MANAGEMENT

Background

The PPL Services Corporation (PPL Services) Vice President - Human Resources & Services, who reports to the PPL Services' President and Chief Executive Officer, has overall responsibility for PPL Electric Utilities Corporation (PPL Electric Utilities or Company) human resources functions. Among the functions administered by the Human Resources Department are recruitment and hiring, affirmative action, compensation, employee benefits, safety operations, training, and employee relations.

The human resource information system (HRIS) utilizes Oracle/PeopleSoft HRMS and PeopleTools. The HRIS's primary modules include:

- Human Resources – core system function that contains all employee information
- Pension Administration – tracks contributions, calculates benefits, etc.
- Time and Labor – time reporting system that feeds into payroll, tracks vacation, sick leave etc.
- Payroll – calculates gross pay, taxes, deductions
- Talent Acquisition Manager – recruitment

The HRIS generates a number of standard reports (i.e., payroll register, deductions register, check register, tax deposit summary, etc.) and has the capability to create custom reports. All employees with a valid system user identification number can access the system to view or modify personal information, view seniority lists, etc. Employees also have access to a self-service application that enables them to enter time worked, view their payroll record, submit travel expense reports, request forms, etc. Restricted security access can be granted based on specific business need basis. An extensive review and approval process is required for restricted security access.

The Company places a strong emphasis on workplace safety and maintains a comprehensive safety program including safety and health manuals, safety training programs, and Company safety needs assessments. The safety program includes: operation of vehicles and equipment, personal protective equipment, fire protection, work area protection, and ergonomics. Safety programs are monitored by the PPL Services' Director-Safety Operations who is responsible for administering all aspects of PPL Corporation's (PPL) safety program. PPL Electric Utilities' safety programs have been developed based on U.S. Occupational Safety and Health Administration (OSHA) regulations, other regulatory requirements, various association guidelines, and established internal policies and procedures.

PPL has a corporate-wide safety committee (i.e., Senior Safety Leadership Team) that is chaired by the Director-Safety Operations and includes the respective operating company Presidents and other senior executives. PPL Electric Utilities also has a number of internal safety committees. Safety information is disseminated to employees through various methods including the safety net video (six episodes per year), the Safety Spotlights weekly newsletter, and real time Safety Alerts.

A comparison of PPL Electric Utilities' recordable incidence and lost time incidence rates within the respective OSHA industry and employment size specific rates as reported by the U.S. Department of Labor's Bureau of Labor Statistics (BLS) is shown on Exhibit XII – 1. Our review of the period 2004-2007 revealed that the Company's recordable incidence rates were lower than the OSHA rates. Company lost time incidence rates showed a positive trend whereby it ultimately fell below OSHA rates in 2006 and 2007.

Exhibit XII – 1
PPL Electric Utilities
Comparison of OSHA to PPL Electric Utilities Incidence Rates
2004-2007

	2004	2005	2006	2007
PPL Recordable Incidence Rate	4.28	4.39	3.33	3.73
OSHA Recordable Incidence Rate	5.20	4.60	4.40	4.50
PPL Lost Time Incidence Rate	1.27	0.89	0.70	0.90
OSHA Lost Time Incidence Rate	.50	.50	1.00	1.10

Source: Data Request HR-4 and BLS data

The Company attributes its overall favorable employee safety performance to an aggressive approach of training and compliance as well as a strong management commitment. The Company utilizes safety goals and leading indicators to achieve positive safety results. As a testament to its high level of safety compliance, the Company had earned OSHA Voluntary Protection Program (VPP) Star status in 2004 and 2005. A cooperative safety program, VPP Star status indicates all program standards (compliance, documentation, incidence rate, etc.) have been exceeded. The Company attained recertification in the program in 2008.

PPL Electric Utilities offers an industry competitive benefits package with retiree healthcare benefits. PPL Electric Utilities general compensation objective is to ensure that positions are market competitive. The Company utilizes annual salary surveys conducted by independent compensation consultants to determine baseline market

salaries for exempt and non-exempt positions. Executive compensation is discussed in more detail in Chapter III-Executive Management and Organizational Structure. Salary data used for the reviews is acquired by leading compensation consultants including Towers Perrin, Mercer, Watson Wyatt, and Hewitt Associates. Wages and benefits for employees represented by the International Brotherhood of Electrical Workers, Local 1600 are determined through the collective bargaining process.

Staffing or workforce planning is the systematic assessment of personnel which include such factors as job skills and age in order to project future manpower needs. The Human Resources Business Partner Lead for PPL Electric Utilities, in partnership with Company executive management, identifies critical skill needs and determines the recruiting strategy for the Company. The Company has taken a pro-active approach in identifying future manpower needs particularly in the craft/skilled job positions which are expected to experience significant retirements in the coming years.

The Company utilizes a 12month rolling resource plan or workforce forecast that lists anticipated critical and non critical hiring needs for the next year. The plan lists the respective business lines (i.e., distribution operations, transmission operations, customer service, etc.) and specific positions where vacancies are anticipated. The plan is updated quarterly. Furthermore, the Company develops a three year workforce forecast identifying future resource needs and a three year workforce plan that responds to the workforce forecast and describes strategic actions to address the most critical resource needs.

In an effort to fill future vacancies in the craft/skilled job positions, in addition to internal development and training, PPL Electric Utilities has alliances with trade and vocational/technical schools to draw potential talent for craft/skilled positions. Also, the Company works with the Center for Energy Workforce Development, a nonprofit consortium of electric, natural gas, and nuclear utilities to address the need for a qualified workforce.

Findings and Conclusions

Our examination of the Human Resource Management function included a review of the Company's succession planning, safety programs and training, compensation, and workforce planning. Based on our review, the Company should devote additional efforts to improving the efficiency and effectiveness of its human resource management by addressing the following:

1. There is no documented formal succession plan for a number of top management positions.

It is a sound business practice to have a succession plan to identify, develop and train replacements for key management positions. The objective of succession planning is to ensure continuity of management while attempting to minimize the adverse impact of unplanned vacancies. This plan would include a list of key management positions, the incumbents, a list of potential employees, a replacement planning/promotability assessment listing several replacement candidates for each key position and ranking each candidate on management potential, performance in present job, readiness for position, etc. The plan should also identify key management personnel who are nearing retirement age and the specialized skills needed to replace them, be ongoing and flexible and have the support of top executives.

While a documented succession plan is in place for the PPL Electric Utilities' President and Vice President-Transmission, there is no succession plans for the Vice President-Distribution Operations, Vice President-Customer Service, Manager-Regulatory Strategy, Manager-Regulatory Compliance, Financial Director-Business Lines, and Senior Director-Planning/Engineering Services. These are executive management positions reporting directly to the PPL Electric Utilities President. To PPL Electric Utilities credit, succession plans are in place for middle management personnel (i.e., managers and directors). These plans are developed by the respective business line executive. For personnel with succession plans in place, successors are listed as emergency, ready now, and ready later (1-3 years).

An updated succession planning process for executive level positions was initiated in 2008 utilizing Success Factors web based software. The system creates a candidate profile, assesses the candidate against an executive competency model, establishes long term development goals, and implements annual development objectives. System benefits include replacing paper documents with an online system that is easily updated, fosters greater internal talent development, and gives greater consistency and transparency to succession planning/development. The system provides executive strength analysis, talent searches of employee profiles, and identification of successor candidates for key executive positions.

The Audit Staff recognizes the initiatives being undertaken by the Company regarding succession planning and feels the Success Factors system is an effective succession planning tool. However, documented succession plans for the key executives listed above had not been formalized as of December 16, 2008, the last day of audit fieldwork. It is important that the Company complete its plans to expand succession planning to all executive level positions, as a lack of succession planning could impact the Company's future productivity and success, if it were to experience a disruption in the continuity of its management.

Recommendation

1. Complete efforts to develop, document, and implement an effective, ongoing succession plan for all PPL Electric Utilities executive management positions.

XIII. DIVERSITY

Background

PPL Services Corporations' (PPL Services) Director of Employee Relations and Staffing, who reports directly to PPL Services' Vice President of Human Resources & Services, oversees all EEO Coordination throughout PPL Corporation. PPL Services' Director of Human Resources for PPL Electric Utilities Corporation (PPL Electric Utilities or Company) serves as PPL Electric Utilities' EEO Coordinator.

A Secretarial Letter was issued by the Commission in March 1992 directing all jurisdictional utilities affected by Section 516 of the Public Utility Code (i.e., utilities whose plant-in-service exceeds $10,000,000) to file certain diversity information to the Commission quarterly. In May 1994, the Commission issued an order directing these utilities to file diversity status reports on a semi-annual rather than a quarterly basis, to submit EEO plans annually, and to file certain diversity procurement data. Most recently, in March 1997, the Commission's Affirmative Action Officer issued diversity filing format clarifications and revisions, which most significantly included a change to the filing requirements from semi-annual to annual and the inclusion of multi-year data.

PPL Electric Utilities has consistently abided by the Commission's requirements to file its PUC Diversity reports annually. The Company submits a summary of its workforce composition, a narrative of its annual Affirmative Action Plans (AAP), and annual procurement data related to the use of Minority and Women owned Business Enterprises (MWBE).

PPL Electric Utilities updates its AAP annually to reflect changing diversity goals and objectives. In previous years, PPL Electric Utilities has filed its AAP data separated by business units. However, as a result of several realignments throughout the Company, PPL Electric Utilities' filing as submitted in 2008 reflected consolidated AAP data for the 2007 calendar year.

PPL Electric Utilities' workforce statistics by EEO employment category, gender, and race for the years 2004 through 2007 are presented in Exhibit XIII – 1. The exhibit shows that from 2004 to 2007, the total number of PPL Electric Utilities employees decreased by 603 (or 21.3%) from 2,835 to 2,232. The main cause for the reduction in number of employees was the transfer of workers within the skilled and semi-skilled job categories to PPL Generation and PPL Services. As a result of the personnel changes from 2004 to 2007 the number of white males employed as a percentage of the total number of employees has decreased 4.4%, while the number of white females employed as a percentage of the total number of employees increased by 3.8%.

PPL Electric Utilities Corp.
Number of Employees by EEO Category, Gender, and Race
For the Years 2004 – 2007

Total Company							
EEO Job Categories	**2004**	**2005**	**2006**	**2007***	**% of 2007 Total Company**	**Net Increase/ (Decrease)**	**% of Change 2004-2007**
Officials and Managers	342	290	268	261	11.7%	(81)	-23.7%
Professionals	304	328	293	307	13.8%	3	1.0%
Technicians	151	146	144	141	6.3%	(10)	-6.6%
Office and Clerical	221	212	198	449	20.1%	228	103.2%
Skilled	1178	921	1033	872	39.1%	(306)	-26.0%
Semi-Skilled	560	318	118	129	5.8%	(431)	-77.0%
Unskilled	79	159	148	73	3.3%	(6)	-7.6%
Totals	**2,835**	**2,374**	**2,202**	**2,232**	**100.0%**	**(603)**	**-21.3%**

*The variation in number of employees within job categories from 2006 to 2007 is a result of the Company's change in reporting job categories in 2007.
Source: 2004 through 2007 Diversity Reports submitted to the PUC.

PPL Electric Utilities Corp.
Number of Employees by EEO Category, Gender, and Race
For the Years 2004 – 2007

White Males

EEO Job Categories	2004	2005	2006	2007*	% of 2007 Total Company	Net Increase/ (Decrease)	% of Change 2004-2007
Officials and Managers	305	252	232	226	86.6%	(79)	-25.9%
Professionals	232	235	215	223	72.6%	(9)	-3.9%
Technicians	138	130	128	126	89.4%	(12)	-8.7%
Office and Clerical	34	27	26	69	15.4%	35	102.9%
Skilled	934	677	778	808	92.7%	(126)	-13.5%
Semi-Skilled	493	280	105	117	90.7%	(376)	-76.3%
Unskilled	65	145	136	65	89.0%	0	0.0%
Totals	**2201**	**1746**	**1620**	**1634**	**73.2%**	(567)	-25.8%
Total as a percentage of Total Company	77.6%	73.5%	73.6%	73.2%		-4.4%	

White Females

EEO Job Categories	2004	2005	2006	2007*	% of 2007 Total Company	Net Increase/ (Decrease)	% of Change 2004-2007
Officials and Managers	27	27	26	23	8.8%	(4)	-14.8%
Professionals	57	76	60	68	22.1%	11	19.3%
Technicians	9	13	13	12	8.5%	3	33.3%
Office and Clerical	157	156	145	314	69.9%	157	50.0%
Skilled	165	170	174	17	1.9%	(148)	-89.7%
Semi-Skilled	31	21	8	7	5.4%	(24)	-77.4%
Unskilled	7	6	3	1	1.4%	(6)	-85.7%
Totals	**453**	**469**	**429**	**442**	**19.8%**	(11)	-2.4%
Total as a percentage of Total Company	16.0%	19.8%	19.5%	19.8%		3.8%	

*The variation in number of employees within job categories from 2006 to 2007 is a result of the Company's change in reporting job categories in 2007.
Source: 2004 through 2007 Diversity Reports submitted to the PUC.

PPL Electric Utilities Corp.
Number of Employees by EEO Category, Gender, and Race
For the Years 2004 – 2007

Minority Males

EEO Job Categories	2004	2005	2006	2007*	% of 2007 Total Company	Net Increase/ (Decrease)	% of Change 2004-2007
Officials and Managers	7	8	6	9	3.4%	2	28.6%
Professionals	8	9	10	9	2.9%	1	12.5%
Technicians	4	3	3	3	2.1%	(1)	-25.0%
Office and Clerical	5	4	4	6	1.3%	1	20.0%
Skilled	40	35	43	46	5.3%	6	15.0%
Semi-Skilled	36	17	5	5	3.9%	(31)	-86.1%
Unskilled	7	8	9	7	9.6%	0	0.0%
Totals	**107**	**84**	**80**	**85**	**3.8%**	(22)	-20.6%
Total as a percentage of Total Company	3.8%	3.5%	3.6%	3.8%		0.0%	

Minority Females

EEO Job Categories	2004	2005	2006	2007*	% of 2007 Total Company	Net Increase/ (Decrease)	% of Change 2004-2007
Officials and Managers	3	3	4	3	1.1%	0	0.0%
Professionals	7	8	8	7	2.3%	0	0.0%
Technicians	0	0	0	0	0.0%	0	n/a
Office and Clerical	25	25	23	60	13.4%	35	140.0%
Skilled	39	39	38	1	0.1%	(38)	-97.4%
Semi-Skilled	0	0	0	0	0.0%	0	n/a
Unskilled	0	0	0	0	0.0%	0	n/a
Totals	**74**	**75**	**73**	**71**	**3.2%**	(3)	-4.1%
Total as a percentage of Total Company	2.6%	3.2%	3.3%	3.2%		0.6%	

*The variation in number of employees within job categories from 2006 to 2007 is a result of the Company's change in reporting job categories in 2007.

Source: 2004 through 2007 Diversity Reports submitted to the PUC.

The number of minority males employed as a percentage of the total number of employees has remained the same while the number of minority females employed as a percentage of the total number of employees has increased 0.6%.

When a search agency is used to locate qualified candidates, the PPL Services' Human Resources group requires that the searches include efforts to present women and minority candidates for PPL Electric Utilities' consideration. PPL Corporation sponsors various minority and women professional organizations (e.g., Business Women's Forum, Hispanic American Organization, local branches of the NAACP, etc.), and advertises in publications geared to minorities and women (e.g., Job Choices: Diversity Edition). PPL Corporation also attends the Penn State University Minority Job Fair and Monster.com Diversity Leadership Conference.

Findings and Conclusions

Our examination of the Diversity function included a review of the latest PUC diversity filings, Affirmative Action Plans, staffing trends (including gender and race trends), labor market comparisons, purchasing practices and trends, policies and procedures, communication methods, management philosophy, and accountability. Based on our review, the Company should devote additional efforts to improving the efficiency and/or effectiveness of its diversity practices by addressing the following:

1. Women and minorities are underutilized in several job categories.

PPL Electric Utilities' utilization of female and minority employees within each job category compared to their availability within the relevant work force from which the Company draws its employees, as of December 2007 is summarized on Exhibit XIII – 2. As stated in the exhibit's footnotes, PPL Electric Utilities uses the "80 percent" method and applies the "one person" rule when determining whether the number of minorities or women was less than reasonably expected given their availability.

Utilities should strive for female and minority employee representation within each job group that is comparable to their availability in the general workforce. As of December 2007, minorities were underutilized in seven job categories (29.2%) and females were underutilized in eight job categories (33.3%). For the underutilized job categories, PPL Electric Utilities formulates goals based on the availability statistics of each job category.

The Company should proactively seek to achieve full representation of women and minorities in the underutilized job categories with initiatives aimed at recruiting, retaining, and advancing diverse talent.

Exhibit XIII – 2
PPL Electric Utilities
Availability Analysis
As of December 2007

Job Group	EMPLOYMENT Total	Minorities		Female		AVAILABILITY Minorities		Female		UNDER-UTILIZATION [3] Minorities	Female
	#	#	%	#	%	% [1]	# [2]	% [1]	# [2]		
MANAGEMENT III	4	0	0.0	1	25.0	6.5	0	13.9	0		
MANAGEMENT II	22	0	0.0	1	4.5	7.2	1	18.4	3	YES	YES
MANAGEMENT I	75	2	2.7	3	4.0	8.6	5	22.3	13	YES	YES
FOREMAN	99	6	6.1	0	0.0	5.1	4	1.1	0		
SUPERVISORY	61	4	6.6	21	34.4	5.0	2	35.0	17		
PROFESSIONAL II	145	7	4.8	39	26.9	9.1	10	43.3	50	YES	YES
SENIOR ENGINEERS	52	3	5.8	4	7.7	9.0	3	11.6	4		
ENGINEERS	55	5	9.1	8	14.5	21.5	9	9.9	4	YES	
PROFESSIONAL I	55	1	1.8	24	43.6	6.7	2	48.7	21	YES	
DRAFTING	21	1	4.8	3	14.3	2.2	0	13.3	2		
TECHNICAL II	105	2	1.9	8	7.6	0.8	0	9.0	7		
TECHNICAL I	15	0	0.0	1	6.7	3.2	0	4.5	0		
NON-UNION CLERICAL	6	0	0.0	6	100.0	11.3	0	82.0	3		
OTHER CLERICAL	74	9	12.2	56	75.7	7.3	4	83.7	49		
STENO/CLERK	121	17	14.0	109	90.1	4.9	4	87.1	84		
CUSTOMER SERVICE	248	40	16.1	204	82.3	10.0	19	75.8	150		
SKILLED	95	7	7.4	14	14.7	3.4	2	1.4	1		
SKILLED PLANT/ FACILITY	17	1	5.9	2	11.8	8.0	1	10.4	1		
SKILLED MOBILE	458	25	5.5	2	0.4	6.7	24	8.2	30		YES
LINEMAN	302	14	4.6	0	0.0	7.1	17	12.4	30	YES	YES
SEMI-SKILLED PLANT/ FACILITY	9	0	0.0	4	44.4	6.8	0	16.1	1		
SEMI-SKILLED MOBILE	87	5	5.7	3	3.4	6.3	4	9.4	6		YES
TRAINEES	33	0	0.0	0	0.0	10.5	2	16.0	4	YES	YES
ENTRY LEVEL	73	7	9.6	1	1.4	10.6	6	19.5	11		YES
TOTALS	**2232**	**156**	**7.0**	**514**	**23.0**						

Summary

	#	%
Job Groups:	24	
Minority Underutilization:	7	29.2
Female Underutilization:	8	33.3

Source: 2008 PPL Electric Affirmative Action Plan for Minorities and Women (Data Request DV-2); Auditor Analysis

[1] Availability percentages are theoretical based on the Company's consideration of internal and external availability, reasonable recruitment areas for each job group, and 2000 United States Census data.

[2] Expected numbers of employees are calculated by taking 80% of the availability percentage times the number of employees within each job group. The Office of Federal Contract Compliance (OFCCP) permits this "80 percent rule".

[3] Underutilization is determined by rounding the expected number of employees down to the nearest whole number and comparing the result to the actual utilization of minorities and women. This "one person" rule is permitted by the OFCCP.

2. PPL Services' minority and persons with disabilities owned vendor purchases and supplier diversity program goals are insufficient

On the advice of PPL Corporation's legal counsel, PPL Services follows the U.S. Small Business Administration (SBA) reporting categories for compiling procurement data. Since 2001, PPL Electric Utilities has consistently included purchases from small businesses as part of its minority owned business entities (MBE) procurement data in the procurement section of its annual PUC Diversity Report. As a result, PPL Electric Utilities is not able to gauge the overall progress being made or determine the extent of the additional effort required for its minority, women, and persons with disabilities owned business entities (MWDBE) supplier diversity program.

As a result of a 2006 Management Efficiency audit recommendation, PPL Electric Utilities had agreed to exclude small business procurement from its reported MBE procurement category. Subsequently, Supply Chain (a business line within PPL Services that procures material for PPL Electric Utilities as discussed in Chapter IX – Materials Management) initiated efforts to provide a breakdown by type of the reported MBE procurement totals (i.e., small business, veteran owned, minority owned, etc.). However, small business procurement is still included as part of the overall MBE procurement data in the PUC Diversity filings and Supply Chain only began to separately track MBE procurement in 2007. On the other hand, women owned business entity purchases are tracked and reported separately. PPL still does not maintain data regarding procurement from persons with disabilities owned business enterprises.

Supply Chain's efforts to attract diverse vendors include attending various regional trade shows annually. Additionally, Supply Chain attends Edison Electrical Institute's annual Supplier Diversity Best Practices and Training Workshop. Supply Chain periodically performs a mass mailing to all suppliers in its database to verify classification and certification, which is only required for classification as a MBE supplier.

Supply Chain has two annual corporate wide goals within diversity procurement: (1) increase the opportunities of MWBE suppliers to submit proposals or quotes by 5% and (2) increase the dollar amount awarded to MWBE suppliers by 5%. However, purchases from small businesses are also included in the calculation of these goals, which skews actual performance with regard to MWBE suppliers.

A summary of PPL Electric Utilities' MWDBE procurement is shown on Exhibit XIII – 3. The table illustrates that from 2004 to 2007, purchases from minority owned businesses decreased from 0.32% of total purchases ($576,283) to 0.08% of total purchases ($183,820) while purchases from women owned businesses increased from 1.41% of total purchases ($2,553,045) to 3.03% of total purchases ($7,377,203).

PPL Electric Utilities Corp.
Total Utility Purchases from Minority, Women, and Persons with Disabilities Owned Business Enterprises
2004 - 2007

		Minority Owned Business Enterprises		Women Owned Business Enterprises		Persons with Disabilities Owned Business Enterprises		Total MWDBE	
Years	Total Purchases	Annual Purchases	% of Total Purchases	Annual Purchases	% of Total Purchases	Annual Purchases	% of Total Purchases	Annual Purchases	% of Total Purchases
2004[1]	$181,438,046	$576,283	0.32%	$2,553,045	1.41%	$0	0.0%	$3,129,328	1.72%
2007	$243,081,180	$183,820	0.08%	$7,377,203	3.03%	$0	0.0%	$7,561,023	3.11%
Net Increase/ (Decrease) $61,643,134		($392,463)		$4,824,158		$0		$4,431,695	

[1]2004 data includes both Gas and Electric Utilities' procurement.

Source: 2005 PPL MEI Report and Data Requests DV-4 and DV-14

In order for PPL Electric Utilities to have a more robust diversity procurement program the Company's efforts should be focused on MWDBE vendors. Small business procurement should be excluded from the minority procurement totals reported in its annual PUC Diversity Report. Additionally, PPL Electric Utilities should begin tracking and reporting purchases from persons with disabilities owned businesses and should strive to increase overall MWDBE procurement by setting absolute target levels rather than incremental targets that when compounded are unsustainable over a long period of time.

Recommendations

1. **Strive to attain full utilization of women and minorities in all job categories.**

2. **Increase the emphasis on procurement from minority owned and persons with disabilities owned businesses within PPL Electric Utilities' supplier diversity program and set realistic annual and long range target levels.**

XIV. RISK MANAGEMENT

Background

The PPL Services Corporation (PPL Services) Vice President of Risk Management has overall responsibility for PPL Corporation (PPL) and its subsidiaries' risk management functions. Primary functions administered by the Risk Management Department are corporate risk and insurance, pricing/risk analytics, and trading controls. The Audit Staff's review focused on the corporate risk and insurance function of risk management.

The Director of Corporate Risk and Insurance, who reports to the Vice President of Risk Management, is assisted by a Corporate Risk and Insurance Specialist and a Corporate Risk and Insurance Senior Analyst. The Director of Corporate Risk and Insurance directs, develops, recommends, and administers the overall PPL risk management programs. Responsibilities include directing insurance and risk transfer programs; coordinating property loss control activities; settlement of property, loss of generation, environmental, and workers' compensation claims; analyzing insurance and other contracts to ensure favorable terms and conditions; etc.

The Corporate Risk and Insurance group manages the corporate insurance program which utilizes risk transfer methods of purchasing insurance policies with limits, coverage, and deductibles available in the marketplace. This involves actuarial studies on loss history compared to industry data to predict losses at specific deductible levels. Primary types of PPL Electric Utilities Corporation (PPL Electric Utilities) coverage include:

- Excess liability
- Executive liability protection
- Fidelity
- Property
- Transmission & distribution storm
- Workers' compensation

PPL Electric Utilities self-insures vehicle liability and auto physical damage. Criteria for self insuring are based on loss experience and actuarial studies on losses. Excess liability insurance kicks in for claims in excess of $4 million.

Insurance carriers are evaluated by the Corporate Risk and Insurance group and must maintain a minimum A. M. Best rating of A (excellent) to provide service to PPL. A. M. Best rating reports for carriers providing primary insurance coverage were reviewed by the Audit Staff. In addition, the Corporate Risk and Insurance group

participates in annual Risk and Insurance Management Society (RIMS) benchmarking studies that allows PPL to compare costs of the major insurance programs against a peer group of other similarly sized electric utilities. Also, to aid in determining insurance values and deductible levels, the Corporate Risk and Insurance group's Property Accounting section compiles an annual insurable value report utilizing the Handy Whitman Index.

The Corporate Risk and Insurance group utilizes insurance carriers who offer focused loss prevention/loss control services. The lead property insurer, FM Global, conducts periodic loss prevention surveys at major PPL Electric Utilities locations. Loss prevention surveys were conducted at the Allentown General Office building in July 2008 and the Lehigh Division Service Center in August 2007. The FM Global Risk Report resulting from the survey includes sections on location overview, risk reduction, physical recommendations, human element recommendations, and comments.

In lieu of a bidding process to acquire insurance coverage from one provider, PPL utilizes panels of multiple insurers. Due to the unique nature of the electric utility industry, commercial insurers willing to provide protection is limited and commercial insurers who do provide coverage place constraints on the limits of liability they are willing to provide. As a result, the industry formed electric and gas utility owned mutual insurance companies to assure stable pricing and coverage availability to the industry.

Due to PPL's required liability limits, insurance programs are often not available from one insurer and, therefore, underwritten by panels of multiple insurers including both commercial and industry owned mutual insurers. The panels include only major insurers who meet PPL's coverage, loss prevention, and financial strength requirements. Pricing for panel provided programs is usually set by the primary insurer which is the insurer providing the largest coverage limit of liability. Other participating insurers must accept the pricing set by the primary insurer. Competitive pricing is achieved by internal competition among panel members as the panels have several insurers who have the ability to be the primary insurer. PPL's insurance brokers assure that pricing offered by the designated primary insurer is market competitive and if not, the primary insurer is replaced with another provider. Extensive annual benchmarking is also utilized to assure protection is competitive with the insurance marketplace.

PPL allocates insurance costs to the subsidiary companies including PPL Electric Utilities for the respective insurance programs. Costs allocated to PPL Electric Utilities are shown in Exhibit XIV – 1. The $7.5 million increase in PPL Electric Utilities total allocated insurance costs in 2006 is attributable to the initiation of the Transmission & Distribution (T & D) Storm program. This policy provides extra coverage for expenses incurred during a period of restoration resulting from physical damage to PPL Electric Utilities' transmission and distribution equipment. Expenses covered include overtime wages, costs of outside providers and mutual aid utilities, and materials and supplies used

to replace damaged property, etc. Claims paid under the T & D Storm program totaled $5,656,000 for the policy year beginning in 2006 and $12,112,000 for the policy year beginning in 2007.

Exhibit XIV – 1
PPL Electric Utilities
Allocated Insurance Costs
2005-2007

Insurance Program	2005 Premium	2006 Premium	2007 Premium	Percentage Change 2005 to 2007
	$	$	$	
Excess Liability	486,745	441,180	506,806	4.1%
Executive Liability	692,199	702,791	625,088	-9.7%
Fidelity	18,616	18,211	19,281	3.6%
Property	1,585,130	1,830,016	1,723,555	8.7%
T & D Storm	-	7,560,000	7,560,000	n/a
Workers Compensation	1,526,521	1,275,059	1,478,684	-3.1%
Totals	**4,309,211**	**11,827,257**	**11,913,413**	

n/a – not applicable

Source: General Data Request RM-5

Findings and Conclusions

Our examination of Risk Management centered on the corporate risk and insurance function and included personnel, insurance procurement practices, loss prevention programs, insurance programs and providers, insurance costs, etc. Based on our review, it appears that proper practices are in place to evaluate risk and obtain insurance coverage at reasonable and appropriate costs and that the function is being performed in a satisfactory manner.

Recommendation

None.

XV. ACKNOWLEDGEMENT

We wish to express our appreciation for the cooperation and assistance given to us during the course of this Focused Management and Operations Audit by the officers and staff of the PPL Corporation and its affiliates.

This audit was conducted by Michael Palewicz; Lori Burger; Nathan Paul; Porus Irani; and Krystle Daugherty of the Management Audit Staff of the Bureau of Audits.

XVI. APPENDICES

Appendix A	Operating Revenue and Expenses – PPL Electric Utilities Corporation.
Appendix B	Balance Sheet Data – PPL Electric Utilities Corporation.
Appendix C	Comparative Data and Statistics for the Pennsylvania Panel

PPL Electric Company
Operating Revenues and Expenses

Appendix A
Page 1 of 3

	2003	2004	2005	2006	2007	Compound Growth
Operating Revenues						
Sales of Electricity						
Residential Sales	$1,111,723,993	$1,120,503,040	$1,268,043,438	$1,291,266,329	$1,388,126,388	5.7%
Commercial Sales	909,964,979	961,286,696	1,076,707,847	1,147,113,581	1,193,959,716	7.0%
Industrial Sales	514,099,127	532,562,687	580,400,189	606,752,266	597,199,928	3.8%
Public Street and Highway Lighting Sales	18,886,381	18,937,694	20,074,300	18,784,969	18,951,289	0.1%
Other Sales to Public Authorities	68,871	45,127	70,939	66,490	58,365	-4.1%
Sales to Railroads and Railways	4,340,856	5,125,424	5,562,668	5,429,440	6,952,596	12.5%
Interdepartmental Sales	0	0	0	0	0	0.0%
Total Sales to Ultimate Customers	$2,559,084,207	$2,638,460,668	$2,950,859,381	$3,069,413,075	$3,205,248,282	5.8%
Sales for Resale	179,965,904	157,501,296	149,340,762	157,778,121	156,773,591	-3.4%
Total Sales of Electricity	$2,739,050,111	$2,795,961,964	$3,100,200,143	$3,227,191,196	$3,362,021,873	5.3%
Provision for Rate Refunds	0	0	0	1,124,500	206,368	0.0%
Other Operating Revenues	47,711,852	49,574,015	203,920,254	176,887,156	196,773,026	42.5%
Total Revenues	$2,786,761,963	$2,845,535,979	$3,304,120,397	$3,402,953,852	$3,558,588,531	6.3%
Megawatt Hours Sold						
Sales of Electricity						
Residential Sales	13,350,039	13,556,544	14,242,135	13,646,639	14,568,456	2.2%
Commercial Sales	12,343,603	12,734,656	13,179,233	13,173,977	13,881,311	3.0%
Industrial Sales	9,573,194	9,666,097	9,751,888	9,626,582	9,633,424	0.2%
Public Street and Highway Lighting Sales	89,896	86,291	85,720	97,309	85,004	-1.4%
Other Sales to Public Authorities	0	0	0	0	0	0.0%
Sales to Railroads and Railways	59,922	68,280	70,890	62,010	95,800	12.4%
Interdepartmental Sales	816	537	822	721	0	0.0%
Total Sales to Ultimate Customers	35,417,470	36,112,405	37,330,688	36,607,238	38,263,995	2.0%
Sales for Resale	1,055,170	1,014,063	1,027,692	991,869	0	NM
Total Sales of Electricity	36,472,640	37,126,468	38,358,380	37,599,107	38,263,995	1.2%
Provision for Rate Refunds	0	0	0	0	0	0.0%
Total Megawatt Hours Sold	36,472,640	37,126,468	38,358,380	37,599,107	38,263,995	1.2%
Average Number of Customers Per Month						
Sales of Electricity						
Residential Sales	1,154,911	1,176,316	1,189,942	1,201,404	1,211,248	1.2%
Commercial Sales	156,211	161,761	165,181	166,587	167,836	1.8%
Industrial Sales	4,912	4,969	4,932	4,773	4,591	-1.7%
Public Street and Highway Lighting Sales	1,276	1,314	1,338	1,365	1,392	2.2%
Other Sales to Public Authorities	0	0	0	0	0	0.0%
Sales to Railroads and Railways	1	1	1	1	1	0.0%
Interdepartmental Sales	16	12	13	13	13	-5.1%
Total Sales to Ultimate Customers	1,317,327	1,344,373	1,361,407	1,374,143	1,385,081	1.3%
Sales for Resale	53	43	40	41	41	-6.2%
Total Sales of Electricity	1,317,380	1,344,416	1,361,447	1,374,184	1,385,122	1.3%
Provision for Rate Refunds	0	0	0	0	0	0.0%
Total Av. Number of Cust. per Month	1,317,380	1,344,416	1,361,447	1,374,184	1,385,122	1.3%

Operation and Maintenance Exp.	2003	2004	2005	2006	2007	Compound Growth
Transmission						
Total Operation	$5,333,617	$12,677,301	$193,921,560	$129,543,181	$165,132,732	135.9%
Maintenance Supervision and Eng	163,240	159,208	179,123	397,034	386,103	24.0%
Maintenance of Structures	28,314	22,809	71,102	790,134	1,513,665	170.4%
Maintenance of Station Equipment	3,924,459	4,137,182	4,086,949	5,011,905	5,654,570	9.6%
Maintenance of Overhead Lines	4,178,747	7,160,454	9,092,319	10,343,554	9,436,009	22.6%
Maintenance of Underground Lines	0	0	0	96,656	303,029	NM
Maintenance of Misc. Trans. Plant	789	1,979,487	356,441	465,632	510,307	404.3%
Total Maintenance	$8,295,549	$13,459,140	$13,785,934	$17,104,915	$17,803,683	21.0%
Total Transmission O&M Expenses	$13,629,166	$26,136,441	$221,493,428	$163,753,011	$200,740,098	95.9%
Distribution						
Operation Supervision and Engineering	$14,729,564	$17,203,934	$15,886,472	$16,274,513	$17,973,934	5.1%
Load Dispatching	670,934	2,421,738	4,186,295	5,146,122	3,500,874	51.1%
Station Expenses	642,973	1,303,815	1,737,813	640,472	1,106,587	14.5%
Overhead Line Expenses	9,836,037	8,680,933	9,587,604	15,301,401	19,365,065	18.5%
Underground Line Expenses	4,776,087	4,731,580	4,497,874	5,579,479	6,150,282	6.5%
Street Lighting and Signal Expenses	471,805	671,390	551,219	565,443	754,922	12.5%
Meter Expenses	8,279,906	7,921,624	7,414,881	7,992,940	8,166,647	-0.3%
Customer Installations Expenses	6,267,952	6,591,440	6,983,803	5,180,614	5,359,472	-3.8%
Miscellaneous Expenses	10,928,217	8,594,089	5,895,336	4,929,281	5,245,823	-16.8%
Rents	5,840,912	7,747,134	7,013,281	8,072,127	8,780,950	10.7%
Total Operation	$62,444,387	$65,867,677	$63,754,578	$69,682,392	$76,404,556	5.2%
Maintenance Supervision and Eng.	$4,977,457	$1,635,300	$982,669	$1,398,976	$1,134,629	-30.9%
Maintenance of Structures	51,076	256,685	90,680	89,329	116,343	22.9%
Maintenance of Station Equipment	8,122,471	7,589,723	9,654,611	8,502,789	5,106,678	-11.0%
Maintenance of Overhead Lines	32,259,164	31,423,709	32,934,125	47,705,706	51,000,039	12.1%
Maintenance of Underground Lines	8,214,094	9,450,018	10,612,685	7,932,205	7,762,573	-1.4%
Maintenance of Line Transformers	2,353,545	2,880,652	3,275,970	2,214,250	2,035,576	-3.6%
Maint. of Street Lighting & Signal Systems	3,309,210	3,518,449	3,471,173	2,646,994	2,538,222	-6.4%
Maintenance of Meters	84,225	281,645	141,752	70,418	13,319	-36.9%
Maintenance of Misc. Dist. Plant	1,137,871	1,633,254	1,441,210	1,691,500	2,033,943	15.6%
Total Maintenance	$60,509,113	$58,669,435	$62,604,875	$72,252,167	$71,741,322	4.3%
Total Distribution O&M Expenses	$122,953,500	$124,537,112	$126,359,453	$141,934,559	$148,145,878	4.8%
Customer Service and Informational Exp.						
Supervision	$0	$0	$0	$0	$0	0.0%
Customer Assistance Expenses	11,255,818	11,948,864	11,294,256	12,301,516	16,680,075	NM
Information and Instructional Expenses	8	0	0	0	0	-100.0%
Misc Customer Service and Info. Exp.	72,342	157,182	78,753	230,472	196,695	1152.2%
Total Customer Service and Info. Expenses	$11,328,168	$12,106,046	$11,373,009	$12,531,988	$16,876,770	10.5%
Total Operation & Maintenance Expenses	$147,910,834	$162,779,599	$359,225,890	$318,219,558	$365,762,746	25.4%

PPL Electric Company
Operating Revenues and Expenses

Income Statement	2003	2004	2005	2006	2007	Compound Growth
UTILITY OPERATING INCOME						
OPERATING REVENUES	$2,786,761,963	$2,845,535,979	$3,304,120,397	$3,402,953,852	$3,558,588,531	6.3%
OPERATING EXPENSES						
Operation Expenses	1,935,072,412	1,987,500,740	2,268,467,877	2,275,317,106	2,458,120,155	6.2%
Maintenance Expenses	66,997,036	73,997,904	84,935,035	102,297,061	103,536,865	11.5%
Depreciation Expenses	97,517,295	102,730,403	107,594,484	113,889,412	127,676,191	7.0%
Amort. and Depreciation of Plant	5,018,046	4,409,787	4,030,935	4,119,680	4,281,294	-3.9%
Amortization of Utility Plant Acquired	69,010	69,010	69,010	69,010	69,010	0.0%
Amort.of Property Losses, Unrec. Plant	0	0	0	0	0	0.0%
Amortization of Conversion Expenses	0	0	0	0	0	0.0%
Regulatory Debits	259,962,844	260,175,370	270,313,235	293,819,361	308,131,712	4.3%
Regulatory Credits	0	0	0	0	0	0.0%
Taxes Other Than Income Taxes	170,706,894	157,586,656	191,476,263	195,654,817	206,780,729	4.9%
Federal Income Taxes	(1,445,028)	(74,849,999)	62,375,630	88,051,693	73,302,124	NM
Other Income Taxes	43,945,178	85,715,565	39,497,033	55,172,787	83,573,841	17.4%
Provision for Deferred Income Taxes	(24,514,543)	(156,435)	(26,606,020)	(33,313,157)	(68,763,613)	29.4%
Provision for Deferred Income Taxes	(2,768,185)	(2,744,913)	(2,603,375)	(2,445,685)	(2,391,640)	-3.6%
Investment Tax Credit	(19,095)	0	0	(122,720)	0	0.0%
Gains from Disposition of Utility Plant	0	0	0	0	3,663	0.0%
Losses from Disposition of Utility Plant	0	0	0	0	0	0.0%
Gains from Disposition of Allowances	0	0	0	0	0	0.0%
Losses from Disposition of Allowances	0	0	0	0	0	0.0%
TOTAL UTILITY OPERATING EXP.	$2,550,541,864	$2,594,434,088	$2,999,550,107	$3,092,509,365	$3,294,320,331	6.6%
NET UTILITY OPERATING INCOME	$236,220,099	$251,101,891	$304,570,290	$310,444,487	$264,268,200	2.8%
OTHER INCOME AND DEDUCTIONS						
Rev. from Merch., Jobbing and Cont. Work	$1,691,138	$1,269,014	$464,974	$617,850	$442,579	-28.5%
Costs of Merch., Jobbing and Cont. Work	(1,488,024)	(1,083,184)	(519,655)	(557,330)	(464,077)	-25.3%
Revenues form Nonutility Operations	0	0	0	0	0	0.0%
Expenses of Nonutility Operations	0	0	0	0	0	0.0%
Nonoperating Rental Income	(44,644)	(42,075)	(42,877)	(42,853)	(42,853)	-1.0%
Equity in Earnings of Subidiary Companies	(348)	2,102,438	9,041,737	13,362,451	12,686,543	0.0%
Interest and Dividend Income	6,932,897	12,842,381	7,377,902	11,405,382	8,646,694	5.7%
Allow. for Other Funds Used During Const	187,994	305,294	0	0	1,262,758	61.0%
Miscellaneous Nonoperating Income	417,017	423,535	1,808,934	504,761	487,615	4.0%
Gain on Disposition of Property	8,452	0	1,043	1,061,451	4,709,233	385.8%
TOTAL OTHER INCOME	$7,704,482	$15,817,403	$18,132,058	$26,351,712	$27,728,492	37.7%
Loss on Disposition of Property	2,635	125,924	0	423,762	728,313	307.7%
Donations	260,405	241,090	364,793	282,837	227,315	-3.3%
Penalties	2,255	812	14,659	1,849	50	-61.4%
Miscellaneous Income Deductions	1,084,553	1,148,463	1,343,854	1,187,064	1,433,368	7.2%
TOTAL OTHER INCOME DED	$1,349,848	$1,516,289	$1,723,306	$1,895,512	$2,389,046	15.3%
Taxes Other Than Income Taxes	132,752	85,305	20,593	375	335	-77.6%
Federal Income Taxes	2,250,250	(706,963)	(6,501,640)	(8,329,079)	(12,630,902)	NM
Other Income Taxes	0	0	0	0	0	0.0%
Provision for Deferred Income Taxes	922,834	363,666	4,067,918	571,172	3,105,077	35.4%
Deferred Income Tax Credits	(890,548)	(682,142)	(5,773,870)	(2,548,025)	(1,742,960)	18.3%
Investment Tax Credit Adjustment	0	0	0	0	0	0.0%
Investment Tax Credit	0	0	0	0	0	0.0%
TOT. TAXES ON OTHER INC. AND DED.	$2,415,288	($940,134)	($8,186,999)	($10,305,557)	($11,268,450)	NM
NET OTHER INCOME AND DED.	$3,939,346	$15,241,248	$24,595,751	$34,761,757	$36,607,896	74.6%
INTEREST CHARGES						
Interest on Long-Term Debt	$201,478,505	$175,675,561	$151,193,365	$130,838,866	$109,169,678	-14.2%
Amortization of Debt Disc. and Expense	7,934,627	7,173,134	5,392,659	4,648,225	3,805,217	-16.8%
Amortization of Loss on Reacquired Debt	2,446,660	3,117,040	3,412,708	3,393,222	3,362,205	8.3%
Amortization of Premium on Debt	0	0	0	0	0	0.0%
Amortization of Gain on Reacquired Debt	0	0	0	0	0	0.0%
Interest on Debt to Associated Companies	706	2,875,532	11,412,976	16,663,734	17,683,779	1158.0%
Other Interest Expense	551,397	1,174,385	10,656,381	(3,404,502)	7,245,531	90.4%
Allow. for Borr. Funds Used During Const.	(683,529)	(571,148)	(560,775)	(1,298,822)	(3,149,452)	46.5%
NET INTEREST CHARGES	$211,728,366	$189,444,504	$181,507,314	$150,840,723	$138,116,958	-10.1%
NET INCOME	$28,431,079	$76,898,635	$147,658,727	$194,365,521	$162,759,138	54.7%

PPL Electric Company
Balance Sheet

Appendix B
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Comparative Balance Sheet	2003	2004	2005	2006	2007	Compound Growth
UTILITY PLANT						
Utility Plant	$3,993,381,196	$4,253,419,922	$4,429,873,095	$4,682,437,667	$4,833,618,615	4.9%
Construction Work in Progress	339,331,334	227,271,620	196,670,003	188,072,658	245,727,988	-7.8%
TOTAL UTILITY PLANT	$4,332,712,530	$4,480,691,542	$4,626,543,098	$4,870,510,325	$5,079,346,603	4.1%
Accum. Depreciation and Amortization	1,632,447,178	1,710,663,731	1,800,764,358	1,876,715,825	1,940,068,172	4.4%
NET UTILITY PLANT (excl. nuclear fuel)	2,700,265,352	2,770,027,811	2,825,778,740	2,993,794,500	3,139,278,431	3.8%
Nuclear Fuel	0	0	0	0	0	0.0%
Accum. Amortization for Nuclear	0	0	0	0	0	0.0%
NET NUCLEAR FUEL	0	0	0	0	0	0.0%
NET UTILITY PLANT (incl. nuclear fuel)	$2,700,265,352	$2,770,027,811	$2,825,778,740	$2,993,794,500	$3,139,278,431	3.8%
OTHER PROPERTY AND INVESTMENTS						
Nonutility Property	5,160,170	4,597,818	4,519,431	4,378,153	3,496,941	-9.3%
Accum. Depreciation and Amortization	438,694	481,546	521,266	564,310	607,355	8.5%
Investments in Associatd Companies	0	0	0	0	0	0.0%
Investment in Subsidiary Companies	18,125	301,420,563	303,962,300	312,324,751	308,011,294	1041.8%
Noncurrent Portion of Allowances	0	0	0	0	0	0.0%
Other Investments	3,959,823	3,184,937	2,473,031	1,986,882	1,520,811	-21.3%
Special Funds	23,503,521	15,606,818	23,317,469	23,224,888	43,443,756	16.6%
TOTALS	$32,202,945	$324,328,590	$333,750,965	$341,350,364	$355,865,447	82.3%
CURRENT AND ACCRUED ASSETS						
Cash	$5,199,942	$21,222,755	$16,777,847	$6,331,771	$20,270,626	40.5%
Special Deposits	100,512	145,337	307,823	517,675	395,767	40.9%
Working Fund	0	0	0	0	0	0.0%
Temporary Cash Investments	157,350,000	129,275,478	280,141,958	132,972,782	9,608,982	0.0%
Notes Receivable	0	0	0	0	0	0.0%
Customer Accounts Receivable	197,888,674	175,940,322	215,101,459	219,706,451	213,594,563	1.9%
Other Accounts Receivable	65,303,264	11,867,808	20,121,529	9,048,514	8,374,601	-40.2%
Accum. for Uncollectible Accounts	(23,524,981)	(18,312,148)	(20,120,323)	(19,085,175)	(18,316,902)	-6.1%
Notes Receivable from Assoc. Companies	0	0	0	0	0	0.0%
Accts Receivable from Assoc. Companies	26,943,148	26,726,618	11,999,568	15,075,824	22,362,164	-4.6%
Fuel Stock	0	0	0	0	0	0.0%
Fuel Stock Expenses Undistributed	0	0	0	0	0	0.0%
Residuals and Extracted Products	0	0	0	0	0	0.0%
Plant Materials and Operating Supplies	25,235,523	27,532,161	27,872,140	29,019,147	31,813,278	6.0%
Merchandise	0	0	0	0	0	0.0%
Other Materials and Supplies	0	0	0	0	0	0.0%
Nuclear Materials Held for Sales	0	0	0	0	0	0.0%
Allowances	0	0	0	0	0	0.0%
Noncurrent Portion of Allowances	0	0	0	0	0	0.0%
Stores Expense Undistributed	5,154,388	4,676,688	3,503,425	2,845,820	2,949,303	-13.0%
Gas Stored Undergroung-Current	0	0	0	0	0	0.0%
Liquefied Gas Stored and Held for Proc.	0	0	0	0	0	0.0%
Prepayments	0	0	0	0	27,885,952	4.5%
Advances for Gas	16,234,025	17,538,322	15,706,658	14,521,671	0	0.0%
Interest and Dividends Receivable	133,926	242,991	964,282	725,799	321,480	24.5%
Rents Receivable	7,331,280	9,046,209	8,618,665	9,584,854	10,615,453	9.7%
Accrued Utiltity Revenues	122,689,071	147,858,500	173,308,178	162,931,669	192,230,274	11.9%
Miscellaneous Current and Accrued Assets	23,346,705	60,671,852	75,325,581	78,345,120	53,182,118	22.9%
TOTALS	$629,385,477	$614,432,893	$829,628,790	$662,541,922	$575,287,659	-2.2%
DEFERRED DEBITS						
Unamortized Debt Expenses	$18,903,432	$14,928,279	$15,143,705	$11,642,364	$11,193,276	-12.3%
Extraordinary Property Losses	0	0	0	0	0	0.0%
Unrecovered Plant and Regulatory Study	0	0	0	0	0	0.0%
Other Regulatory Assets	1,964,690,916	1,723,486,719	1,445,920,393	1,226,110,326	845,358,029	-19.0%
Prelim. Survey and Investigation Charges	0	0	0	0	0	0.0%
Clearing Accounts	(593,674)	0	0	0	0	0.0%
Temporary Facilities	15,826	24,889	33,906	37,620	17,209	2.1%
Misc. Deferred Debits	66,929,455	57,274,243	45,487,519	34,532,768	66,189,574	-0.3%
Def. Losses from Disposition of Plant	0	0	0	0	0	0.0%
Research, Devel. and Demonstration	0	0	0	0	0	0.0%
Unamortized Loss on Reacquired Debt	26,970,585	31,779,877	36,241,695	32,848,473	29,486,268	2.3%
Accum. Deferred Income Taxes	184,539,621	144,337,442	164,077,168	188,376,428	190,064,230	0.7%
TOTALS	$2,261,456,161	$1,971,831,449	$1,706,904,386	$1,493,547,979	$1,142,308,586	-15.7%
TOTAL ASSETS AND OTHER DEBITS	$5,623,309,935	$5,680,620,743	$5,696,062,881	$5,491,234,765	$5,212,740,123	-1.9%

Source: PUC Annual Reports
NM = Not Meaningful

PPL Electric Company
Balance Sheet

Comparative Balance Sheet	2003	2004	2005	2006	2007	Compound Growth
PROPRIETARY CAPITAL						
Common Stock Issued	$1,476,048,307	$1,476,048,307	$1,476,048,307	$363,833,249	$363,833,249	-29.5%
Preferred Stock Issued	50,518,900	50,518,900	50,518,900	300,518,900	300,518,900	56.2%
Capital Stock Subscribed	0	0	0	0	0	0.0%
Stock Liability for Conversion	0	0	0	0	0	0.0%
Premium on Capital Stock	40,639	40,639	40,639	40,639	40,639	NM
Other Paid-in Capital Stock	360,257,454	360,679,115	361,262,733	436,262,745	436,262,745	4.9%
Installments Received on Capital Stock	0	0	210,958	(242,520)	48,871	0.0%
Discount on Capital Stock	0	313,631	0	0	0	0.0%
Capital Stock Expense	(6,773,379)	(6,773,379)	(6,773,379)	(12,225,196)	(12,225,196)	15.9%
Retained Earnings	304,202,106	352,293,670	402,215,679	457,772,018	488,726,097	12.6%
Unappropriated Undistributed Earnings	(36,475)	1,365,963	3,907,700	12,270,151	7,956,694	284.3%
Reacquired Capital Stock	(912,215,058)	(912,215,058)	(912,215,058)	0	0	-100.0%
TOTALS	$1,272,042,494	$1,322,271,788	$1,375,216,479	$1,558,229,986	$1,585,161,999	5.7%
LONG-TERM DEBT						
Bonds	$2,933,276,977	$2,538,887,199	$2,403,320,028	$1,969,703,290	$1,665,119,223	-13.2%
Reacquired Bonds	0	0	0	0	0	0.0%
Advances from Associated Companies	0	0	0	0	0	0.0%
Other Long-Term Debt	9,475,000	9,475,000	9,475,000	9,475,000	9,475,000	0.0%
Unamortized Premium on Long-Term Debt	0	0	0	0	0	0.0%
Unamortized Discount on Long-Term Debt	(5,864,813)	(4,616,638)	(1,884,995)	(1,271,026)	(844,067)	-38.4%
TOTALS	$2,936,887,164	$2,543,745,561	$2,410,910,033	$1,977,907,264	$1,673,750,156	-13.1%
OTHER NONCURRENT LIABILITIES						
Obligations Under Capital Leases-Noncurrent	$0	$0	$0	$0	$0	0.0%
Accum. Provision for Property Insurance	0	0	0	0	0	0.0%
Accum. Provision for Injuries and Damages	0	0	0	0	0	0.0%
Accum. Provision for Pensions and Benefits	0	0	0	132,669,565	95,059,652	NM
Accum. Misc. Operating Provisions	0	0	0	0	0	0.0%
Accum. Provision for Rate Refunds	0	0	0	2,249,000	0	0.0%
TOTALS	$0	$0	$0	$134,918,565	$95,059,652	0.0%
CURRENT AND ACCRUED LIABILITIES						
Notes Payable	$22,374	$42,034,000	$42,034,000	$42,034,000	$41,034,000	554.4%
Accounts Payable	42,121,524	36,129,978	37,658,375	49,203,440	54,416,352	6.6%
Notes Payable to Associated Companies	0	0	0	0	23,135,000	0.0%
Account Payable to Associated Companies	90,412,713	178,718,458	187,439,752	175,329,838	203,654,352	22.5%
Customer Deposits	16,039,015	18,918,630	17,133,364	16,267,219	16,428,228	0.6%
Taxes Accrued	86,516,798	45,336,358	76,287,930	57,678,519	43,862,302	-15.6%
Interest Accrued	32,118,317	29,138,678	26,966,018	23,399,378	23,526,649	-7.5%
Dividends Declared	611,245	611,245	611,245	4,517,495	4,517,495	64.9%
Matured Long-Term Debt	0	0	0	0	0	0.0%
Matured Interests	0	0	0	0	0	0.0%
Tax Collections Payable	3,490,163	3,638,183	4,112,766	4,190,811	4,331,254	5.5%
Miscellaneous Current and Accrued Liab.	65,967,257	349,478,969	401,014,105	391,174,271	359,955,213	52.8%
Obligations Under Capital Leases-Current	0	0	0	0	0	0.0%
TOTALS	$337,299,406	$704,004,499	$793,257,555	$763,794,971	$774,860,845	23.1%
DEFERRED CREDITS						
Customer Advances for Construction	$174,172	$153,078	$153,198	$269,092	$247,384	9.2%
Accum. Deferred Investments Tax Credits	22,254,525	19,509,612	16,906,237	14,460,552	12,068,912	-14.2%
Deferred Gains from Disposition of Plant	0	0	0	0	0	0.0%
Other Deferred Credits	193,766,379	190,162,551	191,084,687	74,947,254	84,567,776	-18.7%
Other Regulatory Liabilities	15,783,163	13,836,437	11,990,093	11,963,503	20,120,405	6.3%
Unamortized Gain on Reacquired Debt	0	286,500,548	283,614,631	311,702,855	314,567,537	NM
Accum. Deferred Income Taxes	845,102,632	600,436,669	612,929,969	643,040,723	652,335,457	-6.3%
TOTALS	$1,077,080,871	$1,110,598,895	$1,116,678,815	$1,056,383,979	$1,083,907,471	0.2%
TOTAL LIABILITIES AND OTHER CRED.	$5,623,309,935	$5,680,620,743	$5,696,062,882	$5,491,234,765	$5,212,740,123	-1.9%

Source: PUC Annual Reports
NM = Not Meaningful

PPL Electric Company
Comparative Data and Statistics for the Pennsylvania Panel

Total Transmission Plant + Total Distribution Plant In Service	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 1,739,638,401	$ 1,762,794,528	$ 1,826,063,833	$ 1,913,604,592	$ 2,023,261,261	3.8%
Met Ed	$ 1,421,724,328	$ 1,462,178,312	$ 1,537,220,879	$ 1,600,868,220	$ 1,671,234,812	4.1%
PECO	$ 4,286,050,736	$ 4,439,741,673	$ 958,029,187	$ 4,686,789,058	$ 4,891,462,518	3.4%
West Penn	$ 1,346,406,355	$ 1,485,595,037	$ 335,822,415	$ 1,613,827,798	$ 1,630,177,539	4.9%
Penelec	$ 1,717,855,177	$ 1,767,040,693	$ 330,162,790	$ 1,949,555,336	$ 2,017,433,341	4.1%
Panel Average	$ 2,102,334,999	$ 2,183,470,049	$ 997,459,821	$ 2,352,929,001	$ 2,446,713,894	3.9%
PPL	$ 3,929,544,752	$ 4,079,944,743	$ 4,206,406,968	$ 4,342,904,791	$ 4,496,201,822	3.4%

Megawatt Hours Sold To Ultimate Consumers	2003	2004	2005	2006	2007	Compound Growth
Duquesne	13,363,091	13,637,498	13,896,547	13,714,343	14,138,380	1.4%
Met Ed	13,017,313	13,397,237	14,008,539	13,839,287	14,337,188	2.4%
PECO	36,841,017	37,576,609	38,724,603	38,366,200	39,891,529	2.0%
West Penn	19,001,901	19,521,492	20,070,799	19,925,043	20,547,856	2.0%
Penelec	13,398,014	13,669,740	14,235,773	14,060,450	14,286,471	1.6%
Panel Average	19,124,267	19,560,515	20,187,252	19,981,065	20,640,285	1.9%
PPL	35,417,470	36,112,405	37,330,688	36,607,238	38,263,995	2.0%

Average Number Of Ultimate Consumers Per Month	2003	2004	2005	2006	2007	Compound Growth
Duquesne	587,202	586,981	586,050	585,678	585,944	-0.1%
Met Ed	513,023	520,687	530,011	538,150	543,811	1.5%
PECO	1,530,715	1,536,985	1,543,543	1,551,632	1,555,342	0.4%
West Penn	694,412	698,079	702,792	707,058	711,050	0.6%
Penelec	584,210	585,658	587,533	588,437	588,871	0.2%
Panel Average	781,912	785,678	789,986	794,191	895,032	3.4%
PPL	1,317,327	1,344,373	1,361,407	1,374,143	1,385,081	1.3%

Transmission Operation Expenses Per Transmission Plant In Service	2003	2004	2005	2006	2007	Compound Growth
Duquesne	0.0388	0.0390	0.0132	0.0122	0.0158	-20.1%
Met Ed	0.0057	0.3042	0.5233	0.6757	1.0262	266.3%
PECO	0.0130	0.1633	0.2703	0.2795	0.2827	115.9%
West Penn	0.1054	0.0978	0.1052	0.0978	0.1402	7.4%
Penelec	0.0142	0.2511	0.4457	0.2761	0.3491	122.7%
Panel Average	0.0354	0.1711	0.2715	0.2683	0.3628	78.9%
PPL	0.0055	0.0127	0.1899	0.1248	0.1527	129.5%

Source: Pa PUC Annual Reports
NM= Not Meaningful

PPL Electric Company
Comparative Data and Statistics for the Pennsylvania Panel

Transmission Operation Expenses Per Megawatt	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 0.78	$ 0.77	$ 0.31	$ 0.30	$ 0.39	-15.9%
Met Ed	$ 0.11	$ 5.87	$ 9.86	$ 13.75	$ 20.32	268.7%
PECO	$ 0.31	$ 3.93	$ 6.42	$ 6.77	$ 6.74	115.9%
West Penn	$ 1.76	$ 1.61	$ 1.69	$ 1.62	$ 2.26	6.5%
Penelec	$ 0.32	$ 5.59	$ 9.74	$ 6.35	$ 8.26	125.4%
Panel Average	$ 0.40	$ 3.52	$ 5.53	$ 6.94	$ 9.15	118.7%
PPL	$ 0.15	$ 0.35	$ 5.19	$ 3.54	$ 4.32	131.7%

Transmission Operation Expenses Per Customer	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 17.80	$ 17.98	$ 7.38	$ 7.08	$ 9.46	-14.6%
Met Ed	$ 2.84	$ 150.96	$ 260.58	$ 353.70	$ 535.75	270.6%
PECO	$ 7.47	$ 96.07	$ 161.02	$ 167.38	$ 172.77	119.3%
West Penn	$ 48.25	$ 44.99	$ 48.13	$ 45.75	$ 65.28	7.9%
Penelec	$ 7.23	$ 130.44	$ 235.94	$ 151.81	$ 200.49	129.5%
Panel Average	$ 16.72	$ 88.09	$ 142.61	$ 145.14	$ 196.75	85.2%
PPL	$ 4.05	$ 9.43	$ 142.44	$ 94.27	$ 119.22	132.9%

Transmission Maintenance Expenses Per Transmission Plant In Service	2003	2004	2005	2006	2007	Compound Growth
Duquesne	0.0100	0.0100	0.0100	0.0100	0.0100	0.0%
Met Ed	0.0200	0.0300	0.0200	0.0200	0.0300	10.7%
PECO	0.0095	0.0131	0.0220	0.0216	0.0236	25.5%
West Penn	0.0100	0.0100	0.0100	0.0100	0.0200	18.9%
Penelec	0.0200	0.0200	0.0200	0.0200	0.0300	10.7%
Panel Average	0.0139	0.0166	0.0164	0.0163	0.0227	13.0%
PPL	0.0100	0.0100	0.0100	0.0200	0.0200	18.9%

Transmission Maintenance Expenses Per Megawatt Hours Sold	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 0.12	$ 0.19	$ 0.19	$ 0.22	$ 0.13	2.0%
Met Ed	$ 0.40	$ 0.50	$ 0.32	$ 0.39	$ 0.50	5.7%
PECO	$ 0.23	$ 0.32	$ 0.52	$ 0.52	$ 0.56	24.9%
West Penn	$ 0.18	$ 0.22	$ 0.22	$ 0.24	$ 0.26	9.6%
Penelec	$ 0.36	$ 0.45	$ 0.36	$ 0.46	$ 0.67	16.8%
Panel Average	$ 0.26	$ 0.34	$ 0.32	$ 0.37	$ 0.42	12.7%
PPL	$ 0.23	$ 0.37	$ 0.37	$ 0.47	$ 0.47	19.6%

Source: Pa PUC Annual Reports
NM= Not Meaningful

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Transmission Maintenance Expenses Per Customer	2003	2004	2003	2004		Compound Growth
Duquesne	$ 2.65	$ 4.41	$ 4.51	$ 5.08	$ 3.15	4.4%
Met Ed	$ 10.11	$ 12.97	$ 8.50	$ 9.94	$ 13.27	7.0%
PECO	$ 5.47	$ 7.71	$ 13.11	$ 12.95	$ 14.41	27.4%
West Penn	$ 4.86	$ 6.28	$ 6.35	$ 6.83	$ 7.52	11.5%
Penelec	$ 8.26	$ 10.43	$ 8.75	$ 11.09	$ 16.17	18.3%
Panel Average	$ 6.27	$ 8.36	$ 8.24	$ 9.18	$ 10.90	14.8%
PPL	$ 6.30	$ 10.01	$ 10.13	$ 12.45	$ 12.85	19.5%

Expenses Per Distribution Plant In Service	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 0.0088	$ 0.0084	$ 0.0092	$ 0.0083	$ 0.0076	-3.6%
Met Ed	$ 0.0116	$ 0.0107	$ 0.0081	$ 0.0081	$ 0.0090	-6.1%
PECO	$ 0.0132	$ 0.0113	$ 0.0079	$ 0.0106	$ 0.0103	-6.0%
West Penn	$ 0.0110	$ 0.0080	$ 0.0083	$ 0.0090	$ 0.0086	-6.0%
Penelec	$ 0.0189	$ 0.0129	$ 0.0103	$ 0.0101	$ 0.0116	-11.5%
Panel Average	$ 0.0127	$ 0.0103	$ 0.0088	$ 0.0092	$ 0.0094	-7.2%
PPL	$ 0.0211	$ 0.0214	$ 0.0200	$ 0.0211	$ 0.0224	1.5%

Distribution Operation Expenses Per Megawatt Hours Sold	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 0.96	$ 0.92	$ 0.99	$ 0.96	$ 0.90	-1.6%
Met Ed	$ 1.04	$ 0.97	$ 0.73	$ 0.78	$ 0.87	-4.4%
PECO	$ 1.22	$ 1.07	$ 0.74	$ 1.04	$ 1.01	-4.6%
West Penn	$ 0.60	$ 0.48	$ 0.52	$ 0.58	$ 0.54	-2.6%
Penelec	$ 2.01	$ 1.38	$ 1.12	$ 1.17	$ 1.36	-9.3%
Panel Average	$ 1.17	$ 0.96	$ 0.82	$ 0.91	$ 0.94	-5.3%
PPL	$ 1.76	$ 1.82	$ 1.71	$ 1.90	$ 2.00	3.2%

Distribution Operation Expenses Per Customer	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 21.94	$ 21.26	$ 23.45	$ 22.41	$ 21.82	-0.1%
Met Ed	$ 26.38	$ 24.84	$ 19.40	$ 19.93	$ 22.99	-3.4%
PECO	$ 29.38	$ 26.04	$ 18.50	$ 25.70	$ 26.01	-3.0%
West Penn	$ 16.32	$ 13.33	$ 14.83	$ 16.33	$ 15.66	-1.0%
Penelec	$ 46.05	$ 32.13	$ 27.18	$ 27.92	$ 33.07	-7.9%
Panel Average	$ 28.01	$ 23.52	$ 20.67	$ 22.46	$ 23.91	-3.9%
PPL	$ 47.40	$ 49.00	$ 46.83	$ 50.71	$ 55.16	3.9%

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Distribution Maintenance Expenses Per Distribution Plant In Service	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 0.0107	$ 0.0101	$ 0.0111	$ 0.0101	$ 0.0086	-5.3%
Met Ed	$ 0.0300	$ 0.0235	$ 0.0209	$ 0.0231	$ 0.0273	-2.3%
PECO	$ 0.0333	$ 0.0259	$ 0.0281	$ 0.0390	$ 0.0300	-2.6%
West Penn	$ 0.0329	$ 0.0297	$ 0.0295	$ 0.0284	$ 0.0258	-5.9%
Penelec	$ 0.0252	$ 0.0218	$ 0.0191	$ 0.0190	$ 0.0219	-3.4%
Panel Average	$ 0.0264	$ 0.0222	$ 0.0217	$ 0.0239	$ 0.0227	-3.7%
PPL	$ 0.0204	$ 0.0190	$ 0.0197	$ 0.0219	$ 0.0210	0.7%

Distribution Maintenance Expenses Per Megawatt Hours Sold	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 1.18	$ 1.11	$ 1.20	$ 1.16	$ 1.02	-3.6%
Met Ed	$ 2.69	$ 2.11	$ 1.90	$ 2.20	$ 2.64	-0.5%
PECO	$ 3.08	$ 2.43	$ 2.61	$ 3.82	$ 2.96	-1.0%
West Penn	$ 1.78	$ 1.77	$ 1.83	$ 1.83	$ 1.63	-2.2%
Penelec	$ 2.67	$ 2.33	$ 2.08	$ 2.20	$ 2.57	-0.9%
Panel Average	$ 2.28	$ 1.95	$ 1.92	$ 2.24	$ 2.16	-1.3%
PPL	$ 1.71	$ 1.62	$ 1.68	$ 1.97	$ 1.87	2.3%

Distribution Maintenance Expenses Per Customer	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 26.80	$ 25.78	$ 28.44	$ 27.10	$ 24.56	-2.2%
Met Ed	$ 68.29	$ 54.38	$ 50.15	$ 56.56	$ 69.58	0.5%
PECO	$ 74.10	$ 59.52	$ 65.59	$ 94.39	$ 75.92	0.6%
West Penn	$ 48.68	$ 49.51	$ 52.36	$ 51.46	$ 47.11	-0.8%
Penelec	$ 61.32	$ 54.37	$ 50.33	$ 52.62	$ 62.43	0.4%
Panel Average	$ 55.84	$ 48.71	$ 49.37	$ 56.43	$ 55.92	0.0%
PPL	$ 45.93	$ 43.64	$ 45.99	$ 52.58	$ 51.80	3.1%

Customer Assistance Expenses Per Megawatt Hours Sold	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 0.24	$ 0.25	$ 0.05	$ 0.16	$ 0.18	-6.9%
Met Ed	$ 0.20	$ 0.49	$ 0.43	$ 0.40	$ 0.70	36.8%
PECO	NA	NA	NA	$ 0.20	$ 0.21	NM
West Penn	$ 0.20	$ 0.19	$ 0.17	$ 0.18	$ 0.19	-1.3%
Penelec	$ 0.30	$ 0.62	$ 0.53	$ 0.47	$ 0.89	31.2%
Panel Average	$ 0.24	$ 0.39	$ 0.30	$ 0.28	$ 0.43	15.7%
PPL	$ 0.32	$ 0.33	$ 0.30	$ 0.34	$ 0.44	8.3%

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Customer Assistance Expenses Per Customer	2003	2004	2005	2006	2007	Compound Growth
Duquesne	$ 5.47	$ 5.79	$ 1.14	$ 3.84	$ 4.45	-5.0%
Met Ed	$ 5.18	$ 12.58	$ 11.41	$ 10.23	$ 18.45	37.4%
PECO	NA	NA	NA	$ 4.84	$ 5.38	NM
West Penn	$ 5.44	$ 5.18	$ 4.79	$ 5.13	$ 5.57	0.6%
Penelec	$ 6.97	$ 14.58	$ 12.93	$ 11.22	$ 21.71	32.8%
Panel Average	$ 5.77	$ 9.53	$ 7.57	$ 7.05	$ 11.11	17.8%
PPL	$ 8.54	$ 8.89	$ 8.30	$ 8.95	$ 12.04	9.0%

Average Collection Period (Days)	2003	2004	2005	2006	2007	Compound Growth
Duquesne	45.66	52.79	52.61	48.91	51.70	3.2%
Met Ed	29.00	16.34	14.62	13.19	12.71	-18.6%
PECO	29.30	27.90	29.68	19.56	22.53	-6.4%
West Penn	34.29	32.00	33.14	24.80	24.70	-7.9%
Penelec	31.13	16.59	14.88	12.04	12.08	-21.1%
Panel Average	33.87	29.12	28.99	23.70	24.74	-7.6%
PPL	28.22	24.34	26.61	26.13	24.32	-3.7%

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