FOCUSED MANAGEMENT AND OPERATIONS AUDIT OF PECO ENERGY COMPANY

Prepared by the
Pennsylvania Public Utility Commission
Bureau of Audits

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PENNSYLVANIA PUC
PUBLIC UTILITY COMMISSION

PECO ENERGY COMPANY
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 PECO Energy Company (PECO 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 PECO. 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, PECO, 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 inquiries into the management and operations of PECO.

The scope of this audit was limited to certain areas of the Company as explained in Section B, Audit Approach.

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, B and D) was completed using financial and operational data obtained from the Company,

Commission, and other available sources. This analysis, which focused on the period 2009 - 2013, was supplemented by comparisons to a panel of electric and gas utilities for the period 2008 - 2012 (see Appendices C and E).

- 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, annual 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
- Electric Operations
- Gas Operations
- Emergency Preparedness
- Materials Management
- Customer Service
- Information Technology
- Fleet Management
- Facilities Management
- Risk Management
- Legal
- Human Resources and Diversity

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 August 13, 2013 and continued intermittently through February 24, 2014. 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 2008 - 2013.

- Visits to the customer call center, offices, electric substations, gas storage facilities, inventory warehouses, observation of selected work practices, etc.

C. Functional Area Ratings

For the functions or areas of the Company that were selected for in-depth examination, the Audit Staff rated the 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 Company'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 each function or area reviewed in-depth can be found in Exhibit I-1 on the next page.

Exhibit I-1
PECO Energy Company
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 Interest and Cost Allocations		X			
Financial Management		X			
Electric Operations			X		
Gas Operations			X		
Emergency Preparedness		X			
Materials Management			X		
Customer Service			X		
Information Technology	X				
Fleet Management		X			
Facilities Management	X				
Risk Management	X				
Legal		X			
Human Resources and Diversity		X			

D. Benefits

Where possible, the Audit Staff attempts to quantify the potential savings that would be expected from effectively implementing the recommendations made in this report. The audit report contains identifiable potential quantifiable cost savings of approximately $2,933,000 to $5,667,000 in annual savings and $2,200,000 to $3,110,000 in one-time savings from effective implementation of the recommendations. We try to identify, whenever it is reasonably practical, the potential savings net of the projected costs for implementation. Some of these savings could be considered an actual reduction in costs, avoided costs or increased revenues; whereas others would result from better deployment and/or use of existing resources. These quantifications require some judgment and may require efforts beyond the scope of the audit for further refinement. Therefore the actual benefits from effective implementation of the recommendations are subject to some degree of uncertainty, and could be higher or lower than the amounts estimated by the Audit Staff. An overall summary of the annual and one-time cost savings quantified in the audit report are shown in Exhibit I-2.

Exhibit I-2
PECO Energy Company
Focused Management and Operations Audit
Quantifiable Savings Summary

Recommendation	Annual Savings	One-Time Savings
Reduce overtime levels, specifically non-storm overtime, for C&M and DSO. (Recommendation VII-2)	$2,400,000 – $5,000,000	$0
Reduce gas line hit damages by mitigating mapping data errors and implementing a preemptive and comprehensive program to locate facilities with an emphasis on plastic pipe. (Recommendation VIII-1)	$200,000	$0
Perform a periodic comprehensive system-wide review of emergency and inactive inventory and eliminate inventory, as appropriate (Recommendation X-1)	$333,000 – $467,000	$2,200,000 – $3,110,000
Totals	$2,933,000 – $5,667,000	$2,200,000 – $3,110,000

For the majority of recommendations, it is not possible or practical to estimate quantitative benefits as their benefits are of a qualitative nature or there was insufficient data available to quantify the impact. For example, it is difficult to estimate the actual benefit where new management practices or procedures are recommended where such did not previously exist or was not fully functional. Similarly, changes in work flow processes or to implement good business practices will result in improved effectiveness and efficiency of a specific function but cannot be easily quantified.

The Company will have varying ways to implement the recommendations and as a result the Audit Staff has not estimated the cost of implementation for recommendations where no savings were quantified. However, it should be noted by the reader that the cost of implementing certain recommendations could be significant. The Audit Staff forecasted possible costs for implementation of the Company's expansion of inspection activities of contractor performed work to range between $500,000 and $700,000. It should be noted that the Audit Staff did not attempt to quantify resultant savings from increased inspection activity but contends that the net long term savings should ultimately outweigh the cost.

E. Recommendation Summary

Chapters III through XVII provide findings, conclusions, and recommendations for each function or area reviewed in-depth during this focused audit. Exhibit I-3 summarizes the recommendations with the following priority assessments for implementation:

- INITIATION TIME FRAME – Estimated time frame on how quickly the Company should be able to initiate its implementation efforts given the Company's resources and general operating environment. The time necessary to complete implementation is expected to vary depending on the nature of the recommendation and the scope of the efforts necessary and resources available to effectively implement the recommendation.

- BENEFITS – Net quantifiable benefits have been provided where they could be estimated as discussed in Section D - Benefits. Our estimated overall level of benefits rankings are not solely based on quantifiable dollars but rather the Audit Staff's assessment of the potential overall impact of the recommendation on the efficiency and/or effectiveness of the Company and/or the services it provides.

  - HIGH BENEFITS – Implementation of the recommendation would result in major service improvements, substantial improvements in management practices and performance, and/or significant cost savings.

  - MEDIUM BENEFITS – Implementation of the recommendation would result in important service improvements, meaningful improvements in management practices and performance, and/or meaningful cost savings.

  - LOW BENEFITS – Implementation of the recommendation is likely to result in service improvements, management practices and performances, and/or enhance cost controls.

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Summary of Recommendations

Rec. No.	Recommendation	Page No.	Initiation Time Frame	Benefits (including $ estimates)
Chapter III – Executive Management and Organizational Structure				
III-1	Conduct periodic management position span of control reviews and document justification for supervisors/subordinate ratios with narrow or wide spans of control.	21	0-12 Months	Medium
III-2	Perform periodic staffing level and base workload studies.	21	0-12 Months	High
III-3	Conduct periodic business case studies for contracted services, particularly Contractors of Choice contracts.	21	0-12 Months	High
Chapter IV – Corporate Governance				
IV-1	Enhance PECO's code of business conduct and ethics training programs by offering periodic in-person led training classes to all employees.	28	0-6 Months	Low
Chapter V – Affiliated Interest and Cost Allocations				
V-1	Periodically review costs and quality of services provided by Exelon BSC and compare them to market.	37	0-12 Months	Medium
Chapter VI – Financial Management				
VI-1	Review and update PECO's Financial Management policies and procedures, periodically, to ensure that the policies reflect actual practices and current organizational structure.	49	0-6 Months	Low
VI-2	Document PECO's internal dividend policy and continue to provide advanced notice, and written explanation to the Commission for each dividend payment in excess of 85 % of net income.	49	0-6 Months	Low
Chapter VII – Electric Operations				
VII-1	Improve response rates to emergency orders by tracking the reasons for missing trouble order goals and implementing corrective measures as necessary.	73	0-6 Months	High
VII-2	Reduce overtime levels, specifically non-storm overtime, for Construction & Maintenance and Distribution System Operations.	73	0-6 Months	High $2.4 - 5.0 million annual savings
VII-3	Improve/expand oversight of contractor performed work.	73	0-12 Months	Medium
VII-4	Reduce the number of customers experiencing four or more service interruptions in a year.	73	12+ Months	High
VII-5	Incorporate additional factors into the Top Priority Circuit Program, like Customers Experiencing Multiple Interruptions.	73	0-12 Months	Low

PECO Energy Company
Focused Management and Operations Audit
Summary of Recommendations

Rec. No.	Recommendation	Page No.	Initiation Time Frame	Benefits (including $ estimates)
Chapter VII – Electric Operations (continued)				
VII-6	Create enhanced tools/systems in partnership with County 911 Centers to provide interface capabilities during emergency situations.	73	0-12 Months	Low
VII-7	Initiate efforts to improve and/or review outage orders closed by field crews.	73	0-12 Months	Low
VII-8	Evaluate the process for providing work packets to contractors and automate if deemed feasible.	73	12+ Months	Low
VII-9	Improve the data capture rate for the Equipment Failure Database by enforcing compliance with the Equipment and Component Failure Analysis material retention procedures.	73	12+ Months	Low
Chapter VIII – Gas Operations				
VIII-1	Reduce gas line hit damages resulting from PECO mapping data errors, by mitigating mapping data errors and implementing an aggressive program to accurately locate facilities with an emphasis on plastic pipe.	89	12+ Months	High $200,000 annual savings
VIII-2	Accelerate the replacement rate of unprotected bare steel mains through a risk-based/prioritized schedule.	89	12+ Months	High
Chapter IX –Emergency Preparedness				
IX-1	Periodically conduct Vulnerability Assessments/Site Security Assessments using outside resources.	93	12+ Months	Low
Chapter X – Materials Management				
X-1	Perform a periodic comprehensive system-wide review of emergency and inactive inventory and eliminate inventory, as appropriate.	104	0-12 Months	Medium $333,000 - 467,000 annual savings $2.2 - 3.11 million one-time savings
Chapter XI - Customer Service				
XI-1	Strive to achieve transactional customer service satisfaction levels equal to or greater than the Pennsylvania Electric Distribution Company average, through continued training, first call resolution, process improvements, etc.	116	0-12 Months	Medium
XI-2	Strive to reduce long-term residential customer arrearages by conducting analysis to explore the enhancement of existing payment programs and collection policies.	116	12+ Months	Medium

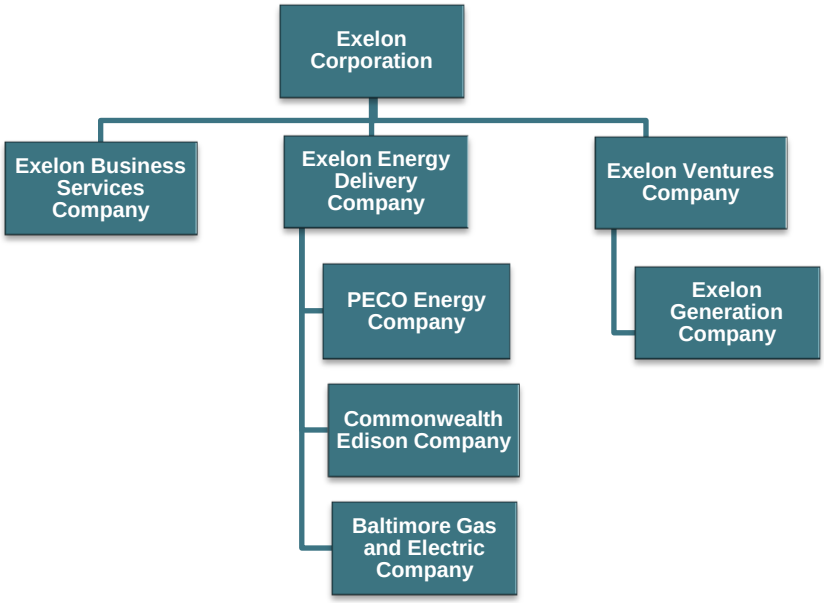
PECO Energy Company
Focused Management and Operations Audit
Summary of Recommendations

Rec. No.	Recommendation	Page No.	Initiation Time Frame	Benefits (including $ estimates)
Chapter XI – Customer Service (continued)				
XI-3	Initiate additional measures to reduce the utilization of deferred payment arrangements for Customer Assistance Program participants and decrease the Company's balance of outstanding customer accounts receivable balances.	116	12+ Months	Low
Chapter XII – Information Technology				
XII-1	None.			
Chapter XIII – Fleet Management				
XIII-1	Document a comprehensive PECO vehicle replacement policy incorporating its current practices to supplement the Exelon BSC vehicle replacement policy.	125	0-12 Months	Low
XIII-2	Strive to meet key fleet performance indicator goals.	125	12+ Months	Low
Chapter XIV – Facilities Management				
XIV-1	None.			
Chapter XV – Risk Management				
XV-1	None.			
Chapter XVI – Legal				
XVI-1	Modify the legal expense budget process to document budget variance causal factors for the indirect, internal and external charges for all BSC Legal teams charging costs to PECO and make adjustments, as necessary, to reduce budgetary variances.	144	0-12 Months	Low
Chapter XVII – Human Resources and Diversity				
XVII-1	Investigate the implementation of automated processes for HRIS time sheet and leave reporting functions.	153	0-12 Months	Low
XVII-2	Modify PECO's Annual Diversity Report to the PUC to include PECO-specific total spending and PECO-specific diverse vendor spending by classification for minority, women, and persons with disabilities-owned business enterprises.	153	0-12 Months	Low

II. BACKGROUND

PECO Energy Company (PECO or Company) is a wholly owned subsidiary of Exelon Energy Delivery Company, LLC (EED), a holding company of regulated electric and gas distribution utilities. EED in turn is a wholly owned subsidiary of Exelon Corporation (Exelon), a utility services holding company. EED's largest subsidiary, Commonwealth Edison Company (ComEd) has approximately 3.8 million electric customers located in the northern region of Illinois, including the city of Chicago. PECO is EED's second largest subsidiary and serves approximately 1.6 million electric and approximately 500,000 natural gas customers in southeastern Pennsylvania. PECO's service territory covers approximately 2,100 square miles within six counties: Bucks, Chester, Delaware, Montgomery, Philadelphia, and York. In 2012, Exelon completed its merger with Constellation Energy Group, Inc. (Constellation). As part of the merger, Exelon acquired Baltimore Gas and Electric Company (BGE), which has approximately 1.2 million electric and gas customers in central Maryland including the city of Baltimore. Constellation's generation units and energy products and services companies became subsidiaries of Exelon Generation Company, LLC. (ExGen). For more information about the merger between Constellation and Exelon see Chapter III – Executive Management and Organizational Structure. Exhibit II-1 illustrates the hierarchy of Exelon subsidiaries that are discussed throughout this audit report.

Exhibit II-1
Exelon Corporation
Corporate Entity Organizational Chart
As of June 30, 2013



Note: Exelon Corporation has additional subsidiaries, which are not listed on the organizational chart or part of the scope of this audit including the subsidiaries of Exelon Generation Company.
Source: Data Request GD-2

Exelon Business Services Company (Exelon BSC) was created in 2001 to provide a variety of support services, including: information technology, legal, supply, human resources, finance, real estate, corporate governance and oversight to Exelon's Operating Companies. As discussed further in Chapter V – Affiliated Interest and Cost Allocations, PECO receives services from, and provides services to, several of its affiliate companies including: Exelon BSC, Exelon Generation Company, LLC (ExGen), BGE and ComEd. See Chapter III – Executive Management and Organizational Structure for more information regarding reporting relationships within PECO and Exelon BSC.

Exhibit II-2 presents a summary of PECO's number of customers, usage, and revenues by customer class as of December 31, 2013 for electric and gas distribution operations. In particular for electric operations, residential customers comprise approximately 90% of the customer base, 35% of the usage, and 70% of revenue; commercial customers comprise approximately 9% of the customer base, 21% of the usage, and 19% of revenue; and industrial electric customers comprise less than 1% of the customer base, 40% of the usage, and 10% of the revenue for the Company. With respect to gas operations, residential gas customers comprise approximately 91% of the customer base, 45% of the usage, and 68% of revenues; commercial customers comprise approximately 8% of the customer base, 25% of the usage and 27% of the revenues; and industrial customers comprise less than 1% of the customer base, 30% of the usage, and 3% of total gas revenues.

Exhibit II-2
PECO Energy Company
Customer Statistics
For the Year Ended December 31, 2013

Electric						
Customer Class	**# of Customers**	**% of Customers**	**MWH Sold**	**% of Sales**	**Revenues**	**% of Revenues**
Residential	1,420,421	89.78%	13,340,802	35.07%	$1,593,165,713	69.63%
Commercial	148,960	9.42%	8,100,575	21.29%	$432,264,524	18.89%
Industrial	3,108	0.20%	15,378,728	40.42%	$222,948,304	9.74%
Other *	9,664	0.61%	1,224,024	3.22%	$39,781,712	1.74%
Totals	**1,582,153**	**100.00%**	**38,044,129**	**100.00%**	**$2,319,201,894**	**100.00%**

Gas						
Customer Class	**# of Customers**	**% of Customers**	**MCF Sold**	**% of Sales**	**Revenues**	**% of Revenues**
Residential	456,429	91.41%	38,418,395	44.65%	$406,099,447	67.88%
Commercial	42,435	8.50%	21,834,252	25.37%	$162,060,812	27.09%
Industrial	465	0.09%	25,581,154	29.73%	$16,467,377	2.75%
Other *	14	0.00%	215,055	0.25%	$13,636,970	2.28%
Totals	**499,343**	**100.00%**	**86,048,856**	**100.00%**	**$598,264,606**	**100.00%**

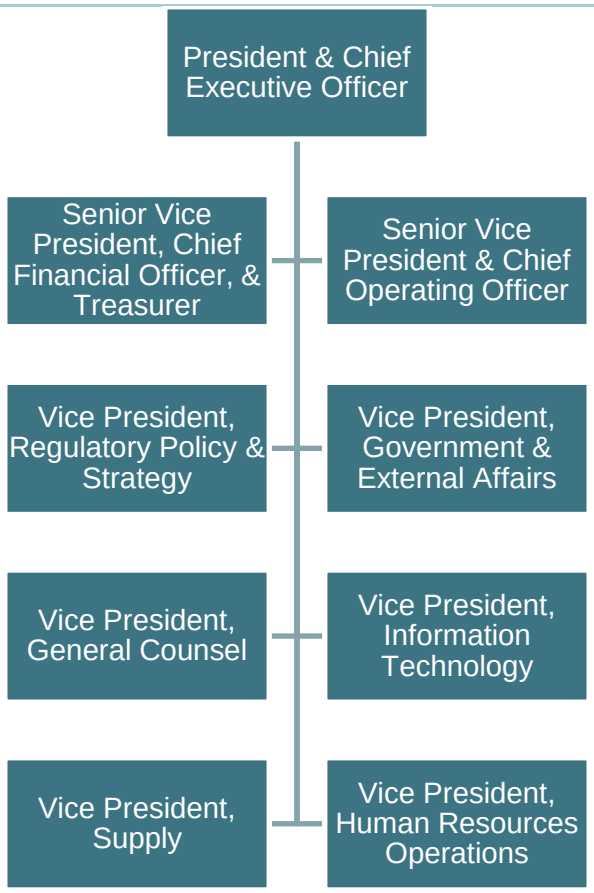
* Includes public and interdepartmental income/sales.
Source: 2013 PECO Energy Company Annual Reports

III. EXECUTIVE MANAGEMENT AND ORGANIZATIONAL STRUCTURE

Background

As discussed in Chapter II – Background and shown on Exhibit II-1, PECO Energy Company (PECO or Company) and Exelon Business Services Company (Exelon BSC or Service Company) are subsidiaries of Exelon Corporation (Exelon). PECO Energy Company is a subsidiary of Exelon Energy Delivery Company, LLC, a holding company, owned by Exelon Corporation (Exelon). As a result of the shared services that Exelon BSC provides to PECO (see Chapter V – Affiliated Interest and Cost Allocations for additional information regarding shared services), PECO's executive management is organized in a matrix management structure. Exhibit III-1 shows the direct reports of PECO's President and Chief Executive Officer (CEO). The dotted line reporting relationships within this organizational chart, and several others throughout this audit report, delineates the indirect or dual reporting responsibilities of individuals within PECO and Exelon BSC. More specifically as shown in Exhibit III-1, the four Vice Presidents with a dotted line reporting relationship to PECO's President represent Exelon BSC employees and support functions that are provided by the Service Company which are dedicated to PECO. Consequently, these Departments are embedded within the PECO organizational structure for functional purposes with an indirect reporting relationship to PECO executives but retain solid line, or direct, reporting relationships to Exelon BSC. See Chapter XII – Information Technology, XVI – Legal, and XVII – Human Resources for more information about these embedded Departments.

Exhibit III-1
PECO Energy Company
Executive Management Organizational Chart
As of August 2013



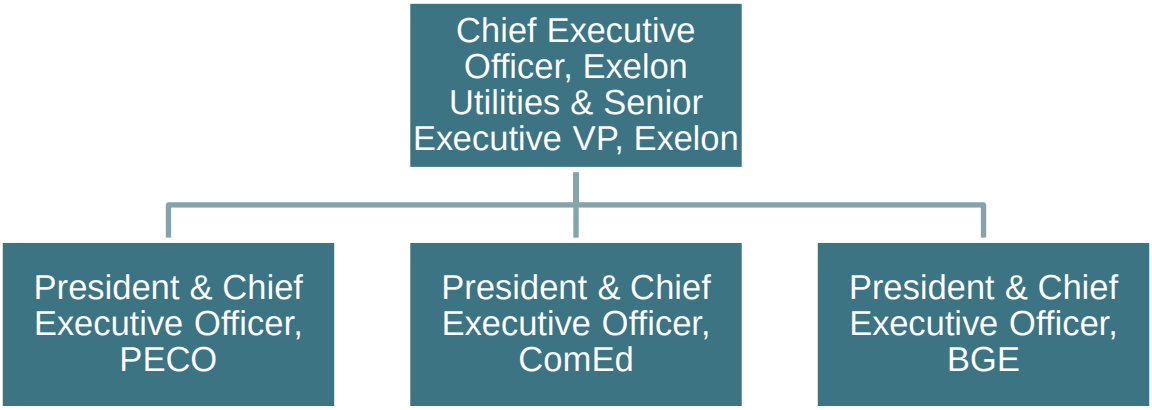
Note: The dotted reporting line represents the dual reporting responsibilities these four VPs have with an executive within the Exelon BSC organization.

Source: PECO Supplied Data

In addition to the embedded Departments (i.e., Legal, Information Technology, Supply, and Human Resources) shown in Exhibit III-1, there are embedded employees within various Departments throughout PECO. About 200 of PECO's approximately 2,500 employees, as of September 2013, are referred to as Exelon BSC embedded employees. The embedded designation is used to classify employees, working under the direction of Exelon BSC and providing a shared service, that dedicates 100% of their time on PECO related matters and accordingly charge their time to PECO. Therefore, the salaries of Exelon BSC embedded employees are directly charged to PECO but these employees perform support functions generally considered as Exelon BSC functions. Exelon BSC embedded employees have dual reporting to both the Exelon BSC organization and PECO's management.

Several changes have occurred within PECO's Executive Management structure as a result of Exelon's merger with Constellation Energy in 2012. Specifically, a new Department, Exelon Utilities, was created in 2012 within Exelon BSC to provide additional oversight, expand the opportunity for collaboration, and increase the sharing of best practices among Exelon's three regulated electric and gas distribution utilities: PECO, Commonwealth Edison Company (ComEd) and Baltimore Gas and Electric Company (BGE). As shown in Exhibit III-2, Exelon Utilities is led by the Exelon Utilities CEO and Senior Executive Vice President of Exelon and reports directly to the Exelon CEO. Upon the formation of Exelon Utilities, the incumbent President and CEO of PECO was selected to fill the position of Exelon Utilities CEO and Senior Vice President of Exelon[1]. During the transition period following the Constellation Energy merger and formation of Exelon Utilities, there were several shifts in reporting relationships in order to realign the levels of oversight among PECO's organizational structure.

Exhibit III-2
Exelon Corporation
Exelon Utilities Organizational Chart
As of August 2013



Source: Company supplied data

[1] The promotion of the prior PECO President and CEO to Exelon Utilities CEO and Senior Executive Vice President of Exelon became effective on March 12, 2012. March 12, 2012 is also the effective starting date for the PECO President and CEO, who was in place during Audit Field work.

Exelon Utilities in order to drive the performance of PECO, ComEd, and BGE established Peer Groups. These Peer Groups are comprised of a Corporate Functional Area Manager (i.e., an Exelon BSC employee referred to as a CFAM) and a representative from each utility (known as a Utility Functional Area Manager or UFAM). The goals of the peer groups are to identify opportunities for the three utilities to improve performance and standardize policies/procedures, systems and best practices. For instance, Exelon Utilities has an initiative for its Peer Groups aimed at consolidating the three utilities (i.e., PECO, ComEd and BGE) onto the same information technology platforms.

The Audit Staff evaluated PECO's staffing levels in terms of full time equivalents (FTEs) for 2008 through 2013 as presented in Exhibit III-3. PECO's Exelon BSC embedded employees are included in this total. As indicated there has been a 2.7% increase in FTEs. A majority of PECO's FTE increase has been within the Customer Operations Department.

Exhibit III-3
PECO Energy Company
Full Time Equivalents (FTEs)
For the Years 2008 through 2013

Year	2008	2009	2010	2011	2012	2013	Percent Change
FTEs	2,355	2,383	2,413	2,409	2,450	2,419	2.7%

Note: FTEs were rounded down to a whole person and are representative as of December 31st.
Source: Data Request EM-1, EM-11, and Auditor Analysis

Annually, as part of the Business Talent Review process, management level employees, excluding first line supervisors, use a Nine-Box[2] matrix to identify and assess their direct reports' talent level relative to current performance and future potential. During March and April of each year, Business Talent Review meetings are held between PECO Vice Presidents and Human Resources personnel to discuss the performance and potential of management employees within their Departments. Subsequent to the executive level meetings, the Business Talent Reviews are further discussed with the PECO CEO. Succession planning reviews are conducted as part of the Business Talent Review process in order to identify the readiness of potential successors for key management positions. The management succession plan lists potential successors for each management position, which are ranked into one of four categories based on readiness: ready now, ready in 1 to 2 years, ready in 3+ years, or contingency[3].

[2] Nine-Box is a performance ranking tool utilizing a three column by three row grid. Employees are ranked in ascending order from left to right and bottom to top based on performance and potential (e.g., low performing employees with low potential would reside in the bottom left of the grid, etc.).
[3] Contingency refers to: employees who may have held the position previously, employees who could temporarily serve the function or employees with no previous significant leadership experience, etc.

In conjunction with its annual multi-year budgeting process, which is discussed in greater detail in Chapter IV – Financial Management, PECO develops its annual strategic plan that includes a five year business plan. Beginning with the strategic direction set at Exelon, strategic initiatives are integrated across Exelon's operating companies as well as within each Department at PECO down to the individual goals for each PECO employee. Additionally, the initiatives within the business plan are integrated into the Company's operating and financial plans based on priority. The initiatives are monitored using key performance indicators compared to the Company's goals, which are discussed monthly via meetings with PECO executive management. An initiative found throughout PECO's strategic business plan for 2013-2017, is to obtain "best-in-class"[4] safety performance. Employees throughout PECO are responsible for ensuring safe business practices are performed on a daily basis. PECO executive management monitors the Company's progress towards achieving its safety goals via key performance indicators (i.e., recordable incident rates, the rate of incidents involving restricted work or transfer to another job, etc.). The Company's performance in meeting these safety metrics is discussed in more detail within Chapter XVII – Human Resources.

Compensation levels for PECO's executives are annually assessed by a consultant. The compensation levels of PECO's named executive officers (NEOs) are set by the compensation committee of the Exelon Board of Directors and are subject to review by the PECO Board of Directors. The executive compensation program for the NEOs includes the following elements:

- Base salary – Base salary levels are set using competitive market data for the position and internal equity.
- Annual incentives – Cash-based awards are paid out to executives who achieve short-term financial and operational goals during a one year period. Based on whether the target was met and the inclusion of the individual performance multiplier, the payout could range from zero up to 200% of the target.
- Long-term incentives – Equity-based awards are paid out to executives via performance share units (PSU)[5] and/or stock options.
- Other benefits – Other benefits include tax-qualified and non-qualified compensation programs, post-termination compensation, retirement benefit plans and perquisites.

Findings and Conclusions

Our examination of Executive Management and Organizational Structure focused primarily on a review of the corporate organization management structure; staffing levels and spans of control; the roles and responsibilities of executive management; the

[4] Best-in-class refers to the highest current performance level in its industry. PECO strives to meet or exceed its industry's safety performance benchmarks.

[5] A PSU is the right to receive a specified number of shares of Exelon common stock or the fair market value thereof, contingent upon the attainment of specified performance goals within a performance period and the expiration of any applicable restriction periods.

strategic and five year business plan, succession planning and executive compensation. Based on our review, PECO should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its executive management and organizational structure by addressing the following:

1. A span of control analysis that includes justification for individual positions with narrow or wide spans of control has not been conducted within the last ten years.

As part of reviewing PECO's organizational structure, the Audit Staff assessed the appropriateness of the Company's spans of control. Spans of control refer to the number of subordinates a manager or supervisor directly supervises. To maximize organizational efficiency and effectiveness, PECO should aim for spans of control in the range of 1:4 to 1:9. Overly narrow spans of control can result in inefficient communications, micro-management, and too many layers of management. Spans of control that are too wide can result in poor performance due to insufficient management oversight and control.

While PECO does not have a defined policy to periodically conduct spans of control analyses, the Company provided a breakdown of its spans of control, which are shown in Exhibit III-4. As of July 2013, only approximately 41% of PECO's reporting relationships fall within the target range of 1:4 to 1:9 with approximately 25% below 1:4. Since the Company has not completed a formal examination of the reasons behind narrow or wide spans of control, PECO's ability to monitor the effectiveness of the reporting relationships may be diminished. Without periodic analysis of spans of control, the Company may be unable to identify or analyze shifting reporting relationships until problems arise (i.e., performance issues, retention of employees, etc.). Moreover, this type of analysis becomes even more relevant after significant reorganizations occur.

As shown in Exhibit III-4, PECO does have occurrences in which a number of atypical reporting relationships exist. Of particular note are the instances of one to one reporting relationships (6%) and reporting relationships greater than 20 (6%). Utility operations can present unique situations where more extreme reporting relationships may be required. For example, PECO noted that for some larger spans there are foremen and master technicians embedded in the headcount who oversee the day to day work of other employees and that some narrow spans are indicative of employees overseeing work performed by contractors. However, since PECO has not performed a span of control analysis, the Audit Staff was unable to determine if in all cases these types of reporting relationships are efficient and/or effective.

Exhibit III-4
PECO Energy Company
Spans of Control
As of July 31, 2013

Reporting Ratio	Number of Relationships	Percent of Total Relationships
1:1	16	6.0%
1:2	24	9.0%
1:3	26	9.7%
<1:4 Sub Total	66	24.7%
1:4	25	9.4%
1:5	21	7.9%
1:6	20	7.5%
1:7	18	6.7%
1:8	13	4.9%
1:9	12	4.5%
1:4-1:9 Sub Total	109	40.8%
1:10	6	2.3%
1:11	10	3.8%
1:12	13	4.9%
1:13	7	2.6%
1:14	9	3.4%
1:15	12	4.5%
1:16 – 1:19	19	7.1%
1:20 – 1:29	16	6.0%
>1:9 Sub Total	92	34.5%
Total	**267**	**100.00%**

Source: EM-2, Auditor Analysis

2. PECO does not sufficiently analyze its base workload staffing needs.

In general, PECO's philosophy for targeting its staffing levels is to staff internally for base workload and utilize contractors to meet peak workload conditions. This approach enables the Company to respond to the dynamic nature of utility operations including large scale storm outage responses,[6] specialty work/tasks, seasonal projects limited in scope, etc. In such cases, staffing internally to meet peak workload would preclude the Company from gainfully employing its internal staff whereas transient resources can flex and contract to meet work demand. As a result, PECO assesses its staffing levels through various means to determine appropriate resource levels such as:

[6] PECO does plan for storm outages using its internal staff and will shift staff to cover potential storms. However, large storms, tornadoes, hurricanes, ice would require PECO to use outside resources (i.e., contractors, mutual assistance, etc.) for faster response.

- Budgeting process – expenses associated with staffing levels are challenged and approved by PECO management and ultimately approved by Exelon's Board of Directors (see Chapter VI – Financial Management).
- Human Resources (HR) Department – aids other Company Departments to develop rolling five year projected workforce planning strategies, which define current and projected short-term and long-term staffing needs based primarily on attrition. Will also provide information on the external industry and labor pool challenges.
- Individual Department – Each Department at its discretion could perform staffing studies or assessments of staffing levels for a specific position, group or on a Department-wide basis. In addition, the Departments do review overall compliment monthly to prepare for financial reviews using a Head Count Report, which details budgeted to actual staffing levels.

While PECO employs various techniques to assess if its staffing levels are adequate, there is not a standard or centralized method to conduct this assessment. Aside from the budgeting reviews and the attrition/hiring plan studies conducted with HR assistance, PECO provided the Audit Staff extremely limited studies on either a Departmental or Company-wide basis assessing staffing levels in relation to base workload requirements. The exceptions included a one-time study, Gas Distribution Staffing Study (Staffing Study), completed by the Gas Department in July 2010. The Staffing Study reviewed various aspects of the gas distribution workload including regulatory requirements, construction and maintenance, emergency response staffing, leak repairs, etc. Based on the workload projections and percentage of work contracted out, the Staffing Study concluded that staffing levels for its distribution mechanics and foreman should remain at 2007[7] levels through 2015. In addition, as mentioned in Chapter XI – Customer Service, the Manager of Customer Care must, on a day to day basis, perform resource management functions (i.e., tracking, monitoring and projecting) of staffing levels for PECO's call center. Therefore, staffing analysis is performed for the call center on a continuous basis in order to address peak call volumes. In addition, this analysis led to changes in PECO's hiring practices for call center employees.

Consequently, PECO primarily relies upon its budgeting process and performance monitoring to assess the effectiveness of its operation and adequacy of its staffing levels. However, the budgeting process is more historical based with some forward looking strategy included within PECO's long range plan. While this approach is acceptable for budgeting purposes, the Audit Staff questions its effectiveness at ensuring that staffing levels are optimal. While upper management could question any assumption in the budget, underlying staffing assumptions may not be revisited or challenged due to the nature of the process. It's also important to note that PECO outsources work to third-parties for a variety of reasons and therefore would have non-staff related expenses included within the overall budget. The combination of PECO employee completed tasks and work that is outsourced would make the budget unclear

[7] From 1998 to 2007, distribution mechanics and foremen of the Gas Operations Department were reduced from 216 to 172 full time equivalents (FTEs).

as to what is truly base workload for PECO employees. PECO's contractor utilization is addressed further in Finding and Conclusion No. 3.

The Company creates a Management Review Meeting (MRM) Metric Book that includes key metrics for each department. MRMs are reviewed by upper management monthly and include metrics such as budget variance, overtime, backlogged work, etc. The Audit Staff agrees that metrics should be employed to measure performance of any organization providing management with a daily status of its operations. However, metrics are not intended to assess base workload or staffing levels, but provide a snapshot of a particular data point influenced by multiple factors. For instance, a metric on overtime could indicate a staffing shortage; however, it could also be a factor of external factors (i.e., storms, other utility projects, regulatory action, etc.), operational preference (i.e., accelerating a project or program), seasonal/periodic work, etc. As noted by Finding and Conclusion VII-2 and VII-3 in Chapter VII – Electric Operations and Finding and Conclusion No. 3 within this chapter, the Audit Staff has identified a few instances where staffing levels may not be optimal at PECO.

PECO's efforts highlighted above (i.e., challenge sessions within the budgeting process, HR attrition studies, etc.) are noteworthy but do not adequately address a staffing or base workload analysis. Instead, a company-wide or department strategic staffing/base workload study would include studies performed by operating Departments (e.g., July 2010 Gas Distribution Staffing Study); incorporate analyses of base workload including storm response strategies; leverage financial analysis of outsourcing work (as discussed in Finding and Conclusion No. 3 later in this chapter); quantify attrition and knowledge retention; integrate management needs coupled with succession planning and/or spans of control analysis (as discussed previously in Finding and Conclusion No. 1); etc. This analysis should not be completed by a single group/department but rather leveraged by the expertise across PECO's business lines including Finance, HR, etc. Moreover, upper management from across PECO should be included within the process so that corporate strategy and/or initiatives can be conveyed.

Ideally, a staffing/base workload study should be conducted periodically (i.e., every 5-8 years) for all major work groups while PECO should continue to use the budgeting process, attrition studies, etc. to evaluate staffing levels on a yearly or as needed basis. The Company could ultimately use the staffing/base workload study to further support its budgeting process; however, individual Departments could also use the staffing/base workload study to more easily support general operations and programs, explain deviations in MRM metrics, plan for future workload, understand work tasks, etc. The staffing/base workload study would also provide analyses that could further support whether or not work is outsourced or performed in-house (as discussed in Finding and Conclusion No. 3).

3. PECO does not routinely perform cost benefit analysis for outsourced workloads.

As discussed previously in Finding and Conclusion No. 2, PECO sets its staffing levels for base workload and outsources[8], in general, work for a variety of reasons including cost, expertise/specialization, peak workload, etc. As a result, certain tasks/projects are entirely outsourced while others may utilize contractors to supplement work traditionally performed by PECO employees. For instance, PECO outsources all underground facility locating activities. Conversely, PECO employees will traditionally perform design work of electric facilities; however, this work may be outsourced if PECO resources are limited or if the design requires specialized expertise.

For a majority of low cost and reoccurring tasks, PECO will select a Contractor of Choice (COC) to perform unit cost work (see Chapter VII – Electric Operations). In general, individual projects estimated to cost at least $250,000 are competitively bid while most other projects are handled by the COC process[9]. More specifically, the COC process enables PECO to competitively bid unitized work for a period of time, typically for four to five year contracts, which provides cost certainty. Gas main replacement, new business construction, directional boring, paving, vegetation management services, electrical secondary repair, etc. are all COC contract services. The Company may have multiple COC's for a job task or it may only have one, depending on the bids, location, and agreed upon terms. At the end of the contract, the contract for the next cycle is rebid requiring the incumbent COC to submit a new bid. PECO also monitors its costs for tasks/projects and compare them to both historical levels and a group of panel companies to ensure costs are in line with industry averages.

As previously mentioned in Finding and Conclusion No. 2, PECO does not perform a company-wide staffing analysis. One of the points to consider in developing a company-wide strategic staffing plan would be the incorporation of financial and operational aspects of outsourcing work. In other words, outsourcing work should be supported by a business case exploring the costs, flexibility, quality, workload needs, etc. of a particular task and/or department. In general, when PECO is proposing/seeking approval from upper management to fully outsource a task or to bring a task in-house, it performs a business case analysis. For example PECO performed an analysis in mid-2009 that concluded that the Company should discontinue outsourcing the materials management, call center and project management functions for new business by 2011. It should be noted that this analysis was mainly performed due to poor contractor performance.

Barring poor contractor performance, PECO rarely explores the business case of contracted services including long standing outsourced services dating back as long as 15 years. An exception would be the analysis performed by the Customer Service Department in 2013 on the feasibility of outsourcing some of the Company's call center activities.[10] The call center analysis focused mainly on cost drivers, but it was a review of contracted services for a long standing contracted service. The Audit Staff contends this type of analysis should occur periodically for all major contracted work tasks,

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[8] Throughout this finding, outsourced work is considered to be provided by non-affiliated companies. See Chapter V – Affiliated Interest and Cost Allocations for discussion of services outsourced to affiliated companies.

[9] Projects less than $250,000 can be competitively bid based upon management's discretion but most are handled by the COC process.

[10] The Credit and Customer Assistance Program Call Centers have been outsourced since 2003.

especially whole scale services provided in COC contracts. It is important to note that outsourcing based on projected costs is not always prudent; an effective business case for contracted resources should include business strategy, workload, work quality, risk, etc. In addition, as discussed in Finding and Conclusion No. 2, outsourcing strategy/business cases must be coupled with staffing strategies to optimize internal and outsourced resources.

The Audit Staff is not necessarily implying that there is data to indicate that PECO's non-affiliated outsourced activities are deviating from industry costs or standards. However, without periodic analyses of contracted resources, the Company could inadvertently be paying more for a service(s) that it could do more effectively and/or efficiently in-house or may be performing a function it should contact out. While the mid-2009 analysis may have been prompted by poor contractor performance, PECO's analysis ultimately concluded that the Company could save approximately $1.1 - $2.9 million annually by performing the function internally. Therefore, the Audit Staff believes that contracted services, particularly those routinely outsourced for more than a decade, should be explored. In addition to potential cost savings, this analysis could also aid PECO in determining appropriate internal and outsourced staffing levels that could lead to more efficient storm/emergency response, knowledge retention, added services, etc.

Recommendations

1. Conduct periodic management position span of control reviews and document justification for supervisors/subordinate ratios with narrow or wide spans of control.

2. Perform periodic staffing level and base workload studies.

3. Conduct periodic business case studies for contracted services, particularly COC contracts.

IV. CORPORATE GOVERNANCE

Background

As discussed in Chapter II – Background, PECO Energy Company (PECO or Company) is a subsidiary of Exelon Energy Delivery Company, LLC, which is a holding company owned by Exelon Corporation (Exelon). Exelon is publicly traded on the New York Stock Exchange (NYSE) under the stock symbol EXC. As a result, Exelon is subject to corporate governance requirements contained in both the Sarbanes-Oxley Act of 2002 (SOX) and the corporate governance rules of the NYSE.

The Exelon Board of Directors (Board) oversees the management and operations of Exelon and all Exelon subsidiaries. To assist in determining director independence, in accordance with NYSE and Securities and Exchange Commission (SEC) requirements, the Board has adopted the Exelon Corporate Governance Principles, which provide additional clarification on Board structure, director selection and evaluation, and Board and committee operations. As of December 31, 2013 Exelon had 15 Directors on its Board. In its 2014 Proxy Statement, the Board determined, based on its Corporate Governance Principles, that 13 of the 15 Directors were independent, all except for the Exelon Chief Executive Officer (CEO) and the Exelon Chairman of the Board.[11] The Lead Director[12] performs the responsibilities of the Chairman of the Board (Chairman) at any time the Chairman is not deemed independent or when the Chairman and the Exelon Chief Executive Officer (CEO) are one in the same. Since the current Chairman is not considered independent, the Lead Director has performed the responsibilities of Chairman of the Board since 2012. Directors are nominated by the Board to serve a one year term[13] upon election by the shareholders at Exelon's annual shareholder meeting. The average tenure of the Directors, as of December 31, 2013 was eight[14] years. The full Board met seven times during 2013 and conducted its business using the following committees:

- Audit Committee – responsible for reviewing financial reports, accounting practices and policies, internal controls, recommending the independent auditor for shareholder ratification, and approving the scope of annual audits conducted by the independent and internal auditors. In addition, the Audit

[11] Exelon's Corporate Governance Principles establish director independence such that if the Director is, or has been, within the past three years, an employee of the company that said director is precluded from being declared independent. Upon the completion of the merger between Exelon and Constellation Energy Group (Constellation) in 2012, the Board separated the positions of Chairman and CEO as provisioned in Exelon's Corporate Governance Principles. Exelon retained the former CEO of Constellation to serve in the capacity as both Chairman of the Board and as an Exelon employee (i.e., Executive Director) through February 2013 to help facilitate the success of the integration. Therefore, the Chairman's (former CEO of Constellation) prior employment with Exelon during the merger integration period precludes him from being independent for three years after February 2013.

[12] An independent Director elected by the independent Directors of the Exelon Board

[13] As established in the Exelon Corporate Bylaws, beginning at the 2008 annual shareholders meeting, Directors are elected to serve a one year term which expires at the next annual shareholder meeting, at which time the standing Directors may be re-elected or replaced by vote of the shareholders.

[14] The average tenure of the Exelon Board of Directors was calculated by including, for the Directors who were part of the Constellation Energy Board of Directors prior to the March 2012 merger with Exelon, the years of service on the Constellation Energy Board. If only the years of service on the Exelon Board are considered in the calculation, the average tenure of the Board would be approximately six years.

Committee reviews and approves Officer and Director expenses and ensures compliance with Exelon's Code of Business Conduct. The Audit Committee is composed of eight independent Directors, which are all considered financial experts for purposes of the applicable SEC rules. The Audit Committee met nine times during 2013.

- Compensation and Leadership Development Committee – responsible for the review and approval of recommendations from management or consultants regarding executive compensation for Officers of Exelon and its subsidiaries, including base salaries, incentive awards, equity grants, and other forms of compensation. Also, the Compensation Committee ensures that executive compensation levels and targets are aligned with Exelon's strategic and operating objectives. The Compensation Committee is composed of four independent Directors and met six times during 2013.

- Corporate Governance Committee – responsible for identifying potential Director candidates and coordinating the nomination process, monitoring succession planning and executive development, approving management delegations of authority, overseeing efforts to promote diversity, and overseeing efforts to protect and improve the environment. Additionally, the Corporate Governance Committee is responsible for coordinating the Board's role of establishing and evaluating the performance criteria for the chairman and CEO. When the full Board is not in session the Corporate Governance Committee may act on behalf of the full Board. The Corporate Governance Committee is composed of seven independent Directors and met five times during 2013.

- Energy Delivery Oversight Committee – This Committee was terminated effective January 1, 2014, to help eliminate duplication of efforts. Its responsibilities were reassigned to the Exelon Board's Finance and Risk Oversight Committee, and the utility operating company respective boards and management. In prior years, the committee assisted Exelon's utility operating subsidiaries in their responsibility to provide safe and reliable energy and related energy products/services to customers. The Committee reviewed the utilities performance trends compared to benchmarks, and focused on issues having cross-utility impact or opportunities for sharing best practices and lessons learned. The Committee also reviewed significant issues having an impact on the utilities' budgets and their ability to meet service obligations. The Energy Delivery and Oversight Committee was composed of four[15] directors and met five times in 2013.

- Finance and Risk Oversight Committee – responsible for assisting the Exelon Board and the Boards of Exelon's subsidiaries in assessing, monitoring and controlling risk by overseeing and making recommendations on risk

[15] The Energy Delivery Oversight Committee was composed of five directors through October 2nd 2013 when Thomas J. Ridge resigned from the Exelon and PECO Boards to pursue a business opportunity with Exelon's independent accounting firm.

management policy, programs, and procedures. The Committee also monitors the financial condition, capital structure, financing plans, dividend policy, treasury policies, liquidity, and related financial risks of Exelon and its subsidiaries. Furthermore, the Committee oversees and approves the capital management and planning process, including capital investments, acquisitions and divestitures. The Finance and Risk Oversight Committee is composed of seven[16] Directors and met seven times during 2013.

- Generation Oversight Committee – responsible for overseeing the safe and reliable operation of Exelon's (or subsidiaries) generating facilities. The Committee reviews Exelon Generation Company's business plans, budgets, financial results, and operating performance, as well as changes in investments and operating strategy. The Generation Oversight Committee is composed of four Directors and met four times in 2013.

- Investment Oversight Committee – responsible for overseeing the management of investments held for covering the expense of decommissioning Exelon's (or subsidiaries) nuclear facilities, and overseeing and monitoring the evaluation, performance, and selection of the trustees and other fiduciaries managing the nuclear decommissioning trusts. In addition, the Investment Oversight Committee is responsible for monitoring the investment performance of Exelon's pension and post-retirement welfare plans and the investment options under those plans. The Investment Oversight Committee is composed of four Directors and met three times in 2013.

The Audit Committee operates pursuant to a written charter consistent with the applicable standards of the NYSE and the SEC. The Audit Committee Charter is reviewed, and if needed, updated annually. The Lead Director in conjunction with the Corporate Governance Committee coordinates the performance evaluations of each Board Committee and each Director annually.

The Audit Committee meets at least four times per year, but will typically meet more frequently as circumstances require (approximately 10 times per year). Each quarterly Audit Committee meeting is attended by the Chairman of the Board, Chief Executive Officer (CEO), Internal Auditor, Independent Auditor, and other Senior Officers from within Exelon. Apart from this full Audit Committee meeting, the Audit Committee also meets in executive session, privately with each of the following groups: the independent audit firm, the Internal Audit Department, and Exelon management. Through these different Audit Committee meetings, the Committee carries out its responsibilities which include the approval of the work plan and scope of work for both Exelon's independent and internal auditors, review of audit results/recommendations, discuss the adequacy of internal controls over financial reporting, review of critical accounting policies, etc.

[16] The Finance and Risk Oversight Committee was composed of eight directors through October 2nd 2013 when Thomas J. Ridge resigned from the Exelon and PECO Boards to pursue a business opportunity with Exelon's independent accounting firm.

Exelon's independent public accounting firm, PricewaterhouseCoopers LLP (PwC), has been engaged since the 2000 calendar year audit. Exelon's Audit Committee annually reviews the independent auditor's performance and fees. The Corporate Controller provides the Audit Committee with a report which benchmarks Exelon's independent audit costs in comparison to those incurred by similar companies in the utility industry and other general large capitalization companies. As required by SEC guidelines and Exelon's Audit Committee Charter, Exelon's independent lead audit partner is rotated at least every five years.

Exelon has a Code of Business Conduct (Code) which applies to all Directors, Officers, and employees of Exelon and all its subsidiaries, as well as consultants, agents, vendors, suppliers, contractors, etc. The Code sets forth Exelon's core values and behavioral requirements and focuses on providing the information necessary to enable all Exelon employees and representatives, to identify situations that may raise ethical and/or legal issues. The Code also discusses what to do if there are any questions or concerns about the Code and how to report violations of the Code or law. As described above, the Exelon Audit Committee is ultimately responsible for ensuring compliance with the Code through Exelon's Corporate Compliance Program, although the Exelon Business Services Company (Exelon BSC) Compliance and Ethics Department is responsible for daily management and administration of the Code for Exelon and all its subsidiaries. The Code provides multiple channels (i.e., e-mail, regular mail, phone, in person, etc.) for any Exelon stakeholder to report violations of the Code to the Exelon Compliance and Ethics Department. Violations or concerns can also be reported or discussed anonymously through the Exelon Help Line. The Help Line is maintained by a third party contractor and available 24 hours a day, seven days a week. Additional information detailing employee training on Exelon's Code of Business Conduct is presented later in the Findings and Conclusions section of this chapter.

Corporate governance guidelines and related documents are available for review by the shareholders and the general public on Exelon's website. Documents available on the website include, but are not limited to:

- Exelon Corporate Governance Principles
- Exelon Code of Business Conduct
- Bylaws
- Committee Charters for all Exelon Committees

In addition to the Exelon Board, PECO has a Board of Directors to oversee the management and operations of PECO. The PECO Board meets quarterly to review the Company's financial performance, SEC disclosures, and ensure compliance with all applicable laws and regulations. Additionally, the PECO Board is responsible for the review and approval of PECO's dividends, budget, and funding for major projects, overseeing hiring practices, safety, compliance with Pennsylvania Public Utility Commission (PUC) and Federal Energy Regulatory Commission (FERC) regulations,

and the purchase of electricity. The PECO Board is responsible for direct oversight and approval of specific projects and transactions while the Exelon Board makes high level, broad approvals to ensure PECO is operating within its overall business plan. As of December 31, 2013, PECO had eight[17] members on its Board with four of the Directors also serving on the Exelon Board. Two of PECO's Directors are considered independent based on PECO's Corporate Governance Principles. PECO's directors are recommended by the Exelon Corporate Governance Committee and elected by the Exelon Board of Directors to staggered three year terms with the term of at least one class (typically three directors) of Directors expiring annually. Any vacancies on the PECO Board are filled by a majority vote of the remaining PECO Board to serve until the next selection of the positions class by the Exelon Board.

The PECO Board utilizes one committee. The PECO Executive Committee is responsible for meeting, as needed, to provide advice to management and assist the PECO Board in reviewing significant financial matters and business opportunities. The Executive Committee also has the power to act on behalf of the full PECO Board when the full Board is not in session, except for items requiring the attention of the full Board as outlined in the Company's Bylaws, Articles of Incorporation, Corporate Governance Principles, and other Corporate Governance documents. The Executive Committee is composed of four Directors and did not meet during 2013.

Findings and Conclusions

Our examination of the Corporate Governance function included a review of Exelon and PECO'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 audit firm, policies related to rotation of audit firms; internal audit function; business conduct and ethics codes; annual reports to shareholders; etc. Based on our review, PECO should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its Corporate Governance function by addressing the following:

1. PECO has a training program for its Code of Business Conduct, however, the level of instructor led training has declined in recent years.

As discussed in this chapter's Background section, Exelon has a Code of Business Conduct (Code) in place which sets forth core values, behavioral requirements, identifying situations that may raise ethical and/or legal issues, violation reporting procedures, etc. As part of Exelon's Corporate Compliance Program all Exelon employees, including PECO employees, are required to complete annual training on Exelon's Code. The training courses are provided to employees via interactive online training modules covering three different topics each year. For each

[17] PECO's Board of Directors was composed of 9 directors through October 2nd 2013 when Thomas J. Ridge resigned from the Exelon and PECO Boards to pursue a business opportunity with Exelon's independent accounting firm.

training module, employees must follow the provided training materials (i.e., general guidance on subjects and situations, and links to policies and procedures) and then answer a series of questions to test their understanding of the module topics.

While all PECO employees are required to complete the annual Code training modules, only non-union PECO employees are required to update certification disclosures mandated by the Code. Certification is achieved through the completion of an additional online module, which asks employees a number of questions regarding business relationships, positions, financial holdings, etc. that could constitute a conflict of interest. In addition, employees must also report on conditions that they may have seen or known about which violated the Code.

In addition to the mandatory online training modules, Exelon's Compliance & Ethics Department offers instructor led training for team/staff meetings, individual Departments, and managers and supervisors as part of PECO's Supervisory Development Program. The training provided for team/staff meetings, or to individual Departments is conducted upon special request, based on the teams/Departments particular needs. The training provided as part of the Supervisory Development Program provides a review of the Code, emphasizes the obligation of supervisors to recognize and elevate Code issues, and to lead by example consistent with the core value of integrity. In the past, instructor led ethics training was included as part of PECO's (and Exelon's) new hire orientation program, however this training has not been conducted since 2011. New employees are now only required to read the Code and complete a verification form as a condition of employment. Exhibit IV-1 illustrates all Code and ethics training provided to PECO employees for the years 2008 through 2013 by the Exelon Office of Corporate Governance.

Exhibit IV-1
PECO Energy Company
Code of Business Conduct & Ethics Training
For the Years 2008 through 2013

	2008	2009	2010	2011	2012	2013
Annual Online Training Sessions	**3**	**3**	**3**	**3**	**3**	**3**
Instructor Led Training Sessions						
Management & Supervisory Programs	4	2	4	5	4	3
Corporate Orientation Programs	1	4	2	2	0	0
Department or Team Programs	2	2	2	1	1	0
Total Instructor Led Training Sessions	**7**	**8**	**8**	**8**	**5**	**3**
Total Annual Training Program Sessions	**10**	**11**	**11**	**11**	**8**	**6**

Source: Data Request CG-31 & Auditor Analysis

As shown in Exhibit IV-1, the number of annual Code and Ethics training sessions provided to PECO employees has decreased in recent years from a high of eleven sessions in the years 2009 through 2011 to a low of seven in 2013. While the

required annual online training has been completed each year, instructor led training has declined, since 2011. Of particular concern is the decrease in Management and Supervisory training from 2011 to 2013, and the elimination of instructor led ethics training from the new hire orientation program since 2011.

Audit Staff contends that the Code and ethics instructor led training provided to PECO employees' needs to be included as part of the new hire orientation program and should be conducted on a more frequent basis. Without regular, instructor led training for all PECO employees, the number of Code and ethical violations could rise (note: violations increased threefold from 2012 to 2013) increasing the potential for more frequent/serious problems caused by unethical behavior. PECO should develop a more robust, instructor led training program to supplement its online Code and ethics training. All employees should periodically be required to attend an interactive Code and ethics training, in person to help employees more fully understand what constitutes unacceptable or unethical behavior and the importance of reporting wrongdoing. Management and Supervisory employees should be required to attend additional training sessions given their position, as leaders, and their ability to influence the workforce culture.

Recommendations

1. Enhance PECO's code of business conduct and ethics training programs by offering periodic in-person led training classes for all employees.

V. AFFILIATED INTEREST AND COST ALLOCATIONS

Background

This chapter presents the results of the Audit Staff's review of the nature and extent of transactions between PECO Energy Company (PECO or Company) and its affiliates. As discussed in Chapter II – Background and shown in Exhibit II-1, PECO is a wholly owned subsidiary of Exelon Energy Delivery Company, LLC (EED), a holding company of regulated electric and gas distribution utilities. EED, which is also the parent company of Commonwealth Edison Company (ComEd) and Baltimore Gas and Electric Company (BGE), is a wholly owned subsidiary of Exelon Corporation (Exelon). In addition to its regulated businesses, Exelon owns several unregulated affiliates including Exelon Business Services Company (Exelon BSC) and Exelon Generation Company (ExGen), which regularly provide and receive services from PECO.

Transactions between PECO and its affiliates are governed by two established frameworks; the General Services Agreement (GSA) and the Mutual Services Agreement (MSA). Per the GSA dated January 1, 2001, Exelon BSC provides services to Exelon's regulated (including PECO) and unregulated affiliates. The GSA establishes the framework to create more detailed Service Level Agreements (SLAs) between Exelon BSC and each affiliate for each service it provides. Two supporting schedules to the GSA provide the types of services that may be provided by Exelon BSC and examples of allocation methodologies that may be used when directly charging costs is not feasible. Annually, Exelon BSC and PECO executive leadership (i.e., CFO, COO, etc.) review and approve an SLA for each service that Exelon BSC provides to PECO. Each SLA specifies the scope of services provided, effective period of the agreement, billing approach and basis for allocation of costs. Several of the SLAs also contain a performance metrics section that specifies levels of service performance that Exelon BSC is responsible for maintaining over the length of the agreement.

The MSA dated January 1, 2001, stipulates that PECO may provide services to and/or receive services from its affiliates. In order to provide specific details regarding transactions between affiliates, Affiliate Level Agreements (ALAs) are created for each service that PECO provides to an affiliate and for each service that PECO receives from an affiliate (except Exelon BSC – see the discussion on SLAs above). The 2013 ALAs reviewed by the Audit Staff indicate that the agreements are effective through the end of 2014. Prior to the expiration of the ALA, PECO will review the agreement with the relevant affiliate to determine whether changes are necessary to reflect actual practices.

PECO filed the MSA and GSA documents with the Commission as part of its merger with ComEd at Docket No. A-110550F0147, Opinion and Order entered June 22, 2000. However, the filed MSA and GSA documents were not signed or executed copies of the agreements. Consequently on April 29, 2013, PECO filed with the Commission updated affiliated interest documents including: Affiliate Service Agreements (MSA and GSA), the Exelon BSC Associate Transactions Procedure Manual and the PECO MSA and Asset Transfer Agreement Cost Allocation Manual.

Additionally, PECO filed updated SLAs and ALAs, Exelon Corporate Organizational Charts, and a description of the business activities for the companies listed in the organizational chart as of January 2013. At its December 19, 2013 Public Meeting, the PUC approved, at Docket Number G-2010-2211383, PECO's GSA, MSA, Cost Allocation Manual, and copies of its 2013 SLAs and ALAs. Annually, PECO intends to provide the Commission with copies of any revised SLAs and/or ALA's.

According to the GSA, Exelon BSC is allowed to provide administrative and management services, purchasing, facilities management, communication and Information Technology (IT) services, vehicle and machinery management, and operational services to PECO. The framework provided by the MSA does not specify any services and allows for ALAs to be created for any service requested in which the providing affiliate is able and willing to perform. Costs incurred in providing services to one affiliate are directly charged to that affiliate. As discussed in Chapter III – Executive Management, employees referred to as embedded Exelon BSC employees are PECO employees that have reporting relationships to Exelon BSC Management.

Whenever services are provided that benefit more than one affiliate, the associated costs are allocated using a cost causative method. Depending on the type of service, charges are allocated using revenue ratios (i.e., revenue, sales, customers), expenditure ratios (i.e., total expenses, O&M expenses, capital expenses), payroll ratios (i.e., payroll, number of employees), unit ratios (i.e., usage, capacity, consumption), asset ratios (i.e., total assets, current assets, gross plant), or composite ratios (i.e., Modified Massachusetts Formula, 12 month average assets and gross payroll). A summary of charges to PECO from Exelon BSC and each affiliate with an executed ALA agreement is presented in Exhibit V-1. Exhibit V-2 presents a summary of charges from PECO to each affiliate with an executed ALA agreement. In Exhibit V-1 and Exhibit V-2 charges are broken down by company and service for the years 2011 through 2013.

Exhibit V-1
PECO Energy Company
Summary of Charges from Affiliates to PECO
For the Years 2011 through 2013

Description of Services	2011	2012	2013
Charges from ExGen to PECO:			
Power Lab	$319,947	$486,737	$437,452
Total charges from ExGen	**$319,947**	**$486,737**	**$437,452**
Charges from ComEd to PECO:			
Call Center	$0	$16,550	$0
Market Research	6,138	7,829	6,220
Total charges from ComEd	**$6,138**	**$24,379**	**$6,220**
Charges from Exelon BSC to PECO:			
Exelon BSC Operations	$2,227,877	$2,110,406	$2,031,394
Communication and Public Affairs	1,894,412	1,408,673	2,042,658
Corporate Development	753,380	922,931	1,091,979
Corporate Governance	1,732,652	1,188,578	758,511
Corporate Strategy	1,024,210	1,093,430	941,035
Executive Services	10,098,427	9,415,614	7,259,442
Exelon Utilities	0	2,798,172	5,459,409
Finance	15,992,852	17,562,118	15,566,104
Government Affairs	1,579,633	2,189,612	1,800,327
Human Resources	3,227,796	3,024,223	3,956,121
Investments	160,258	136,274	108,363
Legal	8,028,127	6,628,587	6,510,223
Risk	154,867	209,039	337,469
Security	412,118	970,752	3,809,351
Supply	1,016,987	982,216	1,061,024
IT (Allocated)- Full Range of IT services	38,549,196	39,352,545	37,064,598
IT (PECO Specific)- Full Range of IT services	2,237,288	2,253,900	3,560,014
Exelon BSC Merger Related Costs	4,058,391	15,713,869	7,028,729
Total charges from Exelon BSC	**$93,148,471**	**$107,960,939**	**$100,386,751**
Total charges from Affiliates	**$93,474,556**	**$108,472,055**	**$100,830,423**

Note: Mutual Aid costs between affiliates were excluded.
Note*: Data taken at year end, December 31st of each year.
Source: Data Requests CA-4, CA-30, and Auditor Analysis

Exhibit V-2
PECO Energy Company
Summary of PECO Charges to Affiliates
For the Years 2011 through 2013

Description of Services	2011	2012	2013
Charges from PECO to ExGen			
Meter Services	$0	$5,105	$1,776
Claims	391,399	762,972	688,607
Legislative Services	31,228	48,351	16,968
Real Estate & Facilities	134,143	148,591	NA
Fleet Services	482,982	538,967	535,979
Fire Academy Training	53,276	38,054	92,424
Environmental & Lab Services	29,598	5,449	0
Transmission and Substation Services	77,807	234,564	83,779
Security	7,084	NA	NA
Total charges to ExGen	**$1,207,517**	**$1,782,053**	**$1,419,533**
Charges from PECO to ComEd			
Chem Lab Services	$0	$542	$50,176
Mapping & Document Services	0	0	3,642
Total charges to ComEd	**$0**	**$542**	**$53,818**
Charges from PECO to BGE			
Mapping & Document Services	NA	NA	$421
Total charges to BGE	**NA**	**NA**	**$421**
Charges from PECO to Exelon BSC			
Real Estate & Facilities	$2,455,241	$2,581,763	$3,177,632
Fleet Services	20,741	23,686	25,443
Mapping & Document Services	NA	NA	3,711
Smart Meter / Smart Grid Feasibility Study	NA	36,690	NA
Total charges to Exelon BSC	**$2,475,982**	**$2,642,139**	**$3,206,786**
Charges from PECO to Adwin Realty Company			
Real Estate & Facilities	$2,475	NA	NA
Total charges to Adwin Realty Company	**$2,475**	**NA**	**NA**
Charges from PECO to Exelon			
Merger Acquisition Services	$588,662	$316,760	NA
Total charges to Exelon	**$588,662**	**$316,760**	**NA**
Total Charges from PECO to Affiliates	**$4,274,636**	**$4,741,494**	**$4,680,558**

NA: Not Applicable – Signifies that no ALA was executed with the affiliate, or for the specific service in the year listed.
Note: Mutual Aid costs between affiliates were excluded.
Note*: Data taken at year end, December 31st of each year.
Source: Data Requests CA-4, CA-30, and Auditor Analysis

PECO is also a member to various mutual assistance agreements. Through its membership in the North Atlantic Mutual Assistance Group (North Atlantic Group) and the Southeastern Electrical Exchange (SEE), PECO may request assistance for aid in the restoration of electrical service. The North Atlantic Group stretches from Maryland through Maine and into Canada encompassing members in 13 states, four provinces, and one district. The SEE, is composed of members from Pennsylvania, Florida, and Oklahoma. Both the North Atlantic agreement and the SEE agreement discuss how utilities will deal with each other, including the reimbursement process, record keeping and invoicing, responsibility for paying certain items, invoicing cut off, etc. In general, mutual assistance services are provided at cost by the responding company with proper supporting records and invoices provided (both electronically and hard copy) to support charges to the receiving company. Mutual assistance between PECO and any of its EED affiliates follow the same practices as if the services were between external companies.

Ring-fencing is a term used to describe the actions (i.e., legal, structural, or behavioral) taken to financially protect a regulated utility from the potentially riskier activities of unregulated affiliates. The objective is to ensure that the financial stability and reliability of the regulated utility is not adversely affected by the actions/conditions of unregulated affiliates. In order to safeguard PECO from the potential financial risks of its affiliates, PECO and Exelon have implemented a number of ring-fencing protections. These protections include, but are not limited to, the following:

- A separate Board of Directors
- Separate debt issuance
- Separate credit rating
- Separate books and records
- PUC notification of PECO dividends to its parent, Exelon Corporation
- Approval by the Federal Energy Regulatory Commission (FERC) and PUC for property transfers
- No guarantees on affiliate debt, mortgages, liens, pledges, etc.
- Accounting controls over affiliate transactions

Also see Chapter VI – Financial Management for additional examples of ring-fencing provisions implemented by PECO and Exelon.

Regulations at 52 Pa. Code §54.121-123 addresses competitive safeguards for electric utilities and affiliate standards of conduct at natural gas utilities were established by Commission Order, adopted on May 11, 2000, at Docket No. M-00991249F0009, and are further reinforced by the Commission's policy statement addressing affiliated interest issues of Natural Gas marketers at 52 Pa. Code §69.191-192. The purpose of these safeguards is to assure the provision of direct access on equal and nondiscriminatory terms to all customers and suppliers (both electric and gas), prevent discrimination in rates, terms or conditions of service by electric or natural gas distribution companies, prevent the cross subsidization of service amongst customers, customer classes or between related distribution companies and suppliers, to forbid

unfair or deceptive practices by production companies and suppliers, and to establish and maintain an effective and vibrant competitive market in the purchase and sale of retail energy. Suppliers, electric and natural gas distribution companies 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.

To address these regulations, Exelon (and PECO) have adopted a Code of Business Conduct (Code) to help guide Directors, Officers, and all representatives of Exelon in fulfilling their fiduciary duties while following all applicable Exelon ethical and legal standards. The Code sets forth Exelon's core values and focuses on providing the necessary information to enable all Exelon employees to identify situations that may raise ethical and/or legal issues. Part of the Code discusses competitive safeguards and provides requirements on energy trading rules, antitrust laws and unfair competition, marketing competitive practices, affiliate nondiscrimination, insider trading, etc. For all situations the Code identifies who to contact with questions and how to report violations of the Code or law. A more detailed discussion on Exelon's Code is presented in Chapter IV – Corporate Governance.

Findings and Conclusions

Our examination of the Cost Allocations function focused primarily on a review of contracts and agreements governing transactions among affiliates, cost allocation methodologies, compliance with existing allocation policies and practices, a review of mutual aid agreements, ring-fencing efforts, code of business conduct, competitive safeguards, etc. Based on our review, PECO should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its cost allocations by addressing the following:

1. Exelon's market testing procedure is applied to a limited number of services.

As noted in the 2007 Stratified Management and Operations Audit (2007 Management Audit) of PECO, at Docket No. D-05MGT048, Exelon BSC periodically reviewed the relative cost of its affiliate services versus the market; but PECO did not have a formal program to compare the use of Exelon BSC's shared services against outsourcing options. As a result of the 2007 Management Audit, Exelon created the Market Testing Service Classification Procedure (Market Testing Procedure) specifically for PECO and conducted its first Market Testing Analysis in 2010. The Market Testing Procedure outlines the process for the evaluation of Exelon BSC service costs to PECO. Exelon BSC is responsible for performing the Market Testing Procedure analysis annually, to identify any services that may require market testing based on the

criteria established in the Market Testing Procedure. Under guidance from PECO's CFO, PECO Finance is then responsible for comparing the cost of the services identified by the Market Testing Analysis to those available in the market and making any resulting changes (i.e., service provider, fee structure, level of service, etc.).

The Market Testing Procedure analysis begins by examining total billings for each Exelon BSC service provided to PECO. Exelon BSC charges to PECO excluded from the analysis include merger related costs, lease abandonment costs, income taxes, and interest. All remaining costs are then classified into one of the four following categories:

- Governance – costs incurred by Exelon BSC in performing services related to external financial reporting, supply chain operations, internal auditing, investor relations, accounting services, human resources, etc. Governance services require expertise and knowledge of Exelon's critical functions, involve activities that establish the policies and direction of Exelon, and often require decisions by senior executives related to executing the mission of the organization.

- Strategic – costs incurred by Exelon BSC in performing services such as financial planning & analysis, corporate strategy, risk management, labor and benefits management, supply management, etc. Strategic services are those which relate to the oversight of critical business decisions, and can lead to competitive, financial or operational activities which are performed by personnel with specialized knowledge and high responsibility and accountability.

- Business Support – costs incurred by Exelon BSC in performing services such as managing third party contracts, cash management, call center services, insurance services, legal operations, etc. Business support services relate to managing the business and supporting ongoing operations.

- Transactional – costs incurred by Exelon BSC in performing services such as payroll processing, media production, advertising, leadership development, mail processing, etc. Transactional services have a high degree of task repetition, operational focus, and are standardized.

Once the remaining service costs have been classified into one of the four cost categories listed above, Governance, Strategic, and Business Support costs are excluded from market testing as Exelon contends that these services are best performed by internal resources or could not be performed by outside vendors. Transactional costs are then grouped into one of the following five categories:

- Currently Outsourced – service which is currently outsourced but typically reflective of specific tasks embedded within functional areas (i.e., , advertising); service could be provided by Exelon or an Exelon subsidiary but management has deemed the service is best served by outsourcing to an outside vendor; outsourcing is completed in accordance with Supply policies and competitively bid.

- Third Party Contracted – a service deemed beneficial to inherently always outsource to a third party contractor (e.g., tree trimming); service is not provided internally within Exelon or any Exelon subsidiary); outsourcing is completed in accordance with Supply policies and competitively bid.

- Recently Analyzed but Not Outsourced – Service analyzed for potential outsourcing within the last five years but a decision was made not to outsource the service.

- 1st and 2nd Quartile – Services are within the 1st or 2nd quartile in cost performance based on a benchmarking study of industry standards.

- Remaining Costs Subject to Further Review – All remaining costs not falling into one of the above transactional cost categories.

All transactional costs except for those classified as Remaining Costs Subject to Further Reviewed are excluded from the market testing analysis since these services have already been reviewed. The Remaining Costs Subject to Further Review category is then evaluated based on the level of charges. All services with less than $500,000 in charges to PECO are also excluded from the market testing analysis. Only Transactional costs, in the Remaining Costs Subject to Further Review category, which are over $500,000, are included for consideration in the market testing analysis.

Based on the 2013 Market Testing analysis, PECO received 118 different Exelon BSC services of which only 27 were considered transactional. Of the 27 transactional services provided to PECO two were already performed by a third party, two were less than $500K in charges and 23 were determined to be effectively performed as a result of a benchmark comparison. Therefore, based on the Market Testing process, Exelon BSC did not identify any services for market testing during its annual review of services in 2010, 2011, 2012 or 2013. Although no services were identified for review in those respective years, the Market Testing procedure did indicate that Payroll and Accounts Payable (A/P) Services should be considered for a future market test review based on the length of time since the last benchmarking assessments in 2007/2008. However, neither A/P nor Payroll has been reviewed because of changes resulting from Exelon's merger with Constellation Energy. Exelon did perform a more detailed benchmarking study on its information technology (IT) services in October 2011 that included a comparison of costs to peer groups and also included recommendations to Exelon for improvement in the IT area. While benchmarking surveys can be a valuable tool to assess cost competitiveness and alignment with peer groups, the Audit Staff cautions that benchmarking studies often do not compare the level and quality of services provided, which is a vital component to a market analysis.

Although PECO implemented a Market Testing Procedure, Audit Staff contends that it does not fully address the intent of the 2007 Management Audit recommendation in which the cost competiveness of Exelon BSC services were to be periodically measured. More explicitly, PECO should periodically compare the cost of services received from affiliates to market rates to ensure intercompany charges are fair,

competitively priced, and evaluate the level and quality of service offered by external providers. In essence, PECO and Exelon BSC should conduct business cases for their affiliated services as discussed for non-affiliated services in Finding and Conclusion No. 3 within Chapter III – Executive Management and Organizational Structure. In addition, services that are currently outsourced should be periodically reviewed to see if those services could be provided more cost effectively by other providers or internal resources. While the Audit Staff acknowledges that some services in the Governance, Strategic, and Business Support categories are best performed by internal resources and cannot logically be outsourced; nonetheless, where possible (i.e., supply management, cash management, call center, legal, insurance and risk management services, etc.), these services should be compared to market to ensure the level and quality of services received from Exelon BSC are similar to those available on the market and at a similar cost.

By excluding over 75% of the services provided by Exelon BSC from the market testing analysis, PECO has not adequately verified that the cost, quality, and/or level of service received are comparable to those available in the market. In addition, the marketing testing analysis could also identify improvements, efficiencies, or other benefits to the services offered by Exelon BSC. While it is not feasible to perform a detailed cost benefit study annually, the Audit Staff asserts that it would be beneficial to conduct periodic formal cost/benefit studies (approximately every 3 - 5 years depending on the particular service) of the rates and services provided by Exelon BSC. In addition, the Audit Staff contends that with the changing landscape created by the merger with Constellation Energy, 2014 would be an opportune time to perform a thorough review of affiliate services and then continue to perform formal cost benefit studies every 3 - 5 years.

Recommendations

1. Periodically review costs and quality of services provided by Exelon BSC and compare them to market.

VI. FINANCIAL MANAGEMENT

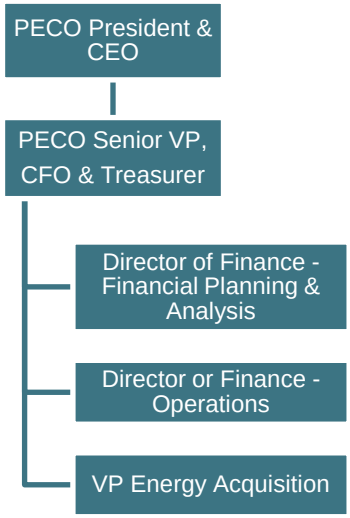
Background

PECO Energy Company's (PECO or Company) financial management function is segregated between PECO's Finance Department and the Exelon Business Services Company (Exelon BSC) Finance Organization. PECO's Finance Department is overseen by PECO's Senior Vice President, Chief Financial Officer (CFO) and Treasurer. PECO's Finance Department performs long range financial planning, budgeting and financial reporting, variance analysis, cost management, project cost evaluation, operations support, benchmarking, and energy acquisition for default service customers. Exelon BSC provides common services to all subsidiaries of Exelon Corporation (Exelon) including PECO, in order to align the financial policies, practices, and processes across all the Exelon business units, and gain efficiency through the elimination of redundant work. Exelon BSC provides PECO with internal audit and tax services, manages Sarbanes Oxley Act of 2002 (SOX) compliance, coordinates external audit services, handles investor relations, provides financial planning and analysis, and accounting services including cash management, treasury, and insurance services. Exhibit VI-1 illustrates the direct reporting structure of the PECO's Finance Department. In addition to the direct reports shown in Exhibit VI-1, the PECO Finance Department includes five additional reporting functions that include:

- Controller
- Tax
- Treasury
- Internal Audit
- Risk Management and Control

The five functions identified above report to management in Exelon BSC and also indirectly report to PECO's Senior Vice President, CFO, and Treasurer. These indirect reports provide the PECO CFO with the support required to fulfill PECO Financial Department objectives and goals. The Controller, Tax, Treasury, and Risk Management and Control functions report directly to various Departments within Exelon BSC and ultimately to the Exelon President and CEO. The PECO CFO reports not only to the PECO President and CEO but also reports indirectly to the Exelon CFO who reports to the Exelon President and CEO.

Exhibit VI-1
PECO Energy Company
Financial Management Organization Chart
As of August 2013



Note: Duel or indirect reporting relationships to the Senior VP, CFO & treasurer are not shown but are described in this chapter's narrative.
Source: Company Supplied Data

The Internal Audit (IA) Department is part of the Exelon BSC organization. The IA Department is responsible for evaluating the design and effectiveness of internal control systems and governance processes throughout the Exelon organization by performing risk based audits on activities affecting the financial, legal, reputational, and operational aspects of the Company. The IA Department also performs SOX compliance testing and information technology (IT) audits. The IA Department is headed by the Vice President (VP) Audit and Controls who oversees three Audit Directors and two Audit Managers. All of the IA Department's auditors are members of the Institute of Internal Auditors with approximately 65% holding accounting and/or auditing certifications (e.g., Certified Public Accountants, Certified Internal Auditors, Certified Information Systems Auditors, etc.).

The VP Audit and Controls reports directly to the Exelon Board of Directors' (Board) Audit Committee. The Audit Committee is responsible for hiring, terminating, reviewing the performance evaluations of the V.P. Audit and Controls. The V.P. Audit and Controls reports quarterly to the Audit Committee on IA's activities, significant risks/issues, updates to the audit plan, budget, resource needs, etc. To ensure continuity between the IA Department and PECO, IA management meets with the PECO CFO monthly to discuss any audit findings and their proposed actions plans. In addition to these monthly meetings, Internal Audit also attends PECO's monthly management meetings to be aware of any changes or developments which may affect the risk level of any processes within PECO and to present any current audit findings to PECO management.

The Internal Audit Department develops its Audit Plan using a risk based approach which incorporates both a 'top down' and 'bottom up' review. Annually, starting early in the third quarter, Exelon BSC's Enterprise Risk Management (ERM) group (See Chapter XV – Risk Management) develops the 'top down' review while the IA Department begins the 'bottom up' review. ERM's 'top down' approach identifies and assesses top risks from across Exelon by updating known risks and conducting interviews with management in each business unit to identify emerging risks. Once this analysis has been completed for each Exelon organization, ERM will develop a list of 10 to 15 top enterprise risks (See Chapter XV – Risk Management).

The IA Department performs the 'bottom up' approach by evaluating business processes across each business unit to identify risks related to processes, people, technology, compliance requirements, etc. Risk scores are then applied to the identified risks based on the likelihood and impact of a failed control using data analytics software. Additionally, interviews are conducted, or surveys are sent to senior management across Exelon allowing them to identify the areas/processes under their purview which are possible risks. The IA Department will then perform an evaluation using all the information gathered (i.e., identified enterprise risks, process risk scores, senior management surveys, etc.) to challenge and adjust risk scores using professional experience and knowledge about the entire Exelon organization.

After the IA Department has evaluated and finalized risks scores, a draft Audit Plan is created and circulated to PECO Management and approved by the Exelon Audit Committee at the December Board meeting. Once approved by the Audit Committee, the IA Department prioritizes the Audit Plan into quarters with the highest risk areas to be audited first. Due to the fact that the Audit Plan is based on risk for the entire corporation, there is no set number of audits that are required specifically related to PECO each year. However, over the period reviewed during the Audit (i.e., 2010 through 2013), multiple IA's had been performed solely on PECO activities.

The IA Department maintains electronic work paper files of all audits and tracks all audit findings and follow-up information in a database. The database contains information with respect to each audit including findings, support documentation, management's response and action plan, responsible manager and VP, audit manager, report date, issue close date, follow-up confirmation date, etc. Each audit finding is assigned a priority of either low, moderate, or high. Low priority issues are generally not tested to confirm management's action on the issue; Moderate priority issues are followed up on within 6 months of the close date; and high priority issues are followed up on within 3 months of audit completion.

PECO's Finance Department is responsible for facilitating the annual budgeting and long range planning process. PECO's operations and maintenance (O&M) and Capital budgets are compiled simultaneously through a three tier budgeting process which results in a current year detailed budget and a four year long range plan (LRP). The first tier of the budgeting process begins in late February when PECO's Finance Department starts updating the previous year's LRP, focusing primarily on the current budget year. Each Department is responsible for reviewing the prior year's LRP and creating new budget estimates based on current operating conditions (i.e., updated

estimates on when projects are to be completed, analyzing historical spending and operating activity levels, analyzing cost per unit information in comparison to historical trends, estimates on how much funding will be needed to maintain or improve key Department performance indicators (KPIs), regulatory changes, storm trends, etc.). The Finance Department then compares the prior year LRP to the current year budget estimates and makes adjustments to create the PECO Spring LRP consisting of a one year budget and three year LRP. The Spring LRP is not part of the official Exelon budgeting process and is prepared internally using spreadsheets to help improve estimates and initiate efforts on the second tier of the budgeting process.

The second tier of the budgeting process begins in late May/early June as the Spring LRP is finalized. The fourth year of the LRP is added during this process and a more detailed review of budget targets is performed. The Finance Department interfaces with each Department to review the proposed budgets by work category (i.e., new business, vegetation management, etc.) to ensure adequate funding. Once operational Departments' budgets have been established for all capital and maintenance items, the PECO Finance Department incorporates the financial aspects (i.e., revenue projections, load forecasts, depreciation, interest, taxes, financing needs, etc.) into the budgets to develop comprehensive budgeted financial statements (i.e., income statement, balance sheet, statement of cash flows, etc.). Exelon BSC provides the PECO Finance Department budget information for services provided through Exelon BSC. More information on the services provided by Exelon BSC to PECO is presented in Chapter V – Affiliated Interest and Cost Allocations. Therefore, the second tier of the LRP budgeting process features annual totals and is approved by the PECO Board of Directors during their November Board meeting. PECO's budget is then consolidated with the budgets for its affiliate utilities, Commonwealth Edison Company (ComEd) and Baltimore Gas and Electric Company (BGE), to form an Exelon Utilities budget. (See Chapter III – Executive Management for additional information regarding Exelon Utilities.)

The third tier of the budgeting process begins in late September/early October and follows a process similar to that used during the second tier. During the third tier, the PECO Finance Department interfaces with each Department to refine the budgets to identify monthly details (i.e., number of linemen needed on a project, use of contractors versus PECO personnel, type of material needed, etc.). Additionally, PECO Finance is making detailed adjustments to benefits, revenue, cash flows, Exelon BSC allocations, etc. Therefore, budgeting detail is more prevalent during the third tier than during the two preceding tiers which are concentrated mainly on the annual budget projections. Many aspects of each budgeting tier overlap by design to provide valuable feedback. Final approval of the annual budgets and LRP is made by the Exelon Board in January and the PECO Board in February, allowing time to make final adjustments to the budget based on year end information. As discussed in more detail in Chapter IV – Corporate Governance, Exelon's Board approves the total budgeted amounts while PECO's Board has the authority to modify individual Department or program budgets within the total Exelon spend limits.

The second and third tiers of the LRP are created and monitored using the Hyperion and Work Planning and Tracking (WPT) systems. The Hyperion system is

used by all Exelon entities to maintain accounting records and budgets while WPT is a work management system used to track projects and project planning for PECO. When creating the annual budget and LRP, Operations Departments typically enter budgeting information into WPT due to the level of detail needed to plan for projects while Non-Operations Departments typically enter information directly into the Hyperion System. Regardless of which system budgeting detail is entered into the two systems interface so that WPT transfers information to Hyperion, the system of record.

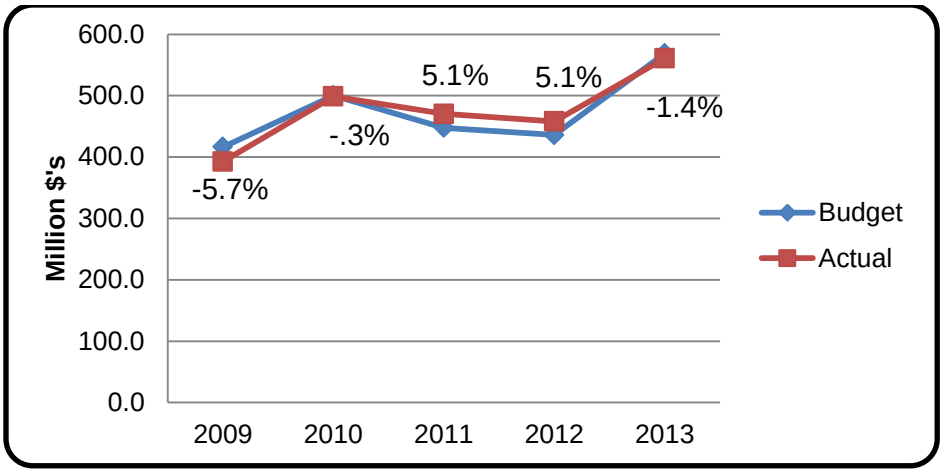
The budgeting process sets the budget for each Department and the projects planned to be completed during the year. However, in order to provide flexibility, PECO uses a standard process to provide funding to cover emergent projects, project overruns, respond to unexpected project delays, etc. The Manager of Investment Strategy is responsible for facilitating this process by identifying and tracking any unneeded or needed funding by Department. Funds originally budgeted as O&M and Capital must be reallocated to the same category via this process. In addition, funds, if possible, are kept within the same Department but can be shifted based upon need. Once funds have been rebudgeted, project managers will monitor budget variances in comparison to this new budgeted amount.

PECO performs budget variance reporting monthly. Variance reports for the O&M and Capital budgets are prepared from the Hyperion and WPT systems. Variances are reported by Department, category, and project with each Department reviewing and providing variance supporting details (i.e., materials, labor, etc.). Finance Department analysts are assigned to facilitate the budget variance reporting process for VPs in their respective Departments. Furthermore, budget variances from each Department are reported up through each level of management to PECO's senior management and then ultimately consolidated into high level variance reports (income statement, balance sheet, statement of cash flows) and reported up to Exelon. Significant budget variances (10% or $50,000 at the project level) require explanation by the project manager. Variance explanation reporting thresholds increase through each level of management with VP's required to provide variance explanations for variances over $100,000. As illustrated in Exhibit VI-2, PECO's oversight of its capital budget is effective as it has resulted in relatively low annual variances, averaging 3.5% from 2009 through 2013.

Exhibit VI-3 illustrates PECO's O&M budget versus actual spending which reflects relatively low annual variances averaging 6.7% over the last five years. As illustrated, PECO's oversight of its O&M budget has been sufficient.

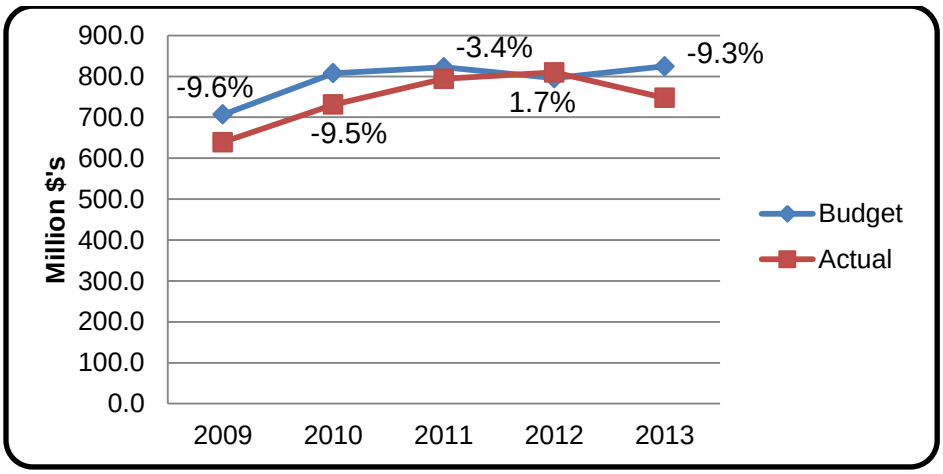
PECO's capital structure, and overall cash management function, is managed by the PECO Finance Department although Exelon BSC's Cash Management Department (Cash Management) helps to administer and execute any necessary cash related functions. Cash Management monitors PECO's (as well as all Exelon subsidiaries') cash position through the use of the Treasury Workstation Cash Management System (Treasury Workstation). The Treasury Workstation allows Cash Management to review the daily cash needs of PECO and track all short term and long term debt including the counterparty, debt terms, rates, payment due dates, debt maturities, etc.

Exhibit VI-2
PECO Energy Company
Actual Capital Expenditures versus Budget
For the Years 2009 through 2013



Source: Data Request FM-14 and Auditor Analysis

Exhibit VI-3
PECO Energy Company
Actual Operations and Maintenance Expenditures versus Budget
For the Years 2009 through 2013



Source: Data Request FM-14 and Auditor Analysis.

The PECO financing plan is created by PECO as part of the budgeting process and approved along with the Statement of Cash Flows, and other financial statements. While creating the Financial Plan, PECO works with Cash Management to take advantage of their detailed knowledge of borrowing rates and practices. For example, if Cash Management expects interest rates to increase next year, PECO's Finance Department would use that information to perform a cost benefit analysis and might decide to accelerate any financing needs into the current year if it would benefit PECO.

PECO performs variance analysis comparing the financing plan to PECO's cash position each month and prepares updated estimates of its future cash position in order to more accurately estimate the timing, and the amount, of any anticipated financing needs.

PECO maintains a senior secured credit rating of A-/A1/A from Standard & Poor's, Moody's Investor's Service, and Fitch, respectively, and, as one of its ring-fencing efforts, does not issue debt to support Exelon or any other affiliates. See Chapter V – Cost Allocations for more information on PECO's ring-fencing efforts. As of December 31, 2013, PECO's long term debt consisted of first and refunding mortgage bonds (approximately 91.4% of total long term debt), and loans from two PECO subsidiaries, PECO Energy Capital Trust III (approximately 3.8% of total long term debt) and PECO Energy Capital Trust IV (approximately 4.8% of total long term debt). PECO Energy Capital Trust III and PECO Energy Capital Trust IV were created by PECO for the sole purpose of issuing and selling trust preferred and common securities and acquiring subordinate debentures from PECO with the proceeds. During 2013, PECO retired all of its outstanding preferred stock and replaced it with first and refunding first mortgage bonds in order to lower their cost of capital. Exhibit VI-4 reflects PECO's capital structure for the years 2009 through 2013.

Exhibit VI-4
PECO Energy Company
Summary of Capital Structure
For the Years 2009 through 2013

	2009	2010	2011	2012	2013
Total Debt	51%	47%	44%	43%	44%
Preferred Equity	2%	2%	2%	2%	0%
Common Equity	47%	51%	54%	55%	56%
	100.0%	100.0%	100.0%	100.0%	100.0%

Note: Data as of year-end, December 31 of each year
Source: Data Request FM-41, SEC form 10-K and Auditor Analysis

Retirement benefits are provided to PECO employees, through the Exelon Corporation Cash Balance Pension Plan (ECCBP) for employees hired on or after to January 1, 2001 and the Exelon Corporation Retirement Program (ECRP) for those employees hired prior to January 1, 2001 who did not elect to transfer their benefit to the ECCBP during the pension choice period. (See Chapter XVII – Human Resources and Diversity for additional information regarding benefits available to PECO employees.) Exelon sponsors both qualified and non-qualified defined benefit retirement plans for Exelon Generation, ComEd, PECO, BGE, and Exelon BSC employees[18]. As of December 31, 2012, the combined total of all Exelon retirement

[18] As of January 1, 2013, there were 2,015 PECO participants out of a total of 7,611 active participants in the ECBPP and 483 PECO participants out of a total of 8,180 active participants in the ECRP.

plan assets reflected an 80% funding status level[19] based on the projected benefit obligation. The projected benefit obligation is calculated by including assumptions on future compensation levels for participants, where funding status levels are determined by calculating the differences between plan assets and estimated obligations of the plan. Funding levels attributed directly to PECO employees for the ECRP and ECBPP are shown in Exhibit VI-5. Differences between funding status levels exist due to differences between PECO-allocated balances and overall Exelon pension plan totals.

Exhibit VI-5
Exelon Corporation
Cash Balance Pension Plan and
Retirement Program Funding Status – PECO Allocation
As of January 1, 2013

	Exelon Corporation Cash Balance Pension Plan	Exelon Corporation Retirement Program
Projected Benefit Obligation	$ 576,118,984	$ 1,023,045,160
Fair Value of Fund Assets	$ 437,321,875	$ 919,619,656
Funding Status	75.9%	89.8%

Source: Data Request HR-14

In order to cover short term cash flow needs, PECO utilizes three primary sources of short term financing. PECO has the ability to utilize the Exelon utility money pool, draw on a $600 million commercial paper program, or utilize a $600 million syndicated revolving credit facility. When PECO identifies the need for short term borrowing, the lowest cost option is selected. If the Exelon utility money pool is utilized, the ability to provide funding to, or borrow funding from, the money pool is determined by whether both parties (i.e., borrower and lender) experience mutual economic benefits. Each participant in the utility money pool must maintain an investment grade credit rating and maintain access to a committed line of credit with available capacity to cover their outstanding borrowings from the money pool. Additionally, to help strengthen PECO's ring-fencing efforts Exelon may only participate in the utility money pool as a lender and Exelon's regulated utilities are prohibited from borrowing external funds to contribute to the money pool. For more information on PECO's ring-fencing efforts see Chapter V – Affiliated Interest and Cost Allocations. As of December 31, 2013 PECO did not have any outstanding short term debt or loans in the Exelon utility money pool. During 2013, the interest rate on internal funds loaned into, or borrowed from the Exelon utility money pool ranged between 0.07% and 0.17%[20].

Cash Management also handles the cash collection process for PECO. The majority of PECO's income is from customer payments, although payments for work performed on behalf of affiliates are also handled by Cash Management. A more detailed description of affiliate transactions is presented in Chapter V – Affiliated Interest

[19] Funding level stated in Exelon Corporation's 2012 Annual Report.
[20] The interest rate on the Exelon utility money pool is based on the greater of the overnight investment rate or the Federal Fund Rate.

and Cost Allocations. Customer payments are received in various ways including electronic transfers (approximately 58% of payments), and by check (approximately 42% of payments) via lockbox arrangements and customer walk-in's at the PECO headquarters in Philadelphia. Cash disbursements for PECO are made via the payroll, accounts payable, and Treasury Workstation systems. The accounts payable system is used to process payments to third party vendors and has embedded controls to ensure there is proper separation of duties in the entry and approval process, proper documentation supports payment vouchers, and the necessary approval is received for a payment. The Treasury Workstation is used to handle internal intercompany transfers and settlements for affiliate transactions.

Findings and Conclusions

Our examination of the Financial Management function focused primarily on a review of the accounting policies and procedures, the capital and operating budget processes, budget variance tracking and reporting, short and long-term financing activities, cash collection and disbursement, dividend policies, and the internal audit process. Based on our review, PECO should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its financial management function by addressing the following:

1. Various PECO policies and procedures related to financial management oversight and control are outdated.

In the operating and regulatory environment in which utilities operate, policies and procedures should be reviewed, and if necessary, updated at least every five years. However, during the review of PECO's financial processes, Audit Staff identified various policies and procedures that were outdated (i.e., longer than 5 years since last being updated or reviewed), contained references to policies no longer in existence, or were inaccurate in relation to practice. Some examples are outlined below:

- PECO's Project Accounting Policy; Project Accounting and Unitization Process; and Monthly Accounting and Reporting for Capital Project Process; all with effective dates in 2007, reference PECO's Property Unit Catalog Policy which, according to Management, was merged into PECO's Capitalization – Plant, Property, and Equipment Policy and no longer exists.

- PECO's Corporate Budget Planning Process, with an effective date in 2008 is not reflective of actual practices. Since the establishment of PECO's Corporate Budget Planning Process, the budgeting process has changed considerably. For example, new terminology is used to explain the budgeting process and the overall process includes a Spring LRP phase which did not exist when the policy was written.

- The Exelon-Settling Certain Intercompany Receivables and Payables Policy, the Exelon-Utility Money Pool Procedure, the Exelon Non-Service Company

Affiliate Transaction Policy, and various other policies reviewed, have not been reviewed and/or updated in the last 5 years.

Exelon and its subsidiaries operate under Exelon's Management Model, which is a collection of corporate guidelines that tie the values, goals, strategies, policies, procedures, and controls of Exelon and its subsidiaries together. The function of the Management Model is to plan, manage the business, assess results, and innovate and improve in order to provide core business functions to customers and other stakeholders. Part of the Management Model calls for policies and procedures to be reviewed, and if necessary, updated at least every five years. In accordance with carrying out this practice, Exelon Utilities is responsible for monitoring the Management Model policies and procedures for PECO, and sending notification to policy owners (the management personnel responsible for overseeing the functions covered by the policy) when a policy should be reviewed and updated. Policy owners are then responsible for reviewing and updating the policy or procedure and obtaining the necessary management approval.

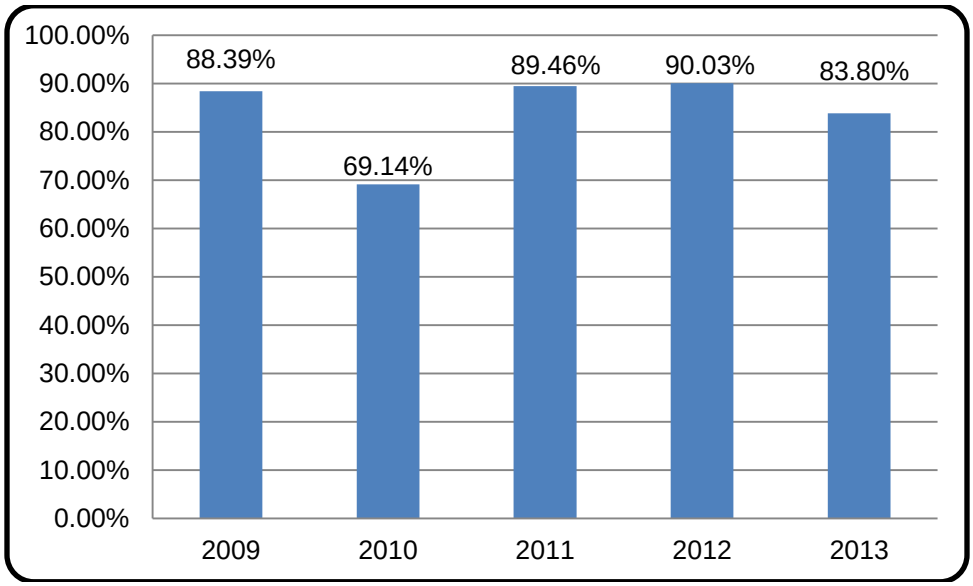
As a result of Exelon's March 2012 merger with Constellation Energy, normal Management Model policy updates have been placed on hold while a thorough Management Model review takes place. The goal of the Management Model review initiative is to update and make consistent all policies and procedures across Exelon Utilities (i.e., PECO, BGE, and ComEd). PECO's Management indicated that the Management Model review is expected to be completed during 2014. However, as of the end of our field work many of the policy and procedure updates had not been completed.

Policies and procedures serve as a management control to ensure that department objectives and goals are achieved effectively and efficiently as well as provide direction to employees in performing their job duties and document valuable institutional knowledge learned over time. By not periodically reviewing and updating policies and procedures, operational changes can result in inefficiencies and failure to effectively achieve objectives and goals. Additionally, unintended stray practices can result and/or institutional knowledge can be lost if such documentation is not updated, especially following significant organizational changes.

2. PECO does not have a written dividend policy.

As a wholly owned subsidiary, PECO provides quarterly dividend payments to Exelon. Exhibit VI-6 illustrates PECO's dividend payments from 2009 through 2013 expressed as a percentage of its annual net income. PECO's dividend payments to Exelon have been consistent during this period with an average dividend payout of approximately 85% of net income.

Exhibit VI-6
PECO Energy Company
Dividend Payments
For the Years 2009 through 2013



Source: Data Requests FM-6, FM-26, and Auditor Analysis

PECO and Exelon both have established dividend payout goals. PECO strives to maintain a long term dividend payout ratio of 65% - 70% of net income with a maximum payout, in any given year, of 100%. However, as can be seen in Exhibit VI-6, PECO's annual dividend payments to Exelon have exceeded the Company's target payout ratio every year, with the exception of 2010. PECO Management indicated to the Audit Staff that dividend payments have been above target levels in order to help maintain the amount of debt to equity in its capital structure.

The dividend goals and guidelines for PECO are documented as part of Exelon's quarterly earnings releases and annual reports to shareholders. The guidelines highlight the dividend goals and outline restrictions on the payment of dividend by Exelon's subsidiary utility (including PECO) and generation companies. Although PECO and Exelon have developed dividend goals, objectives, restrictions and an overall approach, no written internal dividend policy has been established by either PECO or Exelon. A documented dividend policy provides guidance and establishes a uniform procedure regarding dividend processes for Management and Directors. A formal dividend policy should outline the policy's purpose and scope, identify responsibility for the policy, identify financial requirements, restrictions, and/or formulas that are used for determining annual dividend payments and indicate a maximum and target dividend payout range. While Exelon's guidelines provide a solid foundation, already outlining goals, objectives, restrictions, and an overall approach, the lack of a formal dividend policy could result in excessive or erratic dividend payments from PECO to Exelon. The Audit Staff acknowledges that PECO's level of dividend payments have

been within the typical industry dividend payout range of 75% to 85% of net income and PECO has notified the Pennsylvania Public Utility Commission (Commission) of its dividend payments. However, further refining the dividend guidelines by formalizing a policy could provide both PECO and Exelon with a more structured approach ensuring appropriate dividends and policy is maintained between parent and its regulated subsidiaries, further strengthening PECO's ring-fencing efforts.

Recommendations

1. Review and update PECO's Financial Management policies and procedures, periodically, to ensure that the policies reflect actual practices and current organizational structure.

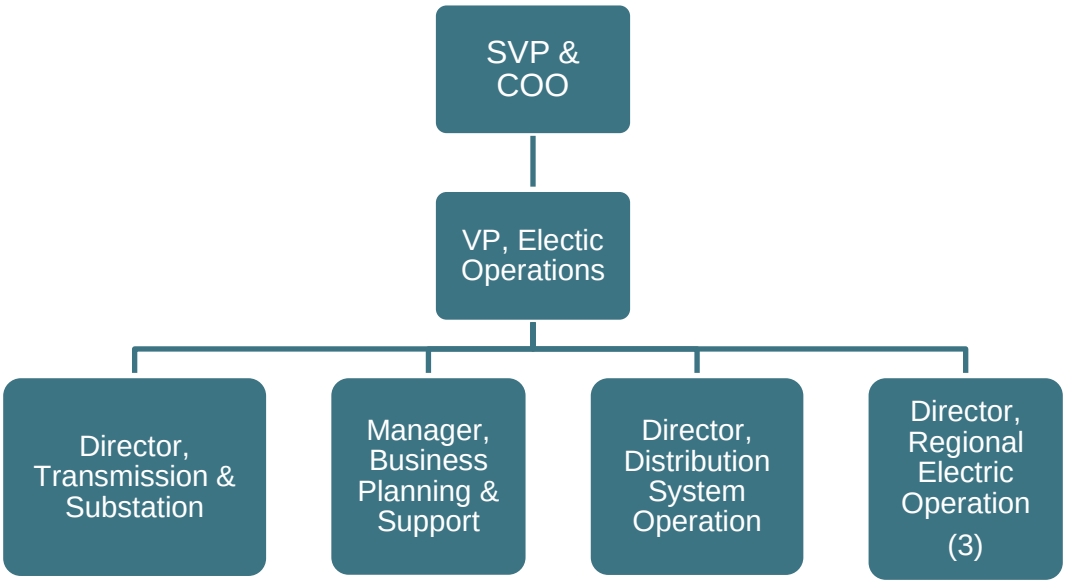
2. Document PECO's internal dividend policy and continue to provide advanced notice, and written explanation to the Commission for each dividend payment in excess of 85 % of net income.

VII. ELECTRIC OPERATIONS

Background

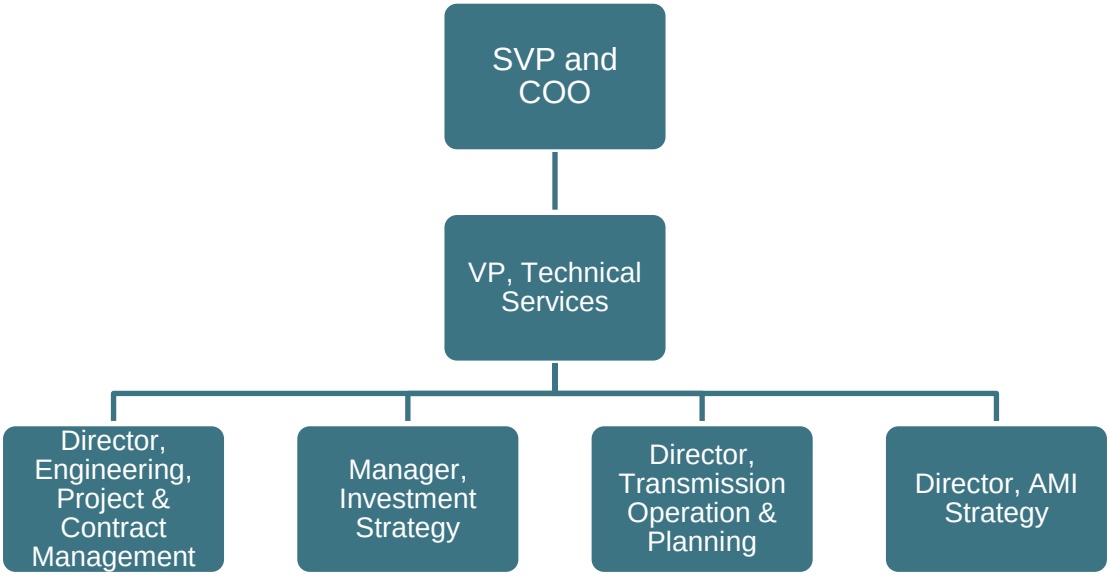
In 2013, PECO Energy Company (PECO or Company) provided electric distribution service to approximately 1.6 million customers across Philadelphia, Bucks, Montgomery, Delaware, Chester and York Counties. The Company operates approximately 22,000 miles of aerial and underground distribution lines and 1,200 miles of transmission lines. PECO's transmission system is part of the PJM Interconnection (PJM), a Regional Transmission Organization. All electric distribution and transmission functions, gas operations, customer service and support services organizations are overseen by PECO's Senior Vice President and Chief Operating Officer (SVP and COO). Reporting directly to the SVP and COO are the Vice President (VP) of Electric Operations and VP of Technical Services as shown in Exhibits VII-1 and VII-2. In general, the Electric Operations Department handles construction, maintenance and operation of all of PECO's distribution electric facilities. In contrast, the Technical Services Department includes engineering, project management, electric reliability, construction, maintenance and operation of the transmission system.

Exhibit VII-1
PECO Energy Company
Electric Operations Organizational Chart
As of December 5, 2013



Source: Data Request GD-1

Exhibit VII-2
PECO Energy Company
Technical Services Organizational Chart
As of December 5, 2013



Source: Data Request GD-1

Electric Operations Department

The Company's electric system operations are divided into three regional areas (Regions) each managed by a Director of Regional Electric Operations reporting directly to the VP of Electric Operations. The Regions are comprised of the Philly (Philadelphia County), Bucksmont (Bucks and Montgomery Counties) and Delchester (Delaware and Chester Counties). Each Region also has an engineering support staff. These engineers are primarily customer facing (i.e., deal with customers or customer problems) in order to aid customers experiencing power issues, analyze local reliability problems, aid in construction/maintenance activities, etc. In addition, each Region is responsible for planning, scheduling and conducting all emergent and planned work in the distribution system. PECO utilizes a Work Management System (WMS) to schedule work. The WMS is integrated with the Company's Mobile Workforce Management System[21] which is accessed via laptops residing in PECO's distribution field crew trucks. As a result, work orders are provided to and completed by field crews electronically but the system also enables the crews to access mapping, global positioning system/directions, outage management system, procedures, etc. PECO uses a priority system within the WMS to effectively schedule work. The Company's priority ranking system and general definitions are presented in Exhibit VII-3.

[21] Mobile Workforce Management System was deployed in three phases. Stage 1 was deployed in 2008 to PECO's Aerial Line Mechanics; in April 2009 to Construction and Maintenance and Transmission and Substation crews; and to Energy Technicians in October 2009.

Exhibit VII-3
PECO Energy Company
Work Task Priority Definitions

Priority	Definition
10	Complete within 24-48 hours.
20	Complete within 14 days.
30	Complete within 8-12 weeks.
40	Complete relative to extend of condition. Do have subgroups such that a 41 priority would be a customer commitment for a specific day.

Source: Interview Request EO-8

Due to the critical nature of Priority 10 work, PECO has established Fix-it-Now (FIN) teams in each Region and Transmission & Substation (T&S). The FIN teams respond to and handle all Priority 10 and 20 work. The Company does have the ability to move additional resources (i.e., construction and maintenance crews that traditionally perform Priority 30 and 40 work) to address Priority 10 and 20 work as needed. As briefly discussed in Chapter III – Executive Management, the WMS teams monitor outstanding work orders, cost per unit of work, jobs not converted to work orders, etc. Primarily all work completed by a Region and T&S is scheduled through the WMS at the regional level; however, storm response is coordinated by the Director of Distribution System Operations, discussed later in this chapter.

The duties at each Region are similar across all three Regions with two exceptions. The Philly Region handles all underground construction and maintenance (C&M) for PECO. While underground crews may be located in other Regions, they report through the Philly Region's management. This enables the highly unique skill sets required for underground construction and maintenance to be consolidated and ensures those underground crews are reporting to management that understands the complexities of underground C&M. In addition, the New Residential Construction Group (NRCG) is overseen by Bucksmont Region management for the entire company. While each Region is responsible for new business for single customers, the NRCG handles both electric and gas service requests from developers adding multiple customers. Ultimately, the consolidated NRCG provides greater customer support for developers that may be doing work in multiple regions. In fact, the NRCG's monthly customer satisfaction rating is routinely rated well above the Company's target of 96.5% and frequently achieve ratings of 100% satisfaction.

The Director of Distribution System Operations (DSO) is responsible for the operation of and dispatch for the distribution system, emergency response (discussed in more detail in Chapter IX – Emergency Preparedness), and information technology support for electric distribution systems (see Chapter XII – Information Technology), etc. In addition, as further discussed in Chapter VIII – Gas Operations, the DSO is responsible for the dispatch of PECO crews to gas emergencies and odor calls. It should also be noted that PECO has a Transmission System Operation Center, which is separate from the DSO and is discussed later in this chapter.

Most duties of the DSO primarily align with real time monitoring of the electrical distribution system and storm response efforts. Therefore, PECO's DSO control room incorporates information from the electric distribution Supervisory Control and Data Acquisition system (SCADA), Outage Management System (OMS), WMS, Distribution Management System (DMS), etc. PECO is planning to upgrade its DMS in 2014 to provide greater integration and functionality with the OMS. Electrical outages are handled by two separate dispatchers at the Operations Control Center. Dispatchers are generally aligned by Region with the most experienced dispatchers handling calls from all Regions. However, generally all outages on secondary distribution lines (i.e., electrical secondary outages[22]) and gas emergency calls are handled by Distribution System Dispatcher (DSD) 1's. In contrast, DSD2's primarily handle all primary electrical outages (i.e., electrical primary outages[23]) but will as needed, handle secondary outage dispatches. In addition to the previously mentioned systems, Dispatchers do have the ability to "ping" the Company's Advanced Meter Infrastructure (AMI) to investigate and/or confirm outages and power restoration. PECO's AMI system has a "last gasp" feature in which the meter will alert the OMS that it no longer has power[24]. PECO's OMS will then use predictive modeling to determine if the outage is a single event or a larger outage affecting multiple customers.

The DSO also has three classes of field forces; Energy Technicians (ET), Substation Operators, and Aerial Line Mechanics (ALM). Energy Technicians are dual trained to handle electric secondary outage restoration and gas emergency calls. Therefore, ETs are primarily dispatched to respond to single customer outages and gas emergency problems on the distribution system. Substation Operators provide emergency response and switching services to PECO electrical substations. Meanwhile, ALMs respond to primary outages and provide the primary response to storm outages. ALMs will close out an order and restore power but their primarily focus is to address emergent or high priority work. As a result of the ALM's analysis, the Dispatcher will secure Regional C&M crews to make resource intensive repairs (i.e., resetting poles, complete rebuilds, etc.) In addition, the DSO has the ability to bring additional C&M crews from the Regions to be dispatched as ALMs to expedite storm recovery. In practice, the ALMs and ETs are first responders and therefore, often make repairs as required, but will hand-off larger projects to C&M crews so that PECO can assess all storm data more quickly. Even though the DSO is centralized, the Company will decentralize functions during major storms in order to facilitate faster storm restoration and improve communication and coordination at the Regional level.

The Director of Transmission and Substation (T&S) handles the C&M activities of PECO's T&S assets. The Company classifies all lines of 69 kV and above as transmission. Therefore, any line facility below 69 kV is the responsibility of the Director of Regional Electric Operations. Meanwhile, the Director of T&S is responsible for any substation asset. Within T&S, the Company has engineering, transmission/substation maintenance, work management, and regulatory compliance groups performing a myriad of work tasks. For instance, T&S creates, monitors, and executes maintenance

[22] Outages that occur on the low voltage-side (or secondary distribution lines) of usually affecting single or small amounts of customers.
[23] Outages that occur on the high voltage-side (or primary distribution lines) usually affecting multiple customers.
[24] Last gasp is disabled during large outages to ensure integrity of the OMS.

cycles that are reevaluated through a Maintenance Effectiveness Review. In general, T&S reviews performance and maintenance cycles at the individual asset level (i.e., by type of breaker, transformer, relay, etc.) instead of an overall program, like that traditionally seen on the distribution system (i.e., pole inspection, circuit patrols, etc.) T&S has been focused on reducing its backlog of preventative maintenance (PM) tasks. In 2010, PECO had approximately 4,500 backlogged PM tasks. However, the Company was on pace to eliminate this backlog by 2014 as a result of strategic and focused efforts on PM. In addition, T&S runs an obsolescence and component health index program aimed at identifying equipment requiring maintenance or replacement. PECO, as a transmission owner, must comply with North American Electric Reliability Corporation (NERC) standards subjugating T&S to NERC compliance audits and Critical Infrastructure Protection (CIP) standards. T&S's reliability performance is depicted in Exhibit VII-4.

Exhibit VII-4
PECO Energy Company
T&S Reliability Performance
For the Years 2008 through 2013

Year	Number of Outages	Percentage of PECO-wide Outages	Number of Customers Interrupted	Percentage of Overall Customers Interrupted	Customer Minutes Interrupted	Percentage of PECO-wide Interruption Minutes
2008	33	0.27%	68,053	3.93%	5,364,441	2.50%
2009	21	0.18%	112,362	6.88%	9,057,430	5.24%
2010	30	0.23%	71,682	3.93%	3,356,130	1.46%
2011	30	0.22%	78,261	4.07%	9,156,036	3.52%
2012	12	0.11%	18,123	1.39%	964,036	0.76%
2013	15	0.16%	61,353	5.21%	2,495,428	2.32%

Source: Data Request EO-17 and Docket Number M-00991220/L-00030161

The last group reporting to the VP of Electric Operations is overseen by the Manager of Business Planning and Support. Business Planning and Support primarily provides contract and project management and other support type duties (i.e., ad hoc reporting, financial analyses, creates contractor work packages, etc.) for the three Regions. T&S and DSO primarily handle their own work within their respective Departments. Business Planning and Support's main duty is contracting, monitoring, and approving payment for the work of contractors performing jobs generally under $250,000 or less. Each Region identifies work to be done by contractors while Business Planning and Support is responsible for ensuring that work is completed. In many cases, Business Planning and Support contracts with one of PECO's Contractors-of-Choice (COC). COCs are determined by competitively bidding unitized work. As a result, PECO has COCs for various activities such as directional boring, paving, secondary fault repair, new construction, etc. In addition, Business Planning and Support is responsible for creating the Management Review Metrics Book for the

Electric Operations organization where key metrics are generated on a monthly basis and reviewed by all management.

Technical Services Department

In the Spring of 2013, project and contract management functions for projects over $250,000 were moved under the auspices of the Director of Engineering, Project and Contract Management (Director of Engineering). While Business Planning and Support handles projects under $250,000, the Project and Contract Management Group, which resides under the Director of Engineering, is responsible for projects over $250,000 which are competitively bid. The Project and Contract Management group is responsible for scheduling, permitting, mapping, variance reporting, closing out, etc. In addition, many projects require feasibility, environmental, site development studies, etc. and are approved through management based upon set approval thresholds. The Company also utilizes Contract Managers and Contract Controls Coordinators responsible for monitoring contractors across PECO; ultimately aiming to ensure consistency and compliance among PECO's contractors; centralize general alliance meetings on safety, upcoming work, etc.; perform quality control inspections; etc.

The Director of Engineering is also responsible for centralized engineering services. Engineers in Technical Service perform a myriad of functions including setting inspection and maintenance standards, capacity planning, preventative maintenance programs, vegetation management specifications, and system wide electric reliability programs. PECO performs capacity planning at least twice a year, reviewing summer and winter peak loads. In addition, the Company annually creates a five year plan for capacity needs which is coupled with a projected 10-20 year forecast.

As discussed previously, each Region has engineers focused on customer or isolated reliability issues. However, the Centralized Reliability Group reporting to the Director of Engineering handles all company-wide reliability programs, analyses, reviews all interruptions from the day before, outage trends, monitors reliability programs and their effectiveness, etc. The Company utilizes various programs to improve reliability across its service territory such as the Top Priority Circuit Program (TPC), Greenboard Program, Distribution Automation Program, Hendrix Cable Analysis Program, etc. Each program has a specific focus. For instance, the TPC Program is an analysis where PECO identifies its worst performing circuits based upon the circuits' performance (for more information on the TPC program, refer to Finding and Conclusion 5). The Greenboard Program is similar to the TPC program but reliability is analyzed by Township. Reliability data in the Greenboard Program is combined with subjective data (customer complaints, customer input, etc.) from PECO's Community Affairs Group to develop rankings for each township. In both cases, the Centralized Reliability Group provides support, tools, monitoring, etc. to the Region while each Region is responsible for developing a plan to improve circuit performance. Other programs like Distribution Automation and Hendrix Cable Analysis Program[25] are more specific and look to improve reliability through sectionalization or installing Hendrix cable, respectively.

[25] This reliability program aims to install Hendricks cable in high vegetation contact areas due to the superior performance of that particular cable in these types of settings.

Definitions of reliability indices used by Pennsylvania Public Utility Commission (PUC or Commission) for monitoring electric distribution company (EDC) reliability performance are presented in Exhibit VII-5. In addition, PECO's reliability performance from 2008 through 2013 is shown in Exhibit VII-6. As presented in Exhibit VII-6, PECO's overall reliability indices improved in 2012 and 2013 with PECO's performance in 2013 being one of the best performance years in recent Company history (i.e., CAIDI was at the best performance level in 2013 since the Commission's requirement of quarterly reporting began in December 2003).

Exhibit VII-5
Pennsylvania Public Utility Commission
Electric Reliability Index Definitions

Performance Measure	Definition
System Average Interruption Frequency Index (SAIFI)	The average frequency of sustained interruptions per customer occurring during the analysis period. Calculated by dividing the total number of sustained customer interruptions by the total number of customers served.
System Average Interruption Duration Index (SAIDI)	The average duration of sustained customer interruptions per customer occurring during the analysis period. It is the average time customers were without power. Determined by dividing the sum of all sustained customer interruption durations, in minutes, by the total number of customers served.
Customer Average Interruption Duration Index (CAIDI)	The average interruption duration of sustained interruptions for those customers who experience interruptions during the analysis period. CAIDI represents the average time required to restore service to the average customer per sustained interruption. Determined by dividing the sum of all sustained customer interruption durations, in minutes, by the total number of interrupted customers.
Benchmark	The Average historical reliability performance of the company from 1994-1998.
12 Month Standard	The minimum level of an EDC's reliability allowed by the Commission. The threshold is at 120% of the benchmark for the major EDCs and 135% of the benchmarks for the small EDCs.

Source: 52 PA. Code §57.192 and Docket No. M-00991220

Exhibit VII-6
PECO Energy Company
Electric Reliability Indices (excluding major events)
For the Years 2008 through 2013

Year	SAIFI	SAIDI	CAIDI
2008	1.11	137	124
2009	1.04	110	106
2010	1.16	147	126
2011	1.22	165	135
2012	0.83	80	97
2013	0.69	63	91
Benchmark	1.23	138	112
12-Month Standard	1.48	198	134

Source: Data Request EO-3, 52 PA Code §57.192, and Docket No. M-00991220

PECO encourages employees as part of its reliability program to report potential reliability/maintenance problems (i.e., broken cross-arm, leaning pole, broken equipment, etc.) on its system by offering small incentives in a monthly drawing to reporting recipients. The intent of the program is to identify potential outage causing conditions on the distribution system before an outage occurs. The Company estimates that the program has reduced SAIFI by approximately 0.07 or the equivalent of approximately 100,000 customer interruptions a year.

The Director of Engineering is also responsible for PECO's Vegetation Management program. Exelon Corporation leverages its size when bidding the tree trimming requirements for its three EDCs (i.e., PECO, Commonwealth Edison Company, and Baltimore Gas and Electric Company). Any of the operating companies could outsource to a different contractor if so desired pursuant to submitting proper justification; however, the combined contract generally provides cost savings related to economies of scale. The Distribution System is trimmed on a five year cycle, or roughly 20% of the system each year with the Transmission System also being patrolled annually. Generally, PECO bids base workload such that a circuit is fully trimmed. In addition to the base cycle, PECO also has vegetation management specific programs such as the mid-cycle, 34 kV, hazard tree, herbicide, etc. The Mid-Cycle program utilizes a quantitative analysis based upon number of outages/events caused by vegetation, customers affected, etc. for circuits that have generally not been trimmed for the last three years. The 34 kV Program operates as the mid-cycle, but it specifically looks at 34 kV circuits and related reliability. In any of these programs, PECO will remove potential hazard trees. Furthermore, PECO's vegetation program can be impacted by other data sources such as the Centralized Reliability Group, customer complaints, PECO employees reporting a problem, etc.

The Manager of Investment Strategy is responsible for governance and prioritization of large projects or programs. In this fashion, Investment Strategy supports budget development but also supports the effort to identify funding for emerging projects across all Departments at PECO. Departments identify projects and enter general project information (i.e., description, cash flow needs, schedule, etc.) into the Work Prioritization Tool. Mandatory projects (i.e., projects required by a regulatory body, customer requirement, capacity upgrades, etc.) are prioritized for funding with the remaining projects weighted on four factors (i.e., operational excellence, customer and key stakeholder satisfaction, financial discipline, and organization effectiveness). Based upon a project ranking, required completion date, etc., Investment Strategy is responsible for aligning funding and project requirements into PECO's Long Range Plan (LRP). As projects emerge throughout the year, Investment Strategy ranks the projects. Any project, both emergent and scheduled within the LRP, is approved by a management committee based upon their project cost approval levels. The Manager of Investment Strategy is also responsible for PECO's electric research and development activities where the Company partners with Electric Power Research Institute and other research organizations.

The Director of Transmission Operation and Planning is responsible for operating and planning PECO's transmission system. While the DSO is responsible for the distribution system, the Transmission System Operation (TSO) is responsible for planning scheduled outages, monitoring alarms, ensuring reliability by performing operational studies, interfacing with PJM, etc. The TSO has responsibility for 69 kV and above transmission facilities and lower voltage substation equipment deemed as transmission facilities. The TSO dispatches any abnormalities to a DSO Substation Operator, but can also dispatch T&S crews. In addition, the TSO constantly monitors voltage and reactive power to ensure grid stability both for PECO's service territory as well as interconnection with PJM. All communications between dispatchers (i.e., switching, analysis, etc.), even within the control room is done with three part communication[26] in compliance with NERC CIP requirements. Also, any requested maintenance on transmission facilities requires a clearance order, sometimes taking a year or more to plan. The Director of Transmission Operation and Planning is also responsible for capacity planning, identifying and integrating major projects, etc. The Company performs various flow and stability analysis every year and also generates a ten year forecast for transmission projects. Large generator or transmission customers need to execute a contract with PECO to interconnect into the Company's system.

The Director of AMI Strategy is responsible for the Company's deployment of electric AMI infrastructure. Gas Operations is responsible for its own deployment of smart meters which is discussed in more detail in Chapter VIII – Gas Operations. As of mid-2013, PECO had deployed its next generation AMI to roughly half of its customers or approximately 800,000 customers. The meters being deployed enable the Company to more easily detect theft, perform remote connect/disconnects, ping meters during outages, send signals when the meter loses power (i.e., last gasp), etc. In addition, the Director of AMI Strategy is tasked with managing the $200 million awarded by the

[26] A communications protocol where information is verbally stated by the initiating party, repeated back by the receiving party and then confirmed by the initiating party.

Department of Energy as part of a Smart Grid Investment Grant that enabled the Company to accelerate deployment of its AMI. PECO anticipates full deployment of AMI to be completed by 2020.

Findings and Conclusions

Our examination of the Electric Transmission and Distribution function included a review of vegetation management, electric reliability, maintenance policies and procedures, staffing levels, etc. Based on our review, PECO should devote additional efforts to improving the effectiveness of its electric transmission and distribution operations by addressing the following:

1. PECO's response to electric trouble orders, particularly emergency tickets, is below Company standards.

As previously mentioned, PECO's DSO is responsible for dispatch and response to both gas and electric emergency calls. PECO's response times to gas emergencies is highlighted in Chapter VIII – Gas Operations, specifically Exhibit VIII-6. Electric distribution service emergency calls are primarily generated by local police or fire crews. The Company prioritizes response to the electric distribution service emergency calls based upon severity level as noted below. In addition, the Company, in conjunction with local emergency response personnel, has developed response goals for each emergency ticket priority ranking. Definitions of each emergency ticket priority ranking and the Company's response goals are as follows:

- **Police/Fire 1** - If the situation is classified as a priority one emergency (response within 30 minutes). Examples of this would include:
  a. A pole hit or wires down and/or arcing preventing a rescue.
  b. A structure fire that has an electrical hazard that is preventing a rescue.

- **Police/Fire 2** - If the situation is classified as a priority two emergency (response within 60 minutes). Examples of this would include:
  a. A structure fire where the Fire Department is unable to shut off main breaker and the firefighting is being delayed until the electricity is shut off.
  b. Wires down and/or arcing with firefighter or police standing by.

- **Police/Fire 3** - If the situation poses no immediate risk of personal injury or property damage (response within 4 hours). Examples of this include:
  a. Wires arcing in a tree.
  b. Pole hit with minimal damage. Police/Fire Department will not remain on site

The DSO operates three shifts in order to cover 24 hour per day/seven day per week operations of the distribution system. All three shifts will respond to trouble orders

similarly. In fact, the Audit Staff found that response rates[27] across all three shifts are comparable. Exhibit VII-7 depicts the percentage of total trouble orders and Police/Fire 1 (P/F1) orders (i.e., emergency tickets) missed during both storm and non-storm conditions. The Company only began tracking response rates to electric distribution service trouble orders in 2010 with implementation of its Mobile Workforce Management System.

Exhibit VII-7
PECO Energy Company
Response Miss Rates to Storm and Non-Storm Trouble Orders
For the Years 2010 through October 2013

Year	Category	Total Number of P/F1 Orders	% of P/F1 Orders Missed	Total Number of Orders	% of Total Orders Missed
2010	Non-Storm	163	27.14%	6689	25.31%
	Storm	62	50.00%	2643	31.88%
	Total	**225**	**28.44%**	**9332**	**27.58%**
2011	Non-Storm	174	40.23%	6877	23.79%
	Storm	76	23.68%	3032	23.88%
	Total	**250**	**35.20%**	**9909**	**23.82%**
2012	Non-Storm	166	30.12%	6741	21.07%
	Storm	46	21.74%	2045	24.30%
	Total	**212**	**28.30%**	**8786**	**21.82%**
2013*	Non-Storm	188	27.66%	5972	18.99%
	Storm	0	0.00%	58	17.24%
	Total	**188**	**27.66%**	**6030**	**18.97%**

* Data for 2013 is through October 2013
Source: Data Request EO-37

As shown in Exhibit VII-7, PECO has generally improved its missed response rates to trouble tickets in all categories (i.e., storm, non-storm, and P/F 1) since 2010. However, the Company is still experiencing total miss rates of approximately 19%. In particular, the Company's performance has improved more significantly during storm conditions from 2010 to October 2013 in contrast to non-storm conditions. However, the Company's performance in responding to PF1 orders is worse than overall performance with roughly 30% missed in non-storm conditions and 20% in storm conditions from 2010 through October 2013. The Company cited a few reasons why the response goals have not been met such as traffic issues, workload, etc. However, PECO does not document the causal factors for missed responses on an individual basis or its performance relative to meeting its response goals. In contrast, the DSO performs a root cause analysis when a gas emergency response exceeds the one hour

[27] Measured from the time PECO receives a trouble ticket to when a Company employee arrives on site.

response time[28]; however, no causal review is performed when the Company misses its electric response goals highlighted above.

As highlighted in the definition for Police/Fire trouble orders, specifically P/F 1, there is a need to respond as quickly as possible to these emergency situations due to safety concerns. As a result, the Company has established very aggressive goals for responding to P/F 1 priority emergency tickets. However, without tracking the cause for missing the response window, PECO cannot effectively target improvement for its response rates. For instance, traffic delays, time delays related to making a previous work site safe before responding, emergency calls for non-PECO facilities, weather, etc. may all be valid reasons why PECO incurs miss rates at current levels and are conditions the Company has limited control over. However, other conditions such as staffing, utilizing available resources to respond (e.g., dispatching regional C&M crews, etc.) are remedies that the Company could employ or investigate to improve its response rate. Consequently, the Company should document causal factors for failing to respond in a timely manner (on a per incident basis) and measure its performance relative to its goals and then deploy corrective actions to improve response rates.

2. PECO's electric operations organization has experienced high overtime levels.

Due to the nature of its utility operation, PECO's employees work overtime for various operational conditions (i.e., storm response, emergency response, seasonal work, etc.) The Company's overtime hours compared to straight time work hours for all Electric Operation Departments (i.e., Regional operations, T&S, DSO, etc.) is presented in Exhibit VII-8. PECO's staffing methodology is explained in more detail in Chapter III – Executive Management and Organizational Structure, Finding and Conclusion No. III-2.

[28] The PUC's Gas Safety Division defines unacceptable response times greater than 60 minutes. There is no such designation in the Electric Industry.

Exhibit VII-8
PECO Energy Company
Overtime and Straight-Time Work Hours for Electric Operations
and Percentage of Overtime by Department
For the Years 2008 through July 2013

	2008	2009	2010	2011	2012	2013
Total Overtime Hours	507,905	431,271	560,115	637,361	557,691	477,010
Total Straight-Time Hours	2,518,048	2,526,368	2,562,560	2,564,640	2,525,120	2,518,880
Percent Overtime	20.17%	17.07%	21.86%	24.85%	22.09%	18.93%
Percentage of Overtime by Department						
C&M	48.22%	48.64%	49.88%	47.55%	47.71%	48.89%
DSO	36.28%	36.55%	36.69%	37.32%	36.95%	40.22%
T&S	10.92%	12.25%	11.97%	11.78%	11.99%	8.00%
Other**	4.58%	2.56%	1.46%	3.34%	3.35%	2.90%

Note: Total Employee Hours was calculated by multiplying number of employees by an average of 2,080 hours worked per year
** Other includes all other PECO Electric Operation Departments that incur overtime such as Transmission Operations, Technical Services, etc.
Source: Data Request EO-10 and 13

The percentage of PECO's Electric Operations Department combined overtime hours to total overall hours has increased slightly between 2008 and 2012. It should be noted that overtime hours can be accumulated differently by Department. For instance, the DSO is more likely to incur overtime due to emergency response efforts while the Regional C&M and T&S organizations are more likely to utilize overtime seasonally when completing preventative or corrective maintenance tasks. For instance, as mentioned in the background, PECO is deploying AMI meters within its electric system and overtime is sometimes needed for this rollout. Naturally every Department's overtime use is impacted by a large storm. However, a large majority of overtime in PECO's electric operations is the result of activities in the Regional C&M and the DSO as presented in Exhibit VII-8. A summary of overtime for the Regional C&M and DSO organization is presented in Exhibit VII-9 coupled with the percentage of non-storm/storm related overtime.

Exhibit VII-9
PECO Energy Company
Overtime and Straight-Time for Regional C&M and DSO
with Storm and Non-storm Activity
For the Years 2008 through 2013

Group	Category	2008	2009	2010	2011	2012	2013
C&M	Total Overtime Hours	244,901	209,761	279,398	303,059	266,081	233,213
	Total Straight-Time Hours	1,127,360	1,131,520	1,162,720	1,156,480	1,112,800	1,085,760
	Percent Overtime	21.72%	18.54%	24.03%	26.21%	23.91%	21.48%
	Percentage of Storm Related Overtime (DSO Only)	38.59%	39.03%	52.56%	50.90%	42.21%	19.96%
	Percentage of Non-Storm Related Overtime (DSO Only)	61.41%	60.97%	47.44%	49.10%	57.79%	80.04%
DSO	Total Overtime Hours	184,243	157,651	205,480	237,894	206,055	191,830
	Total Straight-Time Hours	705,120	711,360	703,040	703,040	717,600	715,520
	Percent Overtime	26.13%	22.16%	29.23%	33.84%	28.71%	26.81%
	Percentage of Storm Related Overtime (C&M Only)	34.16%	31.94%	41.50%	47.22%	42.54%	20.19%
	Percentage of Non-Storm Related Overtime (C&M Only)	65.84%	68.06%	58.50%	52.78%	57.46%	79.81%

Note: Percentage of non-storm related overtime is for the individual Department and not Company-wide.
Source: Data Requests EO-12, 13, 45, and 51

As depicted in Exhibit VII-8, Regional C&M and DSO account for approximately 85% of overtime in Electric Operations. In addition, a simple majority of overtime (i.e., 50-60%) in Regional C&M and DSO is incurred during non-storm events, meaning the overtime is generally supporting normal business activities as presented in Exhibit VII-9. However, storm overtime can vary by year depending on storm activity for the particular year. For instance, storm overtime reached a peak in 2010 and 2011 primarily attributable to Hurricanes Irene and Sandy. In addition, overtime can be concentrated in particular employee groups or departments. For instance, bargaining unit employees are much more likely to utilize overtime than hourly or management employees. In fact, PECO's bargaining unit employees account for approximately 72% of all overtime while accounting for 60% of the workforce.[29]

The combination of these factors indicate that there is a potential staffing shortfall, primarily in the C&M and DSO. However, as discussed in Finding and Conclusion No. III-2, PECO has not completed a base workload staffing analysis that

[29] Regional C&M and DSO account for approximately 82% of all bargaining unit employees in Electric Operations.

could substantiate or refute the Audit Staff's conclusion and the Company's overtime levels. A typical target of 15% overtime in addition to straight time work hours is reasonable for electric utilities; however, 20% can sometimes be justified during a year with substantial storm activity. As indicated by Exhibit VII-8, PECO's overtime has averaged roughly 21% from 2008 to 2013. Meanwhile, overtime in C&M and DSO has averaged approximately 23% and 28% respectively between 2008 and 2013. In addition, a majority of the overtime for C&M and DSO has occurred during non-storm activity, indicating that PECO is paying a premium to complete the normal missions of both Regional C&M and DSO. The Audit Staff estimates that PECO's C&M and DSO have incurred approximately $19 million in non-storm related overtime in 2013. The Audit Staff notes that non-storm overtime has been increasing for the C&M and DSO Departments since 2003. More specifically, non-storm overtime ranged from a low of $7.5 million in 2003 to $14.8 million in 2008. The Company has also identified its overtime utilization (both storm and non-storm) as high in its MRM report indicating that overtime was roughly $7.7 million over budget for January through October 2013. The Audit Staff recognizes that there are various approaches to reduce overtime, including additional staff, outsourcing, implementing additional flex-shits, better overtime management, etc. Adding additional staff to eliminate overtime can often result in a net cost to a utility since overheads could exceed overtime wages; however, additional staffing may be warranted to address safety concerns, operational flexibility, long term needs, etc. Therefore, by reducing overtime to 15-20% of straight work time specifically within C&M and DSO, the Audit Staff estimates PECO could save approximately $5.1 to $10.6 million[30] annually if the overtime could be reduced solely through better management of overtime. However, if overtime was eliminated strictly by increasing staff, the Audit Staff estimates that a reduction of overtime to 15-20% could result in increased overhead costs of approximately $340,000 to $700,000[31] to PECO. It is unlikely PECO should utilize either approach solely to reduce overtime; therefore the Audit Staff estimates a diversified approach employing the alternatives discussed would yield annual savings of approximately $2.4 to $5 million.

3. The Company's Business Planning and Support Department is understaffed

As previously mentioned in the Background section of this chapter, PECO's Business Planning and Support Department is responsible for providing contract and project management for the Regional Divisions for projects less than $250,000. All projects administered by this group are considered construction or maintenance related and include new residential construction, secondary fault repair, rebuilding manhole covers, re-conductoring lines, etc. In most cases, workload is identified by a Region while Business Planning and Support is responsible for utilizing contractors to complete the work. As a result, much of the work is performed by COCs but on an exception

[30] Savings calculated based upon the average overtime incurred by the C&M and DSO Departments from 2008 to 2013, average wages of $40 per hour, and an overtime incurred at time and a half.

[31] Costs calculated on average overtime between 2008 and 2013 assuming average bargaining unit salary of $40 per hour at 0.5 overtime multiplier and based on 2013 data. Since reduction of overtime would primary result from an increase in staff, the difference in wages for additional employees at straight time versus existing employees overtime at time and a half would be 0.5. In addition, additional staffing would have an overhead cost of approximately 60% for pension, health care, etc.

basis various projects/jobs greater than $75,000 are competitively bid. The number of contractor projects by type of work is highlighted in Exhibit VII-10.

Exhibit VII-10
PECO Energy Company
Business Planning and Support Managed Projects by Project Type
For the Years 2008 through 2012 and January through November 2013

	2008	2009	2010	2011	2012	2013*
Aerial COC	130	198	828	504	224	462
Underground COC	347	315	374	433	428	507
Cable Injection	9	16	8	18	7	6
Aerial Secondary Cable Repair	482	423	769	619	406	453
Secondary Fault Locate and Repair	3,252	3,960	3,107	3,754	919	630
New Residential Construction					5,166	4,679
Total	4,220	4,912	5,086	5,328	7,150	6,737

* 2013 data is through November.
Note: New Residential Construction data prior to 2012 is not available due to differences in invoice/tracking prior to 2012.
Source: Data Request EO-48

PECO has four Contract Coordinators reporting to the manager in Business Planning and Support to handle the oversight of the projects in Exhibit VII-10. Once projects are awarded, Contract Coordinators utilizes various techniques to monitor performance both in the field (i.e., safety meetings, site visits/inspections) and remotely in the office (i.e., payment and performance report generation, data analytics/analysis). The Company estimates that the Contract Coordinators split their time evenly (i.e., 50/50) between the field and office. In addition, during 2013 the Company was experimenting with tablets to operate remotely in order to interface with contractors and inspect facilities without having to physically visit the work site. As highlighted in Exhibit VII-10, the four Contract Coordinators are responsible for approximately 5,000 to 7,000 projects each year. Moreover, the Company has averaged approximately 100 scope change order requests from 2011 through 2013 for aerial, underground and new residential construction[32] netting an average project cost change of approximately $450,000 over the same period. If a contractor encounters conditions that warrant changes in the work scope, they must submit justification (i.e., a scope change order). In most cases, Business Planning and Support will then approve/disapprove the change or otherwise seek clarification from the Region if certain expertise is needed (i.e., engineering, drafting, etc.)

[32] Secondary cable repair and secondary fault locate and repair can have change orders but are not governed the same. Costs for these projects are determined after the job is completed based upon a predetermined contracted cost structure.

The Company indicated in its response to Audit Staff data requests that the projects identified in Exhibit VII-10 should be visited/inspected before and after work is completed. However, discussion with Company management indicated that only a single field visit/inspection is typically completed on aerial, underground COC and cable injections projects, often times at the beginning of the project. Furthermore, the Company only conducts a pre-construction safety meeting for new construction projects. All other projects are inspected as time allows or if special circumstances arise. However, the Company also deploys other techniques to either monitor the progress or completion of secondary and new construction work which includes, but is not limited to, documentation review, reenergized facilities, etc. PECO deploys a risk based approach to inspecting contractor work focusing on the projects with the greatest degree of variability. In addition, the Company rotates a more in-depth review of a different contractor each year to ensure compliance.

The Company's endeavor to deploy advance technology such as remote visual inspections through tablets is commendable; however, actual field presence is necessary to ensure contracted work is completed to meet Company specifications and cost. While, PECO's risk based approach and rotation program attempts to effectively monitor all contractors, the facts are a majority of projects are never visited or inspected by Company personnel. This could lead to unwanted conditions such as subpar building standards, costlier projects, deviations from proposed design, etc. If PECO visited/inspected each project twice in accordance with Company's preferred practice as stated in the Company's response to data requests, the Audit Staff estimates that it would take a total of eight full time equivalents[33] or double PECO's current four contract coordinators to complete this work. Therefore, the Audit Staff contends that PECO should explore avenues to perform site inspections more frequently at most, if not all, project sites. The Audit Staff estimates that four additional employees would likely increase wage costs for PECO by approximately $500,000-700,000 in fully loaded costs (i.e., salaries and overhead). It should be noted that additional staffing should yield future savings to PECO from avoided outages due to poor contractor construction/equipment, reduced costs for scope change, etc. for which we did not attempt to quantify the savings but should ultimately yield net long term savings above the cost previously identified. In addition, the Company may be able to utilize its existing workforce (i.e., other Departments) and deploy additional technology to reduce the overall compliment needed to ensure contractor compliance.

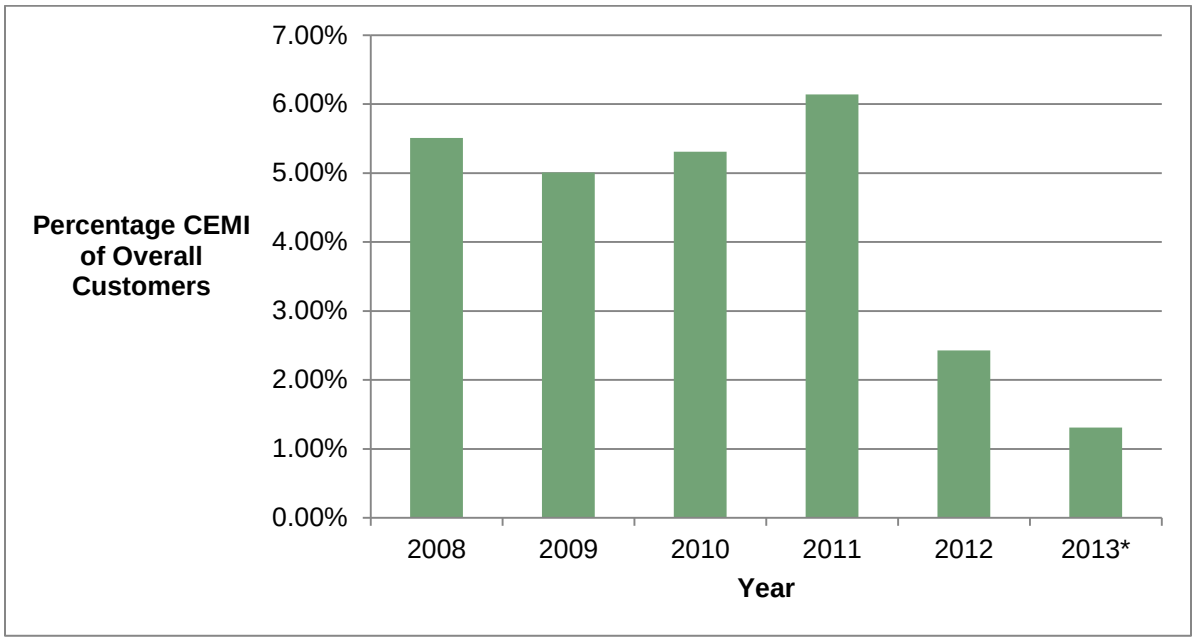
4. The number of customers experiencing multiple interruptions is high relative to overall reliability.

As depicted in Exhibit VII-6 for the years 2008 through 2013, PECO's reliability performance has been generally better than the Commission's Benchmark and almost always better than the 12 Month Standard. While this reliability performance is commendable and indicates that most customers have limited reliability impacts, there are a limited number of PECO customers that are experiencing a higher proportion of

[33] Assuming that each visit/inspection would take one hour total (travel and inspection), 2080 hours for a full time equivalent (FTE), retained 2 FTEs for back office type work (based upon PECO's current 50/50 split with 4 FTEs).

sustained interruptions[34]. There are no Commission standards for Customers Experiencing Multiple Interruptions (CEMI). The Company defines CEMI as the number of customers experiencing four or more outages in a given year. The percentage of CEMI customers to overall customers is depicted in Exhibit VII-11.

Exhibit VII-11
PECO Energy Company
Percentage CEMI of Overall Customers
For the Years 2008 through 2012 and January through November 2013



* Reflects data for the 11 months, January – November 2013.
Source: Data Request EO-31

As presented in Exhibit VII-11, approximately 5% of PECO's customers traditionally experience four or more outages in a given year. However, the Company has made improvements in reducing CEMI in 2012 and 2013. PECO has a reliability program solely dedicated to improving line segments where multiple interruptions occur. The Regions continuously identify areas with pocket problems aided by Technical Services. While the Company attributes its improvement in 2012 and 2013 to its reliability programs, some of this improved performance is also the result of favorable weather conditions over this period. Nonetheless, the impact of CEMI to the Company's overall SAIFI is presented in Exhibit VII-12.

[34] A sustained outage is defined as an outage that lasts more than five minutes.

Exhibit VII-12
PECO Energy Company
Impact of CEMI on SAIFI
For the Years 2008 through 2013

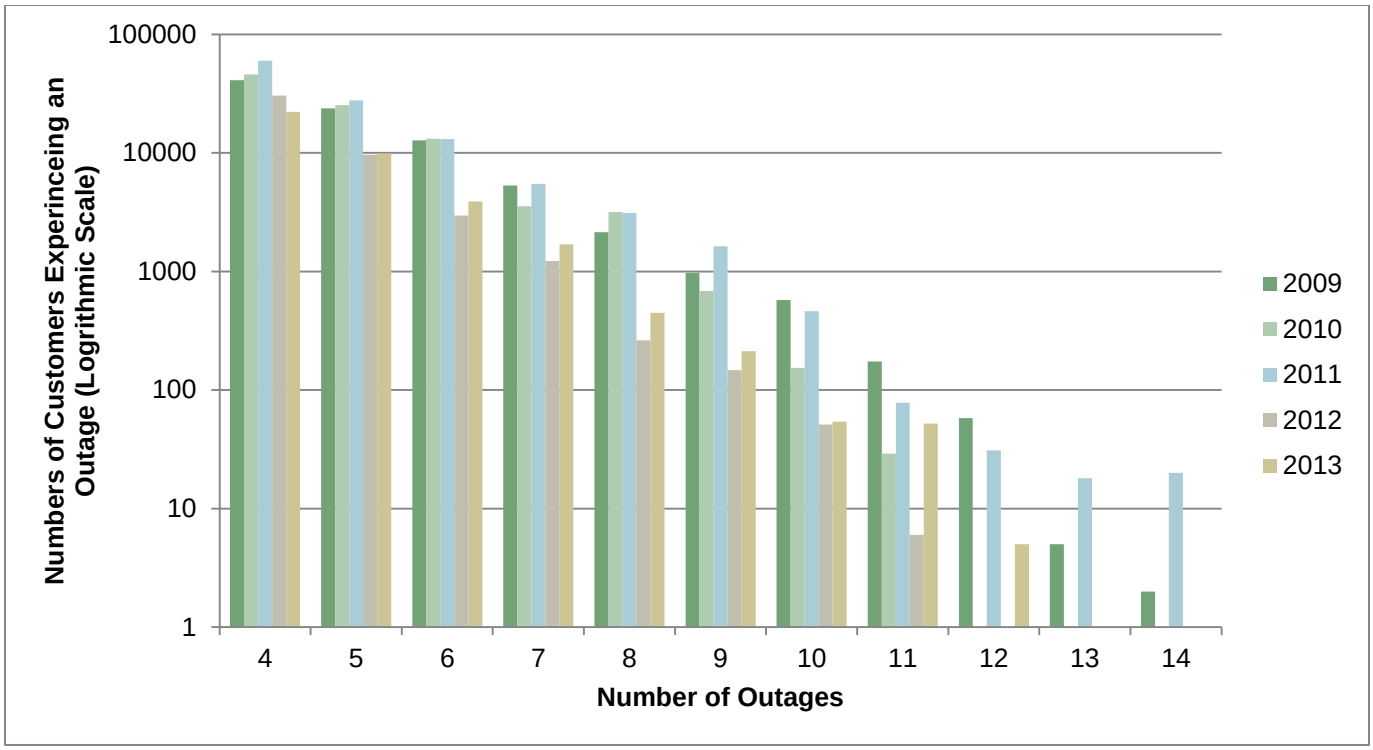
	Total Customer Interrupted	# of Customers Experiencing 4 or more Outages	# of Customer Interruptions from CEMI	% CEMI of Overall SAIFI
2008	1,732,392	91,158	453,957	26.20%
2009	1,633,916	83,466	430,820	26.37%
2010	1,825,113	89,028	447,241	24.50%
2011	1,924,325	103,290	541,070	28.12%
2012	1,306,178	41,047	200,223	15.33%
2013	1,177,242	38,453	180,136	15.30%

Source: Data Requests EO-17, 31, 47, and 52

Due to system design, customer location, and various other conditions, a few customers can account for a disproportionally large portion of outages on a system. Given the data presented in Exhibits VII-11 and V-12, approximately 5% of the customers at PECO account for an average of approximately 22% of customer interruptions or SAIFI.[35] Even though 2013 is considered a good performance year; pockets of customers still experienced poor reliability with 1.3% of the customers accounting for over 12% of the outages. As presented in Exhibit VII-13, from 2008-2013 PECO had customers experiencing ten or more outages. While PECO's statistics are not uncommon for Electric Distribution Companies, the Company's CEMI performance does indicate reliability problems for a small subset of customers. It should be noted that the data in Exhibits VII-11 and 12 includes major storm events; however, customers experiencing multiple sustained interruptions in a given year, particularly more than 10 outages, is poor performance. Therefore, efforts should be employed to reduce overall CEMI and additional emphasis should be aimed at eliminating conditions where customers experience ten or more outages in a year.

[35] Based upon an average for the years 2008 through 2013.

Exhibit VII-13
PECO Energy Company
Number of Customers Experiencing Multiple Outages
For the Years 2008 through 2013



Source: Data Requests EO-17, 31, 47, and 52

5. PECO's top priority circuit factors should be re-examined.

As discussed in the Background section of this chapter, one of PECO's reliability programs to address worst performing circuits is its Top Priority Circuit (TPC) program. The TPC program identifies the worst performing circuits, or segments of line, in the distribution system so that corrective actions can be taken to improve the reliability of those segments. In order to rank the worst performing circuits, PECO uses a formula based upon four criteria; Customer Interruptions, Customer Interruption Hours, circuit SAIFI, and circuit SAIDI. While the four criteria are interrelated, two of the factors (i.e., Customer Interruptions and Customer Interruption Hours) account for a circuit's impact on surrounding circuits while the other two (i.e., circuit SAIFI and circuit SAIDI) are related to individual circuit performance. PECO's TPC formula was last evaluated approximately three years ago in 2010.

Based on the Audit Staff's review, it appears that PECO's TPC is good at identifying circuits with large impacts to the overall distribution system and circuits with individually poor reliability. Both of these factors are key factors in identifying the worst performing circuits. However, as PECO continues to sectionalize between circuits and with the addition of technology, the interplay between reliability of an individual circuit and its impact on the distribution system is changing. In fact, the Audit Staff identified

that during 2012 that 39 of 114 or 34% of the circuits identified as TPC were poor performing circuits solely due to individual circuit performance. While this statistic is not alarming, it does indicate that PECO may need to shift/expand its TPC formula to include other reliability factors.

Ultimately, the TPC program, and any reliability programs at PECO, is aimed at improving electric reliability for the Company's customers. However, there are other factors that the Company could use to help identify its worst performing circuits. For instance, as highlighted in Finding and Conclusion VII-4, certain customers experience multiple interruptions, sometimes as many as ten or more outages in a given year. These customers typically represent pockets of customers within an individual circuit rather than the customers served by the entire circuit. Therefore, pocket problems have a minor impact on the TPC formula but can be a greater reliability concern than trying to eliminate a single circuit-wide outage that is often outside the utilities control (i.e., lightning, wind, vehicle accidents, etc.)

Management indicated that it had a goal to explore the TPC program in 2014 as part of normal business activity. The Audit Staff recommends that PECO explore the addition of other reliability indices such as CEMI, Momentary Average Interruption Frequency Index (otherwise known as MAIFI), or maintenance metrics such as circuit breaker trips in determining worst performing circuits. Some of these indices could be used to help identify circuits not performing optimally in addition to PECO's already established TPC formula. While the Audit Staff only analyzed limited information, we concluded that inclusion of additional factors, particularly CEMI, could enable the Company to identify issues that could be addressed that would improve overall reliability. In addition, inclusion of CEMI in the TPC formula/ranking system would also enable the Company to make changes and improve CEMI itself.

6. Emergency order reporting from County 911 Centers could be improved.

PECO provides electric and/or gas service to Philadelphia, Chester, Bucks, Montgomery, Delaware and York Counties. In 2011, at the interest of Chester County, the Company piloted an emergency trouble order interface protocol with Chester County 911 which enables the Chester County 911 Center to automatically create emergency orders that are electronically transmitted directly to the Company's OMS. As of late 2012, the piloted procedure is now a permanent interface enabling Chester County 911 to directly report emergency orders to PECO. However, no other county in PECO's service territory has the same ability, nor has a projected timeline to establish such an interface for the other 911 centers been established by the counties and PECO.

All other counties, except for Chester County, must contact PECO by phone, presumably after the county intakes a PECO related 911 call. As a result, the County 911 center must verbally relay information to PECO in order for the Company to create an emergency ticket within its systems. Once created, PECO can dispatch a first responder to the emergency. However, this process requires additional time than the one established for Chester County and in many respects is a duplication of work (since

most, if not all, of the information PECO needs to respond has already been entered into the 911 systems).

The Company has indicated a willingness to encourage and support the same emergency trouble order interface protocol with the other counties in its service territory. However, the Company notes that training is crucial as PECO must ensure all data is sufficient, valid, and useful for the process to be beneficial. While there are hurdles for implementation, PECO should continue to promote 911 center direct link access with the counties in their service territory in order to eliminate administrative time and enhance response time to emergency situations. This initiative would improve overall response times by all parties to emergencies thereby potentially saving lives.

7. PECO lacks real time review of outage orders closed in the field.

The deployment of the Mobile Workforce Management System during the 2008/2009 timeframe enable PECO's field crews to electronically receive and close out outage orders via laptop directly from field crew trucks. Once the outage is restored, the ALM/ET may close out the outage order in addition to providing additional outage information (i.e., outage cause, notes, etc.). Once the ALM/ET closes out an outage order, it is automatically removed from both the OMS and dispatcher's screen. However, outage orders that require multiple steps for completion (i.e., embedded outages) must be closed out by a dispatcher.

Subsequent to closing an outage order, shift managers routinely review all closed orders, albeit possibly several hours later specifically looking for data compliance, anomalies or any other discrepancy to ensure the outage data is valid. In some cases PECO's dispatchers, at their discretion, may review closed outage orders as they occur; however, a procedure to govern this process to ensure standardization has not been established. Because the process for a dispatcher to review closed outage orders is not facilitated by design, a dispatcher must manually navigate several screens within the OMS to retrieve the closed outage order information.

By routinely reviewing closed outage orders as they occur, dispatchers are more readily able to identify potential data errors (i.e., a dispatcher may be aware of equipment failure causing the outage whereas a field crew selected unknown as the outage cause in haste to restore customers) due to their interaction with field crews during the restoration effort. Shift managers are not in a position to identify this type of error based on the circumstances. A large majority of outages are closed by the Dispatchers, so the risk of erroneous data within field closed orders is relatively small. However, the Audit Staff identified dispatcher review of closed outage orders as a best practice that should be employed by all PECO dispatchers. It's important to note that this review should occur during non-storm activity and doesn't lend itself to storm activities because dispatchers have a higher priority task of system restoration efforts. Moreover, with the deployment of the new DMS, the number of outages that PECO dispatchers must manually close in the OMS will be reduced allowing additional time for data integrity review. In order to standardize a procedure for dispatcher review of closed outage orders, some software changes may be needed to make the process

more streamlined for dispatchers. Therefore, PECO should review the cost and benefits of making this improvement. Moreover, additional training or refresher classes for field crews could improve data compliance limiting the need for dispatchers to review outage orders.

8. The work transfer interface process between PECO and some of its contractors is overly manual.

When PECO outsources work to contractors, it provides the scope, specifications, and other relevant information within a work packet. However, depending upon the Department, this process can be largely manual and paper intensive. For instance, paper copies of work packets are sent to PECO's vegetation contractors and then must also be entered into the Company's database managing completion dates. In addition, other contract work is printed out of the Company's WMS and then the results must be manually uploaded back into the WMS for completion, additional work, etc.

In contrast, the Business Planning and Support Department started to implement an electronic work packet process in 2013. The work packet is generated from the Company's GIS mapping, WMS, etc. and then converted to an Adobe file and transmitted to the contractor. This process eliminates paper, provides better proof/audit trail of work packets and more useful information to the contractor. For instance, contractors can no longer claim they never received a page of specifications since both parties have an electronic record of correspondence. The Company has indicated that there are some work tasks that require paper due to project complexity, size, and/or frequency. PECO should aim to implement this type of electronic correspondence with all contractors. The paper and manual transmittal of work packets is overly cumbersome, inefficient, and should be improved.

9. PECO has a distribution system Equipment Failure Database but the database has limited information.

The Director of Engineering, Project and Contract Management has a Standards Group that is responsible for maintaining a component health program for PECO's distribution system. The objective of the Standards Group is to correlate reliability data with preventative maintenance work to reduce equipment related outages. As a result, the Company has developed a Component Failure Analysis and Reporting procedure as well as an Equipment Failure Database that aims to capture data related to faulty equipment, equipment out of configuration, or unusual operations in the field in order to identify outage potential conditions. A majority of the work is to identify manufacturer defective equipment before it's placed within the distribution system (i.e., during construction). The Standards Group then identifies activities that could improve equipment performance, identifying a need to remove the equipment from purchase orders (i.e., find a substitute vendor or material), or ultimately minimize the possibility of a recurrence.

PECO's Electric Distribution Equipment and Component Failure Analysis and Reporting Procedure requires field crews, under specific event conditions, to provide the failing equipment to the Standards Group. In addition, field crews must complete a Defective Equipment Tag and Distribution Material Problem Information Form. The Standards Group then analyzes the equipment with the conditions provided by field crews and enter this information into the Equipment Failure Database. However, the Standards Group has only received 34 entries from January through November 2013 compared to the 3,838 reported equipment failures causing outages in calendar year 2013. While not all of the 3,838 equipment failures meet the reporting criteria for the Equipment Failure Database, there is an opportunity to improve the capture rate of equipment failures.

The limited information in the Equipment Failure Database is not optimal to facilitate the investigation of trends or problems. Consequently, education of field forces emphasizing the importance of the Equipment Failure program as well as trying to identify a streamlined approach to providing faulty equipment to the Standards Group could improve data capture. Increasing the population of equipment failures within the Equipment Failure Database will enable the Standards Group to identify trends, problematic equipment, develop beneficial procedures and ultimately reduce outages.

Recommendations

1. Improve response rates to emergency orders by tracking the reasons for missing trouble order goals and implementing corrective measures as necessary.

2. Reduce overtime levels, specifically non-storm overtime, for C&M and DSO.

3. Improve/expand oversight of contractor performed work.

4. Reduce the number of customers experiencing four or more service interruptions in a year.

5. Incorporate additional factors into the Top Priority Circuit Program, like Customers Experiencing Multiple Interruptions.

6. Create enhanced tools/systems in partnership with County 911 Centers to provide interface capabilities during emergency situations.

7. Initiate efforts to improve and/or review outage orders closed by field crews.

8. Evaluate the process for providing work packets to contractors and automate if deemed feasible.

9. Improve the data capture rate for the Equipment Failure Database by enforcing compliance with the Equipment and Component Failure Analysis material retention procedures.

VIII. GAS OPERATIONS

Background

PECO Energy Company (PECO or Company) provides gas service to customers in the southeast region of Pennsylvania, specifically the four counties surrounding the city of Philadelphia which includes Bucks, Chester, Delaware and Montgomery counties and a small portion of Lancaster County. As of December 31, 2013, PECO provided gas service to 458,335 residential customers, 42,171 commercial customers and 907 industrial customers covering approximately 1,900 square miles. Natural gas is delivered to PECO via three major interstate pipelines: Transcontinental Gas Pipeline Corporation (Transco), Eastern Shore Natural Gas Company (Eastern Shore) and Texas Eastern Transmission, feeding PECO's distribution system through 31 gate stations. PECO also owns 31 miles of high pressure transmission main which delivers natural gas to the Company's distribution system.

PECO also owns two peak-shaving facilities which are typically used during the winter months to meet high peak demand. One of these facilities is the Liquefied Natural Gas (LNG) plant located in West Conshohocken, Pennsylvania. The LNG plant has storage capacity of 1.2 billion cubic feet (bcf) and can deliver approximately 160,000 mcf[36] per day to PECO's city gates. The other peak shaving facility is a propane facility located in Chester, Pennsylvania which can provide approximately 25,000 mcf per day. In addition to these peak shaving facilities, Dominion Transmission Inc., Panhandle Eastern Pipeline Company, Texas Eastern Transmission and Transco provide natural gas storage services which are used by PECO to meet daily and peaking requirements during the winter months. Exhibit VIII-1 illustrates the number of withdrawal days and total withdrawal volumes from each facility for the winter of 2013/2014.

Exhibit VIII-1
PECO Energy Company
Storage Withdrawal Days and Volumes
From November 1, 2013 through February 28, 2014

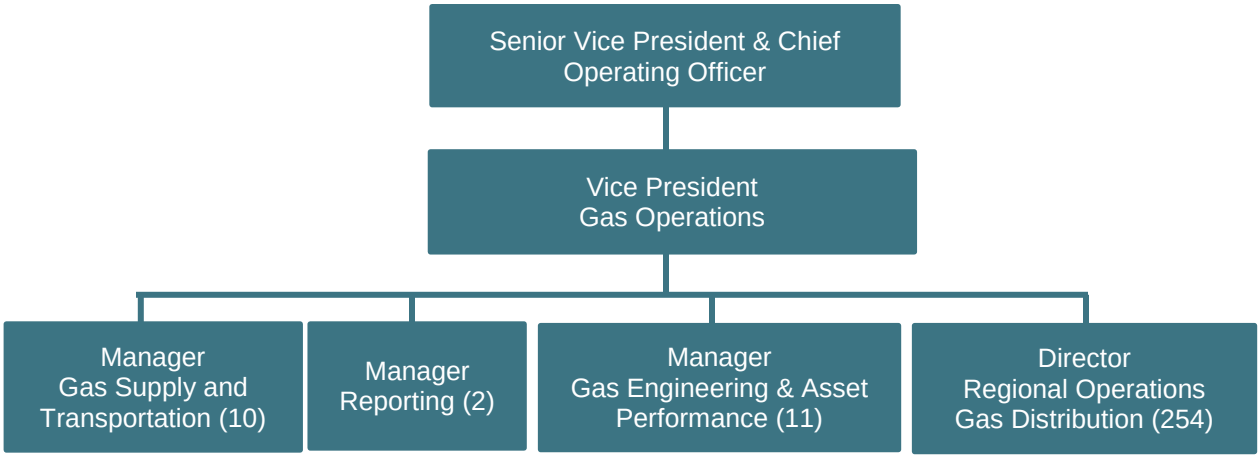
Facility	Withdrawal days	Total Withdrawal Volume (mcf)
LNG	20	589,413
Propane	2	30,969
Dominion Transmission Inc.	94	2,550,514
Panhandle Eastern Pipeline Co.	91	2,304,063
Texas Eastern Transmission	105	3,973,873
Transco	106	6,272,251
Totals	419	15,721,083

Source: Data Request GO-76

[36] One mcf is equal to 1,000 cubic feet of natural gas.

The Vice President, Gas Operations (VP) who reports to the Senior Vice President and Chief Operating Officer oversees all gas operation and maintenance activities. As illustrated in the organization chart shown as Exhibit VIII-2, the VP is responsible for four major Departments in gas operations: Gas Supply and Transportation, Reporting, Gas Engineering & Asset Performance, and Regional Operations Gas Distribution. As of December 2013, the Gas Operations Division was comprised of a total of 278 employees. The Gas Supply and Transportation Department consists of ten employees and is responsible for decisions related to the procurement and supply of natural gas such as daily purchases, meeting winter load requirements, optimizing assets to ensure least cost supply to customers through the Asset Optimization Plan, etc.

Exhibit VIII-2
PECO Energy Company
Gas Operations Organizational Chart
As of December 31, 2013



Source: Data Request GD-1

The Reporting Department consists of a Manager and a Senior Financial Analyst who are responsible for preparing and submitting financial and other regulatory reports to the various Federal and State regulatory agencies. The Gas Engineering and Asset Performance (GEAP) Department consists of 11 employees. GEAP is responsible for the engineering and technical aspects within the Department and also supports information technology (IT) systems used by the Gas Operations Division. In addition, GEAP has the primary responsibility for the development of the Accelerated Gas Improvement Modernization Plan (AGIMP) which is discussed later in this chapter. GEAP is also responsible for developing and maintaining the Transmission Integrity Management Program (TIMP) and the Distribution Integrity Management Program (DIMP). Furthermore, GEAP initiates the project management process for outsourced work and coordinates activities with Exelon Business Service Company's Sourcing Organization (see Chapter X – Materials Management). GEAP also provides engineering and technical support to the Gas System Control and Plant Operations group which resides in Regional Operations Gas Distribution Department.

The Regional Operations Gas Distribution Department is the largest of the four Departments and consists of 254 employees. This Department consists of nine primary groups which include Contract Construction, Regulatory Compliance, Damage Prevention, New Business, Operations Coordinator, Work Management, Engineering, Construction & Maintenance and Gas System Control & Plant Operations.

The Contract Construction group is responsible for assigning construction contracts, coordinating, and overseeing the work performed by Contractors-of-Choice (COC). More specifically, the COC process enables PECO to competitively bid unitized work for certain work tasks for a period of time (i.e., typically three year contracts) which provides cost certainty. During 2013, an internal review was conducted of the contract management and invoice processing oversight function which resides within the Contract Construction group. The internal review noted several control deficiencies resulting in the reorganization of Gas Operations to provide improved oversight of the contract management process.

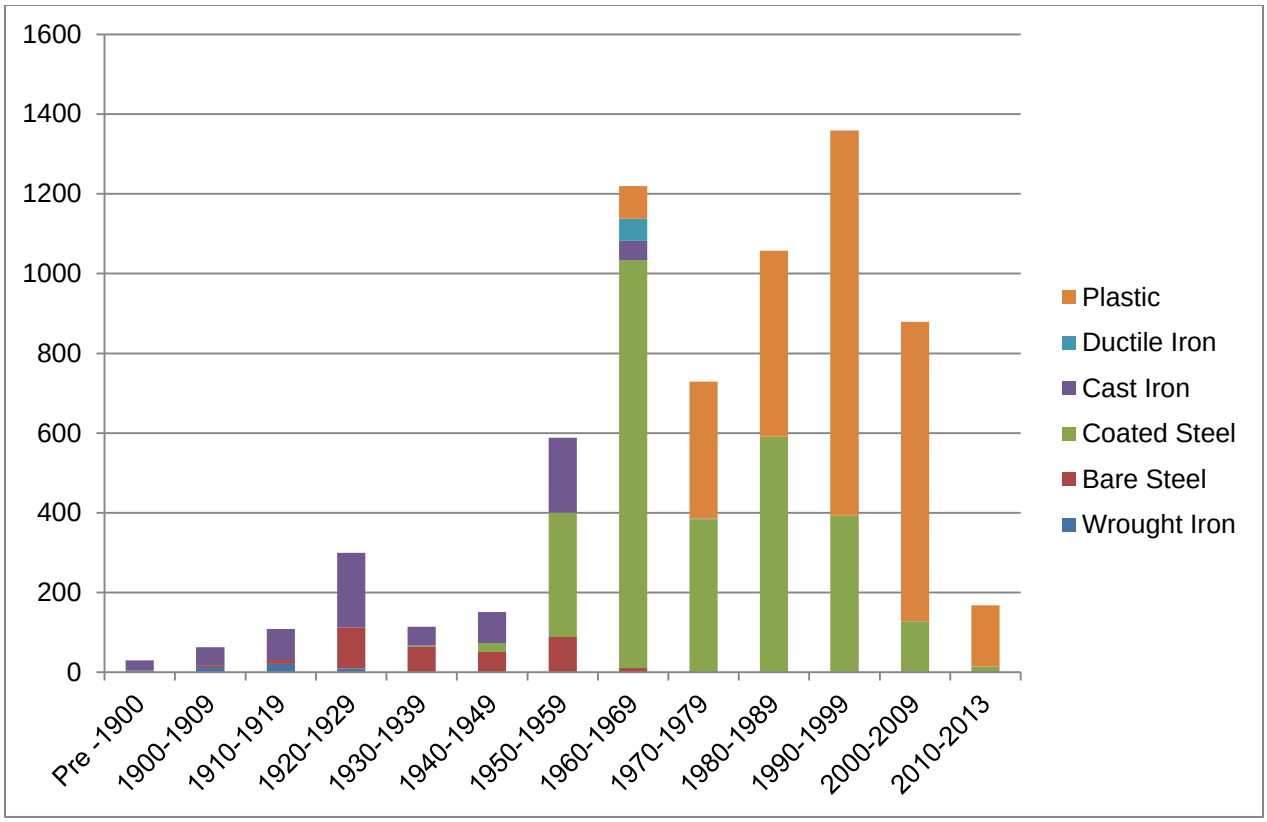
The remaining groups include the Regulator Compliance group which is responsible for performing corrosion control, leak surveys, regulator station maintenance, bridge crossing inspections, odorant level testing, etc. The Damage Prevention group, consisting of 13 employees, is responsible for promoting safety in areas of excavation, education of the public and excavators about PA One Call Law, maintaining, tracking and analyzing underground electric and gas facility damage data to identify trends, etc. The New Business group consisting of 16 employees is responsible for managing new business (except residential construction work that is handled under the Vice President of Electric Operations, see Chapter VII – Electric Operations) which primarily includes the Gas Along the Mains (GAM) program[37], which assists customers in switching to natural gas service. The Work Management group has six employees and is mainly responsible for planning and scheduling work as the jobs are uploaded into the Work Management System. The Engineering group is primarily responsible for gas design work once projects have been approved by the GEAP Department. The engineers then take ownership of the projects providing oversight from start to finish. The Construction and Maintenance group is in charge of maintaining PECO's gas infrastructure, performing construction and maintenance work, contractor oversight/inspections, etc. The Gas System Control & Plant Operations group, consisting of 24 employees including five chief plant operators, is primarily responsible for the flow of natural gas within PECO's system and the operation, maintenance and safety of PECO's LNG plant. Additionally, the Gas System Control & Plant Operations group interfaces with the Gas Supply and Transportation Department especially during the winter months in order to communicate gas flow strategies.

As of December 31, 2013, PECO had 31 miles of transmission pipe ranging in diameter from 6 to 16 inches, 6,767 miles of distribution pipe ranging in diameter from less than 2 inches to over 12 inches, and 441,510 services. PECO's distribution miles of main by material and decade of installation are shown in Exhibit VIII-3. As evident from Exhibit VIII-3, cast iron was the material of choice for distribution main prior to

[37] Under the GAM program, PECO uses the existing infrastructure to provide services to customers that may be on other heat sources and request to be converted to natural gas.

1930, starting in the 1950's steel was predominantly utilized, followed by plastic since the 1970's. Currently, less than 10% of PECO's distribution system is comprised of pre-1940 pipe and over 60% of the Company's main is less than 50 years old.

Exhibit VIII-3
PECO Energy Company
Miles of Main by Material Type and Decade of Installation
As of December 31, 2013

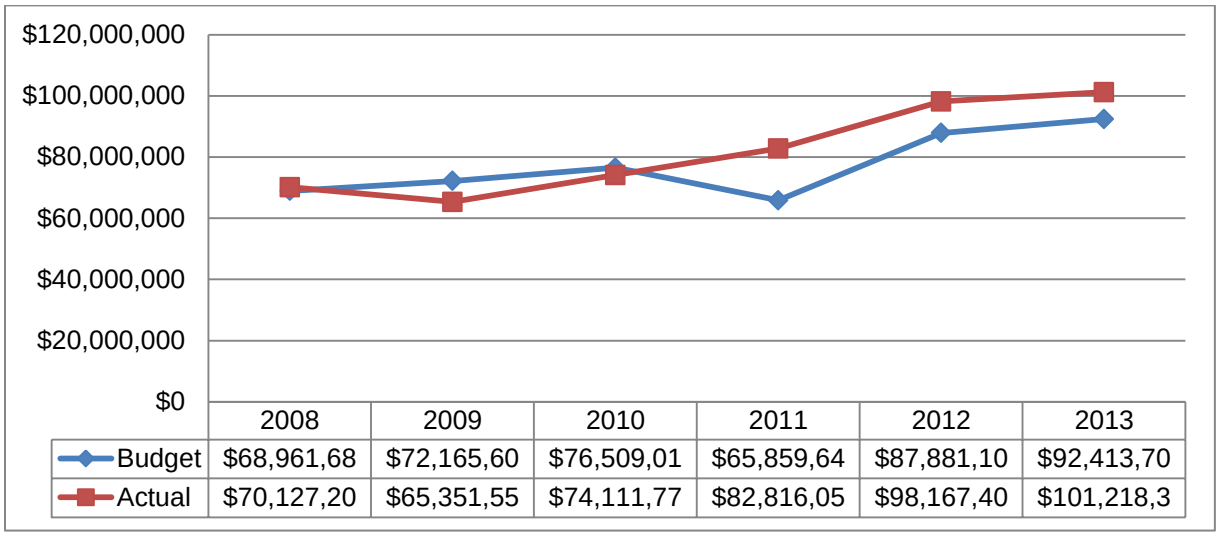


Source: Data Request GO-67

PECO's budget versus actual for both capital and operations and maintenance (O&M) expenditures from 2008 through 2013 are shown in Exhibits VIII-4 and VIII-5, respectively. The capital and O&M budgets for gas operations are comprised of several sub-categories such as capacity expansion, corrective maintenance, facility relocation, new business connections, regulatory, and system performance. The majority of the capital budget items are assigned to new business connections and system performance which includes amounts budgeted for the AGIMP, Gas Plant improvements (i.e., LNG, gate stations), etc. In fact, PECO began accelerating its main replacement efforts in 2011, spending approximately $12 million on the AGIMP and increasing its spending to approximately $20 million annually in 2012 and 2013. The AGIMP and Bare Steel Service Replacement Program (BSSRP) are part of the Long Term Infrastructure Improvement Plan (LTIIP) that PECO filed with the Public Utility

Commission in 2013. Further discussion on the LTIIP can be found under Finding and Conclusion No. 2.

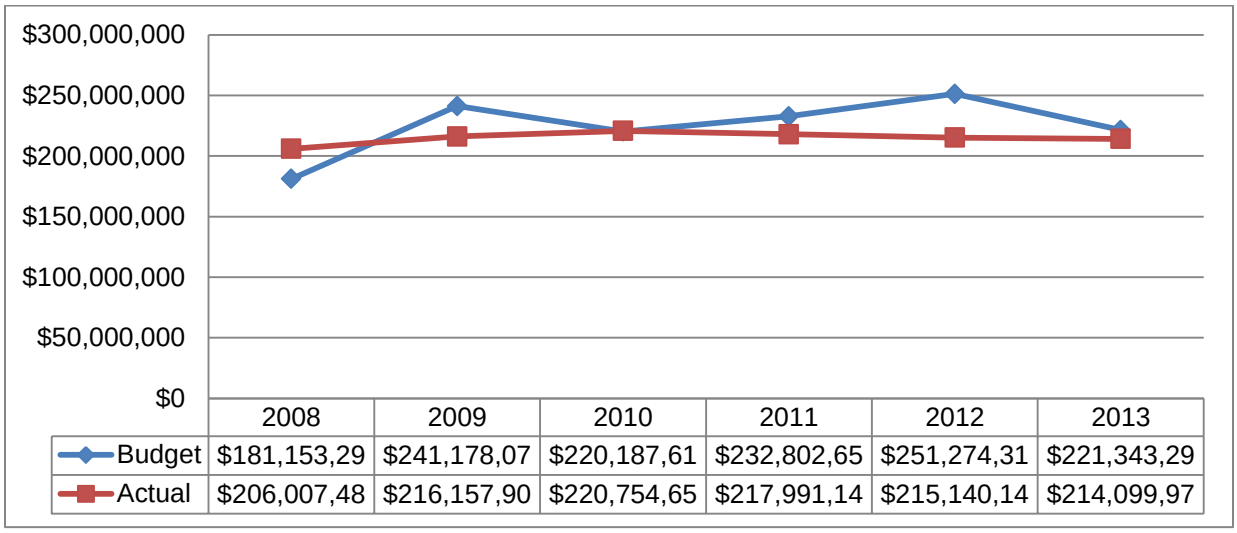
Exhibit VIII-4
PECO Energy Company
Actual to Budget Capital Expenditures
For the Years 2008 through 2013



	2008	2009	2010	2011	2012	2013
Budget	$68,961,68	$72,165,60	$76,509,01	$65,859,64	$87,881,10	$92,413,70
Actual	$70,127,20	$65,351,55	$74,111,77	$82,816,05	$98,167,40	$101,218,3

Source: Data Request GO-5

Exhibit VIII-5
PECO Energy Company
Actual to Budget O&M Expenditures
For the Years 2008 through 2013



	2008	2009	2010	2011	2012	2013
Budget	$181,153,29	$241,178,07	$220,187,61	$232,802,65	$251,274,31	$221,343,29
Actual	$206,007,48	$216,157,90	$220,754,65	$217,991,14	$215,140,14	$214,099,97

Source: Data Request GO-4

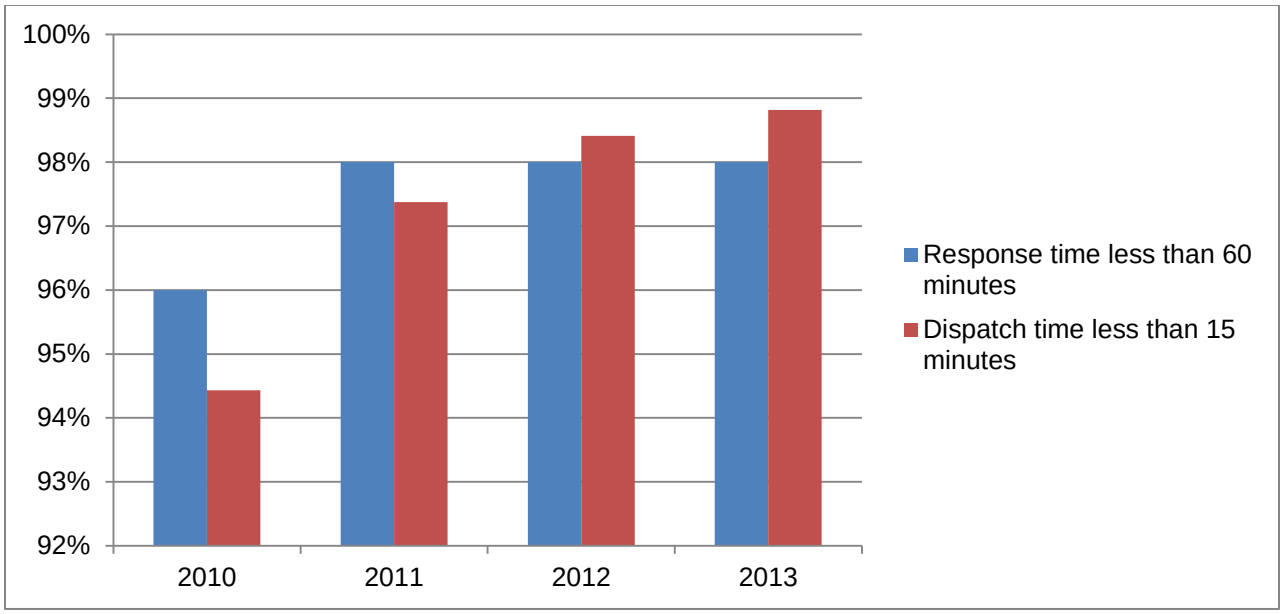
In February 2012, PECO began replacing its legacy Geographic Information System (GIS) with a common Gas and Electric GIS referred to as G/Tech. G/Tech incorporates an updated land base using the PA State Plane Coordinate System[38] instead of the old PECO proprietary grid system. G/Tech has the ability to interface with other systems such as the Outage Management System (OMS), PassPort Inventory Management System, Customer Information Management System (CIMS), Mobile Dispatch, etc. In September 2013, PECO incorporated a new enterprise distribution design tool, to facilitate the use of GIS by Designers and Design Construction Consultants to create aerial and light underground designs (electric only). Gas Designers have requested additional data be added to GIS before they start to use the tool for gas designs. As of the completion of our field work in February 2014, a project was underway to add detailed land base data including digitized road edge features, which will enable Gas Designers to have a more accurate reference point for dimensioning gas assets. Some of the benefits of G/Tech over the legacy GIS system include visibility of both electric and gas facilities using the same graphical tool which will enable various user groups ease of viewing work being performed simultaneously done in proximity to project locations. Additionally, the enhanced functionality allows proposed facility designs to be created right in the GIS as opposed to being drawn after they are built.

PECO's emergency response efforts are primarily managed by its Distribution System Operations[39] (DSO) Department which includes its Operations Control Center and is responsible for the timely response to gas odor calls which includes the initial field investigation and any necessary corrective actions to ensure customer and public safety. Energy Technicians that work in the DSO are trained to handle both gas emergency calls and secondary electrical problems. PECO uses a Mobile Workforce Management System (MWMS) to capture response times and facilitate field service orders over a wireless network to and from mobile data terminals (i.e., field crew trucks). The MWMS was deployed in three phases from June 2008 to October 2009 and was initially provided only to Energy Technicians in late 2009, hence response data was only available after late 2009.

As evident from Exhibit VIII-6, PECO has improved both its gas dispatch and response times since 2010. Emergency dispatch time is defined as the time elapsed from when the customer call is received to when the call is assigned to a responder. Emergency response time is defined as the time from when the customer call is received to when the responder arrives at the site of the emergency. The PUC's Gas Safety Division defines acceptable dispatch and response times as dispatch times of less than 15 minutes and response times of less than 60 minutes (note that this includes dispatch time). PECO has improved acceptable dispatch times as shown in Exhibit VIII-6 by achieving this benchmark from approximately 94% in 2010 to almost 99% in 2013. The Company indicated that the primary reason for dispatch misses (i.e., times greater than 15 minutes) is due in part to large volumes of calls received at the start of the heating system. Moreover, PECO improved acceptable response time rates from 96% in 2010 to approximately 98% in 2013.

[38] The State Plane Coordinate System is a set of 124 geographic zones designed for specific regions of the US, with each state containing one or more state plan zones, the boundaries of which usually follow county lines.
[39] The DSO is discussed in greater detail in Chapter VII – Electric Operations.

Exhibit VIII-6
PECO Energy Company
Percentage of Dispatch & Response Times
For the Years 2010 through 2013



Source: Data Requests GO-11 and GO-29

At its April 4, 2013 Public Meeting, at Docket No. L-2010-2294746, the Commission adopted a Final Rulemaking Order establishing a uniform definition and metrics for unaccounted-for gas (UFG). In accordance with this Order, UFG is to be defined as the difference between the total amount of gas delivered to the natural gas distribution company (NGDC) and the amount of gas that the NGDC subsequently delivers to its retail, commercial and industrial customers adjusted for company use, temperature, pressure variations, or other allowed variables. Historically, PECO was not including adjustments in its UFG calculation filed with the Commission but in light of the new UFG requirements at 52 Pa. Code § 59.111, PECO plans to include adjustments in its future submissions. As of the end of 2013, PECO's UFG definition mirrors the Commission's definition such that UFG is calculated based on the difference between the total gas available from all sources and the total gas accounted for as sales, net interchange and company use. PECO's adjustments in its UFG calculation include pressure/temperature variations, company use, meter read cycle adjustments, transmission line loss, breaks in mains and services, etc. Exhibit VIII-7 shows PECO's UFG percentages for the last six years.

Exhibit VIII-7
PECO Energy Company
Unaccounted For Gas Percentages
For the Years 2008 through 2013

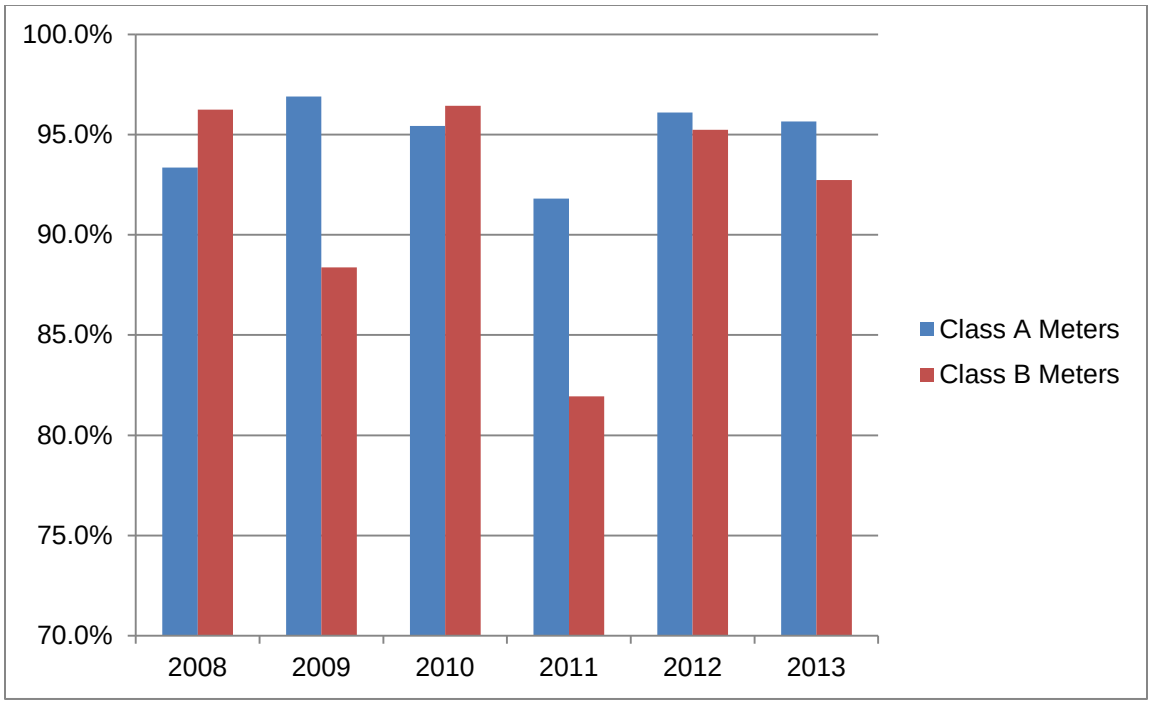
	2008	2009	2010	2011	2012	2013
UFG	3.2%	4.5%	5.5%	(1.6%)	4.3%	4.1%

Source: Data Request GO-18

The Meter Services Department at PECO, reporting to the Manager, Customer Field Operations, determines the meter groups that are to be tested under the random sampling program for each test year cycle. Moreover, large customers are placed on a periodic testing program where the meter is tested at set time intervals. PECO's gas meters are primarily diaphragm displacement meters and are tracked as two major classes in accordance with ANSI Spec, B109.1 Part IV Sec 4.3.2.1. Class A meters having a rated capacity of less than 500 cubic feet per hour[40] are subject to the random sampling program. Similarly, Class B meters, which are mainly for the larger commercial and industrial customers, having a rated capacity of more than 500 but less than 1,500 cubic feet per hour are also subject to the random sampling program. PECO uses two separate databases to maintain its meter records. The Remote Data Acquisition System (RDAS) is used for its commercial and industrial meters and the Advanced Metering Infrastructure (AMI) Device Management System for its residential meters. Exhibit VIII-8 shows the percentage of Class A and Class B meters that passed testing within an accuracy tolerance rate of plus or minus 2%. These results are compliant with 52 Pa. Code § 59.21 (d)(3) which states that "for a group to remain in service, at least 80% of the meters in the sample test shall meet the accuracy limits of 98% average accuracy (i.e., 2% slow) and 102% accuracy (i.e., 2% fast).

[40] At 0.5 inch water column gage pressure

Exhibit VIII-8
PECO Energy Company
Meter Test Passing Percentages
For the Years 2008 through 2013



Source: Data Request GO-68 and GO-77

Findings and Conclusions

Our review of Gas Operations at PECO Energy Company included a review of the operation and maintenance policies and procedures, main replacement program, leak surveys, leak repair backlogs, damage prevention program, unaccounted for gas levels, capital expenditure trends, staffing levels, contractor utilization, etc. Based on our review, PECO should devote additional efforts to improve the effectiveness of its gas operations by addressing the following:

1. Between 40 to 50 percent of all gas line hit damages at PECO are due to mapping inaccuracies.

In accordance with Pennsylvania Act 187 and 49 CFR §192.614, each NGDC is to have a documented damage prevention program. Moreover, the damage prevention program must satisfy several requirements such as providing notification to the public in the vicinity of the pipeline where excavation work is scheduled to begin, a means of receiving/recording notification of planned excavation activities, temporary marking of buried pipelines, etc. PECO participates in the Pennsylvania One-Call System (POCS) as a member utility which facilitates communication between designers, contractors and

excavators as well as other member utilities about planned excavation work in a given area.

As indicated in the Background section of this chapter, PECO's Damage Prevention Department is responsible for maintaining, tracking and analyzing damage data to identify trends for both gas and electric facilities. Exhibit VIII-9 shows the gas line hit statistics for PECO for the years 2008 through 2013. The total number of line hits has decreased by approximately 21% from 2008 to 2013. However, as evident from Exhibit VIII-10, the number of PECO at fault line hits[41] has remained relatively constant at 60% of all hits. The Company has made progress in reducing Company at fault line hits between 2008 and 2013; however Company at fault line hits still account for over 50% of total hits.

Exhibit VIII-9
PECO Energy Company
Gas Line Hit Statistics
For the Years 2008 through 2013

	2008	2009	2010	2011	2012	2013
Reporting Category						
Number of Line Hits	511	539	571	446	430	387
Per 100 miles of main	7.6	8.0	8.5	6.6	6.4	5.7
Per 1000 Services	1.2	1.3	1.3	1.0	1.0	0.9
Per 1000 Locates	3.0	3.6	4.0	3.0	2.9	2.7
Causes						
Marks Accurate	93	121	129	108	106	93
Incorrect Marks	35	41	30	21	28	13
Not Marked	37	30	28	30	17	7
Mapping Inaccuracies	202	240	252	189	193	188
Installation Practices	61	32	28	31	28	15
Expired Dig Ticket	20	11	13	13	5	5
Dug Early	5	10	4	3	0	5
No Locate Request	58	54	87	51	53	61
Totals	511	539	571	446	430	387

Source: Data Request GO-32

[41] PECO at fault line hits include hits due to incorrect marks, not marked, mapping inaccuracies, and installation practices.

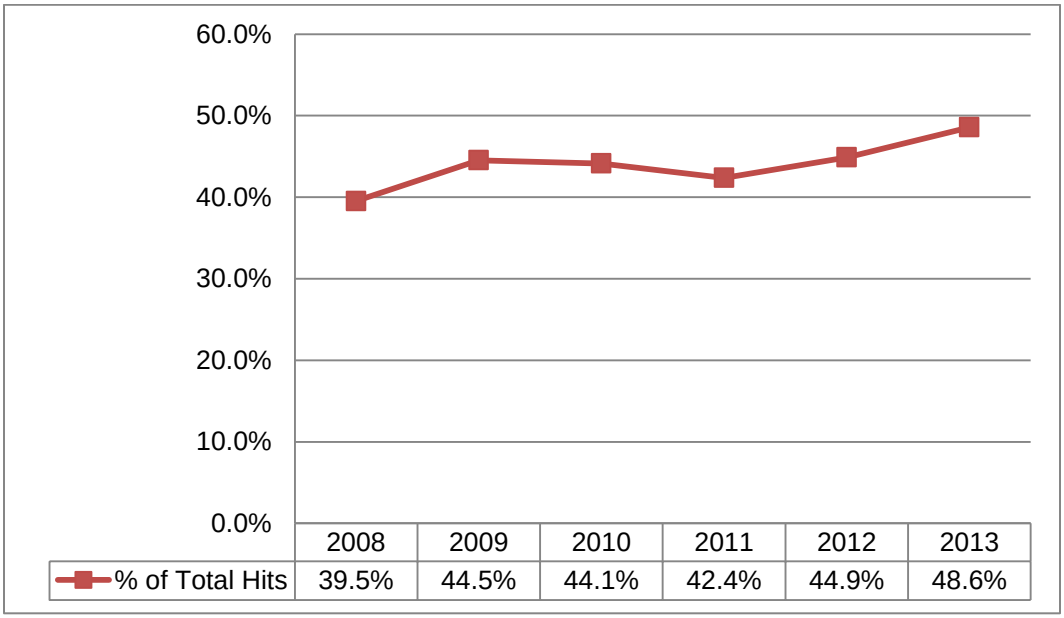
Exhibit VIII-10
PECO Energy Company
Percentage of PECO At Fault Hits
For the Years 2008 through 2013

	2008	2009	2010	2011	2012	2013
PECO at fault	335	343	338	271	266	223
Third party at fault	176	196	233	175	164	164
% PECO at fault hits	65.6%	63.6%	59.2%	60.8%	61.9%	57.6%

Source: Data Request GO-32

PECO at fault hits account for approximately 60% of all line hits to PECO's facilities, which include incorrectly marked pipe, pipe that is not marked, mapping inaccuracies and improper installation practices. Moreover, almost 50% of the Company at fault hits is due to mapping inaccuracies as shown in Exhibit VIII-11. As a percentage of overall hits, the amount of Company at fault hits in 2012 was 62% and was more than double the Pennsylvania NGDC average of 27%[42]. In addition, as highlighted in Exhibit VIII-12, the percentage of mapping error caused damages on plastic pipe has been increasing from 2008 through 2013.

Exhibit VIII-11
PECO Energy Company
Mapping Inaccuracy Hits as Percentage of Total Hits
For the Years 2008 through 2013



Source: Data Request GO-32

[42] Statewide Gas Safety Statistics for 2012 presented by the Pennsylvania PUC's Bureau of Investigation and Enforcement's Gas Safety Manager at the Energy Association of Pennsylvania Conference held on May 29, 2013.

As evident from Exhibit VIII-12, almost all of the hits on plastic mains (approximately 80%) and plastic services (approximately 90%) have been due to mapping inaccuracies. Company management indicated that the primary reason for damages on plastic pipe (mains and services) is missing tracer wire or improperly installed tracer wire. Between the 1960's and 1970's, when PECO first began installing plastic pipe, tracer wire installation did not always occur causing improper installations or no tracer wire at all. Moreover, the natural gas industry has found that the tracer wire installed in the late 1990's and early 2000's has deteriorated considerably and is difficult to trace. For all mapping related damages that occur or for all line locates that cannot be completed, a document discrepancy identification form (DDIF) is submitted to the Mapping & Document Services group.

Exhibit VIII-12
PECO Energy Company
Mapping Inaccuracy Hits on Plastic Mains/Services
For the Years 2008 through 2013

Material Type	2008	2009	2010	2011	2012	2013
Plastic Mains	74%	72%	74%	71%	80%	88%
Plastic Services	88%	90%	88%	88%	90%	83%

Source: Data Request GO-66

PECO has undertaken several initiatives to decrease the number of hits due to mapping inaccuracies, specifically the ones related to missing or improperly installed tracer wire. A pilot program was initiated in 2012 whereby the Company reviewed the feasibility of implementing a Radio Frequency Identification (RFID) marker ball program to reduce the rate of excavation damage due to inaccurate locates that generally result from incorrect mapping or tracer wire issues. In addition, implementation of the new GIS, most notably Geospatial Positioning System capabilities should help PECO reduce its hits due to Company error such as incorrect marks, mapping inaccuracies, etc. Moreover, PECO management indicated that they are exploring an "advance locating team" that would locate facilities in high damage areas. In addition, Company Management is working with other utilities to identify best practices that could be implemented in PECO's service territory.

As noted earlier, PECO's at fault hits relative to all Company hits is the highest in Pennsylvania. More specifically, the Company has continued to struggle with "mapping inaccuracies" despite implementation of new installation practices. While many of the causes of mapping damages are the result of poor materials or installation practices utilized in the past, PECO is still faced with approximately 200 cases each year in which a facility is damaged from inaccurate maps and at least 80 of those cases are on plastic pipe. Any pipe damaged by excavators could eventually result in injury, property damage or in a worst case scenario, death. PECO is making improvements, particularly with the implementation of a GIS system; however, the Audit Staff notes that simply addressing mapping issues on a case by case basis (i.e., with new installations, DDIF, etc.) is not sufficient due to the potential liability and safety concerns. Instead, the Company should aggressively target known or suspected problem areas by positively

identifying facility locations in anticipation of, or conjunction with GIS implementation. Furthermore, the Audit Staff estimates that the Company could achieve annual savings of approximately $200,000[43] in main/leak repair costs by reducing its number of total line hits by 25%.

2. The number of natural gas leaks on bare steel mains have been increasing despite the ongoing bare steel replacement program.

On February 14, 2012, Governor Corbett signed into law Act 11 which authorized the Public Utility Commission (PUC or Commission) to approve a distribution system improvement charge (DSIC) upon petition by an electric distribution company, a natural gas distribution company, a water utility or a wastewater utility. Act 11 also set forth various requirements that must be satisfied in order to establish a DSIC and expedited the recovery of reasonable and prudent costs to repair, improve or replace eligible property. As a result, in February 2013, PECO filed a petition with the Public Utility Commission (PUC or Commission) for approval of its Long Term Infrastructure Improvement Plan (LTIIP). The petition contained several elements such as type and age of eligible property, initial schedule for the planned repair/replacement, location of eligible property, projected annual expenditures, manner in which replacement will be accelerated and the use of a qualified workforce. After examining and reassessing its infrastructure, leak history, replacement rates, etc. in April 2011, PECO initiated the AGIMP to increase its capital investment for replacing cast iron, wrought iron, ductile iron and bare steel mains. Moreover, PECO had already initiated a Bare Steel Service Replacement Program (BSSRP), in 2009, whereby PECO has focused on replacing its bare steel services which had been the major cause of service leaks. While PECO initiated its efforts based upon its analysis, the Commission reinforced the need for the industry as a whole to accelerate main replacement efforts, particularly cast iron and bare steel, in its November 2011 Order at Docket No. M-2011-2271982.

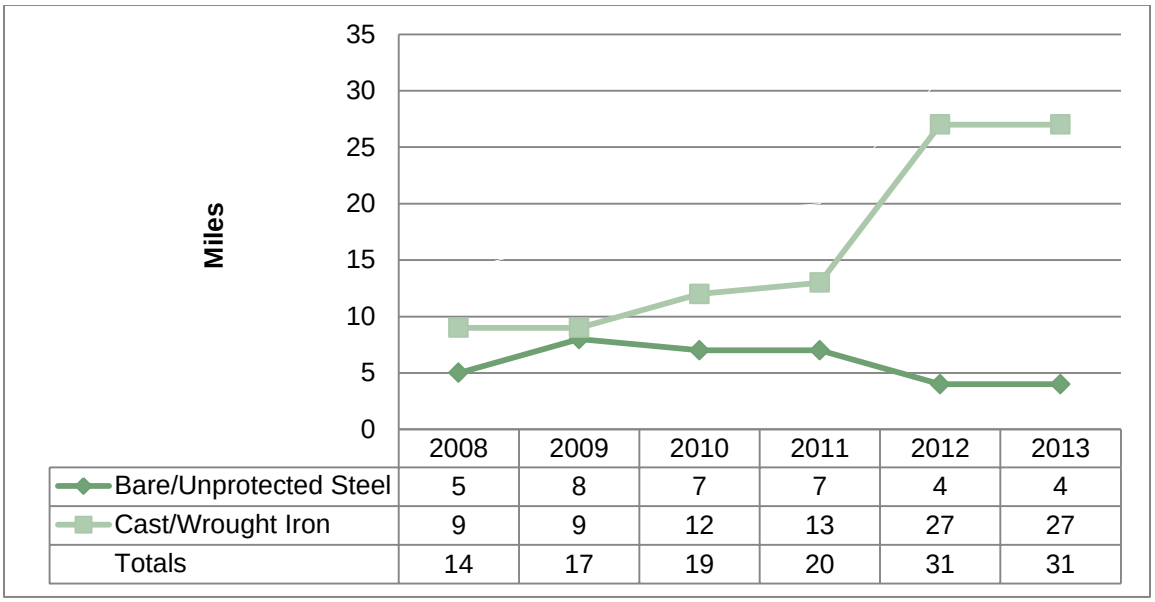
PECO currently uses main prioritization software that serves as a decision support and risk analysis tool which provides PECO with the ability to assess its mains for optimal replacement. The tool also provides a knowledge-based framework to evaluate and rank pipes against a range of threats, environmental conditions, failure probabilities, risk and economic factors. This tool prioritizes main segments as replacement candidates by creating risk scores based on the probability of future leaks for individual pipe segments. However, the Company identifies cast iron pipe replacement candidates based primarily on historical break history which is largely derived from a main replacement priority scheduling decision matrix instead of using the main prioritization software. In addition, the Company also looks at other factors such as wall to wall paving, pipe diameter, system pressure, etc. in making final replacement decisions for cast iron pipe.

As part of the LTIIP program, PECO strives to concentrate its replacement efforts on cast iron pipe that is less than eight inches in diameter, operates at elevated

[43] Savings were calculated using 2013 data; average repair costs of $3,000; assumed non-recovery rate of 15% of damages caused by third parties; and no recovery from PECO at-fault line hit damages.

pressure, is located in areas with greater population density or was installed prior to 1900. However, for the 2011 calendar year the Company migrated to the DIMP Risk Model to identify pipe for replacement in its AGIMP. Exhibit VIII-13 shows the Company's main replacement activity for cast iron and unprotected bare steel from 2008 through 2013. Over 95% of main replacement activities has been related to cast iron and bare steel replacement. Before AGIMP (2008 and 2009), PECO was on pace to replace its cast iron in 100 years. However, after the implementation of AGIMP, as shown by Exhibit VIII-13, PECO is on pace to replace its cast iron in approximately 27 years.

Exhibit VIII-13
PECO Energy Company
Bare Unprotected Steel and Cast Iron Main Replacement Activity (Miles)
For the Years 2008 through 2013

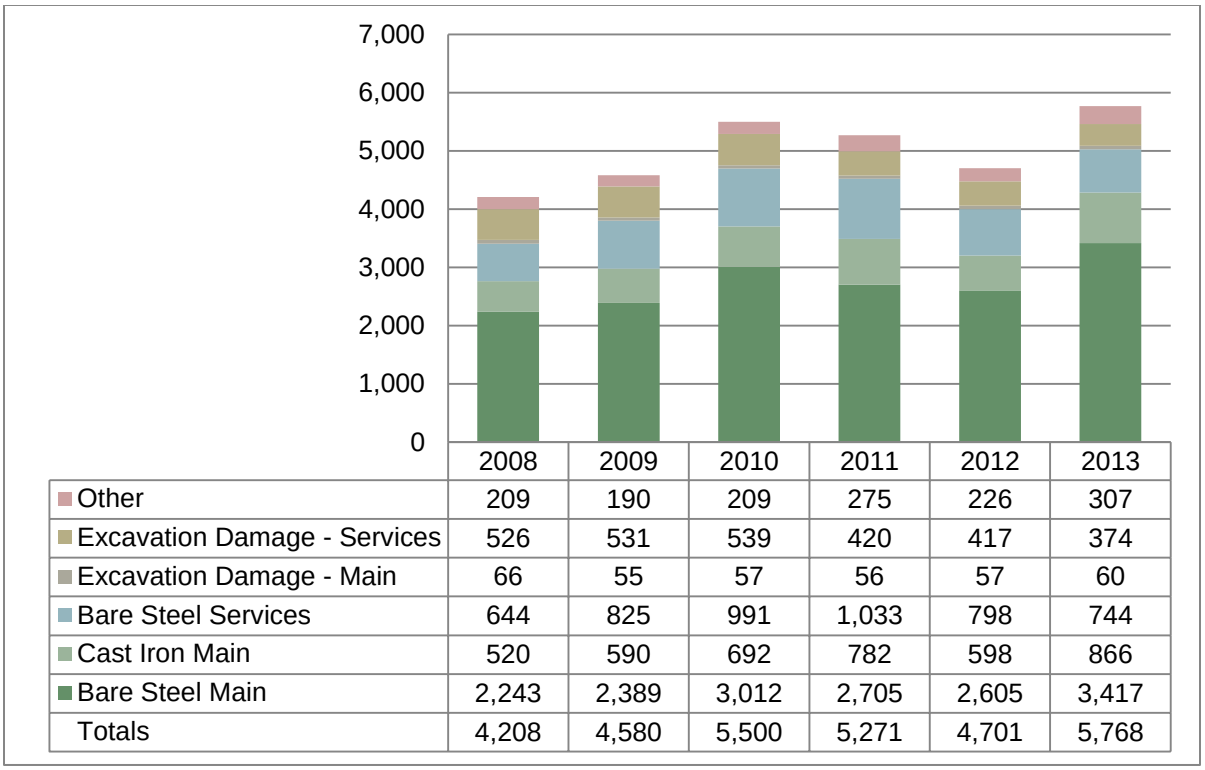


	2008	2009	2010	2011	2012	2013
Bare/Unprotected Steel	5	8	7	7	4	4
Cast/Wrought Iron	9	9	12	13	27	27
Totals	14	17	19	20	31	31

Source: Data Request GO-8, Annual DOT reports

In contrast, PECO has not increased its replacement rate of unprotected bare steel main. As shown in Exhibit VIII-14, unprotected bare steel mains and services are the leading cause of leaks at PECO. In fact, the percentage of leaks due to cast iron and unprotected bare steel mains and services has increased from 81% of total leaks in 2008 to over 87% in 2013. Despite, PECO's main replacement program efforts, unprotected bare steel and cast iron leaks have been increasing especially with regard to unprotected bare steel as noted in Exhibit VIII-15 on a leaks per mile basis.

Exhibit VIII-14
PECO Energy Company
Cause of Leaks
For the Years 2008 through 2013



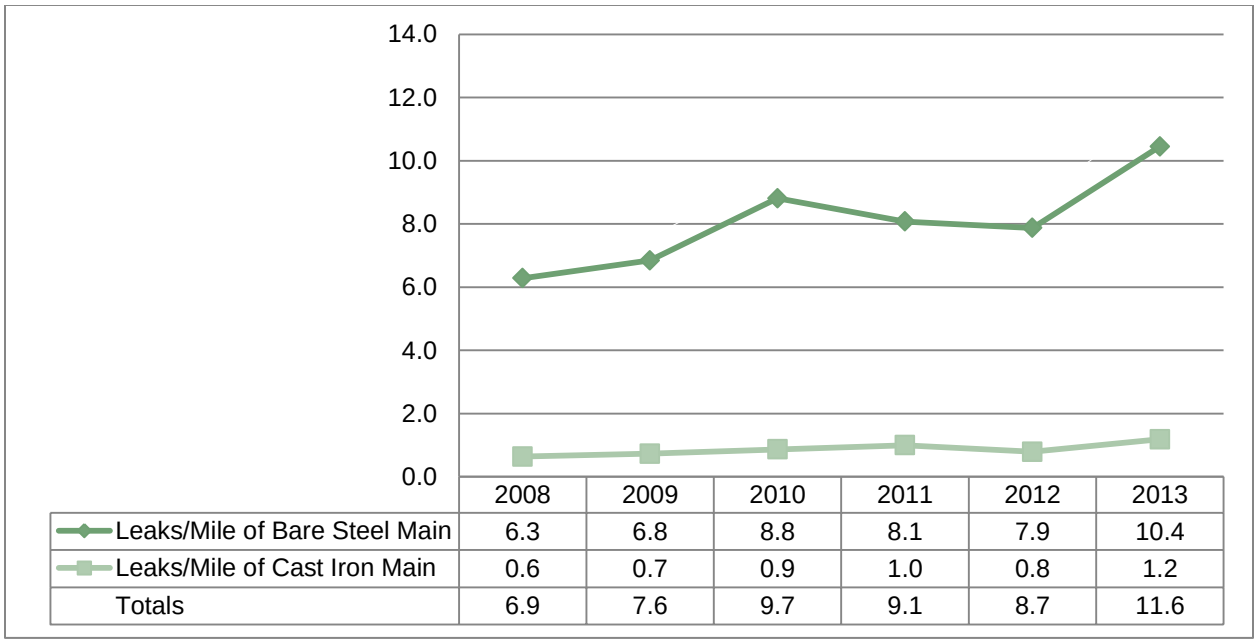
	2008	2009	2010	2011	2012	2013
Other	209	190	209	275	226	307
Excavation Damage - Services	526	531	539	420	417	374
Excavation Damage - Main	66	55	57	56	57	60
Bare Steel Services	644	825	991	1,033	798	744
Cast Iron Main	520	590	692	782	598	866
Bare Steel Main	2,243	2,389	3,012	2,705	2,605	3,417
Totals	4,208	4,580	5,500	5,271	4,701	5,768

Source: Data Request GO-8

PECO Management indicated that it plans to make mitigating leaks on unprotected bare steel mains a greater focus going forward. The risk associated with unprotected bare steel mains is evident from Exhibit VIII-15 which shows the number of leaks per mile of steel main increasing from 6.3 in 2008 to over 10.0 in 2013. However, even though the number of leaks per mile of cast iron is staying fairly steady at around 1.0, cast iron should remain a priority for replacement due to the potential for catastrophic failure.

PECO has replaced an average of 22 miles of cast iron main annually since the AGIMP was initiated in 2011, but the Company has only replaced an average of five miles of unprotected bare steel main over the same time period. At five miles per year, it will take PECO approximately 65 years to replace its bare unprotected steel mains. The Audit Staff recognizes that the Company has over twice as much cast iron/wrought iron as unprotected bare steel main infrastructure. However, the Audit Staff has identified that based on the leaks per mile of unprotected bare steel that indicate a need to remove unprotected bare steel at a pace equal to, or greater than, PECO's cast iron main replacement.

Exhibit VIII-15
PECO Energy Company
Number of Leaks per Mile of Bare Steel and Cast Iron Main
For the Years 2008 through 2013



	2008	2009	2010	2011	2012	2013
Leaks/Mile of Bare Steel Main	6.3	6.8	8.8	8.1	7.9	10.4
Leaks/Mile of Cast Iron Main	0.6	0.7	0.9	1.0	0.8	1.2
Totals	6.9	7.6	9.7	9.1	8.7	11.6

Source: Data Request GO-8 and GO-67

Recommendations

1. Reduce gas line hit damages resulting from PECO mapping data errors, by mitigating mapping data errors and implementing an aggressive program to accurately locate facilities with an emphasis on plastic pipe.

2. Accelerate the replacement rate of unprotected bare steel mains through a risk-based/prioritized schedule.

IX. EMERGENCY PREPAREDNESS

Background – Effective June 11, 2005, Public Utility Commission (PUC or Commission) regulations at 52 Pa. Code § 101.1-101.7 (Chapter 101) require jurisdictional utilities to develop and maintain appropriate written physical security, cybersecurity, emergency response, and business continuity plans to protect the infrastructure within the Commonwealth and ensure safe, continuous and reliable utility service. Along with the requirement to establish these "emergency preparedness" plans, a utility is also required to annually file a Self-Certification Form with the Commission. This form is comprised of 13 questions as shown in Exhibit IX-1 below.

Exhibit IX-1
Pennsylvania Public Utility Commission
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 in the last year and updated as needed?	
3.	Is your physical security plan tested annually?	
4.	Does your company have a cybersecurity plan?	
5.	Has your cybersecurity plan been reviewed in the last year and updated as needed?	
6.	Is your cybersecurity plan tested annually?	
7.	Does your company have an emergency response plan?	
8.	Has your emergency response plan been reviewed in the last year and updated as needed?	
9.	Is your emergency response plan tested annually?	
10.	Does your company have a business continuity plan?	
11.	Does your business continuity plan have a section or annex addressing pandemics?	
12.	Has your business continuity plan been reviewed in the last year and updated as needed?	
13.	Is your business continuity plan tested annually?	

* Attach a sheet with a brief explanation if N/A is supplied as a response to a question.
Source: Public Utility Security Planning and Readiness Self-Certification Form, as available on the PUC website at http://www.puc.state.pa.us/general/onlineforms/pdf/Physical_Cyber_Security_Form.pdf.

During the course of fieldwork, the Audit Staff reviewed the most recent Self Certification form submitted by PECO Energy Company (PECO or Company) to determine the status of its responses. Our examination of the Company's emergency preparedness included a review of the physical security plan, cybersecurity plan, emergency response plan, business continuity plan and associated security measures. In addition, the Audit Staff performed inspections at a sample of the Company's facilities. Due to the sensitive nature of the information reviewed, specific information, findings, and recommendations are not revealed.

Emergency Response at PECO is handled by the Manager of Emergency Preparedness who reports to the Director of the Distribution System Operations Department (see Chapter VII – Electric Operations). PECO utilizes an Emergency

Response Organization (ERO) structure comprised of employees from various Departments covering various roles (i.e., Emergency Response Director, Technical Lead, Staffing Lead, Support Services Lead, Communications Lead, etc.). The ERO structure can be activated, in whole or in part, during business continuity events such as storms, floods, heat/peak loads, security issues, facility problems, etc. PECO has eight fully staffed Emergency Response teams covering the various roles in the ERO structure. Each team serves on a rotating basis as the primary response team for a week and backup/secondary response team for a week.

The responsibility for oversight and administration of the Business Continuity Plan (BCP) was transitioned from PECO to a centralized group within Exelon's Business Services Company (Exelon BSC) in the summer of 2012. Exelon BSC is responsible for the administration, drilling and assessment of BCPs at all of Exelon Corporation's companies, including PECO. PECO is responsible for developing, updating and, if needed, implementing the BCPs through the Company's ERO structure. PECO's Departments will create separate BCPs based upon their response to particular situations like union strikes, pandemics, or other business continuity events. While the BCPs are developed by different Departments, Exelon BSC ensures that all plans are consistent and comprehensive.

Physical security at PECO is handled by the Physical Security Manager reporting directly to the Senior Vice President and Chief Operating Officer. The Physical Security Manager handles investigations (e.g.,fraud, misconduct, theft, etc.), security assessments of facilities, security related training, etc. related to PECO. In addition, the Exelon Utilities Director of Physical Security Programs and Compliance position was established in April 2013 and leads the efforts of Exelon to ensure robust security programs are in place at all three of the Exelon Utilities. Exelon Utilities and the Exelon Corporate & Information Security Services (CISS) Department supports PECO's Physical Security Manager and ensures alignment and compliance with corporate programs and strategies. The CISS defines a security framework across Exelon while providing a standard, formal, and continuous approach to security management, enabling security technology and business processes that are aligned with business requirements and enterprise security management. CISS provides oversight of the Exelon Security Center, which is staffed 24 hours a day, 7 days a week and provides PECO with centralized monitoring of critical facilities.

Theft of copper wire is a major safety and operational concern for electric utilities. In response to copper thefts at PECO, the Company began painting substation grounding wire purple. This enabled PECO's Physical Security Department and local law enforcement agencies to pursue and prosecute copper thieves from PECO's system. The purple wire is also serving as a theft deterrent since thieves are becoming aware that colored wire is traceable. PECO was recognized by the Edison Electric Institute and American Gas Association Security Committee for its purple wire initiative as a best practice in physical security. In addition, the Company founded the Philadelphia Scrap Metal Theft Network in 2011 which is comprised of other utility security Departments and the law enforcement community with members ranging from New York to Virginia.

Cybersecurity is considered an Exelon BSC function and is handled by the Corporate and Information Security Department which is headed by Exelon BSC's Chief Security Officer (CSO). The CSO manages both physical and cybersecurity intelligence for Exelon Corporation, which allows for combined drills, information sharing, intelligence gathering, etc. While PECO has employees dedicated to Information Technology (IT), the Department itself is considered an embedded Department (see Chapter XII – Information Technology) and generally does not handle cybersecurity issues. Instead, the Exelon BSC's Cybersecurity Operations Center monitors Exelon's network and systems from a cybersecurity perspective whereas PECO's IT monitors system performance. Both serve as watchdogs for cyber events but each has a specific mission/role. In addition, Exelon BSC provides cybersecurity support in deployment of new systems, technologies, or hardware, penetration testing, training, security protocols, backup schedules, corporate governance, risk assessment, etc. In 2013, Exelon BSC moved a centrally located employee to PECO to focus on PECO system architecture and gives PECO a direct interface to Exelon BSC's cybersecurity operations.

Findings and Conclusions

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

1. PECO performs all physical security assessments with in-house personnel.

PECO's Physical Security Department performs vulnerability assessments (VA) and security site assessments (SSA) on its facilities to identify and address security issues. While there are some differences between the scope of VAs and SSAs, the main difference is VAs are performed on the most critical facilities whereas SSAs are performed on all other facilities. Both VAs and SSAs are completed on a periodic basis (every 3 years for VAs and 3 to 5 years for SSAs depending upon facility criticality). PECO also performs other inspections encompassing security aspects of facilities on a routine (i.e., substation inspections occur monthly) or as needed basis.

PECO's Physical Security Department performs all VAs and SSAs in-house. It is noteworthy to mention that restricting access to sensitive information contained in a VA or SSA is crucial to protect the entity and cited by PECO as a reason for performing all VA/SSAs internally. For instance, VAs could identify a potential flaw or single contingency if revealed that could result in large power outages. Naturally this information should not be shared in the public domain so that terrorists could act upon it. While this in-house expertise provides PECO with a tremendous advantage to continuously assess its facilities, this approach does lack the ability to obtain an assessment and different perspective from a qualified and vetted independent party. The Audit Staff notes that different perspectives in this area can identify new or

previously unidentified risks and provide additional insight. Therefore, the Audit Staff contends that it would be beneficial for PECO to utilize a qualified and vetted independent party to periodically perform VA/SSAs. Although, various consulting firms perform work in this area, the Audit Staff understands PECO's concerns associated with disclosing highly sensitive information to an independent third party. Consequently, as an alternative PECO could utilize affiliate personnel at Commonwealth Edison Company, Baltimore Gas and Electric Company, Exelon BSC or another affiliate. In addition, various federal agencies, such as Federal Energy Regulatory Commission, Department of Homeland Security, etc. can provide similar site assessments at no cost and eases some of the data sensitivity concerns about an independent third party.

Recommendation

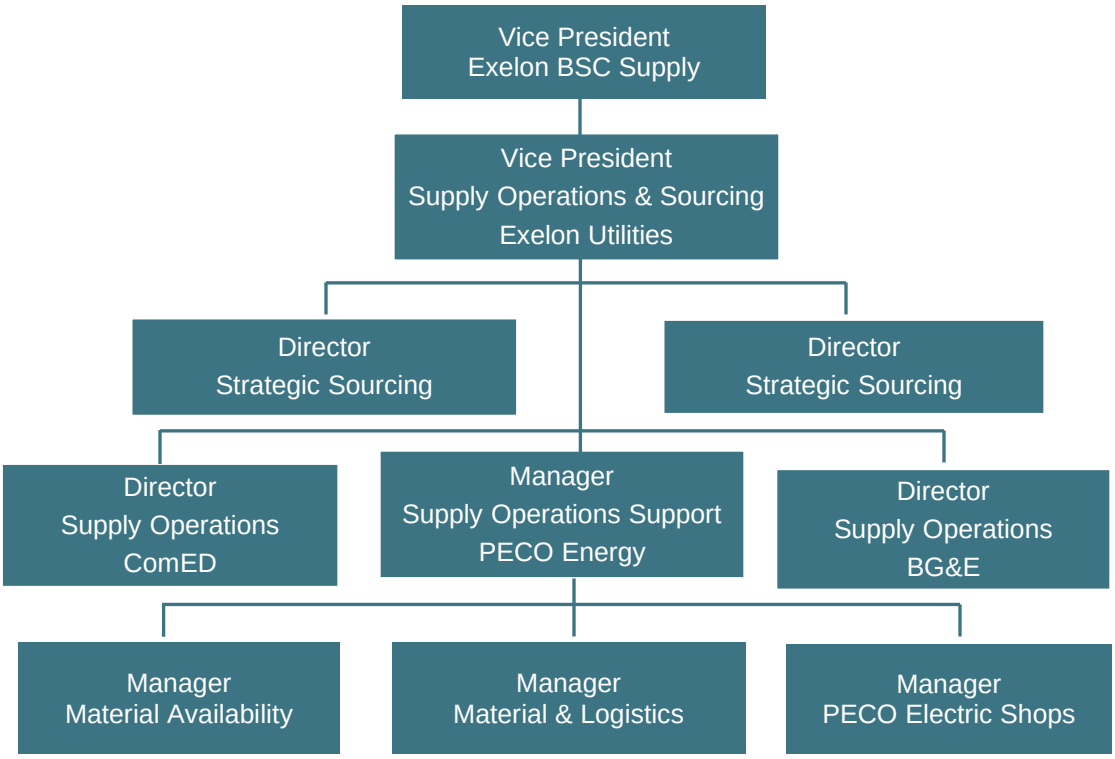
1. Periodically conduct VA/SSAs using outside resources.

X. MATERIALS MANAGEMENT

Background

The overarching responsibility for the procurement and materials management function at PECO Energy Company (PECO or Company), as shown in Exhibit X-1, falls under the Exelon Business Services Company (Exelon BSC) Supply organization which in turn has been partially delegated to the Supply Operations & Sourcing Department with Exelon Utilities (see Chapter III – Executive Management and Organizational for further discussion regarding Exelon Utilities). As shown in Exhibit X-1, the Vice President of Supply Operations & Sourcing, Exelon Utilities is responsible for the two Strategic Sourcing Organizations (discussed later in this chapter) as well as providing oversight of the supply operation support functions at each of the regulated utilities including PECO. The supply organization dedicated to PECO is headed by the Manager of Supply Operations Support (SOS) who reports to Exelon Utilities' Vice President of Supply Operations & Sourcing. As of December 31, 2013, PECO's Supply Operations Support group was comprised of 62 employees including seven managers and supervisors. The SOS group is made up of three Departments: the Material Availability group (MA), the Material & Logistics group (ML), and the PECO Electric Shops group (PES).

Exhibit X-1
Exelon Utilities
Supply Operations Organization Chart
As of December 31, 2013



Source: Data Request GD-7f

The function of PECO's MA group is to make sure that material is available for their customers[44] at all times. Moreover, this MA is responsible for maintaining appropriate inventory levels and procuring material as necessary. As of December 31, 2013, the MA consisted of three Work Management Analysts (WMAs) and five Procurement Specialists (PSs). WMAs are assigned to each PECO region (i.e., Bucksmont, Delchester and Philadelphia) and act as liaisons between the supply group and customers. The WMAs are also responsible for material availability to their respective region along with coordination of any logistical material delivery support. A majority of the planned and emergency type work flows through the WMAs who review the material requests to determine the availability of the material identified, any long lead items to insure the request is being placed against the correct facility, etc. The PSs in the MA group are the tactical buyers or purchasing agents with each PS having responsibility for a specific inventory category (i.e., each inventory category could include items such as transformers, wire and cable, electrical distribution equipment, etc.) across the three regions and the Transmission and Substation (T&S) Department. There is one PS responsible for services contracts for the three Regions and T&S projects.

MA is also responsible for determining, setting and monitoring minimum and maximum levels in Passport, which is the inventory management system used by all three utilities. Minimum and maximum levels and reorder points for inventory items are established based on historical usage data, lead times, etc. and are reviewed periodically by the Procurement Specialists in MA. The key performance indicators for MA include tracking capital and expense inventory, managing the inventory fill rate by line item, diversity spend, inventory turns ratios, contract requisition approval and operational savings.

The ML group is responsible for maintaining and distributing inventory to storerooms, warehouses and job sites throughout PECO's service territory. ML consists of 37 employees assigned to three distinct functional units. The first unit is the "transportation group" and is responsible for moving or transporting inventory from the central warehouses to the satellite storerooms or to various job sites as needed. This group consists of eight Equipment Operators, three Truck Drivers and three Helpers. This group also has a Supply Scheduler who sets the delivery schedule. The second and third units in ML are in charge of the main central warehouse in Berwyn and the smaller satellite storerooms/facilities, respectively. The Bucksmont Region consists of a total of ten Material Coordinators responsible for the central warehouse and satellite storerooms. Meanwhile the other two Regions encompassing Delaware, Chester and Philadelphia Counties is comprised of eight Material Coordinators responsible for satellite storerooms. Material Coordinators are responsible for staging inventory for transporting to smaller storerooms or for direct delivery to job sites. The Material Coordinators work in conjunction with the WMAs from MA on inventory identification on a weekly basis. The key performance indicators for ML include emergency call out rate, emergency response time, safety audits, vehicle audits, overtime and cycle count accuracy.

[44] MA customers are designers, planners or construction foremen that are working on a specific job.

The PES provides repair services of electrical equipment (e.g., transformers, circuit breakers, bushings, etc.), tools, rubber insulating goods (e.g., sleeves, gloves, etc.) and capital tool repairs, which are performed by electrical technicians or Tool Mechanics. In addition, T&S Specialists report to the Manager of PES and are responsible for purchasing material and performing technical research to identify the components needed to support the Transmission & Substation (T&S), Engineering and Maintenance groups and the Project Management Organization. The T&S Parts Team has a mix of three T&S Parts Specialists, a Work Management Material Analysts, and a Senior Procurement Specialist who is only responsible for purchasing substation equipment. The key performance indicators of this group include safety audits, vehicle audits, overtime, contract requisition approval, and on time delivery and productivity.

The groups within Exelon BSC that provides material and services support to PECO are the Strategic Sourcing Organizations (SSOs). Exelon Utilities has two SSOs, one for procuring material and one for bidding and sourcing services. Both SSOs are responsible for sourcing or procuring materials and services for all three utilities specifically to optimize cost, quality and performance. Category Managers (CM) in the SSO perform sourcing activities which include bidding, rebidding, negotiating supplier contracts, acquiring low cost and efficient suppliers, etc. Each CM is responsible for a particular material and service category (i.e., wire and cable, transformers, etc.). The CMs maintain strong relationships with suppliers and are responsible for executing performance evaluations or feedback to the supplier. In addition to materials, the SSOs are responsible for sourcing services including construction, flagging, vegetation management, engineering, environmental services, etc. The primary key performance indicator for the SSOs is generated savings as a result of its strategic procurement efforts. PECO's allocated share of the overall savings achieved is shown in Exhibit X-2 for the years 2008 through 2013. In 2008, PECO and the SSO reevaluated material and third party service purchases and achieved very significant savings between 2009 and 2011. With the BG&E merger in 2012, all material and services were reexamined leading to further savings.

Exhibit X-2
Exelon Business Services Company
Strategic Sourcing Organization Generated Savings allocated to PECO (millions)
For the Years 2008 through September 30, 2013

PECO Allocation	2008	2009	2010	2011	2012	2013
Savings	$5.72	$17.73	$22.91	$18.54	$6.04	$17.61

Source: Data Request MM-21

PECO utilizes Passport) to manage all phases of inventory control, warehousing and materials replenishment for the Company. The three modules in Passport that are primarily used for inventory purposes include Purchasing, Inventory Management and Contract Management. The Purchasing module is designed to execute all purchasing activities across PECO and support direct purchase requirements and inventory replenishment. The Inventory Management module is designed to help manage

inventory levels and movement at various warehouses. The Contract Management module is used to manage all aspects of the contract lifecycle from bidding to evaluations to final approval. Each inventory item in Passport has an established minimum and maximum value as well as preset reorder points which generate a reorder notice to the Procurement Specialists when the item reaches its reorder point. The Procurement Specialist then submits a blanket order to the vendor for that specific inventory item.

PECO categorizes its inventory based on several factors but the two major categories are capital inventory (or capital reserve) and O&M inventory. Both categories are further split into non-emergency reserve (non-ER) inventory and emergency reserves (ER). ER is defined as parts and materials designated as emergency stock or safety stock. ER parts and material are critical materials held for use in emergency situations such as major equipment failures that cause customer outages, create undesirable operating conditions, or place a critical location in a single contingency (i.e., no additional backups available). Capital reserve is visible in Passport for appropriate tracking and availability query purposes. Capital reserve is capitalized upon receipt and is not part of PECO's inventory metrics. The non-ER inventory in capital reserve mainly includes transformers and meters while larger and more expensive power transformers are categorized as emergency reserve.

As summarized in Exhibit X-3, PECO operates 21 warehouses at 15 locations across its service territory, with certain locations having multiple storage sites. For example, the Oregon location has an electric repair shop, a cable yard and a storage area where PECO houses capital emergency reserve stock. Approximately 75% of the Company's operations and maintenance (O&M) inventory (non-critical and emergency) is stored at two of the larger facilities: Berwyn and Luzerne.

Exhibit X-3
PECO Energy Company
Regular Capital and O&M Inventory Held by Major Warehouse
As of July 31, 2013

Warehouse	Capital Inventory	O&M Inventory
Berwyn Central Warehouse	$4,649,232	$7,002,763
Christian Street Service Building	$153,276	$29,789
West Conshohocken Gas Center	$0	$51,837
Coatesville Service Building	$254,540	$99,866
Doylestown Service Building	$182,853	$36,102
Delta Service Building	$35,975	$0
Emilie Service Building	$307,141	$50,833
G & Luzerne Service Building	$2,308,618	$456,147
Meter Shop Facility	$0	$11,479
Baldwin Service Building	$363,986	$165,431
Oregon Electric Repair Shop	$1,030,543	$467,472
Oregon Cable Yard	$0	$1,074,318
Perkieomen Service Building	$153,127	$31,666
Phoenixville	$339,930	$179,038
Plymouth Service Building	$242,493	$143,786
Southwark Service Building	$554,519	$186,361
Oregon Shops	$59,608	$668,862
North Wales Service Building	$188,528	$45,438
Warminster Service Building	$406,033	$271,087
West Chester Service Building	$173,262	$80,255
West Grove Service Building	$126,698	$71,003
Totals	$11,530,361	$11,123,533

Source: Data Request MM-11

PECO employs a hybrid inventory management approach referred to as a Vendor Managed Inventory/Integrator Model (VMI) in which a third-party is contracted to maintain, manage, and supply PECO with inventory, typically fast moving items, on demand as per agreed upon contract provisions while maintaining specific Capital and O&M inventory at Company owned warehouses as shown in Exhibit X-3. A vast majority of Company maintained inventory includes overhead wire, underground cable, transformers, slower moving transmission and substation equipment, etc. Under the VMI process, a supplier performs sourcing, purchasing, and delivery of the inventory to a central warehouse or individual job sites. PECO's inventory management system automatically forwards material requests to the supplier if the item is not in PECO's inventory. An VMI supplier is expected to manage inventory to ensure that critical or frequently used items are always available and to achieve a high service level on all orders. Depending on the criticality of the item, the supplier either packages and ships orders directly to job sites or stages the material at the main central warehouse in Berwyn which is subsequently transported by the ML group to a local storeroom or individual job sites. PECO has incorporated savings incentives in the last several

EDE/MRO and GDE contracts with the supply vendors. These incentives have ranged from 0.5% to 3% of PECO's total spend (i.e., total annual purchases). In most cases, suppliers have been able to generate sufficient savings to meet contractual commitments. In the cases that they have not been able to achieve sufficient savings, suppliers are required to provide a credit for the shortfall. The annual supplier savings for each year are shown in Exhibit X-4.

Exhibit X-4
PECO Energy Company
Supply Contractor Realized Savings
For the Years 2010, 2011 and 2013

	2010	2011	2013
Supply Contractor Savings	$796,920	$521,335	$247,055

Note: 2012 data was not available due to rebid of the contracts.
Source: Data Request MM-29

PECO uses VMI suppliers for different categories but there are three major materials categories pertinent to utility operations. The first category is electrical distribution equipment (EDE) and miscellaneous repair and operations (MRO) which include consumables, wipes, paper towels, tools, safety products etc. The second inventory category is gas distribution equipment (GDE) such as pipe, valves, fittings, etc. The third category is poles. In addition to providing electric and gas distribution parts and equipment, PECO uses several other vendors to provide miscellaneous equipment such as crane rental services, construction equipment, etc.

These materials are provided by the VMI supplier with a competitively bid mark-up cost for providing inventory and on-time delivery services. The mark-up cost is a premium associated with providing the inventory item based on an agreed upon service level negotiated between the VMI supplier and PECO. These mark-up costs vary significantly based on the level of service requested by PECO (i.e., standard delivery, spot buy/drop shipments, etc.). Exhibit X-5 depicts the annual inventory dollar issues for PECO and VMI suppliers as well as PECO's average inventory balance and its inventory turnover with mark-up costs.

Exhibit X-5
PECO Energy Company
PECO and VMI Supplier Inventory Dollar Issues;
PECO Average Inventory Balances and Inventory Turnover with Mark-ups
For the Years 2008 through 2013

	2008	2009	2010	2011	2012	2013
Net Annual Issues (PECO)	$25,201,111	$22,973,529	$29,454,347	$23,745,641	$15,940,104	$23,925,232
Net Annual Issues (ISM Suppliers)	$33,927,526	$27,905,734	$34,449,244	$39,548,999	$42,726,127	$34,439,939
12-month Average Inventory Balance	$10,470,806	$9,019,026	$9,690,195	$10,416,274	$10,382,514	$10,382,881*
Inventory Turnover with Mark-ups	5.65	5.64	6.59	6.08	5.65	5.62**

* Inventory balance calculated based upon an average of the seven months, January thru July 2013.
** Inventory turnover for 2013 was calculated based on a seven month average inventory balance instead of the full year.
Note: Emergency O&M is excluded from issues and balances.
Source: Data Requests MM-2, MM-3, MM-11, MM-36, and Auditor Analysis

Cycle counting at PECO is performed on a cyclic schedule by location such that a different portion of its total inventory is counted each month. The more expensive and high value items in PECO's inventory such as transformers, wire and cable are counted every month. All other material is divided into cycle count categories based on value and usage frequency. The cyclic schedule is based on the 1-2-3-4 cycle count methodology as follows:

- Category 1 represents high dollar/high usage items which are counted every 3 months,
- Category 2 represents medium dollar/high usage items which are counted every 6 months,
- Category 3 represents medium dollar/medium usage items which are counted every year, and
- Category 4 represents the remaining inventory items which are counted every two years.

PECO's cycle counting accuracy has been consistently high with the Company reporting 99.95% net accuracy or higher and absolute accuracy generally following net accuracy, albeit at a slightly lower accuracy for the years 2008 through 2012.

Findings and Conclusions

Our examination of the Materials Management function included a review of assigned responsibilities, policies and procedures, inventory control, inventory warehouse locations and inventory turnover. Based on our review, the Company

should devote additional efforts to improve the effectiveness of its materials management operations by addressing the following:

1. PECO maintains elevated levels of emergency and inactive inventory.

PECO's inventory is categorized into capital and O&M inventory as well as emergency and non-emergency stock. As of July 2013, emergency O&M inventory was maintained at 16 of the 21 storage buildings/warehouses with over 80% of emergency material concentrated at two locations (i.e., Berwyn Central Warehouse and Luzerne Service Building). As of July 31, 2013, PECO had over $16 million in emergency capital inventory and over $9 million in emergency O&M inventory. The $16 million in emergency capital inventory mostly consisted of large power transformers for substations which are considered critical emergency spares. Procurement of these large transformers entail very long lead times, in some cases longer than one year. However, PECO's emergency O&M levels have consistently comprised approximately 45% to 50% of total O&M inventory (i.e., regular O&M inventory and emergency O&M inventory) for the last six years, as shown in Exhibit X-6. It should be noted that PECO's VMI model is designed to timely supply fast moving/high turnover items. Hence, fast moving/high turnover items should typically be excluded as designated emergency stock items.

Exhibit X-6
PECO Energy Company
Average Emergency O&M Inventory as Percentage of Total O&M Inventory
2008 thru 2013

Year	Emergency O&M	Total O&M	Emergency as Percentage of Total
2008	$8,592,927	$19,063,632	45%
2009	$8,552,935	$17,571,961	49%
2010	$8,590,323	$18,280,517	47%
2011	$8,943,670	$19,359,944	46%
2012	$9,268,400	$19,650,914	47%
2013*	$9,302,748	$19,685,629	47%

* Average of seven months (Jan thru July)
Source: Data Request MM-11

Emergency stock is required to ensure smooth and reliable operations and to respond quickly during emergencies. As a general rule of thumb, overall emergency stock levels should be 10%-20% of total O&M inventory. However, actual emergency stock levels should be established on an itemized basis based on historical activity, lead times, availability of material, etc. and may justifiably, individually and cumulatively, deviate substantially from this general rule of thumb. In particular, PECO's VMI model by virtue of its design to handle primarily fast moving/high turnover items effectively elevates the Company's emergency O&M inventory levels and as percentage of total O&M inventory (i.e., routine Company-held inventory levels are reduced) and provide

rationale for emergency stock levels higher than 20% of total O&M inventory. The Company strives to review its inventory levels periodically through several different processes (i.e., quarterly inactive inventory reviews, critical inventory reviews, etc.) The Audit Staff contends that the periodic reviews by the Company are merely one part of an effective review of emergency stock. For instance, PECO's emergency stock reviews focus more on inactive inventory and new projects but does not account for system wide emergency stock analysis. In other words, once an item becomes designated as emergency stock, it remains in emergency stock until identified as obsolete. In contrast, an effective emergency stock analysis would consider stock levels across all warehouses, historical needs, lead times, criticality, etc. In addition, the Company should consider its VMI model as part of its emergency stock analysis in order to determine the feasibility of securing some of its emergency stock materials from its VMI vendors in a timely manner and therefore reduce its own emergency stock levels.

As of December 31, 2013, PECO had 1,018 non-critical or non-emergency inventory items in its capital inventory which mostly include single and three-phase transformers, meters, transformer metering instruments, etc. Additionally, PECO has over 3,800 non-critical or non-emergency inventory items in its O&M inventory consisting of high valued items (i.e., underground copper cable and bushings) to inexpensive items (i.e., washers, screws, and bolts). As of December 31, 2013, approximately 2,400 non-emergency O&M items with a value of $2.7 million that had been inactive for over two years. In addition to the non-emergency O&M inventory, approximately $4.5 million of PECO's December 31, 2013 emergency O&M inventory has not been issued in over two years.

It is typical for emergency stock items (both capital and O&M) to consist of slow moving, high value, and infrequently utilized items. Nonetheless, while it is expected that large and specialized transformers could remain inactive as part of the capital reserve inventory due to the nature and purpose of these items, it is unclear why large amounts of PECO's non-critical and emergency O&M material has been inactive during the last two years. This activity is particularly unexpected because at least three major event storms, including Hurricanes Sandy and Irene, have impacted PECO's service territory over this time frame. Moreover, Hurricane Sandy has been identified as the most devastating storm in PECO's history causing severe and widespread damage that resulted in outages for more than half of the company's electric customers. Nevertheless, despite the destructive nature of these major storms causing extensive equipment failures and outages, the Company only issued approximately 32% of its emergency and 38% of non-emergency O&M inventory items during the two year period ending December 31, 2013. While emergency stock items may support materials that are no longer manufactured and that were unaffected by these storms, over 63% of PECO's non-critical O&M did not move within a two year period.

Management indicated that quarterly reviews of inactive, emergency and obsolete inventory are performed in which appropriate engineering resources are utilized to help identify obsolete inventory. Moreover, inactive inventory is reviewed on a project by project basis such as the T&S critical inventory review where the T&S Department reviews all items of a particular asset/item. The Audit Staff notes that the

Company does need to maintain sufficient inventory to address emergencies in a safe, efficient and timely manner. However, with large amounts of emergency stock not moving in the last two years, it appears that PECO is holding elevated levels of obsolete or unneeded inventory. Overall, utilities should strive to reduce the amount of inactive or obsolete inventory that is being stored at the company's facilities/warehouses. One such effort could include periodic detailed obsolete or inactive inventory analysis of each warehouse which would help identify unneeded items that either could be sold for salvage value or written off.

The Audit Staff believes that PECO should analyze the optimal levels of emergency O&M inventory that should be maintained on a warehouse by warehouse and company-wide basis. Such a comprehensive investigation or analysis should be performed occasionally (approximately every three to five years) in order to optimize inventory levels, free up warehouse space, reduce carrying costs, etc. The Audit Staff recognizes that the electric and natural gas industry is faced with routine storms and/or emergency situations that requires dedicated emergency stock and safety stock, some items of which may not be needed for extended periods of time. However, a routine emergency stock analysis looking at company-wide emergency stock levels could aid PECO in reducing unneeded emergency stock, optimize stock levels, redeploy stock regionally, and/or improve emergency response.

The Audit Staff contends that there is an opportunity for the Company to improve its material management operations by performing studies on both emergency O&M and inactive materials. In addition, the Audit Staff estimates that if PECO reduced its average emergency O&M levels by 10%-20%, it could reduce emergency inventory levels by approximately $890,000 to $1.78 million with an associated annual carrying cost reduction[45] of approximately $134,000 to $267,000, based upon a 15% carrying cost factor. It is important to note that PECO's VMI model could offer a platform to analyze emergency stock inventory levels. For instance, the Company has already noted that many of the O&M materials needed for storm restoration is held by its VMI suppliers. This would indicate that most of PECO's O&M emergency inventory supports no longer manufactured material items. However, an emergency stock analysis should not only look at the quantity of the material but must also consider if PECO has migrated to newer, commercially available, similar parts. Furthermore, inactive inventory stored in warehouses results in unnecessary overhead or carrying costs incurred by the Company and the Audit Staff notes that any reduction in obsolete routine O&M inventory would improve PECO's inventory turnover. In fact, the Audit Staff estimates that a 50% reduction in inactive non-emergency O&M inventory would result in a one-time reduction in inventory of $1.33 million and an annual carry cost reduction of $200,000 (based upon a 15% carrying cost factor). Inactive inventory is usually reduced by reselling or salvaging the items and could yield additional benefits or savings. Collectively, on a cumulative basis, PECO could potentially realize a one-time inventory reduction savings of approximately $2.22 million to $3.11 million and an annual carry cost savings of $333,000 to $467,000 .

[45] Carrying costs could include various components such as capital costs, storage space costs, inventory service costs, inventory risk costs, etc.

Recommendation

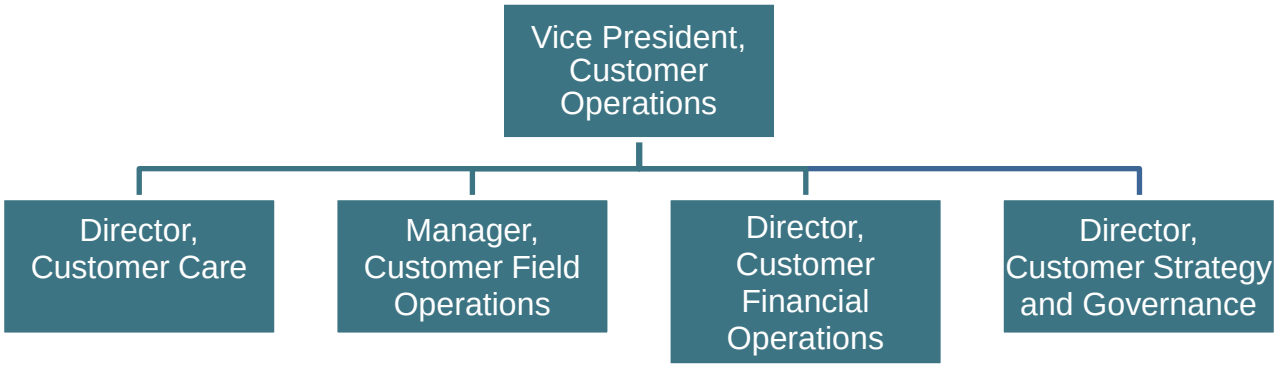
1. Perform a periodic comprehensive system-wide review of emergency and inactive inventory and eliminate inventory, as appropriate.

XI. CUSTOMER SERVICE

Background

PECO Energy Company (PECO or Company) provides electric and gas service to customers exclusively within Pennsylvania. PECO's service territory covers approximately 2,100 square miles, primarily in the southeast region of the Commonwealth. PECO serves approximately 1.6 million electric and 497,000 gas customers. The Vice President (VP) of Customer Operations oversees the customer service function and reports directly to PECO's Senior Vice President & Chief Operating Officer. As illustrated in Exhibit XI-1, Customer Operations is organized into four Divisions under the VP of Customer Operations: Customer Care, Customer Field Operations, Customer Financial Operations, and Customer Strategy and Governance. In 2012, Customer Operations handled over six million customer calls, processed an average of 2.2 million electric and gas meter readings daily, and mailed over 20 million bills. PECO also collected approximately $3.4 billion dollars in customer payments and maintained a customer assistance program for over 138,000 financially disadvantaged customers.

Exhibit XI-1
PECO Energy Company
Customer Operations Organizational Chart
As of December 5, 2013



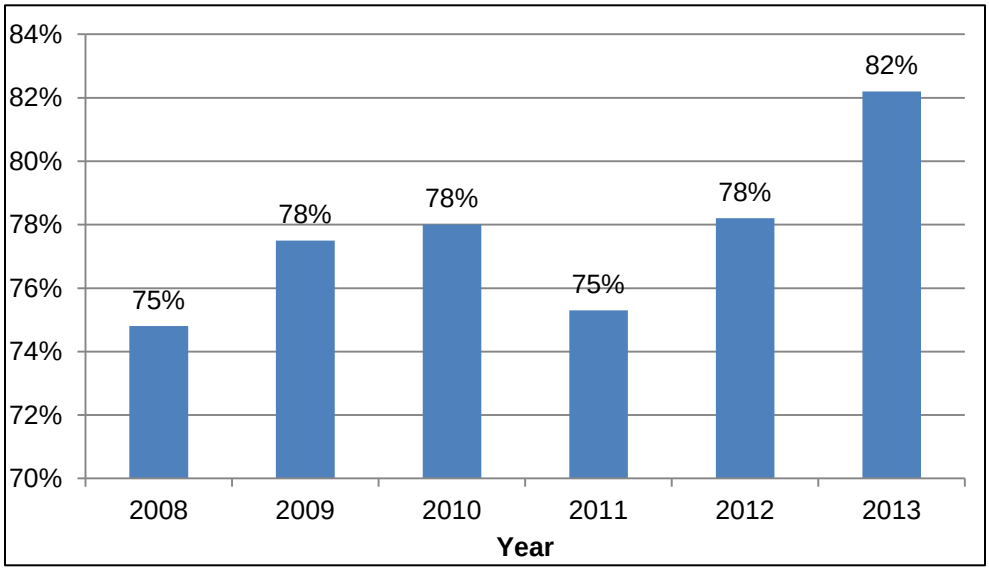
Source: Data Request GD-7

The Customer Care Division is responsible for assisting all customers that contact PECO's Customer Care Call Center (Call Center). PECO's customers fall into three categories: electric only, gas only and dual service customers (i.e., electric and gas service). While PECO utilizes three call centers, it only operates one and outsources the remaining two. PECO's Customer Care group is comprised of Customer Consultants who assist all residential and small business customers with requests to start/stop service, answer billing questions as well as emergency and outage calls. PECO's Customer Consultants receive calls during regular business hours and are available 24 hours a day, seven days a week for emergency and outage calls. As discussed in greater detail later in this chapter, the Customer Financial Operations

Division manages the two additional outsourced call centers that assist low-income and payment-troubled customers.

The Director of Customer Care is responsible for staffing, training and resource management of the Call Center. Resource management includes tracking, monitoring and projecting staffing levels, forecasting call volumes and managing storm and outage events. PECO conducts multiple customer surveys in order to gauge the customer experience and to discover opportunities for improvement. There are Transactional Surveys (completed after a specific transaction) and Perception Based Surveys (not specific to a transaction). PECO also subscribes to customer satisfaction benchmarking services such as JD Powers and Market Strategies Inc. (MSI) so PECO can determine performance against other large investor-owned utilities. As shown in Exhibit XI-2, the call center customer satisfaction surveys conducted over the 2008 through 2013 time period reflect substantial transactional customer satisfaction performance improvements measured on a collective basis for all three call centers. PECO's goal is to continue to show year-over-year improvements in all customer satisfaction surveys and achieve top-quartile performance. Ratings drivers for overall customer satisfaction include call handling, accuracy, resolution, etc. and are measured as the percentage of customers satisfied with the service received during a call to one of the Call Centers.[46] PECO attributes its continuing success to a shift in its call center hiring and selection practices, its comprehensive and on-going training program, and the Company's commitment to quality assurance.

Exhibit XI-2
PECO Energy Company
Residential Call Center Customer Satisfaction Performance
For the Years 2008 through 2013



Source: Data Request CS-2 & CS-38

[46] Satisfaction is rated between zero and ten for a series of questions on the rating drivers (i.e., call handling, accuracy, resolution, etc.) with 10 being extremely satisfied and zero being extremely dissatisfied at all.

Customer Field Operations Division is responsible for meter reading, high bill and theft of service investigations, meter testing and maintenance. PECO's Customer Field Operations Division also oversees both electric and gas service metering. The electric metering system is comprised completely of automated meters, including automatic meter reading (AMR) technology and advanced metering infrastructure (AMI) technology. AMR meters provide one-way communication from the meter to the utility, whereas, AMI meters permit two-way communications. The AMI meters allow PECO to perform remote connection and disconnection of service to accounts. Furthermore, AMI meters provide an additional resource for the Company to monitor outages (see Chapter VII – Electric Operations for more information on use of meters during outages). The gas metering system is comprised of diaphragm meters and rotary/turbine meters and PECO is in the process of deploying AMI technology in its gas service territory. PECO's goal is to attain full deployment by the end of 2014. The gas meter testing schedule is discussed in greater detail in Chapter VIII – Gas Operations. PECO utilizes 21 billing routes with four day billing windows. Meter readings are automatically uploaded to the Customer Information Management System (CIMS). PECO's billing lag ranges from one to four days, allowing for re-reads within the billing window due to out of tolerance reads (i.e., high, low or zero reads). PECO's automated metering technology enables extremely proficient data collection and has reduced the need to generate estimated bills. In 2013, PECO was able to read and render actual bills to its customers over 99% of the time.

Maintenance and meter problems are investigated by Customer Field Operations personnel. Due to safety reasons, cases are investigated within a five day window where there are high probabilities of meter manipulations. Moreover, PECO employs both an active and passive theft of service program. PECO's active theft of service program investigates usage on cut meters, illegal hookups, and meter by-pass connections. Data analytics, observations from field personnel, contractors and anonymous tips from the public provide resources for the Company to identify these theft situations. More specifically, PECO's passive theft of service program relies on data analytics embedded within CIMS to generate exception reports for each billing cycle, which indicates substantial usage on closed accounts.

The Customer Financial Operations Division is primarily responsible for collection and the billing and payments of PECO's electric, gas and combination service customers. Customers are billed monthly and have the option of remitting payment by mail, in person, by telephone, online, or through PECO's AutoPay service. AutoPay provides PECO's customers with the convenience of a monthly automatic deduction from their account at a designated financial institution. AutoPay is offered to customers at no additional charge and provides several advantages to customers, such as reducing the potential for a late payment, notification 21 days prior to the automatic deduction, and providing payment confirmations once the transactions have been completed. The Customer Financial Operations Division also evaluates billing exception reports, including out of tolerance bill reads and attempts to resolve bad reads within the four day billing window. Additionally, the Customer Financial Operations Division is responsible for oversight of the Financial Call Center which receives incoming calls from payment troubled customers, sets up payment arrangements, refers customers to assistance programs and makes outgoing collection

calls. Customer Financial Operations is also responsible for oversight of the Customer Assistance Program Call Center (CAP Call Center).

PECO's customer assistance programs are also the responsibility of the Customer Financial Operations Division. PECO's multi-faceted Universal Services Program includes:

- Customer Assistance Program (CAP) – CAP serves over 138,000 low income customers with electric and/or gas service at a reduced rate.
- Matching Energy Assistance Fund (MEAF) – PECO matches customer pledge contributions in order to provide lump-sum payments to low income customers experiencing a hardship in order to bring the balance to zero. Low-Income Usage Reduction Program (LIURP) – LIURP is a residential usage reduction program which provides weatherization improvements for low income customers in order to assist in energy conservation and reduction of energy bills.
- Low-Income Energy Assistance Program (LIHEAP) Outreach - LIHEAP is a federally funded program which is administered by the Pennsylvania Department of Welfare that aids low-income households with home energy needs during the winter heating season, PECO's LIHEAP Outreach assists customers in applying for funding.
- Customer Assistance and Referral Evaluation Services (CARES) – Referral program designed to provide information and assistance to special needs and low-income customers who are experiencing financial hardship.

As previously mentioned, the Customer Financial Operations Division oversees two outsourced call centers: the Financial Call Center and the CAP Call Center, which assists low income customers. PECO's EDC CAP participation levels account for approximately 40% of all EDC CAP participation in the state of Pennsylvania. PECO has successfully administered and maintained its total program costs below the average Pennsylvania Electric Distribution Companies (EDC) per customer CAP cost. For example, in January 2014, the PUC issued an order requiring PECO's CAP customers to have the ability to shop for electric generation supply and to introduce PECO's CAP customers to PECO's Standard Offer Program[47] by April 15, 2014. PECO's CARES unit is preparing for initial educational outreach in order to prepare CAP customers for the risks and benefits that accompany active participation in the retail electricity market. PECO sought an extension to the April 2014 deadline specifically for the Standard Offer Program. PECO sought the extension in order to train its CAP call center representatives and the third party Call Center handling the Standard Offer Program for PECO's CAP shopping program.

The Customer Strategy and Governance Division is responsible for business readiness and system support. This includes process improvement and implementation of technological advances to streamline business functionality. The Customer Strategy and Governance Division focuses on resolving issues which affect the business needs of the utility. Through evaluation of customer data, surveys, requests, and complaints,

[47] PECO's customer referral program promoting energy choice for the selection of alternative Electric Generation Suppliers

the Department is able to identify opportunities for improvement and implement those changes. For example, PECO plans to transition to a new interactive voice response (IVR) system in the first quarter of 2014. This advanced IVR provides improved self-service capabilities, creating a more efficient method for customers to access basic account information and streamline the outage call handling process. As a contingency, the old IVR system will remain in place during the launch of the advanced IVR. After an adjustment period, PECO will assess the advanced IVR's performance and effectiveness through the evaluation of customer feedback.

Findings and Conclusions

Our examination of the Customer Service function included a review of the Company's policies and procedures, staffing, customer satisfaction surveys, customer assistance programs, budget billing, credit and collection policies and bad debt levels. Based on our review, the Company should initiate or devote additional efforts to improve the effectiveness of its customer service operations by addressing the following:

1. PECO's transactional customer satisfaction performance ranked lower than the Pennsylvania EDC average.

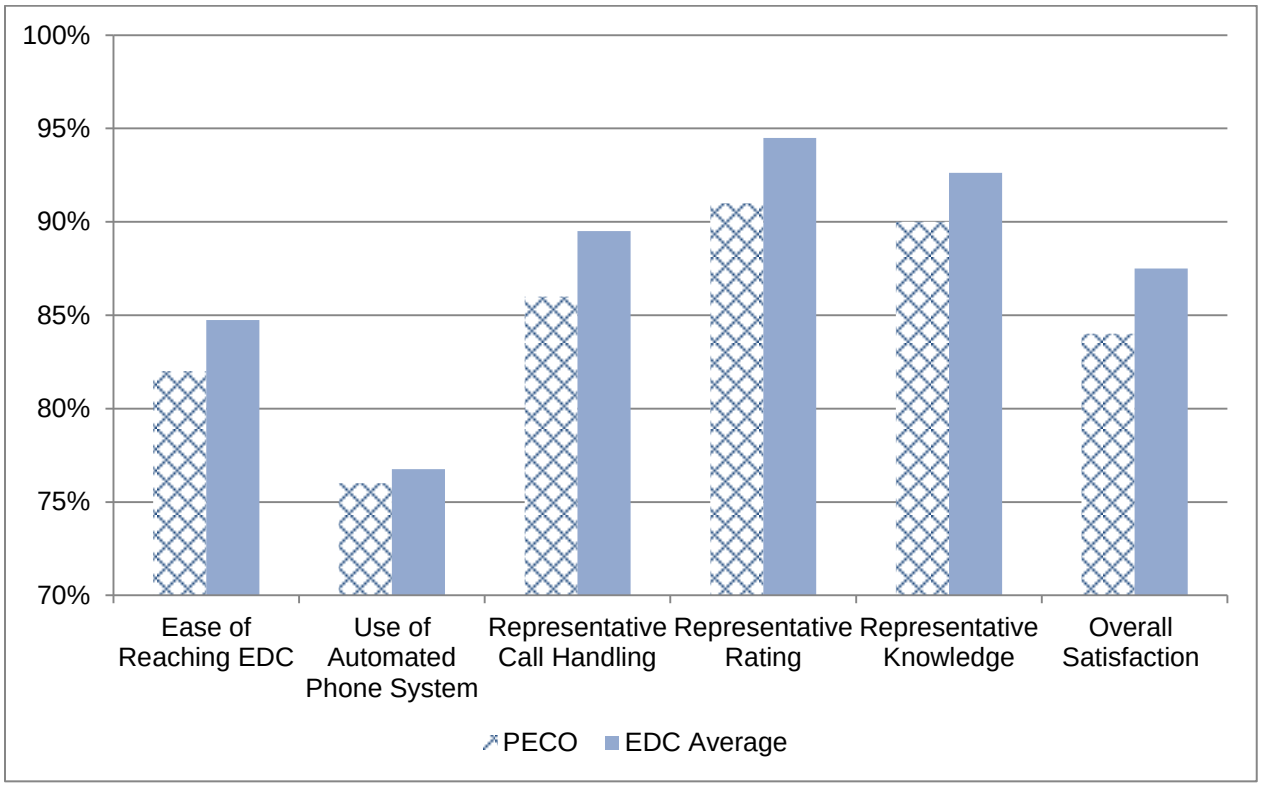
PECO's Customer Service goal established in 2012 is to achieve first quartile (i.e., top 25%) performance in overall customer satisfaction. PECO's focus on customer satisfaction includes improving the Company's quality of service metrics (e.g., calls answered within 30 seconds, abandonment rate, average speed of answer, etc.). As discussed earlier, PECO has achieved first quartile Customer Satisfaction in its perception-based surveys conducted in a nationwide setting. For instance, PECO achieved top quartile Customer Service performance in 2012, based on the JD Powers comparison group of larger utilities located in the Eastern portion of the United States. PECO purports that there is not a nationwide benchmarking study for transactional customer satisfaction. However, overall customer service performance should include evaluation of perception, as well as, transactional based data. Therefore, the Audit Staff suggests that Pennsylvania's benchmarking of transactional performance provides a better statewide comparison of EDCs performance. While national surveys allow companies to measure performance at a high level, state surveys supply more detailed utility specific data to the needs of Pennsylvania ratepayers.

Pennsylvania's major EDCs and Natural Gas Distribution Companies (NGDCs), like PECO, are required to report quality of service data to the PUC[48] which is published in the annual Commission's Customer Service Performance Report. PECO has electric, natural gas and dual service customers which utilize the same call center and receive one bill for individual or both types of utility service. However, customers receiving both electric and gas service from PECO would have two separate meters,

[48] 52 Pa. Code § 54.156 requires EDCs and 52 Pa. Code § 62.34 requires NGDCs to submit statistics on telephone access, billing, meter reading, disputes and interactions.

each read independently. According to data reported in the 2012 Customer Service Performance Report, customers are generally satisfied with the performance of all EDCs. However, as depicted in Exhibit XI-3, Customer Transaction Survey Results indicated that PECO's customer satisfaction ranked consistently lower than the Pennsylvania EDC average. Approximately 98% of PECO's customers receive electric service, either stand alone or in combination with natural gas service[49]. Therefore, the Audit Staff chose to evaluate PECO's customer service performance in comparison with other EDCs, as PECO's electric performance metrics represent over 98% of its customer base.

Exhibit XI-3
PECO Energy Company versus EDC Average
Customer Service Performance Report
Summary of Customer Transaction Survey Results
For the Year 2012



Note: EDC Average includes data from UGI-Electric, Penn Power, PPL, MetEd, Duquesne, Penelec West Penn and PECO.
Source: Customer Service Performance Report 2012

PECO has been steadily improving its performance levels. For example, PECO has improved the percentage of calls answered within 30 seconds from 77% to 85% from 2010 to 2012. In addition, Exhibit XI-2 helps to portray improvements in PECO's residential call center customer satisfaction. PECO made it a priority during 2012 to

[49] In contrast, approximately 30% of PECO's customers receive natural gas service, either in stand alone or in combination with electric service.

build upon its successful increases in its performance metrics for customer satisfaction, and has achieved first quartile ratings, in the nationwide perception based customer satisfaction surveys. Moreover, as discussed in the Background section of this Chapter, PECO has taken the initiative to improve the use of its automated phone system through the implementation of a new advanced Interactive Voice Response (IVR) system slated for launch in the first quarter of 2014.

Notwithstanding the success PECO has had in achieving top-quartile overall customer satisfaction in JD Powers' perception based studies, , PECO has not achieved first quartile transactional customer satisfaction when compared with the performance of other Pennsylvania EDCs, as indicated in Exhibit XI-3. As discussed previously, PECO has already implemented various initiatives (i.e., shift in its hiring and selection practices of call center personnel in 2011, its comprehensive and on-going training program, etc.) to improve its 2013 performance levels and meet its goal. However, some of the initiatives are relatively recent and consequently have not had enough time to fully affect performance. Furthermore, PECO is exploring the replacement of their CIMS. Consequently, one of the factors affecting performance is the navigation of the current CIMS, which sometimes requires a Customer Consultant to negotiate multiple screens in order to address a customer's inquiry. The Company has begun a review of the costs and benefits of migrating to an improved, scripted platform in order to streamline the call answering process. While the Company has achieved significant progress improving its customer satisfaction performance, PECO should continue to strive to reach transactional customer satisfaction performance levels equal to or better than the Pennsylvania EDC average.

2. PECO's residential customer long term arrearages have increased.

Generally, older accounts receivable balances are considered high risk which also increases the Company's likelihood of bad debt write-offs. In 2007, advances in PECO's CIMS functionality enabled the transfer of unpaid balances on inactive accounts to be assigned to the delinquent customer's current account. Although PECO recorded a larger than normal bad debt expense[50] of approximately $150 million in 2008 as a result of this change, PECO has maintained annual bad debt write-off expense levels of approximately $60 million since 2008. The composition of accounts receivable totals can be found within the Residential Customer Accounts Receivable Aging schedule depicted in Exhibit XI-4 and reflects both the Company's success in reducing the amount of short term arrearages and also indicates the continued challenge associated with mitigating long term arrearages.

[50] PECO's bad debt expense includes net charge off amounts, CAP pre-program debt forgiveness, and an uncollectable accounts reserve. Uncollectable accounts reserve is a provision for future bad debts incurred by the Company. PECO's bad debt expense for 2008 included an uncollectable accounts reserve of nearly $89 million, which accounted for more than half of the bad debt expense for that year.

Exhibit XI-4
PECO Energy Company
Summary of Residential Customer Accounts Receivable Aging (in millions)
For the Years Ended December 31, 2008 through 2013

Year	Number of Days Past Due						Total Accounts Receivable
	0-30	31-60	61-90	91-120	121-365	366+	
2009	$ 148.1	$ 26.9	$ 14.7	$ 11.6	$ 41.9	$ 30.1	$ 273.3
% of Total	54.2%	9.8%	5.4%	4.2%	15.3%	11.0%	100.0%
2010	$ 183.7	$ 27.8	$ 15.4	$ 12.1	$ 36.3	$ 23.0	$ 298.3
% of Total	61.6%	9.3%	5.2%	4.1%	12.2%	7.7%	100.0%
2011	$ 168.0	$ 32.7	$ 16.0	$ 11.0	$ 29.7	$ 11.5	$ 268.9
% of Total	62.5%	12.2%	6.0%	4.1%	11.0%	4.3%	100.0%
2012	$ 159.9	$ 35.0	$ 15.5	$ 10.6	$ 33.9	$ 15.9	$ 270.9
% of Total	59.0%	12.9%	5.7%	3.9%	12.5%	5.9%	100.0%
2013	$ 182.9	$ 32.3	$ 15.8	$ 11.4	$ 34.9	$ 16.1	$ 293.4
% of Total	62.3%	11.0%	5.4%	3.9%	11.9%	5.5%	100.0%

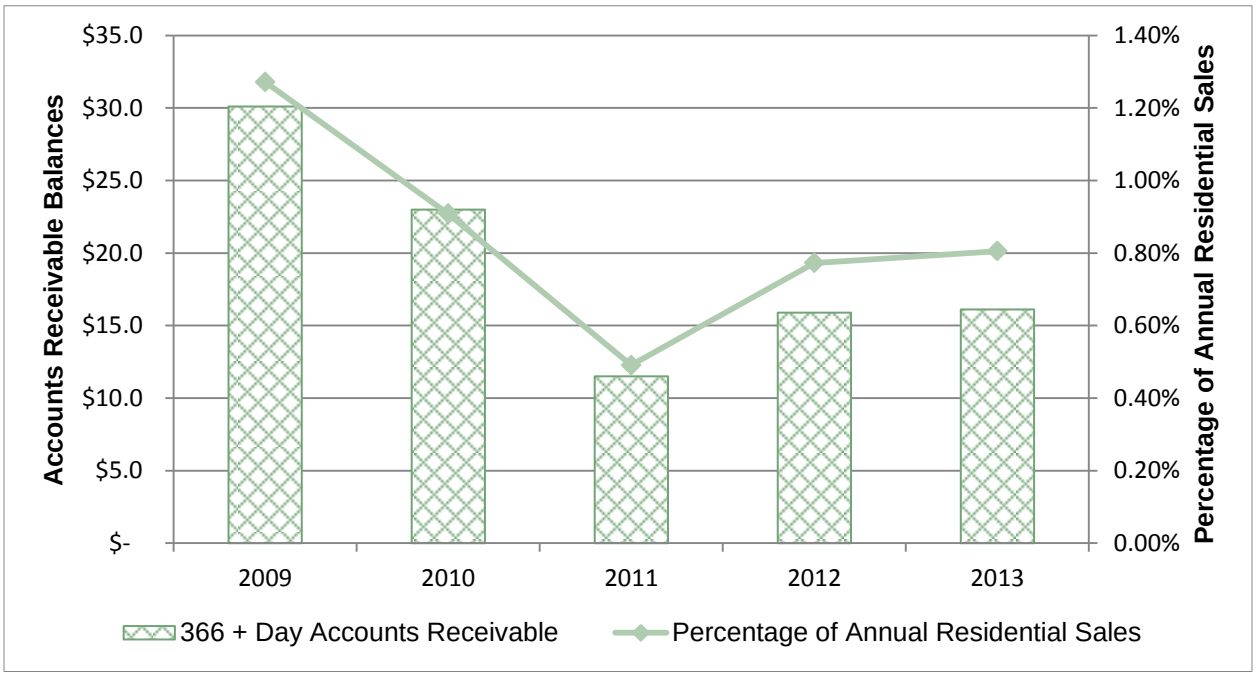
Source: Data Request CS-40 and Auditor Analysis

As depicted in Exhibit XI-4 by the percentage of total of each category, credit and collection activities improved in all accounts receivable categories except for the 0-30 day category from 2009 to 2010; which can be primarily attributed to the Company's increased collection efforts initiated by the 2007 CIMS upgrade as discussed previously. In addition, PECO conducted a onetime forgiveness (i.e., write-offs) program in 2011 for CAP customers with large outstanding balances, resulting in a significant decrease in arrearages greater than 120 days old).

Since 2011, PECO's collection performance has had minor improvement in the accounts receivable aging balances of less than 120 days. The percentage of total residential customer account receivables carried in the 31-60, 61-90, and 91-120 days past due categories have been reduced by 1.2%, 0.6% and 0.2%, respectively since 2011. Yet, PECO's extended long term arrearages have increased significantly from 2011 to 2012 in terms of absolute dollars and as a percentage of total residential customer account receivables. In 2013, PECO did improve (0.4% reduction) the percentage of 366 day and over collections in comparison with overall residential accounts receivables. However, those accounts which fall in the 366 day and over collections have increased nearly $4.6 million dollars (or by 40%) from 2011 to 2013. As depicted in Exhibit XI-5, since the 2011 forgiveness program arrearages greater than 366 days have steadily increased in actual arrearage amounts as well as a percentage of annual residential sales[51].

[51] PECO's annual residential sales data was compiled from PUC Annual Reports including both electricity and natural gas sales to residential customers only.

Exhibit XI-5
PECO Energy Company
366 Days and Over Residential Customer Accounts Receivable versus Percentage of Annual Residential Sales
As of the Years Ended December 31, 2009 through 2013



Source: PUC Annual Reports and Data Request CS-40

The Company contends that the expiration of PECO's "RH" rate class in 2012, resulting in electric heating rate residential customers paying the same rate as non-heating electric customers, led to an increase in the number of payment arrangements offered to its customers. While payment arrangements are beneficial to both the customer and the Company, extended long term payment arrangements may signal an inability to repay by the customer and result in increased write-offs. Significant increases in the number of payment arrangements[52] (approximate 30% increase from 2008 to 2013) have contributed to its increases in long term arrearage balances.

Timely collections of overdue balances reduce the risk of loss due to non-payment by customers. Therefore, utilities should strive to collect unpaid balances as soon as possible through various collection methodologies and techniques. While PECO has shown significant progress in improving their overall accounts receivable arrearages, continued analysis of the impact of customer payment plans, extensions and write-offs may indicate additional opportunities for improvement. Consequently, PECO should explore enhancements of existing policies for additional methods to reduce arrearages, while continuing its adherence to existing regulations.

[52] Source: Data Request Response CS-8

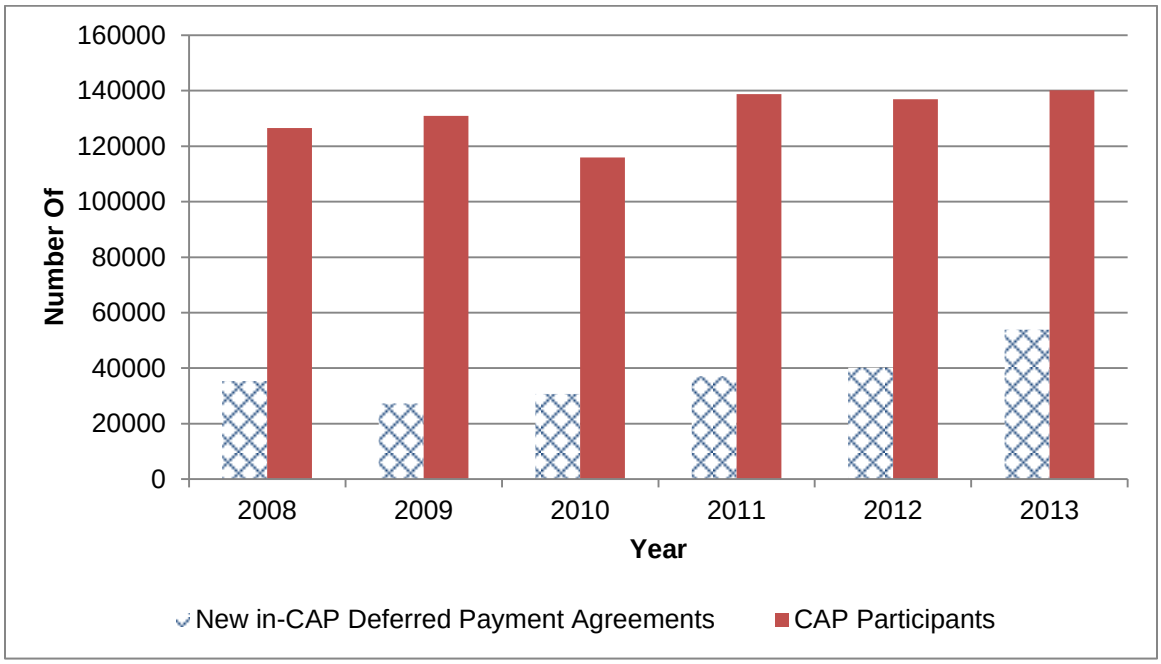
3. PECO's Customer Assistance Program participants have a high number of in-program deferred payment arrangements.

As discussed in the Background section of this chapter, PECO has the largest CAP enrollment and participation rates in the Commonwealth of Pennsylvania. Economic conditions, as well as location, have resulted in PECO having large and increasing numbers of CAP customers. While CAP participants are generally subject to the same collections process applied to non-CAP customers, there are provisions for confirmed low income customers, such as CAP participants. Confirmed low income customers are subject to a faster collection action process than lower risk customers, as there is a $25 threshold instead of $100 for overdue balances. PECO has well documented policies and procedures in place for issuing termination notices and termination orders, in compliance with 52 Pa. Code §§ 56.81, et seq. In 2011 and 2012, 10-12% of CAP participants were terminated for several reasons, including nonpayment. However, PECO's CAP participants are not automatically removed from the program for delinquency.

PECO's procedures also include protections that restrict terminations, under specific circumstances, in adherence to 52 Pa. Code §56 and 66 Pa. C.S. Chapter 14. However, these restrictions also permit CAP customers to accumulate balances during the winter season (December 1 through March 31), billing disputes, and medical certifications exemption periods. Once CAP customers accumulate in-program arrearages, it becomes difficult to satisfy the full outstanding balance without the aid of an in-CAP deferred payment arrangement (DPA).

PECO's procedures allow for the establishment of in-CAP DPAs for balances accrued within the CAP program. These agreements allow for the establishment of extensive payback windows, with terms that provide up to a 60 month repayment schedule. CAP customers may qualify for an additional DPA if the first one is broken due to a decrease in income. A significant portion of CAP participants are actively on in-CAP DPAs (37-46%), where the majority of the DPAs are newly established each year. Further, the number of newly established in-CAP DPAs have increased from 35,351 in 2008 to 53,833 in 2013, reflecting 52% growth for the period evaluated. While PECO's CAP participation has experienced an 8% increase from years 2008 through 2012, the number of new DPAs has increased at a substantially greater rate. Exhibit XI-6 reflects the number of newly established DPAs for in-program CAP participants in comparison to the number of CAP participants for each respective year.

Exhibit XI-6
PECO Energy Company
New in-CAP Deferred Payment Agreements versus
Active CAP Participants
For the Years 2008 through 2013



Source: Data Requests CS-28, CS-29, CS-35, and CS-37

As a result of increasing DPAs, PECO's long term arrearages have also been affected. As discussed in Finding and Conclusion No. 2, PECO's arrearages older than 120 days have experienced notable increases. The increase in the number of in-CAP DPAs have contributed to the long term arrearage increase for PECO. As mentioned in the prior Finding and Conclusion, in November 2011, $25 million in-CAP arrearages were forgiven and written off by PECO. However, since that time the number of new in-CAP DPAs continued to increase.

PECO's multifaceted Universal Services Program (USP) provides additional resources for low income customers including educational outreach (CARES), energy efficiency assistance for high use with low income accounts, LIHEAP Outreach, and a hardship fund for emergent needs. As discussed in the Background section, PECO's CARES unit leads educational and informational outreach including the upcoming launch of CAP shopping. In unison with the upcoming educational program introducing electricity supplier shopping, PECO should explore additional measures to leverage all facets of its USP to reduce outstanding CAP customer balances. While PECO's efforts to keep CAP customers in some form of payment status are commendable, long repayment terms and unpaid balances should be improved.

Recommendations

1. Strive to achieve transactional customer service satisfaction levels equal to or greater than the Pennsylvania EDC average through continued training, first call resolution, process improvements, etc.

2. Strive to achieve lower long-term residential customer arrearages by conducting analysis to explore the enhancement of existing payment programs and collection policies.

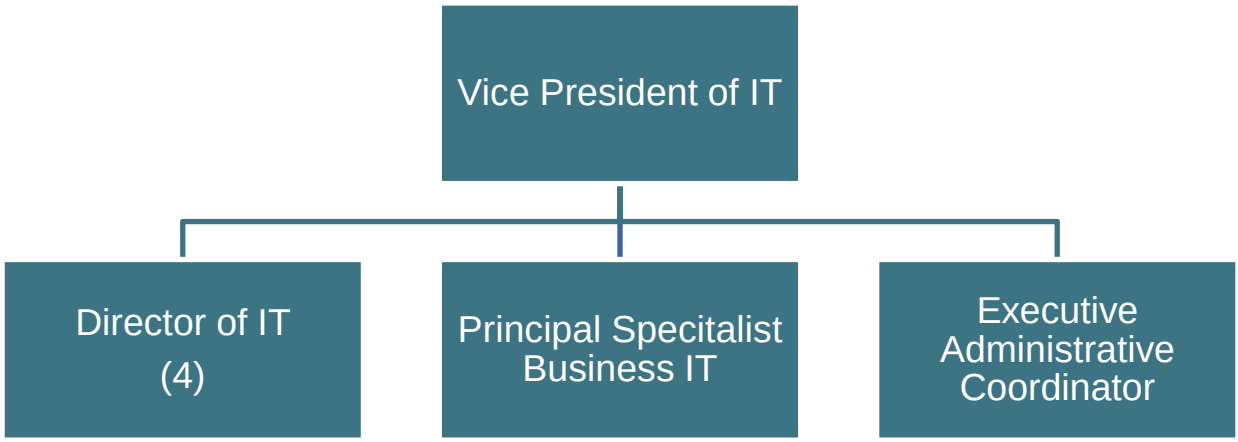
3. Initiate additional measures to reduce the utilization of deferred payment arrangements for Customer Assistance Program participants and decrease the Company's balance of outstanding customer accounts receivable balances.

XII. INFORMATION TECHNOLOGY

Background

Information Technology (IT) is handled by different Departments/groups at PECO Energy Company (PECO). Primarily, the IT Department at PECO is considered an embedded Department focusing on PECO specific IT infrastructure, which means that Exelon Business Services Company (Exelon BSC) employees are performing work solely dedicated to PECO (See Chapter III – Executive Management and Organizational Structure for more information on embedded employees). However, certain IT functions are considered a shared service among subsidiaries of Exelon. For instance, IT employees handling various customer oriented programs (i.e., Customer Information Management System, web payment, etc.) are shared and employee costs are allocated based upon an established allocation procedure (See Chapter V – Affiliated Interest and Cost Allocations). As a result, PECO's Vice President of IT has a dual reporting relationship to the PECO Chief Executive Officer and Exelon BSC's Chief Information Officer (CIO). The organization chart for PECO's IT Department is shown in Exhibit XII-1. In addition to the services provided by Exelon BSC embedded employees, Exelon BSC provides additional IT services to PECO. For instance, as discussed in Chapter IX – Emergency Preparedness, Exelon BSC handles cybersecurity issues for all of Exelon Corporation, including PECO. Cybersecurity functions report through a different Vice President of IT to the CIO. Another example of a centralized function is Exelon BSC's hardware group. Exelon BSC decides what hardware (i.e., servers, routers, computers, etc.) to deploy based upon an operating company's (i.e., PECO's) need.

Exhibit XII-1
PECO Energy Company
Information Technology Organizational Chart
As of December 5, 2013



Source: Data Request GD-1

The four Directors of IT are split into two different focal points with two directors focusing on electric/gas operating systems (i.e., Supervisory Control and Data Acquisition Systems, Outage Management System, Dispatching System, Work Management System, etc.) and two directors handling customer service based systems (i.e., Customer Information Management System, Interactive Voice Response System, Customer Web Facing Applications, etc.) In addition, each focal point has a Director who is responsible for developing, upgrading or changing systems (Project Directors) while the other Director handles operational support and maintenance of the systems (Operational Directors). Meanwhile the Principal Specialist Business IT handles long range planning, budgeting, etc. for the IT Department.

The Project Directors are responsible for project oversight from inception to "live" status. IT Projects are typically initiated as a result of Department client requests (i.e., Electric Operations, Customer Service, Engineering, etc.), but can occasionally originate from the IT Department for system upgrade requirements. A business case would be developed for the project, ultimately requiring PECO upper management for approval to proceed. As part of this approval process, the responsible IT and Business owners present the project to a review board, which takes place on a monthly basis. In fact, each project has a Business Manager assigned to it from the sponsoring PECO Department and an IT Manager from the Project Directors' staff. Once approved, IT projects are managed through the use of a "Six Box" dashboard (i.e., project management tool) monitoring the progress of each project. The Six Box analysis measures a project against six key points; scope, schedule, budget, staffing, issues, and risks. These six factors are reviewed by PECO IT and Business Line (i.e., the Department sponsoring the project) management.

The Project Directors also are responsible for testing projects to ensure compatibility and functional issues are resolved. During the testing phase, employees from the Operational Department are introduced to the new upgrade/system and may aid in the testing. All systems once implemented operate parallel to the old systems to ensure business continuity in the event of any system problems encountered with the new system. Once the parallel analysis is completed, the Development team is officially finished with the project and the new upgrade/system becomes the responsibility of the Operational Directors.

The Operational Directors provide support and maintenance of the systems employed by PECO. Support for a given system is actually provided from multiple areas. The Operational Directors primarily are looking at system performance, working to optimize speed, configuration and other technical issues. In contrast, groups within the Departments such as the Operational Support Group in the Distribution System Operations Department (Electric Operations), Gas Engineering and Asset Performance Department (Gas Operations), and the Customer Strategy and Governance Department (Customer Service) handle general user problems with systems within their respective Departments. For instance, the various Departments would handle general helpdesk activities for the applications (i.e., password lockouts, creating user profiles, etc.) while

the IT Department would handle process flow changes, patches, upgrades[53], batch operations as well as training, when needed. The Operational Department would also be responsible for 24 hour/7 day real time monitoring of system performance. PECO has established metrics for system performance and measures and reports such metrics as system outages and availability.

As previously mentioned in Chapter III – Executive Management and Organizational Structure, Exelon Corporation (Exelon) utilizes a Peer Group approach to drive change across the three operating companies (i.e., PECO, Commonwealth Edison Company [ComEd] and Baltimore Gas and Electric Company [BG&E]). While IT does not have a peer group itself, it does provide support to various peer groups. In fact, Exelon's Northstar Initiative is aimed at moving the three operating companies to the same IT platforms. For instance, there would be a Peer Group populated by the operating companies in order to explore an upgrade to the Customer Information Management System (CIMS) and IT would just provide support to that group as it explored CIMS capabilities. Both, PECO and ComEd utilize the same CIMS, although with slightly different features while BG&E employs a totally different CIMS. In fact, IT holds blue sky sessions occasionally in which new uses of existing software or totally new software packages are presented to business lines. In addition, Exelon BSC continues to work towards standardizing services and software. For instance, with the merger with BG&E, Exelon migrated to a common Electronic Data Interchange Provider across the operating companies in 2013 resulting in a savings of approximately $1 million dollars per year across the three operating companies.

Findings and Conclusions

Our examination of the Information Technology function included a review of PECO's organizational structure, staffing levels, outsourcing conditions, training/staff development, operating expenses and maintenance planning. Based on our review, it appears that proper controls are in place and that the Information Technology function is being performed in a satisfactory manner.

Recommendation

None.

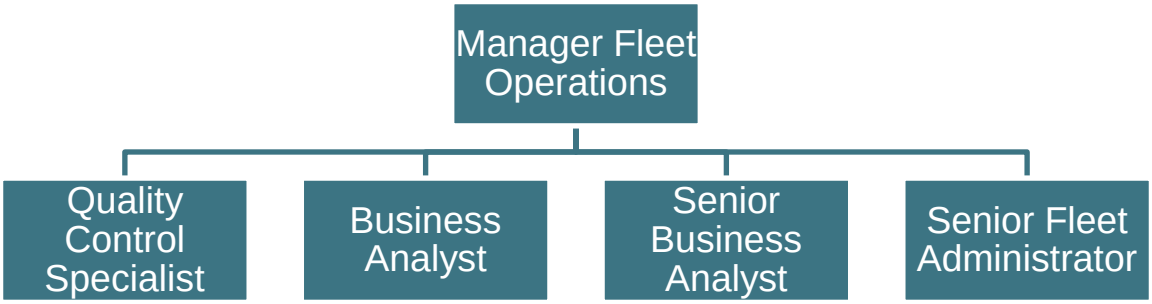
[53] Generally, the Operational Directors handle projects that would take 150 hours or less while any project over that threshold would be the responsibility of the Project Directors.

XIII. FLEET MANAGEMENT

Background

PECO Energy Company's (PECO or Company) Fleet Operations Department (Fleet or Department) is based out of the Berwyn Transportation Center in Berwyn, PA. Fleet is comprised of five full-time employees (see Exhibit XIII-1) including the Manager of Fleet Operations (Manager). The Manager is responsible for oversight of the Company's vehicle procurement, vehicle disposal, and fleet maintenance contract with a third party maintenance company (Contractor). Reporting to the Manager is the Quality Control Specialist, Business Analyst, Senior Business Analyst and Senior Fleet Administrator. Governance and oversight of vehicle assets, fuel management, and governmental reporting are the responsibility of the Senior Fleet Administrator. The Senior Business Analyst develops and conducts short-term and long-range business planning with assistance from the Business Analyst. The Quality Control Specialist schedules and conducts quality assurance audits and inspections of vehicle maintenance, garages, safety, and administrative functions. The Manager reports to the Vice President of Support Services, who in turn reports to the Senior Vice President and Chief Operating Officer. In addition, Exelon Business Service Company (Exelon BSC) provides support to Fleet in contract negotiations and vehicle procurement.

Exhibit XIII-1
PECO Energy Company
Fleet Operations Department
As of August 31, 2013



Source: Data Request FT-22

Management utilizes a risk model in-part to develop its life cycle cost analysis on vehicles to aid in vehicle acquisition and disposal decisions. This process is performed between September and October on an annual basis. The model evaluates on a weighted basis factors such as maintenance cost, down-time, and age with data derived from the Company's fleet maintenance management system (FMMS). Vehicles are then separated by class for direct comparison to determine the best and worst performing vehicles.

Once PECO identifies its worst performing vehicles, the Company replaces vehicles with the aid of Exelon BSC. Vehicle replacement needs are supplied to an embedded Exelon BSC procurement specialist in the Supply Department (see Chapter X – Materials Management) who identifies new vehicles based upon the need and specifications provided by Fleet and what's commercially available. The request is further reviewed by an embedded Exelon BSC Category Manager who identifies any opportunities to leverage and standardize purchases across Exelon's footprint (see Chapter II – Background for more information on Exelon Corporation's footprint and Chapter X - Materials Management for more information on leveraging). A sourcing team consisting of the Category Manager and representatives from Fleet then identify and approve suppliers, engages potential suppliers in an online live bidding process, and selects and sends a bid for approval. Conversely, an auction service contracted by Exelon BCS handles all vehicle disposals.

As of September 2013, PECO had approximately 1,488 vehicles in its fleet, including 14 natural gas hybrid vehicles. In general, PECO primarily purchases its vehicles but will lease vehicles in certain situations (i.e., typically short duration specialized vehicles). A profile of the numbers of vehicles by vehicle class is shown in Exhibit XIII-2.

Exhibit XIII-2
PECO Energy Company
Number of Vehicles by Equipment Class
As of September 2013

Equipment Class	Number of Vehicles
Passenger Car & SUV	101
Van, Light & Heavy Truck	994
Equipment & Trailers	393
Total Vehicles and Equipment	1,488

Source: Data Request FT-12

PECO began outsourcing its fleet maintenance in 2003. PECO's most recent fleet maintenance contract was executed for a three year period beginning in 2011 and was extended for an additional year in September 2013. Subsequently, the Manager's focus has shifted to oversight of the fleet maintenance contract and performance of the Contractor. PECO utilizes the FMMS to track vehicle repairs, expenses, vehicle down-time, key performance indicators (KPI) and PECO employee feedback. Vehicle maintenance is performed at PECO's ten repair facilities. The Contractor staffs PECO's repair facilities with a total of 48 employees, including 40 mechanics. The Contractor is required to perform all duties related to maintaining the Company's fleet including dispatching and responding to service calls, towing vehicles, performing routine/preventive and non-routine maintenance, and managing PECO owned refueling stations.

The Contractor's mechanics perform routine and preventive maintenance work (i.e., flat tire changes and repair, oil changes, bad fuel pump, etc.) at a fixed labor rate and a variable markup on parts. Non-routine maintenance (i.e. vehicle accidents, rust, operator misuse, repairs greater than $500, etc.) is performed at variable costs for labor and parts. Aerial inspections, body work, and other specialty repairs are subcontracted to other outside vendors by the Contractor. However, all non-routine maintenance requires approval from Fleet. Status exception reports are provided to Fleet daily and detail the number of out of service vehicles, estimated return to service date, description of repair, and current step in the repair workflow. The performance of the Contractor is monitored by metrics specified within the contract. The Company currently tracks the number of out-of-service vehicles, length of time vehicles are out-of-service, service call response time, preventive maintenance schedule adherence, budget performance, staffing levels, etc. The Company and Contractor meet weekly to discuss overall fleet health and performance. Overall, the Contractor supervises its own staff with PECO performing quality assurance/control spot checks and performance management oversight. PECO also compares its fleet operation metrics with other electric utilities through the use of a third party vendor.

There are 24 Company-owned refueling stations deployed throughout PECO's service territory. Fuel pumps require vehicle and employee identification, and mileage data input to operate and all fuel costs are automatically entered into the FMMS. PECO also utilizes fuel cards to allow drivers to refuel as needed at participating commercial refueling stations. Fuel purchases utilizing fuel cards are uploaded from vendors weekly. PECO monitors any exception thresholds (i.e., mileage discrepancy, frequency of refueling, excessive dollar amounts, etc.) and investigates the causes.

Findings and Conclusions

Our examination of the Fleet Management function included a review of operating and safety policies and procedures, staffing, acquisition and disposal practices, vehicle maintenance, and benchmarking. 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. PECO's risk based model, which specifies the process for identifying replacement vehicles, is not documented.

PECO purchases approximately 80 vehicles annually. However, the Exelon Vehicle Replacement Policy (last updated in 2009) contains only general guidelines for identifying replacements. More specifically, the replacement guidelines outlined in the Exelon policy include the following:

- Vehicle Age – year of vehicle
- Priorities with End Users – needs of company employees
- Mechanic Evaluation – analysis by company or contractor mechanic

- Amortization Balance – remaining balance on leased vehicles

In 2008, a risk rank model (risk based model) was developed by PECO's Fleet Operations Department in conjunction with other PECO Departments (i.e., Finance, Regulatory, Supply, etc.). The model was initially designed using data acquired from maintenance records with no emphasis on age or downtime. The model was modified in 2011 to determine the worst performing vehicles using a weighted combination of total maintenance costs, days of down-time, and vehicle age. Vehicles are divided by class and ranked using the model. A list of the 100 – 125 worst performing vehicles is then circulated to field management for their concurrence. Once finalized, Fleet begins the vehicle acquisition process as discussed in the background section. However, this process of identifying worst performing vehicles and the risk based model has not been incorporated within Exelon's Vehicle Replacement Policy nor documented as a PECO Fleet Operation Department policy. In addition, the criteria for vehicle replacement within Exelon's Policy are not the primary indicators used by Fleet for replacement of vehicles.

In October 2013 fleet investigated and purchased a vehicle replacement module (VRM) developed by Utilimarc. All vehicle information, including initial cost, maintenance costs and disposal costs are captured to identify total lowest cost of ownership (TLCO). Once TLCO is identified the vehicle life cycle is determined to produce a cyclical vehicle plan and replacement schedule. PECO indicated that it plans to run the VRM in 2014 to establish its vehicle replacement plan for 2015.

Vehicle replacement guidelines and policies are necessary to ensure optimal fleet performance and efficiency. Therefore, informed vehicle replacement decisions are crucial to fleet reliability, efficiency and cost control. However, PECO's vehicle replacement methodology is not included in Exelon Policy and the Company has not established its own policy. Undocumented practices and incomplete policies leave companies vulnerable to knowledge retention issues due to employee departures, promotions, and retirements.

2. Actual performance was worse than certain key performance indicator goals for PECO's Fleet throughout the audit period.

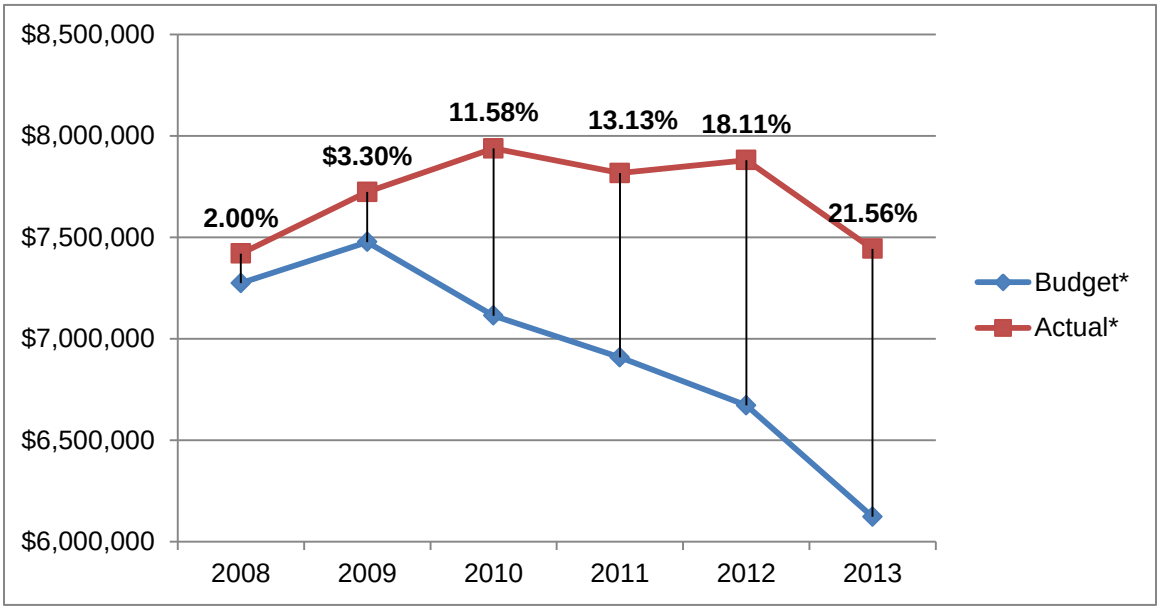
Performance goals or KPIs are written into the maintenance contract with the Contractor; however, many of the goals were not being met. In fact, several reliability and budgetary goals were not met between 2008 and 2013, spanning two different Contractors. More specifically, the goals not met from 2008 to 2013 include the following:

- Average number of out-of-service vehicle count (goal of less than 24 vehicles).

- Vehicles requiring more than 12 days to repair since its inception in 2010 (goal of less than 15 vehicles at any given time).

- Contractor budget performance; failed to meet annually for the 2008 to 2013 period as highlighted in Exhibit XIII-3. The budget in this metric includes all contractor incurred costs except non-routine maintenance.

Exhibit XIII-3
PECO Energy Company
Fleet Contractor Budget Compliance
For the Years 2008 through 2013



Source: Data Request FT-2, FT-29, auditor analysis
* Excludes non-routine maintenance

PECO is actively trying to improve its fleet performance. For example the Company identified rust repair as a significant cost item and the Contractor agreed to include it as a regular fixed priced maintenance item. Fleet also negotiated to include quarterly financial penalties related to four different performance goals (i.e., average number of vehicles out of service, backshift work completion, percentage of preventive maintenance completed each month, and staffing numbers) beginning in 2014 and executed as part of the September 2013 contract extension. The initial contract with the Contractor did include performance goals; however, it contained no incentive or penalties for not meeting those goals.

PECO's Fleet Operations Management indicated several factors were responsible for the budget variance with an aging fleet, parts expenses, rust repairs, and large storms being identified as the primary causes for budget overruns. In addition, the Company migrated to a new contractor in 2011 leading to some transitional costs. However, the gap between the budget and actual spending has grown annually as depicted in Exhibit XIII-3, despite the budget being reduced every year beginning in 2009. Performance goals allow an organization to benchmark against both competitors

and its past performance; however, goals are only useful if the organization views them as a realistic achievement to strive towards. By continuously missing goals, fleet operations is not meeting expectations and possibly leading to increased costs, unavailable vehicles, and interruptions to other operating Departments.

Recommendations

1. Document a comprehensive PECO vehicle replacement policy incorporating its current practices to supplement the Exelon BSC vehicle replacement policy.

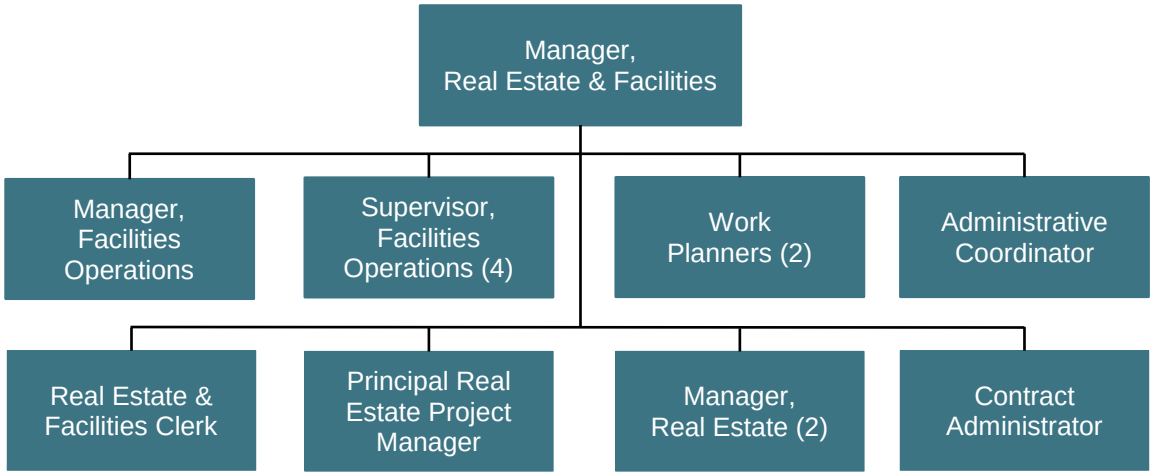
2. Strive to meet key fleet performance indicator goals.

XIV. FACILITIES MANAGEMENT

Background

PECO Energy Company (PECO or Company) owns and operates 37 facilities at 20 sites located throughout its 2,100 square miles service territory in southeastern Pennsylvania. PECO's facilities are managed within its Support Services Department with the Manager of Real Estate and Facilities reporting to the Vice President of Support Services who in turn reports to the Senior Vice President and Chief Operating Officer of PECO. The Manager of Real Estate and Facilities is responsible for facilities maintenance, janitorial services and oversees all real estate transactions (i.e., acquisitions, leases, etc.) The Manager of Real Estate and Facilities oversees 13 direct reports, as shown in Exhibit XIV-1. The Real Estate and Facilities Department is separated into two distinct groups: Real Estate and Facilities Management.

Exhibit XIV-1
PECO Energy Company
Real Estate and Facilities Management Organizational Chart
As of December 5, 2013



Source: Data Request GD-7

As of late 2013, the Facilities Group was comprised of eight staff members, seven of which temporarily reported directly to the Manager of Real Estate and Facilities. Prior to the start of PECO implementing Leadership in Energy and Environmental Design (LEED)[54] projects in 2008 the Facilities Group reported through the Manager of Facility Operations to the Manager of Real Estate and Facilities. Once the Main Office Building (MOB) receives LEED certification, PECO's reporting structure will return to its former reporting structure in which the facilities group reports through the Manager of Facility Operations. The four Supervisors of Facilities Operations are

[54] Leadership in Energy and Environmental Design Certification is awarded by the U.S. Green Building Council, a non-profit organization.

responsible for all work and inspections of facilities in their respective areas. Due to the large size of PECO's MOB, one supervisor is dedicated to that facility with all other buildings being split between a Northern and Southern Supervisor. The fourth supervisor handles facility work related to substations (i.e., building maintenance, upkeep, etc.) In addition, two Work Planners are responsible for prioritizing corrective maintenance throughout PECO's facilities. Corrective maintenance may be requested by any employee through PECO's intranet or may be discovered during routine preventative maintenance.

PECO completes a Master Portfolio Plan (MPP) each year that reviews all facilities and projected capital improvements/recommended projects. For instance, the MPP would identify a roof replacement for a facility in the next 3 years at a projected cost. The MPP also includes a description of each building, occupancy rate, facility statistics (i.e., date constructed, size, and book value), and a recommended action. In addition, the Facilities group is responsible for PECO's long term plans to increase energy efficiency (LEED project) within its fleet of buildings. As of 2013, PECO has achieved certification at 10 facilities. PECO is working towards LEED certification of its Main Office Building which is anticipated to be completed in early 2015. The Company does not have any plans to upgrade any other facility to LEED certification at this time but is committed to reaching LEED certification for any new construction. Through PECO's LEED upgrades and various other energy efficiency efforts, the Company has reduced energy consumption by approximately 8.5 million kilowatt-hours of electricity and 10,000 mcf (thousand cubic feet) of natural gas.

The Contract Administrator handles outsourced contracts (i.e., mailroom, cafeteria, copy center, etc.) and is responsible for scheduling the use of PECO's Energy Center auditorium and large conference areas. The Real Estate Management Group is responsible for sales and leases of PECO property as well as property acquisitions for the Company. The Principle Real Estate Project Manager manages major capital improvements to facilities, whereas the two Managers of Real Estate oversee improvement projects valued at $400,000 or less. One of the Managers of Real Estate is responsible for property acquisitions, re-zoning, taxes as well as easements for electrical facilities. The second Manager of Real Estate oversees sales and leasing, including land and pole leases. Pole leases are contracts with third party vendors who attach other service lines to PECO owned poles, such as communication lines and cables. Annual revenues for 2008 through 2013 resulting from PECO's land and pole leases are presented in Exhibit XIV-2.

Exhibit XIV-2
PECO Energy Company
Land and Pole Lease Revenue Data
For the Years 2008 through 2012 and January through September 2013

Land Leases		
Year	Total Invoice Amount	# Leases
2008	$9,123,898.28	846
2009	$11,138,409.15	857
2010	$11,213,782.30	877
2011	$10,987,015.15	860
2012	$11,974,765.36	850
*2013	$9,297,005.19	797

Pole Leases		
Year	Total Invoice Amount	Attachments
2008	$8,293,180.18	1,610,375
2009	$8,742,295.76	1,735,998
2010	$8,979,479.40	1,759,142
2011	$9,263,643.47	1,764,014
2012	$9,233,016.98	1,768,534
*2013	$9,238,994.57	1,797,636

* 2013 Data January through September 30, 2013
Source: Data Request FS-7

Findings and Conclusions

Our examination of the Facilities Management function included a review of its organizational structure, staffing levels, lease and purchase methodologies, operating expenses and maintenance planning. Based on our review, it appears that proper controls are in place and that the Facilities Management function is being performed in a satisfactory manner.

Recommendation

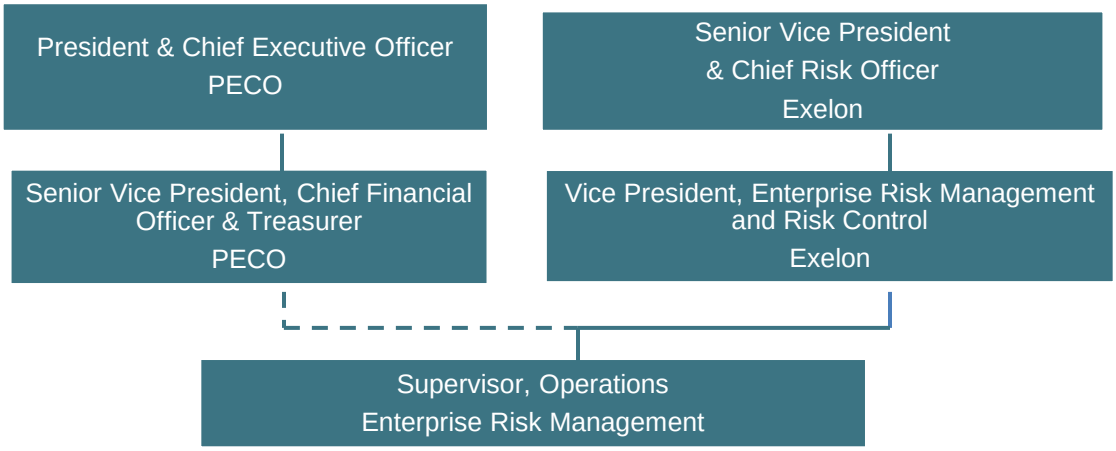
None.

XV. RISK MANAGEMENT

Background

The Enterprise Risk Management (ERM) organization within Exelon Business Services Company (Exelon BSC) governs and provides oversight of all risk management activities across the Exelon Corporation (Exelon) footprint, including PECO Energy Company (PECO or Company). Exelon's Senior Vice President and Chief Risk Officer (CRO) provides overall leadership, vision and direction for the Exelon Risk Management Program. The CRO provides support to PECO and other operating companies and business units in establishing and maintaining risk programs. Reporting to the CRO is the Exelon Vice President of Enterprise Risk Management and Risk Control one of whose direct reports include the Supervisor of Operations, Enterprise Risk Management at PECO. Additionally, the Supervisor of Operations, Enterprise Risk Management also reports to the Senior Vice President and Chief Financial Officer (SVP and CFO) of PECO (indicated by a dotted line in Exhibit XV-1) as an embedded Exelon BSC employee (see Chapter III – Executive Management for discussion regarding the embedded employee/Department concept). The SVP and CFO oversees risk management within PECO. The Enterprise Risk Management function at PECO is shown in Exhibit XV-1. The Supervisor of Operations, Enterprise Risk Management as a critical member of the risk organization is responsible for measuring, monitoring and reporting various risk metrics, producing various risk reports (i.e., daily and ad hoc), and analyzing and summarizing risk data as needed.

Exhibit XV-1
Exelon and PECO Energy Company
Risk Management and Risk Control Department
As of December 31, 2013

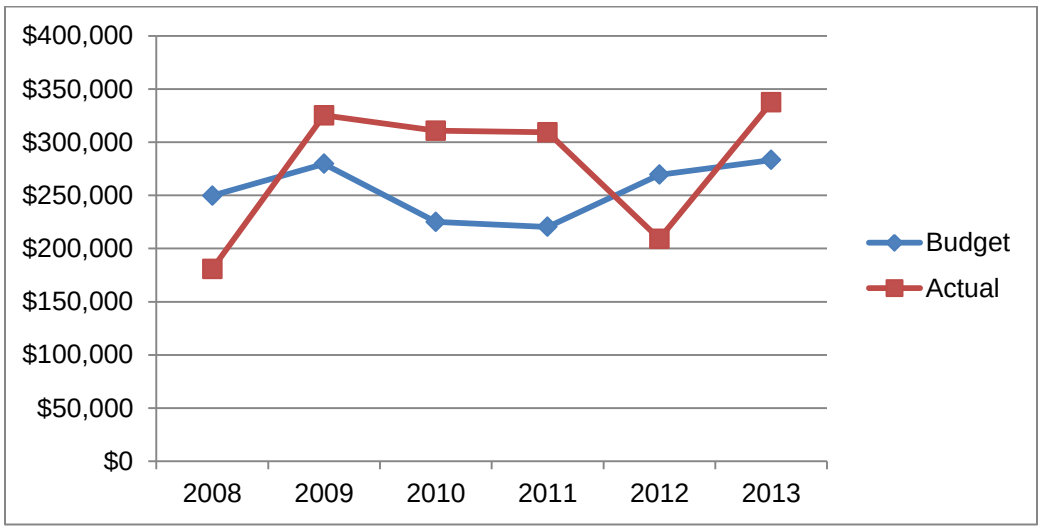


Source: Data Request RM-1

The Exelon Finance and Risk Committee (FRC), formerly referred to as the Risk Oversight Committee, is a corporate Board of Directors (Board) level committee (discussed in detail in Chapter IV - Corporate Governance) established to assist Exelon and any of its subsidiaries in managing and overseeing matters relating to financial and/or other risk exposures. The Risk Management Committee (RMC) is a senior management level risk committee that provides oversight and governance of the Exelon Risk Management Program and policies. The RMC is comprised of Exelon's Chief Risk officer, Chief Finance Officer, General Counsel, and representatives from other subsidiaries that meet monthly and reports quarterly to the FRC on issues such as market risks, credit risks, insurance, etc. In addition, the RMC is established and maintained in accordance with the Exelon RMC Charter. Emerging risks and risk management activities can also be discussed at Exelon's Energy Delivery Oversight Committee, Generation Oversight Committee and the Investment Oversight Committee.

In accordance with its Risk Policy, Exelon has a Risk Management Program in place to manage significant risks across Exelon and its subsidiaries by implementing the appropriate response and controls for each identified risk. The goal of the Enterprise Risk Management Organization is to design, develop, and implement cost effective risk management programs for Exelon. Exelon's insurable risk philosophy is to protect corporate assets and earnings, but to also minimize insurance expenses and maximize the use of industry mutual insurers[55] where beneficial. PECO's risk management budget levels and actual expenditures for 2008 through 2013 are summarized in Exhibit XV-2. As shown in the Exhibit, PECO's expenditures have increased from $180,839 in 2008 to $337,469 in 2013.

Exhibit XV-2
PECO Energy Company
Risk Management Actual Expenditures to Budget
For the Years 2008 through 2013

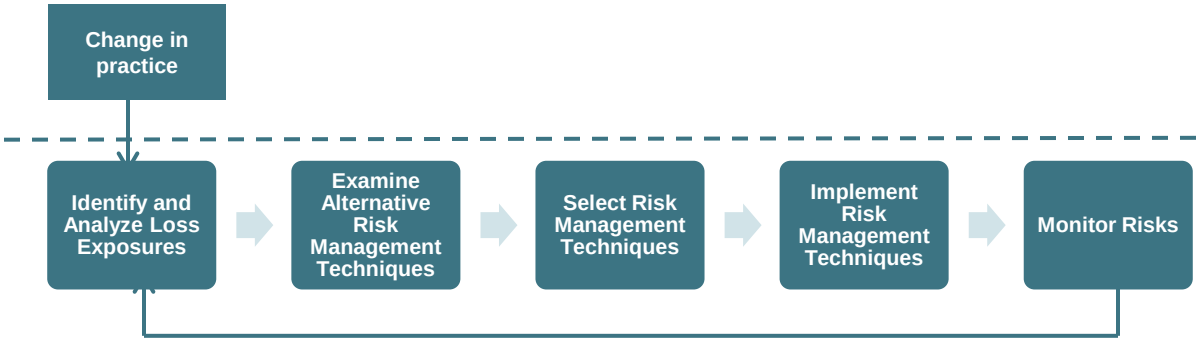


Source: Data Request RM-22

[55] Industry mutual insurers are insurers in which the utilities are members and also owners. Benefits to the member/owners include profit sharing and control of the insurer.

Exelon's risk management process is comprised of five related steps as shown in Exhibit XV-3. A business practice change, whether at the Corporate level or at the Operating Company level, promulgates ERM to identify and analyze the risk exposure associated with the change. Loss exposures are analyzed according to their severity and frequency. After a loss exposure has been identified and analyzed, alternative risk management techniques are considered. The next step is to select a risk management technique and implement it as appropriate. Finally, the risks are monitored on an on-going basis and the results of risk monitoring are used to identify and analyze future risks.

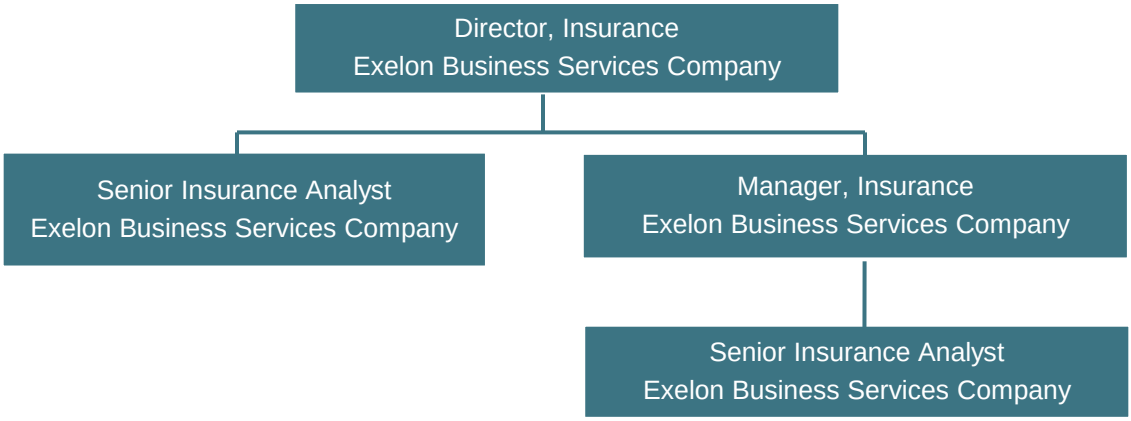
Exhibit XV-3
Exelon Corporation
Risk Management Process
As of August 31, 2013



Source: Data Request RM-10

The Exelon BSC Insurance Organization (Insurance) also has a significant impact on the risk management activities at PECO. The Director of Insurance is an Exelon BSC employee performing insurance work for all of Exelon, including the distribution utilities. The Director of Insurance reports to the Treasurer of Exelon who in turn reports to the Exelon Chief Financial Officer. The EBSC Insurance Organization is comprised of four employees and is responsible for all types of insurance which includes: Director & Officers Liability, Fiduciary Liability, Excess Liability, and Excess Workers Compensation and Crime. The Organization Chart for the Exelon BSC Insurance Organization is shown in Exhibit XV-4.

Exhibit XV-4
Exelon Business Services Company
Insurance Organization
As of November 30, 2013



Source: Data Request RM-1

Together, the two Organizations, Insurance and Enterprise Risk Management, seek to identify, evaluate and mitigate insurable risks across Exelon that fall into the following major categories:

- Executive Liability Risk (i.e., Director & Officers, fiduciary, commercial crime)
- Liability Risk (i.e., Nuclear, general, automobile, employees practices, aircraft)
- Property Risk (i.e., Nuclear and non-nuclear)
- Workers' compensation

Exhibit XV-5 lists the insurance premium costs for PECO's coverage for 2010 through 2012. It should be noted that PECO's insurance for all lines of coverage, is secured as part of the insurance placement for Exelon Corporation and the premiums shown in Exhibit XV-5 are the total premiums that were bound at the beginning of each policy term and allocated to PECO. PECO's share of insurance costs for each policy, are derived by applying the Modified Massachusetts Formula[56], in accordance with Exelon's approved accounting policy. The Director of Insurance analyzes several factors in evaluating self-insured retentions and limits of insurance. These factors include benchmarking inside and outside the industry, past loss experiences, levels of risk from the operations of the various business units, and the cost of insurance versus the probability of loss.

[56] The Modified Massachusetts Formula is the average of each client company's gross revenues, total assets, and direct labor costs to the totals of all client companies.

Exhibit XV-5
PECO Energy Company
Insurance Premium Expenses by Lines of Coverage
For the Years 2009 through 2012

Lines of Coverage	2009	2010	2011	2012
Directors & Officers Liability	-	$936,743	$806,530	$635,306
Fiduciary Liability	-	$227,528	$213,051	$161,934
Excess Liability	-	$940,734	$850,177	$850,458
Excess Workers Compensation	-	$131,697	$112,594	$81,001
Property	-	$620,727	$535,335	$448,681
Crime	-	$21,860	$19,707	$17,593
Totals	$2,892,022	$2,879,289	$2,537,394	$2,194,973

Note: Budgeting at the individual service code level did not begin until 2010; hence the Company could only provide the total insurance premium in 2009 as opposed to a break out by line of coverage.
Source: Data Request RM-5

For major retention/limit changes, the Director of Insurance develops recommendations and submits them to the Exelon Chief Financial Officer who either makes final determination or presents to the Exelon Risk Management Committee, as appropriate. The Director of Insurance implements changes to the levels of insurance that are within established thresholds and of minor economic impact without seeking management approval.

In accordance with the documented insurance renewal procedure at Exelon, insurance renewal is outsourced to insurance brokers who competitively bid for Exelon's insurance needs. Exelon BSC Insurance evaluates the bids based on pricing, coverage limits, financial ratings, claims handling practices and other miscellaneous factors. The Senior Insurance Analysts in the Insurance Organization are responsible for communicating with insurers and brokers during the renewal process and respond to follow-up information requests from brokers.

Exelon strives to use utility owned mutual insurance companies because of their inherent advantages over commercial insurance companies. For example, utility owned insurance companies provide broader coverage and several utility specific benefits that other commercial insurance companies do not provide. Exelon uses these industry owned mutual insurance companies to buy insurance coverage in layers. For example, a particular company may provide the first $35 million in excess liability while a secondary company may provide the next $100 million in coverage, etc. In selecting proposals for insurance coverage and in accordance with Exelon's risk and insurance philosophy, the Insurance Analysts in the Insurance Organization strive to maximize the use of industry mutual insurers and captive insurance companies wherever advantageous and cost efficient. Exelon's insurance practices are regularly benchmarked against other businesses with similar risk profiles regardless of industry classification.

PECO maintains its own Risk Control Manual, separate from Exelon, which describes the process in which the Company will measure, monitor, manage, and report the different types of risk exposures seen in the course of PECO's day-to-day business activities. The Risk Control Manual identifies the types of risks faced at PECO such as Market and Financial risks, Regulatory and Legislative risks, and Operational risks. The Market and Financial Risks include the risk of price fluctuations in the wholesale and retail power markets. Regulatory and Legislative Risks include changes to the laws and regulations that govern competitive markets and utility cost recovery and that drive environmental policy. Operational risks include those risks inherent in running large electric and gas distribution systems and the ability to maintain the availability, reliability, and safety of its energy delivery systems. The Risk Control Manual governs all transactions that occur in the Energy Acquisition and Gas Supply Departments such as forward power purchases, daily load balancing, gas spot purchases/sales, capacity releases, etc. Also included in the Risk Control Manual is the PECO credit policy, which addresses overall credit risk elements and control methodologies for wholesale gas and electric procurement and for supply transactions at PECO.

The Supervisor of Operations, Enterprise Risk Management meets with PECO's SVP and CFO on a quarterly basis to discuss risk management at PECO. These meetings include updates on the complete risk inventory at PECO and all associated mitigation plans. The three types of risk (i.e., operational, market and financial, regulatory and legislative) are further divided into more specific risks. Each risk has a designated threat status (i.e., extreme, moderate, and minor), risk ownership, status of the current mitigation plan, risk trends and any relevant comments or actions. The risk owner designates a single point of contact (SPOC) for each item in the risk inventory that is responsible for providing updates to management on a quarterly or as needed. Exhibit XV-6 lists the numbers of risks by category and threat level.

Exhibit XV-6
PECO Energy Company
Risk Inventory
As of June 30, 2013

Type of Risk	Number of Risks		
	Extreme	Moderate	Minor
Operational	3	17	1
Market and Financial	1	5	1
Regulatory and Legislative	0	6	1
Totals	4	28	3

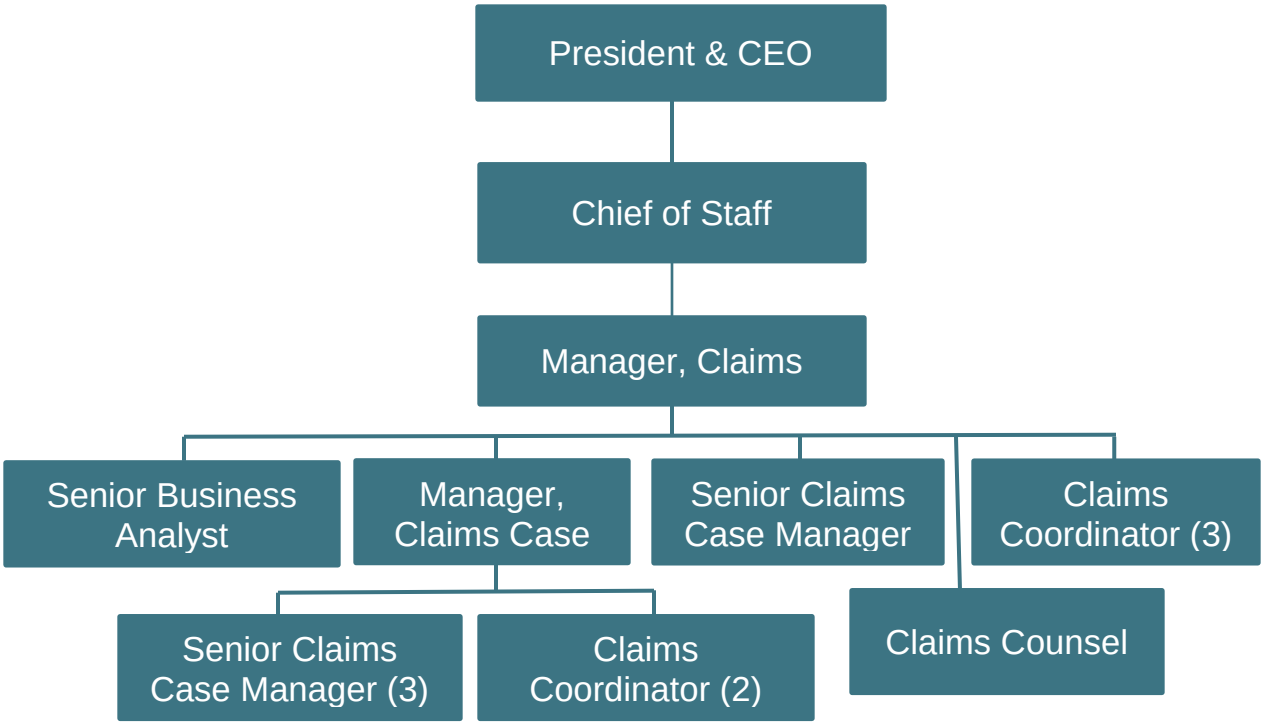
Source: Data Request RM-14

In order to take a closer look at Exelon's risk profile and provide recommendations on limit levels, risk transfer, etc., the Company hired a consultant in the latter half of 2013 to perform a foundational analysis of Exelon Corporation's Economic Cost of Risk. The analysis was to focus on risk financing optimization (RFO) and include several evaluations and analyses based on Exelon's risk bearing capacity,

risk tolerance, economic cost of risk, etc. The RFO will be performed for the following lines of insurance coverage: General Liability, Auto Liability, Excess Workers' Compensation. The analysis was expected to be completed in the first quarter of 2014.

The third organization integral to the Risk Management function at PECO is the Claims Department as shown in Exhibit XV-7. PECO's Claims Department is headed by the Manager of Claims who reports directly to the Chief of Staff. The Claims Department consists of 14 employees and includes five Senior Claims Case Managers, five Claims Coordinators, a Senior Business Analyst and a Claims Counsel. Each Senior Claims Case Manager handles approximately 800 claims per year.

Exhibit XV-7
PECO Energy Company
Claims Department
As of December 31, 2013

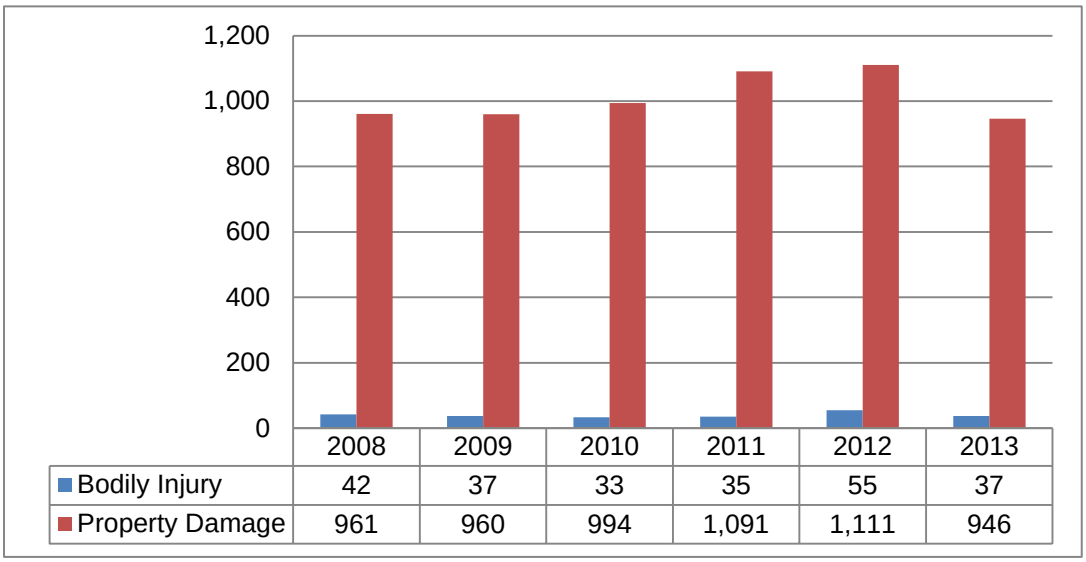


Source: Data Request GD-1

PECO handles two major categories of claims: property damage (PD) and bodily injury (BI). PD claims are typically related to electric service outages (i.e., power restoration claims due to trees down, utility poles damaging property, etc.). These claims are normally created when residential customers call the Company reporting an incident. The PD claims are then entered into the Claims Management System used by the Claims Department. BI claims could encompass injuries related to motor vehicle accidents, electrical contact cases, slips and falls, etc. Bodily injury claims are normally received by the Claims Department directly from attorneys. Exhibit XV-8 shows the number of claim cases from 2008 through November 30, 2013 while Exhibit XV-9

depicts the Property Damage and Bodily Injury settlement amounts that were paid for the same time period.

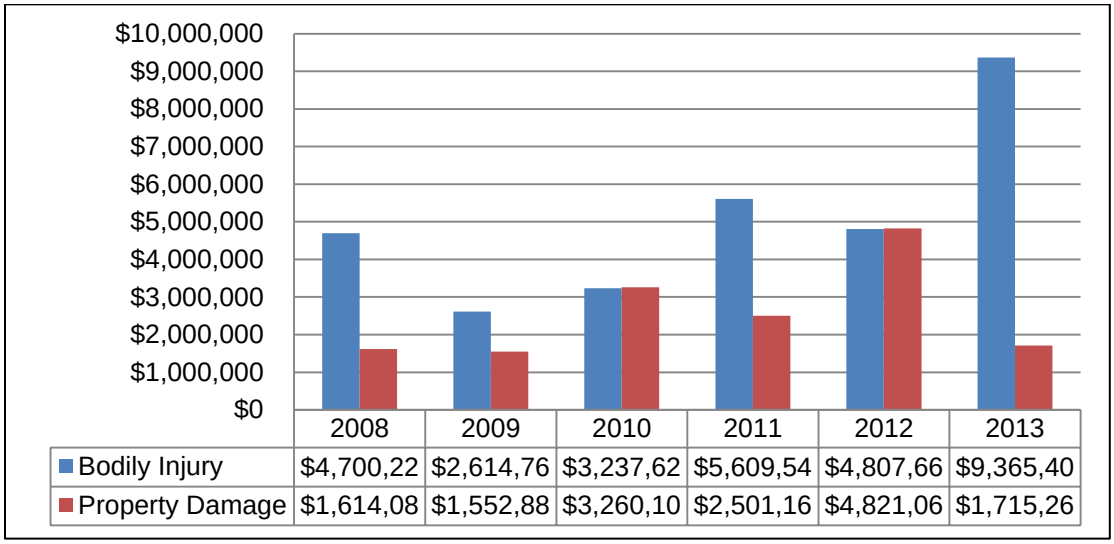
Exhibit XV-8
PECO Energy Company
Number of Claims Cases
For the Years 2008 through 2012 and January through November 2013



	2008	2009	2010	2011	2012	2013
Bodily Injury	42	37	33	35	55	37
Property Damage	961	960	994	1,091	1,111	946

Note: 2013 data January through November 2013.
Source: Data Request RM-20

Exhibit XV-9
PECO Energy Company
Settlement Amounts
For the Years 2008 through 2012 and January through November 2013



	2008	2009	2010	2011	2012	2013
Bodily Injury	$4,700,22	$2,614,76	$3,237,62	$5,609,54	$4,807,66	$9,365,40
Property Damage	$1,614,08	$1,552,88	$3,260,10	$2,501,16	$4,821,06	$1,715,26

Note: 2013 data from January through November 2013.
Source: Data Request RM-20

As seen in Exhibit XV-8, the numbers of BI and PD claims have remained relatively constant from 2008 to 2013. However, the Company indicated that 2012 was an outlier year for both types of claims. Moreover, although the Property Damage settlement amounts shown in Exhibit XV-9 have remained fairly steady, Bodily Injury settlement amounts have almost doubled from 2012 to 2013. This large increase was mainly due to PECO resolving two significant cases in 2013 involving an electric contact fatality and a motor vehicle accident.

Findings and Conclusions

Our examination of the Risk Management function included a review of the Enterprise Risk Management Organization, the Insurance Organization and a brief overview of the Claims Organization. Specifically, Audit Staff reviewed the Risk Management function's goals and objectives, policies and procedures, staffing, reporting, insurance costs, claim cases and amounts, active safety program, etc. Based on our review, it appears that proper controls are in place and that the Risk Management function at PECO is being performed in a satisfactory manner.

Recommendation

None.

XVI. LEGAL

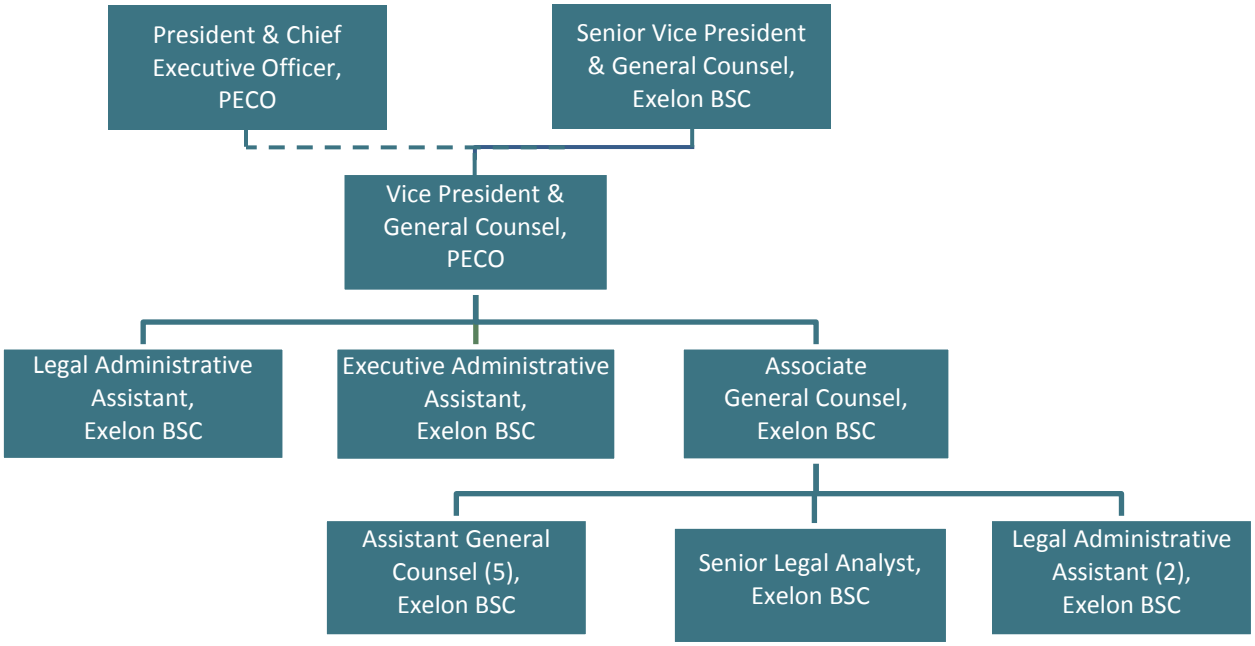
Background

As discussed in Chapter II – Background, Exelon Business Services Company (Exelon BSC) and PECO Energy Company (PECO) are wholly owned subsidiaries of Exelon Corporation (Exelon). Exelon BSC provides several services to Exelon and its subsidiaries, including legal, compliance, ethics and corporate governance through its dedicated Legal Department (Exelon BSC Legal). Exelon BSC Legal is comprised of lawyers and legal professionals with diverse backgrounds from both the government and private sector. Exelon BSC Legal is comprised of ten teams which include:

- Exelon Generation Legal Team
  - Legal support for Exelon Power, Exelon Nuclear and Exelon Nuclear Partners
- Commercial Legal Team
  - Legal transactional and regulatory compliance support for Constellation Energy
- Compliance and Ethics Legal Team
  - Administers Exelon's Ethics Program including oversight on corporate compliance, compliance risk and information management
- Corporate and Commercial Legal Team
  - Purchasing contracts, service agreements, leases and sales of real estate, corporate development, claims and collections
- Environment, Health and Safety Legal Team
  - Safety, Occupational Safety and Health Administration (OSHA) compliance and environmental
- Labor, Employment and Employee Benefits Legal Team
  - Hiring, payment, retention and other employment related issues
- Litigation Legal Team
  - Handles prospective and active litigation and disputes
- Office of Corporate Governance Legal Team
  - Legal support for Exelon's Board of Directors and shareholder service functions
- Legal Operations and Administration Team
  - General administration support for all Exelon legal teams
- Utility Legal Team
  - Handles regulatory matters for Exelon Utilities
  - Includes Baltimore Gas and Electric (BGE), Commonwealth Edison (ComEd) and PECO

Exelon BSC Legal's Utility Legal Team is comprised of three divisions with each providing dedicated legal support to its respective electric distribution operating company client (i.e., BGE, ComEd, and PECO). The Utility Legal Team's PECO Division (PECO Legal) is an Exelon BSC embedded Department, managed by PECO's Vice President and General Counsel as illustrated in Exhibit XVI-1.

Exhibit XVI-1
Exelon Business Services Legal Department
Utility Practice Group - PECO Division
Organizational Chart
As of December 5, 2013



Source: Data Request LG-8

As an Exelon BSC embedded employee[57], PECO's Vice President and General Counsel has a dual reporting relationship to both Exelon BSC Legal and PECO's Chief Executive Officer. All significant legal issues are reported to the Exelon BSC Senior Vice President and General Counsel. Meanwhile, all legal issues concerning PECO are reported to PECO's President and Chief Executive Officer. This flexible structuring allows each business unit to share legal expertise and resources.

PECO Legal is dedicated to achieving optimal results by providing legal advice on regulatory matters, acquisitions and transactions, complex litigation matters and formal legal complaints. Regulatory matters include rate, tariff, rulemaking and comments presented to the Pennsylvania Public Utility Commission (PUC or Commission). Furthermore, PECO Legal advises regulatory staff to ensure compliance with Commission requirements. PECO Legal's Assistant General Counsel and staff are assigned to both electric and gas regulatory matters including PA Act 129 (Energy Efficiency Program), Smart Grid and Smart Meter dynamic pricing requirements, default

[57] The concept of an embedded employee is discussed in greater detail in Chapter III – Executive Management and Organizational Structure.

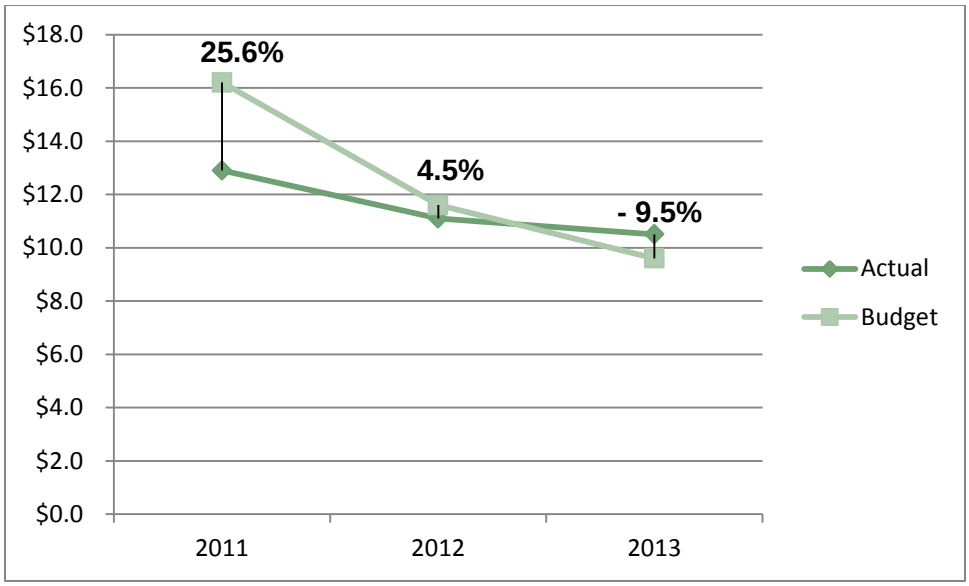
service filings, retail choice, the distribution system improvement charge and PECO's long term infrastructure improvement plans for its natural gas operations.

Exelon BSC Legal's centralized practice groups are dedicated to overlying issues to support Exelon subsidiaries, including PECO. PECO Legal occasionally draws resources from other Exelon BSC Legal Teams. Exelon BSC Legal has also established multiple Legal Department committees which are comprised of members from every legal team and practice group. Moreover, in 2013, Exelon BSC Legal was awarded the Pro Bono Publico Award by the American Bar Association for outstanding volunteer legal services. Exelon BSC Legal encourages its attorneys, employees and external legal counsel to support pro bono projects within the community.

While Exelon BSC Legal provides comprehensive legal resources for Exelon and its subsidiaries, the Department will also outsource legal services dependent upon the nature of the issue, the required level of expertise, or if an independent assessment is necessary. Exelon BSC Legal utilizes a request for proposal (RFP) process in order to determine preferred providers at the corporate level. Preferred providers bill Exelon BSC Legal at predetermined discounted rates which provide Exelon and its subsidiaries with an advantageous cost structure and flexibility in the procurement of external legal services. The RFP selection and bid process was reevaluated in 2013 after completion of the Exelon merger with Constellation Energy. Exelon BSC Legal developed its selection criteria based upon law firm expertise, rates, availability, accessibility and opportunities for diversity inclusion. The selected corporate law firms serve as Exelon BSC Legal's preferred providers for outside legal counsel when a need to outsource arises. In addition, PECO Legal utilizes the same RFP requirements for determining regional preferred providers, which serve localized business needs (i.e., matters specific to PECO only). For example, PECO Legal outsources arbitrations through an Alternative Fee Arrangement, where PECO Legal assigns the appropriate preferred providers based upon the expertise of the attorney, availability, and cost effectiveness of the fee structure. All external bills are reviewed for accuracy and adjustments are requested as appropriate.

Exhibit XVI-2 illustrates PECO's actual overall legal expense in comparison with budgeted amounts. PECO's overall legal expenses include internal, external and indirect counsel expenditures. Internal counsel expenditures are comprised of labor for both PECO Legal and direct charges resultant from non-dedicated Exelon BSC Legal staff who work on PECO specific matters. External counsel costs are resultant for PECO specific matters which are outsourced to third parties. Indirect counsel costs reflect the allocation of Exelon BSC Legal costs charged to PECO which relate to Exelon-wide legal issues which indirectly impact PECO.

Exhibit XVI-2
PECO Energy Company
Actual vs. Budgeted Legal Expenditures (Millions)
For the Years 2011 through 2013



Source: Data Request LG-14

On an annual basis, PECO prepares a five-year plan which includes the overall legal expense budget for the upcoming year. As shown above, PECO's actual overall legal expenses generally are consistent with budgeted amounts. Generally, variances between actual expenditures and budgeted amounts for internal, external and indirect counsel expenses offset in PECO's Legal budget. However, the Company did experience a 25.6% variance in 2011. The majority of the 2011 variance was a result of the indirect charges associated with Exelon's merger with Constellation Energy. During the year, monthly meetings are held between PECO's General Counsel and Exelon BSC's General Counsel to review actual results against the established overall budget.

The external counsel budget is established by estimating the total costs associated with planned legal matters to be outsourced. For outside counsel expenses, actual results for each legal matter are compared to the budgeted amount. On a quarterly basis, the external legal counsel forecast is reviewed by the respective attorneys and adjusted accordingly. The indirect counsel budget is determined concurrently with PECO's internal counsel budget and is based upon historical data. PECO's internal counsel budgeting and variance reporting processes are discussed in greater detail in the Findings and Conclusions section of this chapter.

Findings and Conclusions

Our examination of the Legal function included a review of the organization and administration of legal services provided to PECO. Specifically, the Audit Staff reviewed the Legal function's goals and objectives, policies and procedures, staffing, reporting,

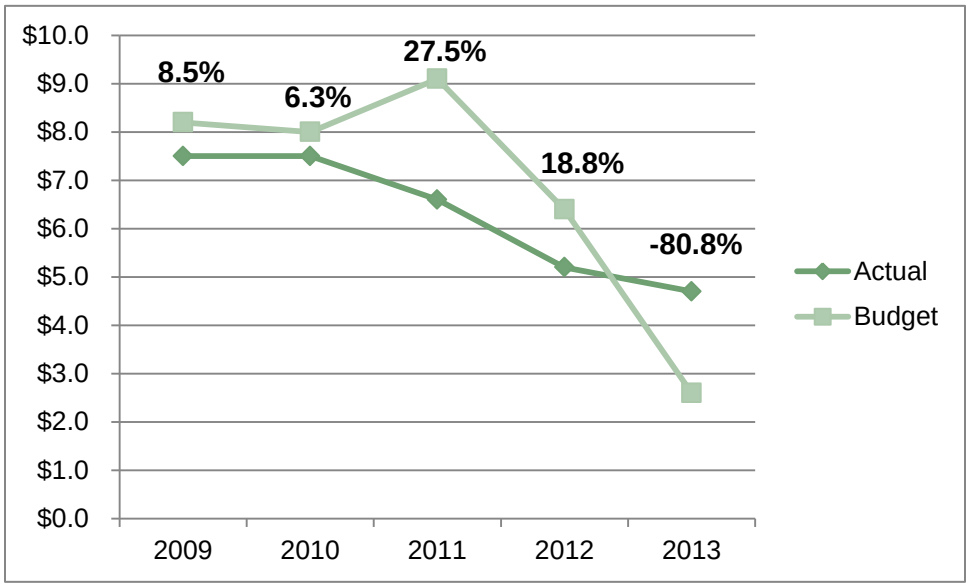
and the assignment and management of caseload to external legal firms. Based on our review, the Company should devote additional efforts to improving its Legal function by addressing the following:

1. PECO's internal counsel expenditures have experienced significant budget variances from budgeted amounts.

As mentioned in the Background, PECO's internal counsel budget is comprised of two components: an amount budgeted for Exelon BSC Legal staff who work on PECO specific matters and a single PECO employee (i.e., PECO's Vice President and General Counsel) collectively referred to as PECO's internal counsel, as well as an amount for non-dedicated Exelon BSC staff who occasionally work on PECO specific matters. Prior to the 2011 Constellation merger, PECO's budget for this component of its internal counsel expense was determined by performing a historical analysis on prior charges from non-dedicated Exelon BSC staff. However, once the merger was completed, historical information for non-dedicated staff was limited due to the addition of attorneys from Constellation Energy. Therefore, only "fully dedicated" Exelon BSC staff costs (i.e., Exelon BSC Legal Staff that are assigned to work on PECO specific matters 100% of the time) were included in the internal counsel expenditure budget from 2012 through 2014. Consequently, Exelon BSC Legal Staff that worked on PECO specific matters less than 100% of the time were not included budgeted for their expenses. PECO Management indicated that its 2015 budget will return to its pre-merger process and base the non-dedicated attorney budget upon historical data.

Exhibit XVI-3 reflects actual versus budgeted internal counsel expenditures from 2009 through 2013 for PECO Legal. As noted earlier, the internal counsel budgets for the years 2009, 2010 and 2011 were determined by using weighted average salaries for PECO internal counsel. As shown in Exhibit XVI-3, there was a significant reduction in PECO's internal counsel budget for 2012 and 2013 largely attributed to the staffing reductions and a change in budgeting methodology. For the 2012 internal counsel budget, staffing levels at PECO Legal were reduced by three positions, primarily due to shifting resources after the completion of the Constellation merger. While the new staffing levels remained consistent for the 2012 and the 2013 budget years, a change in budgeting methodology occurred which impacted the 2013 budget where actual individual salaries were used to calculate the budget as opposed to the previous methodology of using weighted average salaries.

Exhibit XVI-3
PECO Energy Company
Utility Legal Team – PECO Division
Actual versus Budget Internal Counsel Expenditures (Millions)
For the Years 2009 through 2013



Source: Data Request LG-12

Substantial variances, including both a large budgetary shortfall and significant overages, had occurred between 2011 and 2013 for PECO's internal counsel. However, variance reports provided to the Audit Staff were presented on a combined total budgetary basis, where the total actual costs of the delivery of all legal services (i.e., internal, external and indirect) were evaluated in comparison with the total forecasted costs as highlighted in Exhibit XVI-2. Since the overall legal budget had minor variances over this timeframe, no specific legal matters or issues were identified as causing a variance.

The cost of delivery of legal services can be difficult to predict as changes in regulation and policy can impact a utility's ability to perform its core business functions. For example, obtaining approval for PECO's default service program is essential to operations and result in additional resources if unanticipated regulatory changes transpire during the approval process. Moreover, the timing and constraints of litigation often affect costs, which are assessed monthly and re-budgeted quarterly. However, PECO Legal does have contingency funds that are available to guarantee the provision of integral legal services blunting some of the impact of wild variances in its internal counsel budget. Typically, variances under/over 10% should include justification or reasons for the variance while variances within 10% of the budget are generally considered acceptable. While the Company does perform monthly reviews of expenses, specific causes of the variances for internal counsel costs were not provided to the Audit Staff.

The Company purports that due to the unpredictability of legal matters, variances will regularly occur between internal and indirect counsel expenses. PECO states that these variances will characteristically have an inverse relationship (i.e., decrease in internal counsel charges partially offset by increases in indirect charges). However, this relationship is not a one to one ratio, as indirect counsel expenses are charged in proportion to overall charges for matters which affect multiple affiliates and direct charges specific to PECO only are assigned to PECO in their entirety. Thus, while PECO's actual legal costs generally conform to amounts in its overall budget, the Audit Staff contends that establishment of monthly variance reporting at a more granular level will help the Company identify and account for the drivers affecting the variances and in turn could be used for future budgeting purposes. Furthermore, regular review and documentation of these variances will enable PECO Management to reallocate funds within PECO's overall budget as needed. A Department's budget is an estimate of how the Department should perform financially and should aim to be as accurate as possible. In addition, large variances between actual and budgeted expenditures, even if offset in a separate line item, could tie up budgeted operating funds that could be more effectively applied elsewhere.

Recommendation

1. Modify the Legal expense budget process to document budget variance causal factors for the indirect, internal and external charges for all BSC Legal teams charging costs to PECO and make adjustments, as necessary, to reduce budgetary variances

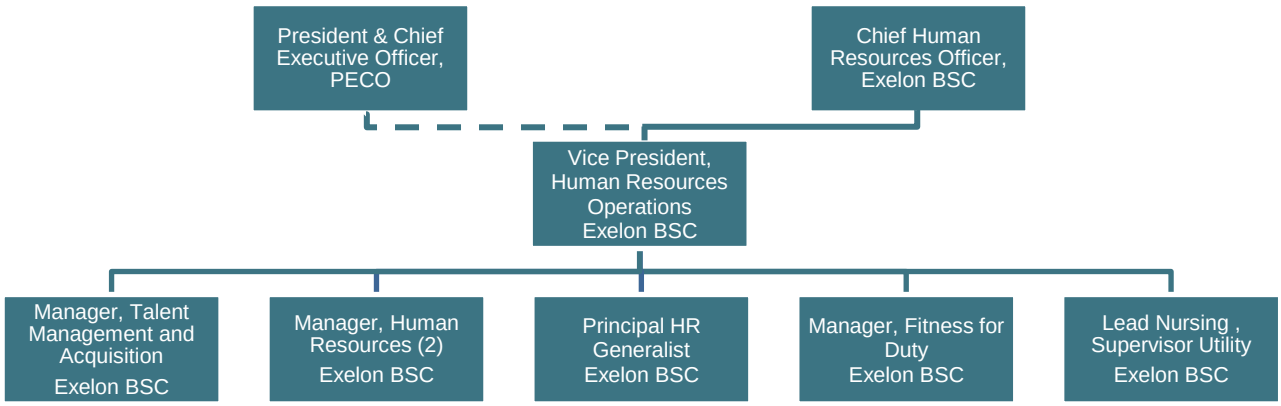
XVII. HUMAN RESOURCES AND DIVERSITY

Background

Human Resources

PECO Energy Company (PECO or Company) is comprised of approximately 2,500 PECO employees including PECO embedded employees as discussed in Chapter III – Executive Management and Organizational Structure. PECO employs both union and non-union employees. PECO's union employees are members of the International Brotherhood of Electric Workers (IBEW). IBEW maintains two separate collective bargaining agreements covering PECO employees in operations and customer service. As discussed in Chapter II – Background, PECO is a subsidiary of Exelon Corporation (Exelon). Exelon's service organization subsidiary, Exelon Business Services Company (Exelon BSC), performs human resources (HR) functions for PECO. Exelon BSC's HR Department also provides direct functional support to PECO through an embedded Exelon BSC Human Resources Department (PECO HR). As discussed previously in Chapter III – Executive Management and Organizational Structure, approximately 200 Exelon BSC employees, are completely dedicated to PECO's business functions and are included in the 2,500 PECO employee total. As such, Exelon BSC embedded employees have reporting responsibilities to both organizations. For example, as illustrated below in Exhibit XVII-1, PECO's Vice President of HR Operations is an Exelon BSC embedded employee, who reports to both the Exelon Chief HR Officer and to PECO's President and Chief Executive Officer.

Exhibit XVII-1
Exelon Business Service Company
Embedded Exelon BSC Human Resources Department - Organizational Chart
As of December 5, 2013



Source: Data Request GD-7

PECO's Vice President of HR Operations oversees any decentralized HR functions at PECO including, day-to-day training, staffing and record management. The Manager of Talent Management and Acquisitions oversees staffing, recruiting, and conducts new employee orientations. The two Managers of HR and the Principal HR Generalist work in tandem with the Manager of Talent Management and Acquisitions to facilitate employee and labor relations. Their combined responsibilities also include special projects such as attrition assessment and retirement forecasting. The Manager of Fitness for Duty oversees drug and alcohol testing, including standard random regulatory Department of Transportation, manager referral, and post-accident testing. Pre-hire drug and alcohol testing is handled through Exelon BSC's HR Department, while PECO's HR Manager of Fitness for Duty performs follow-up on testing results. The Lead Nursing Supervisor serves as the case manager for short term disability and non-work related injuries, oversees the Family Medical Leave Act program and works with PECO's Support Services Department.

In addition, Exelon BSC's HR Department is responsible for centralized payroll and benefit administration as well as support on various other centralized functions. Annual internal assessments are conducted on all corporate-wide job classifications, determining adjustments to pay ranges for all non-executive employees within Exelon, including PECO. Benchmarking for job positions is executed through the use of multiple third-party surveys and networking groups, where pay ranges are targeted at the 50th percentile of the peer groups. Annual adjustments are merit based with union employees receiving cost of living increases based upon negotiated contracts. Meanwhile, compensation for executive level positions is continuously assessed by a third party consultant, in efforts to remain competitive with the market.

Benefits available to PECO employees include: medical, prescription, dental, vision, hearing and wellness programs. Retirement benefits are available to employees, including the Exelon Corporation Cash Balance Pension Plan (ECCBP) for employees hired on or after January 1, 2001 and the Exelon Corporation Retirement Program for those employees hired prior to January 1, 2001 who did not elect to transfer their benefit to the ECCBP during pension choice. (See Chapter VI – Financial Management for additional information related to the funding of the Company's retirement benefit plans.)

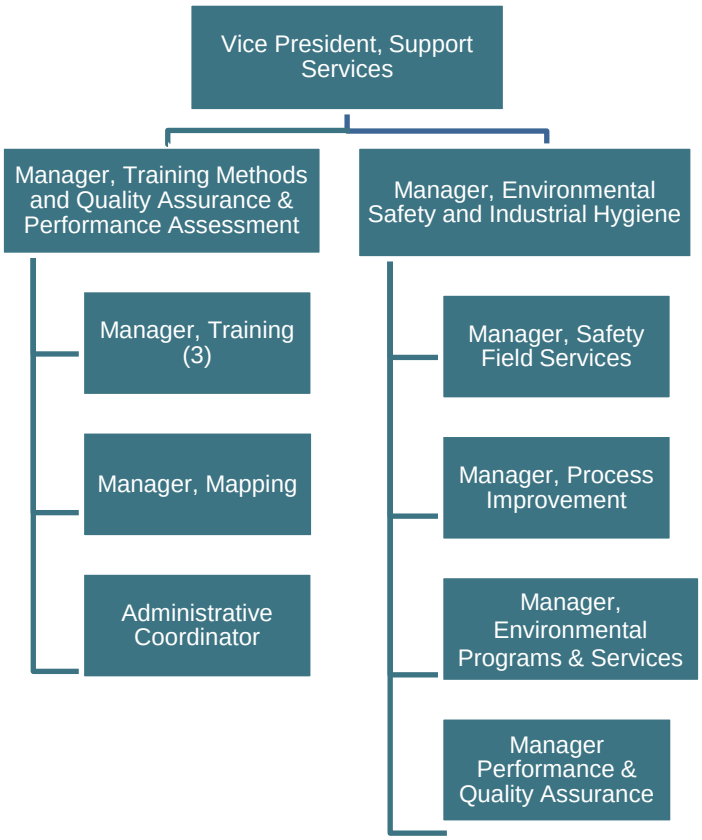
Additionally, Exelon offers an optional employee savings plan (401K), basic life, accidental death and dismemberment and supplemental insurance programs, long term disability, a flexible benefits program, an Employee Assistance Program, legal services, back-up childcare, adoption assistance, tuition reimbursement, and employee stock purchase plan. Paid time off is available as sick, short term disability, vacation and paid parental leave and also includes floating holidays. PECO's Retiree Medical Plan includes medical, dental, prescription drugs; in addition, retiree life insurance is also included as a benefit. There have been changes to PECO's Retiree Medical Plan's provisions in order to maintain benefits provided to employees while balancing the costs. These changes include: increasing contributions from retirees (changes effective 1996 and 2004), transition to a defined contribution arrangement (i.e., the Retiree Medical Savings Account) for employees hired after 2004, and reduction or elimination of non-medical benefits (i.e., dental and life) effective in 2014. Further, costs have been reduced by modifying medical plan cost sharing (i.e., increasing deductibles, co-pays,

etc.), prescription drug costs through government Medicare subsidies (i.e., Employer Group Waiver Plan-new, Retirement Drug Subsidy-past), leveraging Exelon's size/volume to negotiate more favorable costs (i.e., vendor fees, prescription drug costs) by standardizing health care benefits and vendors, and increasing premium cost-sharing. PECO's Retiree Medical Plan is only available to employees hired on or after January 1, 2004 at 100% of the cost. As such, employees hired after January 1, 2004 who become eligible retirees, pay 100% of retiree health care plan costs under the Retiree Medical Savings Account or other health care plan, and may submit requests for reimbursement from their Retiree Medical Savings Account. PECO HR serves as the contact point between PECO employees and Exelon BSC's HR Department for matters concerning payroll and benefits.

PECO's safety function is administered within its Support Services Department. As illustrated in Exhibit XVII-2, the Manager of Environmental Safety and Industrial Hygiene and the Manager of Training Methods and Mapping and Document Services are responsible for safety and training and report directly to the Vice President of Support Services. As discussed in Chapter III – Executive Management, Exelon Utilities drives discussion and best practice standardization between PECO, Baltimore Gas and Electric Company, and Commonwealth Edison Electric Company on safety in a Peer Group.

The Manager of Training Methods, Mapping, and Document Services is responsible for the mapping and documentation function as well as the Training Section. Mapping and documentation includes use of Geographic Information Systems (GIS) technology as well as the distribution of maps. The Training Section is responsible for training and methods based training and is separated into three Divisions: Customer Operations Training, Electric Operations Training and Methods and Gas Operations Training and Methods. Methods focus on the requirements of daily work, such as work procedures, products and tools. Electric Operations Training and Methods is conducted at multiple locations including an outdoor line mechanic school and an indoor classroom facility. Both locations allow for hands-on training and may include handling de-energized devices for safety purposes, providing a way for personnel to gain practical experience in a controlled environment. PECO's training is tailored specifically for its operating system; hazard recognition and safety are paramount to the program. PECO's Training and Methods programs are a compilation of best practices created through input from field employees and other affiliated utilities. PECO Management strives to maintain a training program that evolves with new technology and changes in the customer service, electric and gas industries.

Exhibit XVII-2
PECO Energy Company
Training and Safety Sections within Support Services Department
As of December 5, 2013



Source: Data Request GD-7

The Manager of Environmental Safety and Industrial Hygiene is responsible for tracking and reporting on safety within the PECO organization, including current safety performance, OSHA (Occupational Safety and Health Administration) metrics and environmental impacts. OSHA metrics include both recordable incidents and days away, restricted or transfer (DART) rates. OSHA recordable incidents are cases of illness or injury which require medical treatment beyond first aid, and may result in death, loss of consciousness, days away from work, restricted work or transfer to another job. The OSHA rate is calculated by the number of OSHA recordable incidents divided by the total number of hours worked by all employees and multiplied by the base number of hours worked for 100 full-time equivalent employees. Similarly, the DART rate is calculated by totaling the number of cases involving days away, restricted work activity, and/or job transfer divided by the total number of hours worked by all employees and multiplied by the base number of hours worked for 100 full-time equivalent employees. These metrics are evaluated company-wide by operating division, as illustrated in Exhibit XVII-3, which also presents OSHA and DART rates for select Departments at PECO. It is important to note that many PECO Departments had zero, or close to zero, incidents from 2008 through 2013 and are not presented in

Exhibit XVII-4. Generally, PECO's OSHA rate and DART rate are well below industry averages. It appears that the Company's commitment to establishing a culture of safety as well as its dedication to ongoing training have largely contributed to PECO's success in reducing workplace illnesses and injuries.

Exhibit XVII-3
PECO Energy Company
Occupational Safety and Health Administration (OSHA) Recordable Incident and Days Away, Restricted or Transfer (DART) Rates
For the Years 2008 through 2013

	2008	2009	2010	2011	2012	2013
OSHA Recordable Incident Rates						
Distribution Service Organization*	0.52	3.00	1.26	1.45	1.05	0.73
Construction and Maintenance*	0.84	2.56	1.27	1.69	1.75	0.82
Gas Operations*	1.30	0.66	1.58	0.90	0.61	0.91
PECO - Overall	**0.96**	**1.45**	**0.91**	**0.97**	**0.82**	**0.57**
Electric Distribution Company Industry Average^	**3.00**	**3.00**	**2.80**	**3.20**	**2.50**	**NA**
Natural Gas Distribution Company Industry Average^	**4.00**	**4.20**	**3.70**	**4.00**	**2.90**	**NA**
DART Rates						
Distribution Service Organization*	0.26	1.37	0.76	.48	.79	.49
Construction and Maintenance*	0.17	1.20	0.63	1.08	0.95	0.66
Gas Operations*	0.65	0.00	1.26	0.60	0.31	0.61
PECO - Overall	**0.54**	**0.70**	**0.50**	**0.48**	**0.41**	**0.45**
Electric Distribution Company Industry Average^	**2.00**	**1.50**	**1.50**	**1.60**	**1.20**	**NA**
Natural Gas Distribution Company Industry Average^	**3.00**	**2.50**	**2.40**	**2.50**	**1.70**	**NA**

*Departments within PECO which are comprised of electric and gas operations field forces[58]
^2013 data from U.S. Bureau of Labor Statistics is not available (NA)
Source: Data Request HR-22

The Manager of Environmental Safety and Industrial Hygiene also oversees four managers. The Manager of Safety Field Services acts as steward of PECO's Safety Program, including establishment of procedures and rules, implementation of the program and communication with all employees, both operational and internal staff. The Manager of Safety Field Services oversees a team of five safety professionals who conduct safety observations and act as the first responders to incidents. The Manager of Performance Assessment and Quality Assurance is responsible for conducting evaluations, investigations and safety audits to determine and create appropriate corrective actions in order to reduce incidents. The Manager of Environmental Programs and Services focuses on the prevention of environmental hazards, implementation of environmental regulations and communicating proper procedures

[58] All denoted Departments are discussed in greater detail in Chapter VII – Electric Operations and Chapter VIII – Gas Operations. PECO's Distribution Service Organization Department is includes both electric and gas operations personnel. Whereas, PECO's Construction and Maintenance Department is comprised of field forces from Electric Operations and PECO's Gas Operations Department is comprised of Gas Operations field forces.

required to comply with environmental responsibilities for planned projects. The Manager of Process Improvement facilitates safety review and strategic planning.

Diversity

The Pennsylvania Public Utility Commission (PUC or Commission) has encouraged utilities to proactively improve diversity in their workforce and purchasing efforts for more than two decades. In March of 1992, the Commission issued a Secretarial letter directing all jurisdictional utilities affected by Section 516 of the Public Utility Code (i.e., utilities whose plant-in-service exceeds $10 million) to file quarterly diversity status reports with the Commission. In May of 1994, the Commission issued an Order directing Section 516 utilities to file diversity status reports semi-annually rather than quarterly, to submit EEO plans annually, and to file certain diversity procurement data. In February 1995, the Commission adopted Chapter 69 regulations which encouraged utilities to include diversity efforts as a component of their business strategy. Later, in March of 1997, the Commission's diversity filing requirements changed from semi-annual to annual.

PECO complies with 52 Pa. Code §69.809 by filing annual reports on diversity with the PUC. In addition, PECO participates in a corporate-wide initiative that recognizes the value of diversity and inclusion as a business resource. Exelon's Employee Resource Groups (ERGs) represent various diverse communities and provide camaraderie, encourage diversity awareness and serve as a forum for education, communication and professional development. ERGs also provide the Company with new market opportunities and strengthen relationships with community outreach. Moreover, as discussed in further detail in the Findings and Recommendations section of this chapter, PECO participates in Exelon's Diverse Business Empowerment Process (DBEP) which is designed to strengthen relationships with diverse vendors. For example, as discussed in Chapter XVI – Legal, Exelon BSC Legal and PECO Legal established selection criteria for preferred providers of external legal services to include the consideration for opportunities to engage diverse legal firms and law partners.

Findings and Conclusions

Our examination of the Human Resources, Safety and Diversity functions included a review of the Company's policies and procedures, compensation and benefits, employee training, safety programs, PUC diversity filings, Affirmative Action Plans, staffing trends, policies and procedures, communication methods, management philosophy, and accountability. Based on our review, the Company should initiate or devote additional efforts to improve the effectiveness of its human resources and diversity functions by addressing the following:

1. The time sheet reporting process is cumbersome and a uniform procedure has not been established for leave requests and approvals.

PECO employees utilize an Exelon established intranet website to access the Human Resources Information System (HRIS). Each employee is required to perform positive time reporting by entering his/her time into the HRIS each pay period for payroll purposes. During the initial entry of timesheet data, the HRIS defaults to the employee's assigned location or home base; however, the employee is responsible for properly allocating hours based upon project and/or work location. While the HRIS does populate a list of townships, it does not incorporate a search tool for employees to determine the appropriate township for the location(s) where the employee worked. For most office personnel, their work location doesn't change; however, certain field personnel may work in different townships or counties during the same pay period.

Field operation personnel are generally assigned to projects through the work management system (WMS). Therefore, if an employee worked on multiple projects, that employee must enter locality information into the system. Consequently, project assignments entered into WMS could be linked to the HRIS so that project assignments and locations could automatically default for employees' time reporting purposes. A streamlined, automated process for timesheet reporting would improve accuracy and reduce time required to properly allocate work hours, thereby increasing efficiency.

PECO's Sick and Vacation Leave Policies allow each Department to develop its own specific leave request and approval procedures for all non-union personnel. Union employees have a defined leave approval process governed by negotiated master bargaining agreements based upon seniority. However, PECO policies stipulate that individual Departments must allow for adequate staffing coverage to ensure business functionality, but do not define specific leave use requirements or limitations for non-union employees. At the end of their pay period, employees enter hours worked and/or leave utilized during their pay period into the HRIS. Once the timesheet is completed, hour's worked/exhausted leave is subsequently approved by the employee's direct supervisor. Leave requests and denial of leave is not uniformly tracked or recorded within the HRIS, moreover, approved leave is not recorded within the HRIS until after it is expended (i.e., in the employees timesheet). Therefore, individual supervisors must track leave requests manually. PECO has developed a layered approval process where timesheets are first approved by the employee's direct supervisor, then by the timekeeper and finally by Exelon BSC's HR Department. However, even with a layered approval process, manual processes are error prone.

Inconsistent handling of leave requests may lead to inaccurate application(s) of leave balances and the lack of automation may allow for leave abuse. Furthermore, inconsistent leave approval methodology may reduce employee morale when leave is unexpectedly denied due to staffing constraints. In addition, multiple manual timesheet entries can be cumbersome for employees whose work locations and projects vary. Manual systems are fallible and may cause time to be improperly allocated between Departments, projects and/or Exelon affiliates. Ultimately, errors in recording appropriate townships will negatively impact the proper collection and remittance of payroll taxes to local taxing authorities. The establishment of automated procedures for leave requests and approvals will ensure that requests and subsequent approvals and denials are handled consistently. In addition, automating the leave request and approval process through the HRIS will allow greater oversight for tracking and improve

the recordkeeping process. For instance, employees could submit leave requests through the HRIS which are then approved by management and automatically populated in an employee's timesheet. As such, PECO should explore additional efforts to automate their timesheet reporting process.

2. PECO does not include company specific procurement data in its Annual Diversity Report to the PUC.

The Audit Staff reviewed PECO's reports on diversity filed with the PUC for 2011, 2012 and 2013. Included in its diversity report are sections related to the Company's diversity policies applicable to HR and Procurement. PECO's HR Section contains a narrative on the Company's Affirmative Action efforts, workforce composition, employee retention, promotion, recruitment, and advertising. Diversity initiatives, including supervisory training and the employee development program, are also described. The Procurement Section details PECO's role within Exelon's consolidated supply function, performed by Exelon BSC's Supply Organization. Exelon's DBEP is a corporate-wide diversity initiative which focuses on relationships with minority-owned and woman-owned businesses, and seeks to provide opportunities for minority professionals employed within majority-owned firms. Exelon's DBEP allows for an effective implementation of diversity initiatives within Exelon BSC's Supply Organization. Due to PECO's participation in Exelon BSC's Supply Organization, the Company provides corporate-wide DBEP data within the Procurement Section of its Annual Diversity Reports submitted to the Commission.

Exelon DBEP defines parameters for diverse businesses, where a portion of Exelon DBEP diverse vendors cannot be classified as minority-owned, women-owned, or persons with disabilities-owned business enterprises (MWDBEs) as defined by 52 Pa. Code §69.801. Consequently, the metrics provided in PECO's annual report on diversity are Exelon DBEP-defined diverse vendor expenditure totals and do not separate expenditures by diverse vendor classification. Moreover, the information provided reflects corporate-wide results and not PECO-specific results. The PUC's 1997 Guidelines for Annual PUC Diversity Filing directs utilities to follow the style and format of the Sample Utility Procurement Report, as depicted below in Exhibit XVII-4.

Exhibit XVII-4
Pennsylvania Public Utility Commission
Sample Utility Procurement Report
From the 1997 Guidelines for Annual PUC Diversity Filing

	Total Company Procurement	Minority (MBE)	% of Total	Women (WBE)	% of Total	Persons with Disabilities (DBE)	% of Total	Total (MWDBE)	% of Total
Direct									
Subcontracted									
Total									

Source: Pennsylvania Public Utility Commission's 1997 Guidelines for Annual PUC Diversity Filing

At the request of the Audit Staff, PECO was able to provide company-specific procurement information for MWDBE vendors. In order to comply with the Guidelines for Annual PUC Diversity Filing, PECO should include company-specific data relating to MWDBE vendors as defined by 52 Pa. Code §69.809.

Recommendations

1. Investigate the implementation of automated processes for HRIS time sheet and leave reporting functions.

2. Modify PECO's Annual Diversity Report to the PUC to include PECO-specific total spending and PECO-specific diverse vendor spending by classification for minority, women, and persons with disabilities-owned business enterprises.

XVIII. ACKNOWLEDGEMENTS

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 PECO Energy Company.

This audit was conducted by Nathan Paul, Krystle Daugherty, Porus Irani, Deron Henry, Sunil Patel, Jennie Banzhof and Barry Keener of the Management Audit Staff of the Bureau of Audits.

XIX. APPENDICES

Appendix A	PECO Energy Company (Electric Service Division) Operating Revenues and Expenses
Appendix B	PECO Energy Company (Electric Service Division) Balance Sheet
Appendix C	Electric Comparative Data and Statistics for the Pennsylvania Panel
Appendix D	PECO Energy Company (Natural Gas Service Division) Financial and Operating Data and Statistics
Appendix E	Natural Gas Comparative Data and Statistics for the Pennsylvania Panel

PECO Energy Company
Financial and Operating Data and Statistics

	2009	2010	2011	2012	2013	Compound Growth
Plant In Service						
Land and Land Rights	$60,604,017	$60,188,752	$60,183,461	$60,177,800	$59,896,838	-0.3%
Structures and Improvements	$27,986,238	$31,320,870	$34,976,747	$36,589,192	$36,507,510	6.9%
Station Equipment	$465,331,266	$477,713,858	$576,505,843	$617,343,260	$640,036,779	8.3%
Towers and Fixtures	$237,311,349	$237,769,219	$245,849,337	$243,403,561	$254,904,326	1.8%
Poles and Fixtures	$8,797,921	$9,128,354	$13,839,755	$19,737,672	$18,166,333	19.9%
Overhead Conductors and Devices	$137,406,264	$139,351,016	$151,498,875	$164,360,716	$167,336,873	5.1%
Underground Conduit	$11,151,453	$12,590,442	$13,309,297	$12,638,976	$12,552,375	3.0%
Underground Conductors and Devices	$77,694,835	$83,198,939	$83,292,365	$86,490,688	$92,691,766	4.5%
Roads and Trails	$2,054,612	$2,054,612	$3,529,649	$2,850,246	$2,136,664	1.0%
Asset Retirement Costs for Transmission P	$823,117	$1,293,453	$1,130,490	$1,129,443	$1,127,466	8.2%
Total Transmission Plant	**$1,029,161,072**	**$1,054,609,515**	**$1,184,115,819**	**$1,244,721,554**	**$1,285,356,930**	**5.7%**
Land and Land Rights	$39,849,505	$38,881,427	$39,850,630	$40,824,246	$41,130,065	0.8%
Structures and Improvements	$67,136,040	$70,886,107	$76,326,003	$75,509,236	$83,803,890	5.7%
Station Equipment	$772,474,929	$797,165,614	$838,583,721	$858,544,574	$881,837,098	3.4%
Poles, Towers, and Fixtures	$509,826,610	$533,488,511	$555,235,202	$576,945,595	$589,529,431	3.7%
Overhead Conductors and Devices	$788,093,349	$829,937,637	$880,665,449	$916,247,845	$947,444,320	4.7%
Underground Conduit	$302,392,528	$309,503,893	$323,690,587	$330,946,408	$335,071,756	2.6%
Underground Conductors and Devices	$807,382,157	$844,539,439	$893,154,065	$926,031,953	$968,081,581	4.6%
Line Transformers	$443,162,062	$460,468,502	$481,831,410	$501,707,265	$511,319,239	3.6%
Services	$357,186,498	$363,084,956	$373,095,848	$377,710,016	$382,815,262	1.7%
Meters	$180,761,794	$183,821,557	$194,746,419	$221,190,083	$328,806,113	16.1%
Installations on Customer Premises	$1,030,123	$4,119,717	$11,291,536	$13,777,204	$13,777,204	91.2%
Street Lighting and Signal Systems	$50,445,565	$51,336,694	$52,351,376	$53,007,488	$53,871,763	1.7%
Asset Retirement Costs for Distribution Plar	$2,644,558	$2,702,772	$2,603,544	$3,097,172	$3,020,255	3.4%
Total Distribution Plant	**$4,322,385,718**	**$4,489,936,826**	**$4,723,425,790**	**$4,895,539,085**	**$5,140,507,977**	**4.4%**
Total Plant In Service	**$5,351,546,790**	**$5,544,546,341**	**$5,907,541,609**	**$6,140,260,639**	**$6,425,864,907**	**4.7%**
Total Materials and Supplies						
Assigned - Operations and Maintenance						
Transmission Plant (estimated)	$7,870,185	$8,775,495	$8,917,971	$9,817,285	$11,758,639	10.6%
Distribution Plant (estimated)	$6,700,727	$6,838,594	$5,836,797	$6,305,344	$6,525,346	-0.7%
Operating Revenues						
Sales of Electricity						
Residential Sales	$1,858,586,744	$2,068,562,664	$1,931,678,284	$1,689,299,967	$1,593,165,713	-3.8%
Commercial Sales	$1,036,416,060	$1,061,431,269	$584,019,216	$461,596,388	$432,264,524	-19.6%
Industrial Sales	$1,310,803,597	$1,364,126,847	$307,878,011	$231,994,383	$222,948,304	-35.8%
Other	$89,804,096	$89,375,613	$37,869,603	$31,628,123	$30,250,000	-23.8%
Total Sales to Ultimate Customers	**$4,295,610,497**	**$4,583,496,393**	**$2,861,445,114**	**$2,414,518,861**	**$2,278,628,541**	**-14.7%**
Sales for Resale	$21,387,461	$38,319,185	$21,823,718	$11,367,484	$9,531,712	-18.3%
Total Sales of Electricity	**$4,316,997,958**	**$4,621,815,578**	**$2,883,268,832**	**$2,425,886,345**	**$2,288,160,253**	**-14.7%**
Provision for Rate Refunds	$0	$0	$0	$0	$0	0.0%
Total Revenues Net Provisions	**$4,316,997,958**	**$4,621,815,578**	**$2,883,268,832**	**$2,425,886,345**	**$2,288,160,253**	**-14.7%**
Megawatt Hours Sold						
Sales of Electricity						
Residential Sales	12,893,426	13,910,210	13,685,877	13,233,318	13,340,802	0.9%
Commercial Sales	8,404,059	8,515,119	8,331,936	8,063,130	8,100,575	-0.9%
Industrial Sales	15,888,955	16,387,118	15,755,017	15,252,526	15,378,728	-0.8%
Other	927,616	924,797	953,194	951,078	936,139	0.2%
Total Sales to Ultimate Customers	**38,114,056**	**39,737,244**	**38,726,024**	**37,500,052**	**37,756,244**	**-0.2%**
Sales for Resale	587,586	808,446	530,172	378,446	287,886	NM
Total Sales of Electricity	**38,701,642**	**40,545,690**	**39,256,196**	**37,878,498**	**38,044,130**	**-0.4%**
Average Number of Customers Per Month						
Sales of Electricity						
Residential Sales	1,404,127	1,406,264	1,412,748	1,416,727	1,420,421	0.3%
Commercial Sales	156,126	156,404	152,718	148,687	148,960	-1.2%
Industrial Sales	3,096	3,110	3,114	3,111	3,108	0.1%
Other	1,084	1,094	5,396	9,675	9,664	72.8%
Total Sales to Ultimate Customers	**1,564,433**	**1,566,872**	**1,573,976**	**1,578,200**	**1,582,153**	**0.3%**
Sales for Resale	-	-	-	-	-	0.0%
Total Sales of Electricity	**1,564,433**	**1,566,872**	**1,573,976**	**1,578,200**	**1,582,153**	**0.3%**

NM - Not Meaningful

Source: Pa PUC Annual Reports

PECO Energy Company
Financial and Operating Data and Statistics

	2009	2010	2011	2012	2013	Compound Growth
Operation and Maintenance Expenses						
Transmission						
Total Operation	$257,481,011	$260,873,681	$128,042,708	$119,321,329	$111,470,659	-18.9%
Maintenance Supervision and Engineering						
Maintenance of Structures	$107,021	$83,108	($4,815)	$2,281	$56,083	-14.9%
Maintenance of Station Equipment	$9,755,508	$12,073,449	$12,643,217	$9,927,702	$11,984,692	5.3%
Maintenance of Overhead Lines	$9,248,648	$6,379,162	$7,279,784	$5,745,304	$6,423,338	-8.7%
Maintenance of Underground Lines	$964,359	$1,099,094	$1,959,828	$131,634	$895,395	-1.8%
Maintenance of Misc.Transmission Plant	$6,054,877	$8,045,637	$6,571,862	$5,742,938	$7,061,504	3.9%
Total Maintenance	**$26,130,413**	**$27,680,450**	**$28,449,876**	**$21,549,859**	**$26,421,012**	**0.3%**
Total Transmission O&M Expenses	**$283,611,424**	**$288,554,131**	**$156,492,584**	**$140,871,188**	**$137,891,671**	**-16.5%**
Distribution						
Total Operation	$50,197,624	$55,539,460	$51,899,160	$57,961,557	$56,379,333	2.9%
Maintenance Supervision/Engineering	$0	$276,075	$0	$0	$0	0.0%
Maintenance of Structures	$3,288,363	$2,861,813	$2,814,113	$3,736,046	$3,763,785	3.4%
Maintenance of Station Equipment	$9,601,987	$9,838,356	$9,504,999	$11,128,230	$13,852,489	9.6%
Maintenance of Overhead Lines	$68,034,499	$95,798,423	$113,896,370	$116,108,805	$78,297,993	3.6%
Maintenance of Underground Lines	$22,867,703	$22,198,032	$25,136,147	$22,809,857	$24,237,229	1.5%
Maintenance of Line Transformers	$1,985,144	$1,792,079	$1,362,261	$1,322,130	$1,615,145	-5.0%
Maintenance of Street Lighting/Signal Syste	$953,649	$951,623	$1,448,271	$1,110,690	$1,194,789	5.8%
Maintenance of Meters	$0	$0	$0	$0	$0	0.0%
Maintenance of Misc. Distribution Plant	$14,104,629	$14,894,945	$16,266,125	$18,904,651	$21,013,383	10.5%
Total Maintenance	**$120,835,974**	**$148,611,346**	**$170,428,286**	**$175,120,409**	**$143,974,813**	**4.5%**
Total Distribution O&M Expenses	**$171,033,598**	**$204,150,806**	**$222,327,446**	**$233,081,966**	**$200,354,146**	**4.0%**
Total Transmission and Distribution Expens	**$454,645,022**	**$492,704,937**	**$378,820,030**	**$373,953,154**	**$338,245,817**	**-7.1%**
Customer Service and Info. Expenses						
Supervision	$0	$0	$0	$0	$0	0.0%
Customer Assistance Expenses	$8,911,526	$59,335,902	$61,054,872	$68,183,904	$58,892,443	60.3%
Information and Instructional Expenses	$1,890,867	$1,991,424	$2,319,579	$1,959,832	$1,923,717	0.4%
Misc Customer Service and Info. Expenses	$1,722,142	$3,029,003	$2,282,748	$995,034	$53,805	-58.0%
Total Customer Service and Info. Expense	**$12,524,535**	**$64,356,329**	**$65,657,199**	**$71,138,770**	**$60,869,965**	**48.5%**

NM - Not Meaningful

Source: Pa PUC Annual Reports

PECO Energy Company
Balance Sheet

BALANCE SHEET	2009	2010	2011	2012	2013	Compound Growth
UTILITY PLANT						
Utility Plant - Electric	$5,508,935,516	$5,840,507,723	$6,159,657,477	$6,410,331,666	$6,752,222,210	5.2%
Other Utility Plant	$1,470,942,921	$1,520,578,798	$1,548,072,226	$1,596,821,631	$1,658,457,419	3.0%
TOTAL UTILITY PLANT	**$6,979,878,437**	**$7,361,086,521**	**$7,707,729,703**	**$8,007,153,297**	**$8,410,679,629**	**4.8%**
Accum. Depreciation and Amortization	($1,693,696,644)	($1,754,865,266)	($1,847,425,563)	($1,941,044,601)	($2,039,436,225)	4.8%
NET UTILITY PLANT	**$5,286,181,793**	**$5,606,221,255**	**$5,860,304,140**	**$6,066,108,696**	**$6,371,243,404**	**4.8%**
OTHER PROPERTY AND INVESTMENTS						
Nonutility Property	$13,278,977	$15,379,480	$15,378,804	$14,253,494	$14,164,297	1.6%
Accum. Depreciation and Amortization	($2,010,501)	($2,023,491)	($2,074,511)	($1,979,556)	($1,839,111)	-2.2%
Investments in Associated Companies	$0	$0	$0	$0	$0	0.0%
Investment in Subsidiary Companies	$31,775,889	$28,560,260	$10,688,140	$1,989,375	$4,202,069	-39.7%
Noncurrent Portion of Allowances	$0	$0	$0	$0	$0	0.0%
Other Investments	$18,301,855	$20,325,482	$21,932,915	$22,123,764	$23,089,354	6.0%
Special Funds	$0	$0	$0	$0	$0	0.0%
TOTALS	**$61,346,220**	**$62,241,731**	**$45,925,348**	**$36,387,077**	**$39,616,609**	**-10.4%**
CURRENT AND ACCRUED ASSETS						
Cash	$20,938,399	$21,012,577	$25,981,546	$15,652,672	$42,956,571	19.7%
Special Deposits	$1,107,264	$407,725	$2,391,221	$408,478	$1,943,145	15.1%
Working Fund	$328,422	$305,772	$279,970	$223,112	$116,985	-22.7%
Temporary Cash Investments	$255,056,903	$483,963,387	$159,245,008	$344,285,779	$172,510,745	-9.3%
Notes Receivable	$0	$0	$0	$0	$0	0.0%
Customer Accounts Receivable	$189,838,136	$441,434,601	$300,326,820	$290,445,764	$297,028,907	11.8%
Other Accounts Receivable	$128,136,937	$253,273,039	$363,518,659	$166,366,265	$112,765,658	-3.1%
Accum. for Uncollectible Accounts	($105,100,556)	($99,167,740)	($91,277,537)	($98,661,242)	($106,638,682)	0.4%
Notes Receivable from Assoc. Compan	$0	$0	$82,000,000	$0	$0	MN
Accts Receivable from Assoc. Compani	$4,074,796	$4,156,073	$4,779,325	$11,117,976	$11,247,625	28.9%
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	$17,248,230	$17,917,407	$18,106,108	$18,980,724	$20,339,448	4.2%
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	$0	$0	$0	$0	$0	0.0%
Gas Stored Underground-Current	$0	$0	$0	$0	$0	0.0%
Liquefied Gas Stored and Held for Proc	$0	$0	$0	$0	$0	0.0%
Prepayments	$10,492,049	$11,342,798	$20,278,594	$33,359,156	$16,464,227	11.9%
Advances for Gas	$0	$0	$0	$0	$0	0.0%
Interest and Dividends Receivable	$0	$20,890,383	$22,587,640	$10,828	$1,371	NM
Rents Receivable	$0	$0	$0	$0	$0	0.0%
Accrued Utility Revenues	$227,985,273	$272,820,785	$119,536,777	$114,412,713	$111,310,714	-16.4%
Miscellaneous Current and Accrued Ass	$173,274,384	$173,101,128	$150,369,199	$133,436,043	$130,658,187	-6.8%
TOTALS	**$923,380,237**	**$1,601,457,935**	**$1,178,123,330**	**$1,030,038,268**	**$810,704,901**	**-3.2%**
DEFERRED DEBITS						
Unamortized Debt Expenses	$12,686,800	$10,470,798	$8,673,284	$9,753,927	$12,167,038	-1.0%
Extraordinary Property Losses	$0	$0	$0	$0	$0	0.0%
Unrecovered Plant and Regulatory Stud	$0	$0	$0	$0	$0	0.0%
Other Regulatory Assets	$1,814,791,468	$962,281,831	$1,245,350,537	$1,400,517,753	$1,459,288,361	-5.3%
Prelim. Survey and Investigation Charg	$0	$0	$0	$0	$0	0.0%
Clearing Accounts	$0	$0	$0	$0	$402	0.0%
Temporary Facilities	$0	$0	$0	$0	$0	0.0%
Misc. Deferred Debits	$636,554,190	$688,480,892	$783,973,156	$763,229,854	$836,918,203	7.1%
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	$21,339,017	$17,648,765	$14,509,369	$8,289,168	$5,792,262	-27.8%
Accum. Deferred Income Taxes	$147,390,314	$141,762,151	$137,262,702	$254,997,963	$206,300,430	8.8%
TOTALS	**$2,632,761,789**	**$1,820,644,437**	**$2,189,769,048**	**$2,436,788,665**	**$2,520,466,696**	**-1.1%**
TOTAL ASSETS AND OTHER DEBITS	**$8,903,670,039**	**$9,090,565,358**	**$9,274,121,866**	**$9,569,322,706**	**$9,742,031,610**	**2.3%**

NM - Not Meaningful

Source: Pa PUC Annual Reports

PECO Energy Company
Balance Sheet

BALANCE SHEET	2009	2010	2011	2012	2013	Compound Growth
PROPRIETARY CAPITAL						
Common Stock Issued	$1,423,004,251	$1,423,004,251	$1,423,004,251	$1,423,004,251	$1,423,004,251	0.0%
Preferred Stock Issued	$87,472,000	$87,472,000	$87,472,000	$87,472,000	$0	-100.0%
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	$0	$0	$0	$0	$0	0.0%
Donations from Stockholders	$0	$0	$0	$0	$0	0.0%
Gain on Required Capital Stock	$0	$0	$0	$0	$0	0.0%
Other Paid-in Capital Stock	$715,452,693	$938,565,491	$956,530,728	$965,048,951	$992,181,304	8.5%
Installments Received on Capital Stock	$0	$0	$0	$0	$0	0.0%
Discount on Capital Stock	$0	$0	$0	$0	$0	0.0%
Capital Stock Expense	($86,742)	($86,742)	($86,742)	($86,742)	($86,742)	0.0%
Retained Earnings	$2,742,146,293	$3,111,524,582	$3,221,241,177	$3,343,984,384	$3,478,290,796	6.1%
Unappropriated Undistributed Earnings	($2,317,243,943)	($2,590,164,377)	($2,663,183,623)	($2,752,366,766)	($2,830,092,291)	5.1%
Accumulated Other Comprehensive Inc	$1,054,455	$265,495	$421,178	$819,863	$1,111,853	1.3%
Other	$0	$0	$0	$0	$0	0.0%
TOTALS	**$2,651,799,007**	**$2,970,580,700**	**$3,025,398,969**	**$3,067,875,941**	**$3,064,409,171**	**3.7%**
LONG-TERM DEBT						
Bonds	$2,225,000,000	$2,225,000,000	$1,975,000,000	$1,950,000,000	$2,200,000,000	-0.3%
Reacquired Bonds	$0	$0	$0	$0	$0	0.0%
Advances from Associated Companies	$599,309,726	$184,418,609	$184,418,609	$184,418,609	$184,418,609	-25.5%
Other Long-Term Debt	$0	$0	$0	$0	$0	0.0%
Unamortized Premium on Long-Term D	$0	$0	$0	$0	$0	0.0%
Unamortized Discount on Long-Term D	($3,854,835)	($3,277,668)	($2,707,055)	($2,509,512)	($3,448,829)	-2.7%
TOTALS	**$2,820,454,891**	**$2,406,140,941**	**$2,156,711,554**	**$2,131,909,097**	**$2,380,969,780**	**-4.1%**
OTHER NONCURRENT LIABILITIES						
Obligations Under Capital Leases-Nonc	$0	$0	$0	$0	$0	0.0%
Accum. Provision for Property Insuranc	$0	$0	$0	$0	$0	0.0%
Accum. Provision for Injuries and Dama	$43,380,426	$39,347,258	$38,471,414	$40,312,454	$37,074,188	-3.9%
Accum. Provision for Pensions and Ber	$327,356,602	$322,507,401	$316,697,580	$308,374,288	$305,261,664	-1.7%
Accum. Misc. Operating Provisions	$45,682,191	$43,805,200	$50,305,951	$41,133,699	$40,798,490	-2.8%
Accum. Provision for Rate Refunds	$0	$0	$0	$0	$0	0.0%
Long-Term Portion - Instrument Liabiliti	$24,215,120	$31,886,087	$28,171,539	$29,357,391	$29,984,013	5.5%
TOTALS	**$440,634,339**	**$437,545,946**	**$433,646,484**	**$419,177,832**	**$413,118,355**	**-1.6%**
CURRENT AND ACCRUED LIABILITIES						
Notes Payable	$0	$225,000,000	$225,000,000	$210,000,000	$0	NM
Accounts Payable	$163,839,047	$201,385,607	$261,615,810	$243,212,244	$284,497,086	14.8%
Notes Payable to Associated Companie	$0	$0	$0	$0	$0	0.0%
Account Payable to Associated Compa	$191,295,564	$281,773,128	$63,856,710	$77,757,131	$59,233,435	-25.4%
Customer Deposits	$64,676,820	$64,738,796	$52,603,072	$51,020,556	$49,231,810	-6.6%
Taxes Accrued	$2,652,453	$8,748,146	$3,616,409	$2,835,249	$24,617,895	74.5%
Interest Accrued	$30,329,743	$30,023,413	$27,438,125	$31,892,993	$32,359,665	1.6%
Dividends Declared	$923,942	$923,942	$923,941	$923,941	$0	-100.0%
Matured Long-Term Debt	$0	$0	$0	$0	$0	0.0%
Matured Interests	$0	$0	$0	$0	$0	0.0%
Tax Collections Payable	$699,842	$755,878	$554,363	$42,010	$8,678	-66.6%
Misc. Current and Accrued Liabilities	$70,665,688	$101,671,096	$74,679,022	$71,674,293	$84,788,776	4.7%
Obligations Under Capital Leases-Curre	$0	$0	$0	$0	$0	0.0%
TOTALS	**$525,083,099**	**$915,020,006**	**$710,287,452**	**$689,358,417**	**$534,737,345**	**0.5%**
DEFERRED CREDITS						
Customer Advances for Construction	$3,131,277	$3,231,668	$2,457,577	$439,427	$1,324,813	-19.3%
Accum. Deferred Investments Tax Cred	$8,806,670	$6,903,157	$5,052,603	$3,406,260	$2,763,365	-25.2%
Def. Gains from Disposition of Utility Pl	$0	$0	$0	$0	$0	0.0%
Other Deferred Credits	$19,839,784	$12,778,227	$8,832,568	$6,282,617	$1,892,829	-44.4%
Other Regulatory Liabilities	$319,769,998	$420,466,662	$649,471,151	$707,575,718	$735,247,144	23.1%
Unamortized Gain on Reacquired Debt	$0	$0	$0	$0	$0	0.0%
Accum. Deferred Income Taxes	$2,114,150,974	$1,917,898,052	$2,282,263,508	$2,543,297,397	$2,607,568,808	5.4%
TOTALS	**$2,465,698,703**	**$2,361,277,766**	**$2,948,077,407**	**$3,261,001,419**	**$3,348,796,959**	8.0%
TOTAL LIABILITIES AND OTHER CREDI	**$8,903,670,039**	**$9,090,565,359**	**$9,274,121,866**	**$9,569,322,706**	**$9,742,031,610**	**2.3%**

NM - Not Meaningful

Source: Pa PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Total Transmission Plant + Total Distribution Plant In Service	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$2,387,303,282	$2,463,203,501	$2,598,845,818	$2,796,216,987	$2,973,741,364	4.5%
PPL Electric Utilities Corporation	$5,177,571,776	$5,379,094,065	$5,678,598,537	$6,019,911,404	$6,501,887,796	4.7%
Pennsylvania Power Company	$427,193,225	$451,453,166	$471,222,976	$492,588,224	$506,747,175	3.5%
Metropolitan Edison	$2,162,683,163	$2,257,539,971	$2,247,212,827	$2,455,297,054	$2,381,395,374	1.9%
West Penn Power	$1,898,045,011	$1,950,688,969	$2,044,233,168	$2,075,243,386	$2,073,992,543	1.8%
Pennsylvania Electric Company	$2,109,609,422	$2,214,998,523	$2,315,358,557	$2,802,483,279	$2,713,691,194	5.2%
Panel Average	$2,360,400,980	$2,452,829,699	$2,559,245,314	$2,773,623,389	$2,858,575,908	3.9%
PECO Energy Company	$5,121,291,881	$5,351,546,790	$5,544,546,341	$5,907,541,609	$6,140,260,639	3.7%
Megawatt Hours Sold To Ultimate Consumers	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	13,767,180	13,163,573	14,089,963	14,027,155	14,202,466	0.6%
PPL Electric Utilities Corporation	38,006,123	36,681,588	36,998,015	36,941,727	36,015,643	-1.1%
Pennsylvania Power Company	4,691,592	4,236,148	4,502,094	4,585,851	4,463,786	-1.0%
Metropolitan Edison	14,239,798	13,488,679	13,995,525	13,969,632	13,559,359	-1.0%
West Penn Power	20,353,663	19,199,226	20,040,381	20,104,091	19,673,971	-0.7%
Pennsylvania Electric Company	14,378,604	13,574,794	14,115,793	14,133,623	13,864,963	-0.7%
Panel Average	17,572,827	16,724,001	17,290,295	17,293,680	16,963,365	-0.7%
PECO Energy Company	39,459,943	38,114,056	39,737,244	46,882,859	37,500,052	-1.0%
Average Number Of Ultimate Consumers Per Month	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	586,976	586,835	587,094	587,610	588,676	0.1%
PPL Electric Utilities Corporation	1,392,441	1,397,730	1,401,657	1,403,889	1,407,031	0.2%
Pennsylvania Power Company	159,346	159,558	159,886	160,250	160,725	0.2%
Metropolitan Edison	547,557	549,818	551,776	552,631	553,405	0.2%
West Penn Power	713,401	714,966	716,108	717,269	716,955	0.1%
Pennsylvania Electric Company	589,017	589,201	589,852	589,651	589,505	0.0%
Panel Average	664,790	666,351	667,729	668,550	669,383	0.1%
PECO Energy Company	1,567,250	1,564,433	1,566,872	1,573,976	1,578,199	0.1%
Total T&D Operation & Maintenance Expenses Per Total Plant In Service	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$0.0161	$0.0140	$0.0179	$0.0153	$0.0148	-1.7%
PPL Electric Utilities Corporation	$0.2857	$0.2537	$0.2022	$0.1856	$0.1740	-9.4%
Pennsylvania Power Company	$0.8400	$0.4115	$0.3977	$0.6222	$0.9770	3.1%
Metropolitan Edison	$0.1695	$0.0835	$0.1371	$0.0242	$0.0269	-30.8%
West Penn Power	$0.0512	$0.0468	$0.0552	$0.0335	$0.0240	-14.1%
Pennsylvania Electric Company	$0.0849	$0.0600	$0.0737	$0.0165	$0.0249	-21.8%
Panel Average	$0.2412	$0.1449	$0.1473	$0.1496	$0.2069	-3.0%
PECO Energy Company	$0.0938	$0.0850	$0.0889	$0.0641	$0.0609	-8.3%
Total T&D Operation & Maintenance Expenses Per Megawatt Hours Sold	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$2.79	$2.62	$3.29	$3.05	$3.10	2.1%
PPL Electric Utilities Corporation	$8.65	$8.17	$6.88	$6.77	$7.43	-3.0%
Pennsylvania Power Company	$3.82	$2.07	$1.89	$2.95	$4.83	4.8%
Metropolitan Edison	$25.74	$13.97	$22.01	$4.25	$4.72	-28.8%
West Penn Power	$4.78	$4.75	$5.63	$3.46	$2.53	-12.0%
Pennsylvania Electric Company	$12.46	$9.79	$12.09	$3.27	$4.87	-17.1%
Panel Average	$9.71	$6.90	$8.63	$3.96	$4.58	-14.0%
PECO Energy Company	$12.17	$11.93	$12.40	$8.08	$9.97	-3.9%

Source: Pa PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Total T&D Operation & Maintenance Expenses Per Customer	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$65.64	$58.93	$79.13	$72.87	$74.72	2.6%
PPL Electric Utilities Corporation	$235.98	$214.54	$181.72	$178.11	$190.16	-4.2%
Pennsylvania Power Company	$112.43	$54.96	$53.21	$84.34	$134.08	3.6%
Metropolitan Edison	$669.51	$342.76	$558.20	$107.51	$115.72	-29.6%
West Penn Power	$136.29	$127.57	$157.67	$96.89	$69.29	-12.7%
Pennsylvania Electric Company	$304.19	$225.52	$289.40	$78.42	$114.57	-17.7%
Panel Average	$254.01	$170.71	$219.89	$103.02	$116.43	-14.4%
PECO Energy Company	$306.36	$290.61	$314.45	$240.67	$236.95	-5.0%
Transmission Operation Expenses Per Transmission Plant In Service	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$0.0163	$0.0053	$0.0071	$0.0077	$0.0077	-13.9%
PPL Electric Utilities Corporation	$0.1448	$0.1335	$0.0691	$0.0529	$0.0483	-19.7%
Pennsylvania Power Company	$0.0040	$0.0083	$0.0136	$0.2523	$0.4329	155.2%
Metropolitan Edison	$1.0353	$0.4718	$0.8157	$0.0177	$0.0175	-55.8%
West Penn Power	$0.1420	$0.1349	$0.1505	$0.0747	$0.0753	-11.9%
Pennsylvania Electric Company	$0.3454	$0.2384	$0.3489	$0.0089	$0.0137	-47.6%
Panel Average	$0.2813	$0.1654	$0.2342	$0.0690	$0.0992	-18.8%
PECO Energy Company	$0.2902	$0.2502	$0.2474	$0.1081	$0.0959	-19.9%
Transmission Operation Expenses Per Megawatt Hours Sold	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$0.50	$0.18	$0.23	$0.29	$0.33	-8.0%
PPL Electric Utilities Corporation	$4.38	$4.30	$2.35	$1.93	$2.06	-14.0%
Pennsylvania Power Company	$0.02	$0.04	$0.06	$1.19	$2.14	154.6%
Metropolitan Edison	$22.21	$11.16	$19.00	$0.45	$0.44	-54.4%
West Penn Power	$2.33	$2.32	$2.53	$1.25	$1.30	-11.0%
Pennsylvania Electric Company	$8.20	$6.34	$9.36	$0.28	$0.40	-45.3%
Panel Average	$6.27	$4.06	$5.59	$0.90	$1.11	-29.3%
PECO Energy Company	$7.25	$6.76	$6.56	$2.73	$3.18	-15.2%
Transmission Operation Expenses Per Customer	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$11.76	$3.96	$5.51	$7.04	$7.92	-7.6%
PPL Electric Utilities Corporation	$119.57	$112.84	$62.10	$50.80	$52.80	-15.1%
Pennsylvania Power Company	$0.54	$1.10	$1.82	$34.20	$59.41	156.0%
Metropolitan Edison	$577.59	$273.86	$482.01	$11.31	$10.90	-54.8%
West Penn Power	$66.38	$62.41	$70.89	$34.97	$35.71	-11.7%
Pennsylvania Electric Company	$200.25	$146.10	$223.94	$6.67	$9.43	-45.7%
Panel Average	$162.68	$100.05	$141.05	$24.17	$29.36	-29.0%
PECO Energy Company	$182.59	$164.58	$166.49	$81.35	$75.61	-16.2%
Transmission Maintenance Expenses Per Transmission Plant In	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$0.0076	$0.0094	$0.0079	$0.0097	$0.0073	-0.8%
PPL Electric Utilities Corporation	$0.0130	$0.0135	$0.0201	$0.0196	$0.0234	12.5%
Pennsylvania Power Company	$0.0101	$0.0094	$0.0065	$0.0055	$0.0034	-19.6%
Metropolitan Edison	$0.0195	$0.0141	$0.0136	$0.0132	$0.0250	5.1%
West Penn Power	$0.0130	$0.0176	$0.0158	$0.0174	$0.0154	3.4%
Pennsylvania Electric Company	$0.0264	$0.0153	$0.0134	$0.0143	$0.0249	-1.2%
Panel Average	$0.0149	$0.0132	$0.0129	$0.0133	$0.0166	2.2%
PECO Energy Company	$0.0259	$0.0254	$0.0262	$0.0240	$0.0173	-7.8%

Source: Pa PUC Annual Reports

Transmission Maintenance Expenses Per Megawatt Hours Sold	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$0.23	$0.31	$0.26	$0.37	$0.31	6.2%
PPL Electric Utilities Corporation	$0.39	$0.44	$0.68	$0.72	$1.00	20.7%
Pennsylvania Power Company	$0.05	$0.05	$0.03	$0.03	$0.02	-16.7%
Metropolitan Edison	$0.42	$0.33	$0.32	$0.33	$0.64	8.8%
West Penn Power	$0.21	$0.30	$0.27	$0.29	$0.27	5.2%
Pennsylvania Electric Company	$0.63	$0.41	$0.36	$0.45	$0.73	3.0%
Panel Average	$0.32	$0.31	$0.32	$0.37	$0.50	9.3%
PECO Energy Company	$0.65	$0.69	$0.70	$0.61	$0.57	-2.6%
Transmission Maintenance Expenses Per Customer	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$5.46	$7.03	$6.19	$8.82	$7.53	6.6%
PPL Electric Utilities Corporation	$10.73	$11.45	$18.04	$18.83	$25.57	19.0%
Pennsylvania Power Company	$1.36	$1.25	$0.87	$0.74	$0.47	-19.1%
Metropolitan Edison	$10.88	$8.20	$8.02	$8.47	$15.59	7.5%
West Penn Power	$6.06	$8.16	$7.42	$8.12	$7.29	3.8%
Pennsylvania Electric Company	$15.30	$9.38	$8.60	$10.69	$17.06	2.2%
Panel Average	$8.30	$7.58	$8.19	$9.28	$12.25	8.1%
PECO Energy Company	$16.26	$16.70	$17.67	$18.07	$13.65	-3.4%
Distribution Operation Expenses Per Distribution Plant In Service	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$0.0074	$0.0056	$0.0068	$0.0066	$0.0060	-4.1%
PPL Electric Utilities Corporation	$0.0220	$0.0192	$0.0196	$0.0212	$0.0193	-2.6%
Pennsylvania Power Company	$0.0055	$0.0048	$0.0044	$0.0034	$0.0034	-9.2%
Metropolitan Edison	$0.0091	$0.0060	$0.0063	$0.0049	$0.0047	-12.4%
West Penn Power	$0.0083	$0.0074	$0.0079	$0.0069	$0.0090	1.6%
Pennsylvania Electric Company	$0.0095	$0.0078	$0.0065	$0.0050	$0.0051	-11.7%
Panel Average	$0.0103	$0.0085	$0.0086	$0.0080	$0.0079	-5.2%
PECO Energy Company	$0.0111	$0.0116	$0.0124	$0.0110	$0.0118	1.2%
Distribution Operation Expenses Per Megawatt Hours Sold	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$0.93	$0.75	$0.91	$0.94	$0.88	-1.1%
PPL Electric Utilities Corporation	$2.05	$1.91	$2.03	$2.33	$2.28	2.1%
Pennsylvania Power Company	$0.45	$0.46	$0.41	$0.33	$0.36	-4.4%
Metropolitan Edison	$0.93	$0.68	$0.72	$0.64	$0.60	-8.4%
West Penn Power	$0.56	$0.55	$0.60	$0.54	$0.73	5.4%
Pennsylvania Electric Company	$1.17	$1.06	$0.89	$0.77	$0.77	-8.0%
Panel Average	$1.02	$0.90	$0.93	$0.93	$0.94	-1.6%
PECO Energy Company	$1.16	$1.32	$1.40	$1.11	$1.55	6.0%
Distribution Operation Expenses Per Customer	**2008**	**2009**	**2010**	**2011**	**2012**	**Compound Growth**
Duquesne Light Company	$21.75	$16.92	$21.85	$22.43	$21.28	-0.4%
PPL Electric Utilities Corporation	$56.00	$50.24	$53.51	$61.18	$58.30	0.8%
Pennsylvania Power Company	$13.16	$12.26	$11.62	$9.57	$9.88	-5.6%
Metropolitan Edison	$24.09	$16.75	$18.30	$16.08	$14.71	-9.4%
West Penn Power	$16.12	$14.77	$16.71	$15.19	$20.08	4.5%
Pennsylvania Electric Company	$28.62	$24.39	$21.41	$18.38	$18.13	-8.7%
Panel Average	$26.62	$22.56	$23.90	$23.81	$23.73	-2.3%
PECO Energy Company	$29.32	$32.09	$35.45	$32.97	$36.73	4.6%

Source: Pa PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Distribution Maintenance Expenses Per Distribution Plant In Service	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$0.0091	$0.0102	$0.0142	$0.0102	$0.0107	3.3%
PPL Electric Utilities Corporation	$0.0196	$0.0153	$0.0176	$0.0164	$0.0178	-1.9%
Pennsylvania Power Company	$0.0406	$0.0159	$0.0146	$0.0142	$0.0223	-11.3%
Metropolitan Edison	$0.0214	$0.0157	$0.0171	$0.0220	$0.0237	2.1%
West Penn Power	$0.0246	$0.0212	$0.0297	$0.0174	$0.0028	-35.2%
Pennsylvania Electric Company	$0.0200	$0.0145	$0.0108	$0.0117	$0.0196	-0.4%
Panel Average	$0.0226	$0.0155	$0.0173	$0.0153	$0.0162	-6.4%
PECO Energy Company	$0.0296	$0.0280	$0.0331	$0.0361	$0.0358	3.9%

Distribution Maintenance Expenses Per Megawatt Hours Sold	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$1.14	$1.38	$1.90	$1.45	$1.57	6.6%
PPL Electric Utilities Corporation	$1.82	$1.52	$1.82	$1.80	$2.09	2.8%
Pennsylvania Power Company	$3.31	$1.52	$1.38	$1.39	$2.32	-6.9%
Metropolitan Edison	$2.19	$1.79	$1.97	$2.83	$3.04	6.8%
West Penn Power	$1.67	$1.57	$2.24	$1.38	$0.23	-32.7%
Pennsylvania Electric Company	$2.46	$1.98	$1.48	$1.78	$2.97	3.8%
Panel Average	$2.10	$1.63	$1.80	$1.77	$2.04	-0.6%
PECO Energy Company	$3.11	$3.17	$3.74	$3.64	$4.67	8.5%

Distribution Maintenance Expenses Per Customer	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$26.66	$31.02	$45.57	$34.58	$37.99	7.3%
PPL Electric Utilities Corporation	$49.69	$40.01	$48.06	$47.31	$53.49	1.5%
Pennsylvania Power Company	$97.38	$40.34	$38.90	$39.83	$64.33	-8.0%
Metropolitan Edison	$56.96	$43.95	$49.86	$71.65	$74.52	5.5%
West Penn Power	$47.74	$42.24	$62.64	$38.60	$6.21	-33.5%
Pennsylvania Electric Company	$60.02	$45.65	$35.45	$42.69	$69.95	3.1%
Panel Average	$56.41	$40.54	$46.75	$45.78	$51.08	-2.0%
PECO Energy Company	$78.19	$77.24	$94.85	$108.28	$110.96	7.3%

Maintenance of Line Transformer per Line Transformer Plant In Service	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$0.0001	$0.0002	$0.0003	$0.0001	$0.0001	-4.9%
PPL Electric Utilities Corporation	$0.0043	$0.0045	$0.0063	$0.0033	$0.0048	2.2%
Pennsylvania Power Company	$0.0001	$0.0001	$0.0000	$0.0000	$0.0000	-61.7%
Metropolitan Edison	$0.0001	$0.0000	$0.0000	$0.0000	$0.0000	-45.5%
West Penn Power	$0.0018	$0.0015	$0.0013	$0.0005	$0.0001	-39.3%
Pennsylvania Electric Company	$0.0001	$0.0000	$0.0000	$0.0002	$0.0000	-59.7%
Panel Average	$0.0011	$0.0010	$0.0013	$0.0007	$0.0008	-6.2%
PECO Energy Company	$0.0037	$0.0045	$0.0039	$0.0028	$0.0026	-6.7%

Customer Assistance Expenses Per Megawatt Hours Sold	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$0.18	$0.20	$1.94	$1.64	$1.65	55.8%
PPL Electric Utilities Corporation	$0.35	$0.58	$2.07	$2.90	$2.87	52.3%
Pennsylvania Power Company	$1.21	$2.35	$2.73	$3.46	$3.63	24.6%
Metropolitan Edison	$1.14	$1.63	$2.21	$3.30	$3.38	24.3%
West Penn Power	$0.19	$0.43	$0.53	$0.00	$1.26	46.0%
Pennsylvania Electric Company	$1.53	$2.03	$2.42	$3.34	$3.39	17.2%
Panel Average	$0.77	$1.20	$1.98	$2.44	$2.70	28.5%
PECO Energy Company	$0.23	$0.23	$1.49	$1.30	$1.82	51.2%

Source: Pa PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Customer Assistance Expenses Per Customer	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	$4.29	$4.44	$46.60	$39.04	$39.91	56.2%
PPL Electric Utilities Corporation	$9.64	$15.19	$54.51	$76.19	$73.36	50.1%
Pennsylvania Power Company	$35.64	$62.31	$76.95	$98.89	$100.68	23.1%
Metropolitan Edison	$29.56	$40.10	$55.97	$83.30	$82.94	22.9%
West Penn Power	$5.45	$11.62	$14.89	$0.00	$34.67	44.8%
Pennsylvania Electric Company	$37.38	$46.85	$57.82	$79.97	$79.83	16.4%
Panel Average	$20.33	$30.09	$51.12	$62.90	$68.57	27.5%
PECO Energy Company	$5.91	$5.70	$37.87	$38.79	$43.20	48.9%

Average Collection Period (Days)	2008	2009	2010	2011	2012	Compound Growth
Duquesne Light Company	56.30	57.74	59.51	58.79	63.19	2.3%
PPL Electric Utilities Corporation	25.68	27.23	44.30	55.43	59.74	18.4%
Pennsylvania Power Company	16.19	9.01	27.56	25.12	38.30	18.8%
Metropolitan Edison	14.81	16.95	12.14	28.63	34.18	18.2%
West Penn Power	22.34	22.14	22.13	27.31	32.89	8.0%
Pennsylvania Electric Company	13.84	16.32	12.39	29.51	38.33	22.6%
Panel Average	24.86	24.90	29.67	37.46	44.44	12.3%
PECO Energy Company	24.39	16.13	35.15	38.31	43.91	12.5%

Source: Pa PUC Annual Reports

PECO Energy Company
Financial and Operating Data and Statistics

Operating Statistics	2009	2010	2011	2012	2013	Compound Growth
Gross Utility Plant	$1,684,338,430	$1,733,942,036	$1,797,932,248	$1,868,243,999	$1,939,794,836	3.6%
Depreciation & Amortization	545,288,816	562,314,008	579,634,154	593,655,852	611,056,571	2.9%
Net Utility Plant	$1,139,049,614	$1,171,628,028	$1,218,298,094	$1,274,588,147	$1,328,738,265	3.9%
Operating Revenue:						
Residential	$509,064,765	$462,803,525	$411,242,630	$368,652,961	$406,099,447	-5.5%
Commercial	226,499,225	199,589,441	172,809,923	147,601,868	162,060,812	-8.0%
Industrial	16,429,769	16,989,858	16,382,490	16,333,971	16,467,377	0.1%
Subtotals	$751,993,759	$679,382,824	$600,435,043	$532,588,800	$584,627,636	-6.1%
Other	7,626,726	7,387,479	12,610,832	12,788,887	16,222,015	20.8%
Totals	$759,620,485	$686,770,303	$613,045,875	$545,377,687	$600,849,651	-5.7%
Deliveries by Volume (Mcf)						
Residential	37,534,031	37,062,638	37,929,465	32,297,681	38,395,152	0.6%
Commercial	19,286,678	18,781,660	19,270,939	16,388,544	19,029,517	-0.3%
Industrial	45,397	43,556	1,935	1,187	1,263	-59.2%
Other	649	649	649	649	650	0.0%
Total Mcf Sales	56,866,755	55,888,503	57,202,988	48,688,061	57,426,582	0.2%
Gas Trans. or Compr. for Others	27,346,230	31,030,527	29,568,926	26,287,521	25,579,891	3.6%
Sales for Resale	163,743	740,757	307,928	232,320	189,259	3.7%
Company Use	26,825	0	19,672	17,844	25,146	-1.6%
Injected into Storage	451,115	-68,956	0	0	0	-100.0%
Total Deliveries (Mcf)	84,854,668	87,590,831	87,099,514	75,225,746	83,220,878	-0.5%
Total Receipts (Mcf)	87,446,502	91,030,465	85,417,124	78,366,305	88,792,832	0.4%
Unaccounted for Gas (Mcf)	2,518,405	2,480,886	-1,354,191	3,390,717	2,743,977	2.2%
UFG as a % of Total Receipts	2.88%	2.73%	-1.59%	4.33%	3.09%	1.8%
Customers (Average):						
Residential	444,210	446,657	449,888	452,944	456,429	0.7%
Commercial	41,410	41,481	41,709	42,021	42,435	0.6%
Industrial	423	436	449	461	465	2.4%
Other	14	14	14	14	14	0.0%
Totals	486,057	488,588	492,060	495,440	499,343	0.7%
Employees (Average)	522	524	526	528	536	0.7%
Distribution Mains (M. Ft.)	35,348	35,475	35,510	35,626	35,700	0.2%
Transmission Mains (M. Ft.)	164	164	164	165	165	0.2%
Total Main Pipeline (M. Ft.)	35,512	35,639	35,674	35,791	35,865	0.2%
Total Main Pipeline (Miles)	6,726	6,750	6,756	6,779	6,793	0.2%
Services	426,763	431,257	431,177	436,804	441,625	0.9%

NM = Not Meaningful

PECO Energy Company
Financial and Operating Data and Statistics

Gas Operation & Maintenance Expenses	2009	2010	2011	2012	2013	Compound Growth
	$	$	$	$	$	
Natural Gas Production Expenses	1,726,537	424,514	297,254	259,614	256,789	-37.9%
Other Gas Supply Expenses	472,034,513	402,103,702	318,007,692	262,312,103	296,947,598	-10.9%
Natural Gas Storage, Terminating, & Processing Expenses:						
Underground Storage Expenses	0	0	0	0	0	0.0%
Maintenance	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Other Storage Expenses						
Operation	887,353	760,329	701,102	801,880	863,943	-0.7%
Maintenance	2,861,143	2,586,404	2,584,754	2,777,984	2,867,403	0.1%
Total	3,748,496	3,346,733	3,285,856	3,579,864	3,731,346	-0.1%
LNG Terminating and Processing Exp.						
Operation	0	0	0	0	29,356	NM
Maintenance	0	0	0	0	0	NM
Total	0	0	0	0	29,356	NM
Transmission Expenses:						
Operation	0	0	0	0	0	0.0%
Maintenance	0	0	0	0	0	0.0%
Totals	0	0	0	0	0	0.0%
Distribution Expenses:						
Operation	19,427,724	24,082,359	24,572,836	22,675,817	22,304,562	3.5%
Maintenance	18,774,587	19,610,385	17,487,007	17,024,709	23,007,082	5.2%
Totals	38,202,311	43,692,744	42,059,843	39,700,526	45,311,644	4.4%
Customer Accounts Expenses	27,804,924	26,929,415	27,388,155	24,982,929	23,764,526	-3.8%
Customer Service & Inform. Expenses	2,752,432	3,397,408	5,781,313	5,108,991	5,082,243	16.6%
Sales Expenses	561,186	475,035	1,094,597	1,599,636	1,392,190	25.5%
Administrative & General Expenses:						
Operation	31,924,601	29,370,596	29,022,606	32,650,428	28,003,407	-3.2%
Maintenance	1,036,851	1,323,441	1,244,285	844,439	1,005,916	-0.8%
Totals	32,961,452	30,694,037	30,266,891	33,494,867	29,009,323	-3.1%
Total Gas Operation & Maintenance Exp.	579,791,851	511,063,588	428,181,601	371,038,530	405,525,015	-8.5%

NM - Not Meaningful
Source: PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

ELEMENT	PECO	CGP	EGC	NFG	PNG	UGIU	Panel Average
Number of Customers - 2012	495,440	416,036	258,992	212,845	359,089	346,498	318,692
Number of Customers - 2008	483,457	412,676	273,481	214,180	357,041	328,472	317,170
Compound Annual Growth Rate	0.6%	0.2%	-1.4%	-0.2%	0.1%	1.3%	0.0%
% Residential Customers - 2012	91.4%	91.0%	93.2%	92.5%	91.7%	89.8%	91.6%
Total Throughput (thousand Mcf) - 2012	78,366	103,209	56,075	48,247	83,331	143,386	86,850
Total Throughput (thousand Mcf) - 2008	89,603	120,379	87,752	52,771	90,144	98,494	89,908
Compound Annual Growth Rate	-3.3%	-3.8%	-10.6%	-2.2%	-1.9%	9.8%	-1.7%
Mcf/Residential Customer - 2012	71	50	76	84	82	62	71
Transportation (thousand Mcf) - 2012	26,288	39,440	24,167	21,316	43,137	92,296	44,071
Transportation (thousand Mcf) - 2008	27,615	36,977	26,347	19,009	31,878	52,606	33,363
% Transportation - 2012	33.5%	38.2%	43.1%	44.2%	51.8%	64.4%	48.3%
% Transportation - 2008	30.8%	30.7%	30.0%	36.0%	35.4%	53.4%	37.1%
Compound Annual Growth Rate	2.1%	5.6%	9.5%	5.2%	10.0%	4.8%	7.0%
Number of Employees @ 12/31/12	532	537	338	320	779	889	573
Miles of Distribution Main - 2012	6,747	7,449	3,816	4,619	6,554	5,423	5,572
Miles of Transmission Main - 2012	31	0	39	338	1,087	117	316
Services - 2012	436,804	420,588	261,128	211,749	351,575	346,519	318,312
Net Plant ($Million) - 2012	1,275	959	622	322	815	868	717
Net Plant/Gross Plant - 2012	68.2%	75.4%	64.7%	63.8%	66.3%	65.2%	67.1%
Customers/Main Mile - 2012	73	56	67	43	47	63	55
Average Revenue/Residential Customer - 2012	$813.90	$570.37	$841.52	$796.99	$754.53	$663.44	$725.37
Average Revenue/Residential Mcf - 2012	$11.41	$11.35	$11.08	$9.49	$9.15	$10.69	$10.35

CGP = Columbia Gas of Pennsylvania, Inc.
EGC = Equitable Gas Company
NFG = National Fuel Gas Distribution Corporation
PECO = PECO Energy Company
PNG = Peoples Natural Gas Company LLC
UGIU = UGI Utilities, Inc.

Source: PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Administrative & General Expense/Customer

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$96.68	$109.72	$128.97	$135.44	$113.92	4.2%
Equitable Gas	$133.32	$109.43	$112.18	$109.20	$119.88	-2.6%
National Fuel	$125.31	$125.41	$128.52	$138.75	$136.45	2.2%
Peoples	$42.26	$27.66	$92.25	$142.14	$113.79	28.1%
UGI Utilities	$110.84	$117.30	$112.64	$107.56	$104.31	-1.5%
Panel Average	$101.68	$97.90	$114.91	$126.62	$117.67	3.7%
PECO Energy	$65.18	$67.81	$62.82	$61.51	$67.61	0.9%

Operations & Maintenance Expense/Customer

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$1,708.06	$1,092.53	$1,148.71	$1,006.47	$733.74	-19.0%
Equitable Gas	$2,024.18	$1,414.57	$1,062.69	$904.98	$734.84	-22.4%
National Fuel	$1,559.86	$1,272.56	$940.92	$890.39	$777.54	-16.0%
Peoples	$1,204.77	$944.17	$811.82	$839.46	$668.67	-13.7%
UGI Utilities	$1,544.85	$1,471.88	$1,318.64	$1,197.26	$839.80	-14.1%
Panel Average	$1,608.34	$1,239.14	$1,056.56	$967.71	$750.92	-17.3%
PECO Energy	$1,504.35	$1,192.85	$1,046.00	$870.18	$748.91	-16.0%

Net Plant/Customer

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$1,535.01	$1,623.09	$1,762.23	$2,028.66	$2,305.53	10.7%
Equitable Gas	$2,279.26	$2,316.36	$2,381.29	$2,375.51	$2,402.92	1.3%
National Fuel	$1,374.62	$1,419.88	$1,446.18	$1,470.39	$1,514.95	2.5%
Peoples	$1,671.31	$1,728.35	$1,889.50	$2,035.37	$2,268.49	7.9%
UGI Utilities	$2,254.48	$2,263.78	$2,301.40	$2,384.99	$2,503.79	2.7%
Panel Average	$1,822.94	$1,870.29	$1,956.12	$2,058.98	$2,199.14	4.8%
PECO Energy	$2,296.47	$2,343.45	$2,397.99	$2,475.91	$2,572.64	2.9%

Source: PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Operations & Maintenance Expense/Operating Revenue

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$0.90	$0.83	$0.85	$0.83	$0.75	-4.5%
Equitable Gas	$0.53	$0.45	$0.40	$0.38	$0.38	-7.8%
National Fuel	$0.44	$0.43	$0.41	$0.41	$0.42	-1.6%
Peoples	$0.44	$0.44	$0.46	$0.46	$0.39	-3.1%
UGI Utilities	$0.43	$0.45	$0.45	$0.46	$0.43	-0.4%
Panel Average	$0.55	$0.52	$0.51	$0.51	$0.47	-3.7%
PECO Energy	$0.89	$0.76	$0.74	$0.70	$0.68	-6.4%

Net Plant/Operating Revenue

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$0.81	$1.23	$1.30	$1.67	$2.36	30.7%
Equitable Gas	$0.59	$0.73	$0.89	$1.00	$1.24	20.3%
National Fuel	$0.39	$0.48	$0.63	$0.67	$0.81	20.0%
Peoples	$0.62	$0.81	$1.06	$1.12	$1.33	21.2%
UGI Utilities	$0.63	$0.70	$0.79	$0.92	$1.27	19.1%
Panel Average	$0.61	$0.79	$0.94	$1.08	$1.40	23.2%
PECO Energy	$1.35	$1.50	$1.71	$1.99	$2.34	14.7%

Operations & Maintenance Expense/Net Plant

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$1.11	$0.67	$0.65	$0.50	$0.32	-26.9%
Equitable Gas	$0.89	$0.61	$0.45	$0.38	$0.31	-23.4%
National Fuel	$1.13	$0.90	$0.65	$0.61	$0.51	-18.0%
Peoples	$0.72	$0.55	$0.43	$0.41	$0.29	-20.0%
UGI Utilities	$0.69	$0.65	$0.57	$0.50	$0.34	-16.4%
Panel Average	$0.91	$0.68	$0.55	$0.48	$0.35	-21.0%
PECO Energy	$0.66	$0.51	$0.44	$0.35	$0.29	-18.4%

Source: PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Operations & Maintenance Expense/Mcf

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$17.50	$12.20	$13.27	$12.56	$11.16	-10.6%
Equitable Gas	$10.80	$7.22	$5.62	$4.88	$4.27	-20.7%
National Fuel	$7.86	$6.83	$4.99	$4.40	$3.96	-15.8%
Peoples	$6.20	$5.13	$4.30	$4.48	$3.49	-13.4%
UGI Utilities	$5.88	$5.91	$4.65	$3.84	$2.50	-19.3%
Panel Average	$9.65	$7.46	$6.57	$6.03	$5.08	-14.8%
PECO Energy	$8.64	$6.88	$6.25	$4.99	$4.91	-13.2%

Net Plant/Mcf

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$15.72	$18.12	$20.36	$25.32	$35.07	22.2%
Equitable Gas	$12.17	$11.83	$12.58	$12.80	$13.97	3.5%
National Fuel	$6.93	$7.62	$7.67	$7.27	$7.72	2.7%
Peoples	$8.61	$9.39	$10.01	$10.85	$11.85	8.3%
UGI Utilities	$8.59	$9.08	$8.11	$7.65	$7.45	-3.5%
Panel Average	$10.40	$11.21	$11.75	$12.78	$15.21	10.0%
PECO Energy	$13.19	$13.53	$14.34	$14.21	$16.85	6.3%

Distribution Expense/Thousand Ft. Line

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$981.97	$967.53	$1,018.62	$1,039.70	$1,038.49	1.4%
Equitable Gas	$1,416.46	$1,497.99	$1,214.84	$1,204.69	$1,161.52	-4.8%
National Fuel	$530.05	$485.66	$545.74	$534.89	$511.36	-0.9%
Peoples	$915.36	$926.31	$1,027.58	$1,046.76	$1,049.13	3.5%
UGI Utilities	$894.98	$824.32	$857.37	$1,004.26	$1,057.63	4.3%
Panel Average	$947.77	$940.36	$932.83	$966.06	$963.63	0.4%
PECO Energy	$1,072.23	$1,080.75	$1,231.65	$1,184.45	$1,114.37	1.0%

Source: PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Customer Accounts Expense/Customer

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$108.00	$94.46	$81.72	$75.60	$54.25	-15.8%
Equitable Gas	$57.27	$33.89	$53.54	$37.33	$34.15	-12.1%
National Fuel	$78.41	$64.58	$49.89	$35.65	$43.45	-13.7%
Peoples	$61.88	$61.17	$50.66	$59.39	$44.25	-8.0%
UGI Utilities	$75.19	$57.35	$47.81	$49.81	$40.05	-14.6%
Panel Average	$76.15	$62.29	$56.73	$51.56	$43.23	-13.2%
PECO Energy	$88.02	$57.21	$55.12	$55.66	$50.43	-13.0%

Unaccounted For Gas (as a % of Total Receipts)

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	-0.7%	-0.2%	0.1%	-1.5%	-0.2%	-30.9%
Equitable Gas	10.0%	4.8%	4.0%	2.4%	5.8%	-12.7%
National Fuel	-0.5%	-0.4%	1.9%	-1.2%	0.7%	NM
Peoples	6.4%	4.4%	5.8%	4.4%	3.9%	-11.5%
UGI Utilities	0.4%	0.5%	0.2%	0.2%	0.7%	15.9%
Panel Average	3.1%	1.8%	2.4%	0.9%	2.2%	-8.4%
PECO Energy	4.5%	2.9%	2.7%	-1.6%	4.3%	-0.9%

Revenue/Employee

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	$1,534,643	$1,069,471	$1,149,359	$1,036,450	$786,626	-15.4%
Equitable Gas	$1,653,646	$1,304,578	$982,559	$936,520	$784,961	-17.0%
National Fuel	$1,081,022	$903,022	$718,336	$772,754	$672,464	-11.2%
Peoples	$1,029,932	$850,136	$664,307	$589,514	$446,619	-18.9%
UGI Utilities	$756,916	$722,661	$700,843	$610,055	$412,588	-14.1%
Panel Average	$1,211,232	$969,974	$843,081	$789,059	$620,651	-15.4%
PECO Energy	$1,571,180	$1,455,212	$1,310,630	$1,165,486	$1,032,912	-10.0%

NM = Not Meaningful
Source: PUC Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Customers/Employee

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	810	811	851	852	805	-0.1%
Equitable Gas	679	704	690	729	750	2.5%
National Fuel	609	590	626	663	663	2.1%
Peoples	716	702	658	554	480	-9.5%
UGI Utilities	397	433	412	391	392	-0.3%
Panel Average	642	648	647	638	618	-1.0%
PECO Energy	924	931	932	936	938	0.4%

Plant Materials and Operating Supplies/Net Plant

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	0.1%	0.1%	0.1%	0.1%	0.1%	-9.4%
Equitable Gas	0.2%	0.1%	0.1%	0.1%	0.1%	-16.1%
National Fuel	0.2%	0.2%	0.2%	0.2%	0.2%	-6.7%
Peoples	0.4%	0.4%	0.4%	0.3%	0.3%	-3.6%
UGI Utilities	0.3%	0.3%	0.4%	0.4%	0.3%	4.1%
Panel Average	0.2%	0.2%	0.2%	0.2%	0.2%	-3.8%
PECO Energy	0.0%	0.0%	0.0%	0.0%	0.0%	36.4%

Unprotected Bare Steel Main %

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	27.1%	26.2%	25.3%	23.3%	22.3%	-4.8%
Equitable Gas	23.7%	23.0%	22.4%	21.0%	20.3%	-3.8%
National Fuel	19.9%	19.3%	18.5%	17.9%	20.5%	0.7%
Peoples	27.8%	27.4%	26.9%	26.5%	25.8%	-1.9%
UGI Utilities	5.3%	5.1%	4.9%	4.6%	4.8%	-2.5%
Panel Average	20.8%	20.2%	19.6%	18.7%	18.7%	-2.6%
PECO Energy	5.3%	5.2%	5.1%	5.0%	4.9%	-2.1%

NM = Not Meaningful

Source: PUC Annual Reports, DOT Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Cast Iron Main %

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	0.9%	0.9%	0.8%	2.2%	2.0%	22.1%
Equitable Gas	1.4%	1.4%	1.3%	3.0%	2.9%	19.9%
National Fuel	1.8%	1.8%	1.7%	1.7%	3.6%	19.1%
Peoples	1.0%	1.0%	0.9%	0.9%	0.3%	-28.3%
UGI Utilities	7.9%	7.5%	7.3%	6.8%	6.4%	-5.1%
Panel Average	2.6%	2.5%	2.4%	2.9%	3.0%	4.0%
PECO Energy	12.3%	12.1%	11.9%	11.7%	11.3%	-2.1%

Main Leaks Repaired/100 Main Miles

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	67.2	53.2	50.4	45.7	46.3	-8.9%
Equitable Gas	29.0	28.4	32.8	26.7	27.2	-1.6%
National Fuel	29.3	30.4	31.1	23.3	23.2	-5.7%
Peoples	34.5	41.8	36.1	33.9	36.0	1.1%
UGI Utilities	22.6	27.9	22.5	26.6	27.1	4.7%
Panel Average	36.5	36.3	34.6	31.3	32.0	-3.3%
PECO Energy	43.3	46.0	56.7	53.6	48.9	3.1%

Unprotected Bare Steel Service %

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	17.3%	16.8%	16.1%	15.7%	14.9%	-3.7%
Equitable Gas	7.5%	6.6%	6.6%	6.0%	5.7%	-6.6%
National Fuel	16.1%	15.3%	14.7%	14.5%	13.2%	-4.8%
Peoples	15.6%	15.2%	15.0%	14.7%	14.3%	-2.2%
UGI Utilities	5.3%	5.1%	4.8%	4.5%	4.1%	-6.0%
Panel Average	12.4%	11.8%	11.4%	11.1%	10.4%	-4.1%
PECO Energy	10.6%	10.1%	9.4%	8.9%	8.2%	-6.2%

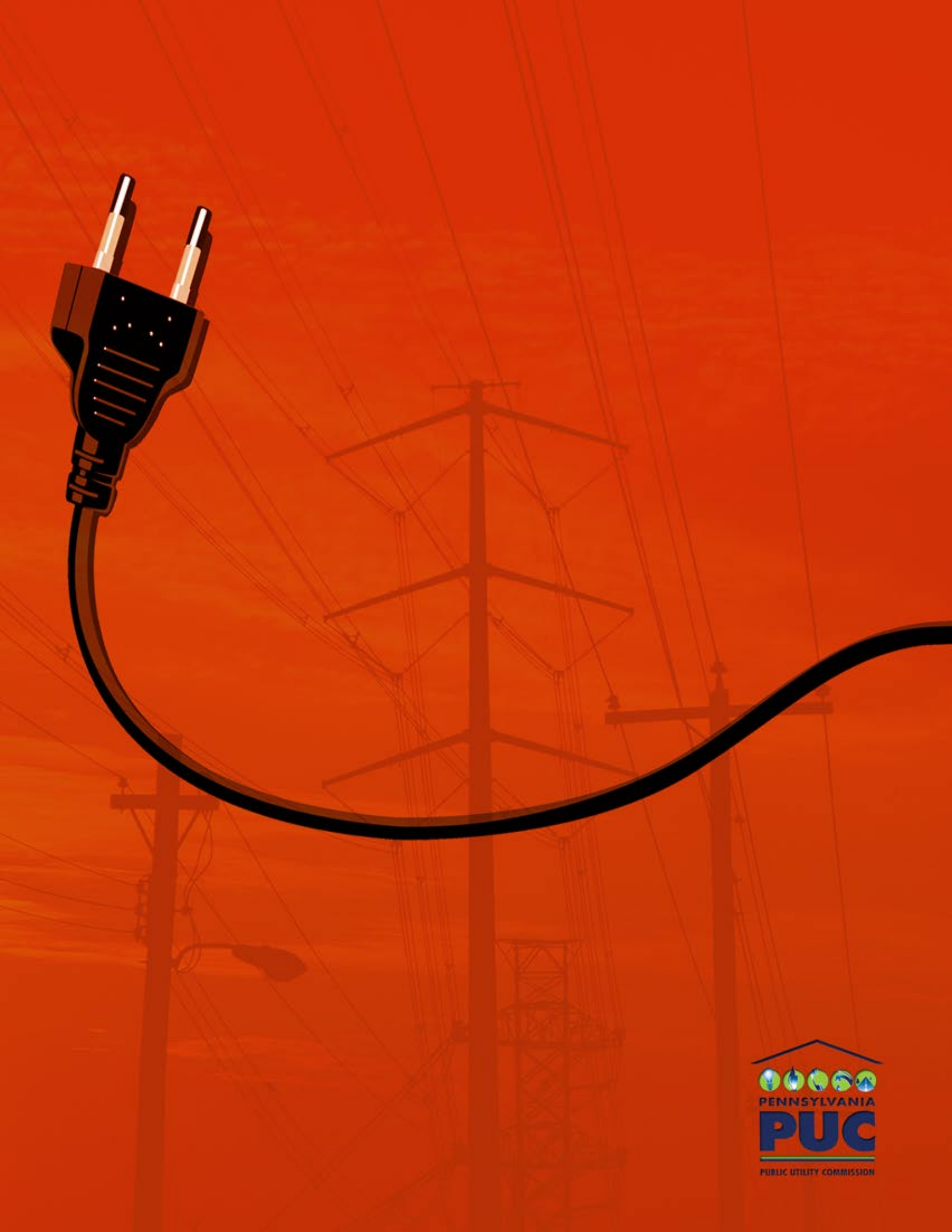
NM = Not Meaningful
Source: PUC Annual Reports, DOT Annual Reports

PECO Energy Company
Comparative Data and Statistics for the Pennsylvania Panel

Service Leaks Discovered/1,000 Services

Company	2008	2009	2010	2011	2012	Compound Growth
Columbia Gas	4.7	4.2	4.0	3.9	3.9	-4.4%
Equitable Gas	3.4	2.8	2.8	2.8	2.2	-10.4%
National Fuel	6.4	3.0	2.8	2.8	2.6	-20.3%
Peoples	9.6	11.3	12.4	10.0	10.7	2.8%
UGI Utilities	2.9	2.9	3.2	3.6	2.6	-2.7%
Panel Average	5.4	4.8	5.0	4.6	4.4	-5.0%
PECO Energy	3.1	3.5	3.9	3.8	3.2	1.0%

Source: PUC Annual Reports, DOT Annual Reports



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