

**FOCUSED MANAGEMENT
AND
OPERATIONS AUDIT
OF
UGI UTILITIES, INC.
UGI CENTRAL PENN GAS, INC.
UGI PENN NATURAL GAS, INC.**

Prepared By The
Pennsylvania Public Utility
Commission
Bureau Of Audits
Issued April 2012

Docket Nos. D-2011-2221061,
D-2011-2221062, & D-2011-2221063

**UGI UTILITIES, INC.
UGI CENTRAL PENN GAS, INC.
UGI PENN NATURAL GAS, INC.
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 UGI Utilities, Inc. (UGI), UGI Central Penn Gas, Inc. (CPG) and UGI Penn Natural Gas, Inc. (PNG) (collectively referred to as "UGI Utility Group"). As the individual companies within the UGI Utility Group are owned and jointly operated by UGI Corporation (UGI Corp.), the focused management and operations audits were conducted concurrently. 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 the UGI Utility Group. 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, UGI Utility Group, and the public with an assessment of the efficiency and effectiveness of the Companies' 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 UGI, CPG and PNG.

The scope of this audit was limited to certain areas of the UGI Utility Group 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, C, E and F) was completed using financial and operational data obtained from the UGI Utility Group, Commission, and other available sources. This analysis, which focused on the period 2006-2010, was supplemented by comparisons to a panel of gas and electric utilities for the period 2006-2010 (see Appendix D, and G, respectively).
- Input was solicited from Commission Bureaus and Offices, certain external parties, and the Company regarding any concerns or issues they would like to have addressed during the course of our review.
- Prior management and operations audits, follow-up management efficiency investigations, implementation plans, implementation plan progress reports, other Commission conducted audits, diversity reports, and other available documents were reviewed.

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

- Executive Management and Organizational Structure
- Corporate Governance
- Affiliated Interests and Cost Allocations
- Financial Management
- Gas Operations
- Electric Operations
- Emergency Preparedness
- Materials Management
- Customer Services
- Fleet Management
- Human Resources
- 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 May 2, 2011 and continued intermittently through October 13, 2011. The principal components of the fact gathering process included:

- Interviews with the UGI Utility Group's personnel and other Commission Bureaus.
- Analysis of records, documents, and reports of a financial and operational nature. This analysis focused primarily on the period 2007-2010, and the year 2011 as available.
- Visits to the customer contact centers, service centers, gas facilities, electric facilities, regional operation centers, inventory warehouses, observation of selected work practices, etc.

C. Functional Area Ratings

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

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

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

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

Exhibit I – 1
UGI Utilities, Inc.
UGI Central Penn Gas, Inc.
UGI Penn Natural Gas, Inc.
Focused Management and Operations Audit
Functional Rating Summary

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

D. Recommendation Summary

Chapters III through XIV provide findings, conclusions, and recommendations for each function or area reviewed in-depth during this focused audit. Effective implementation of the recommendations would result in cost savings, service improvements, and/or improvements in management practices and performance. Exhibit I-2 summarizes the recommendations with the following priority assessments for implementation:

- **HIGH PRIORITY** – Implementation of these recommendations should begin within six months and be completed as soon as practical.
- **MEDIUM PRIORITY** – Implementation of these recommendations should begin within 12 months.
- **LOW PRIORITY** – Implementation of the recommendations should begin within 18 months.

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

**UGI Utilities, Inc.,
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Summary of Recommendations**

<u>Chapter/Section Title</u>	<u>Recommendation</u>	<u>Page Number</u>	<u>Priority</u>
III. EXECUTIVE MANAGEMENT AND ORGANIZATIONAL STRUCTURE			
	1. Refine the UGI Utility Group's strategic planning process to include defined initiatives and establish operating company and overall corporate goals with related performance indicators.	22	Medium
	2. Periodically review spans of control for UGI Utility Group's management positions and document justification for supervisory position ratios with narrow or wide spans of control and adjust reporting relationships as appropriate.	22	Medium
IV. CORPORATE GOVERNANCE			
	None		
V. AFFILIATED INTERESTS AND COST ALLOCATIONS			
	1. File an updated affiliated interest agreement reflecting current corporate structure, affiliate relationship, and allocation methodologies with the Commission for its review and approval.	34	High
	2. Develop, maintain and make available a cost allocation manual to all appropriate employees.	34	Medium
	3. Enhance the accuracy of the common service cost allocations between UGI Corporation and all subsidiaries by computing and applying the allocation to at least a hundredth of a percent.	34	Medium

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<u>Chapter/Section Title</u>	<u>Recommendation</u>	<u>Page Number</u>	<u>Priority</u>
VI. FINANCIAL MANAGEMENT			
	1. Develop a formal dividend policy for PNG and CPG that incorporates their sources and uses of cash.	40	High
VII. GAS OPERATIONS			
	1. Update UGI Gas Service Division, CPG and PNG's documentation to comprehensively state all aspects of DIMP, specifically the qualitative and quantitative risk parameters used in determining the priority of mains for replacement.	63	High
	2. Establish short and long term goals for main replacement at UGI's NGDCs, specifically for cast iron and bare steel, and accelerate the replacement of cast iron and bare steel pipe.	63	High
	3. Initiate efforts to identify when to repair Class A leaks and reduce the number of backlogged Class A leaks at UGI's Gas Service Division and PNG.	63	High
	4. Validate that UFG levels are correctly computed and reported for UGI's Gas Service Division, CPG and PNG.	63	Low
	5. Update and expand the field operations staffing study; address any potential inspector understaffing issues; and implement the results of the staffing study accordingly.	63	High

**UGI Utilities, Inc.,
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<u>Chapter/Section Title</u>	<u>Recommendation</u>	<u>Page Number</u>	<u>Priority</u>
VII. GAS OPERATIONS (CONTINUED)			
	6. Accelerate the safe removal and disposal of mercury regulators throughout UGI Gas Service Division's service territory.	63	Medium
	7. Strive to reduce the number of line hits by increasing damage prevention education outreach and enforcement within PNG's service territory.	63	Medium
VIII. ELECTRIC OPERATIONS			
	1. Implement a computerized outage management system.	69	High
IX. EMERGENCY PREPAREDNESS			
	1. Perform physical security reviews across all utilities within the UGI Utility Group on a continuous basis and make timely repairs or improvements to physical security as necessary.	73	High
	2. Perform periodic physical security risk analyses and/or vulnerability assessments of all facilities and standardize the approach for mitigating these risks across the UGI Utility Group.	73	Medium
	3. Fully document UGI's Electric Service Division existing physical security, business continuity, and emergency response plans.	74	High

**UGI Utilities, Inc.,
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Summary of Recommendations**

<u>Chapter/Section Title</u>	<u>Recommendation</u>	<u>Page Number</u>	<u>Priority</u>
X. MATERIALS MANAGEMENT			
	1. Establish appropriate emergency stock levels for each UGI Utility Group warehouse and strive to reduce the actual overall emergency stock levels maintained to 15% of total inventory.	87	High
	2. Strive to reduce cycle count variances at UGI's NGDCs.	87	High
	3. Strive to achieve inventory turnover ratios of 2 to 4 at the UGI Utility Group and in all warehouses.	87	High
	4. Establish minimum and maximum inventory levels for all items at all of the UGI Utility Group's warehouses.	87	Medium
	5. Strive to increase or expand the use of automated features of the materials management system.	88	Medium
	6. Monitor and enforce CPG's third party vendor's performance metrics and utilize the benefits of the supply contract to optimize inventory levels and turnover.	88	High
XI. CUSTOMER SERVICES			
	1. Document existing customer service goals and track and maintain metrics for all call centers and CIC representatives within the UGI Utility Group.	96	High

**UGI Utilities, Inc.,
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Summary of Recommendations**

<u>Chapter/Section Title</u>	<u>Recommendation</u>	<u>Page Number</u>	<u>Priority</u>
XI. CUSTOMER SERVICES (CONTINUED)			
	2. Develop multiple cost/benefit scenarios to select and implement, as appropriate, a standardized customer information system both inclusive and exclusive of an integrated workforce management system and to explore the economic and operational advantages of consolidating the call centers at the UGI Utility Group.	96	Medium
XII. FLEET MANAGEMENT			
	1. Compile a uniform and comprehensive vehicle safety policy applicable to the Gas Service Division, Electric Service Division, PNG, and CPG.	101	High
	2. Improve utilization of Key Performance Indicators (KPIs) for each vehicle class and track actual performance against the KPIs.	101	Medium
XIII. HUMAN RESOURCES AND SAFETY PROGRAMS			
	1. Expedite the consolidation of the gas safety manuals for UGI's Gas Service Division, PNG and CPG into a single comprehensive manual.	107	High

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Summary of Recommendations**

<u>Chapter/Section Title</u>	<u>Recommendation</u>	<u>Page Number</u>	<u>Priority</u>
XIV. DIVERSITY			
	1. Develop specific initiatives to increase the representation of females in underrepresented EEO job categories.	122	Low
	2. Explore ways to increase purchases from Minority owned business enterprise vendors.	122	Low
	3. Prepare and file annual diversity reports with the Commission according to the most recently issued guidelines.	122	Medium

II. BACKGROUND

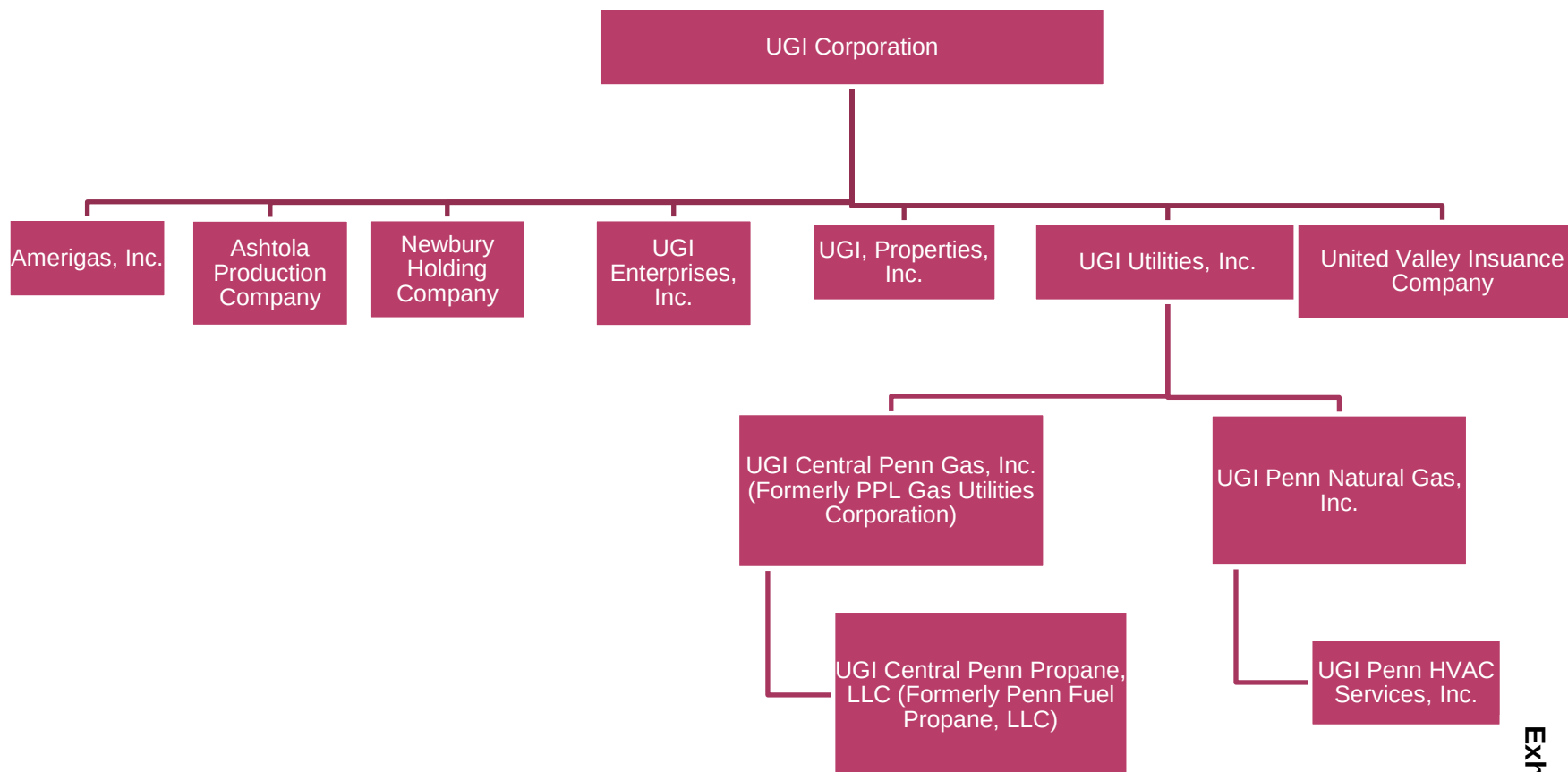
UGI Utilities, Inc. (UGI), UGI Central Penn Gas, Inc. (CPG) and UGI Penn Natural Gas, Inc. (PNG) (collectively referred to as the “UGI Utility Group”) are public utilities subject to regulation by the Pennsylvania Public Utility Commission (PUC or Commission). UGI is comprised of two regulated divisions encompassing a natural gas distribution operation (Gas Service Division) and an electric distribution operation (Electric Service Division). CPG and PNG are wholly owned natural gas distribution companies (NGDC) that are subsidiaries of UGI which in turn is wholly owned by UGI Corporation (UGI Corp. or Parent Company). UGI Corp. is a holding company under the Public Utility Holding Company Act of 2005 with seven subsidiaries, one of which (i.e., Ashtola Production Company) is an inactive Pennsylvania corporation. An entity organization chart of UGI Corp., UGI, CPG, PNG and their affiliates as of September 2011 is shown on Exhibit II-1.

UGI Corp.’s non-regulated subsidiaries include:

- AmeriGas, Inc., owned 44% by UGI Corp., the largest retail propane distribution company in the United States¹ which has propane operations in all 50 states.
- Newbury Holding Company, a Delaware investment holding Company.
- UGI Enterprises, Inc. comprised of nine first tier subsidiaries including:
 - UGI Energy Services, Inc. (d/b/a GASMARK and POWERMARK) which is the gas and electric energy marketing Company. UGI Energy Services is also comprised of seven second-tier subsidiaries of UGI Enterprises, Inc. including:
 - Pipeline holding companies (i.e., Homestead Holding Company and Hellertown Pipeline Company).
 - UGI Storage Company which owns and operates two storage facilities formerly owned by CPG.
 - UGI LNG, Inc. that operates UGI Corporation’s liquefied natural gas facilities.
 - UGI HVAC Enterprises, Inc. and UGI HVAC Services, Inc. provide the unregulated heating ventilation and air conditioning (HVAC) services.
 - Various international holding companies including Eastfield International Holdings, Inc, Eurogas Holdings Inc., UGI Black Sea Enterprises Inc., UGI China Inc., UGI International Inc. and UGI International Enterprises, Inc.
 - In turn, UGI International Enterprises, Inc has propane holdings in France (Antargaz), Austria, Czech Republic, Slovakia, Switzerland, Poland, Hungary, and Romania (Flaga Gmbh) and Denmark (Kosan Gas A/S)
- UGI Properties, Inc. which owns UGI Corp.’s corporate headquarters located in King of Prussia, Pennsylvania.
- United Valley Insurance Company that provides auto, general and workers’ compensation liability insurance coverage to UGI Corp and some of its subsidiaries.

¹ Source: UGI Corp.’s 2010 Shareholder Annual Report

**UGI Corporation
Corporate Entity Chart
As of September 2011**



Source: Data Request GD-2.

Exhibit II-1

More explicitly related to this audit, UGI Corp. also owns and operates three separate utility companies consisting of UGI (both Gas Service Division and Electric Service Division), CPG and PNG. CPG and PNG are wholly owned subsidiaries of UGI Utilities, Inc., as depicted in Exhibit II-1. The Gas Service Division provides natural gas distribution service to approximately 341,300 customers in 16 counties in southeastern and central Pennsylvania. UGI is based out of Reading, Pennsylvania. The Electric Service Division, headquartered in Wilkes-Barre, Pennsylvania, serves approximately 62,200 customers in portions of Luzerne and Wyoming Counties.

At its Public Meeting of August 17, 2006, at Docket Nos: A-120011F2000, A-125146F5000, A-125146 the Commission approved UGI Utilities, Inc's acquisition of the assets of PG Energy, a Division of Southern Union Company. As a result of the acquisition, PG Energy was renamed UGI Penn Natural Gas, Inc. (PNG). UGI's purchase of the assets of Southern Union Company's Pennsylvania operating division, PG Energy, was finalized on August 24, 2006. PNG provides natural gas service to approximately 160,800 customers in 13 counties in Northeastern Pennsylvania. Included in the PNG acquisition was UGI Penn HVAC Services, Inc. (PNG HVAC) which provides heating, ventilation, and air conditioning products to the PNG service territory. PNG HVAC is a subsidiary of PNG and is not regulated by the Commission².

At its Public Meeting of August 21, 2008, at Docket Nos: A-2008-2034045, A-2034047, G-2008-2034115, and G-2008-2034132, the Commission approved UGI Utilities, Inc's acquisition of the assets of PPL Gas Utilities Corporation (PPL Gas). As a result of the acquisition, PPL Gas was renamed UGI Central Penn Gas, Inc. (CPG). UGI's purchase of the assets of PPL Gas was finalized on October 1, 2008. CPG provides natural gas service to approximately 76,500 customers in 33 counties across Pennsylvania. CPG also serves approximately 500 customers in Maryland. CPG has an inactive unregulated affiliate, UGI Central Penn Propane, LLC that transferred its assets to Amerigas in 2008.

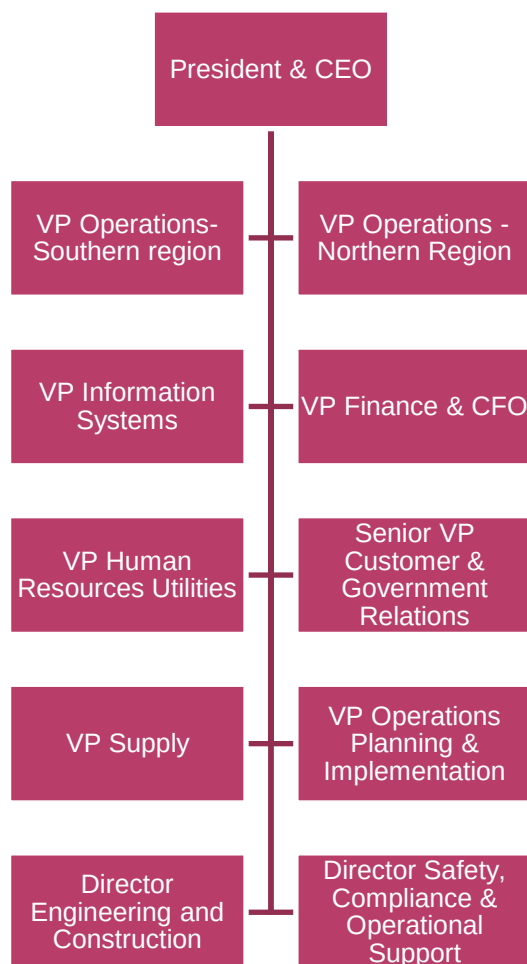
Although UGI, CPG and PNG are separate utility companies, they share a centralized management team and/or various shared services. Effective September 5, 2011, the UGI Utility Group announced a new President and CEO and created the Senior Vice President, Customer and Government Relations. Along with this change, the reporting structure of senior management was altered to reflect the organization chart presented in Exhibit II-2. This organizational chart represents the shared management team across UGI, CPG and PNG. Refer to Chapter III – Executive Management and Organizational Structure for more information on the organizational structure of the UGI Utility Group's management structure.

A summary of the UGI Utility Group's number of customers, usage, and revenues by customer class are shown in Exhibit II-3. Residential gas customers comprise approximately 90%, 87%, and 90% of overall customer base, 22%, 25%, and 34% of the usage, and 58%, 59%, and 71% of the revenue for the Gas Service Division, CPG and PNG, respectively. Residential electric customers comprise approximately 88% of

² The Management Audit did not cover the operational performance of PNG HVAC other than to assess the operations of PNG.

overall customer base, 54% of usage, and 67% of revenue for the Electric Service Division. Commercial gas customers comprise approximately 10%, 13%, and 10% of customer base, 24%, 33%, and 24% of the usage, and 33%, 30%, and 25% of the revenue for Gas Service Division, CPG and PNG, respectively. Commercial electric customers comprise approximately 12% of customer base, 34% of usage, and 28% of revenue. Industrial gas customers comprise less than one percent of the customer base for Gas Service Division, CPG and PNG, 54%, 42%, and 42% of the usage, and 10%, 10%, and 4% of the revenue, respectively. Industrial electric customers comprise less than one percent of customers, 11% of usage, and 5% of revenues. Other electric income amounts to approximately 1% of usage and 1% of revenue.

Exhibit II-2
UGI Utility Group
Senior Management Organizational Chart
As of September 2011



Source: Data Request GD-1

Exhibit II-3
UGI Utility Group
Customer Statistics
As of December 31, 2010

Customer Class	# of Customers	% of Customers	MCF Sold	% of MCF Sold	Revenues	% of Revenues
UGI - Gas Service Division						
Residential	306,368	89.8%	20,967,185	21.9%	\$282,570,691	57.5%
Commercial	33,535	9.8%	22,879,570	23.9%	\$161,274,731	32.8%
Industrial	1,412	0.4%	51,810,615	54.2%	\$47,739,166	9.7%
Totals	341,315	100.0%	95,657,370	100.0%	\$491,584,588	100.0%
PNG						
Residential	144,801	90.0%	14,300,499	33.7%	\$186,546,836	71.1%
Commercial	15,810	9.8%	10,302,391	24.3%	\$64,926,905	24.7%
Industrial	226	0.1%	17,804,344	42.0%	\$10,999,042	4.2%
Totals	160,837	100.0%	42,407,234	100.0%	\$262,472,783	100.0%
CPG						
Residential	66,223	86.6%	5,631,739	24.8%	\$71,745,381	59.4%
Commercial	10,072	13.2%	7,460,163	32.8%	\$36,758,407	30.4%
Industrial	212	0.3%	9,625,844	42.4%	\$12,380,790	10.2%
Totals	76,507	100.0%	22,717,746	100.00%	\$120,884,578	100.0%
UGI - Electric Service Division						
Residential	54,646	87.8%	532,351,832	54.5%	\$72,319,583	66.5%
Commercial	7,378	11.9%	330,321,963	33.8%	\$30,536,291	28.1%
Industrial	161	0.3%	109,255,572	11.2%	\$4,874,238	4.5%
Other ^a	65	0.1%	5,783,571	0.6%	\$1,073,146	1.0%
Totals	62,250	100.0%	977,712,938	100.0%	\$108,803,258	100.0%

a: Other includes miscellaneous and public related income/customers.

Source: 2010 PUC Annual Report

III. EXECUTIVE MANAGEMENT & ORGANIZATIONAL STRUCTURE

Background

UGI Utilities, Inc. (UGI), UGI Penn Natural Gas, Inc. (PNG), and UGI Central Penn Gas, Inc. (CPG), collectively referred to as the “UGI Utility Group”, have common corporate officers. The members of the UGI Utility Group’s executive management team are shown in Exhibit II–2 of Chapter II - Background. The Company President and Chief Executive Officer, promoted to the position on September 5, 2011, was elected to the UGI Board of Directors on September 27, 2011. Prior to the promotion, he served as UGI’s Vice President Marketing, Rates and Gas Supply. A review of UGI, PNG, and CPG’s Board of Directors is provided in Chapter IV – Corporate Governance.

The UGI Utility Group operations and executive management team is supported through the following services provided by UGI Corporation (UGI Corp.):

- Insurance
- Treasury
- Investor Relations
- Legal
- Risk Management
- Internal Audit
- Cash Management
- Tax

UGI Corp. also provides these and other services to UGI Corp.’s regulated and unregulated subsidiaries.

The UGI Utility Group utilizes a multiyear budget process whereby the multiyear budget is updated annually and includes a narrative which drives strategic planning initiatives for its three year business plan. The narrative developed in the annual budget plan narrative provides a financial and operational review of the companies and allows the companies to respond to changing business conditions with modifications as needed. The defined business planning cycle enables the UGI Utility Group to identify future opportunities and evaluate strategic alternatives, prioritizes initiatives, and notes some performance improvement objectives. Final approval of the annual budget plan rests with the UGI Corp. Chief Executive Officer (CEO).

The Audit Staff evaluated the UGI Utility Group’s staffing levels. Exhibit III-1, lists the individual companies and their staffing levels for the period 2007 through 2010. As indicated, the number of UGI employees increased from 847 in 2007 to 948 in 2010 or by 11.9%. Conversely, PNG’s number of employees decreased from 389 in 2007 to 259 in 2010, or by 33.4%; while CPG, which was acquired in October 2008, experienced an employee reduction from 290 in 2008 to 198 in 2010, or by 31.7%. Contributing to the increase in UGI’s workforce and decrease in PNG’s and CPG’s staffing is the transferring of personnel from the latter companies to UGI and the

elimination of positions at PNG and CPG resulting in a net decrease of 121 employees from 2007 to 2010 (noting that the changes for UGI and PNG occurred from 2007 to 2010 and the changes at CPG occurred from 2008 to 2010).

Exhibit III-1
UGI Utility Group
Staffing Levels
As of Fiscal Years Ended September 30, 2007 to 2010

Company	2007	2008	2009	2010	Percent change 9/30/07 to 9/30/10
UGI Utilities	847	836	847	948	11.9%
UGI Penn Natural Gas	389	372	335	259	-33.4%
UGI Central Penn Gas ⁽¹⁾	n/a	290	252	198	-31.7%
Combined Total	1,236	1,498	1,434	1,405	13.7%

⁽¹⁾Acquired by UGI Utilities on October 1, 2008.

n/a-not available

Source: Data Request EM-1

A review of the UGI Utility Group's succession planning efforts found that an executive management succession plan addressing the President & CEO, Vice President Finance & Chief Financial Officer (CFO), Vice President Operations, Vice President Marketing, Supply & Rates, Vice President Human Resources, and Vice President Information Services has been developed. The succession plan is reviewed and updated annually by the UGI Utility Group President with potential candidates from all of UGI Corp.'s operating companies, both regulated and non-regulated, included in the evaluation. The UGI Board of Directors also reviews and approves the succession plan. The executive management succession plan identifies between two and four candidates for each position and includes a candidate profile listing the candidate's academic background and work experience. Additionally, candidates are rated in the following categories:

- Management Personality – evaluates human relations skills with respect to understanding, influencing and/or servicing people.
- Managerial Potential – evaluates the candidate's capability of directing and coordinating complex functions with a level of guidance.
- Performance in Present Job – employee's performance evaluation ranging from needs improvement to outstanding.
- Readiness – 0-6 months, 6 months-2 years, 2-3 years, 3-5 years, etc.

A separate succession plan is maintained for director and manager level positions. Department Vice Presidents review positions and identify potential candidates. A list of two to four candidates is compiled with the UGI Utility Group President giving final approval. Furthermore, in 2010 (updated in 2011), an additional succession plan for first-line operations supervisors who turn age 62 in 2013 was

developed. The plan is prepared by the Vice President Operations with input from regional managers. The Company indicated that the first-line operations supervisors plan will be updated on an as needed basis.

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 strategic planning process and succession planning. Based on our review, the UGI Utility Group should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its executive management and organizational structure function by addressing the following:

1. The UGI Utility Group's annual budget process lacks key strategic planning components.

As described in the Background, the UGI Utility Group prepares a narrative of its annual budget plan that includes an operational and financial overview of the companies. Separate annual operating and capital budgets are prepared for each company, UGI, PNG, and CPG, along with a three year forecast plan summary. In addition, UGI's operating budget, capital budget, and three year forecasts are further refined as separate gas and electric budget plans. In 2010, the UGI Utility Group developed an initiative called the "Winning Strategy". Key Winning Strategy priorities include profitable growth, people development, communications, and safety with the main thrust being to profitably grow the business.

In addition to the Winning Strategy, the UGI Utility Group recognizes that it has an opportunity to increase productivity by integrating PNG and CPG into standardized processes, materials, and systems. In 2010, UGI created a formal process analysis group tasked with evaluating all major company processes in order to standardize and streamline processes while also identifying potential operating metrics and long-term improvement opportunities. Since the group was chartered, they have analyzed the customer service, residential service installation, and procure-to-pay processes as well as several smaller processes. In addition, the Company has formed cross-departmental committees tasked with standardizing the Gas Operations Manual (GOM), safety policies and procedures, materials and supplies, equipment and fleet. Finally, there is also an ongoing effort led by the IS group to evaluate the replacement of legacy customer and work management systems in order to standardize those systems and processes.

Although the narrative developed as part of the annual budget process is partially used for strategy planning purposes, it is weak on defining specific goals for the business units or the UGI Utility Group as a whole. Although the annual budget includes personal and financial goals for senior management (i.e., CEO, CFO, and Vice Presidents), clearly defined corporate goals and a metrics tracking process showing

goal achievement are absent. In addition, although the 2011 capital forecast plan projects capital spending out through the next three years (i.e., 2014), beyond the plan year, 2011, special capital project spending is not identified. Finally, individuals or departments primarily responsible for addressing strategic planning initiatives are not identified in the report.

The UGI Utility Group's senior management believes the strategic planning process included within its annual budget process is sufficient. However, the strategic plan should have clearly defined objectives and metrics that are aligned with the UGI Utility Group's overall vision and mission. Specific strategies or plans for the operating companies should feed into the overall plan. A tracking process for business goals and metrics performance should indicate the level of goal achievement. A defined capital spending plan projected 3 to 5 years forward enumerating specific capital projects and budgeted dollars per year should be part of the plan. Lastly, corporate goal achievement should be tied to the executive incentive compensation program.

A utility's defined business planning cycle should enable the UGI Utility Group to identify future opportunities and evaluate strategic alternatives, prioritize initiatives, set performance improvement objectives, and establish pay for performance metrics.

2. A span of control analysis and analysis of individual supervisory positions with narrow or wide spans of control has not been conducted since 2008.

As part of the review of UGI Utility Group's organization structure, the Audit Staff reviewed the appropriateness of spans of control at various key levels of management. Span of control refers to the number of subordinates a manager or supervisor directly supervises in an organization. To maximize organizational efficiency and effectiveness, the UGI Utility Group should ideally aim for spans of control in the range of 1:4 to 1:9 to control the layers of management and maintain effective communications. Overly narrow spans of control can result in micro-management, a larger number of supervisors, and higher than necessary compensation costs. Spans of control that are too wide can result in poor performance due to a lack of management oversight and control.

The last span of control analysis conducted by UGI was initiated in September 2007. Subsequently, a departmental analysis of positions with low spans of control, 1:3 or lower, and positions with high spans of control, 1:10 or greater, was concluded in August 2008. The report, *Spans of Control for UGI Utilities*, provided justification for positions with low and high spans of control. It is noted in several sections of UGI's report that the number of reports for certain positions would change as PNG continues to be integrated into the UGI organization.

Exhibit III-2 lists the UGI Utility Group's spans of control for management and supervisory positions as of February 2011. As of February 2011, 51% of UGI Utility Group's reporting relationships fell within the target range 1:4 to 1:9 as compared to 49% in September 2007. The February 2011 analysis reflected a decrease from 29% to 23% in the number of managers and supervisors having less than four direct reports

when compared to UGI's September 2007 analysis. The percentage of reporting relationships with wide spans of control (i.e., with 10 or more direct reports) increased from 23% in 2007 to 26% of all reporting relationships in February 2011.

**Exhibit III-2
UGI Utility Group
Span of Control Analysis
As of February 2011**

Reporting Ratio	Reporting Relationships	
	Number	Percentage
1:1	17	8.8%
1:2	14	7.2%
1:3	13	6.7%
<1:4 Sub Totals	44	22.7%
1:4	22	11.3%
1:5	19	9.8%
1:6	17	8.8%
1:7	19	9.8%
1:8	15	7.7%
1:9	7	3.6%
1:4–1:9 Sub Totals	99	51.0%
1:10	14	7.2%
1:11-1:15	23	11.9%
1:16-1:20	10	5.2%
1:21-1:25	4	2.1%
>1:9 Sub Totals	51	26.3%
Totals	194	100.0%

Source: Data Request No. EM-2

The UGI Utility Group has no defined policy to periodically conduct span of control analyses. However, conducting periodic span of control reviews is an effective management efficiency monitoring practice to determine positions with low or high spans of control. In addition, documentation justifying narrow or wide spans of control as reasonable and appropriate should be maintained.

As indicated in its *Spans of Control for UGI Utilities* document, the number of reports for certain positions will change with the continued integration of PNG. In addition, the recent acquisition of CPG likely will affect the spans of control for certain positions and should be evaluated further.

Recommendations

- 1. Refine the UGI Utility Group's strategic planning process to include defined initiatives and establish operating company and overall corporate goals with related performance indicators.**
- 2. Periodically review spans of control for UGI Utility Group's management positions and document justification for supervisory position ratios with narrow or wide spans of control and adjust reporting relationships as appropriate.**

IV. CORPORATE GOVERNANCE

Background

As discussed in Chapter II – Background, UGI Utilities, Inc. (UGI) is a wholly owned subsidiary of UGI Corporation (UGI Corp. or Parent Company), a diversified utility holding company (see Exhibit II-1 for a list of subsidiaries and the corporate organization chart). In addition, UGI is the parent company of two wholly-owned, regulated gas utilities, UGI Penn Natural Gas (PNG) and UGI Central Penn Gas (CPG). UGI Corp. is a publicly traded company listed on the New York Stock Exchange under the symbol, “UGI.” Therefore, UGI Corp. is subject to the corporate governance requirements contained in both the Sarbanes-Oxley Act of 2002 (SOX) and the corporate governance rules of the New York Stock Exchange (NYSE).

UGI Corp. has a nine member Board of Directors (Board) comprised of the Chairman and Chief Executive Officer (CEO) and President and Chief Operating Officer (COO) of UGI Corp. and seven independent Board members. The average tenure of the Directors as of December 31, 2011, was 10 years with one of the Directors having just been appointed in January 2011. The Board has adopted independence guidelines, as part of UGI Corp.’s Principles of Corporate Governance, to assist the Board in determining director independence in accordance with NYSE and Securities and Exchange Commission (SEC) requirements. In its Proxy Statement released to shareholders dated January 20, 2011, the Board determined, based on its guidelines, that seven of the nine board members were independent. The Board conducts its business by using the following committees:

- Audit Committee is responsible for assisting the Board in its oversight of the financial statements, compliance with legal and regulatory requirements, evaluating the independent auditor’s qualifications and independence, and reviewing the performance of the independent auditors and UGI Corp.’s internal audit staff, including the appointment, compensation, retention and oversight of any independent registered public accounting firm. The Audit Committee is comprised of three independent members and met seven times during 2010.
- Compensation and Management Development Committee is responsible for establishing executive compensation policies and programs, recommending to the Board base salaries and target bonus levels for the CEO and senior executive personnel, reviewing and evaluating the performance of the CEO, and reviewing management’s succession planning. The Compensation and Management Development Committee is comprised of three independent members and met three times during 2010.
- Corporate Governance Committee is responsible for nominating and reviewing the qualifications of persons eligible to stand for election as Directors and makes recommendations to the Board, reviews and

recommends candidates for committee membership and chairs, advises the Board with respect to significant developments in corporate governance matters, and reviews and assesses the performance of the Board and each Committee. The Corporate Governance Committee is comprised of three members, all independent, and met two times in 2010.

- Executive Committee acts on behalf of the Board when the Board is not in session. The Executive Committee is comprised of three members (two of which are independent) and met two times during 2010.

The Audit Committee operates pursuant to a written charter consistent with the applicable standards of the NYSE and the SEC. As required by NYSE, the Chairman of the Audit Committee is a financial expert as defined by the applicable law and each member of the Audit Committee is financially literate. The Audit Committee Charter is reviewed annually and updated accordingly. The Audit Committee undergoes an annual performance evaluation that is reviewed by the Board. The evaluation compares the performance of the Audit Committee with the requirements of its written charter.

The Audit Committee also meets with the head of UGI Corp.'s Internal Audit Department (General Auditor) and its independent registered public accounting firm, PricewaterhouseCoopers LLP (PwC), to review and approve the overall scope and plans for their respective audits. The Audit Committee also meets quarterly with the General Auditor and PwC, with and without management present, to discuss audit results, their evaluations of internal controls and the overall quality of UGI Corp.'s financial reporting.

UGI Corp. has a Code of Business Conduct and Ethics (Code) that applies to directors, officers, and employees of UGI Corp. and its subsidiaries. UGI Corp.'s Vice President and General Counsel is the designated Compliance Officer and responsible for the administration of the Code. The Code provides for employees to anonymously report improprieties to the Compliance Officer via a Code of Business Conduct and Ethics Violation Report form. In addition, there is a Code of Ethics applicable to the CEO and senior financial officers (i.e., Chief Financial Officer and Chief Accounting Officer) of UGI Corp. and UGI. The Code of Ethics focuses on areas of ethical risk and recognizing and dealing with ethical issues. The Board, acting through its Audit Committee, is ultimately responsible for the implementation of the Code of Ethics.

Corporate governance guidelines and related documents are available for review by the shareholders and public at large on the Company's website. Documents available on the website include:

- Charters for the Audit, Corporate Governance, and Compensation and Management Development Committees;
- Code of Business Conduct and Ethics ;
- Code of Ethics; and

- Principles of Corporate Governance.

PwC, the external auditor, has been engaged by UGI Corp. to perform the annual audit of UGI Corp. and subsidiaries since the 2003 fiscal year audit. The current audit partner in charge has been in that capacity for four years with the fifth year being the 2011 fiscal year audit. He is scheduled to be replaced after the 2011 audit with a replacement already having been named.

UGI Utilities, Inc. (UGI) has a ten member Board of Directors comprised of nine members who are also on the UGI Corp. Board and the recently appointed President and CEO of UGI. The latter was elected to the UGI Board on September 27, 2011. UGI operates with the same committees (i.e., Audit, Compensation and Management Development, Corporate Governance, and Executive) having the same respective committee members as UGI Corp. In addition, UGI has a Pension Committee. The committee is comprised of three independent members of the UGI Board.

The PNG and CPG Boards are comprised of the same three Directors. One member is the recently appointed President and CEO of UGI who was elected to both Boards on September 5, 2011, replacing the former UGI President and CEO as a Board member. The latter resigned from both Boards on the same date. Other Board members include the Chief Financial Officer of UGI Corp. and a member who serves as Vice President and General Counsel/ Assistant Secretary of UGI Corp., UGI, PNG, and CPG. The PNG and CPG Boards do not utilize any Board Committees.

As noted in Chapter III – Executive Management & Organizational Development, UGI, PNG, and CPG have common corporate officers.

Findings and Conclusions

Our examination of the Corporate Governance function included a review of UGI Corp., UGI, PNG, and CPG Boards of Directors' organization including committee structure and charters; Director independence; relationship with the independent auditor; business conduct and ethics codes; documents related to corporate governance; annual reports; etc. Based on our review, it appears that proper controls are in place and that the corporate governance oversight function is being performed in a satisfactory manner.

Recommendation

None.

V. AFFILIATED INTERESTS AND COST ALLOCATIONS

Background

This chapter presents the results of the Audit Staff's review of the nature and extent of transactions between UGI Utilities, Inc. (UGI), UGI Penn Natural Gas, Inc. (PNG), and UGI Central Penn Gas, Inc. (CPG) and their affiliates. As discussed in Chapter II - Background and shown on Exhibit II-1, UGI is a wholly-owned subsidiary of UGI Corporation (UGI Corp.). UGI Corp. is a holding company that provides common services to several unregulated subsidiaries in addition to the regulated entity, UGI. UGI, comprised of natural gas distribution operations (Gas Service Division) and electric utility operations (Electric Service Division), is the parent company of two wholly-owned, regulated gas utilities, PNG and CPG. UGI, PNG and CPG are collectively referred to as the "UGI Utility Group" in this report.

The UGI Utility Group has several affiliated interest (AI) agreements on file with the Commission. One AI agreement, approved on May 1, 1992, contains a general summary of the services provided between UGI and UGI Corp. UGI also has separate Commission approved AI agreements regarding insurance, heating, ventilation and air conditioning (HVAC) services, propane services, shared real estate and facilities, pipeline engineering, construction, maintenance, and natural gas transactions. CPG and PNG have several similar AI agreements, which the Commission has approved.

The centralized services provided by UGI Corp. to its subsidiaries (including UGI) include: executive management, cash management, tax services, internal auditing, treasury services, pension fund management, financing activities, investor relations, external reporting, insurance, risk management, and legal. Other affiliates provide UGI the following services: propane, natural gas delivery and supply services, office space, insurance, and HVAC services.

UGI also provides certain services to UGI Corp., PNG, and CPG as well as other unregulated affiliates. These services include, but are not limited to: office space, pipeline engineering, construction, maintenance, information services, payroll, accounts payable, accounting, finance, and human resources. A summary of affiliate charges to and from UGI, CPG and PNG during fiscal years 2008 through 2010 are shown on Exhibit V-1. The Company provided the following explanation regarding the negative total charges within Exhibit V-1:

The correct intercompany charges were recorded, however, in some instances, the intercompany payable was recorded to the receivable account and the intercompany receivable was recorded to a payable account. Both the intercompany receivable and payable account are netted together when a payment is made between affiliate companies.³

³ Source: Data Request AI-40

UGI Utilities, Inc.
Summary of Affiliate Charges
For Fiscal Years Ended September 30, 2008 - 2010

<u>Affiliate</u>	<u>FY 2008</u> \$	<u>FY 2009</u> \$	<u>FY 2010</u> \$
<u>Charges From UGI Utilities to Affiliates</u>			
Amerigas	231	18,241	33,979
UGI Corporation	1,395,134	1,855,183	2,419,770
UGI Energy Services	39,031,167	17,588,357	29,265,170
UGI Enterprises	9,342	63,260	85,239
UGI Central Penn Gas	17,407	12,325,618	11,627,168
UGI Penn Natural Gas	10,688,584	12,604,452	18,199,118
UGI HVAC	499,674	385,504	791,437
UGI Petroleum Products of Delaware	0	1,200	(900)
UGI Penn HVAC Services	0	967	0
Totals	51,641,539	44,842,782	62,420,981
<u>Charges From Affiliates to UGI Utilities</u>			
Amerigas	0	(2,956)	0
UGI Corporation	13,320,252	13,178,268	9,318,408
UGI Energy Services	135,811,833	81,298,528	9,673,899
UGI Central Penn Gas	0	5,706,393	1,312,273
UGI Penn Natural Gas	974,585	1,974,906	4,209,927
UGI HVAC	0	807,830	0
UGI Petroleum Products of Delaware	0	900	2,060
UGI Penn HVAC Services	0	31,696	103,010
Totals	150,106,670	102,995,565	24,619,577

Source: Data Request AI-28

**UGI Penn Natural Gas
Summary of Affiliate Charges
For Fiscal Years Ended September 30, 2008 - 2010**

<u>Affiliate</u>	<u>FY 2008</u> \$	<u>FY 2009</u> \$	<u>FY 2010</u> \$
<u>Charges From UGI Penn Natural Gas and UGI Penn HVAC Services to Affiliates</u>			
UGI Corporation	0	0	46,368
UGI Energy Services	4,932,340	6,186,789	33,197,398
UGI Utilities	14,504,430	(7,845,092)	2,320,212
UGI Penn Natural Gas (Recorded on UGI Penn HVAC Services)	1,050,649	1,010,947	190,844
UGI Penn HVAC Services	0	872,284	3,228,093
UGI Central Penn Gas	0	1,307,690	3,396,416
Totals	20,487,419	1,532,618	42,379,331
<u>Charges From Affiliates to UGI Penn Natural Gas and UGI Penn HVAC Services</u>			
UGI Corporation	(55,371)	1,503,731	2,545,731
UGI Energy Services	0	0	23,753,197
UGI Utilities	4,397,681	3,907,297	14,819,992
UGI Penn Natural Gas (Recorded on UGI Penn HVAC Services)	0	744,287	1,508,246
UGI Penn HVAC Services	0	1,005,794	2,010,260
UGI Central Penn Gas	0	83,690	993,452
Totals	4,342,310	7,244,799	45,630,878

Source: Data Request AI-28

**UGI Central Penn Gas
Summary of Affiliate Charges
For Fiscal Years Ended September 30, 2009 - 2010**

<u>Affiliate</u>	<u>FY 2009</u> \$	<u>FY 2010</u> \$
<u>Charges From UGI Central Penn Gas and Subsidiaries to Affiliates</u>		
Amerigas	343,651	(8,122)
UGI Energy Services	2,436,111	5,275,038
UGI Utilities - Gas Division	3,900,388	(3,101,659)
UGI Penn Natural Gas	1,320,365	994,015
UGI Central Penn Gas Receivable from UGI Petroleum Products of Delaware ^a	719,558	5,019
UGI Central Penn Gas Receivable from UGI Central Penn Propane ^b	236,349	0
UGI Petroleum Products of Delaware Receivable from UGI Central Penn Gas	29,250	0
UGI Central Penn Propane Receivable from UGI Central Penn Gas	707,474	33,588
Totals	9,693,146	3,197,879
<u>Charges From Affiliates to UGI Central Penn Gas and Subsidiaries</u>		
Amerigas	0	55,159
UGI Corporation	942,953	2,336,453
UGI Energy Services	607,142	3,113,971
UGI Utilities - Gas Division	9,275,134	11,956,697
UGI Penn Natural Gas	1,163,764	3,398,073
UGI Central Penn Gas Payable to UGI Petroleum Products of Delaware	29,250	0
UGI Central Penn Gas Payable to UGI Central Penn Propane	771,646	19,423
UGI Petroleum Products of Delaware Payable to UGI Central Penn Gas	79,579	5,019
UGI Central Penn Propane Payable to UGI Central Penn Gas	689,261	0
Totals	13,558,729	20,884,795

^a UGI Petroleum Products of Delaware, Inc is a holding company. This entity includes a reserve for one of the environmental manufactured gas plant sites. UGI Central Penn Gas still maintains the Post Retirement Welfare Plan.

^b UGI Central Penn Propane, LLC is a holding company. In fiscal year 2009, the assets were sold to AmeriGas OLP. UGI Central Penn Gas still maintains the Post Retirement Welfare Plan.

Note: CPG was acquired on October 1, 2008, which was the beginning of Fiscal Year 2009.

Source: Data Request AI-28

When feasible, UGI Corp.'s costs are directly charged to the subsidiary that receives the service. However, when identification of direct charges is not possible, UGI Corp. utilizes the Modified Wisconsin Formula (MWF), which is a three-factor methodology to allocate indirect costs to affiliates. The MWF percentages are determined for each affiliate's proportion of total revenues, total operating expenses (including depreciation and amortization and before allocated expenses), and net assets employed (excluding acquisition goodwill) relative to affiliates also receiving services from UGI Corp. Revenues and operating expenses present amounts reported for the preceding fiscal year and net assets employed is as of the end of the latest fiscal year. The revenue and operating expenses components are each designated a 25% weighting and net assets employed are designated a 50% weighting.⁴ The resulting percentage is used to allocate indirect costs to affiliates.⁵

UGI Corp. also incurs expenses that are directly assignable only to the regulated utilities rather than all subsidiaries, but cannot be identified to a specific utility. These expenses are charged to UGI, PNG and/or CPG using a utility allocation method which is based on an average of each company's total revenues, total operating expenses and gross utility plant in service. The same methodology is used for allocation of indirect charges strictly within the UGI Utility Group (i.e., UGI providing common services to either one or more of the regulated entities).

Ring-fencing is the term used to describe efforts which are intended to insulate a regulated utility from the potentially riskier activities of unregulated affiliates. The objective is to ensure that the financial stability of the utility and the reliability of its service are not impacted by the activities of non-regulated corporate activities. In 1992, UGI Corp. reorganized into a holding company structure with two principal businesses, utilities and propane. The purpose of this reorganization was to enable each line of business to have a capital structure and cost of capital consistent with the competitive practices of its industry. As a result of the restructuring, UGI (as parent corporation of PNG and CPG) has a separate board of directors, separate books of account, separate debt instruments and separate bank accounts, with no co-mingling of funds or money pools with its parent corporation, UGI Corp., or other affiliates. Additionally, UGI has voluntarily adopted the corporate codes of conduct of the New York Stock Exchange to assure that the boards of directors and chief executive and financial officers fulfill their fiduciary duties.

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 addressed 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

⁴ For energy marketing organizations, (i.e. UGI Energy Services) the revenue component is net revenue (i.e., gross margin) and the operating expenses component does not include cost of goods sold.

⁵ Additional adjustments are made during the calculation of the indirect allocation percentages such as an international adjustment to account for the limited use of UGI Corporation services by affiliates located overseas and a currency adjustment for subsidiaries that use Euros rather United States Dollars.

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.

The UGI Utility Group addresses these regulations in their respective electric and gas tariffs as well as by mandating that exempt employees (i.e., those salaried employees who are exempt from the provisions of the Fair Labor Standards Act with respect to overtime) sign an annual compliance statement. The Code of Conduct is introduced to all UGI Utility Group new hires during orientation. Specific language regarding energy market rules (i.e. affiliate standards of conduct) is included in the employee handbook. In addition, the Code of Conduct is reviewed during new supervisor training and it was also reviewed during Company Policy workshops that were conducted for all supervisors in 2009-2010.

Findings and Conclusions

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

1. Affiliated interest agreements relating to administrative services do not include a description of the methodologies to be used to allocate costs between affiliates.

As described in the Background section of this chapter, UGI, PNG, and CPG have been proactive in filing affiliated interest filings with the Commission for services provided to and from affiliates. Many of the agreements describe services for which costs are directly charged. However, the May 1992 affiliated interest agreement for

providing administrative services between UGI and UGI Corp (and similar affiliated interest agreements between UGI Corp and UGI's subsidiaries PNG and CPG) does not describe the methodology to be used for allocating costs that cannot be directly attributed to a specific company. Instead, the agreement simply states that costs will be distributed either directly or indirectly by an unspecified allocation method. As previously discussed, UGI Corp. and UGI use the MWF to allocate indirect costs.

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

(a) General rule - No contract or arrangement providing for the furnishing of management, supervisory, construction, engineering, accounting, legal, financial, or similar services . . . between a public utility and any affiliated interest shall be valid or effective unless and until such a contract or arrangement has received the written approval of the commission . . .

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

An up-to-date agreement provides the Commission with an accurate representation of the allocation methodology, types of services and costs UGI and its subsidiaries are being charged from affiliates. Without the allocation methodology, the Commission lacks information needed to monitor and assess utility operations. Therefore, the UGI Utility Group should file updated affiliated interest agreements that include detailed descriptions of the allocation methodologies to be used to distribute costs between the regulated utilities and affiliates as well as a listing of the services provided and any changes in corporate structure.

2. The UGI Utility Group does not have a formal cost allocation manual.

UGI Corp. maintains an internal document entitled “Allocation of Common Expenses”, which describes the allocation methodologies used by UGI Corp to allocate common expenses to its subsidiaries. This document contains a history of the formation of UGI Corp. as a holding company, description of UGI Corp.’s allocation procedures including direct assignment and the MWF allocation methodology, and a description of the services and activities provided by UGI Corp. The document also references the utility allocation method that is used to allocate expenses that impact any combination of the regulated utilities. While this document provides a good foundation, it fails to address many aspects of a typical cost allocation manual.

The NARUC Guidelines for Cost Allocations and Affiliate Transactions state, in part, that:

Each entity that provides both regulated and non-regulated services or products should maintain a cost allocation manual (CAM) or its equivalent and notify the jurisdictional regulatory authorities of the CAM’s existence. At a minimum, the CAM should contain the following:

- An organization chart of the holding company, depicting all affiliates, and regulated entities.
- A description of all assets, services and products provided to and from the regulated entity and each of its affiliates.
- A description of all assets, services and products provided by the regulated entity to non-affiliates.
- A description of the cost allocators and methods used by the regulated entity and the cost allocators and methods used by its affiliates related to the regulated services and products provided to the regulated entity.

Similar sized utilities maintain cost allocation manuals that include the following additional items to those items listed above: detailed descriptions of every journal entry used to allocate costs to an affiliate, the departments responsible for handling specific affiliate transactions and current regulatory documents such as affiliated interest agreements and codes of conduct. Formally documented policies and procedures for cost allocations, could improve the UGI Utility Group’s consistency in accounting for its intercompany transactions. Without a formal centralized document detailing UGI Utility Group’s policies and procedures related to cost allocations between affiliates, it is possible that current and future employees could be inconsistent in using the allocation methodologies for affiliate transactions.

3. UGI Corp. rounds the percentages it charges affiliates for common expenses to whole percentages resulting in subsidization of expenses to unregulated affiliates.

As discussed in the Background section of this chapter, UGI Corp. allocates indirect expenses it incurs from providing common corporate services to its subsidiaries using a MWF. Each year the MWF allocation percentages are updated to reflect the current size and activity level at each subsidiary. During this process UGI Corp. rounds the allocation percentages to whole numbers (i.e., nearest full 1%), which has resulted in two unregulated affiliates, UGI Properties and United Valley Insurance Company, not being charged any portion of UGI Corp.'s indirect expenses as these subsidiaries allocated costs are less than .50%. Not only does the rounding lead to a less accurate allocation percentage of large dollar amounts, but it can also result in the subsidization of the unregulated affiliates by the regulated utilities. Consequently, the costs that would be allocated to UGI Properties and United Valley Insurance are spread among all of the other subsidiaries including the regulated utilities in the UGI Utility Group.

Assuming allocation percentages were rounded to the hundredths of a percent for all of UGI Corp.'s subsidiaries that receive common corporate services based on UGI Corp. March 2011 common expense allocations, the UGI Utility Group would have avoided approximately \$36,000 annually in indirect charges. While this amount is unlikely to be considered material by UGI Corp., it is unfair for the regulated utilities' ratepayers to bear costs that should reasonably be allocated to the unregulated affiliates.

With increased automation of journal entries related to cost allocations calculating to the hundredths place is a standard practice. Moreover, some of the other large PA utilities allocating common expenses which result in allocations of less than one percent elect to allocate these excess percentages only to their unregulated affiliates hence mitigating any subsidization issues. Regardless, it is unfair and unethical to subsidize unregulated companies through regulated affiliates even if charges are minimal or immaterial.

Recommendations

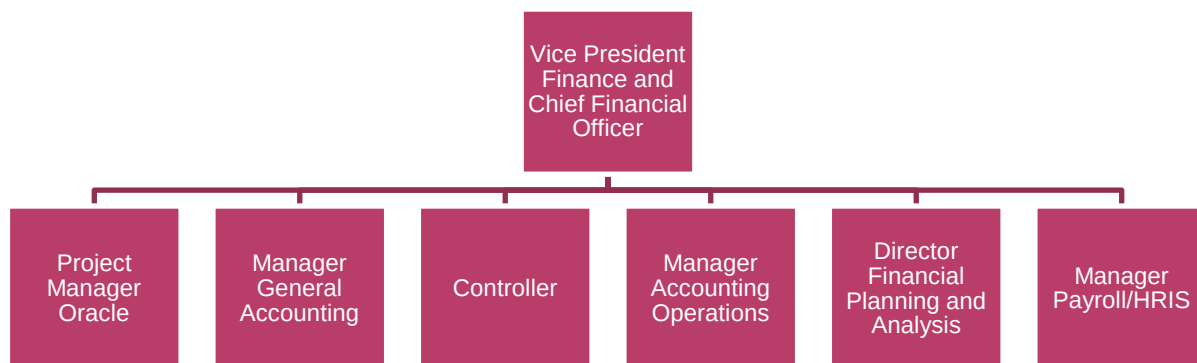
- 1. File an updated affiliated interest agreement reflecting current corporate structure, affiliate relationship, and allocation methodologies with the Commission for its review and approval.**
- 2. Develop, maintain and make available a cost allocation manual to all appropriate employees.**
- 3. Enhance the accuracy of the common service cost allocations between UGI Corporation and all subsidiaries by computing and applying the allocation to at least a hundredth of a percent.**

VI. FINANCIAL MANAGEMENT

Background

UGI Utilities, Inc.'s (UGI) Finance Department, as shown in Exhibit VI-1, is overseen by the UGI Utilities' Vice President of Finance and Chief Financial Officer (CFO). UGI is comprised of two regulated divisions encompassing a natural gas distribution operation (Gas Service Division) and an electric distribution operation (Electric Service Division). The Finance Department is responsible for compiling annual budgets, performing financial analysis, overseeing intercompany transactions, maintaining the general ledger, and managing employee payroll for UGI, UGI Penn Natural Gas, Inc. (PNG) and UGI Central Penn Gas, Inc. (CPG) (collectively referred to as the "UGI Utility Group"). UGI Corporation (UGI Corp.), UGI's parent company, provides additional financial services such as treasury, tax services, external reporting, etc. See Chapter V - Affiliated Interest and Cost Allocations for more information regarding affiliate provided services.

Exhibit VI-1
UGI Utilities, Inc.
Finance Department Organization Chart
As of September 2011



Source: Data Request GD-1

The Financial Planning and Analysis (FP&A) group within the Finance Department is responsible for compiling the annual one year budget and three year financial plan. The budgeting process begins in May by using the first plan year (i.e., year two) from the current budget as a starting point. Each company within the UGI Utility Group creates separate capital and operation budgets independently, which are consolidated and collectively presented to upper management. UGI's President and Vice Presidents review the one year budget and three year financial plans for each respective company several times in conjunction with the Finance Department before

they are submitted to UGI Corp. in August for approval. The UGI Utility Group's budgets are finalized by the end of August and subsequently approved by the UGI Corp. Board of Directors during the September board meeting.

Throughout the year, the FP&A group solicits responses from the departments that contributed to the budgets regarding their progress towards the year end budget numbers. Updated forecasts are created to reflect ongoing changes at the UGI Utility Group. The UGI Utility Group utilizes management approval variance thresholds tiered to specific dollar limits. The UGI Utility Group has an authorization process in place to reallocate budgeted amounts in order to preclude the total capital expenditures from exceeding the budget. Therefore, remaining funds for projects completed under budget are allocated to projects that are over budget. In certain situations, such as when higher priority projects incur substantial cost overruns, projects that were budgeted for the current year are deferred until the following year.

The FP&A group monitors capital budget expenditures by the total dollar amount of each category type rather than by capital project. The Engineering group within UGI's Operations Department is responsible for maintaining line item budget variances for specific capital projects. A review of operating budget variances is conducted each month by the FP&A group. The budget variance reports include comparisons of the amounts budgeted to actual spending for the period, quarter, and year to date. Additionally, the budget variance reports contain written explanations for significant variances (i.e., Income Statement variances that are greater than \$100,000 or Balance Sheet variances greater than 0.5% of total stockholder's equity).

In order to meet its long-term debt financing requirements UGI issues Senior and Medium-Term Notes. As of May 2011, UGI held \$640 million of long-term debt comprised of \$383 million in Senior Notes and \$257 million in Medium-Term Notes. For short-term borrowing needs, UGI had a revolving credit agreement with a group of banks for borrowings of up to \$350 million which was in place from 2006 to May 2011. In May 2011 a new Revolving Credit Agreement was signed with an initial borrowing capacity of \$300 million and the 2006 agreement was terminated. However, UGI may request increases to the \$300 million loan commitment in \$10 million increments up to a maximum of \$400 million. In August 2011, UGI filed a new securities certificate with the Public Utility Commission (PUC or Commission) requesting approval for the ability to borrow under the new agreement but an extension was given to allow the Commission more time to review the filing through October 28, 2011.

CPG and PNG do not issue long term debt. As of May 2011, UGI, as the parent company of CPG and PNG, provided unsecured borrowing to CPG and PNG of up to \$125 million and \$200 million, respectively, to finance each company's respective working capital, capital expenditures and general corporate expenses. During July and August of 2011, CPG and PNG filed new affiliated interest agreements and securities certificates requesting Commission approval for the ability to borrow from UGI amounts up to \$50 million and \$125 million, respectively, under new revolving credit agreements. As of mid-October the affiliated interest agreements were still pending and the revolving credit agreements were given an extension for Commission review through October 28, 2011.

UGI Corp. currently sponsors a defined benefit pension plan for employees of UGI Corp., UGI, PNG, CPG and some of UGI Corp.'s other domestic wholly owned subsidiaries hired before January 1, 2009. See Exhibit VI-2 for the funding status of the pension plan as of December 31, 2010. Each company is allocated a portion of the funded status and costs of the pension plan based upon the dollars invested. For the fiscal year ended September 30, 2011, UGI's allocated portion of the pension expense was \$8.1 million, PNG's allocated portion was \$2.3 million, and CPG's allocated portion was \$1.5 million.

Exhibit VI-2
UGI Corporation *
Employee Pension Plan
As of December 31, 2010

	Accumulated Pension Obligation
Projected Benefit Obligation	\$437,666,424
Fair Value of Assets	\$304,310,824
Percent funded	69.53%

* - This pension plan includes employees from all of UGI Corp.'s domestic subsidiaries.

Notes: CPG's pension plan was consolidated as of December 31, 2010.

PNG's pension plan was consolidated as of January 1, 2009.

Source: Data Request FM-18 Attachment H

The Internal Audit (IA) Department within UGI Corp. is responsible for conducting operational and functional audits throughout UGI Corp. The IA Department is headed by an Audit Manager, who oversees three audit supervisors and 10 auditors. All of the auditors are members of the Institute of Internal Auditors.

The IA Department's Audit Plan is developed using a risk based approach. Annually, beginning in July a risk assessment is conducted in preparation of creating the Audit Plan for the following year. The IA Department's objectives in creating an Audit Plan includes seeking coverage in high risk areas, distributing time to be able to cover all areas identified in the Audit Plan, and being dynamic to be able to adapt to industry changes. While preparing the Audit Plan, the Audit Manager surveys the Chief Financial Officer and Chief Information Officer from each UGI Corp. subsidiary to identify potential areas to audit. The Audit Plan is presented to the UGI Corp. CFO and the Audit Committee for review and approval. Every quarter the IA Department evaluates where audits are in comparison to the Audit Plan; deviations from the Audit Plan must be approved.

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 the UGI Utility

Group each year. However, the last three years reviewed during the Management Audit did have IAs performed solely on UGI Utility Group activities. Some examples of the UGI Utility Group's audits completed are:

- UGI Utilities, Inc. Inter-Company Accounts – September 2010
- UGI Utilities, Inc. Fleet Process Review – April 2010
- UGI Utilities, Inc. Payroll Process – February 2010
- UGI Utilities, Inc. Safety and Compliance Department – September 2009
- UGI Utilities, Inc. Capital Expenditures Process Review – July 2008

Audit reports are distributed to and discussed with the management of the area audited. Management is given 10 business days to formally respond with a plan to implement the recommendations. The IA Department monitors the responses and formally follows-up after a few months to ensure the recommendations were implemented. If the IA Department finds unsatisfactory progress, the UGI Corp. CFO and the CFO of the audited company will be notified for further action.

Findings and Conclusions

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

1. PNG and CPG do not have formal dividend policies.

Despite the fact that PNG and CPG are separate legal entities and separately regulated public utilities; as discussed in the Background section of this chapter, PNG and CPG's current dividend payout policies are simply to pay UGI dividends based on their amount of excess cash on hand. According to management, PNG and CPG's dividend payments are used to support UGI's interest expenses and quarterly dividend payments to UGI Corp. On the other hand, UGI's dividend policy is to make dividend payments of 75% to 85% of net income such that it maintains a 50/50 debt to equity capital structure.

As described in the Background section of this chapter, in order to leverage and economize its debt costs the UGI Utility Group's collective financing needs are met by debt issues and revolving credit agreements made solely by UGI. UGI in turn provides unsecured loans to CPG and PNG, to finance their working capital, capital expenditures

and general corporate expenses. However, unlike many other regulated utilities' corporate families, the UGI Utility Group does not pass through and record in the accounting records the various layers of debt and corresponding interest payments from the parent (i.e., UGI) to the subsidiaries (i.e., PNG and CPG). As a result, the actual amount of debt and interest expenses are not recorded on the accounting records of UGI, PNG and CPG. Consequently for rate making purposes UGI would submit a rate case based on a representative pro-forma capital structure rather than actual accounting records.

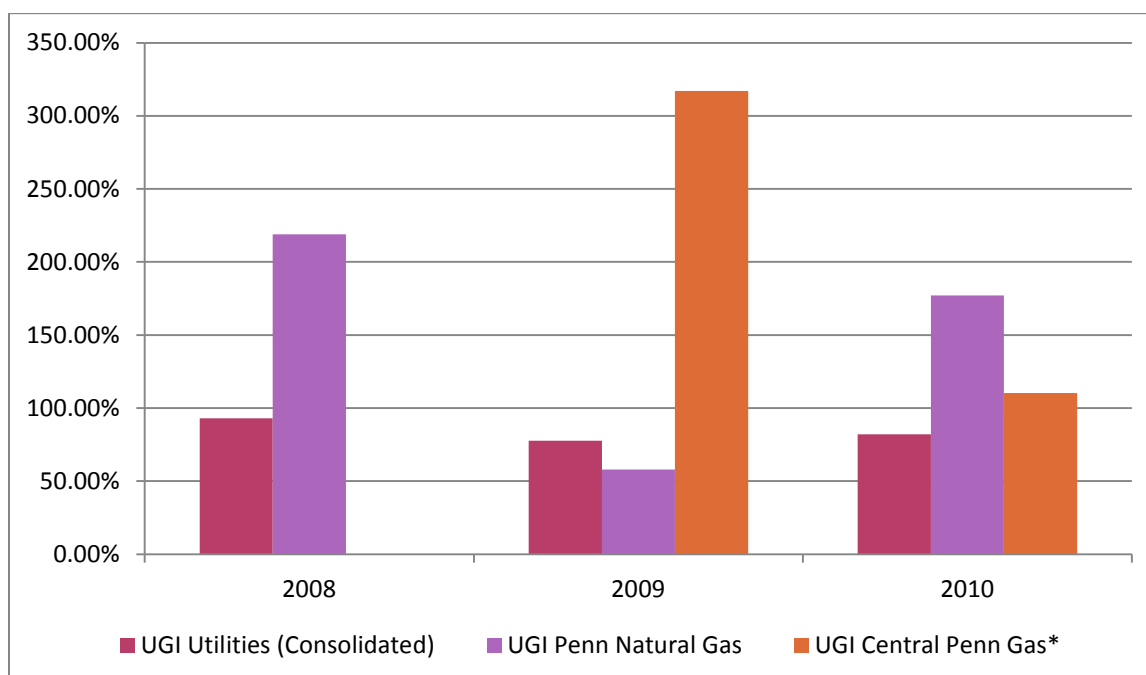
In order to meet its long-term debt financing requirements UGI issues Senior and Medium-Term Notes. As of May 2011, UGI held \$640 million of long-term debt comprised of \$383 million in Senior Notes and \$257 million in Medium-Term Notes. For short-term borrowing needs, UGI had a revolving credit agreement with a group of banks for borrowings of up to \$350 million which was in place from 2006 to May 2011. In May 2011 a new Revolving Credit Agreement was signed with an initial borrowing capacity of \$300 million and the 2006 agreement was terminated. However, UGI may request increases to the \$300 million loan commitment in \$10 million increments up to a maximum of \$400 million. In August 2011, UGI filed a new securities certificate with the Public Utility Commission (PUC or Commission) requesting approval for the ability to borrow under the new agreement but an extension was given to allow the Commission more time to review the filing through October 28, 2011.

As previously stated, CPG and PNG do not issue long term debt. As of May 2011, UGI, as the parent company of CPG and PNG, provided unsecured borrowing to CPG and PNG of up to \$125 million and \$200 million, respectively, to finance each company's respective working capital, capital expenditures and general corporate expenses. During July and August of 2011, CPG and PNG filed new affiliated interest agreements and securities certificates requesting Commission approval for the ability to borrow from UGI amounts up to \$50 million and \$125 million, respectively, under new revolving credit agreements. As of mid-October the affiliated interest agreements were still pending and the revolving credit agreements were given an extension for Commission review through October 28, 2011.

The Director of FP&A oversees the calculation of UGI's quarterly dividend payments to UGI Corp. as part of the annual budgeting process. UGI strives to adhere to a dividend policy whereby it makes dividend payments of 75% to 85% of net income such that it maintains an approximate 50/50 debt to equity capital structure. PNG and CPG have greatly fluctuating dividend ratios because their dividend payments serve multiple purposes. PNG's and CPG's dividend payments to UGI are based upon forecasted cash flows. PNG and CPG are 100% equity financed and therefore do not have long term debt or an associated interest expense. Therefore, CPG and PNG pay excess cash as a dividend to UGI in order to support UGI's interest charges and quarterly dividends to UGI Corp. An illustration of the dividend to net income payout ratios for UGI (including its subsidiaries), PNG and CPG for 2008 through 2010 is shown in Exhibit VI-3. Consequently, as shown in Exhibit VI-3, it appears that PNG and CPG may have paid excessive dividends to UGI over the past several years, as they have paid dividends at rates well above 100% of the respective companies' net income from 2008 through 2010. However, since PNG and CPG do not have debt, the dividend

payout ratio should not be the sole indicator about the effect of the dividend on their financial situation as wholly-owned operating subsidiaries of UGI.

Exhibit VI-3
UGI Utility Group
Dividends to Net Income Payout Ratios
Fiscal Years 2008-2010



* - UGI Central Penn Gas was acquired on October 1, 2008, which was the beginning of Fiscal Year 2009.
Source: Data Requests GD-4 and FM-20

Therefore, UGI should develop a formal dividend policy that incorporates the sources and uses of cash resulting from operations at PNG and CPG. Among the considerations in formulating a dividend policy would be, but not be limited to, a formal calculation based upon cash flows which would provide PNG and CPG the ability to fund their operations, and provide dividends to UGI Utilities that includes sufficient funds to cover their share of interest expenses.

Recommendation

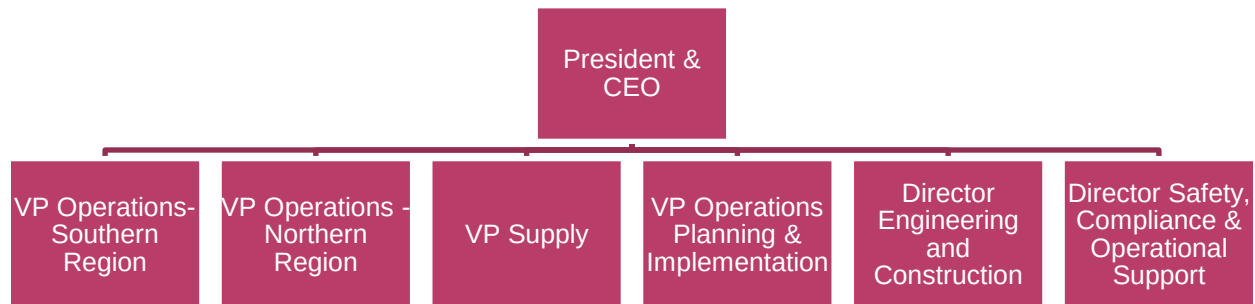
- 1. Develop a formal dividend policy for PNG and CPG that incorporates their sources and uses of cash.**

VII. GAS OPERATIONS

Background

UGI Utilities, Inc. (UGI), UGI Central Penn Gas, Inc. (CPG) and UGI Penn Natural Gas, Inc. (PNG) (collectively referred to as the “UGI Utility Group”) are public utilities subject to regulation by the Pennsylvania Public Utility Commission (PUC or Commission). UGI is comprised of two regulated divisions encompassing a natural gas distribution operation (Gas Service Division) and an electric distribution operation referred to as Electric Service Division (See Chapter VIII – Electric Operations for more information). Although UGI’s Gas Service Division, CPG and PNG (collectively referred to as “UGI’s NGDCs”) are separate legal entities, UGI’s NGDCs operate as a single business entity led by a centralized executive management team reportedly resulting in improved operating effectiveness and efficiency. Exhibit VII-1 depicts the various departments responsible for the UGI Utility Group’s transmission and distribution operations.

**Exhibit VII-1
UGI Utility Group
Organizational Chart
As of September 30, 2011**



Source: Data Request GD-1

For management control and operational purposes, the UGI Utility Group has established two operating regions, a Northern and Southern Region. The Southern Region encompasses most of UGI including the Reading, Lancaster, Middletown, and Lehigh service territories and portions of CPG including Stroudsburg, Frackville, Lehigh, Shippensburg, and Waynesboro service areas. The Southern Region also includes CPG’s small Maryland operation. The Northern Region includes all of PNG, the Hazelton operation of UGI, and the northern service territories of CPG including Wellsboro, Port Allegheny, Lock Haven, Pittston, etc. The Northern Region’s management also directs the Electric Service Division.

Despite the geographical differences, both Vice Presidents (VP) of Operations perform similar duties with similar staffing structures. However, there are dedicated employees at each of UGI's NGDCs that, in general, are not shared across the UGI Utility Group. Primarily all maintenance, operation, and construction of the distribution systems fall under the two VP of Operations. First response duties in a gas emergency, Pennsylvania One Call (PA One Call) locates, leak repair, main replacement, meter reading, etc. are all performed in-house by the Northern and Southern Operations Departments.

The VP of Supply is responsible for the procurement and supply of natural gas for UGI's NGDCs. The Supply Department analyzes and forecasts historical and future demand/usage patterns as well as weather patterns in order to procure natural gas for customer use. In addition, the Supply Department is tasked with developing and optimizing its natural gas portfolio including long and short term gas supply contracts while maximizing storage and peaking assets. UGI's NGDCs' Gas Control Center (GCC), which is in the Supply Department, is staffed 24 hours a day, seven days a week. The GCC utilizes Supervisory Control and Data Acquisition (SCADA) system to monitor most city gates⁶ and to actively examine deliveries by interstate pipelines. CPG's city gates (which were acquired in 2008) do not have the same capabilities as the PNG and UGI Gas Service Division's city gates. Consequently, CPG's city gates are being upgraded with the same SCADA features but these upgrades are not anticipated to be completed until 2016.

UGI's NGDCs are required to maintain operational manuals (O&M) pursuant to 49 CFR §192.605. However, due to ongoing assimilation of both PNG and CPG into UGI practices and procedures, operating procedure differences still exist between UGI's NGDCs as of October 2011. Although, UGI's Gas Service Division, CPG and PNG were individually compliant with regulations at §192.605, UGI's NGDCs decided for purposes of continuity and operational effectiveness to standardize procedures and operation manuals. As a result, the VP of Operations Planning and Implementation is tasked with integrating these procedures into a single manual as well as facilitating a material standards group. Furthermore, the Operations Planning and Implementation Department is responsible for the Operator Qualification and training program for field employees (i.e., those employees under the direction of the VPs of Operations) and provides an interface to drive other system standardization efforts such as databases, mapping, etc. As of October 2011, UGI's NGDCs had combined approximately 50-75% of the operation manual and anticipated that the standardization of the O&M manuals would be completed by 2013.

The Director of Engineering and Construction (E&C) manages the corrosion control program, the transmission integrity management program, distribution integrity management program, main replacement program, mapping, leak survey analysis, design of facilities, etc. In order to accomplish all the above duties, the E&C Department has embedded its engineers across its service territory with specific engineers responsible for UGI's Gas Service Division, PNG and CPG. This enables engineering to provide direct support to the Operation Departments. Reporting to the

⁶ A city gate is the point the local utility takes possession of natural gas deliveries from interstate pipelines.

Director of E&C, the Manager of Utility Facilities' Data and Systems Operations is responsible for maintaining and utilizing the hydraulic model, geographical information system (GIS), outage management system, damage prevention models which have been integrated with PA One Call, mobile data units deployed in the field, etc. As a result of the merger, UGI's NGDCs all have different levels of automation/integration with the various programs used by E&C and the Operation Departments. A summary of some of the differences can be found in Exhibit VII-2.

Exhibit VII-2
UGI's NGDCs
Summary of Operation Support System Differences
As of August 2011

System	UGI's Gas Service Division	CPG	PNG
GIS	Yes ^a	Yes ^a	Yes ^a
Mobile Units for Operations Department	Yes	No - expected completion by end of 2011 with 2 way communication by 2012	No - expected completion by end of 2011 with 2 way communication by 2012
Computerized Outage Management System	Yes - 60% integrated with GIS	No - expected completion by end of 2011	No - expected completion in 2012+
Damage Prevention System	Flame ^b	PA One Call System - will integrate into Flame once mapping is completed	Digtracks ^b - will integrate into Flame once mapping is completed
Computer Aided Dispatch	Yes	No	Partial

Note: A "Yes" indicates that the company has a computerized system, "Partial" means that some capabilities of a computerized system exist, whereas a "No" indicates that the company does not have a computerized system.

a: The Gas Utilities are still working through configuration issues with its maps in which old geographical positioning systems could be off by 5-10 feet that must now be corrected in the GIS.

b: Flame and Digtracks are computer programs similar to the PA One Call System that provide support for the damage prevention program (i.e., automatically identifying if dig tickets are in proximity to company facilities, track tickets, etc.).

Source: Interview Requests GO-1, 4 and 10.

The Director of Safety, Compliance and Operational Support is responsible for the safety programs, damage prevention, and UGI's NGDCs compliance activities with state and federal regulations. Furthermore, dispatch responsibilities are handled by the Superintendent of Central Customer Accounting and Dispatch Services found within the Central Services Department under the Senior VP of Customer and Government Relations. Emergency dispatch and response times should be accomplished as soon as possible. Consequently the PUC's Gas Safety Division defines unacceptable dispatch and response times as greater than 15 and 60 minutes, respectively. However, UGI's NGDCs have established a more stringent 45 minute response goal. UGI's NGDCs dispatch and response rates for 2010 are summarized in Exhibit VII-3.

Exhibit VII-3
UGI NGDCs
Dispatch and Response Time
2010

	UGI's Gas Service Division	CPG	PNG
Dispatch <= 15 minutes	99.5%	99.4%	99.6%
Response time <= 45 minutes	96.9%	98.4%	98.3%
Response time <= 60 minutes	99.1%	99.8%	99.6%

Source: Data Requests GO-12, 28 and 35

Findings and Conclusions

Our examination of the Gas Transmission and Distribution function included a review of the operation and maintenance policies and procedures, main replacement program, leak surveys, leak repair backlogs, damage prevention program, levels of unaccounted-for-gas, capital expenditure trends, staffing levels, contractor utilization, etc. It should be noted that Audit Staff did not review UGI's Gas Beyond the Mains Program⁷ since this matter was concurrently being reviewed by the Commission at Docket Number M-2008-2072850. Based on our review, UGI's NGDCs should devote additional efforts to improving the effectiveness of its gas transmission and distribution operations by addressing the following:

1. UGI's NGDCs' main replacement program is not well documented.

As of August 2011 during our field work stage of the audit, the main replacement programs at each of UGI's NGDCs was similar but not identical. UGI's NGDCs required either the Operations Department or E&C to identify potential main replacement projects. Moreover, UGI's Gas Service Division and PNG use a computerized risk model to help prioritize cast iron or steel main replacement projects taking into consideration two primary factors - probability of main failure and the consequence of the failure; whereas, CPG lacked this capability (due mainly to mapping differences)⁸ and hence relied on a manual process to prioritize its potential projects. As projects are identified at UGI's Gas Service Division and PNG, both in the field or by engineering analysis, they are quantitatively compared with other projects within the respective system. Starting with the 2011-2012 fiscal year (i.e., September 2011 through August 2012), CPG will be adopting and utilizing the same computerized risk model used by UGI's Gas Service Division and PNG to aid in identifying and prioritizing main replacement projects.

⁷ For more information on the Gas Beyond the Mains Program, see Focused Management and Operations Audit of UGI Utilities, Inc. and the Management Efficiency Investigation Evaluating the Implementation of Selected Management Audit Recommendations from the 2005 Focused Management and Operations Audit of UGI Utilities at Docket Nos: D-04MGT014 and D-07MEI005, respectively.

⁸ Prior to September 2011, the risk model was only used for cast iron and steel material types at UGI's Gas Service Division and PNG. Reportedly all material types will be included in the 2011-2012 budget years.

The Audit Staff reviewed the documentation for the computerized risk model in order to understand how UGI's NGDCs identified and prioritized main replacement projects. As a result, two configuration manuals were provided that detailed the computerized risk model. These configuration manuals were dated 2008 and 2011 and provided the details of the risk model. However, there were various instances in which the 2008 and 2011 manuals were different or incomplete. For instance, the factors determining the consequence score for risk have weighting criteria used in scoring projects that were only explained in the 2008 manual but not provided in the 2011 manual. To compound matters, the 2008 manual included additional factors for the failure weightings that were not identified within the 2011 manual. Furthermore, neither manual fully explained and documented how the probability of failure curves are created, applied, modified and updated. As a result of these differences and other factors, the Audit Staff developed a total risk score based on the configuration manuals that was substantially lower than risk scores actually assigned by UGI's Gas Service Division/PNG projects. Upon inquiry, the Audit Staff determined that the UGI Utility Group was not even using the limited information on probability of failure found within their configuration manuals.

Pursuant to 74 FR §63906, the Pipeline Inspection, Protection, Enforcement, and Safety Act of 2006, the U.S. Department of Transportation's (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) required NGDCs to develop and implement a distribution integrity management program (DIMP) by August 2, 2011. More specifically, at 49 CFR §192.1007, NGDCs are required to maintain a written integrity management plan containing seven key themes:

- Knowledge of the program,
- Identification of threats,
- Evaluation and rank of risks,
- Identification and implementation of measures to reduce risk,
- Measure performance,
- Periodic evaluation and improvements, and
- Report results.

UGI's NGDCs appear to be relying upon the previously discussed configuration manuals to satisfy their DIMP documentation requirements in conjunction with materials stored within the computerized risk model. In addition, with employee attrition, the potential loss of valuable undocumented institutional knowledge could leave UGI's NGDCs with outdated, inconsistent or problematic replacement methodologies.

It should be noted that the Audit Staff did not perform a detailed DIMP audit of UGI's NGDCs. Therefore, this report should not be construed to indicate that the qualitative aspects of UGI's NGDCs' DIMPs are satisfactory or unsatisfactory. With this in mind, it would be prudent for UGI's NGDCs to routinely update its documentation to comprehensively state the qualitative and quantitative risk parameters used in determining the priority of mains for replacement. Nevertheless, all aspects of UGI's NGDCs' DIMPs will be evaluated independently by the PUC's Gas Safety Division and a determination of compliance with 49 CFR §192.1007 will be made at that time.

2. UGI's NGDCs do not have main replacement program goals, specifically for removal of their cast iron and unprotected bare steel mains.

The main focus of the DOT's DIMP regulation is to promote a systematic and logical approach to main replacement. Therefore, two key aspects of an effective DIMP program are to be able to measure performance and conduct periodic evaluations of progress. Although there are many different ways for a utility to measure and evaluate its performance; goals can provide a reasonable mechanism to monitor, evaluate, and quantify main replacement performance. Goals can also serve as driving factors for continuous improvement, which ties directly into reducing risk.

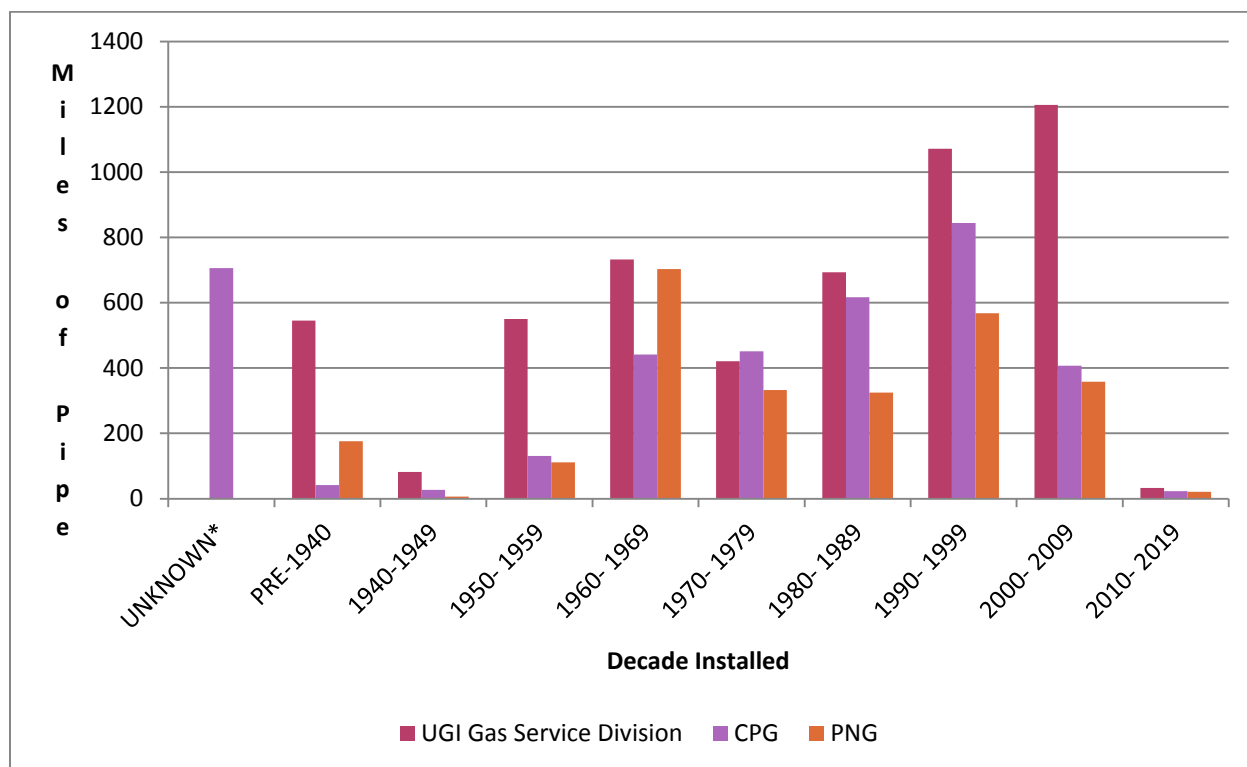
In general, UGI's NGDCs each fund main replacement projects based upon the "riskiest" segment or in coordination with other projects for economic reasons (i.e., municipality paving activities, etc.) up to the amount included in the proposed budget for each company. Budgets and main replacement projects are developed/identified by company (i.e., UGI's Gas Service Division, PNG, and CPG,) independently. As new projects are identified, they may be funded for the current fiscal year if the risk is higher than projects originally identified; otherwise they are added into the rolling three year capital budget. As a result, any project not funded in the current year is reevaluated each subsequent year based on its relative risk. However, UGI's NGDCs have not established short or long term goals for its replacement program. UGI's NGDCs rely on a budget and general main replacement approach to address their infrastructure needs. While risk based replacement provides a utility with qualitative data to prioritize its projects, it does not address the economical and long term needs of UGI's NGDCs.

The risk model does have the capability to quantify and/or analyze repair versus replace decisions; however, it does not identify the optimized level of main replacement for a given year nor do UGI's NGDCs fund projects to a particular risk level. Therefore, funded projects from year to year could have differing risk levels. If the minimum risk level continues to increase yearly, it could indicate a progressive worsening of the risk profile and the infrastructure at UGI's NGDCs. The converse holds true, only if, enough pipe/capital is replaced/invested to ensure a consistent or falling risk level which is the goal of DIMP. However, there will be natural fluctuations from year to year in main replacement requirements due to installation age, piping materials, soil conditions, external factors, etc.

If age is considered as the primary factor for replacement, an analysis of installation dates can be used to determine long range capital requirements or goals. Each of UGI's NGDCs has an age profile for distribution mains. Since piping material deteriorates, it will likely need to be replaced at an average rate of 80 years⁹. This expected replacement period yields a distribution of long term replacement requirements. Exhibit VII-4 depicts the age distribution of main at UGI's NGDCs.

⁹ Statistical averages are utilized to determine useful lives of certain material. Each material has a different useful life with newer plastics projected to last over 100 years.

**Exhibit VII-4
UGI NGDCs
Age Profile of Mains
As of December 31, 2010**



* Unknown miles for CPG are a result of inaccurate data from the acquisition from PPL.
Source: Data Request GO-8 and DOT Annual Reports

Assuming an 80 year pipe segment service life, UGI's Gas Service Division, CPG and PNG will need to replace approximately 54.7, 18.3¹⁰ and 17.6 miles, respectively, of "antiquated" pipe per year from 2010 to 2019. This rate would drop dramatically to 8.2, 16.8⁵ and 0.6 miles per year for UGI's Gas Service Division, CPG and PNG, respectively, for the 2020 to 2029 period. However, age alone should not be used as the sole factor in determining main replacement needs, rather factors such as corrosion, pipe material, actual performance (i.e., leaks, service quality, etc.), etc. typically play a more pivotal role than age. More specifically, cast iron and unprotected bare steel piping materials are considered to be some of the most problematic and riskiest piping materials employed within UGI's NGDCs' distribution system. Both cast iron and bare steel pipe were considered to be the best available piping material at one time. However, after decades of service these piping materials have an increased probability or likelihood of corrosion, leaking, breaking, and/or failure.

¹⁰ CPG miles over 80 years old was calculated by equally distributing the unknown pipe into five decades starting with pre-1940s.

Given the problems with cast iron and bare steel pipe many NGDCs within Pennsylvania have already developed specific goals for removal of cast iron and bare steel pipes. Furthermore, at its Public Meeting of November 10, 2011 at Docket No: M-2011-2271982, the PUC directed gas utilities within Pennsylvania to establish main replacement programs that specifically target cast iron and bare steel pipe that must meet or exceed a metric¹¹ established for each gas utility. However, UGI's NGDCs have not established cast iron and bare steel goals for its main replacement program. In September 2011, the E&C Department indicated that goals for cast iron and bare steel removal would likely reflect 20 and 30 year replacement schedules, respectively. However, these goals had not yet been formally established. It should be noted that the Audit Staff had concluded its field work before the Commission's November 2011 Order, at Docket No. M-2011-2271982, had been adopted; therefore, UGI's NGDCs had not yet had an opportunity to incorporate the Commission targets into its proposed cast iron and bare steel replacement goals. UGI's NGDCs main replacement activity from 2005-2010 is summarized in Exhibit VII-5.

Exhibit VII-5
UGI's NGDCs
Cast Iron, Bare Steel, and Overall Company Main Replacement Activity
2005- 2010

	Gas Service Division	CPG	PNG
Average Replacement Miles per Year (2008-2010)	25	16	13
System Miles (As of Dec. 31, 2010)	5,336	3,691	2,601
Replacement Percentage	0.47%	0.43%	0.50%
Replacement Schedule (years)	213	238	195
Average Replacement Rate for cast iron miles (2005-2010)	9.4	2.8	7.6
Miles of cast iron (As of Dec. 31 2010)	387	18	122
Replacement Percentage for cast iron	2.4%	15.6%	6.2%
Replacement Schedule for cast iron (years)	41	6.4	16
Average Replacement Rate for bare steel miles (2005-2010)	10	11	7.4
Miles of bare steel (As of Dec. 31 2010)	259	610	275
Replacement Percentage for bare steel	3.9%	1.8%	2.7%
Replacement Schedule for bare steel (years)	26	54	37

Source: Data Requests GO-5, 8, and 47 and DOT Annual Reports

¹¹ According to the Commission's November 10, 2011 Order, each utility's metric must be set such that cast iron and bare steel replacement must meet or exceed the average ten year historical replacement activity of the utility or established to remove all cast iron and bare steel within 20 years.

The replacement schedules presented in Exhibit VII-5 indicate the number of years it would take UGI's NGDCs to replace their entire mains in each category, provided that their historical average replacement rates are maintained. Generally, replacement rates should match the depreciation rate of the asset or expected service life. As presented in Exhibit VII-5, UGI's NGDCs' replacement rates for 2005-2010 were approximately 2.5 to 3 times the expected service lives of 80 years. However, large portions of UGI's NGDCs' mains are relatively new¹² (see Exhibit VII-4). This large portion of newer main can skew yearly replacement rates but indicates that replacement needs will become substantially higher in the future. More specifically the Audit Staff estimates within 20 years (i.e., 2030), that UGI's Gas Service Division, CPG and PNG will need to replace approximately 55, 27 and 11 miles per year, respectively, with replacement rates increasing further in subsequent decades.

The cast iron and bare steel replacement rates presented in Exhibit VII-5 indicates that UGI's NGDCs replacement progress was not conforming to its proposed goals with respect to bare steel pipe. In addition, UGI's Gas Service Division cast iron replacement rate of 41 years was more than double the UGI Utility Group's proposed 20 year replacement schedule. Moreover, given the Commission November 10, 2011 Order, UGI's NGDCs have been directed to establish replacement schedules for cast iron and bare steel at rates that meet or exceed each Company's metric.

UGI's NGDCs are in a unique position to eliminate cast iron and bare steel before replacement requirements double or triple in the next 15 to 20 years. This projected increase in main replacement activity will require additional capital, a skilled workforce, and a commitment to the viability of the company. A way to ensure UGI's NGDCs accomplish timely cast iron and bare steel replacement and are ready for future requirements is to establish both short and long term goals. These goals should reflect long term replacement needs that strive to reduce overall risk while establishing short term goals to eliminate problematic portions, like cast iron and bare steel segments, with specific target lengths and replacement schedules. More specifically in the short term, UGI's NGDCs need to focus on removing their cast iron and bare steel pipe so that these liabilities do not complicate and/or hinder its long term viability. Therefore, the UGI NGDC's short term goals could include certain items such as specific length targets of cast iron or bare steel removal per year, goals to reduce short term risk by setting reduction percentage targets for overall risk of the system, etc. In addition, UGI's NGDCs long term focus must be able to address a dramatic increase in capital for main replacement (i.e., doubling for UGI's Gas Service Division and CPG in 20 years and six times current levels for PNG in 30 years¹³) and the training or acquiring the skilled labor force needed to make the replacements. Some examples of possible long term goals include setting a specific maximum risk level for individual projects and the overall system, creating main replacement targets for the complete lifecycle of all mains (i.e., effectively planning to replace main 80 years from now), etc.

¹² Approximately 64% of UGI's Gas Service Division, 63% of CPG and 61% of PNG's mains were installed between 1970-2010

¹³ Projects are based upon UGI's NGDCs historical replacement rates presented in Exhibit VII-5 and an age based replacement for pipe over 80 years old.

Without short term goals, UGI's NGDCs may experience increasing risk, liability, unaccounted-for-gas (UFG), leaks, etc. Short term problems that are deferred until a future date, like replacement of cast iron and bare steel pipe, only exacerbate later problems or needs. Therefore, without addressing these short term problems and establishing long term goals and initiatives, UGI's NGDCs and their customers will face substantial rate shock, reduced reliability, increasing safety concerns, cascading failures and liabilities. UGI's NGDCs' passive approach to main replacement is ill suited to handle projected future problems and requirements. Instead, a proactive, systematic and qualitative approach to main replacement through risk based analysis incorporating both short and long term goals, would help enable UGI's NGDCs to plan and mitigate problems in their future.

3. UGI's Gas Service Division and PNG have an excessive amount of Class A backlogged¹⁴ leaks.

During our field work, as of September 2011, the leak investigation and classification standard in UGI's NGDC's O&M manuals were not standardized across the three NGDCs. Reportedly, this procedure was to be standardized by the end of 2011. However, despite their procedural differences, UGI's NGDCs are using similar definitions for leak classification. Exhibit VII-6 provides UGI's NGDCs' leak classification definitions.

Exhibit VII-6 UGI's NGDCs Leak Classification Definitions As of August 2011

Class	Definition
Class A	Leaks that do not represent an immediate hazard and can be reasonably expected to remain non-hazardous.
Class B	Leaks that are recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard.
Class C	Leaks representing an existing or possible hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.

Source: Data Request GO-11

¹⁴ UGI NGDC's characterizes these Class A leaks as 'identified' and not backlogged since the companies have no plans besides main replacement to fix these leaks.

In addition to the definitions presented in Exhibit VII-6, UGI's NGDCs have developed classification and action criteria to aid employees with identifying and repairing leaks in a timely manner. More specifically, Class A leaks are generally monitored until they no longer register as a leak, are remediated through main replacement, or when they are reclassified as a Class B or C leak. UGI's NGDCs will repair Class A leaks if there is an advantage to do so at the time of discovery (i.e., in areas that some excavation or work has already been done to locate the leak, if the leak looks like it will "grow" into a Class B shortly, etc.). UGI's NGDCs' repair rates for 2007 to 2011 by classification are presented in Exhibit VII-7.

UGI's Gas Service Division, PNG and CPG reported 4,566, 2,208, and 358 backlogged Class A leaks, respectively in 2010. In fact, only 4%, 13%, and 31% of Class A leaks were repaired by UGI's Gas Service Division, PNG, and CPG, respectively in 2010. Given this repair rate, it would take UGI's NGDCs approximately 21, 7, and 2 years respectively to repair backlogged Class A leaks, if and only if, no more Class A leaks were to occur during that time period.

Exhibit VII-7
UGI NGDCs
Leak Repair Rates by Classification
2007-2010 and Partial Year 2011 Data^a

Repair Classification	2007	2008	2009	2010	2011 YTD ^a	Average (2007-2010)
UGI's Gas Service Division						
Class A Repaired	212	153	239	250	96	214
Class B Repaired	1,431	1,418	1,489	1,305	381	1,411
Class C Repaired	825	608	848	752	419	758
PNG						
Class A Repaired	321	243	361	353	147	320
Class B Repaired	524	487	540	574	362	531
Class C Repaired	611	535	617	676	411	610
CPG						
Class A Repaired	113	139	228	150	56	158
Class B Repaired	190	233	346	261	177	258
Class C Repaired	161	151	194	221	123	182

a: As of June 13, 2011 for UGI, July 31, 2011 for PNG, and August 17, 2011 for CPG.

Source: Data Request GO-27

UGI's NGDCs' leak repair practices are based on those published by the American Gas Association's Gas Piping and Technology Committee and adopted by PHMSA¹⁵. The Audit Staff agrees that monitoring a non-hazardous leak, like a Class A leak, can be a fiscally and technically sound business practice; however, there becomes a point when continuously monitoring non-hazardous leaks is not optimal or prudent. A

¹⁵ United States. Department of Transportation. Research and Special Programs Administration. Office of Pipeline Safety. Guidance Manual for Operators of Small Natural Gas Systems. Washington: GPO. June 2002

review of other gas utilities in Pennsylvania indicates that some companies repair their respective Class A's on a much shorter timeframe. For instance, National Fuel Gas repairs approximately 43% of its Class A leaks while PECO repairs approximately 46% of its Class III (80% repaired per year) and Class IV (8% repaired per year)¹⁶. PECO splits its Class A leaks into Class III and IV. Class III leaks are non-hazardous leaks that have the potential to worsen over time while Class IV leaks are projected to remain non-hazardous. Due to their large backlogs in Class A leaks, UGI's Gas Service Division and PNG could benefit from splitting its Class A leaks into those needing to be repaired within two years and those that could be repaired in five to ten years. This approach would allow UGI's Gas Service Division and PNG to systematically repair the more critical Class A leaks until backlog levels are reduced to manageable levels. A comparative analysis for main leaks repaired per 100 main miles is presented in Exhibit VII-8.

Exhibit VII-8
UGI Utilities, Inc. – Gas Service Division
UGI Central Penn Gas, Inc.
UGI Penn Natural Gas, Inc.
Comparative Analysis for Main Leaks Repaired per 100 Miles of Main
2006-2010

Company	2006	2007	2008	2009	2010	Average
Columbia	50.6	56.8	67.2	53.2	50.4	55.6
Equitable	29.8	34.3	29.0	28.4	32.8	30.9
National Fuel	35.0	31.0	29.3	30.4	31.1	31.4
Peoples	32.3	37.2	34.5	41.8	36.1	36.4
T.W. Phillips	46.9	53.1	48.8	52.6	46.9	49.7
PECO	46.7	45.6	43.3	46.0	56.7	47.7
Panel Average	40.2	43.0	42.0	42.1	42.3	41.9
CPG	16.9	12.9	14.2	16.3	11.2	14.3
PNG	34.8	34.5	31.8	30.1	35.9	33.4
UGI's Gas Service Division	26.1	25.2	22.6	27.9	22.5	24.9

Note: Exhibit VII-8 includes leaks on mains only while Exhibit VII-7 presents leaks on mains and services. There is also timing differences between the two charts.

Source: DOT Annual Reports

UGI's NGDCs leak repair rates per miles of main do not compare favorably with the panel of other major Pennsylvanian NGDCs presented within Exhibit VII-8. The number of leaks repaired from 2006 through 2010 is substantially lower for UGI's Gas Service Division and CPG and marginally lower for PNG in the panel. It is recognized however, that low repair rates could reflect low leakage incidence or identification when

¹⁶ See Schumaker & Company Stratified Management and Operations Audit of PECO Energy. Pennsylvania Public Utility Commission, Bureau of Audits. August 2007.

compared with other distribution systems. However, it should be noted that system characteristics can often drive potential leak rates and therefore leak repair rates¹⁷.

Class A leaks can be prudently monitored; however, any leak is a potential liability, contributes to lost revenue, and is an indication for or causes stress within the system. In general, once a leak occurs it will not correct itself and may increase in severity until it is elevated to the next classification. In fact, based on its monitoring, UGI Gas Service Division reclassifies approximately 600 Class A leaks to Class B or Class C leaks each year at which time they are scheduled for repair. Naturally not every Class A leak is a cause for concern; however, a balanced approach to economically monitoring Class A leaks and systematically and proactively repairing these leaks to ensure the viability of the distribution system should be reexamined. CPG doesn't appear to have this problem due to its limited number of reported leaks. In addition, UGI Gas Service Division and PNG should strive to significantly reduce Class A backlogged¹⁸ leaks.

4. The reported unaccounted-for-gas (UFG) levels at UGI's NGDCs appear to be erroneously low.

UGI's Gas Service Division and PNG bill and calculate UFG using volumetric measurements of a thousand cubic feet (MCF) while CPG bills on energy use or dekatherms (DTH)¹⁹. Regardless of the unit of measure, UGI's NGDCs all employ the same methods for determining unaccounted-for-gas (UFG). The equation UGI's NGDCs utilize to determine UFG is illustrated within Exhibit VII-9.

Exhibit VII-9 UGI's NGDCs Unaccounted-for-gas Calculation

$$UFG = (Sendout) - (Sales) - (Net Unbilled Sales) - (Company Use)$$

Source: Data Request GO-19

UGI's NGDCs define sendout as the accumulation of gas delivered to city gates and gas produced. Sendout primarily represents the gas purchased from interstate pipeline companies, storage, and/or peaking units at UGI's NGDCs. Additionally, for systems like CPG, there are a few local producers tied directly into the distribution system that inject their production directly into the distribution system. As a result of the

¹⁷ It should be noted that the UGI NGDCs are comprised of more contemporaneous materials (e.g., plastic and cathodically protected steel) than other utilities within the panel.

¹⁸ Leaks identified for multiple years without being repaired/remediated.

¹⁹ A dekatherm equals approximately 0.97 MCF but this conversion factor can fluctuate based upon actual heating values of natural gas.

merger, CPG has added its own meters to monitor these local producers and also required a gas quality check on local producers. Furthermore, almost all of the city gates²⁰ at UGI's NGDCs continuously monitor gas throughput from the interstate pipelines to ensure gas deliveries are accurately reported.

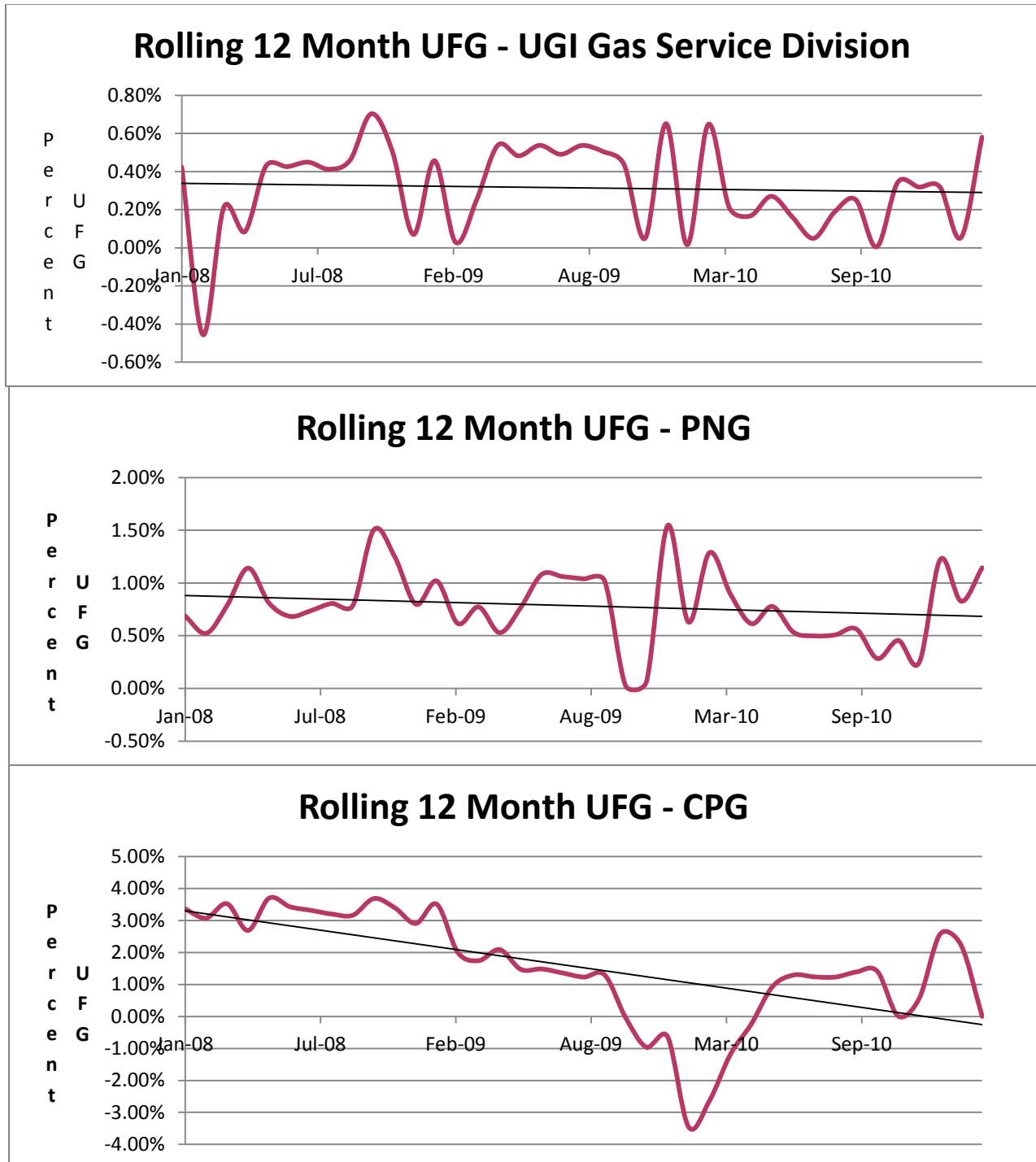
System sales are determined by summing the total of all actual customer usage through meter reads. However, UGI's NGDCs have adopted a policy to adjust for timing differences in meter reads by developing a "net unbilled sales" factor for each month. Since sendout is measured on a monthly basis and system sales can be recorded for varying periods based on various meter read dates (i.e., the 15th to the 15th or the 3rd to the 27th), the Companies use net unbilled sales to correct for the timing differences. In order to perform this correction, UGI's NGDCs employ various equations (i.e., dependant on class and whether the customer is heating or non-heating) and variables (i.e., degree days, historical usage, etc.) to estimate the amount of usage in the current billing cycle that has not been billed. In addition, the estimate from the previous month is subtracted from the current month thereby negating the time billed that is not within the current cycle. Therefore, the accumulation of sales and net unbilled sales for each customer represents calendar monthly usage that can be compared with sendout volumes.

The last component of the UFG calculation is company use. Company use is the gas used by UGI's NGDCs for the operation of the distribution system (e.g., gas used in compressors, buildings, etc.). All gas quantified as company use is either metered or measured in some manner.

The net result of UGI's NGDCs adjusted UFG calculations from 2008 through March 2011 are summarized as rolling 12 month actual in Exhibit VII-10. The graphs within Exhibit VII-10 depict extremely low UFG at UGI's NGDCs. In fact, UGI's Gas Service Division and CPG report at least one rolling 12-month period of negative UFG (i.e., the sale/use of gas was more than what entered the distribution system) with PNG effectively reporting a 12 month period of zero UFG. In a closed system, negative UFG is a physical impossibility and can only result from some sort of error (i.e., timing differences, meter inaccuracy, data mishandling, etc.). However, the Audit Staff agrees that UFG calculation components can introduce errors that allow for a single evaluation period to become negative, although consecutive periods of negative UFG usually indicate a systematic error.

²⁰ As noted in the background there are still some CPG city gates without this capability but an ongoing initiative will allow this capability at all city gates by 2016.

Exhibit VII-10
UGI's NGDCs
Rolling 12 Month Unaccounted-for-Gas
January 2008 - March 2011



Note: The decrease in CPG's UFG was reportedly attributed to the efforts to ensure quality and quantity of gas supply from local producers.

Source: Data Request GO-18

UGI's Gas Service Division reported a total UFG volume of approximately 300,000 MCF for the 2010 calendar year. This amounts to approximately 0.3% of total throughput. In general, low UFG is commendable; however, the Audit Staff questions the feasibility/accuracy of the UFG reported by UGI's NGDCs. As presented in Finding VII-3, UGI's Gas Service Division reported 4,566 backlogged Class A leaks in 2010. Each leak represents a point in which gas is escaping the system. Therefore, using a modified version of Bernoulli's equation corrected for the compressibility of natural gas, it is possible to estimate gas lost for these backlogged leaks. By using a few assumptions²¹, the Audit Staff estimates that the 4,566 backlogged Class A leaks would result in approximately 696,000 MCF²² of UFG gas for UGI's Gas Service Division, which is more than double the amount of UFG reported in its 2010 Annual Report. Moreover, these numbers do not account for the 2,300 leaks repaired by UGI's Gas Service Division during 2010, nor other areas of lost gas (i.e., meter inaccuracy, theft, etc.). A similar analysis performed for PNG for its Class A leaks yielded an estimated 437,000 MCF²³ of gas compared to a reported UFG volume of 291,315 MCF. Conversely, CPG reports substantially fewer backlogged leaks than UGI's Gas Service Division or PNG yet reports a higher percentage of UFG.

The Commission regularly reviews UGI's Gas Service Division, CPG and PNG's UFG separately as it is a litigated component of each annual Purchase Gas Cost rate filing pursuant to 66 Pa.C.S §1307 (f). Despite this scrutiny, the Audit Staff still has questions regarding the accuracy of reported UFG levels at UGI's NGDCs given the level of backlogged leaks and their reported UFG compared to other utilities (See Appendix D, Exhibit page 5). On the other hand, it should be noted that the Audit Staff did not find any problems with the methodology employed by UGI's NGDCs nor the brief analysis employed to check for errors. It is possible that meter inaccuracies, unaccounted for supply or some other error(s) are arbitrarily reducing lost gas below expected leakage rates. Therefore, the Audit Staff asserts that UGI's NGDCs should ensure and/or investigate reported UFG levels to ascertain that all possible errors have been properly adjusted in the UFG computation. Inaccurate UFG can have lasting impacts on purchased gas cost rates, supplier contracting, revenues, an unfair burden on a rate class, operational constraints, etc. Actual UFG levels higher than reported could lead to higher PGC rates for non-shopping customers, undersupply of gas, reduced revenues, system pressure issues, etc. while the converse holds true for UFG levels that are lower than reported.

²¹ Audit Staff assumed round geometry with a hole diameter of 1/64 inch for each leak, pipeline pressure of 0.25 pounds per square inch gauge (PSIG) for cast iron, 0.5 PSIG for low pressure bare steel, 46.5 PSIG for medium pressure bare steel, 222.5 PSIG for high pressure bare steel, breakdown of system leaks comprised of 1300 on cast iron and the rest distributed based upon system percentage of bare steel at 25% low pressure, 73% medium pressure and 2% high pressure no temperature/pressure/density fluctuations, the compressibility of natural gas remains constant at cp/cv of 1.35, and backlog leaks emitted for 365 days.

²² Audit Staff's number is based upon numerous assumptions that could impact the overall value calculated. However, Audit Staff believes that its assumptions are conservative enough to help illustrate that the gas lost through backlogged Class A leaks would be more than reported.

²³ Using similar assumptions above except for system leaks comprised of 600 cast iron leaks, and the rest distributed upon system percentage of bare steel of 20% low pressure, 61% medium pressure and 19% high pressure.

5. UGI's NGDCs' staffing studies, used to determine optimal field staffing levels, are outdated and inconsistent.

Subsequent to the acquisition of CPG, UGI's NGDCs performed a study aimed at determining the optimal structure of the organization, primarily with management and reporting relationships. In addition, a manpower staffing study (Staffing Study) was completed and disseminated to area managers in the spring of 2010 for each company by operating region. The Staffing Study utilized historical data to develop estimated man-hour needs for the 50 most frequent tasks/duties. These 50 tasks reportedly represent the vast majority of workload for UGI's NGDCs on a consistent basis and include main replacement, PA One Call locates, emergency response, leak repair, etc.

The Staffing Study provides a tool for management to determine the optimal level of staffing at each company and division. In addition, the Staffing study considers factors such as vacation/sick time, training, overtime, and contractor utilization. Ultimately, the Staffing Study provides management an average time to complete a task that translates into full time equivalents (FTE) based upon historical activity (i.e., 2009). However, the Staffing Study has not been consistently updated with certain divisions at UGI's Gas Service Division performing piecemeal updates on their own. Comparing the data used to generate the Staffing Study with average contractor utilization for 2008-2010 revealed that contractor utilization for certain categories were much higher than used in the 2009 Staffing Study²⁴. A summary of these differences is presented in Exhibit VII-11.

Exhibit VII-11
UGI's Gas Service Division
Average Contractor Utilization Compared to UGI's NGDCs' Staffing
Study
2008 - 2010

	Percentage Contracted to Third Parties	Staffing Study Contractor Hours	Average Contractor Utilization Hours (2008-2010)	Difference
Contractor Capital Workload				
New Business Mains	70%	12,371	27,504	15,133
New Business Services	50%	12,534	41,639	29,105
Main Replacements	50%	3,538	51,972	48,434
Service Replacements	40%	18,749	15,434	-3,315
Contractor O&M Workload				
Valve Inspection	10%	693	3,855	3,162
Leak Repairs by contractor	10%	4,126	25,625	21,499

Source: Data Requests GO-17 and 40

²⁴ Contractor data for PNG and CPG was not provided in a format that allows for reliable comparison to the Staffing Study.

UGI's NGDCs all perform some of the work highlighted in Exhibit VII-11 in house. However, a certain amount of work is contracted to third parties based upon historical levels. Since contractor utilization is much higher than originally identified within UGI's Gas Service Division Staffing Study, it appears that more work is being done than anticipated; staffing levels are not optimal requiring more third party utilization (i.e., possibility of understaffing exists); and/or UGI's Gas Service Division Staffing Study didn't reflect actual needs for these areas. Contracting work to third parties can provide an economical and logical approach to specialized work and to meet short term higher workloads. However, there is a cost benefit relationship between the costs of third party resources and the internal workforce. For instance, the differences noted in Exhibit VII-11 should be analyzed to see if additional staff should be added or if it is more economical to contract the work to a third party. This type of analysis should be incorporated within the Staffing Study and applied to all contractor work. Reportedly, starting in 2012 UGI's NGDCs will begin using a cost benefit analysis to assess whether or not to perform conversion of services in house or with third parties.

More specific manpower study deficiencies noted by the Audit Staff include how UGI's NGDCs account for the inspection of all third party work before it is placed in service. The 2009 Staffing Study calculated the total inspection needs solely from the amount of contractor work in new business mains, but excluded contractor work related to new business services, main replacement, and service replacement. Upon inquiry, management indicated that these other factors were included as time requirements in other areas (e.g., perhaps even in inspection hours for new business mains). However, given the large difference between UGI's Gas Service Division Staffing Study and average contractor utilization hours presented in Exhibit VII-11, the Audit Staff believes that inspection hours, among other areas could be substantially impacted. For instance, the difference in contractor hours presented in Exhibit VII-11 for UGI's Gas Service Division new business mains would seem to indicate that another 1.8 FTEs²⁵ would be needed for inspection activity across the UGI Gas Service Division. Furthermore, if all contractor activity was considered and the same inspection rate was applied to new services, main replacement, and service replacements, the Audit Staff estimates that UGI's Gas Service Division could need additional inspectors. Moreover, without performing a full analysis of its staffing, UGI's Gas Service Division does not have the ability to ensure its staffing levels are optimal.

Management at UGI's NGDCs has acknowledged that the Staffing Study should be routinely updated and expanded as necessary, but noted that resources were not available for this update/expansion. Management also discussed the possibility of increasing its analysis of overtime within the Staffing Study. Currently, overtime is analyzed between regions in order to identify best practices, areas for improvement, etc. However, there is no analysis for identifying optimal overtime targets, instead this is performed on a case by case basis. UGI's NGDCs are working to collect more comprehensive information on overtime by using more detailed time management coding for overtime. Overtime should be further incorporated into the Staffing Study to

²⁵ Calculated utilizing UGI's Gas Service Division inspection rate presented within Data Request GO-40 and assuming one FTE equals 2,080 hours.

determine if additional staffing is required to meet balanced staffing needs between steady and peak operating conditions.

Optimal staffing levels require a utility to consider both qualitative and quantitative analysis. The Staffing Study is a tool that provides a snap shot in time to help quantify staffing levels, but if not updated or expanded Management is left to rely solely on their qualitative analysis to adjust staffing levels. As a result, staffing level requirements can fluctuate based upon subjective rather than objective data leading to potential understaffing or overstaffing issues. Furthermore, an inability to perform timely cost benefit analysis could lead to paying a premium for services that could be better rendered in house or outsourced. Therefore, UGI's NGDCs should continuously update and explore ways to improve their Staffing Study information.

6. UGI's Gas Service Division has not removed all of its mercury regulators from service.

Prior to the late 1970s, mercury was used in a variety of devices as a measuring liquid (i.e., thermometers, gas regulators, etc.). As a result, certain types of natural gas service regulators used a small amount of mercury. Although mercury could provide superior operational benefits than other alternatives at the time, it is now considered a toxic substance according to the Toxic Substance Control Act of 1976 (15 U.S.C. §2601). As a result, many gas utilities, including CPG and PNG, have reportedly removed all mercury containing regulators from their distribution systems. However, UGI's Gas Service Division has approximately 6,700 (or approximately two percent of services) confirmed mercury regulators within its distribution system and needs to inspect another 4,000 devices for the possibility of mercury.

To compound matters, many of UGI's Gas Service Division service regulators are located inside residential or commercial buildings. Although accidental mercury release requires hazardous material response regardless of location, mercury released in a confined space poses a higher risk as it could cause lingering health concerns if not properly remediated. UGI's Gas Service Division indicated that it removes and replaces mercury regulators infrequently in conjunction with service line replacements or as single targeted replacements through independent work. On average, UGI's Gas Service Division has been replacing approximately 500 mercury regulators a year. Given the current rate of replacement, it would take approximately 13 to 21 years²⁶ to remove all of its mercury regulators from service.

UGI's Gas Service Division has established comprehensive procedures within its operations and maintenance manuals for proper removal of mercury devices. However, the unique nature and specialized procedures employed during removal of mercury regulators, could allow field employees to become complacent, forgetful, or neglectful with UGI's Gas Service Division procedures when handling mercury. Although there are no regulatory requirements to remove these devices, there is a documented case in

²⁶ Numbers are based upon an average replacement rate of 500 per year with a minimum number to be replaced of 6,700 and a maximum of 10,700 (6,700 confirmed + 4,000 to be inspected).

which utilities identified multiple customers who had elevated mercury levels within their residence due to improper handling of mercury from removal of the utilities regulators²⁷. In addition, the Commission has a Proposed Rulemaking, at Docket No. L-2009-2107155 that would require all service regulators be located outside customer buildings. The increased liability from these devices, specialized removal procedures, and potential upcoming rulemaking seem to indicate that an accelerated program to remove and safely dispose of mercury regulators would be beneficial for UGI's Gas Service Division and its customers.

7. The number of third-party line hits is elevated at PNG as compared to UGI's Gas Service Division and CPG.

Damage prevention at UGI's NGDCs is a centralized function within the Safety, Compliance and Operational Support Department. UGI's NGDCs each employ a different damage prevention tracking system as presented in Exhibit VII-2. However, starting in calendar year 2011, UGI's NGDCs have standardized a good portion of their damage prevention program which includes using the same damage report, billing for damages on a consistent basis, and using the same consolidated public awareness manual. UGI's NGDCs continuously look for ways to improve their damage prevention program. In the summer of 2011, UGI's NGDCs instituted a problem contractor program. UGI's NGDCs WMS will identify PA One Call tickets with problem contractors and automatically assign an employee to routinely visit the dig site. In addition, contractors are now required to pay past damages before more work is awarded to the firm. UGI's NGDCs also perform various face to face meeting with contractors, hold multiple regional public awareness meetings every year, and work closely with Pennsylvania One Call, the Department of Labor & Industry and Occupational Safety and Health Administration. UGI's NGDCs' line hit statistics are presented in Exhibit VII-12 for Fiscal Years ending September 2008 through September 2010 and partial fiscal year October 2010 to February 2011.

The number of company at fault line hits has averaged around 27%, 34%, and 44% of hits for UGI's Gas Service Division, PNG and CPG, respectively. Conversely, CPG experienced an increase in company at fault hits during 2010 as the result of approximately 25 more mismarks/no-marks than it historically experiences. Reportedly, the Northern regions of CPG's territory does have increased activity due to Marcellus Shale gas drilling and related activities. However, comparing line hit statistics per 100 miles of main, 1,000 services, and 1,000 line locates indicates that PNG experiences two to three times the number of line hits than UGI's Gas Service Division or CPG per metric. A detailed analysis of PNG line hits reveal that a large majority (65%) of third party damages were the result of either insufficient excavation practices or no PA One Call notification. In addition, PNG's damage collection rate for Fiscal Years 2009 through February 2011 is lower than UGI and CPG as presented in Exhibit VII-13.

²⁷ Hryhorczuk D, Persky V, Piorkowski J, Davis J, Moomey CM, Krantz A, et al. Residential mercury spills from gas regulators. *Environ Health Perspect.* 2006;114:848–852. <<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2702399/>>

**UGI's NGDCs
Line Hit Statistics
Fiscal Years Ending September 2008 through September 2010 and October 2010 through February 2011**

	UGI's Gas Service Division				CPG				PNG			
	2008	2009	2010	October 2010 – February 2011	2008 ^a	2009	2010	October 2010 – February 2011	2008	2009	2010	October 2010 – February 2011
Marked Correctly	75	80	54	40	N/A	40	37	12	102	79	107	43
Marked Incorrectly	18	15	29	12	N/A	31	46	9	61	51	65	18
Not Marked by Utility	26	37	10	10	N/A	6	16	5	21	16	30	9
PA One Call Violation ^b	110	51	36	18	N/A	39	37	8	86	66	75	15
Total Not Marked	136	88	46	28	N/A	45	53	13	107	82	105	24
Total # Hits	229	183	126	73	N/A	116	118	29	270	212	252	74
% Utility At Fault	19.2%	28.4%	31.0%	30.1%	N/A	31.9%	52.5%	48.3%	30.4%	31.6%	37.7%	36.5%
Hits per 100 Miles of Main	4.3	3.4	2.3	1.3	N/A	3.0	3.1	0.8	10.3	8.1	9.6	2.8
Hits per 1000 Services	0.7	0.5	0.4	0.2	N/A	1.4	1.5	0.4	1.7	1.3	1.5	0.5
Hits per 1000 Locates	2.5	2.1	1.5	2.6	N/A	2.8	2.3	2.0	7.0	5.1	6.1	5.0

a: 2008 data was not readily available for CPG due to the acquisition.

b: PA One Call Violations are any violation of the PA One Call Law by third party contractors (i.e., no call, didn't wait the three days, etc.)

Source: Data Request GO-14 and 29

Exhibit VII-13
UGI's NGDCs
Damage Collection Efforts
October 2008 through February 2011

Company	Amount Billed (2009-2011)	Amount Collected	Amount in Litigation	Amount Collected and in Litigation	Percent Collected and in Litigation
UGI's Gas Service Division	\$959,914	\$658,833	\$64,923	\$723,756	75.4%
CPG	\$291,449	\$96,122	\$122,405	\$218,527	75.0%
PNG	\$670,878	\$299,482	\$73,427	\$372,909	55.6%

Source: Data Requests GO-14 and 51

UGI's Gas Service Division and CPG both recover approximately 75% of damages from third parties (provided CPG and UGI's Gas Service Division can recover amounts currently in litigation) while PNG does not compare as well at a 56% recovery rate. Management could not definitively explain the increase in line hits and reduced damage collection rates at PNG but speculated that it was caused by "problem" contractors (i.e., contractors with multiple hits, poor excavation techniques, etc.) or common trenching whereby multiple facilities are installed within the same trench. Historically, PNG's facilities have an increased likelihood than UGI's Gas Service Division or CPG to have facilities installed in the same trench as water facilities. Common trenching increases the risk for damages during excavation by either party. However, PNG also suffers from past poor record keeping in the form of inaccurate mapping (approximately 25% of all hits are caused by past inaccurate mapping at PNG).

An effective damage prevention program should aim to reduce the risk of line hits through education, enforcement, employee awareness, etc. More importantly, the damage prevention program should employ localized, specific initiatives to reduce line hits in a particular geographical area. Third party damages can often result in the uncontrolled release of natural gas that could lead to property damage and/or loss of life of customers, contractors, or gas employees. While UGI's NGDCs damage prevention program provides the basis for effective mitigation of risks, it should continue to prioritize solutions to the increased incident rate and damage collection shortfalls at PNG. UGI's NGDCs should continue to focus additional educational and public awareness initiatives targeted at PNG.

Recommendation

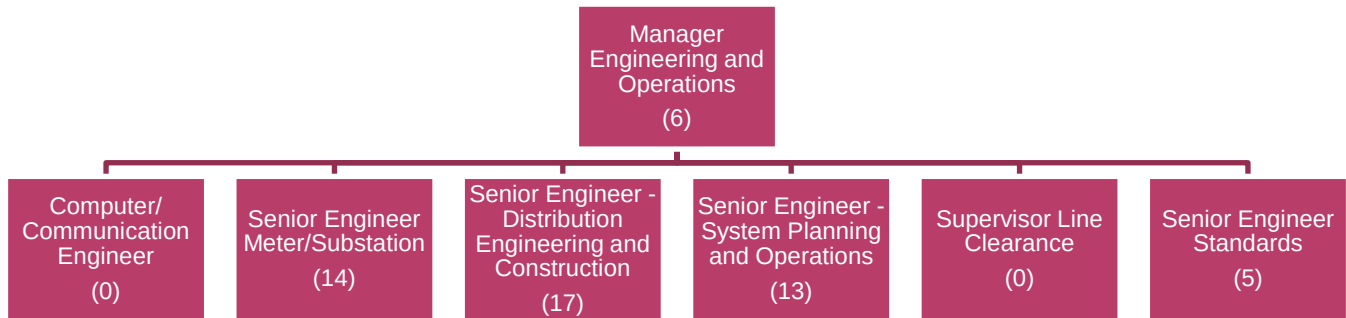
- 1. Update UGI Gas Service Division, CPG and PNG's documentation to comprehensively state all aspects of DIMP, specifically the qualitative and quantitative risk parameters used in determining the priority of mains for replacement.**
- 2. Establish short and long term goals for main replacement at UGI's NGDCs, specifically for cast iron and bare steel, and accelerate the replacement of cast iron and bare steel pipe.**
- 3. Initiate efforts to identify when to repair Class A leaks and reduce the number of backlogged Class A leaks at UGI's Gas Service Division and PNG.**
- 4. Validate that UFG levels are correctly computed and reported for UGI's Gas Service Division, CPG and PNG.**
- 5. Update and expand the field operations staffing study; address any potential inspector understaffing issues; and implement the results of the staffing studying accordingly.**
- 6. Accelerate the safe removal and disposal of mercury regulators throughout UGI Gas Service Division's service territory.**
- 7. Strive to reduce the number of line hits by increasing damage prevention education outreach and enforcement within PNG's service territory.**

VIII. ELECTRIC OPERATIONS

Background

UGI Utilities, Inc. - Electric Service Division (Electric Service Division), provides approximately 932,000 mega-watt hours annually to 62,000 customers across Luzerne and Wyoming Counties in Northeast Pennsylvania. The Electric Service Division has a radial distribution system encompassing about 1,331 miles of overhead and underground primary distribution line and an additional 33 miles of transmission line as of yearend 2010. The Electric Service Division's transmission system is part of the PJM Regional Transmission Organization (PJM). The Electric Service Division has 56 employees and its management structure responsible for transmission and distribution (T&D) operations is depicted in Exhibit VIII-1.

Exhibit VIII-1
UGI Utilities, Inc. - Electric Service Division
Organizational Chart
As of September 30, 2011



() Indicates number of direct reports
Source: Data Request GD-1

The Manager of Engineering and Operations has general responsibility for all electric operations and reports to the UGI Utilities, Inc.'s (UGI) Vice President - Northern Region (see Exhibit VII-1 in Chapter VII – Gas Operations). The Computer/Communication Engineer is in charge of the field aspects for the substation and transmission communication system and supervisor control and data acquisition (SCADA) system. In addition, the Electric Service Division is exploring potential avenues of distribution automation and the Computer/Communication engineer is working with prospective vendors in developing a pilot project. The Senior Engineer Meter/Substation is responsible for all engineering, maintenance, and operations for the Division's 16 substations and also oversees the deployment of meter hardware. All customers in the Electric Service Division have drive-by automatic meter reading technology; however, actual meter reading responsibilities are the function of UGI's Operational Support Services Department.

The Senior Engineer – Distribution Engineering and Construction is responsible for the everyday maintenance and operations of the distribution system. For instance, this Department handles new customer builds, engineering of expansions and repairs to distribution facilities, most of the inspection and maintenance standards pursuant to 52 Pa Code §57.198, and general repairs/maintenance and operation of the distribution system. The Electric Service Division's ten linemen are managed by a Superintendent Distribution – Linemen who reports directly to the Senior Engineer – Distribution Engineering and Construction. The linemen also perform inspection, maintenance, and construction activities on the transmission system when needed.

The Senior Engineer – System Planning and Operations handles all dispatching/system monitoring, storm response, and back office support such as budgeting and performance monitoring. There are five operators and one superintendent responsible for monitoring the bulk power and distribution system. These operators must be North American Electric Reliability Corporation (NERC) and PJM certified. Although electric reliability is ultimately the responsibility of all management, System Planning and Operations is responsible for monitoring and reporting the electric reliability indices; System Average Interruption Frequency Index (SAIFI), System Average Interruption Duration Index (SAIDI), and Customer Average Interruption Duration Index (CAIDI). 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 VIII-2. It should be noted, for PUC's monitoring purposes, that the Electric Service Division is considered a small EDC when calculating the 12-month standard. In addition, the Electric Service Division's reliability performance from 2006 through 2010 is shown in Exhibit VIII-3.

As presented in Exhibit VIII-3, the Electric Service Division's reliability performance from 2006 through 2010 exceeds its benchmark and 12-month standard. One of the reasons for the Electric Service Division's performance is that the Electric Service Division has been able to identify and eliminate problematic devices within its distribution system. For example, many EDC's have reported equipment failure outages related to faulty porcelain cutouts (primarily related to a specific manufacturer of cutouts). The Electric Service Division has been able to target these cutouts and have removed all of the faulty manufactured porcelain cutouts. Due to this proactive faulty equipment identification and replacement, among other reasons, the Electric Service Division has been able to reduce equipment caused outages by 57% from 2006 to 2010.

Exhibit VIII-2
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 VIII-3
UGI Utilities, Inc. - Electric Service Division
Electric Reliability Indices
2006-2010

Year	SAIFI	SAIDI	CAIDI
2006	0.79	88	112
2007	0.68	114	167
2008	0.67	90	135
2009	0.76	80	105
2010	0.48	48	99
Benchmark	0.83	140	169
12-Mo. Standard	1.12	256	228

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

The Supervisor Line Clearance handles the Electric Service Division's tree trimming activities. The Electric Service Division utilizes contractors to perform tree trimming via time and material contracts which are competitively bid annually. Tree trimming needs are inspected based on its line clearance specifications in a two year period such that half of its distribution system is inspected each year. Furthermore, the transmission system is inspected annually for vegetation encroachment and treatment schedules are modified based upon the inspection. Ultimately, circuits within the distribution system average a trimming cycle between four and seven years whereas the transmission system maintains approximately a five year cycle. The Electric Service Division employs an integrated approach to its vegetation management by using herbicide application, trimming/pruning, tree removal, and management of invasive species. The Supervisor Line Clearance measures the performance of contractors through active inspection of work and practices, statistics on contractor performance, etc. These statistics and inspections are utilized to ensure the contractor is efficient, effectively performs all identified work, and is used in future bid evaluations. The Senior Engineer Standards develops, modifies and reviews distribution and transmission standards, performs maintenance on highly specialized equipment (i.e., switches, reclosers, etc.) and is responsible for managing materials for the Electric Service Division.

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, the Electric Service Division should devote additional efforts to improving the effectiveness of its electric transmission and distribution operations by addressing the following:

1. The Electric Service Division's outage management process is manually intensive and lacks automation.

In general, an outage at the Electric Service Division is recorded when a customer calls into one of two Call Centers²⁸. Customer Service Representatives (CSR) collect outage information from customers and enter the information into the Customer Information System (CIS). This information is then provided both electronically as well as a hardcopy faxed into the Electric System Operator (ESO). In addition, the information added into the CIS automatically populates portions of the Work Management System (WMS) and generates a work order for the outage repair.

During storm or multiple outage situations, the ESOs and management must manually sort through the faxed copies of outage reports to determine if there is a common cause and then prioritize outages. This process is performed manually using the expertise and experience of employees. Once a common cause is identified, troublemen/linemen are dispatched to make the repair. Any crew feedback (i.e.,

²⁸ Electric customer calls are handled by the UGI or PNG Call Centers. The CPG Call Center does not receive any electric customer calls. For more information on the Call Centers, refer to Chapter XI – Customer Service.

expected restoration time, outage cause, equipment affected, comments, actual restoration time, etc.) is reported to the ESO. The ESO must then manually enter this information onto two reports; the Interruption Report for that specific outage (hardcopy) and update the information within the WMS pertaining to the work order for the outage.

The Electric Service Division's back office work related to outage management is also manually intensive. For instance, the CIS automatically populates the WMS with some outage information; however, there are no means for the WMS to provide information back to the CIS. Therefore, ESOs must email the CSRs expected restoration times for general areas so that the CSRs can provide restoration estimates to customers. In addition, electric reliability reports or similar reliability inquiries must be generated by querying the master work requests in the WMS. Moreover, the extent of all these manual processes raises questions regarding the accuracy of reported reliability numbers since excessive manual processes can lead to data collection or entry errors.

In contrast to the manual processes described above, all investor owned EDCs within Pennsylvania, except for UGI Utilities, Inc. – Electric Service Division, have implemented an automated outage management system (OMS). An OMS specifically helps to improve the flow of information during an outage as well as automate most processes related to managing, monitoring and reporting outages. For instance, an OMS would receive outage call information directly from the CIS/WMS and can use a prediction model to automatically predict the device causing the outage and its location. Although the Electric Service Division's ESOs have traditionally performed this function effectively, the OMS would provide a tool that would produce additional support enabling the ESOs to more efficiently manage workload and the system.

An OMS could also help to improve customer satisfaction by providing additional information or services to customer during outage situations. The OMS could provide CSRs or individual customers (i.e., those with web based access) the ability to check on the status of an outage at any time, receive customer specific estimated restoration times, etc. Overall, an OMS would provide the Electric Service Division with a tool to drive outage efficiency, reduce workload for ESOs – specifically error prone manual processes during storm conditions, provide increased reporting capabilities, support expanded customer service through increased information, etc. Furthermore, Smart Grid initiatives or distribution automation projects often require a utility to have the ability to capture, analyze and integrate information. Without the ability to electronically handle the information, additional benefits of smart grid/distribution automation projects can go unrealized. Moreover, many of the integrated products and services offered by electric utilities today are dependent upon an integrated OMS such as web based display of outages, meter last gasp integration with outage reporting, voltage analysis, etc.

In 1998, the Electric Service Division's management team identified a need for an OMS and developed a business case. However, despite a projected four year payback period and a stated need, the project was not funded through UGI Utilities' Inc. capital budget process. The project has been recommended for consideration multiple times with the latest being the 2011 budget year. Reportedly, the project has been delayed due to numerous reasons including mapping system transition delays,

budgetary concerns, etc. However, as of October 2011, the OMS project was included in the 2012 budget. Although an OMS is not required by Commission regulations or order, it has become a standard business practice among EDCs with many, if not all, companies reporting operational benefits.

Various other EDCs have implemented an automated OMS system purporting that their reliability performance increased (or worsened) due to an increase in capture rates (conductivity) of outages and customer demographics. However, because the EDCs did not perform parallel analyses, sufficient evidence could not be provided to support their contentions. Consequently, petitions to the Commission requesting modifications to existing PUC reliability benchmarks and standards have been met with skepticism. Consequently, the Commission amended its regulations which states in 52 Pa. Code §57.195(i):

When an EDC implements a change in its outage management system for gathering and analyzing reliability performance that has the potential to affect reliability index values, the EDC shall conduct parallel measurement and analysis to isolate and quantify the influence that the measurement change exerts on reliability index values. The length of the parallel measurement period shall be sufficient to isolate and quantify the independent effects of the measurement change.

To comply with Commission regulations, it is therefore imperative to operate both the automated and manual OMS systems in tandem for a representative time period to document and substantiate any deviation that may have a negative consequence on reliability performance reporting. Management at the Electric Service Division has already expressed interest in and even discussed running a parallel analysis when an automated OMS is implemented.

Recommendation

- 1. Implement a computerized outage management system.**

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, cyber security, 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?	1.
2	Has your physical security plan been reviewed in the last year and updated as needed?	2.
3	Is your physical security plan tested annually?	3.
4	Does your company have a cyber security plan?	4.
5	Has your cyber security plan been reviewed in the last year and updated as needed?	5.
6	Is your cyber security plan tested annually?	6.
7	Does your company have an emergency response plan?	7.
8	Has your emergency response plan been reviewed in the last year and updated as needed?	8.
9	Is your emergency response plan tested annually?	9.
10	Does your company have a business continuity plan?	10.
11	Does your business continuity plan have a section or annex addressing pandemics?	11.
12	Has your business continuity plan been reviewed in the last year and updated as needed?	12.
13	Is your business continuity plan tested annually?	13.

* 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.

The Audit Staff reviewed the most recent (2011) Self Certification Form submitted separately by UGI Utilities, Inc. (UGI) which is comprised of a regulated natural gas distribution operation (Gas Service Division) and an electric distribution operation (Electric Service Division), UGI Penn Natural Gas, Inc. (PNG), and UGI Central Penn Gas, Inc. (CPG) (collectively referred to as “UGI Utility Group”) to determine the status of their responses. Our examination of UGI Utility Group’s emergency preparedness included a review of the physical security plans, cyber security plans, emergency response plans, business continuity plans, and all associated security measures. In addition, Audit Staff performed inspections at a sampling of the UGI Utility Group’s electric and gas facilities in its service territories. Due to the

sensitive nature of the information reviewed, specific information is not revealed in this report but rather the generalities of the information are summarized.

Certain aspects of UGI Utility Group's emergency response plans are centrally handled by a specific department while other areas are the responsibility of various departments and/or employees. For instance, cyber security is handled exclusively by UGI's shared Information Services Department (See Exhibit II-2 in Chapter II – Background) for the UGI Utility Group whereas emergency preparedness and response is the responsibility of each individual company's operations department. However, the UGI Utility Group's general approach for all security plans is to provide a safe working environment, supply a safe and reliable product to customers, protect its assets, and ensure continuity of service.

Findings and Conclusions

Our examination of the UGI Utility Group's Emergency Preparedness included a review of the physical security plans, cyber security plans, emergency response plans, business continuity plans, and all associated security measures. Based on our review, the UGI Utility Group should devote additional efforts to improving the effectiveness of its emergency preparedness by addressing the following:

1. Minor deficiencies in physical security were noted during facility inspections of the UGI Utility Group.

Physical security should be continuously reviewed and any deficiencies should be addressed as soon as possible. The Audit Staff performed random inspections of various facilities and assets at UGI's Gas Service Division, UGI's Electric Service Division, PNG, and CPG. These inspections focused on each company's compliance with the UGI Utility Group's physical security policies as well as identification of vulnerabilities.

As the Audit Staff performed our inspections, we noted various minor conditions/deficiencies with physical security at select facilities. Most of the minor deficiencies were caused by weather type conditions, wear and tear, or general oversight. In fact, the UGI Utility Group made plans to address some deficiencies before the inspection was completed.

2. There are inconsistencies in approaches to physical security within the UGI Utility Group.

Physical security is handled by various departments throughout the UGI Utility Group. Security at office buildings is handled by a centralized group within UGI's shared Central Services Department (See Exhibit II-2 in Chapter II – Background) and focuses on identification badges, building access, etc. Meanwhile, the physical security aspect of distribution/transmission facilities (i.e., gate stations, regulator stations,

substations, etc.) are designed by UGI's shared Engineering Department (See Exhibit II-2 in Chapter II – Background), and then monitored and inspected by field operations for each individual company.

In addition to the minor deficiencies in physical security noted in Finding IX-1, the Audit Staff noted various differences in physical security features between the various utilities within the UGI Utility Group. Most of the differences identified were the result of different approaches or levels to physical security of similar facilities. As discussed in Chapter II – Background, PNG and CPG were acquired in 2006 and 2008, respectively. Therefore, most of PNG and CPG facilities would have had security features designed by their respective former companies before the mergers. For instance, not all office/service centers have magnetic locks but all employ some type of locking mechanism. Furthermore, the UGI Utility Group's headquarters has experienced problems with its emergency lighting (i.e., emergency lighting failed to activate throughout the building during at least two power outage incidents including in the evacuation stairwells). In addition, fence height, fencing features, uniform locks at a station, etc. were noted to have slight deviations depending on the company and facility. In all but one case, the Audit Staff found that physical security levels were sufficient at mitigating some risk, albeit inconsistently.

A utility's security features should be designed to provide enough barriers to mitigate expected risk across its entire footprint. Each layer provides an additional obstacle or deterrent against possible entry or tampering. Ideally, a risk based physical security methodology should be developed and standardized over time across all of UGI Corporation's subsidiaries. However, security measures at other UGI Corporation's subsidiaries were beyond the scope of this audit and outside the PUC's jurisdiction. Therefore, at a minimum the UGI Utility Group should strive to standardize their physical security approach similar to the current efforts in standardizing departments, operation manuals, etc.

The UGI Utility Group has not performed a vulnerability assessment (VA) since 2001. UGI Corporation's Internal Audit Department did perform a physical security audit of the UGI Utility Group's non-operational facilities in 2009. However, a similar review was not completed for the UGI Utility Group's distribution and transmission facilities. Although the UGI Utility Group is not required to perform a VA, they could benefit from reviewing their vulnerabilities periodically. More specifically, the American Gas Association encourages companies, "to assess their own security needs and implement security measures they consider appropriate."²⁹ This type of assessment could help to identify inconsistencies in physical security across the UGI Utility Group and emphasize areas needing improvement.

²⁹ AGA Natural Gas Security Committee, INGAA Security Committee, and Process-Performance Improvement Consultants, Security Practices Guidelines Natural Gas Industry Transmission and Distribution. American Gas Association, 2008

3. UGI's Electric Service Division has not fully documented its emergency response, physical security and business continuity plans.

According to 52 Pa Code §101.3, a jurisdictional utility shall develop and maintain written physical (PSP) and cyber security (CSP), emergency response (ERP) and business continuity plans (BCP). UGI's Electric Service Division has created a myriad of different documents to satisfy its Chapter 101 requirements. As mentioned previously, the CSP is centrally handled by the Information Services Department for the UGI Utility Group and is not the responsibility of the UGI's Electric Service Division. The three documents within the Company's control are the PSP, ERP, and BCP and are primarily addressed through its system restoration plan for storm/outage response, and its standard operating and engineering practices for physical security needs.

UGI's Electric Service Division system restoration plan includes a prioritized order in responding to outages, identification of critical equipment, and designation of an incident commander for storm conditions. Although most of the emergencies faced by an electric utility are related to storm or outage conditions, this document does not take into account other situations or conditions such as computer malfunctions (which would be handled by the shared Information Services Department but would take a certain amount of time to restore systems), loss of communication equipment (UGI's Electric Service Division has multiple communication media on differing backbones), facilities (the UGI Utility Group has multiple office building space that could be used), personnel, etc. In addition, the storm restoration plan doesn't include any contact information for first responders, mutual aid assistance, emergency preparedness support agencies, media outlets, etc. Furthermore, UGI's Electric Service Division has various contingency plans that are not documented (e.g., acquisitions of a portable transformer or spare parts if a substation outage were to occur). Instead, UGI's Electric Service Division could model its plans off of the content provided in UGI's Gas Service Division, PNG, and CPG's emergency response section of their gas operations manual.

Most, if not all, of the undocumented procedures and information can be found within UGI's Electric Service Division institutional knowledge. The Audit Staff found no issues with the preparedness of the Company; however, without consistent documented Chapter 101 plans, UGI's Electric Service Division risks the possibility of losing knowledge within emergency preparedness through attrition. Furthermore, fragmented and dispersed document/knowledge can result in slower response times, additional confusion, and/or mistakes which compound an emergency situation.

Recommendations

- 1. Perform physical security reviews across all utilities within the UGI Utility Group on a continuous basis and make timely repairs or improvements to physical security as necessary.**
- 2. Perform periodic physical security risk analyses and/or vulnerability assessments of all facilities and standardize the approach for mitigating these risks across the UGI Utility Group.**

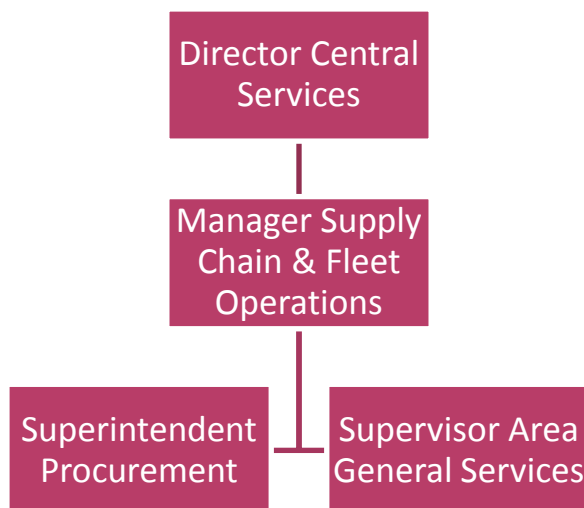
3. Fully document UGI's Electric Service Division existing physical security, business continuity, and emergency response plans

X. MATERIALS MANAGEMENT

Background

UGI Utilities, Inc. (UGI) and its subsidiaries, UGI Penn Natural Gas, Inc. (PNG) and UGI Central Penn Gas, Inc. (CPG) (collectively referred to as the “UGI Utility Group”) share a management team that includes the Director of Central Services who oversees the Manager of Supply Chain and Fleet Operations (See Chapter II – Background). The Manager of Supply Chain and Fleet Operations is responsible for the overall procurement process and general materials management functions including storerooms and warehousing for the UGI Utility Group. UGI is comprised of two regulated service divisions encompassing a natural gas distribution operation (Gas Service Division) (along with PNG and CPG are collectively referred to as UGI’s NGDCs) and an electric distribution operation (hereafter individually referred to as the Electric Service Division). However, the warehousing function for electric distribution inventory is embedded within the operations of the Electric Service Division and does not report to the Manager of Supply Chain and Fleet Operations. The UGI Utility Group also provides material management services to UGI Penn HVAC Services, Inc. (PNG HVAC) via PNG’s storerooms. However, PNG HVAC is not included within the analysis presented within this report because these activities are not regulated by the Pennsylvania Public Utility Commission (PUC or Commission). An organizational chart for the Materials Management Organization for UGI Utility Group is shown in Exhibit X-1.

**Exhibit X-1
UGI Utility Group
Materials Management Organizational Chart
As of September 2011**



Source: Data Request GD-1

All warehousing operations for UGI's NGDCs, including transporting materials, are the responsibility of the Supervisor Area General Services. UGI's NGDCs storeroom and warehousing functions are organized in a hub and spoke configuration in which the Reading (Gas Service Division) and Wilkes-Barre (PNG), warehouses act as centralized storerooms for the smaller satellite warehouses. In addition, CPG is moving to establish a centralized warehouse within the Port Allegheny service territory for northwestern operations. UGI's NGDCs basic material handling processes is such that the satellite warehouses issue a transfer request to the appropriate centralized warehouse when material is needed. There are scheduled delivery days for routine material transfers to each satellite warehouse; however, unscheduled emergency material deliveries can be made upon request at any time. As a result, material orders are typically submitted to the Procurement Group by the centralized warehouses.

The procurement process is a centralized service provided by UGI's procurement department for the UGI Utility Group and is overseen by the Superintendent of Procurement. The UGI Utility Group has assigned specific buyers to business lines such that a single buyer is responsible for gas materials or electric materials. The UGI Utility Group utilizes a Request-for-Quote (RFQ) process in which suppliers submit quotes either on an item basis or bulk pricing. In addition, any vendor may submit a RFQ bid, but the material must be approved by UGI Utility Group's Engineering Departments (i.e., the material must meet the technical standards) before the supplier can garner business. Consequently, the UGI Utility Group awards the material purchase to the lowest approved bidder for the year or until a lower bid is secured. Certain items, due to turnover occurring 12 times or more in a year, are handled through blanket purchase order agreements. Blanket purchase order agreements allow requested material to be automatically ordered through the winning supplier without the Procurement Group needing to review the purchase request. Furthermore, due to CPG's expansive service territory, a blanket purchase agreement has been established for most of CPG's material needs.

Findings and Conclusions

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

1. Emergency stock inventory levels are either too high or not reported for individual companies within the UGI Utility Group.

Utility companies, as a matter of prudent business practice, must be ready to respond to any number of conditions requiring immediate repair to their infrastructure due to storm conditions, main breaks/leaks, etc. Therefore, sufficient material or parts must be kept on hand to ensure a timely and efficient response to emergencies. Material held for these emergency conditions is frequently referred to as emergency

stock. Due to the unique nature of emergency stock it is normally excluded from inventory turnover calculations and stock reorder points due to its infrequent use. In general, there are two separate categories for emergency stock. The primary category encompasses emergency stock (ES₁) that is highly specialized material with long lead times and generally high unit costs that are only needed for an emergency. ES₁ material is needed to support uncommon, old, or non-standard infrastructure throughout the system and enables the utility to quickly respond to emergencies. Identifying ES₁ stock is rather straight forward as the material normally has virtually no activity over a prolonged period. In addition, ES₁ material is typically identified by other departments (i.e., Engineering, Operations, Gas Supply, etc.) as a critical item³⁰ supporting a specific need.

The second category of emergency stock (ES₂) consists of a reserve supply of more common or “stocked” items needed for defined emergency situations. Since certain conditions within utility operations are considered as emergency situations due to the potential for property damage or loss of life like Class C leaks (see Chapter VII – Gas Operations), inventory levels must be adequate to ensure the ability to timely repair/replace the problem. The vast majority of stocked items would be considered regular inventory items except for a very small percentage that is needed to protect against unusually large material requirements for emergency response (i.e., ES₂). Material of this nature would typically constitute a small portion of a utility’s safety stock levels (i.e., material levels established to handle average issues between reorder points and deliveries to prevent stockouts). Therefore, identifying ES₂ levels require a more scientific and statistical approach. ES₂ levels should be based upon historical average usage, peak usage, supported infrastructure, potential risk and consequence of a material stockout, delivery and lead time, and economic order quantities. Therefore, any emergency stock claimed within the ES₂ category should have supporting analysis defining ES₂ levels.

UGI’s NGDCs have centralized their emergency stock at the Reading warehouse. The Reading warehouse serves as the central material hub for the Gas Service Division but can also transfer materials to PNG and CPG. Management stated that material can be delivered to any area within UGI’s NGDCs’ service territory within eight hours. UGI’s NGDCs report approximately \$983,000³¹ in combined emergency stock as of 12/31/10 while the Electric Service Division did not identify a dollar amount for its emergency stock. The emergency stock identified at the Reading Warehouse includes ES₁ and ES₂ material. However, UGI’s NGDCs include all inventory material under its minimum levels as emergency stock without any supporting analysis.

Discussion with various management and warehouse personnel revealed that satellite warehouses maintain a certain level of additional stock in order to account for emergencies or critical equipment needs. Because satellite warehouses have some mobility in managing their everyday operations, they can plan their ordering requirements around lead times, company needs, and criticality. In essence, the

³⁰ ES₁ material should be periodically reviewed by the owning department (i.e., the department that the material supports) to ensure that the material is still critical and not obsolete.

³¹ The accumulation of stock within the emergency warehouse and stock designated as emergency stock within the Reading warehouse.

satellite warehouses have developed their own independent additional emergency stock levels for various items within the ES₁ and ES₂ categories. Normally emergency stock is excluded from inventory calculations and analysis; however, any unidentified emergency stock could impact processes at PNG and CPG. For instance, inactive material, defined as material having no activity for the last twelve months, for the UGI Utility Group is presented in Exhibit X-2.

Exhibit X-2
UGI Utility Group
Inactive Inventory Levels
Twelve Months Ended April 2011

	Gas Service Division	PNG	CPG	Electric Service Division
Inactive Material	\$214,371	\$248,115	\$742,454	\$0
2010 Average Inventory Levels	\$1,781,996	\$1,413,937	\$2,893,348	\$685,081
Percentage of Inventory	12.0%	17.6%	25.7%	0.00%

Source: Data Requests MM-2, 4, and 17

Since portions of emergency stock often are slow moving, specialty type items retained for an emergency can often be captured on inactive reports. Typically each warehouse, in consultation with the centralized warehouse, is responsible for identifying unneeded material. This type of analysis is performed on a case by case basis rather than on a routine basis. Furthermore, inactive material levels should be minimized, with utilities often striving for less than one percent of average inventory levels showing no activity. However, the Audit Staff believes that the high percentage of UGI's NGDCs' inactive material is in effect the result of undocumented emergency stock levels.

Although a centralized warehouse repository for emergency stock can have its benefits, it's usually limited to more specialized or rare equipment. Since utilities often must account for standard maintenance and emergency conditions that require the same material, it is often prudent to keep emergency related items of this dual nature embedded within local operations. Meanwhile, specialized equipment/materials can be supplied on a more global basis. UGI's NGDCs are reportedly investigating where specific portions of emergency stock should be located and the optimal levels needed. However, UGI's NGDCs' identified emergency stock levels represent approximately 14% of total inventory³² but does not account for unidentified emergency stock in the PNG, CPG or UGI Electric Division's warehouses.

While emergency stock levels should be established based upon historical activity, lead times, etc. and can be highly dependent on system characteristics and utility type, quantitative and qualitative analysis must be used to determine the optimal

³² Safety stock levels divided by the addition of safety stock levels and 2010 average inventory levels (\$982,664/[\$982,664+\$6,089,281]).

emergency stock levels for each utility. As a general rule of thumb, emergency stock levels between 10-20% of total inventory are prudent, although higher levels can be justified through quantified analysis, particularly for certain items. Excess emergency stock can tie up capital and warehouse space; incur additional inventory carrying costs; etc. While UGI's NGDCs' reported emergency stock levels are within the acceptable range of 10-20% of total inventory, many of the satellite warehouses carry emergency stock that is not tracked as such and included in reported amounts. In addition, UGI Utility Group is purportedly moving towards some level of decentralized emergency stock levels. Therefore, this emergency stock analysis could be performed on a company by company basis. As a result, the Gas Service Division could reduce its emergency stock levels by approximately \$668,000 with an associated annual carrying costs savings of approximately \$100,000 (based upon a 15% carrying factor³³) while PNG, CPG and Electric Service Division would need to potentially increase or reclassify existing inventory as emergency stock by approximately \$250,000, \$511,000, and \$121,000, respectively. However, it should be noted that the costs or reclassification of emergency stock at PNG, CPG and UGI Electric Service Division are accounted for in Finding X-3 which addresses inventory levels and turnover rates whereas the savings identified for the Gas Service Division presented here are in fact potential savings that could be realized and are in addition to those presented in Finding X-3. The savings for the Gas Service Division are not rolled into inventory turnover in Finding X-3 because the emergency stock levels identified at the Gas Service Division are already excluded from that calculation.

2. Inventory cycle counts are being performed improperly at PNG while inventory cycle counting accuracy rates are poor at the Gas Service Division and CPG.

The UGI Utility Group performs monthly inventory physical counts at each warehouse. These physical counts are considered cyclical since certain items (randomly selected) are counted each month with all items being counted at least once throughout the year. Adjustments are made within the materials management system for inaccuracies or differences between the physical counts and materials management system. However, at PNG, the warehouses receive about a one week advanced notice of items to be counted within the next cycle. The PNG warehouse personnel then perform physical counts and make inventory adjustments ahead of the scheduled cycle counts. Consequently, PNG reports zero variances during the scheduled counts. Conversely, the purpose of inventory cycle counts is to reconcile physical inventory to recorded inventory levels to test the accuracy of information within the materials management system. Therefore, bypassing the standard cycle counts, by counting early and making preemptive adjustments, eliminates a key management tool, performance metric and trending analysis. Cycle count accuracy can point to error prone procedures, theft, or other variance causal factors within supply chain. Accuracy rates for the UGI Utility Group are presented in Exhibit X-3 for 2009 through July 2011.

³³ Carrying costs are typically within 12-24.5% of inventory value as reported in: Pooler, Victor H., David J. Pooler, and Samuel P. Farney. Global Purchasing and Supply Management: Fulfill the Vision-Second Edition. Norwell: Kluwer Academic Publishers, 2004.

Exhibit X-3
UGI Utility Group
Inventory Accuracy Rates
2009 through July 2011

Year	Gas Service Division		PNG		CPG		Electric Service Division	
	Net	Gross	Net	Gross	Net	Gross	Net	Gross
2009	0.32%	3.62%	-3.73%	9.02%	-7.43%	21.22%	-1.61%	2.37%
2010	-1.61%	7.96%	0.00%	0.00%	-5.32%	9.85%	-0.29%	0.68%
2011 (Jan through July)	0.11%	12.84%	0.00%	0.00%	-1.87%	27.03%	-0.19%	1.30%

Source: Data Request MM-13

A net variance is the difference between the total dollar value of inventory in the materials management system and the physical count. Gross variance is the cumulative line by line absolute difference in value of each inventory item between the materials management system and the physical count. As demonstrated in Exhibit IX-3, the net variance reflects offsetting tracking errors of over and under counts and is therefore relatively small compared to the gross variance at the UGI Utility Group. Generally, a one to two percent net variance is accepted as efficient operation. While, the net variances at UGI generally fall within accepted ranges, CPG and PNG report net variances larger than 2%. Moreover, the gross variance reflects that substantial adjustments were made at UGI's NGDCs³⁴ while the Electric Service Division had only minor gross variances. In addition, certain warehouses (i.e., Hazelton, Lehighon, Lock Haven, and Stroudsburg) had extremely high gross variances that were at or above 30% in 2010. These conditions illustrate that UGI's NGDCs inventory records are not being maintained accurately and the large variances result in ineffective materials management as ordering is based upon the perpetual inventory records.

A large gross variance with a relatively small net variance usually indicates a lack of proper accounting for material in the field. One example is when the actual material used is a substitute for the project planned items but documentation of the change is not recorded. As a result, the net variance is typically small since substituted materials typically have similar values but the substituted material creates two errors in a gross variance (both to the original and the substituted items). Since many of the processes for issuing, receiving, and adjusting inventory are largely manual, errors can arise especially if similar material is pulled.

Inaccurate inventory records can lead to a host of different problems. For example, inventory might not be available for a project even though the system indicates that it is, thereby causing a decrease in productivity. In addition, inventory

³⁴ While PNG did not report inventory accuracy, Audit staff was able to review adjustment history. While adjustments can be the result of multiple operations such as inventory adjustments, returns, receiving adjustments, etc., the large amount of adjustments seem to indicate that PNG would have gross inventory adjustments that may be in excess of 10% of inventory counted.

turnover, carrying costs, order quantities, and emergency stock levels can all be impacted by inventory inaccuracies. Net variances also require year-end financial statement adjustments impacting the utilities expenses, ratepayers, and stock holders. The contrast between net and gross variances also illustrates that future adjustments could be much larger at UGI's NGDCs.

The monthly physical counts do provide the utility with a method to correct variations in the inventory management system's perpetual inventory records and assess where problems have occurred in a timely manner. However, the monthly physical counts are time consuming, inflexible, and too concentrated to address all inventory concerns. In fact, since material counts are randomly generated, many warehouses must count stock items with zero balances even if they never received, issued, transferred or held that item throughout the year. In contrast, many utilities and industry professionals have moved to the ABC cycle counting system.

In ABC cycle counting, materials in the A category are usually high volume items with high costs that are counted on a monthly or quarterly basis. Whereas, the B category is inventory items issued occasionally with moderate cost and are counted on a somewhat longer schedule while C category material includes items that rarely move or have a lower cost and are only counted annually. The varied cycle counting allows the utility to reduce the total amount of material counted at any one time but also concentrates on "fast moving" (i.e., high turnover), high cost, or problematic inventory. By focusing on these criteria, the UGI Utility Group would be able to identify and remedy stock items that may need additional controls. In addition, with a computerized materials management system, generated cycle count requests could be tailored to each warehouse eliminating "zero" counts, focus on individual problem areas, and/or provide more flexible count timing. Although the financial aspect of cycle counting enables a utility to minimize high dollar inaccuracies, the UGI Utility Group should focus its current efforts on improving overall accuracy for fast moving inventory at high variance warehouses. Moreover, the periodic assessment of inventory accuracy provides a metric to gauge and improve current processes and procedures.

3. Inventory turnover ratios are declining at the Gas Service Division and are low for PNG, CPG, and Electric Service Division.

Inventory turnover is calculated by dividing average inventory levels into yearly net inventory issues. Therefore, inventory turnover yields the rate at which inventory is "turned" or used. For example, an inventory turnover of 4.0 would indicate that the entire inventory would be issued four times a year or correspondingly an average three months of supply is being maintained. The UGI Utility Group's inventory turnover for 2008 to 2010 is shown in Exhibit X-4.

Exhibit X-4
UGI Utility Group
Inventory Turnover
2008 - 2010

	2008	2009	2010
Gas Service Division			
12-Month Average Inventory	\$1,140,421	\$1,289,411	\$1,621,216
Yearly Issues	\$4,503,900	\$3,178,814	\$3,511,049
Inventory Turnover	4.0	2.5	2.2
PNG			
12-Month Average Inventory	\$2,165,439	\$2,070,359	\$1,413,937
Yearly Issues	\$2,857,568	\$2,431,247	\$1,805,549
Inventory Turnover	1.3	1.2	1.3
CPG			
12-Month Average Inventory	N/A	\$2,874,702	\$2,893,348
Yearly Issues	N/A	\$1,427,474	\$1,882,780
Inventory Turnover	N/A	0.5	0.7
Electric Service Division			
12-Month Average Inventory	\$776,420	\$648,084	\$685,081
Yearly Issues	\$874,122	\$711,683	\$782,523
Inventory Turnover	1.1	1.1	1.1

N/A = Not Available due to acquisition from PPL.

Source: Data Requests MM-2, 3 and 17

Inventory turnover ratios normally are between two and four in the utility industry. Only the Gas Service Division reports inventory turnover ratios within this range³⁵ while the remaining companies within the UGI Utility Group report inventory turnovers of 1.0 or lower. However, emergency stock levels should be excluded from the inventory turnover calculation used for comparison and trending. Therefore, the costs for establishing emergency stock identified in Finding X-1 for PNG, CPG and the Electric Service Division should be excluded from average inventory levels, thereby increasing/improving the inventory turnovers. As a result, the Audit Staff calculates that PNG, CPG, and the Electric Service Division's adjusted inventory turnovers would be closer to 1.6, 0.8, and 1.4, respectively in 2010, which are still below the 2.0 to 4.0 target levels.

³⁵ Since the Gas Service Division excludes large amounts of emergency stock, the Gas Service Division has artificially deflated its average inventory levels at the Reading warehouse. However, Audit Staff believes that inventory levels would be corrected by appropriately identifying emergency stock and eliminating excess material.

Despite the extremely low inventory turnovers reported in Exhibit X-4, even as adjusted for excluding emergency stock, certain warehouses have been able to achieve commendable turnover rates. Two Gas Service Division warehouses, Harrisburg and Lehigh, reported inventory turnovers of 7.6 and 6.9 respectively in 2010. These two warehouses are utilizing the benefit of the centralized warehouse in Reading. Since a centralized warehouse is often larger than a satellite warehouse, it can hold large amounts of material to help support operations in neighboring regions. This allows satellite warehouses to reduce the amount of inventory they maintain as they rely upon the centralized warehouse to transfer material as needed. Within this configuration, the centralized warehouse often has a lower turnover ratio but supports an overall companywide higher turnover ratio. However, this higher level of turnover performance for satellite warehouses is not occurring at PNG, CPG, or the Electric Service Division.

Inventory turnover is dependent on numerous variables such as reorder points, inventory accuracy, emergency stock, and optimized inventory levels. By optimizing inventory turnover, the UGI Utility Group could realize lower carrying costs and free working capital (i.e., cash). By reaching an inventory turnover between 2 and 4, the UGI Utility Group could realize a one-time reduction in inventory and annual reductions in carrying costs based upon 15% carrying costs as presented in Exhibit X-5.

Exhibit X-5
UGI Utility Group
Cost Savings for Improving Inventory Turnover
Based upon 2010 Calendar Year Data

Inventory Reduction		Carrying Cost Reduction
Gas Service Division		
Turnover of 2	\$0	\$0
Turnover of 4	\$743,454	\$111,500
PNG		
Turnover of 2	\$261,644	\$39,200
Turnover of 4	\$713,032	\$107,000
CPG		
Turnover of 2	\$1,441,368	\$216,200
Turnover of 4	\$1,912,063	\$286,800
Electric Service Division		
Turnover of 2	\$172,924	\$25,900
Turnover of 4	\$368,554	\$55,300
Total UGI Utility Group		
Turnover of 2	\$1,875,936	\$281,300
Turnover of 4	\$3,737,103	\$560,600

Source: Data Requests 2, 4, 17

4. Automated minimum and maximum inventory levels have not been established for most UGI Utility Group warehouses.

The UGI Utility Group typically orders material on an as-needed basis. Material requirements for large projects, generally identified through the budgeting process by other departments such as Engineering, Operations or Marketing are determined one year or more in advance. Materials for large projects are scheduled to arrive as close to construction dates as possible and are sometimes shipped directly to the work site. Therefore, the materials for large projects usually do not have an impact on reorder points or reserve material levels (i.e., emergency and safety stock levels). On the other hand, most satellite warehouses will order materials through the centralized warehouse by requesting a transfer. Centralized warehouse employees will then transfer or order more material as necessary. However, in some warehouses the UGI Utility Group relies upon warehouse employees to intuitively gauge stock levels (i.e., based upon experience) and determine the appropriate reorder points and lead time.

Only the Reading warehouse at the Gas Service Division has established automated minimums (min) and maximums (max) for its inventory items. Warehouse Management reviews the Reading warehouse min/max report weekly in order to identify materials that need to be ordered. However, the remaining warehouses rely solely on a manual process to ascertain appropriate inventory reorder points which may not provide the UGI Utility Group with a consistent or reliable approach to maintaining efficient stock levels. Consequently, individuals may be inclined to 'err' on the side of caution when handling such situations based on the thought that it is better to have more stock than needed rather than incur a stock out situation. However, purchasing and storing excess stock is inefficient and unduly increases carrying costs, ties up cash, results in excess storage and higher expenses. In contrast, too little stock may expose a utility to longer restoration times, prolonged outages, or increased liability for property damage. A much more robust method to address reordering is to establish minimum and maximum inventory levels for each item based upon economic order quantities (EOQ). In fact, the UGI Utility Group has a goal to establish minimum and maximum inventory levels for all items by the end of calendar year 2012.

On a simplified basis, automated inventory mins and maxs are based upon historical trends, employee experience and/or knowledge, safety stock, emergency stock, and material requirement planning efforts. However, optimized materials handling also accounts for the EOQ. EOQ identifies the least costly combination of ordering and carrying costs and helps to identify and cost justify the reorder point (minimum) and the amount of stock to be ordered (maximum).

In theory, the minimum level is the absolute lowest point an item should reach at any time. To establish a particular item's minimum level, one needs to consider the reordering lead time, historical usage patterns, and appropriate level of emergency stock. Conversely, the maximum level is the highest level of stock a utility should ever carry on a consistent basis (i.e., there are exceptions for major projects or special circumstances). Therefore, the maximum inventory level should take into consideration the carrying costs, usage patterns, reorder lead times and cash requirements of the utility. When blended, the range between the minimums and maximums is the utility's

operating stock level. However, the UGI Utility Group should consider establishing automated minimum and maximum levels for each warehouse to help warehouse employees effectively manage stock levels thereby eliminating the manual nature of the ordering process.

5. The UGI Utility Group's inventory management process is excessively manual and lacks automation.

When materials are needed, the end users (i.e., supervisors, field employees, etc.) must submit a material request to the local warehouse. Material request forms require various fields to be completed such as account number, work order number, date, and quantity. The forms are separated by material type (i.e., steel, plastic, cast iron, etc.) and also have a short description of stock items with their corresponding catalog number. Except for large projects, these material requests are delivered in person to warehouse employees and are manually processed. The requestor must then wait (usually within the warehouse) for the warehouse attendant to fill the request before receiving the materials. Most material requests issued by field personnel follow this manual process. In contrast, automated warehouses at other large Pennsylvania utility companies provide operating effectiveness and efficiency advantages over the UGI Utility Group's current manual paper process. For instance, operational employees' productivity would increase from reducing wait times for materials via the elimination of processing manual forms, etc. At the same time, warehouse employees would experience increased productivity from eliminating the need to manually enter the request into the materials management system, ability to pull multiple orders at once, reduced stock outs by eliminating the physical monitoring of individual material items, etc.

The UGI Utility Group also does not utilize location item mapping for locating items stored within its warehouses. Instead materials are arranged based on type, size, and/or employee preference. Although many warehouse employees are intimately familiar with the layout of their respective warehouse; new employees, transfers or helpers must gain this "feel" to be effective. Otherwise, warehouse employees must take extra time to identify and select the needed material. In contrast, many companies have stock items mapped to a specific grid location. This mapping system allows employees to efficiently identify the stock item location within a large warehouse. Item mapping expedites the filling of material requests, aids in inventory counts, and helps to ensure different materials aren't mixed together. The UGI Utility Group indicated that it plans to implement item mapping sometime after its computer system upgrade, scheduled for February 2012 is completed. Other examples of current deficiencies and automation remediations are listed below:

- Warehouse employees must often validate a zero item count regardless of inventory holdings (see Finding X-2). In addition, the warehouse employee must also enter a zero count into the materials management system. In contrast, the system should be able to eliminate items that were never stored at a warehouse.

- The UGI Utility Group has not established min-max levels for all but one warehouse (see Finding X-4). Without these min/max levels, warehouse employees must order material based upon their experience and judgment. In contrast, automatic reorder points could be established so that orders are automatically generated once stock items reach a certain point. This feature can improve efficiency, avoid stock outs, and help to maximize inventory turnover.
- The Reading warehouse, which does have established min/max levels, requires Management to run two separate reports (i.e., min/max report and reorder report) in order to identify what items need to be reordered. Both reports must be run simultaneously to avoid duplication of material orders. The Audit Staff understands why a separate min/max report and reorder report would be helpful to management but contends that these reports should be combined for ease of use and effectiveness. Even if automatic reorder points are established, a combined min/max and reorder report is a key management tool that should allow management to quickly assess stock levels.

Various reasons are attributable to the materials management system's lack of automation and inefficient processes which includes upgrades not scheduled until February 2012, and the standardization of procedures, materials, and warehousing operations subsequent to the acquisition of PNG and CPG. Consequently in 2011, the UGI Utility Group's materials management system is not operating efficiently or effectively ultimately leading to inaccurate records, unproductive time, low inventory turnover, excessive carrying costs, etc. The above discussion while not an exhaustive list provides some examples of potential automation improvements for the UGI Utility Group's materials management system and/or processes.

6. CPG does not track its primary supplier's performance metrics and is not optimizing the benefits of its business partnership.

CPG utilizes a blanket purchase supply agreement with a third party vendor to supply most³⁶ of its material needs. CPG purchases material from the third party supplier at set prices that are adjusted quarterly and in return the third party supplier provides minimum performance level thresholds. As a result, the agreement has seven different performance metrics. These metrics include on time delivery of materials, shipping accuracy, sale volume, cost savings, etc. According to the agreement these metrics are to be reviewed by the UGI Utility Group quarterly. While UGI Utility Group does review the third party's reported performance metrics quarterly, it does not independently accumulate and track the raw performance data to independently verify the metrics' results. Instead, CPG relies upon its third party vendor to supply actual data with respect to performance metrics. Management indicated an understanding of

³⁶ Approximately 90% of all inventory issued in 2010 was purchased at CPG's third party vendor.

the need to monitor, and not just rely upon, its third party vendor and was reportedly instituting the ability to track at least some of these metrics by the end of 2011.

In general, performance metrics provide a contractual level of service that can be used to help manage inventory levels at CPG warehouses. Since CPG's service territory is spread across Pennsylvania, it is not economical for CPG to have a centralized warehouse that supplies the entire company. Therefore, the third party supplier becomes a "virtual" central warehouse since it's contractually required to supply materials to all service locations within set standards. However, CPG is not utilizing the third party vendor's performance advantage within its purchasing and material management function. As shown in Exhibit X-4, the CPG warehouses have the lowest inventory turnover of all UGI Utility Group warehouses. In contrast, UGI's Gas Service Division warehouses at Middletown and Lehigh have been able to increase inventory turnover to ten times the average turnover at the CPG warehouses by maximizing the efficiencies of using a central warehouse operation. Although there are differences between the relationship of UGI's Gas Service Division warehouses and CPG with its third party supplier, CPG should still be able to improve inventory turnover substantially by leveraging the supplier's performance.

Relying on the third party to provide actual performance data provides a clear conflict of interest for the third party supplier. It also hinders the ability of CPG to demand improved service or renegotiate contracted prices. As a result, CPG has no way of independently verifying third party supplier contractual performance. In fact, CPG employees have reported that certain items are purchased outside of the third party supplier due to the supplier's inability to provide the material or meet the required material specifications. This has occurred despite the fact that CPG pays a premium for its materials to garner specified services it has contracted from its third party supplier. Therefore if CPG is not maximizing the benefits of the third party supplier by reducing inventory levels, increasing inventory turnover, etc., then CPG is needlessly overspending on purchasing its materials by approximately 18%, or \$370,000 annually. As a result, it may be more economical to provide materials through UGI's NGDCs existing structure rather than renewing contracts with the third party supplier.

Recommendations

- 1. Establish appropriate emergency stock levels for each UGI Utility Group warehouse and strive to reduce the actual overall emergency stock levels maintained to 15% of total inventory.**
- 2. Strive to reduce cycle count variances at UGI's NGDCs.**
- 3. Strive to achieve inventory turnover ratios of 2 to 4 at the UGI Utility Group and in all warehouses.**
- 4. Establish minimum and maximum inventory levels for all items at all of the UGI Utility Group's warehouses.**

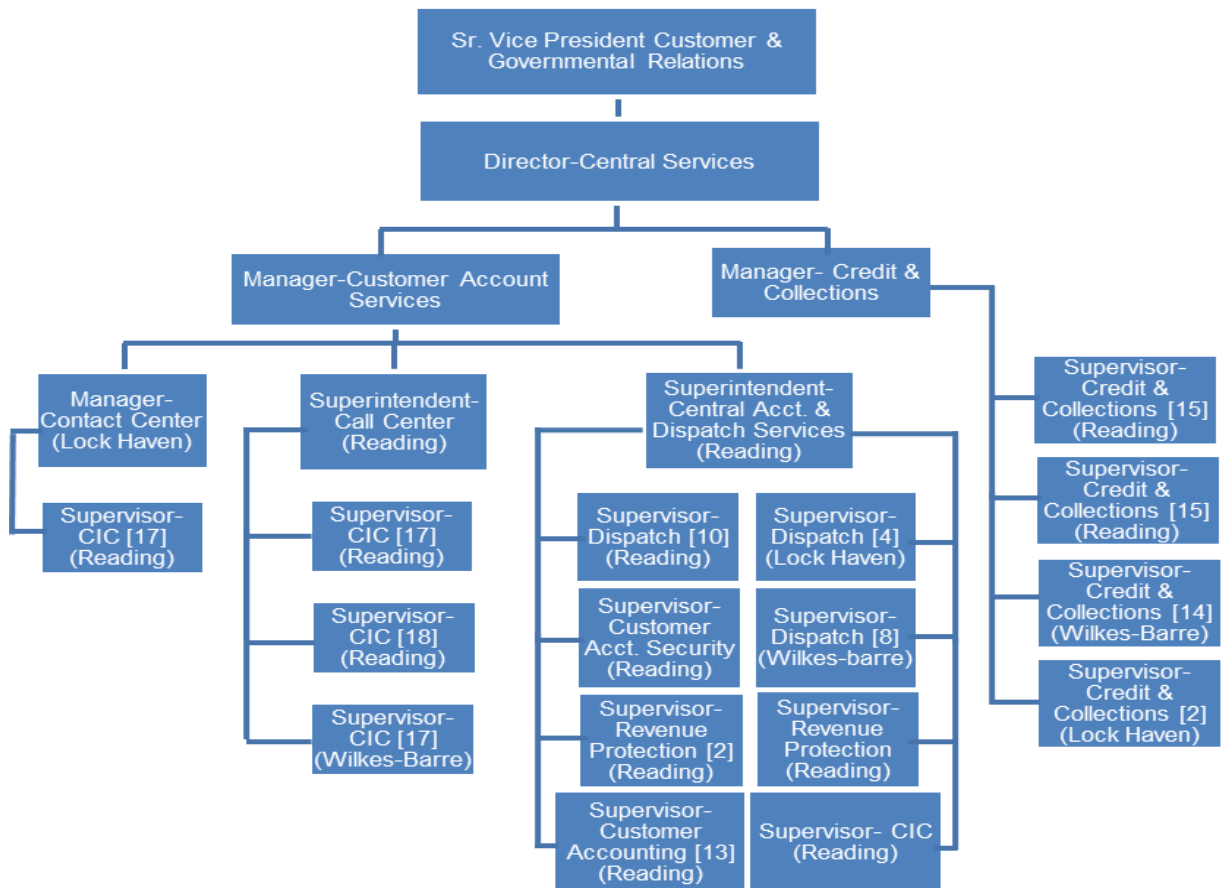
- 5. Strive to increase or expand the use of automated features of the materials management system.**
- 6. Monitor and enforce CPG's third party vendor's performance metrics and utilize the benefits of the supply contract to optimize inventory levels and turnover.**

XI. CUSTOMER SERVICES

Background

UGI Utilities, Inc.'s (UGI) Senior Vice President Customer & Governmental Relations is responsible for customer service. The UGI Director Central Services oversees the customer service function at UGI, UGI Penn Natural Gas, Inc. (PNG), and UGI Central Penn Gas, Inc. (CPG), collectively referred to as the UGI Utility Group. UGI is comprised of two regulated divisions encompassing a natural gas distribution operation (Gas Service Division) and an electric distribution operation (Electric Service Division). A summary of UGI Utility Group's Customer Account Services and Credit and Collections organization chart is shown in Exhibit XI – 1.

Exhibit XI – 1
UGI Utility Group
Customer Services Organizational Chart
As of September 2011



() – Denotes employee location

[] - Denotes number of direct reports

Source: Data Request GD-1

UGI provided service to approximately 341,300 gas customers and 62,250 electric customers and PNG and CPG provided gas service to approximately 160,800 and 76,500 customers, respectively, as of year-end 2010. As of October 2011, the UGI Utility Group has three fully staffed call centers located in Reading, Wilkes-Barre, and Lock Haven. The Reading and Wilkes-Barre call centers handle calls for UGI (both gas and electric service) and PNG and are integrated with incoming calls routed to the next available Customer Information Center (CIC) representative (note that these employees are commonly referred to as Customer Service Representatives at other companies) at either location. The Lock Haven call center handles all calls for CPG.

The Manager-Customer Account Services oversees the UGI Utility Group's CIC representatives at the Reading and Wilkes-Barre call centers and the Revenue Protection function. These CIC representatives are cross trained to handle basic and emergency in-bound calls for both gas and electric customers. The Manager-Credit & Collections oversees the UGI Utility Group's CIC representatives responsible for credit checks, delinquent account collections, bad debt write-offs, etc. Each call center utilizes a credit and collections staff including supervisory personnel and CIC representatives.

The Revenue Protection Department, headed by the Superintendent-Central Accounting & Dispatch Services, is responsible for identifying and reducing theft of service and equipment tampering and recouping lost revenue as a result of theft of service. This Department employs five full time employees, three Revenue Protection Supervisors and two Revenue Protection Representatives.

The UGI Utility Group's customer service policies and procedures are governed by the Customer Accounting Services Policy Manual. This manual includes customer service policies and procedures for special programs (i.e., budget billing, landlord shut off program, payment plans, etc.), security deposits, residential/commercial applications, call center emergency procedures, billing, credit and collections (i.e., late payment charges, bad checks, payment arrangements, third party notification, collection agency, theft, etc.).

UGI's Gas Service Division, Electric Service Division, and PNG utilize mobile meter reading technology and on-site hand held meter reading devices. Approximately 80% of the Gas Service Division, 93% of the Electric Service Division, and 98% of PNG meter reads are acquired via mobile collections. Conversely, CPG utilizes on-site hand held meter reading due to its rural, diversified service territory. A pilot program to install encoder receiver transmitter (ERT) meters in CPG's Lock Haven and Pittston service territories began in 2011. All meter reads are uploaded overnight to the Customer Information System (CIS) and then transmitted to a contracted billing service. The third party billing service prints and mails customer bills within one day.

Customers can pay their bill via standard mail, at third party bill payment centers, over the phone with credit cards or electronic transfer, the internet, or automatic bill payment. All mail in payments are routed directly to a lock box and processed by a bank which provides an electronic file to the UGI Utility Group.

CIC representatives assigned to the credit & collections function at the respective call centers are responsible for the collection of delinquent customer accounts. The CIS has a collection module to aid in managing overdue accounts. The CIS groups accounts by the age of the delinquency and size of the unpaid balances. Internal collection efforts, as governed by procedures documented in its Customer Service Policy Manual which range from reminder notices to termination notices, are initiated once accounts are 30 days past due and are in arrears of \$300 for heating accounts and \$100 for non-heating accounts before being sent to a collection agency (i.e., typically after 60 days once all internal collection efforts have concluded). The UGI Utility Group has used various collection agencies over the past five years and routinely switched agencies based on agency performance and fees. In 2011, accounts were being placed with two agencies which charged fees of 25% of collections. Uncollected accounts are written-off 110 days after they are placed with a collection agency. Exhibit XI-2, summarizes the collection agency net recovery rates results during the years 2007 through 2010 for the UGI Gas and Electric Service Divisions, PNG, and CPG.

Exhibit XI-2
UGI Utility Group
Collection Agency Net Recovery Rates
2007 - 2010

	2007	2008	2009	2010	Average
UGI (Gas & Electric*)	7.4%	5.0%	5.1%	6.3%	6.0%
PNG	3.1%	1.6%	3.2%	21.7%	7.4%
CPG	8.0%	6.9%	4.1%	8.9%	7.0%

*Separate figures not available
Source: Data Request CS-16

As shown in Exhibit XI-3, The UGI Utility Group's percentage of overall customer revenues written-off from the 2007 through 2010 (which ranged from 1.4% to 1.8% for the Gas Service Division, 0.6% to 1.2% for the Electric Service Division, 1.8% to 2.4% for PNG, and 0.6% to 2.0% for CPG) appear to be reasonable.

Exhibit XI-3
UGI Utility Group
Bad Debt Write-offs
2007 – 2010

	2007	2008	2009	2010
Gas Service Division				
Revenues	\$543,412,000	\$548,290,000	\$474,088,000	\$407,246,000
Write-offs	\$8,860,000	\$9,121,000	\$8,541,000	\$5,844,000
Percentage of Revenues Written-Off	1.6%	1.7%	1.8%	1.4%
Electric Service Division				
Revenues	\$121,168,000	\$130,481,000	\$126,175,000	\$108,402,000
Write-offs	\$762,000	\$1,260,000	\$780,000	\$1,283,000
Percentage of Revenues Written-Off	0.6%	1.0%	0.6%	1.2%
PNG				
Revenues	\$321,088,000	\$341,955,000	\$346,478,000	\$243,111,000
Write-offs	\$6,459,000	\$8,057,000	\$8,186,000	\$4,347,000
Percentage of Revenues Written-Off	2.0%	2.4%	2.4%	1.8%
CPG				
Revenues	\$161,758,000	\$164,647,000	\$160,892,000	\$122,103,000
Write-offs	\$2,151,000	\$1,842,000	\$3,328,000	\$683,000
Percentage of Revenues Written-Off	1.0%	1.1%	2.0%	0.6%

Source: Data Requests CS-9 and CS-15

In an effort to better assess customer service levels and identify improvement opportunities, the UGI Utility Group conducts a number of customer satisfaction surveys including:

- Metrix Matrix surveys conducted for the EAP measuring Gas Service Division, PNG, and CPG overall customer satisfaction against other natural gas distribution companies' within PA. The rolling surveys covered the period January 2005 to March 2011 and consisted of 24 questions related to the customer's contact with the companies. Customer responses to each survey question were provided for each operating company.
- A JD Powers and Associates survey for the Gas Service Division measuring residential and business customer satisfaction levels related to customer service, field service, billing and payment, price, corporate citizenship, and communications. The survey was conducted for the years 2008, 2009, and

2010 and compared the Gas Service Division to other eastern United States large gas utilities.

- An internal survey conducted by Metrix Matrix for the Gas Service Division commenced in the fourth quarter of 2010 gauging customer satisfaction with their most recent service request. The 25 question survey also asked if the customer would like the Gas Service Division to contact them regarding a specific issue.
- A new accounts survey conducted by Metrix Matrix covering new gas and electric customers. The survey was conducted from November 1, 2010 to March 14, 2012.
- Metrix Matrix survey conducted for the EAP measuring UGI Electric Division customer satisfaction against other Pennsylvania electric companies.

Findings and Conclusions

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

1. While the Customer Service Department has goals to gauge call center and CIC representative performance, documentation of the goals and performance results are not always evident.

As of September 2011, the UGI Utility Group had 114 CIC representatives in customer service and credit and collections. The customer information systems are capable of and do track vast customer service data. However, customer service goals are broad based and limited to two primary customer service goals related to ensuring customer satisfaction (i.e., as measured by customer surveys) and grade of service (i.e., answer 82% of calls within 30 seconds).

In addition to the metrics discussed above, CIC representatives are measured on the following metrics:

Productivity

- Total Calls per Hour
- Average Work Time per call
- Total Calls

Job Knowledge

- General - UGI & PUC Policies
- Payment Arrangement Guidelines
- Error Rate
- Collection Rate

Communication

- Call Monitoring

- Supervisor Callbacks
- Dependability
- Absent Occurrences
 - Punctuality
 - Adherence to break schedules
 - Overtime Availability

However, CIC representatives overall performance results based on the above metrics was not available or provided.

In conjunction with UGI's acquisition of PNG and CPG, the Public Utility Commission's (PUC) Acquisition Orders included a service/reliability provision to provide annual reports regarding the Companies' quality of customer service for a five year period (through 2011 for PNG and through 2013 for CPG). Among the performance indicators required to be reported were:

- percentage of calls answered within 30 seconds,
- average busy out rate,
- average call abandonment rate,
- percentage of residential meters not read as required by Commission regulations at 52 PA Code § 56.12(4)(ii) (6 months) and (iii) (12 months),
- percent of residential bills not rendered once every billing cycle,
- justified residential payment arrangement request rate,
- justified consumer complaint rate,
- gas safety response times, etc.

Proposed standards were established for each indicator. As of the 2011 reporting year, both PNG and CPG have met the established benchmarks. Although the PNG and CPG Acquisition Orders denote quality of service performance indicators, the benchmarks are labeled as proposed merger standards and only tracked and reported for regulatory purposes on an annual basis and UGI Utility Group has not committed to continuing to report upon expiration of the Acquisition Order.

By documenting and utilizing performance benchmarks, the UGI Utility Group will enhance their ability to evaluate and trend customer service performance at the three call centers. At a minimum, calls answered within 30 seconds, average busy out rate, and average call abandonment rate goals should be utilized. By continuously monitoring customer service, quality deficiencies can be detected and timely corrective action taken. It would also aid in determining if call center staffing is adequate or if additional CIC representative training is needed.

2. The UGI Utility Group does not utilize the same customer information system across its operating companies.

The Gas Service Division, Electric Service Division, and PNG call centers (Reading and Wilkes-Barre) utilize the Customer Information System (CIS), a custom

built system, while the CPG call center (Lock Haven) utilizes the Enterprise Customer Information System (ECIS). The ECIS was the system being utilized by CPG when it was acquired by UGI. The primary difference between the two systems is how a customer's account is maintained. The CIS utilizes a premise based system where an address shows the history of residents at that specific location. The ECIS is customer based with premise data also maintained. The account number follows a specific customer regardless of location (e.g., when a customer relocates). A summary comparison of the CIS and ECIS are denoted in Exhibit XI-4. Due to the differences in the systems shown in Exhibit XI-4, functionally consolidating the CPG call center with the UGI and PNG (i.e., Reading and Wilkes-Barre) call centers is not easily achieved.

Exhibit XI-4
UGI Utility Group
Summary of Customer Information System and Enterprise Customer
Information System Technical Differences

CIS	ECIS
Cobol and Assembler – developed in-house	Purchased I-Series Product with GUIO Windows Viewer Interface
Maintained internally	Internal customization allowed (mainly RPG) but programming changes are minimized by client managed control tables
Premise Based System – address shows history of residents	Customer Based with premise data maintained- account number follows customer (regardless of location)
Data copies to data warehouses for analysis by clients	Client Query tools provided with ECIS that include Windows based interfaces (Word, Excel)
Internally programmed letter system	Client driven correspondence management (letters)
Separate Workforce Management System (WMS) interfacing with CIS	Jobs scheduling (client independence for ECIS without IT support)

Source: Data Request CS-19

Due to the lack of uniformity among the CIS and ECIS as well as interfacing separate standalone workforce management systems for the respective CIS systems and the resulting ongoing need to maintain two different systems, the UGI Information Technology (IT) Department retained an independent consultant to evaluate the costs and risks to convert all call centers to one system and implement standardized field work management systems. Based upon their initial analysis, the replacement will require a significant capital and operating investment over a multi-year period. The evaluation and conversion process has been ongoing since 2010.

Standardization of the CIS would enable all call centers to operate in a more cost efficient manner eliminating dual processes and maintenance of two systems. Additionally, call center personnel utilization would improve with the ability to cross train personnel to handle customer service calls from any call center. Finally, if all call centers utilize one system, the UGI Utility Group will be in a position to evaluate the benefits for further consolidation of the call centers and develop one set of metrics/goals for evaluation purposes.

Recommendations

- 1. Document existing customer service goals and track and maintain metrics for all call centers and CIC representatives within the UGI Utility Group.**
- 2. Develop multiple cost/benefit scenarios to select and implement, as appropriate, a standardized customer information system both inclusive and exclusive of an integrated workforce management system and to explore the economic and operational advantages of consolidating the call centers at the UGI Utility Group.**

XII. FLEET MANAGEMENT

Background

UGI Utilities, Inc.'s (UGI) Fleet Operations is responsible for providing transportation services for its operations and for its affiliates UGI Penn Natural Gas, Inc. (PNG) and UGI Central Penn Gas, Inc. (CPG). UGI is comprised of two regulated divisions encompassing a natural gas distribution operation (Gas Service Division) and an electric distribution operation (Electric Service Division). The UGI Director of Central Services is responsible for Fleet Operations. Reporting to the Director Central Services is the Manager of Supply Chain & Fleet Operations who oversees the Superintendent of Fleet & Transportation who has direct oversight of fleet services.

As of May 2011, UGI, PNG, and CPG (collectively referred to as the UGI Utility Group) had 14 employees in Fleet Operations. Exhibit XII – 1 shows the fleet staffing levels by Operation Division from 2006 through 2011. The decrease in staffing levels from a high of 29 in 2006 to 14 in 2010 and 2011 resulted from an increased outsourcing of fleet maintenance.

**Exhibit XII-1
UGI Utility Group
Fleet Operations Staffing Levels by Operating Division
2006-2011**

Year	Number of Employees				
	UGI Gas Service Division ¹	PNG	CPG	UGI Electric Service Division	Totals
2006	20	6	0	3	29
2007	19	6	0	3	28
2008	18	6	0	3	27
2009	9	5	0	2	16
2010	9	4	0	1	14
2011	9	4	0	1	14

¹ Includes three management employees who provide support services to the entire UGI Utility Group.
Source: Data Request FT-7

The Utility Group's corrective maintenance work for specialty services such as auto body work, transmission work, engine repair, etc. is outsourced. The UGI Utility Group operates garages and service facilities in Wilkes-Barre and Archibald. Therefore, all basic preventative maintenance (PM) including oil changes, inspections, brake replacement, and tires is done in-house for these areas. The Wilkes-Barre garage services the Gas Service Division, Electric Service Division, and PNG vehicles while the

Archibald garage primarily services PNG vehicles. Despite the work performed at these two garages, approximately 80% to 85% of all vehicle maintenance is outsourced.

The UGI Utility Group contracts with Penske, Inc. (Penske) to perform vehicle maintenance and repairs for a pre-determined fee at facilities in Reading, Allentown, Lancaster, Harrisburg, Lebanon, Carlisle, and Hazleton. Vehicle maintenance tasks that fall outside the agreement are billed on a time and material basis at a fixed hourly rate. The UGI Utility Group also utilizes Wheels, Inc.'s (Wheels) Maintenance Advantage Program (MAP) as an alternative to Penske's services. The MAP requires commercial vendors to obtain approval from MAP advisors before performing work on any vehicle. When the maintenance/repair costs exceed \$1,000, the vehicles mileage is more than 100,000 miles, or it's age is 8 years or greater, the MAP advisors must obtain approval from UGI Fleet Operations management before work on the vehicle can be performed.

As of August 2010, UGI Utility Group had 1,315 vehicles in its fleet. A profile of the number of vehicles by vehicle class is shown in Exhibit XII-2.

Exhibit XII-2
UGI Utility Group
Number of Vehicles by Equipment Class
As of August 2010

Equipment Class	Number of Vehicles
Passenger Car & SUV	169
Van & Light Truck	550
Heavy Truck	205
Equipment & Trailers	391
Total Vehicles and Equipment	1,315

Source: Data Request FT-5

The UGI Utility Group's vehicles are refueled at Company refueling stations located in Wilkes-Barre, Archibald, Reading, Lehigh Region, and Lancaster (diesel fuel) or at public fueling stations utilizing Wright Express (WEX) fuel cards. Fuel transactions from Company fueling stations are stored in the Fleet Data System (FDS) data base. Fuel purchases utilizing WEX fuel cards are uploaded from vendors daily with any exception thresholds (i.e., number of refuelings in a day, excessive dollar amount, etc.) noted.

An annual list of vehicles for potential replacement is compiled utilizing the following thresholds:

- mileage greater than 100,000 miles or greater than 5,000 hours of operation depending on the type of equipment
- life to date maintenance/repair expenses greater than \$5,000

- age greater than 10 years

The list is then shared with department management and fleet personnel to help identify high priority candidates for replacement. Responses are used by the Superintendent of Fleet & Transportation to assess and rank vehicles for replacement. Actual vehicle replacement is dictated by the vehicle lease budget but generally replacement thresholds are followed.

With the exception of work trailers, which are purchased, the Gas Service Division and Electric Service Division have been replacing all vehicles on an approximately 9 years leasing program. PNG and CPG owned their vehicles when acquired by UGI; however, vehicle replacements are done through leasing. In the past, the UGI Utility Group evaluated the costs of acquiring new vehicles through lease or purchase (lease versus buy analysis) and determined leasing was the lower cost preferred method. The UGI Utility Group reasoned that negative cash flow is experienced in a capital purchase of vehicles, whereas leasing allows payment for vehicle use to occur over an extended period of time, greatly reducing the need for large cash outlays. In summary, the cost of capital exceeds financing costs. Furthermore, one of UGI Utility Group's fleet vendors, Wheels, Inc., has been providing favorable financing for vehicle leases since 2009.

Findings and Conclusions

Our examination of the Fleet Management function included a review of operating and safety policies and procedures, staffing, acquisition 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. The UGI Utility Group does not have a uniform vehicle safety policy.

The various vehicle safety policies for each regulated operation are outlined below:

- The UGI Gas Service Division's Safety and Health Program includes a Fleet Safety chapter detailing vehicle safety including driver selection, accident reporting, fleet safety rules, written driver safety examination, heavy equipment safety guidelines, etc. There is no mention of cell phone usage/texting.
- For PNG, the only data provided was a page from the former PG Energy Safety & Compliance Manual pertaining to working areas where natural gas leaks are suspected. The vehicle safety policy pertains to keeping vehicles, equipment, etc. turned off or at a distance from natural gas leaks.

- For CPG, Section 40.160 Vehicle Operation Safety of the former PPL Gas Utilities' Safety, Health & Environmental Manual serves as the vehicle safety policy. The policy is comprehensive.
- The UGI Electric Service Division's Employee Safety Rules include the sections Motor Vehicle Safety (2-19.00) and Ariel Lift Trucks, Electric Line Trucks (4-7.00). Motor vehicle safety policies are vague and general in nature. Absent are policies regarding seat belt usage, cell phone usage/texting, and accident reporting. The Ariel Lift Trucks, Electric Line Trucks policy appears comprehensive.
- The UGI Employee Handbook also includes a section titled Vehicles that denotes vehicle safety policies.

While it is understandable vehicle safety policies could vary among companies, basic components such as seat belt usage, accident reporting, cell phone usage/texting, authorized use of company vehicles, etc. should be part of all vehicle safety policies. A lack of uniformity between UGI's Gas Service Division and Electric Service Division's vehicle safety policies was exacerbated with the acquisitions of PNG and CPG and their distinct policies. However, the UGI Utility Group's Safety Department does have an overall safety program, with a focused area on defensive driving. The defensive driving program included initiatives to reduce incidents through number of programs. A drive forward program instructs employees to park in a way which will allow them to pull out, and video camera recorders have been installed on approximately 100 vehicles to aid in individualized driver training. Complete initiatives of the Safety Departments safety program is covered in Chapter XIII - Human Resources and Safety Programs.

In 2011, the UGI Superintendent of Fleet & Transportation was in the process of revising and standardizing vehicle operating policies and procedures that would be applicable to all of the UGI Utility Group. A draft copy had been produced with the final version expected to be completed in November 2011. The document pertained only to administrative functions related to vehicle usage. Reportedly, the UGI Human Resources Safety Group is working on vehicle safety policies for the UGI Utility Group with the goal of establishing a uniform policy.

A uniform and concise vehicle safety policy would ensure that all employees are aware of their safe vehicle operating responsibilities. Having one consistent safety policy would simplify administration of the policy by Fleet Operations across the UGI Utility Group. There should be a procedure to formally track employee acknowledgement of receipt and review of the safety policy.

2. The UGI Utility Group is not effectively using vehicle performance metrics.

As previously discussed, the UGI Utility Group's vehicle maintenance is performed by in-house mechanics or outsourced to third party vendors. Vehicle mileage is gathered and recorded in the FDS when PM is performed and also when vehicles are refueled using the WEX fuel card. Therefore, Fleet Operations tracks annual miles driven and annual maintenance costs, which are the keys to developing

various performance metrics. Despite the ability to develop metrics, the UGI Utility Group has not created or tracked performance metrics for any vehicle. In order to establish appropriate cost performance metrics such as maintenance and repair costs per mile, miles per gallon, etc., Fleet Operations must accurately record mileage per vehicle annually and track it on a historic basis.

Performance metrics are crucial in assessing the reasonableness of the costs of operating and maintaining a vehicle. Without performance metrics the UGI Utility Group cannot adequately and effectively gauge the manner in which their fleet is performing. Additionally, Fleet Operations tracks the maintenance and operating costs for all UGI Utility Group operations but doesn't use this data to perform any kind of cost performance metrics to determine the efficiency of vehicles within each vehicle class.

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

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

Maintenance and repair cost per mile or per hour (depending on the type of vehicle), like miles per gallon, is an important tool in determining the efficiency of equipment within the same vehicle class. Reviewing an annual cost per mile ratio will identify problem vehicles within each category. KPIs such as cost per mile, miles per gallon, etc. are intended to demonstrate performance in a given area, one that should be of interest to management and aid in making repair or replace decisions. However in 2011 Fleet Operations was not analyzing trends in miles per gallon or costs per mile for each vehicle or vehicle class. As a result, no KPIs have been developed which makes it impossible for the Company to effectively evaluate the operations of its fleet.

Recommendations

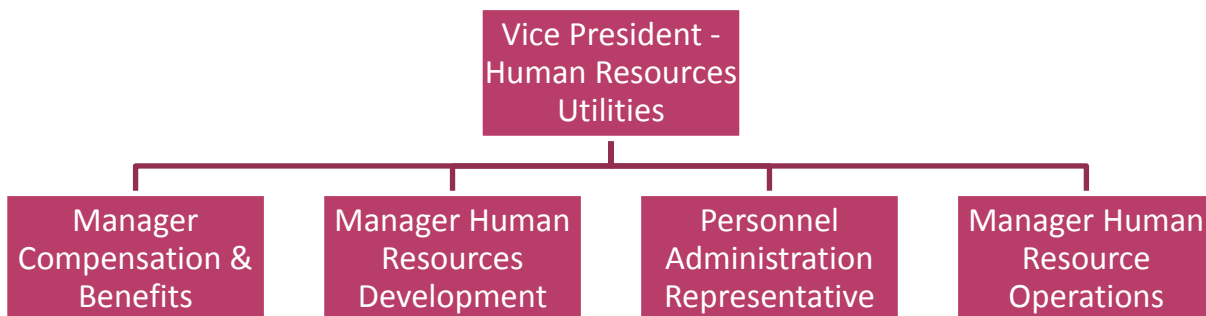
- 1. Compile a uniform and comprehensive vehicle safety policy applicable to the Gas Service Division, Electric Service Division, PNG, and CPG.**
- 2. Improve utilization of Key Performance Indicators (KPIs) for each vehicle class and track actual performance against the KPIs.**

XIII. HUMAN RESOURCES AND SAFETY PROGRAMS

Background

UGI Utilities Inc.'s (UGI) Human Resources Department provides recruitment and hiring, affirmative action, compensation, employee benefits, and training services to UGI, UGI Penn Natural Gas, Inc. (PNG), and UGI Central Penn Gas, Inc. (CPG) (collectively referred to as the "UGI Utility Group"). UGI is comprised of two regulated divisions encompassing natural gas distribution operations (Gas Service Division) and electric distribution operations (hereafter individually referred to as the Electric Service Division). The Human Resources Department, as shown in Exhibit XIII-1, is overseen by the Vice President of Human Resources.

**Exhibit XIII-1
UGI Utilities, Inc.
Human Resources Department Organizational Chart
As of September 2011**



Source: Data Request GD-1

The goal of the UGI Utility Group's salary administration program is to ensure that positions are externally competitive with the marketplace and internally equitable. Periodic salary benchmarking studies are conducted by an outside compensation consultant. These studies are conducted every two to three years by comparing specific UGI Utility Group positions to positions available in the marketplace (utilities and industry). In addition to these benchmarking studies, the UGI Utility Group reviews published survey data related to local market areas, other utilities, and general industrial companies of comparable size and structure (i.e., American Gas Association data). The UGI Utility Group targets plus or minus 10% of the 50th percentile when determining compensation. Based on the reviews, adjustments are made to the salary grade ranges during discussions with all Vice Presidents. Wages and benefits for union employees are determined through the collective bargaining process. The UGI Utility Group's

employees are represented by three unions at UGI (two for the Gas Service Division and one at the Electric Service Division), three at PNG, and six at CPG.

Exempt employees³⁷ (excluding executives) are eligible to participate in an annual incentive program with a target bonus payout of 3% of an employee's salary up to a maximum payout of 5% in any given year. The goal of the plan is to reward individual and group performance in two areas that are within the control and/or influence of employees: operational expenses and improved safety performance. Rewards/bonuses are increased for performance in excess of the established goals and reduced when the goals are not met.

In order to place an increased importance on safety, the UGI Utility Group moved its safety program from within the Human Resources Department to a standalone Safety Department led by the Director of Safety, Compliance & Operational Support who reports directly to the President and Chief Executive Officer. The UGI Utility Group's safety programs have been developed based on Occupational Safety and Health Administration (OSHA) regulations complemented by internal policies and procedures to eliminate hazards from the work environment. The safety program's focus areas include: cold weather injuries, excavation safety, defensive driving, and protective equipment. Additionally, the Safety Department communicates safety information through various methods including monthly safety meetings, monthly reports on safety statistics, and periodic safety advisories. Since 2009, the UGI Utility Group has increased its focus on behavior based safety training in order to promote safe decisions at home as well as at work. The effectiveness of safety training is primarily measured in the reduction of accidents.

Exhibit XIII-2 shows the safety trends for 2007 through 2010 at UGI Utility Group excluding the Electric Service Division. All of the entities have experienced substantial decreases in the number and rate of OSHA recordable incidents from 2007 to 2010. CPG and PNG also have experienced decreases in the number and rate of lost time incidents (LTI) from 2007 to 2010. The Electric Service Division's safety trends from 2007 to 2010 are shown on Exhibit XIII-3. The Electric Service Division has generally experienced substantial decreases in all of its safety statistics from 2007 to 2010.

The Safety Department began an initiative to reduce vehicle accidents in 2008. During 2009, the UGI Utility Group installed video camera recorders in 25 vehicles that were driven by employees who historically had the highest accident rates. The video cameras only recorded vehicle experiences during an event as determined by the recorder's g-force sensors. This information is used to provide individualized training and coaching for employees. This program has expanded to the point, as of mid-2011, that approximately 100 vehicles had video cameras installed. Additional recent initiatives to reduce vehicle accidents include prohibiting the use of any electronic devices while driving and a drive forward policy that instructs employees to park vehicles rear end first so that the first move when moving from a parked location is forward.

³⁷ Employees paid on a salary basis and exempt from overtime pay.

Exhibit XIII-2
UGI Utilities, Inc. - Gas Service Division
UGI Central Penn Gas, Inc.
UGI Penn Natural Gas, Inc.
Safety Trends
2007 – 2010

	2007	2008	2009	2010
Lost Time Incidents	3	3	5	6
OSHA Recordable Incidents	27	19	16	15
Lost Time Incident Rate	0.4	0.4	0.7	0.8
OSHA Recordable Incident Rate	3.3	2.5	2.1	2.0
Lost Time Incidents	5	2	1	1
OSHA Recordable Incidents	9	6	7	2
Lost Time Incident Rate	1.7	0.7	0.4	0.4
OSHA Recordable Incident Rate	3.1	2.2	2.8	0.9
Lost Time Incidents	11	10	3	2
OSHA Recordable Incidents	25	22	10	5
Lost Time Incident Rate	2.6	2.5	0.8	0.6
OSHA Recordable Incident Rate	5.9	5.5	2.8	1.5
OSHA Recordable Incident Rate	4.3	4.0	3.8	3.4

Source: Data Request HR-4.

Exhibit XIII-3
UGI Utilities, Inc – Electric Service Division
Safety Trends
2007 – 2010

	2008	2009	2010
Lost Time Incidents	0	2	0
OSHA Recordable Incidents	2	2	2
Lost Time Incident Rate	0	2.5	0
OSHA Recordable Incident Rate	2.3	2.5	2.6
OSHA Recordable Incident Rate	3.7	3.6	3.1

Source: Data Request HR-4

The Safety Department monitors motor vehicle accidents and total injuries in a combined annual safety goal. Exhibit XIII-4 shows the UGI Utility Group's overall safety goals and trends since implementation in 2009. The UGI Utility Group strives for at least a 10% reduction in the overall safety goal each year. The UGI Utility Group has shown a decrease in the total number of vehicle accidents and injuries since 2009. The Safety Department breaks down the overall safety goal into regional goals between the north and south operating regions of the UGI Utility Group. The regional goals are tied to an incentive program for field employees with the top performers in safety receiving an award.

The UGI Utility Group uses Oracle E-Business for its human resource information system (HRIS). The HRIS's primary modules include: Human Resources, Payroll, Employee Self-Service, and Benefits. The HRIS generates a number of standard human resource, benefit and payroll reports and has the capability to create ad hoc reports. Employees in the Human Resources and Payroll Departments have access to make changes in the HRIS.

Exhibit XIII-4
UGI Utility Group
Total Injuries and Motor Vehicle Accidents
Fiscal Year 2009 – 2011

	2009	2010	2011
Region Goals			
North	58	41	38
South	69	69	57
Totals	127	110	95
Actual Results			
North	45	43	44
South	79	64	59
Totals	124	107	103

Source: Data Request HR-21

Findings and Conclusions

Our examination of the Human Resource and Safety Program Management function included a review of the HRIS, safety programs, training, and compensation. Based on our review, the UGI Utility Group should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its human resources and safety program function by addressing the following:

1. UGI Gas Service Division, PNG and CPG have not fully consolidated their gas safety manuals into a single comprehensive manual.

After UGI acquired PNG in 2006, the Safety Department began consolidating its gas safety manual in order to ensure that PNG's safety policies and procedures conformed to the safety policies and procedures already in place at UGI's Gas Service Division. Later, in 2008, UGI acquired CPG which necessitated the consolidation of an additional gas safety manual.

As part of the process to consolidate each section of the safety manual, UGI's Gas Service Division reviews each of the respective manuals to revise and update language as needed. Additionally, the safety equipment employed at each company is being reviewed in order for the Safety Department to select the most advantageous equipment to become the standard used within the UGI Utility Group. As each section of the consolidated safety manual is finalized, UGI's Gas Service Division, PNG and CPG train all applicable gas employees regarding the updated policies and procedures. Newly consolidated policies, procedures or safety equipment becomes the new standard only after all employees have received related training.

As of September 2011, at the end of Audit Staff's field work, over one dozen sections of the safety manual had been consolidated. However, management estimates that it will take until approximately October 2014 to fully consolidate the manuals. On the other hand, until safety procedures are standardized, it will be more difficult to ensure that proper procedures are followed especially during emergency events when crews are assisting in different operating areas. Having consistent safety policies and procedures as well as standardized safety equipment should be a natural gas distribution company's top priority and should be completed as soon as possible.

Recommendation

- 1. Expedite the consolidation of the gas safety manuals for UGI's Gas Service Division, PNG and CPG into a single comprehensive manual.**

XIV. DIVERSITY

Background

Due to the unique organizational structure of UGI Utilities, Inc. (UGI) and its regulated subsidiaries, UGI Penn Natural Gas, Inc. (PNG) and UGI Central Penn Gas, Inc. (CPG) (collectively referred to as the “UGI Utility Group”), many common services are jointly provided to all three Utilities. Diversity related functions are performed within two separate departments; Human Resources (HR) and Central Services. UGI’s HR Department has the responsibility of collecting Equal Employment Opportunity (EEO) data, preparing a single Affirmative Action Plan (AAP) for all three regulated utilities, preparing quarterly internal diversity reports, local recruitment, staffing, and labor relations. UGI’s Central Services Department, and more particularly the procurement section, is responsible for identifying Minority, Women, and Disadvantage Business Enterprises (MWDBE), and assuring their inclusion in the bidding process and tracking of MWDBE purchases.

The Pennsylvania Public Utility Commission (PUC or Commission) has encouraged utilities to proactively improve the diversity in their workforce and purchasing efforts for almost two decades. In March 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 \$10,000,000) to file quarterly diversity status reports with the Commission. In May 1994, the Commission issued an order directing Section 516 utilities to file diversity status reports on a semi-annual rather than quarterly basis, to submit EEO plans annually, and to file certain diversity procurement data. In February 1995, the Commission adopted Chapter 69 regulations (at 52 Pa. Code §69.801-69.809) which encourage utilities to include diversity efforts as a component of their business strategy. Later, in March 1997, the Commission issued diversity report clarifications and revisions, which most significantly included the inclusion of multi-year data, and a change from semi-annual to annual reporting.

Exhibit XIV-1 depicts a summary of the UGI Utility Group’s total number of employees by EEO Job category, gender, and race for 2007 through 2010. However, as discussed in Chapter II – Background, CPG was acquired in 2008 which elevated overall staffing levels and therefore CPG’s employees are not included in the 2007 data. However, by adjusting for the acquisition, the UGI Utility Group has reduced overall staffing levels by 121 employees between 2007 and 2010. This decrease is reportedly the result of staffing efficiency reductions that resulted from the PNG and CPG acquisitions and the centralizing of certain functions. Despite the employee reductions, the UGI Utility Group did increase the number of minority male workers by nine or approximately 17% from 2007 to 2010. Additionally, over the past several years the UGI Utility Group has undergone multiple Office of Federal Contract Compliance Program (OFCCP) audits with no significant issues being identified.

UGI Utility Group
Number of Employees by EEO Category, Gender, and Race
For Year End September 30, 2007 – 2010^a

Total Company							
EEO Job Categories	Number of Employees				% 2010 Total Company	Net Increase/ (Decrease)	Change 2007- 2010
	2007	2008^a	2009	2010			
Officials and Managers	203	230	207	205	14.6%	2	1.0%
Professionals	148	179	178	182	13.0%	34	23.0%
Technicians	58	82	79	73	5.2%	15	25.9%
Sales Workers	36	47	41	41	2.9%	5	13.9%
Administrative Support Workers	303	324	308	299	21.3%	(4)	-1.3%
Craft Workers	312	456	449	442	31.5%	130	41.7%
Operatives	49	53	49	46	3.3%	(3)	-6.1%
Laborers and Helpers	127	127	123	117	8.3%	(10)	-7.9%
Totals	1236	1498	1434	1405	100.0%	169	13.7%

White Males							
EEO Job Categories	Number of Employees				% 2010 Total Company	Net Increase/ (Decrease)	Change 2007- 2010
	2007	2008^a	2009	2010			
Officials and Managers	162	180	168	164	80.0%	2	1.2%
Professionals	93	104	102	106	58.2%	13	14.0%
Technicians	41	58	56	52	71.2%	11	26.8%
Sales Workers	28	36	32	31	75.6%	3	10.7%
Administrative Support Workers	22	25	18	16	5.4%	(6)	-27.3%
Craft Workers	282	425	418	411	93.0%	129	45.7%
Operatives	39	44	40	38	82.6%	(1)	-2.6%
Laborers and Helpers	118	117	114	107	91.5%	(11)	-9.3%
Totals	785	989	948	925	65.8%	140	17.8%

a. Data is included for CPG as of September 30, 2008 although not acquired by UGI until October 1, 2008

UGI Utility Group
Number of Employees by EEO Category, Gender, and Race
For Year End September 30, 2007 – 2010^a

White Females							
EEO Job Categories	Number of Employees				% 2010 Total Company	Net Increase/ (Decrease)	Change 2007- 2010
	2007	2008^a	2009	2010			
Officials and Managers	37	46	37	35	17.1%	(2)	-5.4%
Professionals	43	60	57	57	31.3%	14	32.6%
Technicians	12	20	19	16	21.9%	4	33.3%
Sales Workers	5	9	7	8	19.5%	3	60.0%
Administrative Support Workers	229	247	245	240	80.3%	11	4.8%
Craft Workers	1	1	1	2	0.5%	1	100.0%
Operatives	6	6	6	3	6.5%	(3)	-50.0%
Laborers and Helpers	2	2	2	1	0.9%	(1)	-50.0%
Totals	335	391	374	362	25.8%	27	8.1%

Minority Males							
EEO Job Categories	Number of Employees				% 2010 Total Company	Net Increase/ (Decrease)	Change 2007- 2010
	2007	2008^a	2009	2010			
Officials and Managers	3	3	2	4	2.0%	1	33.3%
Professionals	6	6	10	9	4.9%	3	30.0%
Technicians	3	2	2	3	4.1%	0	n/a
Sales Workers	2	2	2	2	4.9%	0	n/a
Administrative Support Workers	3	3	2	3	1.0%	0	n/a
Craft Workers	29	30	30	29	6.6%	0	n/a
Operatives	3	2	2	5	10.9%	2	66.7%
Laborers and Helpers	5	7	6	8	6.8%	3	60.0%
Totals	54	55	56	63	4.5%	9	16.4%

a. Data is included for CPG as of September 30, 2008 although not acquired by UGI until October 1, 2008

UGI Utility Group
Number of Employees by EEO Category, Gender, and Race
For Year End September 30, 2007 – 2010^a

Minority Females							
EEO Job Categories	Number of Employees				% 2010 Total Company	Net Increase/ (Decrease)	Change 2007- 2010
	2007	2008^a	2009	2010			
Officials and Managers	1	1	0	2	1.0%	1	100.0%
Professionals	6	9	9	10	5.5%	4	66.7%
Technicians	2	2	2	2	2.7%	0	n/a
Sales Workers	1	0	0	0	0.0%	(1)	- 100.0%
Administrative Support Workers	49	49	43	40	13.4%	(9)	-18.4%
Craft Workers	0	0	0	0	0.0%	0	n/a
Operatives	1	1	1	0	0.0%	(1)	- 100.0%
Laborers and Helpers	2	1	1	1	0.9%	(1)	-50.0%
Totals	62	63	56	55	3.9%	(7)	-11.3%

a. Data is included for CPG as of September 30, 2008 although not acquired by UGI until October 1, 2008
Source: Data Request DV-12 & 2007-2010 EEO-1 Reports

Findings and Conclusions

Our examination of the Diversity function included a review of the AAP and EEO reports, staffing trends, labor market comparisons, purchasing practices and trends, policies and procedures, and a review of the latest PUC diversity filings. Based on our review, the UGI Utility Group should initiate or devote additional efforts to improving the efficiency and/or effectiveness of its diversity practices by addressing the following:

1. Women are underrepresented in several job categories.

While the UGI Utility Group is committed to improving diversity in its workforce through the application of their affirmative action plan³⁸, underrepresentation of women is still occurring in several job categories. Underrepresentation (or underutilization) occurs when the percentage of women or minorities employed in a specific job group is less than the availability within the relevant labor market as measured using one of four

³⁸ The UGI Utilities Group files a single affirmative action plan

methods³⁹ accepted by the OFCCP. The UGI Utility Group utilizes the two standard deviation method (the method most likely to yield the least underutilization), to determine if specific EEO job categories have underrepresentation of certain job categories based on the expected availability of the specific labor market for that job group. For each job group, in each geographic area, there is a different mean number of available employees in the job market. By using the two standard deviation method, UGI establishes an acceptable range of utilization around the mean that will be different for each job group. Therefore, one job group could have a relatively small difference between the representation percentage and availability percentage and be indicated as being not underrepresented while another with a larger difference could be indicated as being underrepresented. In all underutilized job groups, the UGI Utility Group set a general goal to achieve full utilization.

Exhibit XIV-2 summarizes the UGI Utility Group's combined underutilization analysis for both women and minorities, broken down by job group and operating region as of December 31, 2010. Due to UGI Utility Group's use of the two standard deviation method, Exhibit XIV-2 will not always show a job group as being underrepresented even though the availability percentage is higher than the percentage currently utilized. It should be noted that the information presented in Exhibit XIV-1 of employees by job category, gender, and race encompasses the period ended September 30, 2010 (UGI Utility Group's fiscal year-end). The data in Exhibits XIV-2, detailed by job group and operating region, is based on a calendar year end. Therefore, the small deviations in the number of employees between Exhibit XIV-1 and 2 are the result of the above described timing differences.

The underutilization analysis presented in Exhibit XIV-2 shows that the UGI Utility Group's workforce is underutilized in 8 of 51 job groups for women, or 16%, and 1 of 51 job groups for minorities, or 2% of the job groups. The UGI Utility Group has goals to increase the number of minorities and woman in identified underrepresented job groups by recruiting from a number of universities, keeping the affirmative action plan in mind when recruiting, and striving to include 20% diverse candidates in the hiring pool each year. Although the UGI Utility Group does not have specific initiatives in place, other factors beyond the Groups control contribute to the underutilization of minorities and women. While minorities and women are statistically available within the population, the demographics of the population, especially within PNG and CPG's territory, have few qualified minority workers for many job groups. Also, a number of the job groups experiencing underrepresentation of women have historically been filled by males and therefore, pose a barrier for attracting qualified female applicants. Despite its general diversity programs and conditions, the UGI Utility Group does not have specific initiatives to increase utilization of underrepresented groups. Without specific initiatives in place the UGI Utility Group lacks a road map to achieve their general goals. Instead, clear and specific initiatives or strategies would provide the UGI Utility Group with an ability to actively achieve greater or full representation. Examples of such programs could include mentoring programs within universities, trade school partnerships, intern and externships, etc.

³⁹ 1. Two standard deviation rule; 2. Any difference rule; 3. Difference greater than one person; 4. 80% rule

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

READING									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Officials and Managers	65	20	30.8%	31.4%	No	1	1.5%	6.8%	No
Professionals	115	42	36.5%	35.0%	No	17	14.8%	8.0%	No
Technicians	18	6	33.3%	41.8%	No	2	11.1%	7.5%	No
Sales Workers	4	1	25.0%	18.1%	No	1	25.0%	22.0%	No
Administrative Support Workers	158	145	91.8%	90.0%	No	38	24.1%	26.2%	No
Craft Workers	21	0	0.0%	0.6%	No	3	14.3%	3.1%	No
Operatives	22	0	0.0%	9.2%	No	1	4.5%	7.1%	No
Laborers and Helpers	12	0	0.0%	12.8%	No	0	0.0%	15.3%	No
Executive level Officials	21	3	14.3%	33.5%	No	1	4.8%	5.7%	No
Totals	436	217	49.8%			64	14.7%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

WILKES BARRE									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Officials and Managers	17	2	11.8%	21.7%	No	0	0.0%	4.6%	No
Professionals	29	6	20.7%	34.5%	No	1	3.4%	5.7%	No
Technicians	7	0	0.0%	43.4%	Yes	0	0.0%	6.3%	No
Sales Workers	3	1	33.3%	20.4%	No	0	0.0%	20.3%	No
Administrative Support Workers	15	13	86.7%	96.0%	No	1	6.7%	2.6%	No
Craft Workers	20	0	0.0%	50.5%	Yes	2	10.0%	10.3%	No
Operatives	9	5	55.6%	15.8%	No	1	11.1%	11.3%	No
Executive level Officials	1	0	0.0%	21.2%	No	0	0.0%	4.2%	No
Totals	101	27	26.73%			5	5.0%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

LANCASTER									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Craft workers	21	0	0.0%	0.0%	No	6	28.6%	0.4%	No
Laborers and helpers	2	0	0.0%	17.2%	No	0	0.0%	22.6%	No
Total	23	0	0.0%			6	26.1%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

LEHIGH									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Officials and Managers	10	2	20.0%	27.1%	No	0	0.0%	0.6%	No
Professionals	5	1	20.0%	20.9%	No	0	0.0%	0.3%	No
Technicians	8	3	37.5%	47.2%	No	0	0.0%	0.5%	No
Sales Workers	7	0	0.0%	15.1%	No	1	14.3%	1.7%	No
Administrative Support Workers	12	12	100.0%	97.2%	No	1	8.3%	2.1%	No
Craft Workers	71	0	0.0%	7.9%	Yes	10	14.1%	5.9%	No
Operatives	4	1	25.0%	17.1%	No	1	25.0%	0.5%	No
Laborers and Helpers	19	1	5.3%	17.2%	No	1	5.3%	4.3%	No
Total	136	20	14.7%			14	10.3%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

MIDDLETOWN									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Officials and Managers	17	1	5.9%	30.4%	Yes	0	0.0%	1.2%	No
Professionals	4	2	50.0%	23.8%	No	1	25.0%	0.3%	No
Technicians	9	3	33.3%	46.0%	No	3	33.3%	0.8%	No
Sales Workers	12	2	16.7%	15.8%	No	0	0.0%	2.8%	No
Administrative Support Workers	18	16	88.9%	97.6%	Yes	3	16.7%	2.4%	No
Craft Workers	53	0	0.0%	5.6%	No	7	13.2%	10.7%	No
Operatives	4	1	25.0%	19.8%	No	0	0.0%	0.8%	No
Laborers and Helpers	28	1	3.6%	17.2%	No	7	25.0%	6.3%	No
Total	145	26	17.9%			21	14.5%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

PNG									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Officials and Managers	48	7	14.6%	33.8%	Yes	0	0.0%	5.4%	No
Professionals	18	12	66.7%	34.2%	No	0	0.0%	7.9%	No
Technicians	22	5	22.7%	35.1%	No	0	0.0%	4.7%	No
Sales Workers	8	2	25.0%	25.0%	No	0	0.0%	16.9%	No
Administrative Support Workers	58	55	94.8%	96.1%	No	2	3.4%	4.8%	No
Craft Workers	112	1	0.9%	1.8%	No	2	1.8%	0.6%	No
Operatives	6	1	16.7%	11.7%	No	0	0.0%	7.7%	No
Laborers and Helpers	61	0	0.0%	18.6%	Yes	0	0.0%	20.2%	Yes
Total	333	83	24.9%				0.0%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations

UGI Utility Group
Underutilization Analysis by Operating Region
As of December 31, 2010

CPG									
Job Group	Total Employees	Women				Minorities			
		Representation		Availability Percentage	Under Represented	Representation		Availability Percentage	Under Represented
		Number Employed	Percentage			Number Employed	Percentage		
Officials and Managers	23	2	8.7%	30.1%	Yes	0	0.0%	5.3%	No
Professionals	10	4	40.0%	33.4%	No	0	0.0%	5.6%	No
Technicians	11	2	18.2%	37.1%	No	0	0.0%	6.0%	No
Sales Workers	7	1	14.3%	38.8%	No	0	0.0%	6.7%	No
Administrative Support Workers	51	51	100.0%	95.9%	No	0	0.0%	2.9%	No
Craft Workers	148	0	0.0%	0.5%	No	0	0.0%	0.6%	No
Operatives	2	0	0.0%	10.3%	No	0	0.0%	13.6%	No
Laborers and Helpers	5	0	0.0%	17.2%	No	0	0.0%	22.6%	No
Total	257	60	23.3%			0	0.0%		

*Underrepresented (Yes/No) is based on the Company's acceptability range of 2 St. Deviations
Source: 2010 Affirmative Action Plan and Auditor Analysis

2. The UGI Utility Group's overall MWDBE purchases have generally increased from 2007 to 2010; however, purchases from Minority vendors remain a small percentage of overall purchases.

The Commission's Policy Statement on Diversity, at Pa. Code §69.808, encourages major jurisdictional utilities to identify minority, women, and persons with disability owned business enterprises vendors and offer them the chance to bid on the utilities' purchases of goods and services. The UGI Utility Group has multiple programs in place to identify and evaluate MWDBE vendors. Some of their efforts include attending various conferences to meet MWDBE suppliers and networking with other purchasing professionals who may be able to help establish additional diverse supplier relationships. Also the UGI Utility Group has established a supplier diversity program, as called for in 52 Pa. Code §69.804, to train central purchasing employees to actively participate in outreach activities that facilitate diverse business relationships and in the spirit of 52 Pa. Code §69.807, require vendors making downstream purchases to use diverse suppliers if possible.

An analysis of MWDBE vendor utilization is shown below in Exhibit XIV-3 for the years 2007 through 2010. The UGI Utility Group's total purchases from MWDBE vendors fluctuated over the four year period from a high of 6.0% of total spend in 2008 to a low of 3.8% in 2009. In 2010, 5.8% of total spend was attributed to MWDBE vendors, with 5.1% or \$5,011,992 purchased from women owned businesses and only 0.7% or \$732,996 purchased from minority owned businesses. Purchases from minority owned businesses consistently trended downward over the four year period. This is the result of bids from a few large minority owned suppliers being significantly higher than other bids received from competitors, resulting in the minority owned vendors not being awarded the bids they had previously acquired. While the UGI Utility Group has various activities in place to identify MWDBE vendors, finding such suppliers who can cost effectively supply the quantity of materials and services needed by the UGI Utility Group has reportedly been difficult. However, the Audit Staff encourages the UGI Utility Group to continue their efforts to identify MWDBE vendors and increase minority vendor purchases whenever possible.

Exhibit XIV-3
UGI Utilities, UGI-PNG, & UGI-CPG
Comparison of Total Organizational Spend to Minority, Women, and
Persons with Disability Owned Business Enterprise Spend
2007-2010

Year	Total Spend	Minority Owned BE's		Women Owned BE's		Total MWDBE	
		Spend	% of Total Spend	Spend	% of Total Spend	Spend	% of Total Spend
2007	\$97,855,764	\$2,212,555	2.3%	\$2,033,572	2.1%	\$4,246,127	4.3%
2008	\$82,514,991	\$3,127,734	3.8%	\$1,849,188	2.2%	\$4,976,922	6.0%
2009	\$69,581,789	\$829,968	1.2%	\$1,799,200	2.6%	\$2,629,169	3.8%
2010	\$98,409,112	\$732,996	0.7%	\$5,011,992	5.1%	\$5,744,988	5.8%
Net Increase/ Decrease	\$553,348	-\$1,479,559	-1.5%	\$2,978,420	3.0%	\$1,498,861	1.5%

Source: Data Request DV-4, DV-11, & Auditor Analysis

3. The UGI Utility Group has not submitted annual diversity reports with the PUC since 2002.

The Commission has encouraged its major jurisdictional utility companies to file annual diversity reports since 1992. In February 1995, the Commission adopted a “Policy Statement Regarding Diversity at major Jurisdictional Utilities” which, encourages major jurisdictional utilities to file annual diversity reports with the Commission by March 1 each year, and added regulations at 52 Pa. Code (69.801-69.809) which encourage major jurisdictional utilities to make diversity an integrated component of their business strategy. The PUC’s policy statement at 52 Pa. Code section 69.809, and updated by the Commission’s March 1997 issue of diversity report clarifications and revisions, provide the guidelines for submitting annual diversity filings.

Previously, in the report on the 2008 Management Efficiency Investigation (MEI), at Docket Number D-07MEI005, the Audit Staff identified that UGI had not filed its annual diversity reports since 2002. UGI’s Implementation Plan filed in response to the MEI indicated that UGI would resume filing the diversity reports by the end of 2008. However, our current review found that submission of annual diversity reports have not resumed nor have annual diversity reports been submitted for PNG or CPG since being acquired by UGI in 2006 and 2008, respectively.

The Commission’s “Policy Statement Regarding Diversity at major Jurisdictional Utilities” was adopted to facilitate transparency and the monitoring of a company’s diversity programs and encourages jurisdictional utilities to file annual diversity reports. Furthermore, the vast majority of other Pennsylvania major jurisdictional utilities are consistently filing annual diversity reports with the PUC.

Recommendations

- 1. Developing specific initiatives to increase the representation of females in underrepresented EEO job categories.**
- 2. Explore ways to increase purchases from Minority owned business enterprise vendors.**
- 3. Prepare and file annual diversity reports with the Commission according to the most recently issued guidelines.**

XV. ACKNOWLEDGEMENTS

We wish to express our appreciation for the cooperation and assistance given to us during the course of this Focus Management and Operations Audit by the officers and staff of UGI Utilities, Inc., Penn Natural Gas, Inc., Central Penn Gas, Inc., and UGI Corporation.

This audit was conducted by Michael Palewicz, Nathan Paul, Krystle Daugherty, and Deron Henry of the Management Audit Staff of the Bureau of Audits.

XVI. APPENDICES

Appendix A	UGI Central Penn Gas, Inc. Financial and Operating Data and Statistics
Appendix B	UGI Penn Natural Gas, Inc. Financial and Operating Data and Statistics
Appendix C	UGI Utilities, Inc. (Gas Service Division) Financial and Operating Data and Statistics
Appendix D	Gas Comparative Data and Statistics for the Pennsylvania Panel
Appendix E	UGI Utilities, Inc. (Electric Service Division) Operating Revenues and Expenses
Appendix F	UGI Utilities, Inc. (Electric Service Division) Balance Sheet Data
Appendix G	Electric Comparative Data and Statistics for the Pennsylvania Panel

UGI Central Penn Gas, Inc. (CPG)
Financial and Operating Data and Statistics
For the Years Ended 2006-2010

Appendix A
Page 1 of 2

<u>Operating Statistics</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Gross Utility Plant	\$300,797,792	\$313,664,945	\$326,528,673	\$340,882,661	\$358,075,385	4.5%
Depreciation & Amortization	-83,580,117	-90,406,132	-98,467,831	-104,777,027	-112,710,112	7.8%
Net Utility Plant	<u>\$217,217,675</u>	<u>\$223,258,813</u>	<u>\$228,060,842</u>	<u>\$236,105,634</u>	<u>\$245,365,273</u>	3.1%
Operating Revenue:						
Residential	\$99,948,386	\$91,818,863	\$93,785,304	\$90,683,102	\$71,745,381	-8.0%
Commercial	60,500,709	54,393,530	53,655,138	49,192,851	36,758,407	-11.7%
Industrial	13,330,554	14,354,549	15,409,669	13,765,585	12,380,790	-1.8%
Other	15,620,486	0	30,192,176	15,359,868	35,309,277	22.6%
Totals	<u>\$189,400,135</u>	<u>\$160,566,942</u>	<u>\$193,042,287</u>	<u>\$169,001,406</u>	<u>\$156,193,855</u>	-4.7%
Deliveries by Volume (Mcf)						
Residential	5,660,820	5,984,025	5,858,472	5,724,118	5,631,739	-0.1%
Commercial	6,615,412	7,330,167	7,188,184	7,429,435	7,460,163	3.0%
Industrial	10,199,719	9,990,035	10,227,600	9,145,370	9,625,844	-1.4%
Other	9,715	9,687	9,711	8,658	142,688	95.8%
Total Mcf Sales	<u>22,485,666</u>	<u>23,313,914</u>	<u>23,283,967</u>	<u>22,307,581</u>	<u>22,860,434</u>	0.4%
Injected into Storage	2,287,249	3,607,586	2,970,068	3,980,470	3,730,204	13.0%
Company Use	57,906	55,267	61,362	48,142	48,981	-4.1%
Exchange Gas, Off System Sales, etc.	3,003	6,521	10,217	9,967	5,552,989	NM
Total Deliveries (Mcf)	24,833,825	26,983,288	26,325,614	26,346,160	32,192,608	6.7%
Total Receipts (Mcf)	25,513,945	28,554,739	27,526,170	26,615,210	32,453,545	6.2%
Unaccounted for Gas (Mcf)	680,120	1,571,451	1,200,556	269,050	260,938	-21.3%
UfG as a % of Total Receipts	2.7%	5.5%	4.4%	1.0%	0.8%	-25.9%
Customers (Average):						
Residential	65,910	65,911	66,168	65,650	65,551	-0.1%
Commercial	9,837	9,862	9,901	9,906	9,961	0.3%
Industrial	302	286	282	232	216	-8.0%
Other	8	0	8	7	7	-3.3%
Totals	<u>76,057</u>	<u>76,059</u>	<u>76,359</u>	<u>75,795</u>	<u>75,735</u>	-0.1%
Employees (Average)	315	305	290	268	228	-7.8%
Distribution Mains (M. Ft.)	15,856	15,928	19,389	19,440	19,436	5.2%
Transmission Mains (M. Ft.)	4,561	4,555	649	649	837	-34.5%
Total Main Pipeline (M. Ft.)	<u>20,417</u>	<u>20,483</u>	<u>20,038</u>	<u>20,089</u>	<u>20,273</u>	-0.2%
Total Main Pipeline (Miles)	3,867	3,879	3,795	3,805	3,840	-0.2%
Services	76,849	76,846	79,398	79,852	80,521	1.2%

NM = Not Meaningful
Source: PUC Annual Reports

UGI Central Penn Gas, Inc. (CPG)
Financial and Operating Data and Statistics
For the Years Ended 2006-2010

Appendix A
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<u>Gas Operation & Maintenance Expenses</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound</u>
	\$	\$	\$	\$	\$	Growth
Natural Gas Production Expenses	122,003	150,580	181,481	-1,955	127,960	1.2%
Other Gas Supply Expenses	131,284,137	118,686,680	119,497,386	98,002,252	78,390,348	-12.1%
Natural Gas Storage, Terminating, & Processing Expenses:						
Underground Storage Expenses	2,851,563	3,184,540	3,289,244	1,861,977	1,529,906	-14.4%
Maintenance	127,332	80,003	326,245	254,022	407,370	33.7%
Totals	2,978,895	3,264,543	3,615,489	2,115,999	1,937,276	-10.2%
Transmission Expenses:						
Operation	602,777	1,389,522	1,085,483	650,941	502,776	-4.4%
Maintenance	132,868	475,383	601,783	383,370	273,672	19.8%
Totals	735,645	1,864,905	1,687,266	1,034,311	776,448	1.4%
Distribution Expenses:						
Operation	7,482,364	5,905,230	9,096,533	8,497,311	7,005,573	-1.6%
Maintenance	1,380,604	2,401,044	4,969,893	3,384,302	3,045,863	21.9%
Totals	8,862,968	8,306,274	14,066,426	11,881,613	10,051,436	3.2%
Customer Accounts Expenses	5,605,119	5,070,136	7,336,881	6,788,779	4,009,449	-8.0%
Customer Service & Inform. Expenses	11,802	44,980	449,535	473,962	454,154	149.1%
Sales Expenses	50	738,798	890,619	850,016	591,824	943.1%
Administrative & General Expenses:						
Operation	22,008,893	23,390,508	16,688,511	15,010,211	17,591,196	-5.4%
Maintenance	595,317	615,406	662,461	634,911	565,854	-1.3%
Totals	22,604,210	24,005,914	17,350,972	15,645,122	18,157,050	-5.3%
Total Gas Operation & Maintenance Exp.	172,204,829	162,132,810	165,076,055	136,790,099	114,495,945	-9.7%
Operating Income	\$6,405,609	\$11,399,610	\$14,752,983	\$13,644,113	\$20,415,034	33.6%
Net Income	\$909,527	\$7,458,508	\$8,512,474	\$27,378,142	\$18,151,800	111.4%

Source: PUC Annual Reports

UGI Penn Natural Gas, Inc. (PNG)
Financial and Operating Data and Statistics
For the Years Ended 2006-2010

Appendix B
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**Compound
Growth**

<u>Operating Statistics</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	
Gross Utility Plant	\$707,260,001	\$702,205,788	\$718,887,664	\$728,530,594	\$744,973,574	1.3%
Depreciation & Amortization	158,839,427	168,792,924	182,244,898	192,588,780	205,964,791	6.7%
Net Utility Plant	<u>\$548,420,574</u>	<u>\$533,412,864</u>	<u>\$536,642,766</u>	<u>\$535,941,814</u>	<u>\$539,008,783</u>	-0.4%

Operating Revenue:

Residential	\$202,890,489	\$220,805,764	\$233,511,186	\$228,555,190	\$186,546,836	-2.1%
Commercial	79,128,294	86,553,674	93,802,011	93,646,699	64,926,905	-4.8%
Industrial	13,056,254	12,728,941	13,645,369	11,798,800	10,999,042	-4.2%
Other	7,480,110	4,314,384	2,722,203	3,017,452	65,982,881	72.3%
Totals	<u>\$302,555,147</u>	<u>\$324,402,763</u>	<u>\$343,680,769</u>	<u>\$337,018,141</u>	<u>\$328,455,664</u>	2.1%

Deliveries by Volume (Mcf)

Residential	14,028,386	16,093,472	15,453,064	15,169,987	14,300,499	0.5%
Commercial	8,096,399	10,138,333	10,135,650	10,563,704	10,302,391	6.2%
Industrial	20,290,488	20,363,397	18,650,571	17,539,496	17,804,344	-3.2%
Other	691,857	866,747	843,837	0	0	-100.0%
Total Mcf Sales	<u>43,107,130</u>	<u>47,461,949</u>	<u>45,083,122</u>	<u>43,273,187</u>	<u>42,407,234</u>	-0.4%

Injected into Storage	0	10,097,524	10,742,113	11,013,245	11,012,761	NM
Company Use	61,879	67,733	64,713	62,839	68,593	2.6%
Exchange Gas, Off System Sales, etc.	0	0	0	0	11,554,676	NM

Total Deliveries (Mcf)	43,169,009	57,627,206	55,889,948	54,349,271	65,043,264	10.8%
Total Receipts (Mcf)	43,369,181	57,457,280	56,285,998	54,846,320	65,334,580	10.8%
Unaccounted for Gas (Mcf)	-445,115	-169,926	396,050	497,050	291,315	NM
UfG as a % of Total Receipts	-1.0%	-0.3%	0.7%	0.9%	0.4%	NM

Customers (Average):

Residential	143,551	143,577	143,719	143,377	143,107	-0.1%
Commercial	15,236	15,328	15,341	15,743	15,671	0.7%
Industrial	225	245	238	233	228	0.3%
Other	479	436	0	0	0	-100.0%
Totals	<u>159,491</u>	<u>159,586</u>	<u>159,298</u>	<u>159,353</u>	<u>159,006</u>	-0.1%

Employees (Average)	409	389	366	344	294	-7.9%
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Distribution Mains (M. Ft.)	13,526	14,016	13,644	13,680	14,779	2.2%
Transmission Mains (M. Ft.)	154	154	153	153	153	-0.2%
Total Main Pipeline (M. Ft.)	<u>13,680</u>	<u>14,170</u>	<u>13,797</u>	<u>13,833</u>	<u>14,932</u>	2.2%

Total Main Pipeline (Miles)	2,591	2,684	2,613	2,620	2,828	2.2%
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Services	159,205	160,927	162,474	163,050	167,723	1.3%
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NM = Not Meaningful
Source: PUC Annual Reports

UGI Penn Natural Gas, Inc. (PNG)
Financial and Operating Data and Statistics
For the Years Ended 2006-2010

APPENDIX B
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<u>Gas Operation & Maintenance Expenses</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
	\$	\$	\$	\$	\$	
Natural Gas Production Expenses	0	0	0	0	0	0.0%
Other Gas Supply Expenses	217,555,048	223,824,237	247,124,254	265,534,893	214,634,094	-0.3%
Natural Gas Storage, Terminating, & Processing Expenses:						
Underground Storage Expenses	0	0	0	14,608	69,027	47.4%
Maintenance	0	0	0	0	0	
Totals	0	0	0	14,608	69,027	47.4%
Transmission Expenses:						
Operation						
Maintenance						
Totals	0	0	0	14,608	69,027	47.4%
Distribution Expenses:						
Operation	6,578,173	7,266,319	7,182,497	8,489,296	9,387,986	9.3%
Maintenance	3,639,685	4,323,151	4,260,237	5,874,804	5,139,086	9.0%
Totals	10,217,858	11,589,470	11,442,734	14,364,100	14,527,072	9.2%
Customer Accounts Expenses	10,566,066	10,804,980	15,367,392	11,683,868	7,107,903	-9.4%
Customer Service & Inform. Expenses	464,943	842,243	979,302	623,506	773,106	13.6%
Sales Expenses	530,430	408,642	530,382	476,247	486,417	-2.1%
Administrative & General Expenses:						
Operation	13,905,478	16,845,082	20,090,617	21,792,035	21,223,738	11.1%
Maintenance	748,016	344,067	515,988	440,615	583,449	-6.0%
Totals	14,653,494	17,189,149	20,606,605	22,232,650	21,807,187	10.4%
Total Gas Operation & Maintenance Exp.	253,987,839	264,658,721	296,050,669	314,929,872	259,404,806	0.5%
Operating Income	\$27,855,841	\$27,556,069	\$20,642,506	\$24,091,941	\$30,976,074	2.7%
Net Income	\$28,936,907	\$28,668,222	\$23,229,980	\$24,624,648	\$28,242,307	-0.6%

Source: PUC Annual Reports

UGI Utilities, Inc.
Financial and Operating Data and Statistics
For the Years Ended 2006-2010

Appendix C
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<u>Operating Statistics</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Growth</u>
Gross Utility Plant	\$1,041,751,486	\$1,083,886,016	\$1,129,350,080	\$1,160,930,483	\$1,204,064,332	3.7%
Depreciation & Amortization	-354,348,282	-369,446,715	-388,816,331	-406,133,134	-427,993,153	4.8%
Net Utility Plant	<u>\$687,403,204</u>	<u>\$714,439,301</u>	<u>\$740,533,749</u>	<u>\$754,797,349</u>	<u>\$776,071,179</u>	3.1%

Operating Revenue:

Residential	\$311,835,563	\$334,445,603	\$344,048,558	\$312,440,744	\$282,570,691	-2.4%
Commercial	204,339,031	214,424,895	216,733,603	187,071,235	161,274,731	-5.7%
Industrial	61,383,264	64,566,687	60,850,883	50,081,693	47,739,166	-6.1%
Other	3,059,651	0	4,714,541	6,494,141	81,704,941	127.3%
Totals	<u>\$580,617,509</u>	<u>\$613,437,185</u>	<u>\$626,347,585</u>	<u>\$556,087,813</u>	<u>\$573,289,529</u>	-0.3%

Deliveries by Volume (Mcf)

Residential	17,959,868	21,478,313	20,864,370	21,380,638	20,967,185	3.9%
Commercial	19,577,355	22,397,582	23,093,853	22,904,647	22,879,570	4.0%
Industrial	40,661,569	46,560,120	42,300,543	38,803,927	51,810,615	6.2%
Other	0	0	0	0	0	0.0%
Total Mcf Sales	<u>78,198,792</u>	<u>90,436,015</u>	<u>86,258,766</u>	<u>83,089,212</u>	<u>95,657,370</u>	5.2%

Injected into Storage	10,607,994	11,973,749	11,703,859	11,632,417	13,405,206	6.0%
Company Use	167,068	163,589	152,869	163,393	162,617	-0.7%
Exchange Gas, Off System Sales, etc.	0	0	0	0	14,896,639	NM

Total Deliveries (Mcf)	88,973,854	102,573,353	98,115,494	94,885,022	124,121,832	8.7%
Total Receipts (Mcf)	89,349,173	103,194,529	98,494,062	95,331,018	124,401,133	8.6%
Unaccounted for Gas (Mcf)	375,319	621,176	378,567	445,995	279,301	-7.1%
UfG as a % of Total Receipts	0.4%	0.6%	0.4%	0.5%	0.2%	-14.5%

Customers (Average):

Residential	283,908	289,404	294,610	299,056	302,591	1.6%
Commercial	31,351	31,921	32,389	32,929	33,214	1.5%
Industrial	1,488	1,476	1,473	1,439	1,412	-1.3%
Other	0	0	0	0	0	0.0%
Totals	<u>316,747</u>	<u>322,801</u>	<u>328,472</u>	<u>333,424</u>	<u>337,217</u>	1.6%

Employees (Average)	939	925	828	770	818	-3.4%
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Distribution Mains (M. Ft.)	26,973	27,599	27,588	28,099	28,176	1.1%
Transmission Mains (M. Ft.)	722	618	617	617	617	-3.9%
Total Main Pipeline (M. Ft.)	<u>27,695</u>	<u>28,217</u>	<u>28,205</u>	<u>28,716</u>	<u>28,793</u>	1.0%

Total Main Pipeline (Miles)	5,245	5,344	5,342	5,439	5,453	1.0%
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Services	321,858	326,783	332,335	334,028	337,126	1.2%
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NM = Not Meaningful
Source: PUC Annual Reports

UGI Utilities, Inc.
Financial and Operating Data and Statistics
For the Years Ended 2006-2010

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<u>Gas Operation & Maintenance Expenses</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
	\$	\$	\$	\$	\$	
Natural Gas Production Expenses	2,787,327	768,155	5,589,660	6,179,239	791,991	-27.0%
Other Gas Supply Expenses	387,439,190	406,597,625	412,020,027	399,273,695	361,963,609	-1.7%
Natural Gas Storage, Terminating, & Processing Expenses:						
Underground Storage Expenses	0	0	0	0	0	0.0%
Maintenance	0	0	0	0	0	0.0%
Totals	0	0	0	0	0	0.0%
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	12,582,553	14,611,905	14,773,531	12,919,138	13,605,419	2.0%
Maintenance	9,229,523	9,636,332	9,917,314	10,243,488	10,551,941	3.4%
Totals	21,812,076	24,248,237	24,690,845	23,162,626	24,157,360	2.6%
Customer Accounts Expenses	22,247,677	21,629,226	24,697,517	19,122,751	16,122,879	-7.7%
Customer Service & Inform. Expenses	3,107,237	3,297,835	3,112,590	2,881,939	2,668,698	-3.7%
Sales Expenses	1,162,477	952,225	921,362	1,029,367	980,554	-4.2%
Administrative & General Expenses:						
Operation	40,344,906	36,594,517	35,611,637	37,430,951	36,537,096	-2.4%
Maintenance	1,032,220	364,738	796,679	1,678,029	1,446,819	8.8%
Totals	41,377,126	36,959,255	36,408,316	39,108,980	37,983,915	-2.1%
Total Gas Operation & Maintenance Exp.	479,933,110	494,452,558	507,440,317	490,758,597	444,669,006	-1.9%
Operating Income	\$52,334,965	\$65,865,405	\$60,383,464	\$63,385,435	\$67,311,992	6.5%
Net Income	\$31,837,834	\$48,527,407	\$45,848,780	\$49,747,519	\$53,803,581	14.0%

Source: PUC Annual Reports

**UGI Central Penn Gas, Inc. (CPG)
UGI Penn Natural Gas, Inc. (PNG)
UGI Utilities, Inc. (UGI)**

Comparative Data and Statistics for the Pennsylvania Panel

<u>ELEMENT</u>	<u>CPG</u>	<u>PNG</u>	<u>UGI</u>	<u>PG</u>	<u>CGP</u>	<u>EGC</u>	<u>NFG</u>	<u>TWP</u>	<u>Panel Average</u>
Number of Customers - 2010	75,735	159,006	337,217	356,694	413,824	257,774	212,134	60,398	260,165
Number of Customers - 2006	76,057	159,491	316,747	355,818	408,581	255,202	212,732	62,115	258,890
Compound Annual Growth Rate	-0.1%	-0.1%	1.6%	0.1%	0.3%	0.3%	-0.1%	-0.7%	0.0%
% Residential Customers - 2010	86.6%	90.0%	89.7%	92.1%	90.9%	93.2%	92.5%	92.6%	92.3%
Total Throughput (thousand Mcf) - 2010	32,454	65,335	124,401	86,737	117,681	60,568	50,456	27,087	68,506
Total Throughput (thousand Mcf) - 2006	25,514	43,369	89,349	80,245	102,780	64,099	48,811	25,605	64,308
Compound Annual Growth Rate	6.2%	10.8%	8.6%	2.0%	3.4%	-1.4%	0.8%	1.4%	1.2%
Mcf/Residential Customer - 2010	86	100	69	95	69	91	93	90	88
Transportation (thousand Mcf) - 2010	14,360	23,085	66,154	35,397	35,697	24,341	18,818	16,111	26,073
Transportation (thousand Mcf) - 2006	12,854	22,676	48,489	36,419	37,747	22,239	20,239	14,173	26,163
% Transportation - 2010	44.2%	35.3%	53.2%	40.8%	30.3%	40.2%	37.3%	59.5%	41.6%
% Transportation - 2006	50.4%	52.3%	54.3%	45.4%	36.7%	34.7%	41.5%	55.4%	42.7%
Compound Annual Growth Rate	-3.2%	-9.3%	-0.5%	-2.6%	-4.7%	3.7%	-2.6%	1.8%	-0.9%
Number of Employees @ 12/31/10	205	255	870	577	478	360	320	203	388
Miles of Distribution Main - 2010	3,681	2,799	5,336	6,553	7,363	3,433	4,629	1,552	4,706
Miles of Transmission Main - 2010	159	29	117	1,092	67	38	338	1,164	540
Services - 2010	80,521	167,723	337,126	352,530	416,638	249,079	209,981	58,087	257,263
Net Plant (\$Million) - 2010	245	539	776	674	729	614	307	156	496
Net Plant/Gross Plant - 2010	68.5%	72.4%	64.5%	64.7%	71.7%	64.4%	63.7%	65.6%	66.0%
Customers/Main Mile - 2010	20	56	62	47	56	74	43	22	48
Average Revenue/Residential Customer - 2010	\$1,094.50	\$1,303.55	\$933.84	\$771.63	\$858.80	\$1,170.98	\$945.50	\$1,125.42	\$974.47
Average Revenue/Residential Mcf - 2007	\$12.74	\$13.04	\$13.48	\$8.11	\$12.45	\$12.80	\$10.15	\$12.49	\$11.20

CPG= UGI Central Penn Gas, Inc.
PNG = UGI Penn Natural Gas, Inc.
UGI = UGI Utilities, Inc.
PG = The Peoples Natural Gas Company

CGP = Columbia Gas of Pennsylvania, Inc.
EGC = Equitable Gas Company
NFG = National Fuel Gas Distribution Corporation
TWP = Peoples TWP LLC

NA = Not Available
Source: PUC Annual Reports

Comparative Data and Statistics for the Pennsylvania Panel

Administrative & General Expense/Customer

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$111.37	\$120.61	\$96.68	\$109.72	\$128.96	3.7%
Equitable	\$159.88	\$254.71	\$133.32	\$109.43	\$112.18	-8.5%
National Fuel	\$124.88	\$124.46	\$125.31	\$125.41	\$128.52	0.7%
Peoples	\$43.75	\$23.09	\$42.26	\$27.66	\$92.25	20.5%
Peoples TWP	\$172.37	\$189.59	\$197.76	\$193.85	\$239.78	8.6%
Panel Average	\$122.45	\$142.49	\$119.07	\$113.21	\$140.34	3.5%
UGI CPG	\$297.20	\$315.62	\$227.23	\$206.41	\$239.74	-5.2%
UGI PNG	\$91.88	\$107.71	\$129.36	\$139.52	\$137.15	10.5%
UGI	\$130.63	\$114.50	\$110.84	\$117.30	\$112.64	-3.6%

Operations & Maintenance Expense/Customer

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$1,263.53	\$1,425.16	\$1,708.06	\$1,092.53	\$1,148.65	-2.4%
Equitable	\$1,436.33	\$1,564.79	\$2,024.18	\$1,414.57	\$1,062.69	-7.3%
National Fuel	\$1,536.96	\$1,411.88	\$1,559.86	\$1,272.56	\$940.92	-11.5%
Peoples	\$1,165.41	\$1,020.88	\$1,204.77	\$944.17	\$811.82	-8.6%
Peoples TWP	\$1,880.00	\$1,801.92	\$2,102.22	\$1,458.59	\$1,381.30	-7.4%
Panel Average	\$1,456.45	\$1,444.93	\$1,719.82	\$1,236.48	\$1,069.08	-7.4%
UGI CPG	\$2,264.15	\$2,131.67	\$2,161.84	\$1,804.74	\$1,511.80	-9.6%
UGI PNG	\$1,592.49	\$1,659.61	\$1,868.75	\$1,981.26	\$1,637.59	0.7%
UGI	\$1,515.19	\$1,531.76	\$1,544.85	\$1,471.88	\$1,318.64	-3.4%

Net Plant/Customer

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$1,279.13	\$1,380.91	\$1,535.01	\$1,623.09	\$1,762.15	8.3%
Equitable	\$2,236.16	\$2,330.28	\$2,279.26	\$2,316.36	\$2,381.29	1.6%
National Fuel	\$1,325.71	\$1,357.83	\$1,374.62	\$1,419.88	\$1,446.18	2.2%
Peoples	\$1,599.43	\$1,616.44	\$1,671.31	\$1,728.35	\$1,889.50	4.3%
Peoples TWP	\$2,247.58	\$2,315.16	\$2,400.19	\$2,432.28	\$2,587.96	3.6%
Panel Average	\$1,737.60	\$1,800.13	\$1,852.08	\$1,903.99	\$2,013.42	3.8%
UGI CPG	\$2,855.99	\$2,935.34	\$2,986.69	\$3,115.06	\$3,239.79	3.2%
UGI PNG	\$3,438.57	\$3,342.48	\$3,368.80	\$3,363.24	\$3,389.86	-0.4%
UGI	\$2,170.20	\$2,213.25	\$2,254.48	\$2,263.78	\$2,301.40	1.5%

Comparative Data and Statistics for the Pennsylvania Panel

Operations & Maintenance Expense/Operating Revenue

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$0.90	\$0.90	\$0.90	\$0.83	\$0.85	-1.3%
Equitable	\$0.47	\$0.50	\$0.53	\$0.45	\$0.40	-4.1%
National Fuel	\$0.46	\$0.44	\$0.44	\$0.43	\$0.41	-2.9%
Peoples	\$0.45	\$0.43	\$0.44	\$0.44	\$0.46	0.4%
Peoples TWP	\$0.45	\$0.43	\$0.44	\$0.43	\$0.43	-1.1%
Panel Average	\$0.55	\$0.54	\$0.55	\$0.51	\$0.51	-1.7%
UGI CPG	\$0.49	\$0.49	\$0.48	\$0.42	\$0.44	-2.4%
UGI PNG	\$0.43	\$0.42	\$0.44	\$0.46	\$0.46	1.4%
UGI	\$0.44	\$0.43	\$0.43	\$0.45	\$0.45	0.8%

Net Plant/Operating Revenue

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$0.91	\$0.87	\$0.81	\$1.23	\$1.30	9.5%
Equitable	\$0.73	\$0.74	\$0.59	\$0.73	\$0.89	5.0%
National Fuel	\$0.40	\$0.42	\$0.39	\$0.48	\$0.63	12.2%
Peoples	\$0.61	\$0.68	\$0.62	\$0.81	\$1.06	14.6%
Peoples TWP	\$0.54	\$0.55	\$0.51	\$0.71	\$0.80	10.7%
Panel Average	\$0.64	\$0.65	\$0.58	\$0.79	\$0.94	10.1%
UGI CPG	\$0.62	\$0.67	\$0.67	\$0.73	\$0.95	11.4%
UGI PNG	\$0.93	\$0.84	\$0.79	\$0.77	\$0.94	0.3%
UGI	\$0.63	\$0.61	\$0.63	\$0.70	\$0.79	5.9%

Operations & Maintenance Expense/Net Plant

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$0.99	\$1.03	\$1.11	\$0.67	\$0.65	-9.9%
Equitable	\$0.64	\$0.67	\$0.89	\$0.61	\$0.45	-8.7%
National Fuel	\$1.16	\$1.04	\$1.13	\$0.90	\$0.65	-13.4%
Peoples	\$0.73	\$0.63	\$0.72	\$0.55	\$0.43	-12.4%
Peoples TWP	\$0.84	\$0.78	\$0.88	\$0.60	\$0.53	-10.6%
Panel Average	\$0.87	\$0.83	\$0.95	\$0.67	\$0.54	-11.2%
UGI CPG	\$0.79	\$0.73	\$0.72	\$0.58	\$0.47	-12.4%
UGI PNG	\$0.46	\$0.50	\$0.55	\$0.59	\$0.48	1.1%
UGI	\$0.70	\$0.69	\$0.69	\$0.65	\$0.57	-4.8%

Source: PUC Annual Reports

UGI Central Penn Gas, Inc. (CPG)
 UGI Penn Natural Gas, Inc. (PNG)
 UGI Utilities, Inc. (UGI)

Appendix D
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Comparative Data and Statistics for the Pennsylvania Panel

Operations & Maintenance Expense/Mcf

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$15.03	\$14.83	\$17.50	\$12.20	\$13.27	-3.1%
Equitable	\$8.44	\$8.41	\$10.80	\$7.22	\$0.35	-54.9%
National Fuel	\$7.82	\$6.88	\$7.86	\$6.83	\$4.99	-10.6%
Peoples	\$6.41	\$5.35	\$6.20	\$5.13	\$4.30	-9.5%
Peoples TWP	\$4.95	\$4.70	\$5.52	\$4.23	\$3.47	-8.5%
Panel Average	\$8.53	\$8.03	\$9.58	\$7.12	\$5.28	-11.3%
UGI CPG	\$7.66	\$7.14	\$7.09	\$6.13	\$5.01	-10.1%
UGI PNG	\$5.89	\$5.58	\$6.60	\$7.30	\$6.14	1.0%
UGI	\$6.14	\$5.47	\$5.88	\$5.91	\$4.65	-6.7%

Net Plant/Mcf

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$15.22	\$14.37	\$15.72	\$18.12	\$20.36	7.6%
Equitable	\$13.14	\$12.52	\$12.17	\$11.83	\$0.78	-50.6%
National Fuel	\$6.75	\$6.61	\$6.93	\$7.62	\$7.67	3.3%
Peoples	\$8.79	\$8.47	\$8.61	\$9.39	\$10.01	3.3%
Peoples TWP	\$5.92	\$6.04	\$6.31	\$7.06	\$6.50	2.4%
Panel Average	\$9.96	\$9.60	\$9.95	\$10.80	\$9.07	-2.3%
UGI CPG	\$9.66	\$9.83	\$9.79	\$10.58	\$10.73	2.7%
UGI PNG	\$12.72	\$11.24	\$11.90	\$12.39	\$12.71	0.0%
UGI	\$8.79	\$7.90	\$8.59	\$9.08	\$8.11	-2.0%

Distribution Expense/Thousand Ft. Line

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$745.74	\$898.75	\$981.97	\$967.53	\$1,021.66	8.2%
Equitable	\$1,110.52	\$1,159.21	\$1,416.46	\$1,497.99	\$1,348.90	5.0%
National Fuel	\$509.89	\$558.10	\$530.05	\$485.66	\$545.74	1.7%
Peoples	\$823.04	\$856.00	\$915.36	\$926.31	\$1,027.58	5.7%
Peoples TWP	\$536.67	\$593.04	\$440.47	\$460.23	\$447.49	-4.4%
Panel Average	\$745.17	\$813.02	\$856.86	\$867.55	\$878.28	4.2%
UGI CPG	\$558.97	\$521.51	\$725.48	\$611.19	\$517.16	-1.9%
UGI PNG	\$755.42	\$826.87	\$838.66	\$1,050.01	\$982.95	6.8%
UGI	\$808.66	\$878.59	\$894.98	\$824.32	\$857.37	1.5%

Source: PUC Annual Reports

Comparative Data and Statistics for the Pennsylvania Panel

Customer Accounts Expense/Customer

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$91.92	\$83.95	\$108.00	\$94.46	\$81.72	-2.9%
Equitable	\$64.09	\$73.74	\$57.27	\$33.89	\$53.54	-4.4%
National Fuel	\$87.66	\$81.78	\$78.41	\$64.58	\$49.89	-13.1%
Peoples	\$60.10	\$82.07	\$61.88	\$61.17	\$50.66	-4.2%
Peoples TWP	\$49.77	\$48.43	\$51.12	\$58.82	\$61.46	5.4%
Panel Average	\$70.71	\$73.99	\$71.33	\$62.58	\$59.45	-4.2%
UGI CPG	\$73.70	\$66.66	\$96.08	\$89.57	\$52.94	-7.9%
UGI PNG	\$66.25	\$67.71	\$96.47	\$73.32	\$44.70	-9.4%
UGI	\$70.24	\$67.00	\$75.19	\$57.35	\$47.81	-9.2%

Unaccounted For Gas (as a % of Total Receipts)

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	0.1%	-0.1%	-0.7%	-0.2%	0.1%	0.0%
Equitable	11.9%	9.3%	10.0%	4.8%	4.0%	-23.8%
National Fuel	-1.5%	0.0%	-0.5%	-0.4%	1.9%	5.5%
Peoples	5.9%	9.0%	6.4%	4.4%	5.8%	-0.6%
Peoples TWP	4.1%	4.3%	3.7%	5.1%	3.9%	-1.0%
Panel Average	4.1%	4.5%	3.8%	2.7%	3.1%	-6.5%
UGI CPG	2.7%	5.5%	4.4%	1.0%	0.8%	-25.9%
UGI PNG	-1.0%	-0.3%	0.7%	0.9%	0.4%	-18.8%
UGI	0.4%	0.6%	0.4%	0.5%	0.2%	-14.5%

Revenue/Employee

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	\$1,210,081	\$1,051,926	\$1,534,643	\$1,069,471	\$1,008,169	-4.5%
Equitable	\$937,702	\$987,637	\$1,653,646	\$1,304,578	\$983,296	1.2%
National Fuel	\$1,090,483	\$1,007,114	\$1,081,022	\$903,022	\$718,336	-9.9%
Peoples	\$957,885	\$924,021	\$1,029,932	\$850,136	\$664,307	-8.7%
Peoples TWP	\$631,401	\$638,828	\$733,000	\$541,877	\$495,887	-5.9%
Panel Average	\$965,511	\$921,905	\$1,206,448	\$933,817	\$773,999	-5.4%
UGI CPG	\$601,270	\$526,449	\$665,663	\$631,781	\$686,566	3.4%
UGI PNG	\$739,744	\$833,940	\$939,018	\$981,130	\$1,117,196	10.9%
UGI	\$618,336	\$663,534	\$756,916	\$722,661	\$700,843	3.2%

Source: PUC Annual Reports

Comparative Data and Statistics for the Pennsylvania Panel

Customers/Employee						Compound
<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Growth</u>
Columbia	859	849	810	811	851	-0.3%
Equitable	565	596	679	704	690	5.1%
National Fuel	638	617	609	590	626	-0.5%
Peoples	675	733	716	702	658	-0.6%
Peoples TWP	293	301	308	311	299	0.5%
Panel Average	606	619	624	624	625	0.8%
UGI CPG	241	249	263	283	333	8.4%
UGI PNG	390	410	435	464	541	8.5%
UGI	337	349	397	433	412	5.1%

Plant Materials and Operating Supplies/Net Plant						Compound
<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Growth</u>
Columbia	0.05%	0.06%	0.11%	0.08%	0.08%	14.0%
Equitable	0.27%	0.17%	0.15%	0.13%	0.09%	-24.5%
National Fuel	0.22%	0.24%	0.23%	0.17%	0.17%	-5.9%
Peoples	0.35%	0.35%	0.37%	0.35%	0.35%	0.0%
Peoples TWP	1.25%	0.98%	0.69%	0.57%	0.60%	-17.0%
Panel Average	0.43%	0.36%	0.31%	0.26%	0.26%	-12.0%
UGI CPG	0.97%	1.04%	1.11%	1.08%	1.24%	6.4%
UGI PNG	0.39%	0.37%	0.43%	0.00%	0.00%	-100.0%
UGI	0.35%	0.28%	0.30%	0.29%	0.36%	0.5%

Unprotected Bare Steel Main %						Compound
<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Growth</u>
Columbia	30.1%	28.4%	27.1%	26.2%	25.3%	-4.3%
Equitable	25.1%	24.3%	23.7%	23.0%	22.4%	-2.8%
National Fuel	21.4%	20.6%	19.9%	19.3%	18.5%	-3.5%
Peoples	29.1%	28.3%	27.8%	27.4%	36.5%	5.9%
Peoples TWP	43.9%	39.5%	38.4%	37.3%	37.3%	-4.0%
Panel Average	29.9%	28.2%	27.4%	26.6%	28.0%	-1.6%
UGI CPG	18.3%	17.8%	17.5%	16.9%	16.5%	-2.5%
UGI PNG	11.9%	11.3%	11.1%	11.0%	10.6%	-2.9%
UGI	6.0%	5.6%	5.3%	5.1%	4.9%	-5.1%

Source: PUC Annual Reports, DOT Annual Reports

Comparative Data and Statistics for the Pennsylvania Panel

Cast Iron Main %

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	1.0%	1.0%	0.9%	0.9%	0.8%	-5.1%
Equitable	1.4%	1.4%	1.4%	1.4%	1.3%	-1.5%
National Fuel	1.9%	1.9%	1.8%	1.8%	1.7%	-2.4%
Peoples	1.0%	1.0%	1.0%	1.0%	0.9%	-2.0%
Peoples TWP	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Panel Average	1.1%	1.0%	1.0%	1.0%	1.0%	-2.6%
UGI CPG	0.8%	0.7%	1.6%	0.5%	0.5%	-10.7%
UGI PNG	5.9%	5.5%	5.2%	2.5%	4.7%	-5.5%
UGI	8.5%	8.1%	7.9%	7.5%	7.3%	-4.0%

Main Leaks Repaired/100 Main Miles

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	50.6	56.8	67.2	53.2	50.4	-0.1%
Equitable	29.8	34.3	29.0	28.4	32.8	2.4%
National Fuel	35.0	31.0	29.3	30.4	31.1	-2.9%
Peoples	32.3	37.2	34.5	41.8	36.1	2.9%
Peoples TWP	46.9	53.1	48.8	52.6	46.9	0.0%
Panel Average	38.9	42.5	41.8	41.3	39.5	0.3%
UGI CPG	16.9	12.9	14.2	16.3	11.2	-9.7%
UGI PNG	34.8	34.5	31.8	30.1	35.9	0.8%
UGI	26.1	25.2	22.6	27.9	22.5	-3.6%

Unprotected Bare Steel Service %

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	19.5%	18.2%	17.3%	16.8%	16.1%	-4.7%
Equitable	7.9%	7.7%	7.5%	6.6%	6.6%	-4.4%
National Fuel	17.9%	17.0%	16.1%	15.3%	14.7%	-4.8%
Peoples	16.4%	16.0%	15.6%	15.2%	15.0%	-2.1%
Peoples TWP	23.4%	23.4%	21.4%	20.8%	20.2%	-3.6%
Panel Average	17.0%	16.5%	15.6%	14.9%	14.5%	-3.9%
UGI CPG	1.7%	1.0%	0.8%	0.8%	0.5%	-26.0%
UGI PNG	1.5%	1.2%	1.1%	1.0%	1.0%	-10.7%
UGI	5.8%	5.5%	5.3%	5.1%	4.8%	-4.7%

Source: PUC Annual Reports, DOT Annual Reports

Comparative Data and Statistics for the Pennsylvania Panel

Service Leaks Discovered/1,000 Services

<u>Company</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>Compound Growth</u>
Columbia	4.1	4.6	4.7	4.2	4.0	-0.8%
Equitable	3.0	3.7	3.4	2.8	2.8	-2.0%
National Fuel	4.1	3.7	6.4	3.0	2.8	-9.2%
Peoples	8.1	10.7	9.6	11.3	12.4	11.1%
Peoples TWP	2.7	6.0	5.4	3.7	3.2	3.8%
Panel Average	4.4	5.7	5.9	5.0	5.0	3.3%
UGI CPG	2.9	2.7	2.3	2.5	2.0	-8.4%
UGI PNG	6.5	3.5	5.8	7.2	7.3	3.1%
UGI	3.9	6.8	2.9	2.9	3.2	-5.4%

Source: PUC Annual Reports, DOT Annual Reports

UGI Utilities, Inc. (Electric Service Division)
Operating Revenues and Expenses

Appendix E
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	2006	2007	2008	2009	2010	Compound Growth
Operating Revenues						
Sales of Electricity						
Residential Sales	\$49,678,035	\$68,663,447	\$72,063,539	\$71,698,660	\$72,319,583	9.8%
Commercial Sales	\$30,817,466	\$40,181,477	\$43,736,653	\$42,361,362	\$30,536,291	-0.2%
Industrial Sales	\$9,289,837	\$12,323,304	\$14,680,956	\$12,114,967	\$4,874,238	-14.9%
Public Street and Highway Lighting Sales	\$823,005	\$820,051	\$820,620	\$819,068	\$1,040,560	6.0%
Other Sales to Public Authorities	\$69,211	\$78,115	\$99,563	\$0	\$6,403,396	210.1%
Sales to Railroads and Railways	\$0	\$0	\$0	\$0	\$0	0.0%
Interdepartmental Sales	\$0	\$0	\$0	\$0	\$0	0.0%
Total Sales to Ultimate Customers	\$90,677,554	\$122,066,394	\$131,401,331	\$126,994,057	\$115,174,068	6.2%
Sales for Resale	\$3,714,491	\$810,179	\$5,165,445	\$3,923,200	\$12,885	-75.7%
Total Sales of Electricity	\$94,392,045	\$122,876,573	\$136,566,776	\$130,917,257	\$115,186,953	5.1%
Provision for Rate Refunds	\$0	\$0	\$0	\$0	\$0	0.0%
Total Revenues Net Provision for Refunds	\$94,392,045	\$122,876,573	\$136,566,776	\$130,917,257	\$115,186,953	5.1%

Megawatt Hours Sold						
Sales of Electricity						
Residential Sales	523,728	537,836	530,174	517,097	532,352	0.4%
Commercial Sales	343,631	351,978	344,039	325,918	330,322	-1.0%
Industrial Sales	122,985	120,586	122,861	103,397	109,256	-2.9%
Public Street and Highway Lighting Sales	4,892	4,897	4,911	4,899	4,912	0.1%
Other Sales to Public Authorities	770	607	747	797	4,003	51.0%
Sales to Railroads and Railways	-	-	-	3,272	-	0.0%
Interdepartmental Sales	-	-	-	-	-	0.0%
Total Sales to Ultimate Customers	996,006	1,015,904	1,002,732	955,380	980,845	-0.4%
Sales for Resale	-	-	-	118,286	-	0.0%
Total Sales of Electricity	996,006	1,015,904	1,002,732	1,073,666	980,845	-0.4%
Provision for Rate Refunds	-	-	-	-	-	0.0%
Total Megawatt Hours Sold	996,006	1,015,904	1,002,732	1,073,666	980,845	-0.4%

Average Number of Customers Per Month						
Sales of Electricity						
Residential Sales	54,389	54,466	54,546	54,515	54,624	0.1%
Commercial Sales	7,328	7,387	7,416	7,414	7,359	0.1%
Industrial Sales	162	162	161	158	160	-0.3%
Public Street and Highway Lighting Sales	55	55	55	55	55	0.0%
Other Sales to Public Authorities	7	7	7	10	10	9.3%
Sales to Railroads and Railways	-	-	-	-	-	0.0%
Interdepartmental Sales	-	-	-	-	-	0.0%
Total Sales to Ultimate Customers	61,941	62,077	62,185	62,152	62,208	0.1%
Sales for Resale	-	-	-	-	-	0.0%
Total Sales of Electricity	61,941	62,077	62,185	62,152	62,208	0.1%
Provision for Rate Refunds	-	-	-	-	-	0.0%
Total Av. Number of Customers per Month	61,941	62,077	62,185	62,152	62,208	0.1%

Operation and Maintenance Expenses						
Total Operation	\$5,779,571	\$5,815,207	\$5,622,914	\$5,292,443	\$5,086,168	-3.1%
Total Maintenance	\$536,651	\$592,086	\$581,008	\$632,090	\$640,519	4.5%
Maintenance Supervision and Engineering	\$90,855	\$96,112	\$103,617	\$97,910	\$109,473	4.8%
Maintenance of Structures	\$5,987	\$4,204	\$5,633	\$7,112	\$5,761	-1.0%
Maintenance of Station Equipment	\$289,917	\$279,873	\$242,222	\$286,175	\$214,865	-7.2%
Maintenance of Overhead Lines	\$147,937	\$211,145	\$228,187	\$240,542	\$304,386	19.8%
Maintenance of Underground Lines	\$0	\$0	\$0	\$0	\$0	0.0%
Maintenance of Miscellaneous Trans. Plant	\$1,955	\$752	\$1,349	\$351	\$6,034	32.5%
Total Transmission Expenses	\$6,316,222	\$6,407,293	\$6,203,922	\$5,924,533	\$5,726,687	-2.4%

UGI Utilities, Inc. (Electric Service Division)
Operating Revenues and Expenses

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Income Statement	2006	2007	2008	2009	2010	Compound Growth
Operation Supervision and Engineering	\$357,106	\$344,692	\$375,006	\$357,019	\$381,073	1.6%
Load Dispatching	\$345,187	\$370,546	\$331,690	\$387,060	\$423,434	5.2%
Station Expenses	\$42,738	\$47,353	\$34,053	\$29,718	\$28,282	-9.8%
Overhead Line Expenses	\$87,799	\$141,200	\$178,918	\$89,087	\$114,458	6.9%
Underground Line Expenses	\$40,567	\$35,923	\$40,369	\$36,961	\$32,469	-5.4%
Street Lighting and Signal Expenses	\$8,351	\$31,449	\$27,611	\$57,783	\$38,943	47.0%
Meter Expenses	\$432,579	\$468,541	\$429,335	\$365,756	\$376,596	-3.4%
Customer Installations Expenses	\$164,986	\$137,028	\$162,902	\$138,219	\$127,086	-6.3%
Miscellaneous Expenses	\$414,522	\$499,727	\$417,292	\$311,415	\$387,272	-1.7%
Rents	\$158,283	\$161,934	\$77,149	\$39,872	\$163	-82.1%
Total Operation	\$2,052,118	\$2,238,393	\$2,074,325	\$1,812,890	\$1,909,776	-1.8%
Maintenance Supervision and Engineering	\$224,112	\$226,109	\$261,507	\$248,614	\$245,990	2.4%
Maintenance of Structures	\$450	\$409	\$1,940	\$1,800	\$1,623	37.8%
Maintenance of Station Equipment	\$20,494	\$21,693	\$18,225	\$18,856	\$21,171	0.8%
Maintenance of Overhead Lines	\$2,480,652	\$2,441,603	\$2,683,628	\$2,451,529	\$2,639,657	1.6%
Maintenance of Underground Lines	\$181,700	\$187,463	\$189,855	\$152,457	\$158,372	-3.4%
Maintenance of Line Transformers	\$225,166	\$243,527	\$306,284	\$184,974	\$127,863	-13.2%
Maint. of Street Lighting and Signal Systems	\$43,561	\$41,393	\$58,950	\$50,289	\$25,802	-12.3%
Maintenance of Meters	\$12,337	\$18,652	\$7,717	\$9,107	\$11,829	-1.0%
Maintenance of Miscellaneous Dist. Plant	\$28,779	\$31,425	\$30,440	\$24,128	\$19,352	-9.4%
Total Maintenance	\$3,217,251	\$3,212,274	\$3,558,546	\$3,141,754	\$3,251,659	0.3%
Supervision	\$67,839	\$73,084	\$74,173	\$46,917	\$65,597	-0.8%
Customer Assistance Expenses	\$418,934	\$422,788	\$386,079	\$409,485	\$321,697	-6.4%
Information and Instructional Expenses	\$68,944	\$50,499	\$100,510	\$42,735	\$53,318	-6.2%
Miscellaneous Customer Service and Info. Exp	\$74,547	\$111,634	\$85,177	\$63,485	\$25,171	-23.8%
Total Customer Service and Info. Expenses	\$630,264	\$658,005	\$645,939	\$562,622	\$465,783	-7.3%
Total Distribution Expenses	\$5,269,369	\$5,450,687	\$5,632,871	\$4,954,644	\$5,161,435	-0.5%
UTILITY OPERATING INCOME						
OPERATING REVENUES	\$99,050,357	\$128,975,411	\$143,217,487	\$136,573,433	\$115,186,953	3.8%
OPERATING EXPENSES						
Operation Expenses	\$64,970,458	\$86,261,933	\$104,170,064	\$104,945,142	\$88,045,846	7.9%
Maintenance Expenses	\$3,795,209	\$3,858,694	\$4,277,196	\$3,826,451	\$3,937,927	0.9%
Depreciation Expenses	\$3,292,224	\$3,254,346	\$3,522,074	\$3,671,258	\$3,773,604	3.5%
Amort. and Depreciation of Utility Plant	\$150,159	\$217,886	\$198,355	\$237,766	\$251,756	13.8%
Amortization of Utility Plant Acquired	\$0	\$0	\$11,889	\$15,902	\$16,641	NM
Amort. of Property Losses, Unrec. Plant, etc.	\$0	\$0	\$0	\$0	\$0	0.0%
Amortization of Conversion Expenses	\$0	\$0	\$0	\$0	\$0	0.0%
Regulatory Debits	\$0	\$0	\$0	\$0	\$0	0.0%
Regulatory Credits	\$0	\$0	\$0	\$0	\$0	0.0%
Taxes Other Than Income Taxes	\$6,461,412	\$8,226,750	\$9,114,633	\$8,238,626	\$7,424,084	3.5%
Income Taxes	\$6,333,473	\$11,461,712	\$7,275,286	\$4,657,248	\$158,549	-60.2%
Other Income Taxes	\$0	\$0	\$0	\$0	\$0	0.0%
Provision for Deferred Income Taxes	\$1,537,652	\$3,218,706	\$3,714,091	\$2,186,255	\$3,758,892	25.0%
Provision for Deferred Income Taxes-Credit	(\$371,596)	(\$4,208,829)	(\$2,606,376)	(\$1,032,864)	\$391,004	NM
Investment Tax Credit	(\$70,959)	(\$87,704)	(\$57,295)	(\$47,472)	(\$38,461)	-14.2%
Gains from Disposition of Utility Plant	\$0	\$0	\$0	\$0	\$0	0.0%
Losses from Disposition of Utility Plant	\$0	\$0	\$0	\$0	\$0	0.0%
Gains from Disposition of Allowances	\$0	\$0	\$0	\$0	\$0	0.0%
Losses from Disposition of Allowances	\$0	\$0	\$0	\$0	\$0	0.0%
TOTAL UTILITY OPERATING EXPENSES	\$86,098,032	\$112,223,494	\$129,619,717	\$126,698,312	\$107,719,842	5.8%
NET UTILITY OPERATING INCOME	\$12,952,325	\$16,751,917	\$13,597,770	\$9,875,121	\$7,467,111	-12.9%

UGI Utilities, Inc. (Electric Service Division)
Operating Revenues and Expenses

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Income Statement	2006	2007	2008	2009	2010	Compound Growth
OTHER INCOME AND DEDUCTIONS						
Rev. from Merch., Jobbing and Cont. Work	\$0	\$0	\$0	\$0	\$0	0.0%
Costs and Exp. of Merch., Jobbing and Cont	\$0	\$0	\$0	\$0	\$0	0.0%
Revenues form Nonutility Operations	\$0	\$0	\$0	\$0	\$0	0.0%
Expenses of Nonutility Operations	\$0	\$0	\$0	\$0	\$0	0.0%
Nonoperating Rental Income	\$31,468	\$32,358	\$38,737	\$39,389	\$45,488	9.6%
Equity in Earnings of Subsidiary Companies	\$0	\$0	\$0	\$0	\$0	0.0%
Interest and Dividend Income	\$7,957	\$39,190	\$11,430	\$12,102	\$110,047	92.8%
Allow. for Other Funds Used During Const.	\$0	\$0	\$0	\$0	\$0	0.0%
Miscellaneous Nonoperating Income	\$15,357	\$75,638	\$127,298	\$110,682	\$150,479	76.9%
Gain on Disposition of Property	\$0	\$0	\$0	\$0	\$0	0.0%
TOTAL OTHER INCOME	\$54,782	\$147,186	\$177,465	\$162,173	\$306,014	53.7%
Loss on Disposition of Property	\$0	\$0	\$0	\$0	\$0	0.0%
Miscellaneous Amortization	\$0	\$0	\$0	\$0	\$0	0.0%
Donations	\$91,094	\$58,436	\$64,160	\$106,636	\$128,480	9.0%
Miscellaneous Income Deductions	\$0	\$0	\$0	\$0	\$0	0.0%
TOTAL OTHER INCOME DEDUCTIONS	\$91,094	\$58,436	\$64,160	\$106,636	\$128,480	9.0%
Taxes Other Than Income Taxes	\$0	\$0	\$0	\$0	\$0	0.0%
Income Taxes, Other Income and Deduction	\$0	\$0	\$0	\$0	\$0	0.0%
Other Income Taxes	\$2,765	\$44,689	\$59,082	\$36,655	\$94,550	141.8%
Provision for Deferred Income Taxes	\$13,518	\$0	\$0	\$0	\$0	-100.0%
Deferred Income Tax Credits	\$0	\$0	\$0	\$0	\$0	0.0%
Investment Tax Credit Adjustment - Net	\$0	\$0	\$0	\$0	\$0	0.0%
Investment Tax Credit	\$0	\$0	\$0	\$0	\$0	0.0%
TOT. TAXES ON OTHER INC. AND DED.	\$16,283	\$44,689	\$59,082	\$36,655	\$94,550	55.2%
NET OTHER INCOME AND DEDUCTIONS	(\$52,595)	\$44,061	\$54,223	\$18,882	\$82,984	NM
INTEREST CHARGES						
Interest on Long-Term Debt	\$1,972,258	\$1,629,319	\$1,551,125	\$1,489,574	\$1,759,468	-2.8%
Amortization of Debt Disc. and Expense	\$30,380	\$34,172	\$34,819	\$45,186	\$51,077	13.9%
Amortization of Loss on Reacquired Debt	\$9,836	\$9,043	\$8,097	\$7,822	\$8,436	-3.8%
Amortization of Premium on Debt	(\$547)	\$0	\$0	\$0	\$0	-100.0%
Amortization of Gain on Reacquired Debt - C	\$0	\$0	\$0	\$0	\$0	0.0%
Interest on Debt to Associated Companies	\$0	\$0	\$0	\$0	\$0	0.0%
Other Interest Expense	\$667,480	\$808,486	\$303,071	\$182,355	\$149,481	-31.2%
Allowance for Borrowed Funds Used During	(\$46,767)	(\$153,700)	(\$36,690)	(\$7,347)	(\$19,459)	-19.7%
NET INTEREST CHARGES	\$2,632,640	\$2,327,320	\$1,860,422	\$1,717,590	\$1,949,003	-7.2%
INCOME BEFORE EXTRA. ITEMS	\$10,267,090	\$14,468,658	\$11,791,571	\$8,176,413	\$5,601,092	-14.1%
EXTRAORDINARY ITEMS						
Extraordinary Income	\$0	\$0	\$0	\$0	\$0	0.0%
Extraordinary Deductions	\$0	\$0	\$0	\$0	\$0	0.0%
NET EXTRAORDINARY ITEMS	\$0	\$0	\$0	\$0	\$0	0.0%
Income Taxes - Federal and Other	\$0	\$0	\$0	\$0	\$0	0.0%
Extraordinary Items After Taxes	\$0	\$0	\$0	\$0	\$0	0.0%
NET INCOME	\$10,267,090	\$14,468,658	\$11,791,571	\$8,176,413	\$5,601,092	-14.1%

UGI Utilities, Inc. (Electric Service Division)
Balance Sheet

Appendix F
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Comparative Balance Sheet	2006	2007	2008	2009	2010	Compound Growth
UTILITY PLANT*						
Utility Plant	\$1,026,965,295	\$1,068,485,795	\$1,113,223,841	\$1,153,486,902	\$1,187,667,211	3.7%
Construction Work in Progress	\$2,211	\$0	\$0	\$0	\$0	-100.0%
Accumulated Provision for Depreciation	\$14,396,189	\$15,010,219	\$15,736,237	\$7,053,579	\$16,007,119	2.7%
TOTAL UTILITY PLANT	\$1,041,363,695	\$1,083,496,014	\$1,128,960,078	\$1,160,540,481	\$1,203,674,330	3.7%
Accum. Depreciation and Amortization	(\$353,958,280)	(\$369,056,713)	(\$388,426,329)	(\$405,743,132)	(\$427,603,151)	4.8%
NET UTILITY PLANT (excluding nuclear fuel)	\$687,405,415	\$714,439,301	\$740,533,749	\$754,797,349	\$776,071,179	3.1%
Nuclear Fuel	\$0	\$0	\$0	\$0	\$0	0.0%
Accum. Amortization for Nuclear	\$0	\$0	\$0	\$0	\$0	0.0%
NET NUCLEAR FUEL	\$0	\$0	\$0	\$0	\$1	0.0%
NET UTILITY PLANT (including nuclear fuel)	\$687,405,415	\$714,439,301	\$740,533,749	\$754,797,349	\$776,071,180	3.1%
OTHER PROPERTY AND INVESTMENTS						
Nonutility Property	\$236,930	\$236,930	\$236,930	\$236,930	\$236,930	0.0%
Accum. Depreciation and Amortization	(\$5,310)	(\$5,310)	(\$5,310)	(\$5,310)	(\$5,310)	0.0%
Investments in Associated Companies	\$0	\$0	\$0	\$0	\$0	0.0%
Investment in Subsidiary Companies	\$0	\$0	\$0	\$0	\$0	0.0%
Noncurrent Portion of Allowances	\$0	\$0	\$0	\$0	\$0	0.0%
Other Investments	\$552,447,436	\$538,330,236	\$800,818,469	\$772,753,592	\$762,638,974	8.4%
Special Funds	\$1,192	\$820,299	\$698,883	(\$445,349)	(\$595,778)	NM
TOTALS	\$552,690,868	\$539,392,775	\$801,759,592	\$772,550,483	\$762,285,436	8.4%
CURRENT AND ACCRUED ASSETS						
Cash	\$5,760,134	\$4,612,883	\$1,349,608	\$1,128,530	\$0	-100.0%
Special Deposits	\$0	\$0	\$0	\$0	\$0	0.0%
Working Fund	\$20,925	\$19,665	\$19,330	\$19,330	\$17,080	-4.9%
Temporary Cash Investments	\$7,947,477	\$13,214,749	\$35,917,810	\$6,253,972	\$5,447,267	-9.0%
Notes Receivable	\$0	\$0	\$0	\$0	\$0	0.0%
Customer Accounts Receivable	\$74,107,766	\$86,632,230	\$95,757,510	\$77,042,648	\$75,581,575	0.5%
Other Accounts Receivable	\$8,070,862	\$14,086,898	\$13,674,349	\$6,953,690	\$7,774,845	-0.9%
Accum. for Uncollectible Accounts	(\$6,675,855)	(\$5,699,033)	(\$7,744,062)	(\$5,518,590)	(\$4,518,364)	-9.3%
Notes Receivable from Assoc. Companies	\$66,700,000	\$89,250,000	\$102,900,000	\$49,200,000	\$36,900,000	-13.8%
Accts Receivable from Assoc. Companies	\$12,437,362	\$5,364,824	\$5,328,517	\$26,499,742	\$31,844,010	26.5%
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	\$2,431,233	\$2,009,673	\$2,205,617	\$2,205,371	\$2,803,108	3.6%
Merchandise	\$691,654	\$0	\$0	\$0	\$0	-100.0%
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	\$371,469	\$271,136	\$760,362	\$719,960	\$488,512	7.1%
Gas Stored Underground-Current	\$85,054,305	\$68,558,605	\$72,322,685	\$72,234,126	\$42,742,539	-15.8%
Liquefied Gas Stored and Held for Proc.	\$0	\$0	\$0	\$0	\$0	0.0%
Prepayments	\$1,919,939	\$2,654,051	\$3,294,155	\$3,356,628	\$3,901,284	19.4%
Advances for Gas	\$0	\$0	\$0	\$0	\$0	0.0%
Interest and Dividends Receivable	\$460,095	\$398,208	\$205,081	\$104,766	\$128,926	-27.2%
Rents Receivable	\$0	\$0	\$0	\$0	\$0	0.0%
Accrued Utility Revenues	\$39,872,014	\$55,975,668	\$53,426,360	\$46,899,980	\$44,004,996	2.5%
Miscellaneous Current and Accrued Assets	\$4,548,275	\$470,208	\$409,028	\$354,816	\$668,788	-38.1%
TOTALS	\$303,717,655	\$337,819,765	\$379,826,350	\$287,454,969	\$247,784,546	-5.0%
DEFERRED DEBITS						
Unamortized Debt Expenses	\$4,682,763	\$4,457,319	\$4,853,726	\$4,226,739	\$3,599,967	-6.4%
Extraordinary Property Losses	\$0	\$0	\$0	\$0	\$0	0.0%
Unrecovered Plant and Regulatory Study	\$0	\$0	\$0	\$0	\$0	0.0%
Other Regulatory Assets	\$66,194,217	\$69,615,120	\$67,910,222	\$73,439,175	\$163,169,437	25.3%
Prelim. Survey and Investigation Charges	\$251,102	\$44,100	\$2,680	\$43,734	\$127,475	-15.6%
Clearing Accounts	\$7,597	\$8,100	\$31,436	(\$268,838)	\$789,825	219.3%
Temporary Facilities	\$0	\$548	\$219	\$35	\$0	NM
Misc. Deferred Debits	\$19,436,465	\$174,885	\$563,154	\$443,407	\$8,282,323	-19.2%
Def. Losses from Disposition of Plant	(\$431)	\$753,937	\$232,691	\$150,944	(\$503,258)	484.6%
Research, Devel. and Demonstration	\$0	\$0	\$0	\$0	\$0	0.0%
Unamortized Loss on Reacquired Debt	\$726,580	\$643,542	\$560,504	\$477,466	\$394,429	-14.2%
Accum. Deferred Income Taxes	\$18,725,924	\$37,661,506	\$80,645,604	\$56,121,326	\$42,171,593	22.5%
TOTALS	\$110,024,217	\$113,359,057	\$154,800,236	\$134,633,988	\$218,031,791	18.6%
TOTAL ASSETS AND OTHER DEBITS	\$1,653,838,155	\$1,705,010,898	\$2,076,919,927	\$1,949,436,789	\$2,004,172,953	4.9%

UGI Utilities, Inc. (Electric Service Division)
Balance Sheet

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Comparative Balance Sheet	2006	2007	2008	2009	2010	Compound Growth
PROPRIETARY CAPITAL						
Common Stock Issued	\$60,259,016	\$60,259,016	\$60,259,016	\$60,259,016	\$60,259,016	0.0%
Preferred Stock Issued	\$0	\$0	\$0	\$0	\$0	0.0%
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	\$345,801,426	\$346,757,574	\$466,888,318	\$467,160,467	\$467,903,160	7.9%
Miscellaneous Paid-in Capital	(\$4,186,139)	(\$19,210,391)	(\$76,281,715)	(\$82,053,681)	(\$4,814,180)	3.6%
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	\$0	\$0	\$0	\$0	\$0	0.0%
Retained Earnings	\$158,600,128	\$196,364,494	\$208,236,083	\$112,885,520	\$80,876,373	-15.5%
Unappropriated Undistributed Earnings	\$0	\$0	\$0	\$115,869,284	\$163,359,468	NM
Accumulated Other Comprehensive Income	\$0	\$0	\$0	\$0	\$0	0.0%
Reacquired Capital Stock	\$560,474,431	\$584,170,693	\$659,101,702	\$674,120,606	\$767,583,837	8.2%
TOTALS	\$1,120,948,862	\$1,168,341,386	\$1,318,203,404	\$1,348,241,212	\$1,535,167,674	8.2%
LONG-TERM DEBT						
Bonds	\$0	\$0	\$0	\$0	\$0	0.0%
Reacquired Bonds	\$0	\$0	\$0	\$0	\$0	0.0%
Advances from Associated Companies	\$0	\$0	\$0	\$0	\$0	0.0%
Other Long-Term Debt	\$512,000,000	\$512,000,000	\$640,000,000	\$640,000,000	\$640,000,000	5.7%
Unamortized Premium on Long-Term Debt	\$0	\$0	\$0	\$0	\$0	0.0%
Unamortized Discount on Long-Term Debt	\$0	\$0	\$0	\$0	\$0	0.0%
TOTALS	\$512,000,000	\$512,000,000	\$640,000,000	\$640,000,000	\$640,000,000	5.7%
OTHER NONCURRENT LIABILITIES						
Obligations Under Capital Leases-Noncurrent	\$0	\$0	\$0	\$0	\$0	0.0%
Accum. Provision for Property Insurance	\$0	\$0	\$0	\$0	\$0	0.0%
Accum. Provision for Injuries and Damages	\$2,357,029	\$2,769,201	\$1,341,728	\$830,381	\$165,879	-48.5%
Accum. Provision for Pensions and Benefits	\$0	\$5,969,807	\$106,753,862	\$103,964,763	\$89,577,317	NM
Accum. Misc. Operating Provisions	\$6,136,861	\$5,368,907	\$5,061,524	\$7,167,354	\$6,800,695	2.6%
Accum. Provision for Rate Refunds	\$0	\$0	\$0	\$87,841	\$90,515	NM
TOTALS	\$8,493,890	\$14,107,915	\$113,157,114	\$112,050,339	\$96,634,406	83.7%
CURRENT AND ACCRUED LIABILITIES						
Notes Payable	\$250,000,000	\$257,000,000	\$283,000,000	\$179,000,000	\$74,000,000	-26.2%
Accounts Payable	\$55,899,315	\$66,408,159	\$64,335,367	\$41,455,845	\$42,883,686	-6.4%
Notes Payable to Associated Companies	\$0	\$0	\$0	\$0	\$0	0.0%
Account Payable to Associated Companies	\$11,995,446	\$4,208,677	\$19,527,326	\$15,527,226	\$14,353,605	4.6%
Customer Deposits	\$17,176,599	\$19,275,755	\$20,433,857	\$21,618,408	\$22,183,161	6.6%
Taxes Accrued	\$5,563,176	\$13,846,094	\$18,168,282	\$593,850	\$14,740,525	27.6%
Interest Accrued	\$7,928,488	\$7,806,220	\$9,916,136	\$10,461,689	\$10,830,056	8.1%
Dividends Declared	\$0	\$0	\$0	\$666,970	\$312,646	NM
Matured Long-Term Debt	\$0	\$0	\$0	\$0	\$0	0.0%
Matured Interests	\$0	\$0	\$0	\$0	\$0	0.0%
Tax Collections Payable	\$1,614,290	\$1,861,941	\$2,149,983	\$1,463,821	\$1,252,525	-6.1%
Miscellaneous Current and Accrued Liabilities	\$24,006,666	\$23,197,862	\$51,998,745	\$30,761,818	\$26,136,370	2.1%
Obligations Under Capital Leases-Current	\$0	\$0	\$0	\$125,440	\$13,369,544	NM
TOTALS	\$374,183,980	\$393,604,708	\$469,529,696	\$301,675,067	\$220,062,118	-12.4%
DEFERRED CREDITS						
Customer Advances for Construction	\$196,376	\$86,692	\$54,312	\$33,028	\$57,957	-26.3%
Accum. Deferred Investments Tax Credits	\$6,706,628	\$6,320,504	\$5,944,788	\$14,779,345	\$16,950,431	26.1%
Deferred Gains from Disposition of Utility Plant	\$0	\$0	\$0	\$0	\$5,877,417	NM
Other Deferred Credits	\$13,235,936	\$12,536,019	\$15,767,738	\$5,578,896	\$5,222,016	-20.7%
Other Regulatory Liabilities	\$0	\$0	\$0	\$0	\$0	0.0%
Unamortized Gain on Reacquired Debt	\$0	\$0	\$0	\$0	\$0	0.0%
Accum. Deferred Income Taxes - Other Property	\$178,106,531	\$196,831,085	\$195,851,631	\$211,500,624	\$260,827,574	10.0%
Accum. Deferred Income Taxes - Other	\$198,245,471	\$215,774,300	\$217,618,469	\$231,891,893	\$288,935,395	9.9%
TOTALS	\$396,490,942	\$431,548,600	\$435,236,938	\$463,783,786	\$577,870,790	9.9%
TOTAL LIABILITIES AND OTHER CREDITS	\$2,412,117,674	\$2,519,602,609	\$2,976,127,152	\$2,865,750,404	\$3,069,734,988	6.2%

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Total Transmission Plant + Total Distribution Plant In Service	2006	2007	2008	2009	2010	Compound Growth
Penn Power	356,728,169	374,639,897	382,749,030	427,051,232	446,517,862	5.8%
Citizens Electric Company	12,984,781	13,595,913	14,316,167	14,916,490	15,678,669	4.8%
Pike County Light and Power	11,768,039	12,388,597	13,456,210	14,084,371	14,601,436	5.5%
Wellsboro Electric Company	12,006,416	12,568,885	13,166,643	0	0	-100.0%
Panel Average	98,371,851	103,298,323	105,922,013	114,013,023	119,199,492	4.9%
UGI Utilities, Inc.	113,435,739	120,905,690	126,225,301	130,505,724	133,034,478	4.1%

Megawatt Hours Sold To Ultimate Consumers	2006	2007	2008	2009	2010	Compound Growth
Penn Power	4,668,336	4,736,809	4,691,493	4,236,148	4,502,095	-0.9%
Citizens Electric Company	168,549	176,657	168,258	160,209	155,939	-1.9%
Pike County Light and Power	71,963	73,645	77,294	72,268	75,357	1.2%
Wellsboro Electric Company	111,674	111,172	110,294	105,051	114,907	0.7%
Panel Average	1,255,131	1,274,571	1,261,835	1,143,419	1,212,075	-0.9%
UGI Utilities, Inc.	996,006	1,015,904	1,002,732	955,380	980,845	-0.4%

Average Number Of Ultimate Consumers Per Month	2006	2007	2008	2009	2010	Compound Growth
Penn Power	158,369	158,987	159,346	159,558	160,116	0.3%
Citizens Electric Company	6,698	6,717	6,765	6,804	6,821	0.5%
Pike County Light and Power	4,568	4,599	4,642	4,646	4,656	0.5%
Wellsboro Electric Company	5,932	5,972	6,009	6,070	6,138	0.9%
Panel Average	43,892	44,069	44,191	44,270	44,433	0.3%
UGI Utilities, Inc.	61,941	62,077	62,185	62,152	62,208	0.1%

Distribution Operation Expenses Per Distribution Plant In Service	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 0.0064	\$ 0.0060	\$ 0.0055	\$ 0.0048	\$ 0.0044	-8.9%
Citizens Electric Company	\$ 0.0436	\$ 0.0451	\$ 0.0400	\$ 0.0403	\$ 0.0405	-1.8%
Pike County Light and Power	\$ 0.0151	\$ 0.0212	\$ 0.0194	\$ 0.0246	\$ 0.0205	8.0%
Wellsboro Electric Company	\$ 0.0165	\$ 0.0176	\$ 0.0146	\$ 0.0145	\$ 0.0147	-2.8%
Panel Average	\$ 0.0204	\$ 0.0225	\$ 0.0199	\$ 0.0210	\$ 0.0200	-0.5%
UGI Utilities, Inc.	\$ 0.0238	\$ 0.0240	\$ 0.0212	\$ 0.0179	\$ 0.0185	-6.1%

Distribution Operation Expenses Per Megawatt Hours Sold	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 0.46	\$ 0.45	\$ 0.45	\$ 0.46	\$ 0.41	-2.8%
Citizens Electric Company	\$ 3.36	\$ 3.47	\$ 3.40	\$ 3.75	\$ 4.07	4.9%
Pike County Light and Power	\$ 2.46	\$ 3.56	\$ 3.39	\$ 4.79	\$ 3.96	12.6%
Wellsboro Electric Company	\$ 1.78	\$ 1.99	\$ 1.74	\$ 1.89	\$ 1.83	0.7%
Panel Average	\$ 2.53	\$ 3.01	\$ 2.84	\$ 3.48	\$ 3.29	6.8%
UGI Utilities, Inc.	\$ 2.06	\$ 2.20	\$ 2.07	\$ 1.90	\$ 1.95	-1.4%

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Distribution Operation Expenses Per Customer	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 13.64	\$ 13.29	\$ 13.16	\$ 12.26	\$ 11.60	-4.0%
Citizens Electric Company	\$ 84.57	\$ 91.38	\$ 84.61	\$ 88.27	\$ 93.02	2.4%
Pike County Light and Power	\$ 38.80	\$ 57.05	\$ 56.36	\$ 74.49	\$ 64.15	13.4%
Wellsboro Electric Company	\$ 33.43	\$ 37.04	\$ 31.93	\$ 32.68	\$ 34.30	0.6%
Panel Average	\$ 42.61	\$ 49.69	\$ 46.52	\$ 51.93	\$ 50.77	4.5%
UGI Utilities, Inc.	\$ 33.13	\$ 36.06	\$ 33.36	\$ 29.17	\$ 30.70	-1.9%

Distribution Maintenance Expenses Per Distribution Plant In Service	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 0.029	\$ 0.035	\$ 0.041	\$ 0.016	\$ 0.015	-15.5%
Citizens Electric Company	\$ 0.021	\$ 0.021	\$ 0.015	\$ 0.018	\$ 0.024	3.1%
Pike County Light and Power	\$ 0.014	\$ 0.012	\$ 0.014	\$ 0.057	\$ 0.014	0.1%
Wellsboro Electric Company	\$ 0.029	\$ 0.029	\$ 0.030	\$ 0.033	\$ 0.027	-2.4%
Panel Average	\$ 0.023	\$ 0.024	\$ 0.025	\$ 0.031	\$ 0.020	-4.1%
UGI Utilities, Inc.	\$ 0.037	\$ 0.035	\$ 0.036	\$ 0.031	\$ 0.032	-4.1%

Distribution Maintenance Expenses Per Megawatt Hours Sold	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 2.07	\$ 2.59	\$ 3.31	\$ 1.52	\$ 1.38	-9.6%
Citizens Electric Company	\$ 1.62	\$ 1.60	\$ 1.27	\$ 1.68	\$ 2.40	10.3%
Pike County Light and Power	\$ 2.36	\$ 2.06	\$ 2.51	\$ 11.14	\$ 2.80	4.4%
Wellsboro Electric Company	\$ 3.14	\$ 3.27	\$ 3.57	\$ 4.31	\$ 3.31	1.3%
Panel Average	\$ 2.30	\$ 2.38	\$ 2.67	\$ 4.66	\$ 2.47	1.8%
UGI Utilities, Inc.	\$ 3.23	\$ 3.16	\$ 3.55	\$ 3.29	\$ 3.32	0.7%

Distribution Maintenance Expenses Per Customer	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 61.01	\$ 77.29	\$ 97.38	\$ 40.34	\$ 38.84	-10.7%
Citizens Electric Company	\$ 40.87	\$ 41.95	\$ 31.53	\$ 39.67	\$ 54.80	7.6%
Pike County Light and Power	\$ 37.13	\$ 33.00	\$ 41.86	\$ 173.23	\$ 45.35	5.1%
Wellsboro Electric Company	\$ 59.16	\$ 60.88	\$ 65.51	\$ 74.64	\$ 61.92	1.1%
Panel Average	\$ 49.54	\$ 53.28	\$ 59.07	\$ 81.97	\$ 50.23	0.3%
UGI Utilities, Inc.	\$ 51.94	\$ 51.75	\$ 57.23	\$ 50.55	\$ 52.27	0.2%

Customer Assistance Expenses Per Megawatt Hours Sold	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 0.26	\$ 0.26	\$ 1.21	\$ 2.35	\$ 2.73	80.0%
Citizens Electric Company	\$ -	\$ -	\$ 0.01	\$ 0.01	\$ 0.01	0.0%
Pike County Light and Power	\$ 1.12	\$ 0.73	\$ 1.08	\$ 1.76	\$ 0.46	-19.9%
Wellsboro Electric Company	\$ -	\$ -	\$ -	\$ 0.01	\$ 0.02	18.9%
Panel Average	\$ 0.69	\$ 0.50	\$ 0.77	\$ 1.03	\$ 0.81	3.9%
UGI Utilities, Inc.	\$ 0.42	\$ 0.42	\$ 0.39	\$ 0.43	\$ 0.33	-5.9%

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Customer Assistance Expenses Per Customer	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ 7.63	\$ 7.83	\$ 35.64	\$ 62.31	\$ 76.84	78.1%
Citizens Electric Company	\$ -	\$ -	\$ 0.17	\$ 0.17	\$ 0.24	9.0%
Pike County Light and Power	\$ 17.59	\$ 11.70	\$ 17.93	\$ 27.35	\$ 7.49	-19.2%
Wellsboro Electric Company	\$ -	\$ -	\$ -	\$ 0.25	\$ 0.38	11.0%
Panel Average	\$ 7.20	\$ 7.32	\$ 20.93	\$ 34.45	\$ 41.01	54.5%
UGI Utilities, Inc.	\$ 6.76	\$ 6.81	\$ 6.21	\$ 6.59	\$ 5.17	-6.5%

Maintenance Of Line Transformers Per Line Transformer Plant In Service	2006	2007	2008	2009	2010	Compound Growth
Penn Power	\$ -	\$ -	\$ 0.0001	\$ 0.0001	\$ -	0.0%
Citizens Electric Company	\$ 0.0118	\$ 0.0093	\$ 0.0056	\$ 0.0065	\$ 0.0076	-10.4%
Pike County Light and Power	\$ -	\$ -	\$ -	\$ -	\$ -	0.0%
Wellsboro Electric Company	\$ 0.0101	\$ 0.0106	\$ 0.0061	\$ 0.0120	\$ 0.0070	-8.8%
Panel Average	\$ 0.0110	\$ 0.0100	\$ 0.0039	\$ 0.0062	\$ 0.0049	-18.4%
UGI Utilities, Inc.	\$ 0.0134	\$ 0.0138	\$ 0.0171	\$ 0.0098	\$ 0.0067	-15.9%

