



Energy Analysis

EA 2018-01

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2014-2016 PERFORMANCE BENCHMARKS FOR NATURAL GAS UTILITIES

I. INTRODUCTION

Summary data of gas utility financial profiles and performance appear in this Energy Analysis. The intent is to provide industry participants and observers with relative measures of financial returns and operational efficiencies of natural gas distribution companies. For this study, the American Gas Association (AGA) collected data from its members. The data source for these benchmarking metrics is the Uniform Statistical Report (USR), which is administered annually by AGA on behalf of its member companies. Results are presented for the years 2014 through 2016. Additional information, some of which is company specific, is included in an attachment to this analysis and available only to AGA member companies.

For study purposes, the gas utility industry is segmented into distinct groups: investor-owned gas-only utilities, investor-owned combination gas and electric utilities, and municipally-owned gas utilities. Summary results are segmented in this sample accordingly. Comprehensive details are provided in the appendices.

II. BACKGROUND

THE NATURAL GAS DISTRIBUTION INDUSTRY. Approximately 1,400 utilities distribute natural gas to end-use consumers in the United States. For this analysis, a total of 87 utilities were included in the 2016 sample, 87 utilities were examined in 2015, and 84 companies were studied for 2014.¹ They are located across the United States, and each company has a unique combination of scale, load profile, and climatic attributes. In aggregate, the firms included in this study accounted for 87 percent of the residential and commercial natural gas customers in 2016, 86 percent in 2015, and 68 percent in 2014. *Given this sample size, any inferences about the sample's depiction of the entire industry are accordingly limited.*

Many AGA member companies are gas-only, investor-owned utilities, as are most companies in this analysis. These companies earn returns that accrue to their investors. State-level public utility commissions regulate their operations, finance, and capital investment activities.

¹ This set number was determined after eliminating member companies for whom data was either incomplete or not provided. Firms with zero net income are excluded from the analysis. This is not a scientific sample in that sample stratification by segment type does not reflect population stratification. See Appendix 9 for list of companies included.

Combination utilities have the franchise rights to transport and sell both gas and electric power commodities. These are also investor-owned firms with financial obligations to shareholders. Like the gas-only investor-owned firms, these companies are subject to various state and federal regulations.

Municipal utilities are publicly owned by the citizens of the jurisdictions that the utilities serve. Local governments enjoy tax-free bond-issuing capabilities, usually at interest rates lower than can be obtained by investor-owned utilities. Ultimately, such debt is usually collateralized by these utilities' abilities to secure tax revenue to back up debt commitments. What an investor-owned utility would pay out in dividends accrues instead to the municipal company's citizen-shareholders in the form of lower rates. Municipal utility regulation is performed primarily by local governments as opposed to state-level commissions.²

DESCRIPTION OF DATA SOURCES. Financial data about AGA member companies are drawn from the Uniform Statistical Report (USR). Member company staff prepares these standardized forms annually for collection by AGA, but companies may choose to withhold any or all of the requested data. Some of the USR duplicates the information found in audited end-of-year financial statements, but the USR requests additional information, such as heating degree-day profiles, type of sales by customer class, number of customers served, and various employment profile statistics. Data for miles of mains came from the U.S. Department of Transportation, Office of Pipeline Safety.

DATA LIMITATIONS. Since the data used for this analysis are annual figures only, a few inferential limitations should be noted. First, a single year's data for gas distribution operations are influenced by weather patterns for that year. The deviation between actual heating degree days (HDDs) versus historic normals will vary by location. This in turn suggests that utility benchmarks may slightly overstate or understate overall utility financial performance or efficiency of operations when impacted by weather.

Another limitation is that the ability to perform trend analysis is somewhat limited. While three years' worth of data are presented here, comparison of actual values (total revenues for example) from year to year can be distorted by changes in sample size. Also, variances in weather can affect these trends. Finally, the data set covers only three years and this limits the ability to compare longer-term trends.

Sample size and composition must also be considered as a potential limitation. The industry segment sample sizes used in this study are not consistently proportional to their respective populations. Additionally, the sample size—measured both in number of companies, and more importantly as percentage of total gas deliveries—has varied over time. Finally, specific company participation in the data collection changes from year to year. **This makes annual comparisons of absolute values, such as total number of therms sold, difficult and any resulting conclusions suspect.** However, the purpose of ratio analysis is to address this problem and facilitate annual comparisons.

² Note that relatively few financial profiles were available for the municipal segment. The operations data used here considers only gas activities. The financial profiles of gas-only and combination municipal utilities are blended together for summary purposes.

III. BENCHMARKING METRICS

Benchmarking metrics created for this study take several forms. Typical accounting ratios, based on income statements and balance sheets, serve as financial performance indicators. Financial statements are also recast in same-size formats, which present line items in percentage terms. Other benchmarks describe numbers of employees, meters, and volumes of gas throughput. All AGA data are summarized so that no individual company statistics are revealed. Additionally, summaries are created which divide the industry into type-of-company segments. These include gas utilities, combination gas and electric utilities, and municipally owned gas utilities.³ Appendix 2 is a series of charts that display the range of observations for selected benchmarking metrics. Appendix 9 shows the list of companies that were included in this analysis.

- *Utility Operating Profiles - Absolute Values (Section IV-A and Appendix 3a).* System profiles are summarized here by type of company. This data includes information on gas volumes delivered as well as the number of customers by class.
- *Financial Statements - Absolute Values (Section IV-B and Appendix 3b).* Income statement and balance sheet data are summarized here by type of company.⁴ Income statement amounts are expressed in absolute dollars in Appendix 3b. Note that these items represent gas operations only.
- *Financial Statements - Same-Size Analysis (Appendix 3c).* The financial statement data shown in absolute values are re-cast in percentage terms for a same-size analysis. Income statement line items are in percentages relative to operating revenue while balance sheet items are expressed as a percentage of total assets. This shows the disposition of a firm's revenue and composition of its asset base without respect to the size of an individual firm.
- *Financial Statements - Per Cost Driver (Section IV-B and Appendix 3d).* Income statements are shown in several formats: per therm delivered, per customer served, per dollar value of gas plant in service, and per mile of main in operation.
- *Financial Ratios (Section IV-D and Appendix 3e).* These are conventional financial analysis tools, and they compare a company's financial status to other firms or types of firms. Ratios are calculated from group totals or averages (explanations are provided in the Glossary, Appendix 1).
- *O&M Detail Analysis (Section IV-C and Appendix 4).* These cost elements represent major gas delivery activities, starting with purchase or production and continuing sequentially through transmission, distribution, customer service, sales activities, and administrative and general (A&G) accounting. These results are also arrayed by type of company. Benchmarks for these data are created by expressing each line item on a basis of annual costs per therm delivered. See Table 3 for more detail.
- *Debt Analysis - Ratios (Section IV-E).* Data are presented to highlight various measures of debt. These include debt as a percent of capitalization and interest coverage ratios. The data in this section necessarily include both gas and electric operations.
- *Wages and benefits: Ratios and Same-Size Analysis (Section IV-G and Appendix 5).* Data about utility employment and benefits profiles are included. These measures are

³ See Glossary in Appendix 1 for a definition of these categories.

⁴ Appendix 3a financial statements are in thousands of dollars.

intended to illustrate the norms for staffing levels and expenses as they vary by type of firm. Benchmark measures include:

- » Total salaries and wages per employee
 - » Total benefits and pensions per employee
 - » Ratio of total benefits to total compensation
 - » Annual therm throughput per employee
 - » Average annual customers served per employee
- *Profitability (Section IV-F and Appendix 6).* Profitability is expressed here in terms of return on assets (ROA) as well as return on common equity. Since ROA measures the returns attributable to operations (prior to finance costs), ROA is used to describe the relative economic efficiency of natural gas distribution by industry segment. This section will examine selected cost drivers-- numbers of therms sold, of customers served, dollars of gas plant utilized, and miles of pipe in service-- to evaluate each in terms of its impact on ROA. Additionally, return on equity indicates the rate of return that a firm earns on its equity base. See Table 6 for more detail.

IV. BENCHMARK DISCUSSION

IV-A. OVERVIEW

Benchmark summaries are presented here in order of accounting process: revenues are discussed first, followed by O&M costs, operating income, debt management, capitalized income values, and profitability. Finally, wage and benefit profiles are discussed. Table 1 summarizes the scope and scale of the companies studied. It is important to emphasize that the following data are meant to illustrate the typical company studied in this sample and absolute values should not be extrapolated to the industry as a whole. This is especially true of the average number of customers.

TABLE 1 UTILITY PROFILES STATISTICAL SUMMARY, BY INDUSTRY SEGMENT DATA BASED ON SEGMENT AVERAGES			
	2014	2015	2016
All Companies	84 Firms	87 Firms	87 Firms
Number of gas customers	677,004	662,552	659,073
Annual therms delivered ('000)	1,393,449	1,249,229	1,609,325
Annual therms delivered per account	2,244	2,443	5,720
Therms delivered per \$1,000 of gas plant	770	666	1,542
Density of system ²	63.7	79.1	61.3
Firm sales ³	104.5%	92.8%	93.6%
Gas utilities	51 Firms	55 Firms	54 Firms
Number of gas customers	764,932	689,347	750,845
Annual therms delivered ('000)	1,448,069	1,295,680	1,452,743
Annual therms delivered per account	2,171	2,837	2,736
Therms delivered per \$1,000 of gas plant	734	695	618
Density of system ²	57.6	84.3	58.8
Firm sales ³	94.4%	94.6%	94.9%
Comb. Gas & Electric Utilities¹	25 Firms	23 Firms	23 Firms
Number of gas customers	739,642	789,295	789,337
Annual therms delivered ('000)	1,669,606	1,523,908	1,525,057
18 Firms Annual therms delivered per account	2,103	1,900	1,901
Therms delivered per \$1,000 of gas plant	741	630	891
Density of system ²	70.9	71.5	68.2
Firm sales ³	92.0%	93.7%	93.7%
Municipal Utilities	8 Firms	9 Firms	10 Firms
Number of gas customers	167,966	174,906	159,761
Annual therms delivered ('000)	245,933	263,404	509,991
Annual therms delivered per account	1,510	1,423	14,265
Therms delivered per \$1,000 of gas plant	836	581	6,393
Density of system ²	87.2	66.5	67.0
Firm sales ³	91.2%	79.5%	85.7%

Source: AGA, USR and US Department of Transportation, Office of Pipeline Safety.

¹ Data for "Combination Gas & Electric Utilities is from gas operations only.

² "Density" refers to the number of customers per mile of pipe in service.

³ "Firm Sales" is expressed as a percentage of total annual therm volume delivered.

IV-B. REVENUE PERFORMANCE

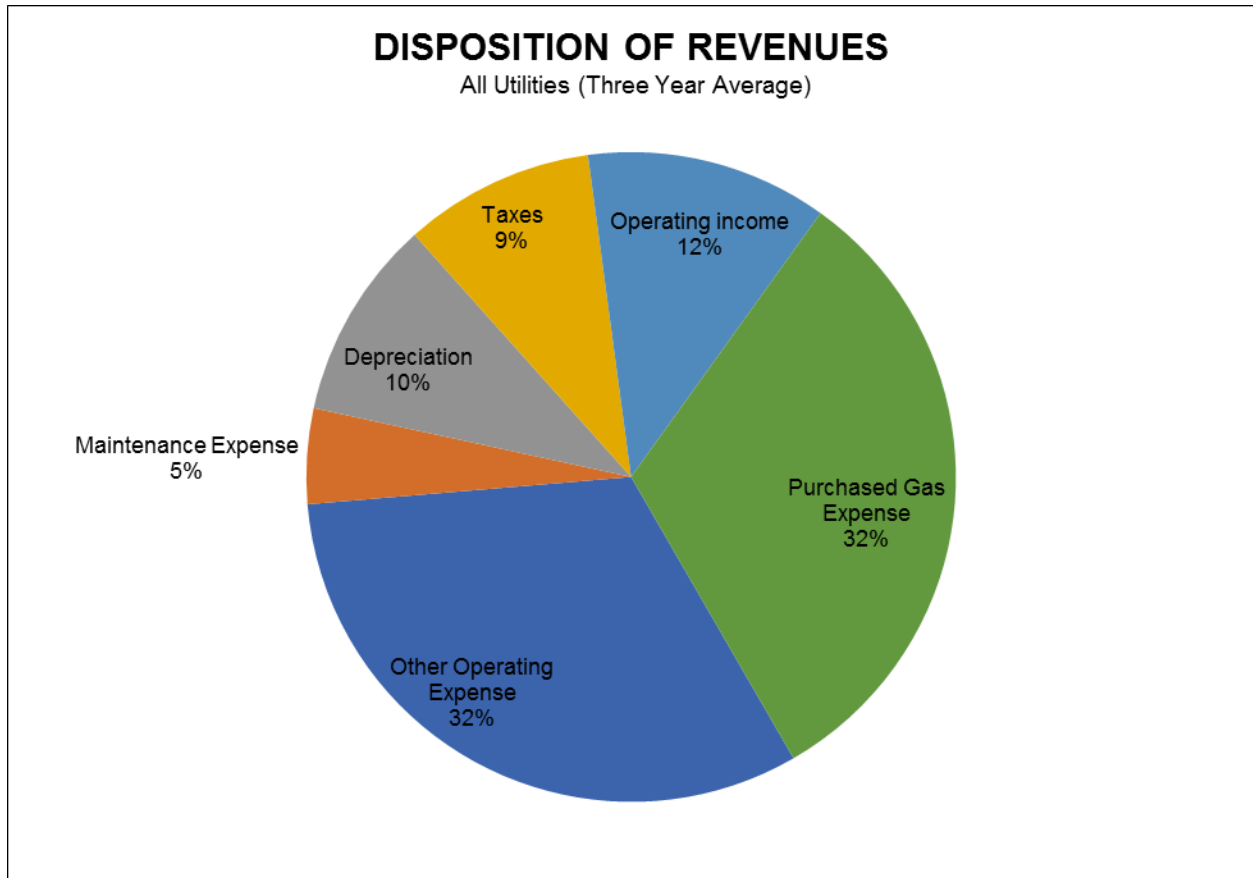
Figure 1 shows the allocation of average revenue for the three years studied. Table 2 summarizes average industry revenue performance by segment. Weather patterns impacted revenues per customer, while changing gas costs impacted both revenues per customer and per therm.

TABLE 2			
UTILITY REVENUE PERFORMANCE			
Annual Average Values per Group Data Based on Segment Averages			
	2014	2015	2016
All Companies			
Operating revenue ('000)	\$724,410	\$604,675	\$568,495
Per customer	\$1,280	\$1,210	\$1,137
Per therm	\$0.756	\$0.688	\$0.614
Gross sales margin (Rev. less Pur. Gas, '000)	\$385,598	\$372,279	\$391,229
Per customer	\$617	\$588	\$707
Per therm	\$0.363	\$0.328	\$0.366
Collection period (days)	36.1	28.6	36.9
Gas Utilities			
Operating revenue ('000)	\$772,332	\$604,335	\$598,832
Per customer	\$1,237	\$1,294	\$1,194
Per therm	\$0.707	\$0.633	\$0.606
Gross sales margin (Rev. less Pur. Gas, '000)	\$424,985	\$394,012	\$415,415
Per customer	\$627	\$658	\$827
Per therm	\$0.356	\$0.341	\$0.383
Collection period (days)	38.1	30.0	40.3
Comb. Gas & Electric Utilities¹			
Operating revenue ('000)	\$859,042	\$771,151	\$760,765
Per customer	\$1,298	\$1,074	\$1,005
Per therm	\$0.820	\$0.795	\$0.744
Gross sales margin (Rev. less Pur. Gas, '000)	\$441,508	\$468,501	\$511,913
Per customer	\$617	\$463	\$564
Per therm	\$0.393	\$0.329	\$0.351
Collection period (days)	29.2	25.3	29.9
Municipal Utilities			
Operating revenue ('000)	\$218,123	\$181,314	\$147,723
Per customer	\$1,298	\$1,042	\$931
Per therm	\$0.910	\$0.755	\$0.539
Gross sales margin (Rev. less Pur. Gas, '000)	\$106,502	\$104,193	\$101,200
Per customer	\$504	\$442	\$495
Per therm	\$0.359	\$0.318	\$0.374
Collection period (days)	48.9	28.6	34.5

Source: AGA

¹ Figures for gas operations only.

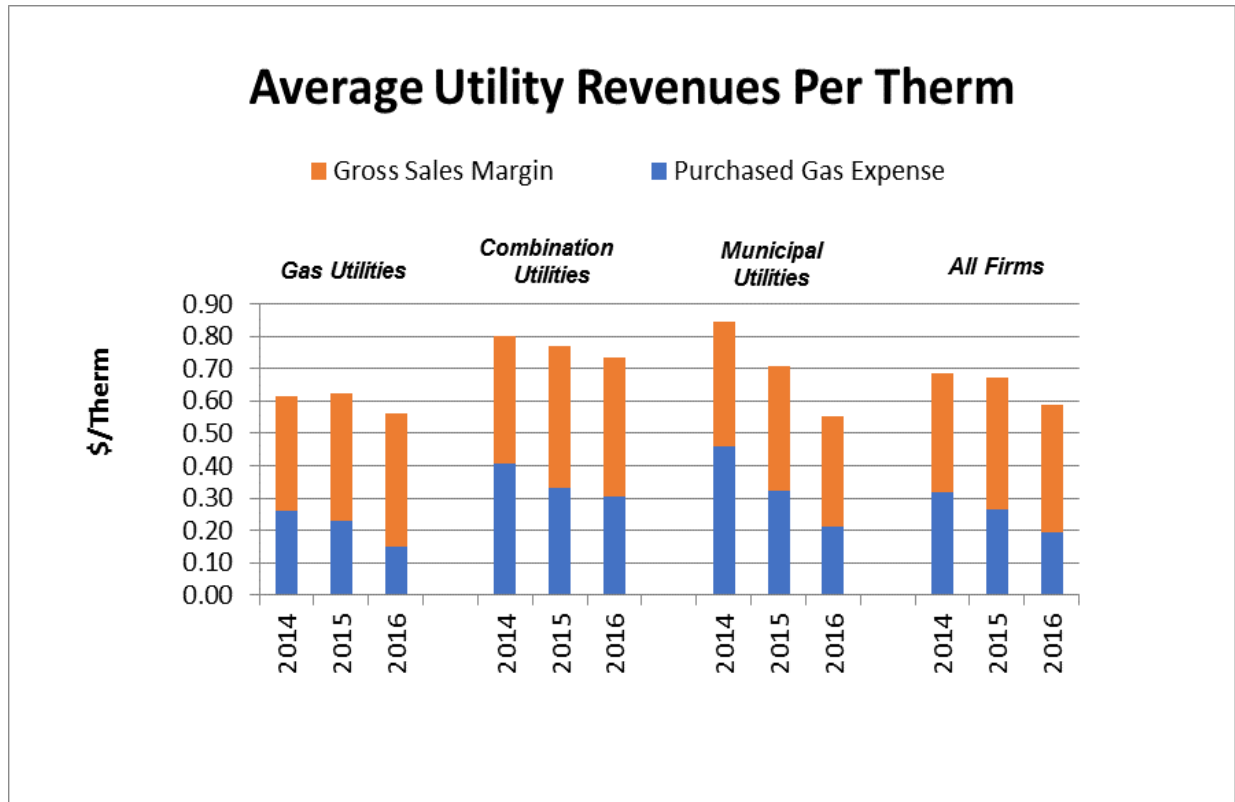
FIGURE 1



IV-C. O&M ANALYSIS

Operations and maintenance (O&M) expenses are those costs specifically attributable to current-year gas distribution activity. These are cost items that are incurred within an annual time period (as opposed to costs amortized over a period of years as is the case with finance costs and depreciation). A presentation of O&M costs on a per-therm basis will facilitate a comparison of cost efficiencies attained by the various industry segments. Table 3 shows average O&M expense detail for the years studied for the combination and gas utility segments.

FIGURE 2



Source: AGA, USR.

TABLE 3						
UTILITY O&M DETAIL ANALYSIS						
	GAS UTILITIES			COMBO UTILITIES ¹		
	2014	2015	2016	2014	2015	2016
VALUES PER THERM						
Gas-only revenues	\$0.6883	\$0.6700	\$0.6068	\$0.8467	\$0.7777	\$0.7444
Purchased-gas expense	\$0.2862	\$0.2288	\$0.1499	\$0.3786	\$0.3316	\$0.3043
Gross sales margin	\$0.3591	\$0.3966	\$0.4105	\$0.4418	\$0.4378	\$0.4308
	\$0.3291	\$0.2734	\$0.1963	\$0.4048	\$0.3399	\$0.3136
Total production costs ²						
Storage & LNG	\$0.0035	\$0.0045	\$0.0012	\$0.0026	\$0.0036	\$0.0037
Transmission	\$0.0087	\$0.0122	\$0.0115	\$0.0070	\$0.0135	\$0.0146
Distribution	\$0.0462	\$0.0673	\$0.0664	\$0.0625	\$0.0646	\$0.0749
Customer accounts	\$0.0253	\$0.0270	\$0.0266	\$0.0307	\$0.0340	\$0.0358
Customer svc. & info.	\$0.0040	\$0.0049	\$0.0054	\$0.0158	\$0.0137	\$0.0134
Sales	\$0.0011	\$0.0030	\$0.0030	\$0.0041	\$0.0032	\$0.0031
<u>Admin. & general</u>	\$0.0860	\$0.0744	\$0.0819	\$0.0841	\$0.0751	\$0.0897
Total O&M	\$0.5026	\$0.4648	\$0.4062	\$0.6117	\$0.5475	\$0.4841
SAME-SIZE ANALYSIS						
Gas-only revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Purchased-gas expense	41.60%	34.15%	24.71%	44.70%	42.64%	40.88%
Gross sales margin	52.20%	59.20%	67.66%	52.20%	56.29%	57.87%
	47.80%	40.80%	32.34%	47.80%	43.71%	42.13%
Total production costs ²						
Storage & LNG	0.50%	0.67%	0.19%	0.30%	0.46%	0.50%
Transmission	1.30%	1.82%	1.90%	0.80%	1.73%	1.96%
Distribution	6.70%	10.05%	10.94%	7.40%	8.30%	10.06%
Customer accounts	3.70%	4.03%	4.38%	3.60%	4.38%	4.81%
Customer svc. & info.	0.60%	0.73%	0.89%	1.90%	1.76%	1.80%
Sales	0.20%	0.44%	0.49%	0.50%	0.41%	0.42%
<u>Admin. & general</u>	12.50%	11.10%	13.50%	9.90%	9.65%	12.06%
Total O&M	73.00%	69.37%	66.94%	72.20%	70.41%	65.04%

Source: AGA, USR.

¹ Figures for gas operations only.

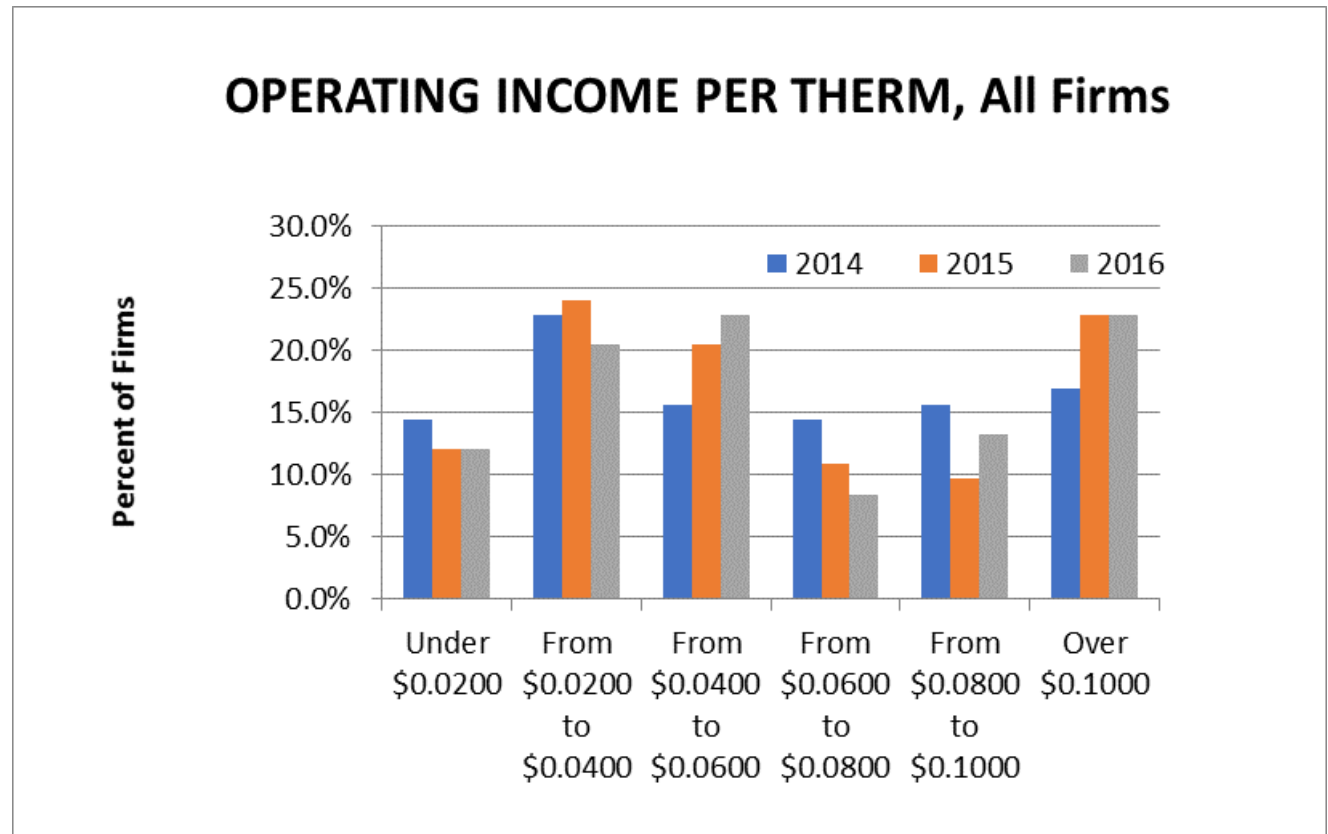
² Purchased-gas expense is subsumed within total production costs.

NOTE: Figures do not sum precisely due to independent rounding.

IV-D. INCOME ANALYSIS

Operating income, by accounting definition, represents revenues net of operations expenses. Operating income does not net out capital cost-related expenses such as interest and amortization. A summary of operating income, then, allows a comparison of efficiency in gas distribution. Figure 3 shows the dispersion of individual companies' operating income per therm. Table 4 shows average operating income results by type of firm.

FIGURE 3



Source: AGA, USR.

TABLE 4						
UTILITY INCOME STATEMENT HIGHLIGHTS						
AVERAGE VALUES PER GROUP, GAS OPERATIONS ONLY						
	GAS UTILITIES			COMBO UTILITIES ¹		
	2014	2015	2016	2014	2015	2016
Operating revenue, \$000	\$772,332	\$604,335	\$598,832	\$859,042	\$771,151	\$760,765
Total O&M, \$000	\$552,158	\$403,466	\$375,631	\$622,588	\$542,407	\$498,873
Operating income, \$000	\$81,064	\$74,794	\$83,713	\$94,998	\$88,922	\$117,790
Percent of Revenue						
Total O&M	71.49%	66.76%	62.73%	72.47%	70.34%	65.58%
Operating income	10.50%	12.38%	13.98%	11.06%	11.53%	15.48%
Per Therm						
Revenue	\$0.707	\$0.672	\$0.606	\$0.820	\$0.778	\$0.744
Total O&M	\$0.515	\$0.466	\$0.406	\$0.611	\$0.548	\$0.484
Operating income	\$0.073	\$0.071	\$0.069	\$0.079	\$0.085	\$0.107
Per Customer						
Revenue	\$1,237	\$1,292	\$1,194	\$1,298	\$1,068	\$1,005
Total O&M	\$899	\$1,013	\$899	\$956	\$756	\$657
Operating income	\$134	\$67	\$66	\$134	\$115	\$143
Per Dollar of Gas Plant						
Revenue	\$0.417	\$0.347	\$0.289	\$0.435	\$0.334	\$0.407
Total O&M	\$0.313	\$0.254	\$0.205	\$0.327	\$0.242	\$0.284
Operating income	\$0.040	\$0.033	\$0.029	\$0.044	\$0.033	\$0.053
Per Mile of Main²						
Revenue	\$70,579	\$88,489	\$57,528	\$93,402	\$78,022	\$72,659
Total O&M	\$51,018	\$64,677	\$38,547	\$66,284	\$52,477	\$45,500
Operating income	\$7,409	\$8,926	\$6,694	11,424	\$10,425	\$12,205

Source: AGA, USR.

¹ Figures for gas operations only.

² Miles of main only.

IV-E. DEBT ANALYSIS

Historically, utilities have operated in a regulated environment. Therefore, debt instruments and their management have been prominent items on the utilities' financial agendas. Debt has traditionally represented a large share of utility capitalization. This is due to the historically regulated environment in which utilities have operated. The presence of regulatory oversight, from an investor's perspective, suggests less risk, more stable cash flow, and generally better debt ratings and interest coverage from cash flow. Historically, this made

the utility industries attractive to bond investors. As for utilities, the containment of interest and other debt-related carrying costs can have a decisive impact on the overall profitability of operations.

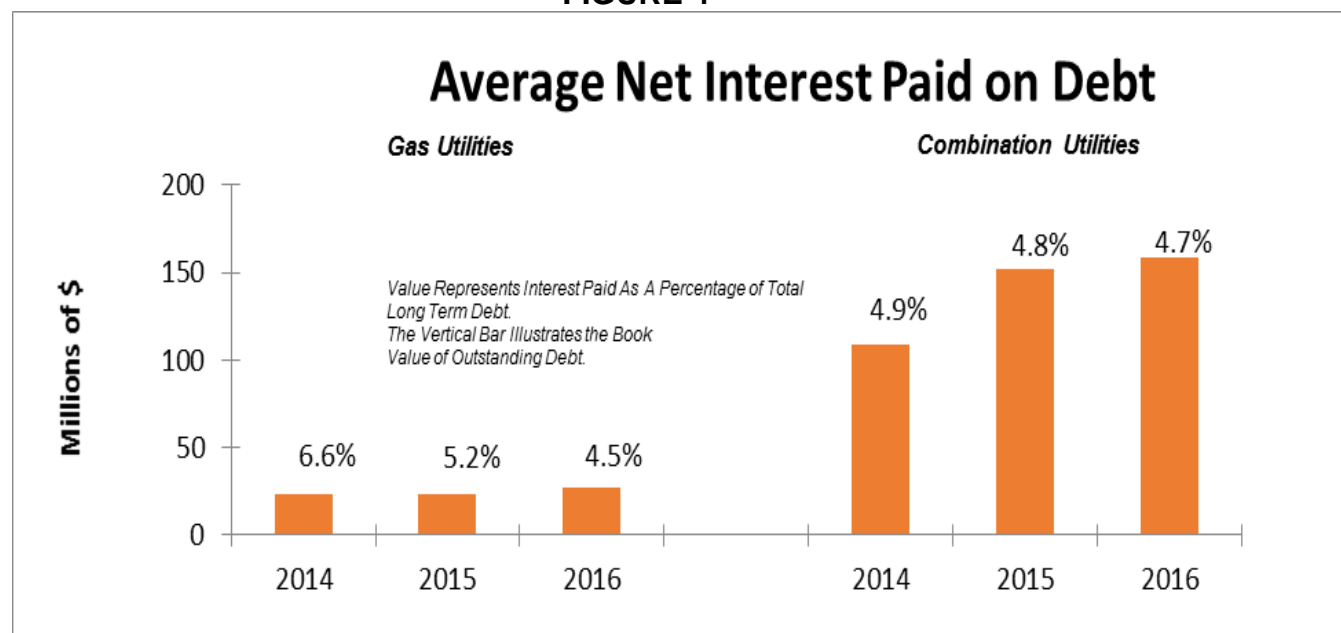
The total cost of capital for a utility reflects that of both debt and equity financing.⁵ Table 5 shows summary descriptors of capital costs for utilities by industry segment.

TABLE 5			
UTILITY DEBT AND DEBT COVERAGE			
AVERAGE VALUES			
	2014	2015	2016
Gas utilities			
Total LT Debt to Total Assets	23.26%	21.84%	20.49%
LT Debt to Total Capitalization	38.94%	36.55%	34.55%
EBITDA Interest Coverage	9.8x	8.7x	19.5x
Combination Utilities¹			
Total LT Debt to Total Assets	26.49%	28.01%	28.32%
LT Debt to Total Capitalization	42.43%	45.03%	45.46%
EBITDA Interest Coverage	8.6x	6.3x	7.8x

Source: AGA, USR.

¹Figures represent combined gas and electric operations.

FIGURE 4



Note: Combination utility figures represent combined gas and electric operations.

⁵ For combination utilities, such measures necessarily reflect combined gas and electric financials. Some municipal utilities in this study have similar combined activity financing.

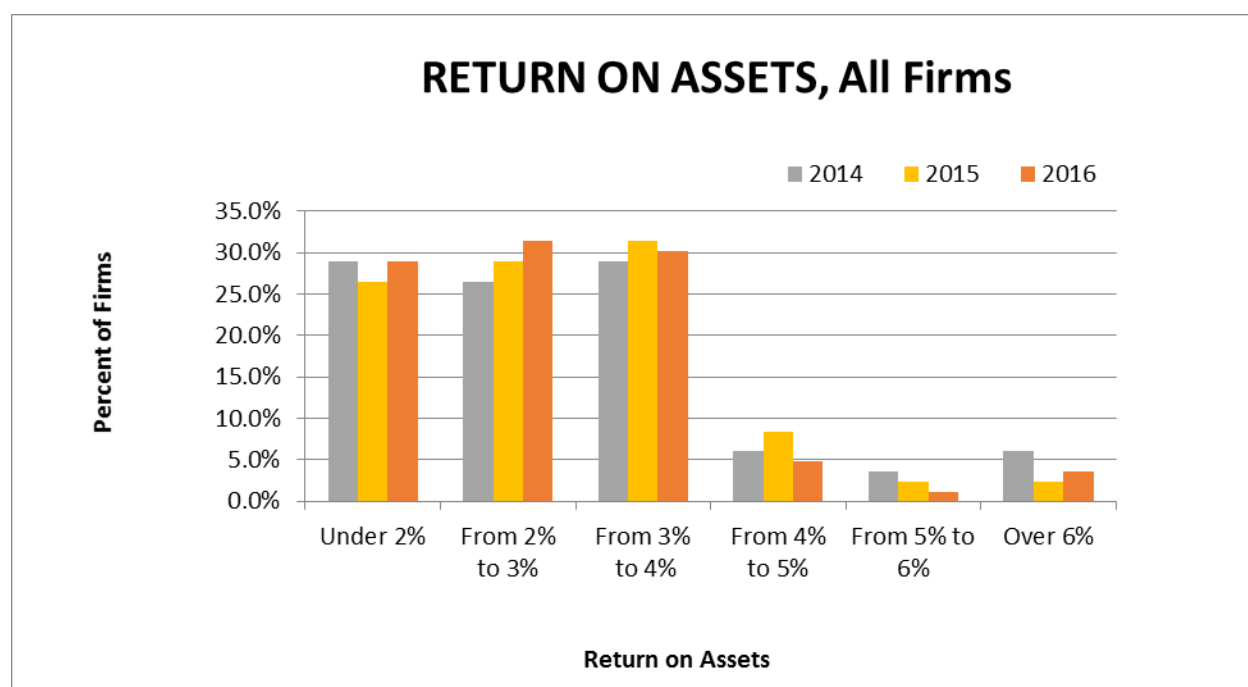
Note again that the discussion of combination utility debt and capital structure cannot be limited to gas operations. Therefore, this portion of the analysis necessarily considers combined-commodity financial performance. The combination utilities feature a diversity of commodity sales and stabilized electric base-load operations attributable to base-load (i.e., not weather-driven) sales.

IV-F. PROFITABILITY ANALYSIS

For this study, profitability is expressed in terms of return on assets (ROA), which relates net income to the value of the asset base that generated that income. Stated differently, ROA measures how well a company's assets "work" to generate income from operations. As such, ROA is convenient for comparing the operating results across companies within an industry.

Figure 5 shows the dispersion of individual company ROA results. Table 6 shows profitability measures for both gas and combination utilities for the years studied.

FIGURE 5



¹ When referring to combined gas and electric operations, the balance sheet items (i.e., total end-of-year assets) refer to the total firm, which could include non-utility assets, gas transmission assets and "other" utility assets (e.g., water), while income statement items (i.e., total revenues) refer to only gas and electric utility distribution operations combined. As a result, these ratios may differ from other reports that consolidate income statement items for the total firm.

While ROA is typically measured as the ratio of net income to assets, it can also be expressed as asset turnover multiplied by profit margin. Asset turnover measures a firm's ability to generate sales from its fixed asset base. The second component of ROA is profit margin, or return on sales. This measures the operating profit per dollar of sales.

TABLE 6			
UTILITY PROFITABILITY INDICATORS			
AVERAGE VALUES			
	2014	2015	2016
Gas Utilities			
Asset Turnover	0.41X	0.34X	0.27X
Financial Leverage	67.27%	67.84%	65.75%
Equity Multiplier	3.07	3.00	3.02
Profit Margin	7.24%	7.83%	8.01%
ROA ²	3.01%	2.68%	2.41%
ROE ²	9.96%	8.43%	7.10%
Current Ratio	0.84	0.74	0.67
Current Assets/Total Assets	13.32%	8.92%	8.82%
Combination Utilities¹			
Asset Turnover	0.35X	0.30X	0.28X
Financial Leverage	67.35%	68.58%	68.29%
Equity Multiplier	3.14	3.22	3.20
Profit Margin	8.66%	9.63%	10.26%
ROA ²	2.97%	2.81%	2.85%
ROE ²	9.52%	9.45%	9.79%
Current Ratio	1.18	0.94	0.99
Current Assets/Total Assets	8.81%	7.14%	7.11%

Source: AGA, USR.

¹ Figures represent combined gas and electric operations.

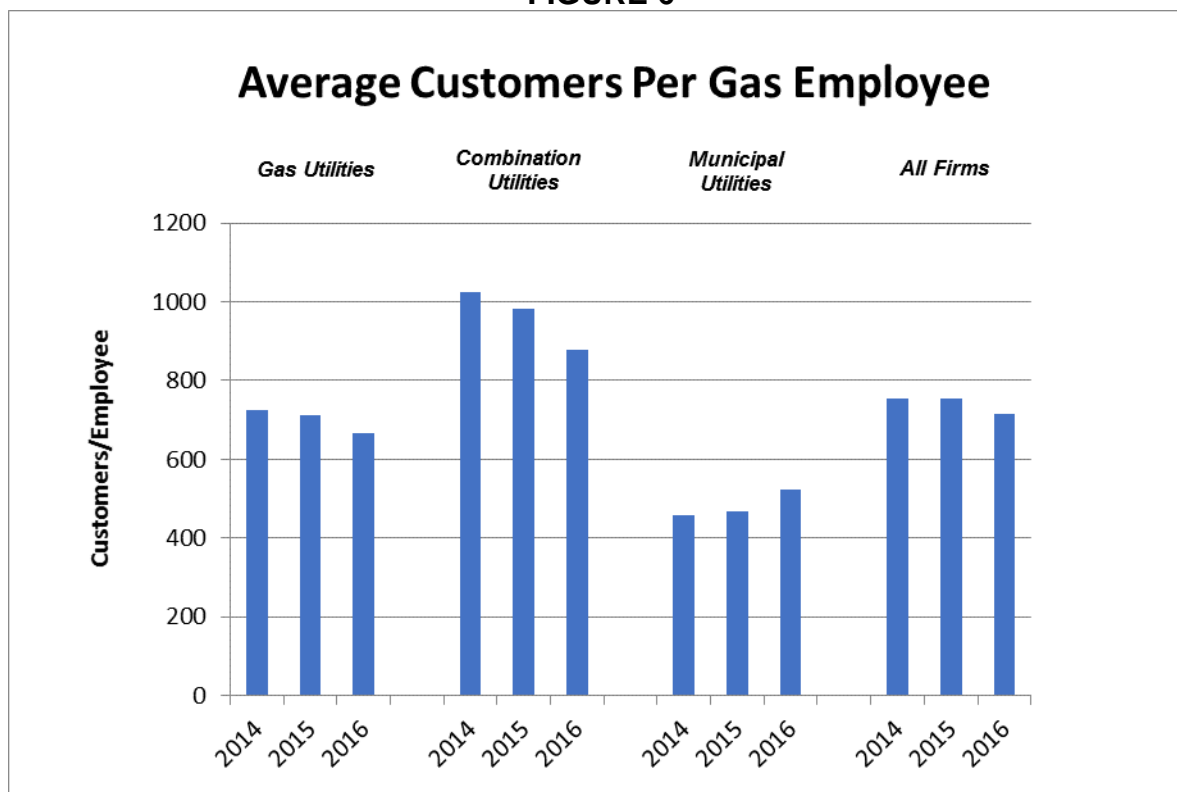
² When referring to combined gas and electric operations, the balance sheet items (i.e., total end-of-year assets) refer to the total firm, which could include non-utility assets, gas transmission assets and "other" utility assets (e.g., water), while income statement items (i.e., total revenues) refer to only gas and electric utility distribution operations combined. As a result, these ratios may differ from other reports that consolidate income statement items for the total firm.

Another measure of profitability is return on common equity (ROE). This differs from ROA in that it takes into account the impact of a firm's capital structure on its profitability. The capital structure of a firm can be examined in many different ways. ROE can be expressed as ROA multiplied by the equity multiplier. The equity multiplier (shown in Table 6) measures a firm's assets relative to its common stock equity. An increase in a firm's level debt financing (an increase in liabilities) will cause a reduction in stockholders' equity. This will cause the equity multiplier to rise and thereby increase total ROE. The rise in ROE compensates equity holders for the increased risk they must bear as the firm increases its level of debt.

IV-G. LABOR PRODUCTIVITY AND WAGE ANALYSIS

Current industry interest in restructuring, efficiency, and cost effectiveness often calls attention to staffing and wage profiles. Figure 6 and Table 7 summarize wage and benefit values by industry segment.

FIGURE 6



Source: AGA, USR.

TABLE 7 UTILITY WAGES AND BENEFITS AVERAGE VALUES PER EMPLOYEE AT YEAR-END				
	2014	2015	2016	3-Year Average
All Firms				
Number of employees at year-end	876	887	983	915
Total salaries and wages	\$87,724	\$87,110	\$91,014	\$88,616
Total benefits and pensions	\$27,918	\$28,810	\$27,280	\$28,003
Total salaries, benefits, and pensions	\$115,642	\$115,919	\$118,294	\$116,618
Ratio of total benefits to total compensation	21.80%	24.4%	24.6%	23.6%
Therms sold per employee	1,621,802	1,455,922	2,754,260	1,943,994
Customers per employee	755	692	716	721
Gas Utilities				
Number of employees at year-end	978	917	1019	971
Total salaries and wages	\$76,870	\$77,849	\$82,218	\$78,979
Total benefits and pensions	\$20,651	\$20,218	\$23,286	\$21,385
Total salaries, benefits, and pensions	\$97,521	\$98,066	\$105,503	\$100,364
Ratio of total benefits to total compensation	20.00%	21.1%	22.0%	21.0%
Therms sold per employee	1,547,725	1,296,357	1,328,236	1,390,773
Customers per employee	712	624	667	668
Combination Utilities¹				
Number of employees at year-end	912	1,117	1,323	1,118
Total salaries and wages	\$118,224	\$121,134	\$124,202	\$121,187
Total benefits and pensions	\$41,572	\$45,744	\$29,290	\$38,869
Total salaries, benefits, and pensions	\$159,796	\$166,878	\$153,492	\$160,056
Ratio of total benefits to total compensation	19.80%	24.0%	19.1%	21.0%
Therms sold per employee	1,845,975	1,729,605	1,671,666	1,749,082
Customers per employee	981	914	877	924
Municipal Utilities				
Number of employees at year-end	371	392	354	372
Total salaries and wages	\$65,616	\$62,366	\$70,993	\$66,325
Total benefits and pensions	\$34,818	\$38,319	\$43,674	\$38,937
Total salaries, benefits, and pensions	\$100,434	\$100,685	\$114,667	\$105,262
Ratio of total benefits to total compensation	37.00%	41.6%	47.2%	41.9%
Therms sold per employee	752,207	693,274	12,547,591	4,664,358
Customers per employee	467	465	523	485

Source: AGA, USR.

¹ Figures for gas operations only.

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APPENDIX1: GLOSSARY

NOTE: Immediately below some glossary items are references to the USR data field(s) which are the source for that item. The specific field reference is in the format (x,y) where x is the schedule and y is the line item on that schedule. For example, [(6, 21) divided by (2,1 / 365)] refers to Schedule VI, 21 divided by the result of Schedule II, line 1 divided by 365.

Absolute values; absolute dollars

These numbers show the sum of the actual reported data of those companies responding to the survey.

Admin. and gen. expense (4,12)

The overhead cost associated with office activities. Examples of such expenses include stationery, telephone service, office cleaning, heat and power, etc.

Asset turnover (2,1)/(6,36)

A ratio which expresses sales revenue as a percentage of assets on-hand over corresponding accounting periods (usually one year). This ratio can be interpreted as the relative degree to which a company's assets "work" to generate sales revenue.

Assets (6,36)

The total accounting value of a company's productive resources at a point in time (as on a balance sheet).

Average salaries, benefits, & pensions per employee [(13,6)+(13,10)]/(13,2)

Total compensation to employees (wages, benefits, etc.) divided by number of employees.

Capitalization (6,51)

The structure of a firm's long-term financing. "Capitalization" refers to the combination of debt and equity, which (in addition to retained earnings) is the monetary equivalent of the firm's assets.

Collection period (days) (6,21)/ [(2,1)/365]

An accounting measure that indicates the efficiency of revenue collections. This measure expresses an accounts receivable total in terms of the number of days of normal revenue collections that would be accumulated to make a sum equivalent to the accounts receivable balance.

Combination gas and electric company

A business entity that distributes both gas and electricity to customers within a franchise territory.

Common equity (6,42)

The total value of wealth given by investors to a company in return for ownership of shares (common stock) of that company's assets and retained earnings.

Current ratio (6,29)/(6,61)

Current assets divided by current liabilities. An indication of a company's ability to meet short-term debt obligations; the higher the ratio, the more liquid the company is.

Customer

An entity which enters into an account with a utility in order to receive natural gas for heating, power, feedstock, and other uses. For current purposes, an individual gas meter functionally represents each customer account. As such the terms "customer," "meter," and "account" are used interchangeably in this study.

Customers per employee [20,15)+(20,18)]/(8,2)

Total customers (including both sales and transportation) divided by total employees.

Customer accounts expense (4,9)

The expense attributable to serving a customer. For utility operations, this includes metering, billing, and fixed charges incurred by customer hook-ups. Includes FERC System of Accounts 901 (Supervision), 902 (Meter reading expenses), 903 (Customer records and collection expenses), 904 (Uncollectable accounts), and 905 (Misc. customer accounts expenses).

Customer accounts expense per therm (4,9)/[(20,15+20,18)]

Customer accounts expense divided by total therms (including both sales and transportation volumes).

Customer service and information (4,10)

The expense attributable to all customer assistance and information operations. Bill remediation, bill inserts, and other communication with existing customers is included in this category. Includes FERC System of Accounts 907 (Supervision), 908 (Customer assistance expenses), 909 (Informational and instructional advertising expenses), and 910 (Misc. customer and informational expense).

Customer service and information expense per therm (4,10)/[(20,15+20,18)]

Customer service and information expense divided by total therms (including both sales and transportation volumes)

Debt (6,50) + (6,54) + (6,61)

The summed monetary value of a company's short- and long-term obligations to repay money that it has borrowed from lenders.

Depreciation (2,4)

The operating expense that, as an accounting mechanism, represents the predetermined annual write-down of a durable capital asset. Depreciation, as an accounting item, impacts net income and taxes. It is not a cash expenditure, but is an annual recognition of long-lived asset costs which are spread over the years that these assets are expected to be in operation.

Distribution expense (4,8)

The operating expense that represents the cost of moving natural gas from a utility's city gate to all the meters along the franchise's system of gas mains. Includes FERC System of Accounts 871 (Distribution load dispatching), 872 Compressor station labor and expenses), 873 (Compressor station fuel and power (Major only), 874 (Mains and service expenses), 875 (Measuring and regulating station expenses 0 General), 876 (Measuring and regulating station expenses – Industrial), 877 (Measuring and regulating station expenses – City Gate Check Stations), 878 (Meter and house regulator expenses), 879 (Customer Installation expenses), 880 (Other expenses), 881 ((Rents), 885 (Maintenance supervision and engineering), 886 (Maintenance of structure and improvements), 887 (Maintenance of mains), 888 (Maintenance of mains), 888 (Maintenance of compressor station equipment), 889 (Maintenance of measuring and regulating stations equipment – General 890 (Maintenance of measuring and regulating station equipment – Industrial), 891 (Maintenance of measuring and regulating station equipment – City Gate Check Stations), 892 (Maintenance of services), 893 (Maintenance of meters and house regulators), and 894 (Maintenance of other equipment).

EBIT (2,18)+(2,8)

A measure which describes, for an accounting period, the total company income net of operations expense, but not yet net of interest and tax expenses. This measure facilitates comparisons of companies' economic output after operations, capital depletion, and depreciation conventions.

EBITDA (2,18)+(2,6)+(2,8)

A measure which describes, for an accounting period, the total company income net of operations expense, but not yet net of interest, tax, depreciation, and amortization expenses. This measure facilitates comparisons of companies' economic output from operations.

Equity multiplier (4,36)/(4,42)

Total assets divided by total common stock equity. Used as a measure of corporate profitability.

Fuel (4,1)

Includes FERC System of Accounts 501, 518 and 547.

Field

An element of database structure that holds the recorded values for a specific attribute of interest common to all observations. See also *Uniform Statistical Report (USR)*.

Financial leverage $[(6,50)+(6,54) + (6,61) + (6,67)]/(6,36)$

Total debt divided by total assets. Measures the employment of funds obtained at a fixed cost.

Firm, percent $((20,1+20,2+20,3+20,5+20,7+20,9)/20,15)$

Total sales volumes of gas sold under the firm tariff divided by total sales volumes.

Gas plant (6,2)

The undepreciated capital facilities directly related to gas distribution. See also "total plant in service."

Gas plant per customer $(6,2)/[(20,15)+(20,18)]$

Gas plant divided by total customers (including both sales and transportation).

Gas plant per mile of main $(6,2)/\text{miles of main}$

Gas plant divided by total miles of mains (from U.S. Dept. of Transportation).

Gas utility

A franchised gas distribution company, the equity value of which is held by shareholders in the form of stock. The earnings of such a company are distributed wholly or in part to shareholders in the form of dividends. Any earnings not distributed are retained by the company on its balance sheet.

General & administrative costs per customer $(4,12)/[(20,15)+(20,18)]$

Expenses incurred by the utility not specifically assignable to operations or sales, such as overhead, general office, personnel, etc., divided by total customers (both sales and transportation).

General & administrative costs per therm $(4,12)/[(20,15)+(20,18)]$

Expenses incurred by the utility not specifically assignable to operations or sales, such as overhead, general office, personnel, etc., divided by total therms (both sales and transportation volumes).

Gross sales margin per customer or Gross margin per customer $[(2,1) - (4,5)]/[(20,15)+(20,18)]$

Defined as revenue, less total production costs, divided by total customers, both sales and transportation. An accounting measure that describes the per-unit dollar value that remains after the acquisition cost of the unit is subtracted from the retail revenue received for that unit.

Gross sales margin per therm or Gross margin per therm $[(2,1) - (4,5)]/[(20,15)+(20,18)]$

Defined as revenue, less total production costs, divided by total delivered therms. An accounting measure that describes the per-unit dollar value that remains after the acquisition cost of the unit is subtracted from the retail revenue received for that unit. Includes both sales and transportation volumes.

Heating Degree Days (HDD)

A measure of the coldness of the weather experienced, based on the extent to which the daily mean temperature falls below a reference temperature, usually 65 degrees F.

Implied long-term (LT) debt cost $(2,24)/(6,50)$

A proxy measure of the interest rate paid by utilities for long-term borrowing (obligations over one year). Data as collected on the USR did not request a breakout of short- versus long-term interest obligations. Therefore, a strict calculation of cost of long term debt (annual interest paid on long-term obligations divided by total long-term debt) was not possible. The implied cost relates net interest costs (interest of all types) to long-term debt. The result permits some distortion of true long-term debt costs.

Interest coverage $[(2,18 + 2,4 + 2,6 + 2,8) \text{ divided by } (2,24)]$

The comparison of a company's financial returns to its interest payment obligations, for a specific accounting period. "EBITDA" is an income statement result; specifically, it means "earnings before interest, taxes, depreciation, and amortization." This ratio indicates the company's relative ability to generate the cash flow necessary to meet its interest payment obligations.

Long-term debt (6,50)

Financial instruments that become due on a date at least one year beyond the current accounting period. These include the mortgages and bonds, which represents a company's capital borrowings. By issuing debt, the company has an obligation to repay its lenders the amount borrowed plus regular increments of interest.

Lower quartile (LQ)

A statistical measure that describes a data value that is halfway between the median and the lowest value in the data set. Technically defined as the "first quartile." See "quartile" and "median."

Mean (Arithmetic – See Weighted Average.)

An average value; i.e., a single calculated value which is representative of a set of values. The mean is calculated by summing a set of observation values, then dividing that total by the number of observations that were used.

Median (MED)

A statistical measure describing the "middle position" for a sequence of observations, or the 50-percent position in a sequence of ordered observations (2nd quartile). See "quartile."

Meter

(See "customer")

Miles of Main

Length of utility system's distribution mains (excludes transmission and service lines) as reported by utilities to the US Department of Transportation, Office of Pipeline Safety.

Municipal utility

A type of gas distribution company that is owned by a local government entity and run on behalf of that entity's citizenry. Whereas investor-owned utilities usually pay out dividends to shareholders, the municipal utility's dividends accrue to the citizens in the form of a lower cost for energy.

Net margin per customer $[(2,1)-(4,13)]/[(20,15)+(20,18)]$

Operating revenues less total O&M, with the result divided by total customers (includes both sales and transportation).

Net margin per therm $[(2,1)-(4,13)]/[(20,15)+(20,18)]$

Operating revenues less total O&M, with the result divided by total therms (includes both sales and transportation volumes).

Net worth

The residual value of a company's assets after deducting liabilities.

Operations and maintenance (O&M) (20,13)

These are accounting summaries of expenditures attributable to company operations. Most importantly, these are expenses over which management has direction. These are distinct from (i.e., do not include) expenses imposed from outside of operations such as interest payments and amortization.

Observation

A single event for which an activity is recorded or measured. For a measurable event the unique record for any observation is that observation's value. For example, if the variable of interest is annual therms sold, then "1,000,000" may be the value of this variable for the single observation "ABC Company."

Operating income (2,11)

The financial outcome of a company that represents revenues earned less the expenses attributable to operations, including depreciation, amortization, and taxes (but not expenses such as interest payments, amortization, etc.).

Operating revenue

See revenue.

Other production expenses (4,4)

Includes FERC System of Accounts 805 (Other gas purchases and purchase gas adjustments), 806 (Exchange gas), 812 (Gas used for the utility operations), and 813 (Other gas supply expense).

Profit margin (2,29)/(2,1)

Net income available for common stockholders divided by total operating revenues (including electric for combination companies, since net income is not segmented by operational division).

Purchased gas expense (4,3)

The utility expenditure for the gas it buys on the market from producers, transmission companies, marketers, and other sources. Includes FERC System of Accounts 800 (wellhead purchases), 801 (field line purchases), 802 (plant outlet purchases), 803 (transmission line purchases), 804 (city gate purchases) LESS 804.1 (LNG), and 807 (Purchased or expense).

Purchased gas cost per therm (4,5)/(20,15)

Total production gas expense divided by total sales volumes

Quartile

A statistical tool that analyzes a set of values that are sequenced by order of magnitude. Any set of ordered values can be divided into four quartiles. The first quartile is the observation reached after counting off the first 25 percent of the sequenced values (counting from the lowest value). The second quartile is the observation at the 50 percent position in the sequence; the third quartile is at the 75 percent position; and the fourth quartile is at the 100 percent position, which is also the highest value for the entire data set.

Return on Assets (ROA) (2,29)/(6,36)

A financial ratio that expresses net income as a percentage of assets. This ratio measures how well a company uses its assets to generate operating income.

Return on Equity (ROE) (2,29)/(6,42)

A financial ratio that expresses net income as a percentage of total common stock equity. This ratio measures how well investors in a firm are doing relative to other investments.

Revenue (2,1)

The receipts from utility operations and sales of gas, excluding non-utility and other income, before expenses are considered.

Revenue per customer (2,1)/[(20,15)+(20,18)]

Operating revenues divided by total meters, including transportation customers.

Revenue per therm (2,1)/[(20,15)+(20,18)]

Operating revenues divided by total therms, including transportation volumes.

Sales expense (4,11)

The cost of sales administration, including commissions overhead, materials, etc. Includes FERC System of Accounts 911 (Supervision), 912 (Demonstrating and selling expenses), 913 (Advertising expenses), and 916 (Misc. sales expenses).

Same-size financial statement

This is an alternative method of displaying income statement and balance sheet summaries. It is intended to facilitate comparisons across company types. As opposed to displaying absolute dollar values, the same-size statement presents each line item as a percentage of its aggregate total. The same-size income statement sets revenues at 100.0 and all other items are a percent of that total. The same-size balance sheet similarly sets total assets (as well as total liabilities and owners' equity) to 100.0.

System density $[(20,15)+(20,18)]/\text{Miles of Main}$

Total customers (both sales and transportation) divided by total miles of mains (from the U.S. Dept. of Transportation). A ratio that describes the degree to which meters are "packed" onto a distribution system.

Tax expense (2,8)

The amount representing the utility's obligation to pay taxes, including sale, gross receipts, income, and property taxes. This total includes pass-through taxes collected by the utility on behalf of local government jurisdictions.

Therm

A unit of measurement for energy, equivalent to 100,000 British thermal units.

Therms per customer $[(20,15)+(20,18)]/[(20,15)+(20,18)]$

Total therms (both sales and transportation) divided by total customers (both sales and transportation).

Therms delivered per employee $[(20,15)+(20,18)]/(8,2)$

Total therms (both sales and transportation) divided by total employees.

Total benefits (13,10)

The annual compensation accruing to utility employees in the form of pensions, health care, insurance, and other non-payroll items.

Total compensation (13,6 + 13,10)

The total annual compensation accruing to utility employees, both as payroll and non-payroll compensation, as well as benefits.

Total production expense (4,5)

Combination of fuel (4,1), purchased gas (4,3), and other production expenses (4,4).

Total O&M per customer $(4,13)/[(20,15)+(20,18)]$

All operations and maintenance expenses divided by total customers (includes both sales and transportation).

Total O&M per therm $(4,13)/[(20,15)+(20,18)]$

All operations and maintenance expenses divided by total therms (includes both sales and transportation volumes).

Total plant in service (6,5)

The total value of utility plant as shown on the balance sheet. In the case of combination utilities, this will include gas and electric plant used for the purpose of power distribution.

Transmission (4,7)

The cost to a utility for moving natural gas purchases from its source to its city gate. Includes FERC System of Accounts 850 (Operations, supervision and engineering), 851 (System control and load dispatching), 852 (Communication system expenses), 853 (Compressor station labor and expenses), 854 (Gas for compressor station fuel), 855 (Other fuel and power for compressor stations), 856 (Main expenses), 857 (Measuring and regulating station expenses), 858 (Transmission and compression of gas by others), 859 (Other expenses), 860 (Rents), 861 (Maintenance supervision and engineering), 862 (Maintenance of structures and improvements), 863 (Maintenance of mains), 864 (Maintenance of compressor station equipment), 865 (Maintenance of measuring and regulating station equipment), 866 (Maintenance of communication equipment), 867 (Maintenance of other equipment), and 870 (Operation supervision and engineering).

Transmission and distribution costs per customer $[(4,7)+(4,8)]/[(20,15)+(20,18)]$

Cost of transporting gas to the customer, divided by total customers (both sales and transportation).

Transmission and distribution costs per therm $[(4,7+4,8)/(20,15+20,18)]$

Cost of transporting gas to the customer, divided by total therms (both sales and transportation).

Uniform Statistical Report (USR)

The standardized reporting form used by the American Gas Association to collect financial and operating information from its individual member companies. The USR data is the source for information presented in this study.

Upper quartile (UQ)

A statistical measure, which describes a data value that, is halfway between the median and the highest value in the data set. Technically defined as the "third quartile." See "Quartile" and "Median."

Value

In statistics, a "value" is the recorded measurement for an individual observation. For example, if the variable of interest is "annual therms sold," then "1,000,000" may be the value of this variable for the single observation "ABC Company."

Variable

An attribute, more or less common to a set of observations, which is subject to measurement. For example, if the variable of interest is "annual therms sold," then "1,000,000" may be the value of this variable for the single observation "ABC Company."

Weighted average

A statistical measure for describing the mean or "central tendency" of a set of numeric observations. Weighted averages are used in this study to provide benchmark ratios per group or per industry segment. For these benchmark ratios and arithmetic (simple) average would be the mean value of the ratios calculated individually for each company. Instead, the weighted average ratio has as its numerator the sum of observations for that variable divided by the sum of observations for the denominator variable. For example, the density of distribution system metric for gas utilities relates the sum of all gas utility meters divided by the sum of all gas utility miles of pipe.

APPENDIX 2: MULTI-YEAR CHARTS FOR ALL COMPANIES

Explanation of factors influencing results:

REVENUE: Impacted by weather, rate design, customer growth, the economy, allowed rates of return, taxes, depreciation expense, total O&M expense, and subsidiary operations.

REVENUE PER CUSTOMER: Determined by revenue and customer base (predominantly higher-consuming customer population yields larger results).

REVENUE PER THERM: Determined by revenue and customer base (predominantly smaller-consuming customer base yields larger results).

THERMS DELIVERED PER CUSTOMER: Influenced by weather and customer base (predominantly higher-consuming customer population yields larger results).

PERCENT FIRM SALES: Determined by customer base. Utilities with predominantly residential and small commercial customers tend to have higher values here. Large customers switching from sales to transportation tariffs also influence results.

PURCHASED GAS COST PER SALES THERM: Impacted by proximity to supplies (closer leads to lower transportation costs), interstate pipeline access (more competition leads to lower costs), volumes purchased (economies of scale), and purchasing strategies (spot versus contracts, storage refill, hedging, etc.).

GROSS SALES MARGIN: Influenced by revenue, O&M, and company size (economies of scale).

TRANSMISSION AND DISTRIBUTION COST PER THERM/CUSTOMER: Determined by age of system, throughput, customer base, system density, and size of company (economies of scale).

CUSTOMER ACCOUNT EXPENSE PER THERM: Impacted by customer base (concentration of smaller customers leads to higher costs per therm), types of administrative (e.g., billing) systems, and throughput.

CUSTOMER SERVICE AND INFORMATION EXPENSE PER THERM: Influenced by types of administrative systems (e.g., database software and hardware), customer base, and throughput.

SALES EXPENSE PER THERM: Determined by level of marketing effort put forth by company and throughput.

GENERAL AND ADMINISTRATIVE EXPENSE PER THERM/CUSTOMER: Impacted by employee base/compensation, overhead expenses, customer base, and throughput.

TOTAL OPERATION AND MAINTENANCE EXPENSE PER THERM/CUSTOMER: Combination of purchased gas expense, other production costs, T&D, customer accounts, service, & information expenses, sales, and G&A. See those factors for explanation.

NET MARGIN PER THERM/CUSTOMER: Influenced by allowed rates of return, taxes, depreciation, weather, customer base, and throughput.

AVERAGE SALARIES, BENEFITS, AND PENSIONS PER EMPLOYEE: Impacted by union contracts, experience/tenure of average employee, age of employees and retirees, local economic competition for employees, proportion of upper management relative to employee base (higher for companies outsourcing significant workload), and special offers to employees (early retirement, severance packages due to downsizing, etc.).

CUSTOMERS PER EMPLOYEE: Determined by the customer base (companies with predominately small-use customers tend to have a higher value) as well as the employee base (more efficient companies and those outsourcing significant workload tend to have a higher value).

THERMS DELIVERED PER EMPLOYEE: Primarily determined by the customer base (companies with predominately large-use customers tend to have a higher value).

GAS PLANT PER CUSTOMER: Influenced by the customer base (companies with predominately large-use customers tend to have a higher value).

RETURN ON ASSETS: Impacted by allowed rate of return, weather, sales growth, subsidiary performance, and one-time charges (e.g., asset reevaluation, merger expense, etc.).

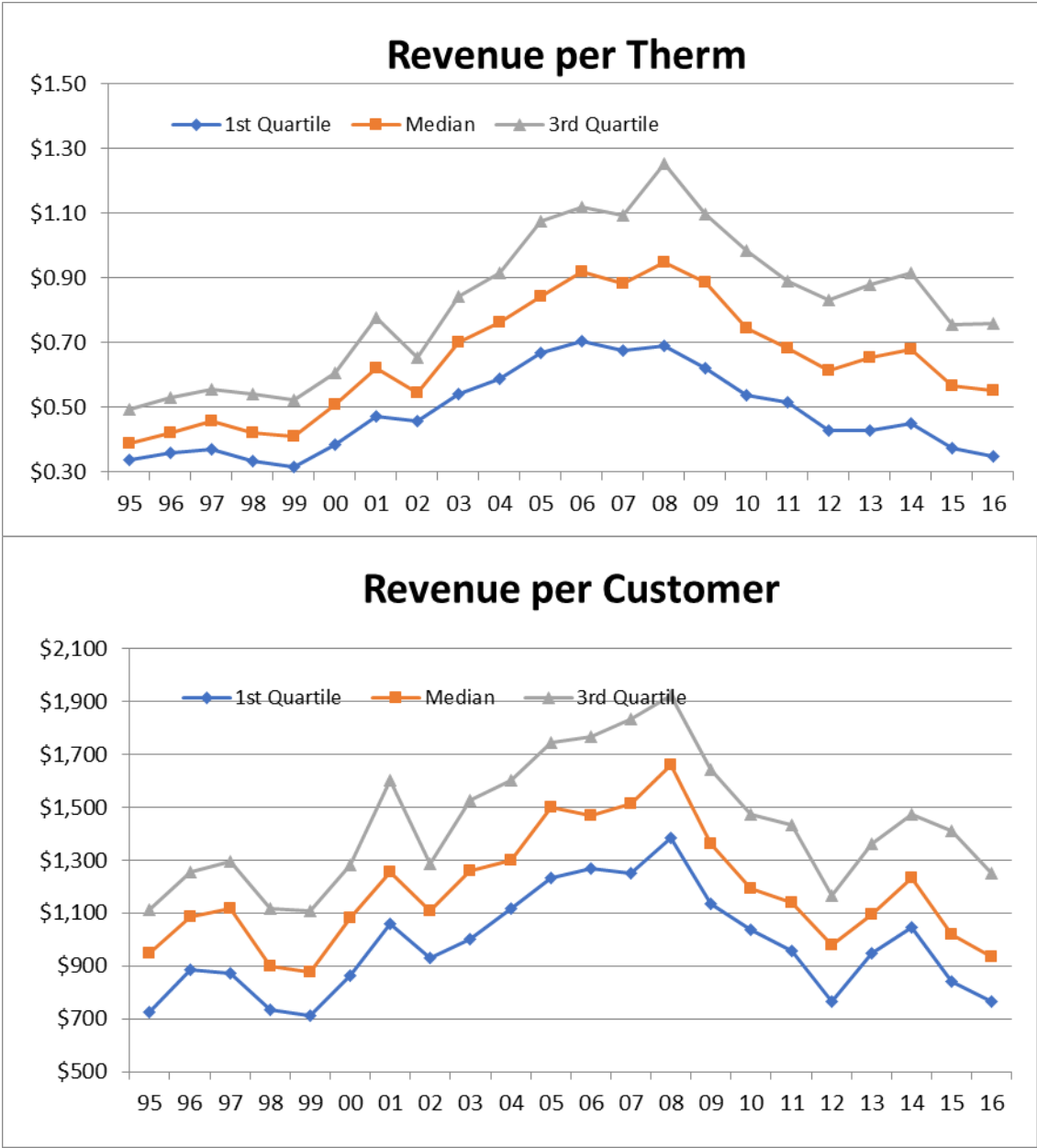
RETURN ON EQUITY: Impacted by allowed rate of return, weather, sales growth, subsidiary performance, and one-time charges (e.g., asset reevaluation, merger expense, etc.).

ASSET TURNOVER: Influenced by revenue and composition/age of gas plant.

PROFIT MARGIN: Impacted by allowed rate of return, income taxes, interest expense, and weather.

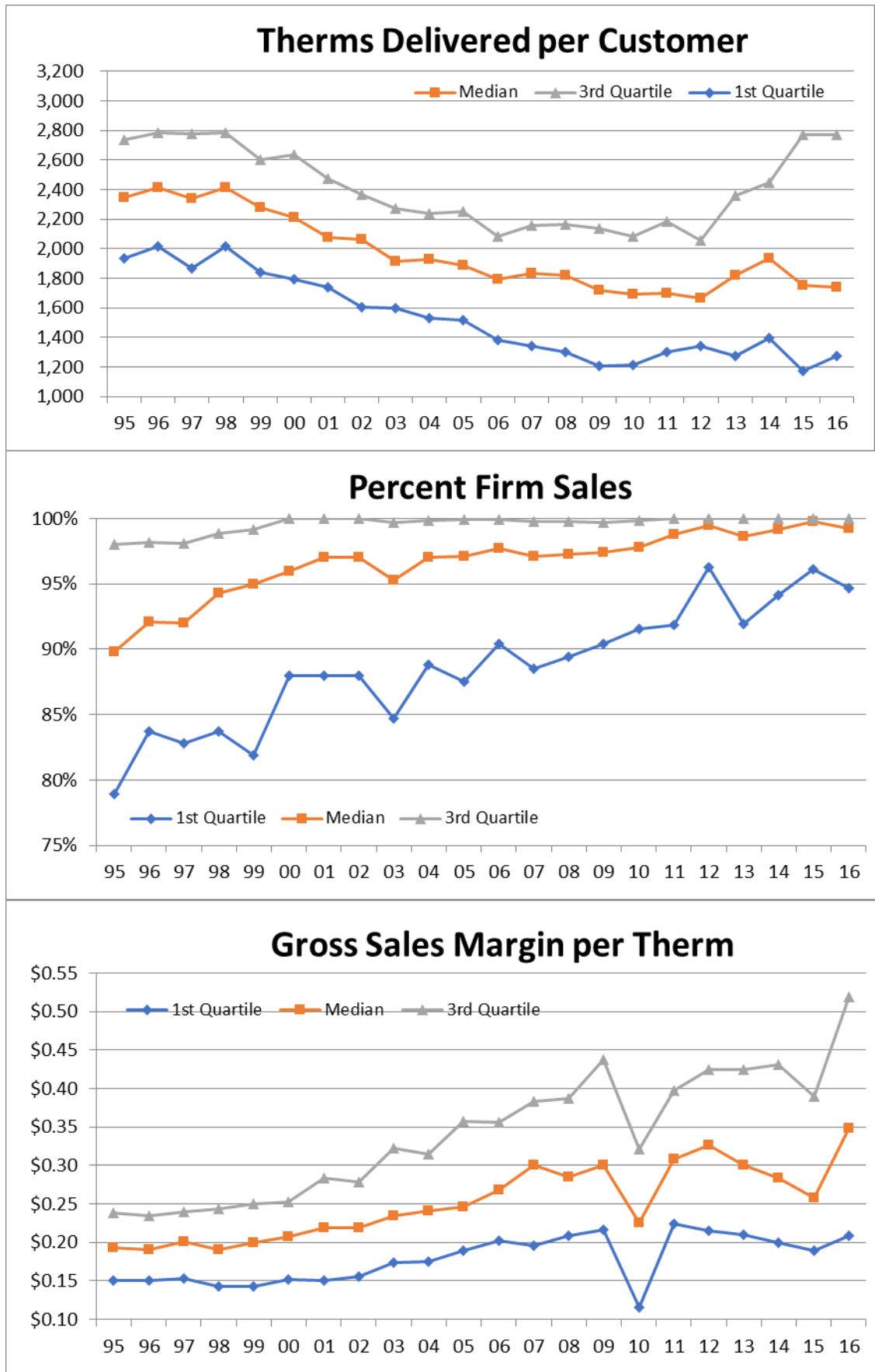
FINANCIAL LEVERAGE: Influenced by the proportion of debt and the amount of gas plant for a company.

NOTE: Recent results of metrics involving miles of main are not comparable for years prior to 2004 because of changes in the definition of miles of main changed (no longer includes services) and in the data source (now derived from the US Department of Transportation, Office of Pipeline Safety database).

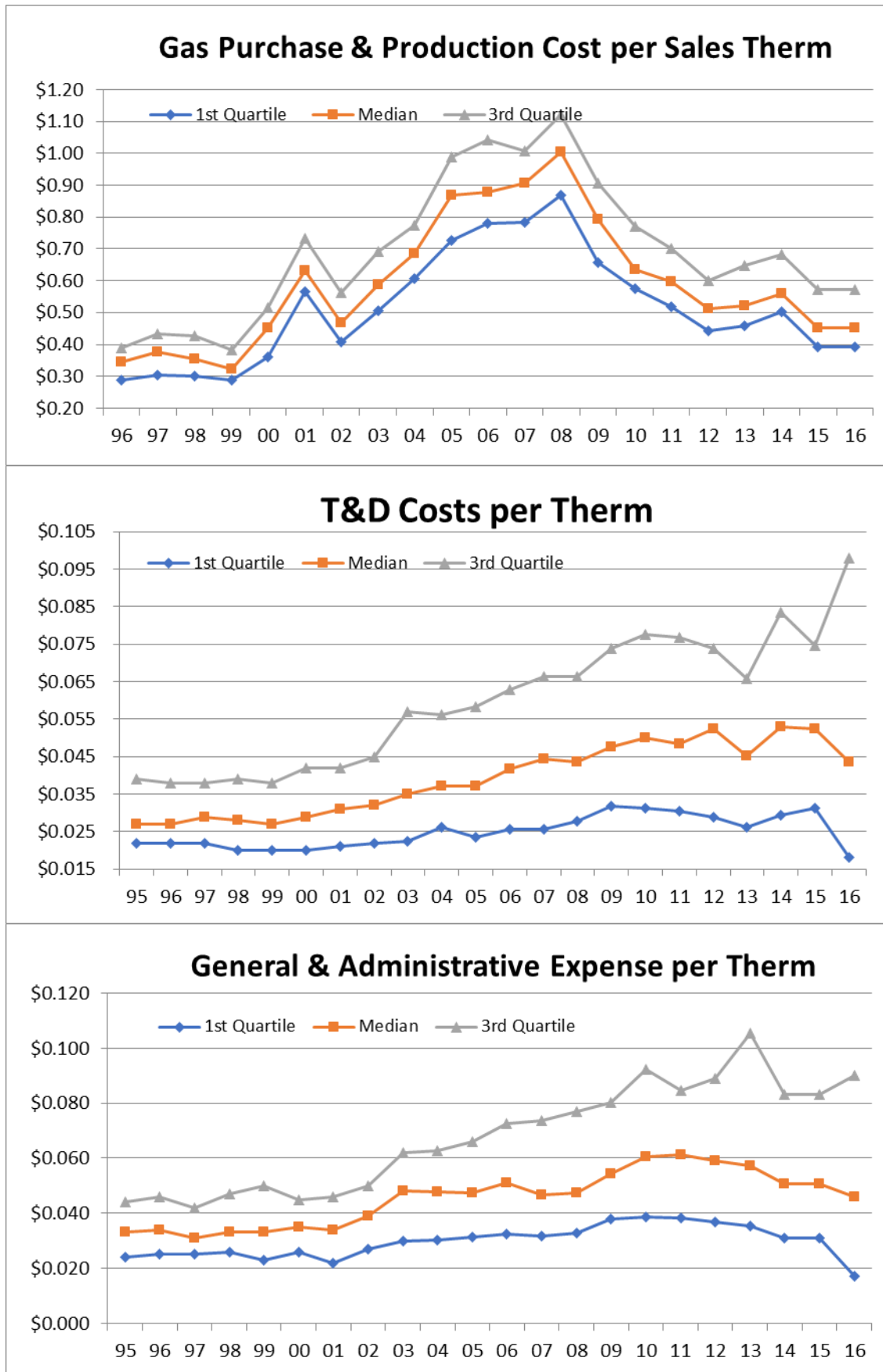


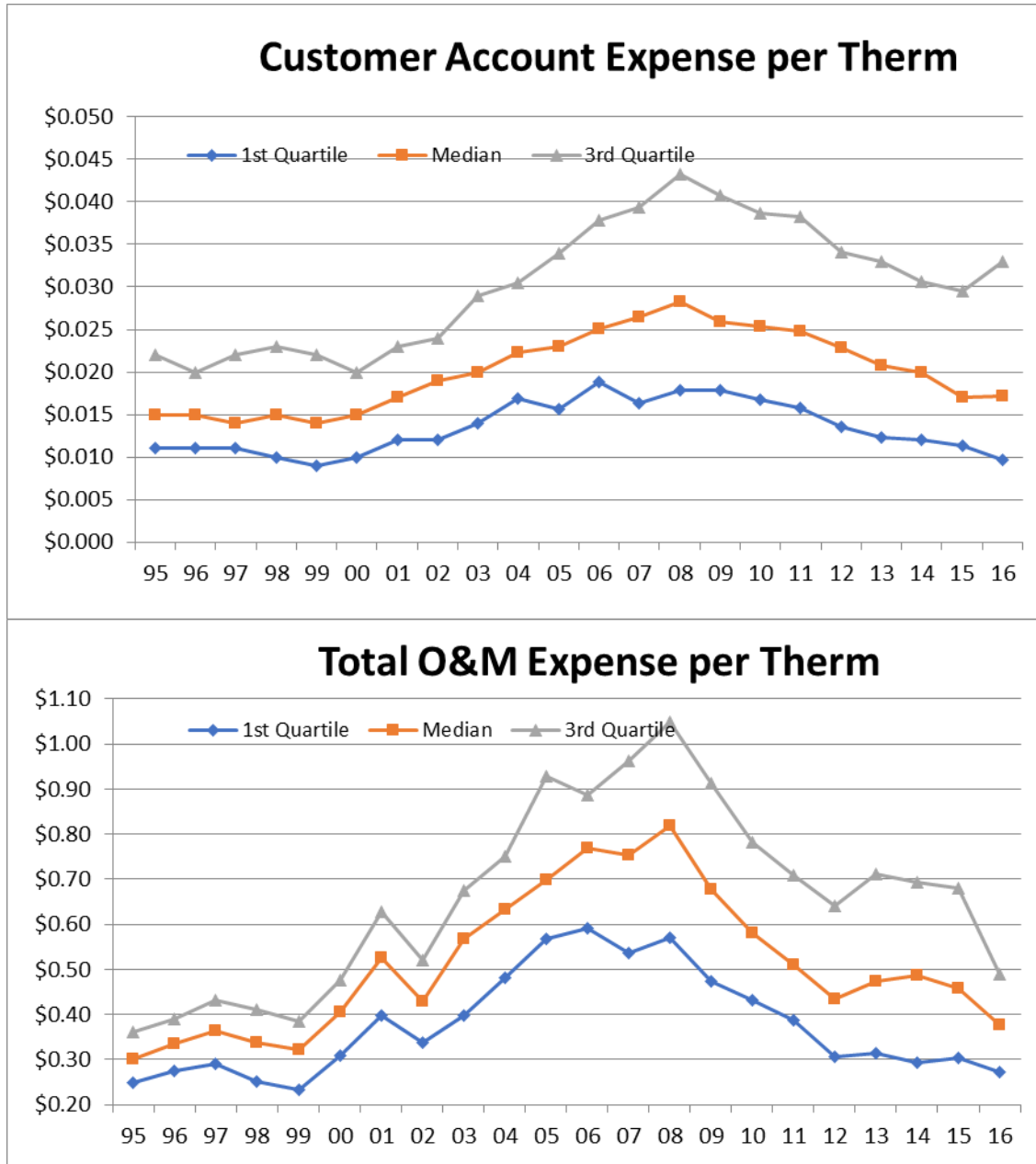
Note: Sample size and individual company participation vary by year, impairing trend analysis

Appendix 2: Multi-year Charts for All Companies

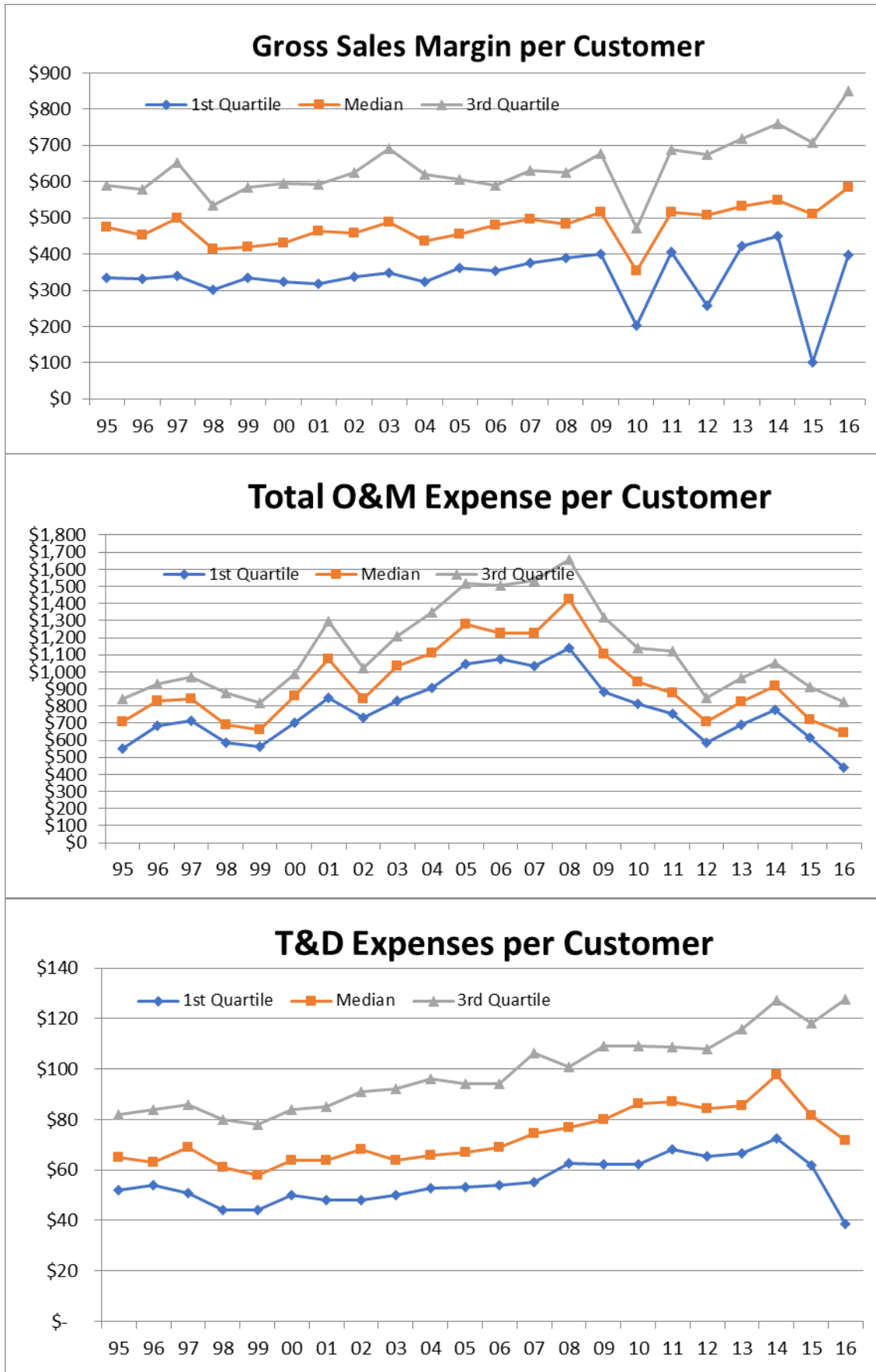


Note: Sample size and individual company participation vary by year, impairing trend analysis



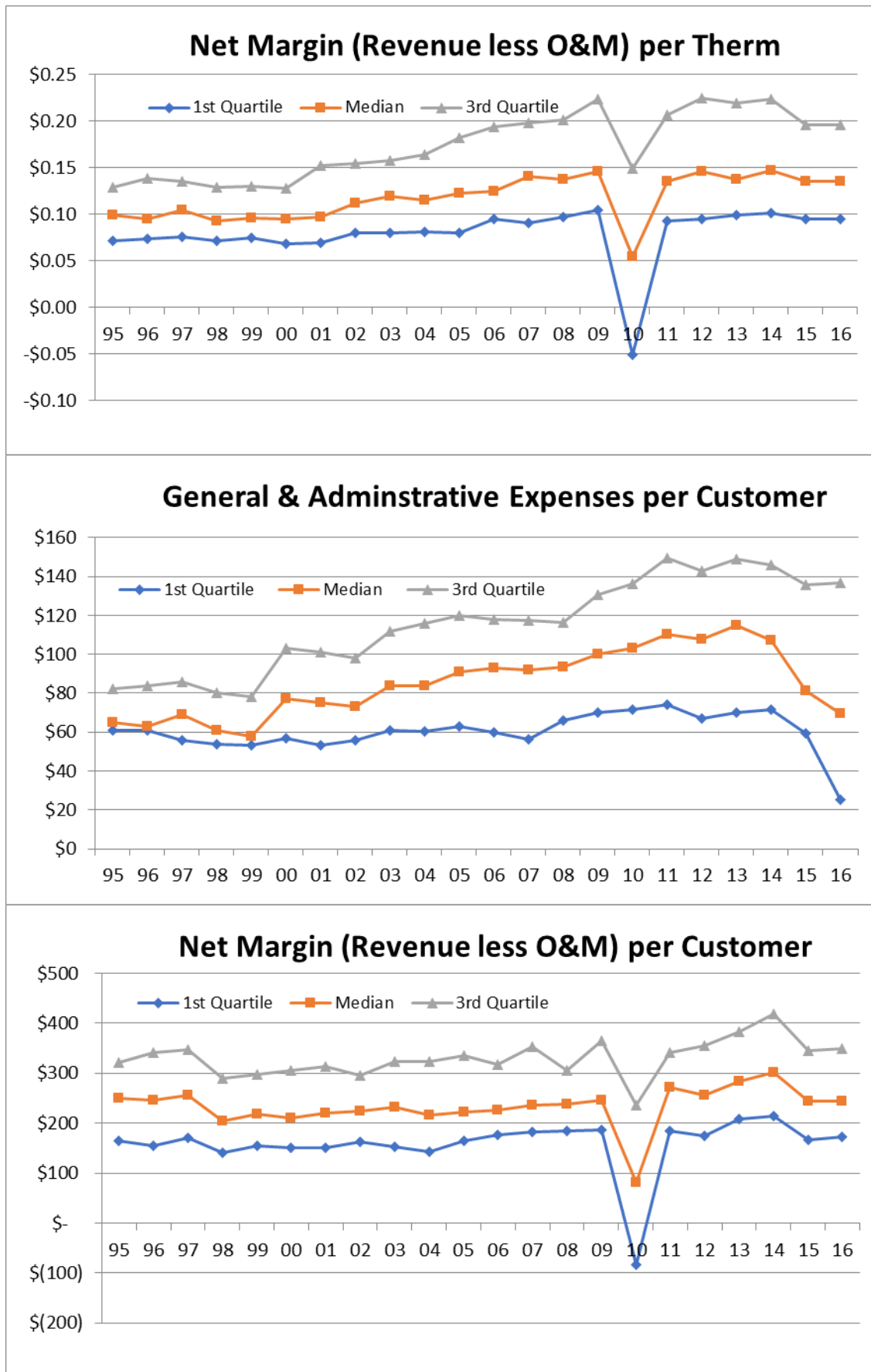


Appendix 2: Multi-year Charts for All Companies

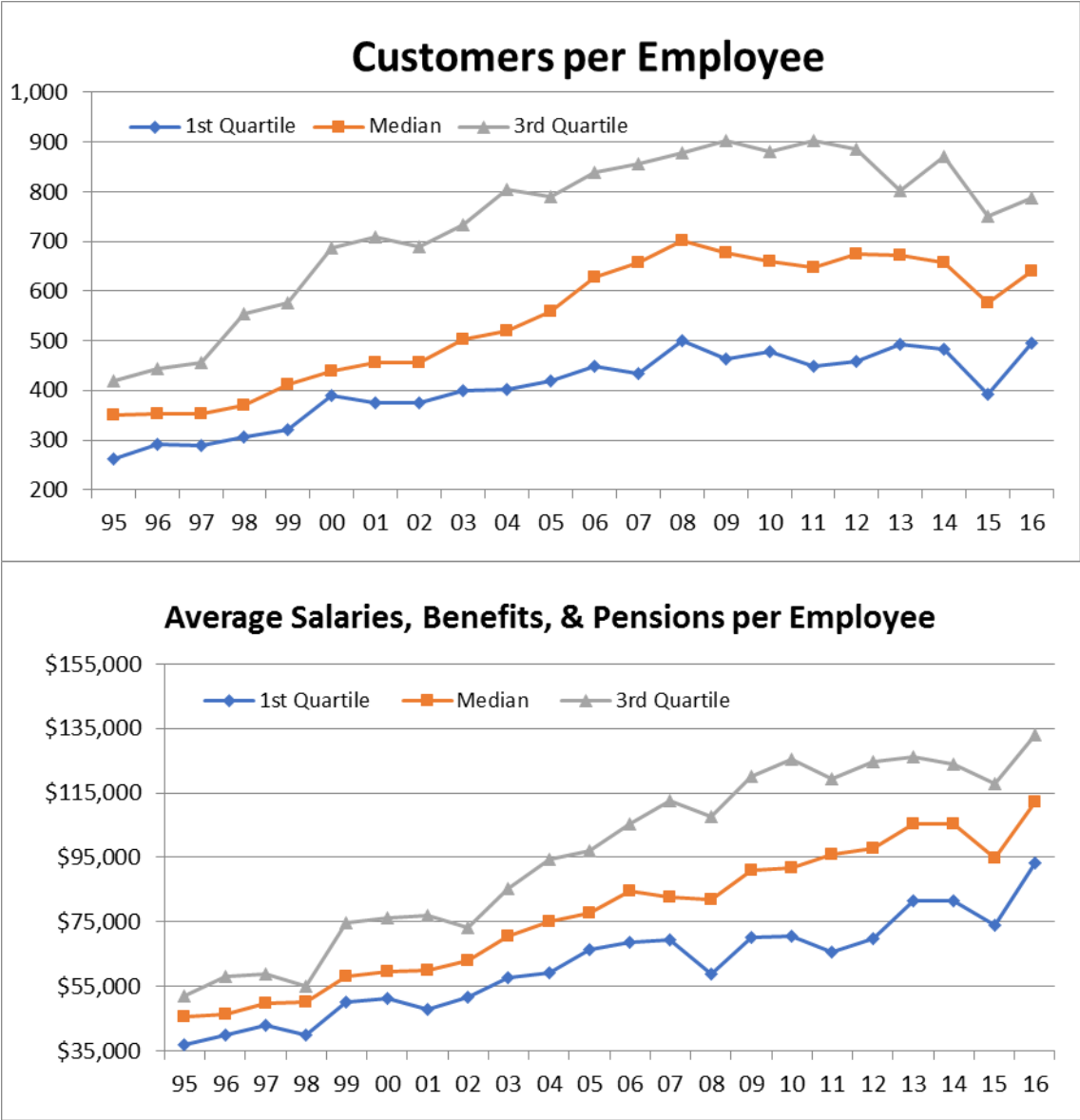


Note: Sample size and individual company participation vary by year, impairing trend analysis

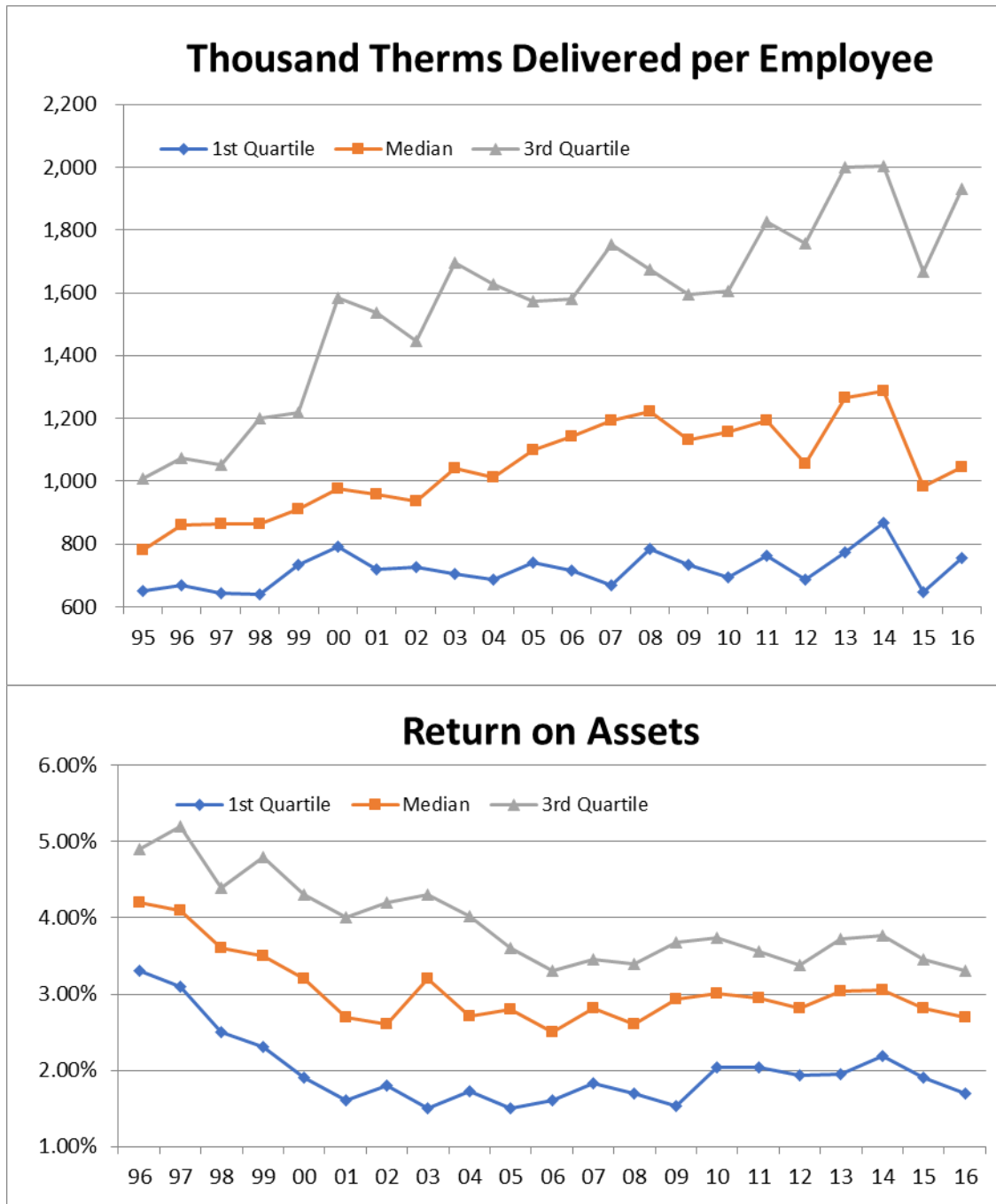
Appendix 2: Multi-year Charts for All Companies



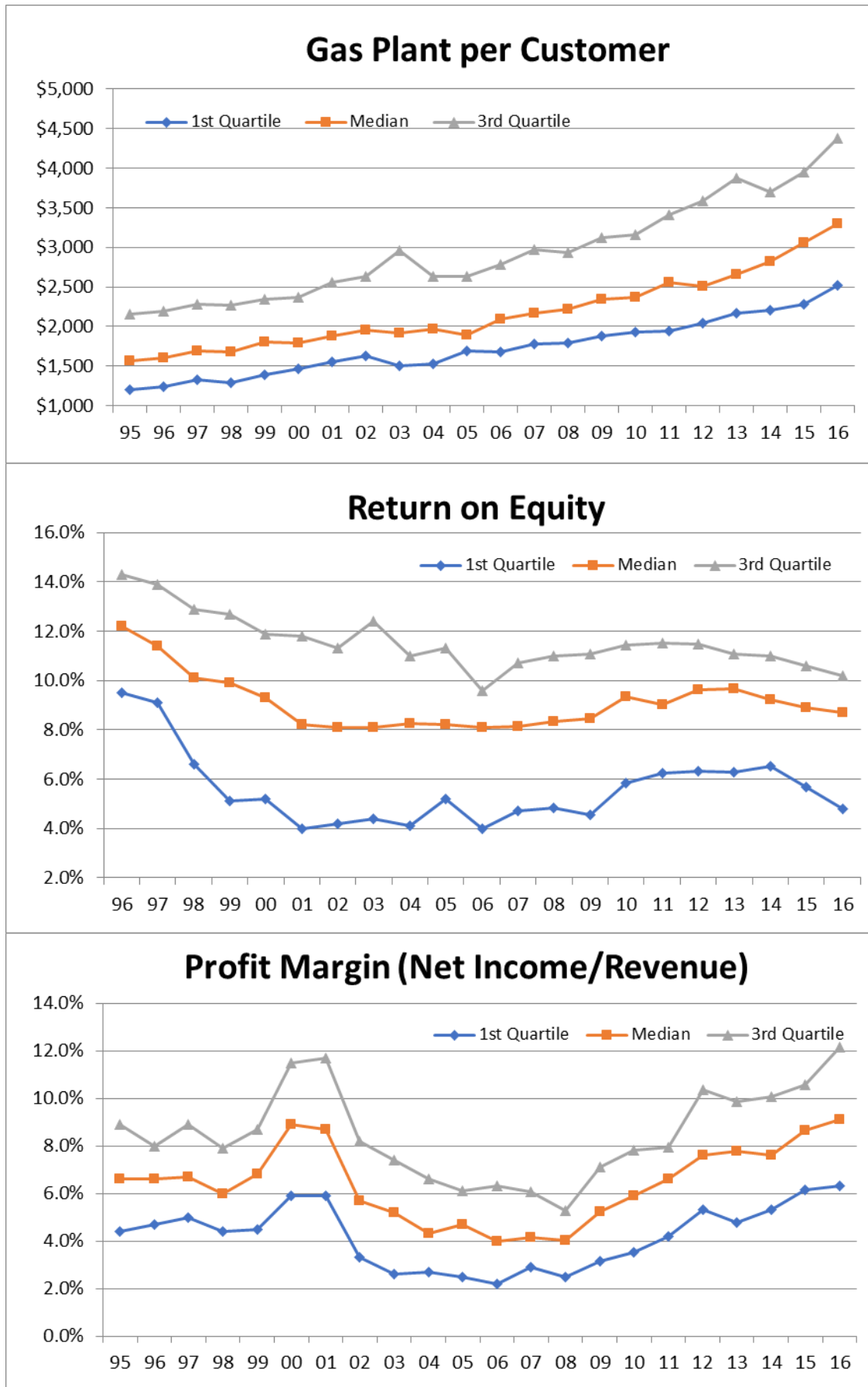
Note: Sample size and individual company participation vary by year, impairing trend analysis



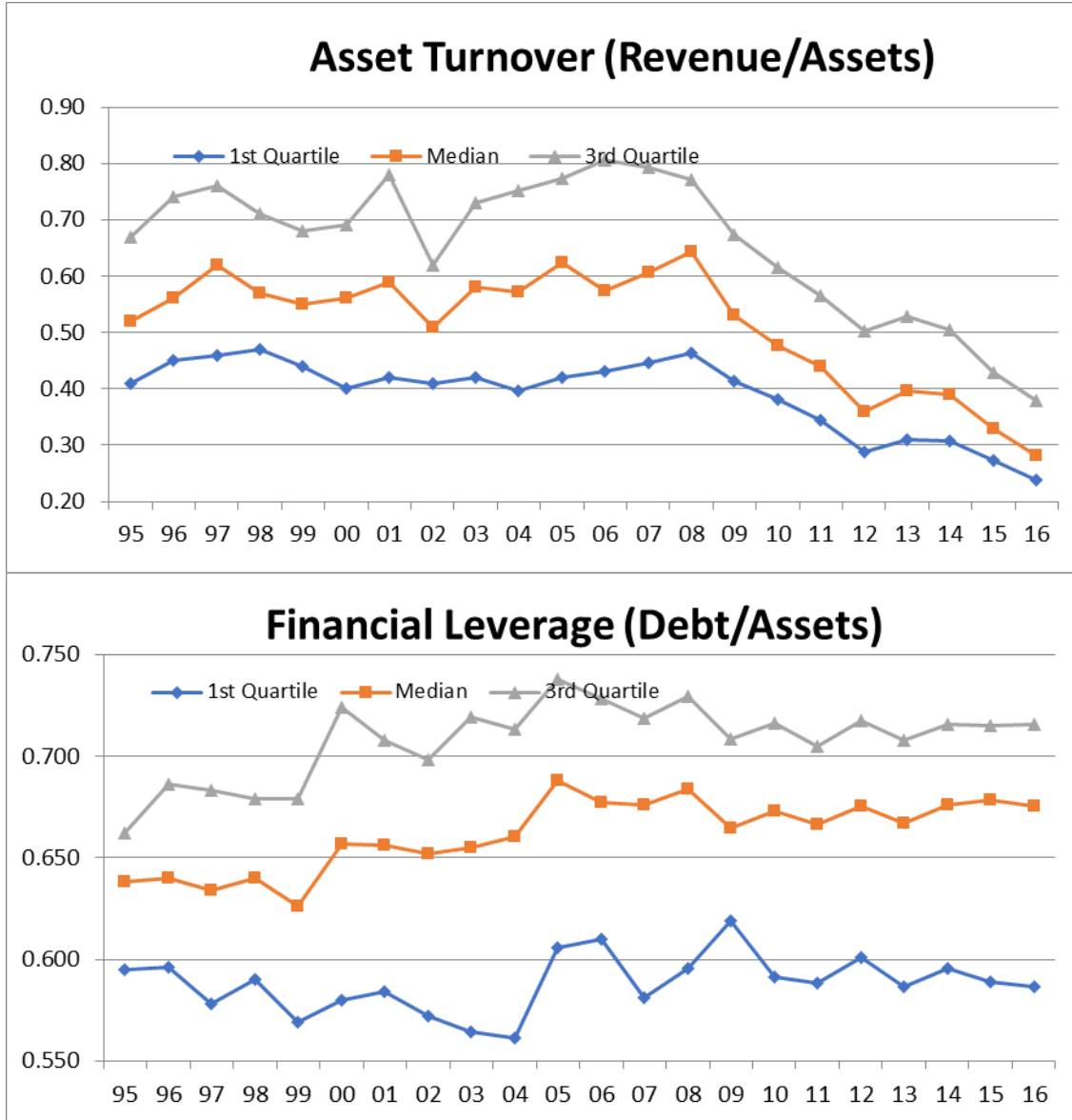
Appendix 2: Multi-year Charts for All Companies



Note: Sample size and individual company participation vary by year, impairing trend analysis



Note: Sample size and individual company participation vary by year, impairing trend analysis



APPENDIX 3a: GAS UTILITY SYSTEM PROFILES AND DELIVERY VOLUMES

2016 Data, 87 Utilities Reporting	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
Stratified by Type of Company	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
SYSTEM PROFILE 1/																
Total Therms delivered (000)	58,210	602,814	1,750,311	1,452,743	338,104	809,457	2,006,105	1,525,057	131,659	322,430	701,921	509,991	102,814	605,809	1,750,311	1,609,325
Total Sales Volume (000)	21,593	238,529	953,745	667,701	229,781	509,520	1,010,650	728,717	129,217	308,326	425,030	454,487	51,265	323,894	880,873	824,246
Transportation Volume (000)	770	167,760	853,060	785,042	-	155,992	997,230	796,341	-	1,545	11,864	55,504	91	155,992	781,625	785,079
Gas customers	26,918	313,437	926,025	750,845	209,784	602,929	958,376	789,337	47,549	105,624	221,362	159,761	57,265	294,554	810,043	659,073
Miles of main in use	1,161	6,142	12,009	11,862	3,399	8,071	17,171	11,336	1,500	2,465	2,974	2,296	1,919	4,971	12,788	10,213
Density (meters/mile of main)	29.1	46.0	62.3	58.8	42.8	54.0	83.4	68.2	43.5	64.2	77.7	67.0	35.2	50.1	67.0	61.3
THERM VOLUME BY CUSTOMER CLASS (000)																
Residential heating	13,256	140,021	546,178	393,068	129,040	329,350	564,617	459,239	53,778	134,583	321,051	205,956	30,105	196,071	522,792	485,654
Residential non-heating	-	-	458	3,060	-	-	6,865	25,600	-	-	-	516	-	-	1,526	9,565
Commercial, firm	6,039	62,513	142,085	156,838	91,243	132,048	232,097	187,613	32,786	81,471	101,771	168,314	16,897	88,686	188,236	228,249
Commercial, interruptible	-	-	-	5,982	-	-	2,732	12,780	-	-	2,328	4,769	-	-	104	7,159
Industrial, firm	-	2,260	16,945	84,903	1,660	4,509	25,909	19,976	1,831	4,021	15,535	48,040	133	3,071	17,430	70,408
Industrial, interruptible	-	-	-	1,313	-	-	1,222	3,025	-	-	5,702	6,204	-	-	380	2,224
Electric utility generation, firm	-	-	-	142	-	-	-	83	-	-	-	12,432	-	-	-	1,528
Electric utility generation, interup.	-	-	-	11,510	-	-	-	-	-	-	-	586	-	-	-	6,285
Non-utility generation, firm	-	-	-	70	-	-	-	-	-	-	-	-	-	-	-	38
Non-utility generation, interup.	-	-	-	0	-	-	-	1,685	-	-	-	980	-	-	-	558
NGV	-	-	-	3,130	-	-	-	906	-	-	-	42	-	-	-	1,935
Municipal & public	-	-	5	4,039	-	-	-	7,245	-	-	1,825	2,189	-	-	50	5,431
Interdepartmental	-	-	-	-	-	-	577	2,003	-	-	-	63	-	-	-	537
Other	-	-	-	3,645	-	-	-	8,564	-	-	-	4,395	-	-	-	4,673

1/ Includes transportation only customers

2/ Quartile figures for each column do not sum. The quartile arrangements do not yield the same sequence of firms for each variable.

Key: LQ = Lower Quartile, MED = Median, UQ = Upper Quartile, AVG = Average

APPENDIX 3a: GAS UTILITY SYSTEM PROFILES AND DELIVERY VOLUMES (Cont'd)

NUMBER OF CUSTOMERS BY CUSTOMER CLASS (000)

2016 Data, 87 Utilities Reporting	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
Stratified by Type of Company	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
Residential heating	17,949	218,441	553,622	570,316	177,028	470,901	790,136	647,211	42,649	95,457	197,333	142,001	50,878	237,385	569,457	515,524
Residential non-heating	-	-	1,458	18,616	-	-	13,187	43,462	-	467	1,537	4,642	-	-	3,499	24,561
Commercial, firm	1,161	17,961	40,818	38,642	21,257	34,498	63,093	59,422	1,554	8,498	17,176	9,743	3,971	20,385	45,315	39,556
Commercial, interruptible	-	-	-	1,358	-	1	105	74	-	2	704	2,019	-	-	5	1,001
Industrial, firm	-	43	404	1,017	56	275	1,464	1,601	5	43	235	150	1	77	575	1,022
Industrial, interruptible	-	-	-	32	-	-	11	90	-	3	78	272	-	-	7	88
Electric utility generation, firm	-	-	-	0	-	-	-	2	-	-	-	1	-	-	-	1
Electric utility generation, interup.	-	-	-	1	-	-	-	-	-	-	-	3	-	-	-	1
Non-utility generation, firm	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0
Non-utility generation, interup.	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0
NGV	-	-	-	7	-	-	-	179	-	-	-	2	-	-	-	51
Municipal & public	-	-	1	404	-	-	-	193	-	-	35	427	-	-	2	318
Interdepartmental	-	-	-	-	-	-	-	6	-	-	-	2	-	-	-	2
Other	-	-	-	0	-	-	-	48	-	-	-	-	-	-	-	23

APPENDIX 3b: GAS UTILITY FINANCIAL STATEMENTS (000\$)

2016 Data, 87 Utilities Reporting Stratified by Type of Company	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
GAS-ONLY INCOME STATEMENT																
Operating revenue	27,600	321,420	885,729	598,832	183,101	498,756	908,609	760,765	36,206	108,178	166,497	147,723	65,158	298,090	706,861	568,495
Operating expense	14,973	197,176	472,555	350,807	120,002	334,846	536,463	443,361	26,571	83,916	126,390	109,783	43,633	197,176	432,858	336,685
Maintenance expense	1,429	10,413	31,115	24,824	6,727	21,061	37,185	55,513	964	2,645	11,000	8,561	2,170	10,413	30,043	29,742
Total O&M	16,191	208,478	503,670	375,631	125,980	350,011	583,224	498,873	27,923	85,855	140,667	118,344	44,869	208,478	467,984	366,427
Depreciation	4,592	31,522	72,954	64,072	10,521	41,317	75,633	69,700	3,466	9,412	14,841	12,399	6,383	26,910	60,866	57,040
Depletion	-	-	-	172	-	-	99	921	-	-	-	-	-	-	-	357
Amortization	-	70	2,401	3,396	-	2,380	11,300	9,727	-	-	-	14	-	-	2,502	4,408
Prop. loss charged to operations	-	-	-	464	-	-	-	546	-	-	-	4	-	-	-	396
Total taxes	3,233	26,432	88,447	71,385	17,285	43,771	91,862	63,207	-	949	6,260	3,948	3,233	23,486	70,800	57,982
Other operating income	-	-	-	20	-	-	-	(24)	-	-	-	48	-	-	-	25
Total operating income	4,792	37,488	122,750	83,713	17,955	50,045	132,170	117,790	1,386	3,678	12,854	13,014	5,789	34,766	104,413	81,884
BALANCE SHEET																
Gas plant	166,742	1,184,622	3,382,251	2,438,183	498,932	2,180,104	3,398,789	2,775,235	134,394	371,628	572,122	504,836	273,129	1,041,400	2,627,857	2,203,203
Common plant	-	-	-	40,373	47,597	269,137	590,465	860,488	-	-	-	13,675	-	-	22,899	250,868
Other plant	-	-	-	20	-	-	765	116,152	-	-	16,010	371,093	-	-	-	73,372
Total plant in service 1/2/	166,742	1,184,622	3,680,072	2,533,418	2,802,256	9,985,357	15,976,122	12,962,722	134,394	466,712	1,786,416	1,297,335	365,005	1,974,202	5,221,354	5,038,987
Accumulated depreciation 1/	36,027	322,517	1,014,150	815,822	919,473	3,149,346	5,427,809	4,493,922	62,343	151,861	795,083	516,747	113,238	635,029	1,733,131	1,725,142
Construction work-in-progress 1/	9	7,675	82,330	67,678	88,367	142,256	520,912	424,691	1,339	13,180	84,421	55,983	1,982	23,953	126,173	156,561
Net utility plant 1/	127,207	850,274	2,939,526	1,787,361	1,850,280	5,120,092	10,425,705	8,933,436	90,759	330,263	1,074,639	838,147	268,383	1,265,805	3,685,432	3,481,602
Gas storage (non-current) 1/	-	-	48	4,110	-	-	5,885	7,551	-	-	79	4,063	-	-	201	5,321
Customer accts. Receivable 1/	1,705	20,294	90,881	82,202	48,648	167,932	290,749	264,772	4,324	10,519	77,010	38,180	6,934	35,790	144,926	122,370
Total current & accrued assets 1/	10,746	103,950	267,107	232,462	192,975	529,591	1,132,159	890,351	46,810	63,511	254,283	181,099	46,728	147,271	428,562	392,730
Total deferred debits 1/	1,986	110,214	573,428	518,866	402,891	1,160,605	2,369,242	2,000,553	2,707	4,928	125,254	61,791	17,218	164,311	851,343	824,773
Total assets 1/	149,243	1,120,963	4,253,895	2,682,162	2,886,994	7,014,931	14,249,336	12,196,010	152,475	395,268	1,528,374	1,121,708	349,499	1,715,134	4,892,061	4,883,396
Common stock 1/	-	1,700	45,460	91,516	13,824	195,843	549,670	354,266	-	-	-	-	-	1,920	74,808	143,971
Retained earnings 1/	8,121	63,577	528,434	305,206	426,850	912,282	1,577,620	1,828,328	100,560	182,828	327,223	491,232	26,855	205,768	738,820	712,035
Total common stock equity 1/	48,019	490,304	1,093,727	876,121	909,777	2,335,767	4,143,800	3,680,973	100,560	182,828	358,485	495,401	141,423	585,269	1,662,477	1,530,184
Total long-term (LT) debt 1/	4,486	250,000	826,723	599,250	717,570	1,945,443	3,737,766	3,351,504	13,201	101,083	301,426	413,876	44,428	340,343	1,395,040	1,272,993
Total capitalization 1/2/	99,551	618,706	2,160,764	1,492,729	2,067,924	3,990,094	7,641,223	7,056,040	114,645	366,098	1,033,317	915,945	218,770	1,018,684	2,868,006	2,818,630
Total non-current other liabilities 1/	-	45	24,344	53,422	31,080	258,379	920,239	935,636	-	3,286	7,523	56,530	-	5,634	97,029	285,764
Current & accrued liabilities 1/	17,822	139,230	463,862	373,532	223,970	554,693	958,748	908,727	9,629	51,507	147,265	135,714	53,616	177,859	541,931	477,281
Total deferred credits 1/	11,630	176,741	1,092,579	706,415	652,380	1,671,041	3,873,985	3,271,137	1,320	1,895	15,521	10,263	13,957	239,568	1,222,319	1,263,895
Total capitalization & liabilities 1/2/	149,243	1,120,963	4,253,895	2,682,162	2,886,994	7,014,931	14,249,336	12,196,010	152,475	395,268	1,528,374	1,121,708	349,499	1,715,134	4,892,061	4,883,396

1/ Figures for combination utilities are necessarily based on combined gas and electric operations. Some municipal utilities are also combined utilities.

2/ Reflects gas and non-gas assets, also includes regulatory assets. 3/ Total capitalization figure in this display includes preferred stock.

Key: LQ = Lower Quartile, MED = Median, UQ = Upper Quartile, AVG = Average

APPENDIX 3c: GAS UTILITY SAME-SIZE FINANCIAL STATEMENTS

2016 Data, 87 Utilities Reporting					
Stratified by Type of Company	Gas Utilities	Combination Utilities	Municipal Utilities	All Companies	
	55 firms	23 firms	9 firms	87 firms	
GAS-ONLY INCOME STATEMENT - Based on average values					
Operating revenue	100.0	100.0	100.0	100.0	
Operating expense	63.0	58.8	75.0	63.0	
Maintenance expense	4.1	6.2	4.9	4.7	
Total O&M	67.1	65.0	79.9	67.8	
Depreciation	10.6	9.2	9.3	10.0	
Depletion	0.1	0.2	-	0.1	
Amortization	0.7	0.7	0.1	0.6	
Prop. loss charged to operations	0.0	0.0	0.0	0.0	
Total taxes	10.2	10.4	3.3	9.5	
Other operating income	0.0	(0.0)	0.0	0.0	
Total operating income	11.3	14.4	7.5	12.0	
BALANCE SHEET - Based on average values					
Gas plant	90.9	22.8	45.0	45.1	
Common plant	1.5	7.1	1.2	5.1	
Other plant	0.0	1.0	33.1	1.5	
Total plant in service	94.5	106.3	115.7	103.2	
Accumulated depreciation	30.4	36.8	46.1	35.3	
Construction work-in-progress	2.5	3.5	5.0	3.2	
Net utility plant	66.6	73.2	74.7	71.3	
Gas storage (non-current)	0.2	0.1	0.4	0.1	
Customer accts. receivable	3.1	2.2	3.4	2.5	
Total current & accrued assets	8.7	7.3	16.1	8.0	
Total deferred debits	19.3	16.4	5.5	16.9	
Total assets	100.0	100.0	100.0	100.0	
Common stock	3.4	2.9	-	2.9	
Retained earnings	11.4	15.0	43.8	14.6	
Total common stock equity	32.7	30.2	44.2	31.3	
Total long-term (LT) debt	22.3	27.5	36.9	26.1	
Total capitalization	55.7	57.9	81.7	57.7	
Total non-current other liabilities	2.0	7.7	5.0	5.9	
Current & accrued liabilities	13.9	7.5	12.1	9.8	
Total deferred credits	26.3	26.8	0.9	25.9	
Total capitalization & liabilities	100.0	100.0	100.0	100.0	

1/ Figures for combination utilities are necessarily based on combined gas and electric operations. Some municipal utilities are also combined utilities.

2/ Reflects gas and non-gas assets, also includes regulatory assets. 3/ Total capitalization figure in this display includes preferred stock.

APPENDIX 3d: GAS UTILITY INCOME STATEMENTS – Per Cost Driver

GAS-ONLY INCOME STATEMENT - Per Annual Therm Delivered

2016 Data, 87 Utilities Reporting	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>
Operating revenue	\$0.3457	\$0.5862	\$0.7361	\$0.6056	\$0.3569	\$0.5643	\$1.0231	\$0.7444	\$0.3780	\$0.6543	\$0.7550	\$0.5390	\$0.3462	\$0.5495	\$0.7601	\$0.6144
Operating expense	\$0.2167	\$0.3907	\$0.5546	\$0.3818	\$0.2441	\$0.3864	\$0.5426	\$0.4380	\$0.3142	\$0.4696	\$0.5825	\$0.4042	\$0.2167	\$0.3726	\$0.5546	\$0.3871
Maintenance expense	\$0.0095	\$0.0191	\$0.0346	\$0.0245	\$0.0111	\$0.0181	\$0.0599	\$0.0462	\$0.0036	\$0.0255	\$0.0483	\$0.0264	\$0.0091	\$0.0177	\$0.0367	\$0.0292
Total O&M	\$0.2388	\$0.4128	\$0.5692	\$0.4064	\$0.2556	\$0.4143	\$0.6734	\$0.4841	\$0.3295	\$0.4965	\$0.6197	\$0.4307	\$0.2388	\$0.3992	\$0.5709	\$0.4163
Depreciation	\$0.0306	\$0.0468	\$0.0790	\$0.0643	\$0.0274	\$0.0573	\$0.0807	\$0.0686	\$0.0228	\$0.0373	\$0.0895	\$0.0502	\$0.0277	\$0.0455	\$0.0790	\$0.0614
Depletion	\$0.0000	\$0.0000	\$0.0000	\$0.0006	\$0.0000	\$0.0000	\$0.0001	\$0.0016	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0008
Amortization	\$0.0000	\$0.0002	\$0.0048	\$0.0042	\$0.0000	\$0.0011	\$0.0084	\$0.0051	\$0.0000	\$0.0000	\$0.0000	\$0.0004	\$0.0000	\$0.0000	\$0.0042	\$0.0037
Prop. loss charged to operations	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0001
Total taxes	\$0.0337	\$0.0462	\$0.0734	\$0.0615	\$0.0285	\$0.0443	\$0.1208	\$0.0776	\$0.0000	\$0.0048	\$0.0294	\$0.0175	\$0.0192	\$0.0439	\$0.0734	\$0.0583
Other operating income	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000
Total operating income	\$0.0362	\$0.0562	\$0.0859	\$0.0686	\$0.0406	\$0.0766	\$0.1511	\$0.1073	\$0.0016	\$0.0444	\$0.0873	\$0.0403	\$0.0361	\$0.0562	\$0.0938	\$0.0740

GAS-ONLY INCOME STATEMENT - Per Average Annual Customer Served

2016 Data, 87 Utilities Reporting	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>	<u>LQ</u>	<u>MED</u>	<u>UQ</u>	<u>AVG</u>
Operating revenue	\$742	\$954	\$1,237	\$1,194	\$826	\$906	\$1,155	\$1,005	\$758	\$844	\$1,134	\$931	\$766	\$934	\$1,249	\$1,137
Operating expense	\$477	\$638	\$765	\$841	\$531	\$589	\$666	\$605	\$561	\$602	\$870	\$714	\$526	\$604	\$765	\$772
Maintenance expense	\$21	\$37	\$53	\$58	\$22	\$33	\$51	\$52	\$22	\$45	\$69	\$45	\$21	\$37	\$55	\$53
Total O&M	\$533	\$673	\$818	\$899	\$582	\$621	\$694	\$657	\$589	\$646	\$936	\$760	\$561	\$643	\$811	\$825
Depreciation	\$64	\$89	\$117	\$197	\$59	\$85	\$99	\$86	\$52	\$71	\$99	\$83	\$63	\$88	\$116	\$149
Depletion	\$0	\$0	\$0	\$3	\$0	\$0	\$0	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3
Amortization	\$0	\$0	\$11	\$7	\$0	\$4	\$14	\$7	\$0	\$0	\$0	\$0	\$0	\$0	\$9	\$6
Prop. loss charged to operations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total taxes	\$58	\$93	\$142	\$23	\$57	\$93	\$141	\$109	\$0	\$6	\$39	\$21	\$50	\$83	\$137	\$54
Other operating income	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3	\$0	\$0	\$0	\$0
Total operating income	\$72	\$116	\$160	\$66	\$92	\$129	\$156	\$143	\$61	\$71	\$108	\$67	\$72	\$119	\$161	\$100

APPENDIX 3d: GAS UTILITY INCOME STATEMENTS – Per Cost Driver (cont'd)

GAS-ONLY INCOME STATEMENT - Per Dollar of Gas Plant

2016 Data, 87 Utilities Reporting	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
Operating revenue	\$0.2319	\$0.2664	\$0.3375	\$0.2893	\$0.2492	\$0.2829	\$0.2927	\$0.4075	\$0.2537	\$0.2996	\$0.3595	\$0.3466	\$0.2397	\$0.2799	\$0.3353	\$0.3281
Operating expense	\$0.1228	\$0.1693	\$0.2308	\$0.1944	\$0.1428	\$0.1645	\$0.1839	\$0.2667	\$0.1958	\$0.2139	\$0.2987	\$0.2679	\$0.1350	\$0.1729	\$0.2296	\$0.2225
Maintenance expense	\$0.0055	\$0.0100	\$0.0134	\$0.0102	\$0.0086	\$0.0105	\$0.0165	\$0.0176	\$0.0109	\$0.0168	\$0.0245	\$0.0164	\$0.0060	\$0.0102	\$0.0147	\$0.0126
Total O&M	\$0.1288	\$0.1792	\$0.2443	\$0.2046	\$0.1624	\$0.1789	\$0.1992	\$0.2843	\$0.2050	\$0.2361	\$0.3166	\$0.2844	\$0.1461	\$0.1858	\$0.2457	\$0.2351
Depreciation	\$0.0216	\$0.0255	\$0.0309	\$0.0261	\$0.0203	\$0.0240	\$0.0286	\$0.0325	\$0.0220	\$0.0259	\$0.0313	\$0.0278	\$0.0215	\$0.0254	\$0.0305	\$0.0281
Depletion	\$0.0000	\$0.0000	\$0.0000	\$0.0002	\$0.0000	\$0.0000	\$0.0000	\$0.0008	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0004
Amortization	\$0.0000	\$0.0001	\$0.0028	\$0.0025	\$0.0000	\$0.0009	\$0.0047	\$0.0021	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0000	\$0.0025	\$0.0019
Prop. loss charged to operations	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0000	\$0.0000	\$0.0001
Total taxes	\$0.0199	\$0.0259	\$0.0372	\$0.0267	\$0.0208	\$0.0283	\$0.0380	\$0.0352	\$0.0000	\$0.0017	\$0.0144	\$0.0081	\$0.0169	\$0.0255	\$0.0350	\$0.0265
Other operating income	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0012	\$0.0000	\$0.0000	\$0.0000	\$0.0001
Total operating income	\$0.0260	\$0.0336	\$0.0424	\$0.0292	\$0.0277	\$0.0364	\$0.0445	\$0.0525	\$0.0215	\$0.0291	\$0.0407	\$0.0261	\$0.0271	\$0.0356	\$0.0427	\$0.0361

GAS-ONLY INCOME STATEMENT - Per Mile of Distribution Pipe

2016 Data, 87 Utilities Reporting	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
Operating revenue	\$28,172	\$42,001	\$65,523	\$57,528	\$35,220	\$55,366	\$88,621	\$72,659	\$38,888	\$58,604	\$66,413	\$65,717	\$30,980	\$44,868	\$75,289	\$63,372
Operating expense	\$17,499	\$25,706	\$39,094	\$36,040	\$24,812	\$35,696	\$46,834	\$41,296	\$27,673	\$45,150	\$57,421	\$49,490	\$19,472	\$29,118	\$46,934	\$39,656
Maintenance expense	\$821	\$1,555	\$2,913	\$2,508	\$1,023	\$2,145	\$4,697	\$4,204	\$1,164	\$2,641	\$4,570	\$3,635	\$890	\$1,873	\$3,256	\$3,022
Total O&M	\$18,396	\$26,993	\$42,080	\$38,547	\$26,255	\$37,628	\$55,359	\$45,500	\$28,323	\$48,784	\$61,596	\$53,125	\$20,082	\$31,040	\$52,171	\$42,679
Depreciation	\$2,814	\$4,007	\$6,046	\$6,057	\$2,804	\$4,673	\$7,874	\$6,383	\$2,686	\$4,072	\$6,729	\$5,528	\$2,887	\$4,226	\$6,857	\$6,088
Depletion	\$0	\$0	\$0	\$52	\$0	\$0	\$8	\$152	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75
Amortization	\$0	\$19	\$587	\$384	\$0	\$261	\$881	\$556	\$0	\$0	\$0	\$10	\$0	\$0	\$464	\$356
Prop. loss charged to operations	\$0	\$0	\$0	\$10	\$0	\$0	\$0	\$31	\$0	\$0	\$0	\$18	\$0	\$0	\$0	\$15
Total taxes	\$2,288	\$3,891	\$6,716	\$5,784	\$2,335	\$5,917	\$9,767	\$7,832	\$0	\$512	\$2,223	\$1,237	\$1,883	\$3,695	\$6,862	\$5,795
Other operating income	\$0	\$0	\$0	\$2	\$0	\$0	\$0	-\$4	\$0	\$0	\$0	\$185	\$0	\$0	\$0	\$21
Total operating income	\$2,960	\$5,368	\$9,080	\$6,694	\$3,555	\$6,317	\$12,690	\$12,205	\$1,366	\$4,734	\$6,238	\$5,800	\$3,213	\$5,611	\$9,752	\$8,364

APPENDIX 3e: GAS UTILITY FINANCIAL RATIOS

2016 Data, 87 Utilities Reporting Stratified by Type of Company	Gas Utilities 54 firms				Combination Utilities 23 firms				Municipal Utilities 10 firms				All Companies 87 firms			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
Therms delivered (avg.) per acct.	1,228	1,737	2,859	2,736	1,200	1,702	2,416	1,901	1,383	1,589	1,759	14,265	1,277	1,737	2,769	5,720
Therms per \$1,000 of gas plant	0.353	0.542	0.820	0.618	0.260	0.403	0.799	0.891	0.325	0.696	0.951	6.393	0.315	0.550	0.854	1.542
Value of gas plant per customer	\$2,322	\$3,294	\$4,463	\$3,934	\$2,634	\$3,347	\$3,889	\$3,474	\$2,048	\$2,609	\$3,547	\$2,954	\$2,519	\$3,294	\$4,376	\$3,833
%Sales firm (not interruptible)	96.1%	99.8%	100.0%	94.9%	95.1%	97.6%	99.9%	93.7%	73.5%	90.8%	97.7%	85.7%	94.7%	99.2%	100.0%	93.6%
Collection period (days) 1/	23.7	30.8	53.7	40.3	24.2	27.2	40.2	29.9	24.8	27.5	42.0	34.5	23.9	30.0	44.6	36.9
Gas O&M expense as pct. of revenue	60.5%	65.8%	74.6%	67.8%	61.8%	66.8%	71.0%	66.5%	76.4%	83.3%	84.1%	81.6%	61.5%	66.8%	75.7%	68.9%
Gas operating income as pct. of revenue	8.7%	12.9%	15.1%	11.2%	11.1%	13.1%	14.9%	13.7%	7.6%	9.0%	11.7%	6.8%	9.0%	12.9%	14.9%	11.7%
Gas operating revenue per customer	\$727	\$947	\$1,214	\$1,183	\$826	\$906	\$1,155	\$1,005	\$758	\$844	\$1,134	\$931	\$765	\$930	\$1,248	\$1,132
Gas O&M expense per customer	\$514	\$671	\$815	\$889	\$582	\$621	\$694	\$657	\$589	\$646	\$936	\$760	\$558	\$641	\$811	\$820
Gas operating income per customer	\$72	\$114	\$158	\$66	\$92	\$129	\$156	\$143	\$61	\$71	\$108	\$67	\$73	\$118	\$160	\$100
Gas revenue per dollar of gas plant	\$0.229	\$0.266	\$0.336	\$0.288	\$0.249	\$0.283	\$0.293	\$0.407	\$0.254	\$0.300	\$0.359	\$0.347	\$0.236	\$0.280	\$0.335	\$0.327
Gas O&M expense per dollar of gas plant	\$0.129	\$0.176	\$0.241	\$0.203	\$0.162	\$0.179	\$0.199	\$0.284	\$0.205	\$0.236	\$0.317	\$0.284	\$0.145	\$0.185	\$0.244	\$0.234
Gas operating income per \$ of gas plant	\$0.027	\$0.033	\$0.042	\$0.029	\$0.028	\$0.036	\$0.044	\$0.053	\$0.021	\$0.029	\$0.041	\$0.026	\$0.027	\$0.036	\$0.043	\$0.036
Gas revenue per mile of pipe 2/	\$28,360	\$42,172	\$66,853	\$57,748	\$35,220	\$55,366	\$88,621	\$72,659	\$38,888	\$58,604	\$66,413	\$65,717	\$31,183	\$45,218	\$73,710	\$63,424
Gas O&M expense per mile of pipe 2/	\$18,603	\$27,094	\$41,745	\$38,600	\$26,255	\$37,628	\$55,359	\$45,500	\$28,323	\$48,784	\$61,596	\$53,125	\$20,103	\$31,169	\$51,972	\$42,660
Gas operating income per mile of pipe 2/	\$3,037	\$5,373	\$9,204	\$6,747	\$3,555	\$6,317	\$12,690	\$12,205	\$1,366	\$4,734	\$6,238	\$5,800	\$3,237	\$5,660	\$9,659	\$8,374
Long-term debt - total assets ratio 1/	15.3%	24.5%	26.9%	20.5%	24.2%	27.9%	31.1%	28.3%	7.7%	25.1%	45.6%	27.4%	16.3%	25.3%	29.5%	23.5%
Long-term debt - total capitalization ratio 1/3/	26.2%	42.7%	48.2%	34.5%	43.7%	46.7%	49.2%	45.5%	13.9%	27.6%	53.1%	33.5%	30.6%	43.0%	48.6%	37.8%
Net interest - long-term debt ratio 1/	3.8%	4.8%	5.7%	444.6%	4.5%	5.0%	5.3%	6.1%	0.7%	3.6%	4.8%	2.6%	4.0%	5.0%	5.5%	226.7%
EBITDA interest coverage 1/	6.2x	8.1x	10.5x	19.5x	7.0x	7.6x	8.5x	7.8x	3.9x	8.9x	17.0x	51.5x	6.2x	7.9x	10.0x	18.9x
Return on assets	1.2%	2.4%	3.2%	2.0%	2.6%	2.8%	3.3%	3.1%	2.5%	2.9%	3.4%	2.7%	1.7%	2.7%	3.3%	2.4%
Gross sales margin per therm 4/	\$0.102	\$0.247	\$0.486	\$0.383	\$0.049	\$0.288	\$0.412	\$0.351	\$0.118	\$0.199	\$0.361	\$0.374	\$0.208	\$0.346	\$0.512	\$0.366
Gross sales margin per customer 4/	\$0	\$615	\$848	\$827	\$88	\$441	\$611	\$564	\$110	\$274	\$441	\$495	\$397	\$585	\$850	\$707

Key: LQ = Lower Quartile, MED = Median, UQ = Upper Quartile, AVG = Average

1/ Figures for combination utilities are necessarily based on combined gas and electric operations. Four municipal utilities are also combined gas-electric utilities.

2/ Miles of distribution pipes from US Department of Transportation.

3/ Total capitalization figure in this display includes preferred stock.

4/ Gross sales margin = operating revenues less total production costs

NOTE: Some ratios are not always normally distributed. Therefore, average ratio values may be subject to distortion by a few observations that are outliers.

APPENDIX 4: GAS UTILITY O&M Detail
Based on Segment Averages

	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
VALUES PER THERM	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Gas-only revenues	\$0.7070	\$0.6700	\$0.6068	\$0.8197	\$0.7777	\$0.7444	\$0.8734	\$0.7552	\$0.5390	\$0.7448	\$0.7087	\$0.6144
Purchased-gas expense	\$0.2606	\$0.2288	\$0.1499	\$0.4073	\$0.3316	\$0.3043	\$0.2920	\$0.3213	\$0.2110	\$0.3077	\$0.2656	\$0.1951
Gross sales margin	\$0.3562	\$0.3966	\$0.4105	\$0.3931	\$0.4378	\$0.4308	\$0.4755	\$0.3881	\$0.3408	\$0.3908	\$0.4066	\$0.3922
Total production costs ¹	\$0.3507	\$0.2734	\$0.1963	\$0.4266	\$0.3399	\$0.3136	\$0.3979	\$0.3671	\$0.2571	\$0.3539	\$0.3006	\$0.2298
Storage & LNG	\$0.0013	\$0.0045	\$0.0012	-\$0.0022	\$0.0036	\$0.0037	\$0.0019	\$0.0012	\$0.0005	\$0.0031	\$0.0039	\$0.0019
Transmission	\$0.0104	\$0.0122	\$0.0115	\$0.0104	\$0.0135	\$0.0146	\$0.0023	\$0.0036	\$0.0040	\$0.0076	\$0.0116	\$0.0109
Distribution	\$0.0557	\$0.0673	\$0.0664	\$0.0549	\$0.0646	\$0.0749	\$0.0580	\$0.0635	\$0.0651	\$0.0512	\$0.0662	\$0.0656
Customer accounts	\$0.0252	\$0.0270	\$0.0266	\$0.0284	\$0.0340	\$0.0358	\$0.0257	\$0.0266	\$0.0232	\$0.0265	\$0.0288	\$0.0275
Customer svc. & info.	\$0.0048	\$0.0049	\$0.0054	\$0.0158	\$0.0137	\$0.0134	\$0.0114	\$0.0161	\$0.0141	\$0.0075	\$0.0084	\$0.0082
Sales	\$0.0013	\$0.0030	\$0.0030	\$0.0033	\$0.0032	\$0.0031	\$0.0045	\$0.0065	\$0.0068	\$0.0022	\$0.0034	\$0.0032
Admin. & general	\$0.0647	\$0.0744	\$0.0819	\$0.0762	\$0.0751	\$0.0897	\$0.0692	\$0.1079	\$0.1067	\$0.0837	\$0.0780	\$0.0835
Total O&M	\$0.5155	\$0.4648	\$0.4062	\$0.6112	\$0.5475	\$0.4841	\$0.6925	\$0.5925	\$0.4776	\$0.5485	\$0.4999	\$0.4208
PERCENT OF REVENUE												
Gas-only revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Purchased-gas expense	36.9%	34.2%	24.7%	49.7%	42.6%	40.9%	33.4%	42.6%	39.1%	41.3%	37.5%	31.8%
Gross sales margin	50.4%	59.2%	67.7%	48.0%	56.3%	57.9%	54.4%	51.4%	63.2%	52.5%	57.4%	63.8%
Total production costs ¹	49.6%	40.8%	32.3%	52.0%	43.7%	42.1%	45.6%	48.6%	47.7%	47.5%	42.4%	37.4%
Storage & LNG	0.2%	0.7%	0.2%	-0.3%	0.5%	0.5%	0.2%	0.2%	0.1%	0.4%	0.6%	0.3%
Transmission	1.5%	1.8%	1.9%	1.3%	1.7%	2.0%	0.3%	0.5%	0.8%	1.0%	1.6%	1.8%
Distribution	7.9%	10.0%	10.9%	6.7%	8.3%	10.1%	6.6%	8.4%	12.1%	6.9%	9.3%	10.7%
Customer accounts	3.6%	4.0%	4.4%	3.5%	4.4%	4.8%	2.9%	3.5%	4.3%	3.6%	4.1%	4.5%
Customer svc. & info.	0.7%	0.7%	0.9%	1.9%	1.8%	1.8%	1.3%	2.1%	2.6%	1.0%	1.2%	1.3%
Sales	0.2%	0.4%	0.5%	0.4%	0.4%	0.4%	0.5%	0.9%	1.3%	0.3%	0.5%	0.5%
Admin. & general	9.1%	11.1%	13.5%	9.3%	9.7%	12.1%	7.9%	14.3%	19.8%	11.2%	11.0%	13.6%
Total O&M	72.9%	69.4%	66.9%	74.6%	70.4%	65.0%	79.3%	78.5%	88.6%	73.6%	70.5%	68.5%
VALUES PER CUSTOMER												
Gas-only revenues	\$1,203	\$1,017	\$947	\$1,291	\$968	\$906	\$1,171	\$948	\$794	\$1,093	\$990	\$927
Purchased-gas expense	\$427	\$408	\$230	\$643	\$445	\$378	\$522	\$424	\$297	\$528	\$438	\$298
Gross sales margin	\$571	\$571	\$599	\$574	\$548	\$586	\$444	\$487	\$478	\$531	\$548	\$570
Total production costs ¹	\$600	\$462	\$354	\$648	\$454	\$388	\$642	\$470	\$417	\$541	\$462	\$370
Storage & LNG	\$-	\$-	\$-	\$-	\$0	\$0	\$-	\$-	\$-	\$-	\$-	\$-
Transmission	\$5	\$7	\$6	\$3	\$2	\$2	\$-	\$-	\$-	\$3	\$4	\$4
Distribution	\$84	\$81	\$87	\$79	\$79	\$80	\$83	\$102	\$85	\$74	\$81	\$85
Customer accounts	\$37	\$34	\$34	\$43	\$37	\$38	\$31	\$30	\$30	\$35	\$36	\$34
Customer svc. & info.	\$2	\$2	\$2	\$23	\$20	\$24	\$4	\$12	\$13	\$4	\$4	\$5
Sales	\$1	\$1	\$1	\$1	\$1	\$1	\$-	\$1	\$1	\$1	\$1	\$1
Admin. & general	\$106	\$123	\$123	\$103	\$91	\$104	\$71	\$114	\$83	\$115	\$109	\$110
Total O&M	\$912	\$729	\$671	\$956	\$756	\$657	\$875	\$718	\$633	\$825	\$718	\$637

1/ Purchased cost expense is subsumed within total production costs. **NOTE:** Figures may not add precisely due to independent rounding.

APPENDIX 5: WAGES & BENEFITS
2016 Data, 87 Utilities Reporting

	Gas Utilities				Combination Utilities				Municipal Utilities				All Companies			
	57 firms				23 firms				10 firms				87 firms			
	LQ	MED	UQ	AVG.	LQ	MED	UQ	AVG.	LQ	MED	UQ	AVG.	LQ	MED	UQ	AVG.
Average number of employees	189	647	1,221	1,006	208	470	1,289	1,239	20	153	475	360	151	469	1,208	955
Number of Employees at year-end	189	647	1,315	1,019	236	605	1,571	1,323	20	148	401	354	151	478	1,243	983
O&M wages ('000)	\$5,998	\$30,950	\$76,486	\$63,902	\$29,390	\$51,534	\$95,784	\$90,080	\$2,113	\$11,219	\$22,603	\$22,852	\$7,924	\$33,749	\$68,116	\$63,074
Construction wages ('000)	\$1,041	\$6,713	\$29,931	\$24,159	\$6,908	\$23,261	\$52,037	\$54,269	\$0	\$1,084	\$4,255	\$2,841	\$1,828	\$6,844	\$29,912	\$27,996
Total pensions ('000)	\$1,278	\$10,593	\$37,634	\$26,583	\$4,813	\$17,247	\$26,079	\$18,956	\$2,882	\$6,091	\$28,474	\$694,987	\$3,119	\$11,271	\$29,806	\$102,893
PER YEAR END EMPLOYEE:																
Total salary & wages	\$69,071	\$80,332	\$86,967	\$82,218	\$92,841	\$110,686	\$131,921	\$124,202	\$55,424	\$74,674	\$86,629	\$70,993	\$69,668	\$83,440	\$95,864	\$91,014
Tot. benefits & pension	\$16,143	\$24,760	\$32,378	\$23,286	\$16,813	\$25,869	\$40,005	\$29,290	\$26,795	\$40,729	\$52,102	\$43,674	\$16,755	\$26,236	\$39,629	\$27,280
Total salary, benefits, and pension	\$88,650	\$102,284	\$114,225	\$105,503	\$119,001	\$132,786	\$152,330	\$153,492	\$80,999	\$128,689	\$142,256	\$114,667	\$93,185	\$112,024	\$132,905	\$118,294
Ratio: avg. benefits to avg. compensation	19%	23%	30%	22%	14%	20%	25%	19%	32%	35%	54%	47%	18%	25%	32%	25%
Therms delivered per year-end employee	756,122	999,617	1,814,940	1,328,236	704,265	1,041,723	1,761,637	1,671,666	455,155	803,631	1,301,929	12,547,591	756,122	1,044,026	1,932,096	2,754,260
Customers per year-end employee	470	643	767	667	572	690	1,129	877	455	525	602	523	495	639	788	716

NOTE: Some ratios are not always normally distributed. Therefore, average ratio values may be subject to distortion by a few observations that are outliers.

Key: LQ = Lower Quartile, MED = Median, UQ = Upper Quartile, AVG = Average

APPENDIX 6: GAS UTILITY FINANCIAL PERFORMANCE

<i>Based on Segment Medians</i>	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Asset Turnover	0.41X	0.34X	0.27X	0.33X	0.30X	0.28X	0.53X	0.35X	0.33X	0.39X	0.33X	0.28X
Financial Leverage	67.6%	67.8%	65.8%	68.5%	68.6%	68.3%	39.6%	42.9%	41.6%	67.6%	67.9%	67.6%
Debt/Equity Ratio	75.8%	71.1%	74.6%	87.5%	87.6%	87.4%	18.6%	56.9%	42.0%	78.7%	76.5%	75.7%
Equity Multiplier	3.09	3.00	3.02	3.24	3.22	3.20	1.74	1.66	1.73	3.10	3.05	3.10
Profit Margin	7.1%	7.8%	8.0%	9.0%	9.6%	10.3%	7.8%	10.4%	8.2%	7.5%	8.7%	9.1%
ROA	3.0%	2.7%	2.4%	3.0%	2.8%	2.8%	3.4%	3.4%	2.9%	3.0%	2.8%	2.7%
ROE	9.3%	8.4%	7.1%	9.7%	9.4%	9.8%	5.9%	5.1%	5.3%	9.2%	8.9%	8.7%
Current Ratio	0.84	0.74	0.67	1.03	0.94	0.99	2.56	2.66	2.25	0.94	0.83	0.84
Current Assets/Total Assets	12.2%	8.9%	8.8%	8.8%	7.1%	7.1%	25.1%	26.4%	25.1%	11.9%	8.9%	8.8%

<i>Based on Segment Averages</i>	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Asset Turnover	0.46X	0.39X	0.32X	0.33X	0.30X	0.28X	0.51X	0.39X	0.37X	0.43X	0.36X	0.32X
Financial Leverage	64.2%	64.7%	62.7%	66.5%	67.2%	67.2%	40.7%	43.5%	44.7%	62.7%	63.1%	62.2%
Debt/Equity Ratio	75.2%	69.1%	66.7%	90.4%	96.3%	97.0%	65.8%	103.1%	85.5%	79.0%	79.8%	77.3%
Equity Multiplier	3.10	3.04	3.41	3.22	3.24	3.25	2.08	2.43	2.58	3.03	3.03	3.25
Profit Margin	7.1%	5.8%	5.7%	10.7%	4.4%	11.0%	7.1%	9.7%	8.9%	8.2%	5.8%	7.7%
ROA	2.9%	2.4%	2.0%	3.2%	2.1%	3.1%	3.1%	3.2%	2.7%	3.0%	2.4%	2.4%
ROE	8.9%	7.1%	4.7%	9.9%	8.0%	9.8%	6.0%	6.6%	7.5%	9.0%	7.3%	6.7%
Current Ratio	0.87	0.84	0.71	1.17	1.15	1.15	3.35	3.59	3.25	1.24	1.20	1.15
Current Assets/Total Assets	13.9%	11.7%	10.5%	10.3%	7.8%	7.5%	25.4%	22.5%	23.6%	14.1%	11.8%	11.7%

APPENDIX 7a: GAS UTILITY INCOME STATEMENTS

Based on Segment Averages

GAS-ONLY INCOME STATEMENT - Per Annual Therm Delivered

	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Operating revenue	\$ 0.7070	\$ 0.6716	\$ 0.6056	\$ 0.8197	\$ 0.7777	\$ 0.7444	\$ 0.9102	\$ 0.7552	\$ 0.5390	\$ 0.7557	\$ 0.7087	\$ 0.6144
Operating expense	\$ 0.4960	\$ 0.4429	\$ 0.3818	\$ 0.5819	\$ 0.5167	\$ 0.4380	\$ 0.7269	\$ 0.5631	\$ 0.4042	\$ 0.5406	\$ 0.4752	\$ 0.3871
Maintenance expense	\$ 0.0194	\$ 0.0233	\$ 0.0245	\$ 0.0293	\$ 0.0309	\$ 0.0462	\$ 0.0326	\$ 0.0293	\$ 0.0264	\$ 0.0230	\$ 0.0260	\$ 0.0292
Total O&M	\$ 0.5155	\$ 0.4663	\$ 0.4064	\$ 0.6112	\$ 0.5475	\$ 0.4841	\$ 0.7595	\$ 0.5925	\$ 0.4307	\$ 0.5636	\$ 0.5012	\$ 0.4163
Depreciation	\$ 0.0512	\$ 0.0603	\$ 0.0643	\$ 0.0513	\$ 0.0637	\$ 0.0686	\$ 0.0429	\$ 0.0579	\$ 0.0502	\$ 0.0505	\$ 0.0610	\$ 0.0614
Depletion	\$ 0.0002	\$ 0.0007	\$ 0.0006	\$ 0.0027	\$ 0.0028	\$ 0.0016	\$ -	\$ -	\$ -	\$ 0.0009	\$ 0.0012	\$ 0.0008
Amortization	\$ 0.0018	\$ 0.0048	\$ 0.0042	\$ 0.0030	\$ 0.0033	\$ 0.0051	\$ 0.0033	\$ 0.0007	\$ 0.0004	\$ 0.0022	\$ 0.0040	\$ 0.0037
Prop. loss charged to operations	\$ -	\$ (0.0000)	\$ 0.0001	\$ 0.0001	\$ 0.0001	\$ 0.0001	\$ 0.0004	\$ -	\$ 0.0000	\$ 0.0001	\$ 0.0000	\$ 0.0001
Total taxes	\$ 0.0652	\$ 0.0688	\$ 0.0615	\$ 0.0722	\$ 0.0755	\$ 0.0776	\$ 0.0189	\$ 0.0253	\$ 0.0175	\$ 0.0623	\$ 0.0660	\$ 0.0583
Other operating income	\$ -	\$ 0.0005	\$ 0.0000	\$ (0.0018)	\$ 0.0079	\$ (0.0000)	\$ (0.0142)	\$ 0.0022	\$ 0.0000	\$ (0.0019)	\$ 0.0026	\$ 0.0000
Total operating income	\$ 0.0731	\$ 0.0707	\$ 0.0686	\$ 0.0792	\$ 0.0847	\$ 0.1073	\$ 0.0851	\$ 0.0788	\$ 0.0403	\$ 0.0761	\$ 0.0753	\$ 0.0740

NOTE: "\$0.0000" indicates a value which, on a per-therm basis, is too small to be expressed within four significant digits.

GAS-ONLY INCOME STATEMENT - Per Average Customer Served

	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
Operating revenue	\$ 1,237	\$ 1,292	\$ 1,194	\$ 1,298	\$ 1,068	\$ 1,005	\$ 1,298	\$ 1,042	\$ 931	\$ 1,280	\$ 1,206	\$ 1,137
Operating expense	\$ 866	\$ 899	\$ 841	\$ 912	\$ 712	\$ 605	\$ 1,051	\$ 781	\$ 714	\$ 914	\$ 837	\$ 772
Maintenance expense	\$ 33	\$ 114	\$ 58	\$ 45	\$ 43	\$ 52	\$ 44	\$ 41	\$ 45	\$ 37	\$ 87	\$ 53
Total O&M	\$ 899	\$ 1,013	\$ 899	\$ 956	\$ 756	\$ 657	\$ 1,095	\$ 822	\$ 760	\$ 951	\$ 924	\$ 825
Depreciation	\$ 88	\$ 163	\$ 197	\$ 77	\$ 81	\$ 86	\$ 55	\$ 77	\$ 83	\$ 83	\$ 132	\$ 149
Depletion	\$ -	\$ 3	\$ 3	\$ 4	\$ 4	\$ 3	\$ -	\$ -	\$ -	\$ 2	\$ 3	\$ 3
Amortization	\$ 3	\$ 6	\$ 7	\$ 4	\$ 5	\$ 7	\$ 4	\$ 1	\$ 0	\$ 3	\$ 5	\$ 6
Prop. loss charged to operations	\$ -	\$ (0)	\$ 0	\$ -	\$ 0	\$ 0	\$ 1	\$ -	\$ 0	\$ -	\$ 0	\$ 0
Total taxes	\$ 113	\$ 41	\$ 23	\$ 122	\$ 108	\$ 109	\$ 23	\$ 33	\$ 21	\$ 108	\$ 58	\$ 54
Other operating income	\$ -	\$ 1	\$ 0	\$ (3)	\$ 10	\$ (0)	\$ (28)	\$ 3	\$ 3	\$ (3)	\$ 3	\$ 0
Total operating income	\$ 134	\$ 67	\$ 66	\$ 134	\$ 115	\$ 143	\$ 121	\$ 109	\$ 67	\$ 133	\$ 84	\$ 100

APPENDIX 7a: GAS UTILITY INCOME STATEMENTS – Per Cost Driver (cont'd)
Based on Segment Averages

GAS-ONLY INCOME STATEMENT - Per Dollar of Gas Plant

	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2014	2015	2015	2014	2015	2015	2014	2015	2015	2014	2015	2015
Operating revenue	\$ 0.4170	\$ 0.3465	\$ 0.2893	\$ 0.4355	\$ 0.3338	\$ 0.4075	\$ 0.6858	\$ 0.4007	\$ 0.3466	\$ 0.4462	\$ 0.3488	\$ 0.3281
Operating expense	\$ 0.3019	\$ 0.2433	\$ 0.1944	\$ 0.3129	\$ 0.2299	\$ 0.2667	\$ 0.5691	\$ 0.2997	\$ 0.2679	\$ 0.3299	\$ 0.2456	\$ 0.2225
Maintenance expense	\$ 0.0109	\$ 0.0103	\$ 0.0102	\$ 0.0145	\$ 0.0123	\$ 0.0176	\$ 0.0193	\$ 0.0160	\$ 0.0164	\$ 0.0125	\$ 0.0114	\$ 0.0126
Total O&M	\$ 0.3128	\$ 0.2536	\$ 0.2046	\$ 0.3274	\$ 0.2422	\$ 0.2843	\$ 0.5884	\$ 0.3158	\$ 0.2844	\$ 0.3425	\$ 0.2570	\$ 0.2351
Depreciation	\$ 0.0275	\$ 0.0271	\$ 0.0261	\$ 0.0251	\$ 0.0249	\$ 0.0325	\$ 0.0265	\$ 0.0259	\$ 0.0278	\$ 0.0266	\$ 0.0264	\$ 0.0281
Depletion	\$ 0.0001	\$ 0.0003	\$ 0.0002	\$ 0.0013	\$ 0.0011	\$ 0.0008	\$-	\$ -	\$ -	\$ 0.0005	\$ 0.0005	\$ 0.0004
Amortization	\$ 0.0017	\$ 0.0024	\$ 0.0025	\$ 0.0014	\$ 0.0017	\$ 0.0021	\$ 0.0046	\$ 0.0002	\$ 0.0001	\$ 0.0018	\$ 0.0020	\$ 0.0019
Prop. loss charged to operations	\$-	\$ (0.0000)	\$ 0.0000	\$ 0.0001	\$ 0.0001	\$ 0.0001	\$ 0.0003	\$ -	\$ 0.0001	\$ 0.0001	\$ 0.0000	\$ 0.0001
Total taxes	\$ 0.0346	\$ 0.0298	\$ 0.0267	\$ 0.0362	\$ 0.0306	\$ 0.0352	\$ 0.0132	\$ 0.0111	\$ 0.0081	\$ 0.0328	\$ 0.0280	\$ 0.0265
Other operating income	\$ 0.0001	\$ 0.0002	\$ 0.0000	\$ (0.0008)	\$ 0.0034	\$ (0.0000)	\$ (0.0169)	\$ 0.0012	\$ 0.0012	\$ (0.0018)	\$ 0.0012	\$ 0.0001
Total operating income	\$ 0.0401	\$ 0.0335	\$ 0.0292	\$ 0.0438	\$ 0.0333	\$ 0.0525	\$ 0.0528	\$ 0.0477	\$ 0.0261	\$ 0.0420	\$ 0.0349	\$ 0.0361

NOTE: "\$0.0000" indicates a value which, on a per \$gas plant basis, is too small to be expressed within four significant digits.

GAS-ONLY INCOME STATEMENT - Per Mile of Distribution Pipe

	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2014	2015	2015	2014	2015	2015	2014	2015	2015	2014	2015	2015
Operating revenue	\$ 70,579	\$ 88,489	\$ 57,528	\$ 93,402	\$ 78,022	\$ 72,659	\$ 112,744	\$ 71,906	\$ 65,717	\$ 81,324	\$ 83,954	\$ 63,372
Operating expense	\$ 48,868	\$ 61,466	\$ 36,040	\$ 62,857	\$ 48,770	\$ 41,296	\$ 91,377	\$ 53,673	\$ 49,490	\$ 57,299	\$ 57,255	\$ 39,656
Maintenance expense	\$ 2,150	\$ 3,210	\$ 2,508	\$ 3,427	\$ 3,707	\$ 4,204	\$ 3,597	\$ 3,328	\$ 3,635	\$ 2,614	\$ 3,356	\$ 3,022
Total O&M	\$ 51,018	\$ 64,677	\$ 38,547	\$ 66,284	\$ 52,477	\$ 45,500	\$ 94,975	\$ 57,001	\$ 53,125	\$ 59,912	\$ 60,611	\$ 42,679
Depreciation	\$ 4,847	\$ 7,040	\$ 6,057	\$ 5,779	\$ 6,127	\$ 6,383	\$ 4,690	\$ 5,111	\$ 5,528	\$ 5,102	\$ 6,594	\$ 6,088
Depletion	\$ 29	\$ 68	\$ 52	\$ 249	\$ 269	\$ 152	\$-	\$ -	\$ -	\$ 90	\$ 114	\$ 75
Amortization	\$ 230	\$ 306	\$ 384	\$ 335	\$ 389	\$ 556	\$ 837	\$ 18	\$ 10	\$ 310	\$ 298	\$ 356
Prop. loss charged to operations	\$-	\$ (1)	\$ 10	\$ 39	\$ 30	\$ 31	\$ 47	\$ -	\$ 18	\$ 16	\$ 7	\$ 15
Total taxes	\$ 7,045	\$ 7,474	\$ 5,784	\$ 9,292	\$ 8,305	\$ 7,832	\$ 1,983	\$ 1,921	\$ 1,237	\$ 7,173	\$ 7,115	\$ 5,795
Other operating income	\$ (13)	\$ 55	\$ 2	\$ (288)	\$ 427	\$ (4)	\$ (2,182)	\$ 230	\$ 185	\$ (301)	\$ 172	\$ 21
Total operating income	\$ 7,409	\$ 8,926	\$ 6,694	\$ 11,424	\$ 10,425	\$ 12,205	\$ 10,211	\$ 7,855	\$ 5,800	\$ 8,720	\$ 9,214	\$ 8,364

APPENDIX 7b: GAS UTILITY FINANCIAL RATIOS

Based on Segment Averages

Stratified by Type of Company

		Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
		2014	2015	2015	2014	2015	2015	2014	2015	2015	2014	2015	2015
Therms delivered (avg.) per acct.		2,171	2,369	2,736	2,103	1,900	1,901	1,510	1,423	14,265	2,244	2,144	5,720
Therms per \$1,000 of gas plant		0.734	0.695	0.618	0.741	0.630	0.891	0.836	0.581	6.393	0.770	0.666	1.542
Value of gas plant per customer		\$ 3,378	\$ 3,604	\$ 3,934	\$ 3,101	\$ 3,298	\$ 3,474	\$ 2,251	\$ 2,919	\$ 2,954	\$ 3,249	\$ 3,451	\$ 3,833
%Sales firm (not interruptible)		94%	95%	95%	92%	94%	94%	91%	79%	86%	105%	93%	94%
Collection period (days)	1/	38.1	30.0	40.3	29.2	25.3	29.9	48.9	28.6	34.5	36.1	28.6	36.9
Gas O&M expense as pct. of revenue		72%	71%	68%	74%	71%	67%	84%	79%	82%	74%	72%	69%
Gas oper. income as pct. of revenue		11%	10%	11%	11%	11%	14%	9%	11%	7%	10%	11%	12%
Gas operating revenue per customer		\$ 1,237	\$ 1,279	\$ 1,183	\$ 1,298	\$ 1,068	\$ 1,005	\$ 1,298	\$ 1,042	\$ 931	\$ 1,280	\$ 1,199	\$ 1,132
Gas O&M expense per customer		\$ 899	\$ 1,002	\$ 889	\$ 956	\$ 756	\$ 657	\$ 1,095	\$ 822	\$ 760	\$ 951	\$ 918	\$ 820
Gas operating income per customer		\$ 134	\$ 67	\$ 66	\$ 134	\$ 115	\$ 143	\$ 121	\$ 109	\$ 67	\$ 133	\$ 84	\$ 100
Gas revenue per dollar of gas plant		\$ 0.4170	\$ 0.3453	\$ 0.2877	\$ 0.4355	\$ 0.3338	\$ 0.4075	\$ 0.6858	\$ 0.4007	\$ 0.3466	\$ 0.4462	\$ 0.3480	\$ 0.3267
Gas O&M expense per \$ of gas plant		\$ 0.3128	\$ 0.2523	\$ 0.2030	\$ 0.3274	\$ 0.2422	\$ 0.2843	\$ 0.5884	\$ 0.3158	\$ 0.2844	\$ 0.3425	\$ 0.2562	\$ 0.2339
Gas oper. income per \$ of gas plant		\$ 0.0401	\$ 0.0336	\$ 0.0292	\$ 0.0438	\$ 0.0333	\$ 0.0525	\$ 0.0528	\$ 0.0477	\$ 0.0261	\$ 0.0420	\$ 0.0349	\$ 0.0360
Gas revenue per mile of pipe	2/	\$ 70,579	\$ 88,144	\$ 57,748	\$ 93,402	\$ 78,022	\$ 72,659	\$ 112,744	\$ 71,906	\$ 65,717	\$ 81,324	\$ 83,788	\$ 63,424
Gas O&M expense per mile of pipe	2/	\$ 51,018	\$ 64,328	\$ 38,600	\$ 66,284	\$ 52,477	\$ 45,500	\$ 94,975	\$ 57,001	\$ 53,125	\$ 59,912	\$ 60,437	\$ 42,660
Gas oper. income per mile of pipe	2/	\$ 7,409	\$ 8,934	\$ 6,747	\$ 11,424	\$ 10,425	\$ 12,205	\$ 10,211	\$ 7,855	\$ 5,800	\$ 8,720	\$ 9,216	\$ 8,374
LT debt - total assets ratio	1/	23.3%	21.8%	20.5%	26.5%	28.0%	28.3%	23.1%	31.3%	27.4%	24.4%	24.4%	23.5%
LT debt - total capitalization ratio	1/3/	38.9%	36.6%	34.5%	42.4%	45.0%	45.5%	26.7%	36.7%	33.5%	39.1%	38.8%	37.8%
Net interest - long-term debt ratio	1/	5.5%	5.5%	444.6%	4.9%	6.6%	6.1%	4.2%	2.3%	2.6%	5.2%	5.5%	226.7%
EBITDA interest coverage	1/	9.8x	8.7x	19.5x	8.6x	6.3x	7.8x	9.5x	11.8x	51.5x	9.3x	8.3x	18.9x
Return on assets		2.9%	2.4%	2.0%	3.2%	2.1%	3.1%	3.1%	3.2%	2.7%	3.0%	2.4%	2.4%

1/ Figures for combination utilities are necessarily based on combined gas and electric operations.

2/ Miles of distribution pipes and services combined. Starting in 2004, services are excluded from the pipe calculation

3/ Total capitalization figure in this display includes preferred stock.

NOTE: Some ratios are not always normally distributed. Therefore, average ratio values may be subject to distortion by a few observations that are outliers.

APPENDIX 8: GAS UTILITY WAGES AND BENEFITS

Based on Segment Averages

Stratified by Type of Company

		Gas Utilities					Combination Utilities					Municipal Utilities					All Companies		
		2014	2015	2016			2014	2015	2016			2014	2015	2016			2014	2015	2016
Average number of employees		962	897	1006			894	996	1,239			368	397	360			860	845	955
Number of Employees at year-end		978	917	1019			912	1,117	1,323			371	392	354			876	887	983
O&M wages ('000)		\$58,651	\$57,987	\$63,902			\$74,701	\$86,940	\$90,080			\$23,976	\$24,081	\$22,852			\$57,812	\$59,617	\$63,074
Construction wages ('000)		\$21,499	\$21,392	\$24,159			\$39,753	\$47,935	\$54,269			\$3,485	\$3,483	\$2,841			\$23,699	\$25,022	\$27,996
Total pensions ('000)		\$23,400	\$22,127	\$26,583			\$20,988	\$42,377	\$18,956			\$16,745	\$21,756	\$694,987			\$21,737	\$26,877	\$102,893
Per Employee(1/):																			
Total salary & wages		\$76,870	\$77,849	\$82,218			\$118,224	\$121,134	\$124,202			\$65,616	\$62,366	\$70,993			\$87,724	\$87,110	\$91,014
Tot. benefits & pension		\$20,651	\$20,218	\$23,286			\$41,572	\$45,744	\$29,290			\$34,818	\$38,319	\$43,674			\$27,918	\$28,810	\$27,280
Total salary, benefits, and pension		\$97,521	\$98,066	\$105,503			\$159,796	\$166,878	\$153,492			\$100,434	\$100,685	\$114,667			\$115,642	\$115,919	\$118,294
Ratio: avg. benefits to avg. compensation		20.0%	21.1%	22.0%			19.8%	24.0%	19.1%			37.0%	41.6%	47.2%			21.8%	24.4%	24.6%
Therms sold per year-end employee		1,547,725	1,296,357	1,328,236			1,845,975	1,729,605	1,671,666			752,207	693,274	12,547,591			1,621,802	1,455,922	2,754,260
Customers per year-end employee		712	624	667			981	914	877			467	465	523			755	692	716

1/ year-end employees

APPENDIX 9: Companies Studied

Consolidations are limited to LDC business units.

GAS IOUs	2014	2015	2016	GAS IOUs (cont.)	2014	2015	2016
AGL Resources	X	X	X	Summit Natural Gas of Missouri, Inc.	X	X	X
Arkansas Oklahoma Gas Corp	X	X	X	TECO Peoples Gas	X	X	X
Atmos Energy Corporation	X	X	X	Texas Gas Service	X	X	X
Centerpointe Energy Corp.	X	X	X	Union Oil & Gas Co.	X	X	X
Chesapeake Utilities Corp	X	X	X	Vectren Energy Delivery	X	X	X
Citizens Gas & Coke Utility	X	X	X	Vermont Gas	X	X	X
Colorado Natural Gas	X	X	X	Washington Gas Light Company	X	X	X
Columbia Gas of Kentucky	X	X	X				
Columbia Gas of Massachusetts	X	X	X				
Columbia Gas of Maryland	X	X	X	COMBINATION IOUs	2014	2015	2016
Columbia Gas of Ohio	X	X	X	Avista Corp	X	X	X
Columbia Gas of Pennsylvania	X	X	X	Ameren Illinois Corp.	X	X	X
Columbia Gas of Virginia	X	X	X	Ameren Missouri	X	X	X
Corning Natural Gas Corp		X	X	Baltimore Gas & Electric Co.	X	X	X
Delta Natural Gas Company	X	X	X	Black Hills Corporation	X	X	X
Dominion East Ohio Gas Company	X	X	X	Central Hudson Gas & Electric Corp.	X	X	X
DTE Gas Company	X	X	X	Cheyenne Light, Fuel, & Power	X	X	
Eastern Natural Gas Company		X	X	Consolidated Edison of New York	X	X	X
Enstar Natural Gas Company	X	X	X	Consumers Energy	X	X	X
Hope Gas, Inc.	X	X	X	Florida Public Utilities Company	X	X	X
Illinois Gas Company	X	X	X	Gainesville Regional Utilities	X	X	X
Indiana Gas Company, Inc.			X	Madison Gas & Electric Company	X	X	X
Kansas Gas Service	X	X	X	National Grid - Niagara Mohawk	X	X	
KeySpan Energy Delivery - NYC	X	X	X	Northern Indiana Public Service Co.	X		X
KeySpan Energy Delivery New England	X	X	X	Pacific Gas & Electric	X	X	X
KeySpan Gas East - LILCO	X	X	X	Public Service Enterprises	X	X	X
Laclede Gas Company	X	X	X	Puget Sound Energy	X	X	X
MDU Resources Corporation	X	X		San Diego Gas & Electric	X	X	X
Mobile Gas Service Corporation	X	X		UGI Utilities, Inc.	X	X	X
Mountaineer Gas	X	X	X	WE Energies	X	X	X
Mt. Carmel Public Utility	X	X	X				
Narragansett Gas Co.			X	MUNICIPALS	2014	2015	2016
National Fuel Gas Company	X	X	X	Colorado Springs Utilities	X	X	X
National Grid - Rhode Island	X		X	Knoxville Utilities Board		X	X
New Jersey Natural Gas Company	X	X	X	Memphis Light, Gas & Water Div	X	X	X
New Mexico Gas Company	X	X	X	Metropolitan Util Dist-Omaha	X	X	X
Northwest Natural Gas Company	X	X		Middle Tenn Nat Gas Util Dist	X	X	X
Ohio Gas Company	X	X	X	Okaloosa County Gas District	X	X	X
Oklahoma Natural Gas		X	X	Owatonna Public Utilities	X	X	X
Peoples Natural Gas	X	X	X	Philadelphia Gas Works	X	X	X
Piedmont Natural Gas Company	X	X	X	Richmond Dept. of Pub. Util., City of		X	X
Pike Natural Gas Company	X	X	X	Westfield Gas & Electric			X
Questar Gas Company	X	X	X				
Semco Energy (S.E. Michigan)	X	X	X				
Southeastern Natural Gas Co	X	X					
Southern California Gas	X	X	X				
Southwest Gas Corporation	X	X	X				
Southwestern Virginia Gas Co.	X	X	X				