



# Energy Analysis

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## 2017-2019 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 2017 through 2019. 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 82 utilities were included in the 2019 sample, 79 utilities were examined in 2018, and 82 companies were studied for 2017.<sup>1</sup> 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 78 percent of the residential and commercial natural gas customers in 2019, 70 percent in 2018, and 70 percent in 2017. *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.

<sup>1</sup> 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.<sup>2</sup>

*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.

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<sup>2</sup> 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.<sup>3</sup> 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.<sup>4</sup> 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

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<sup>3</sup> See Glossary in Appendix 1 for a definition of these categories.

<sup>4</sup> 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			
	2017	2018	2019
<b>All Companies</b>	<b>82 Firms</b>	<b>79 Firms</b>	<b>82 Firms</b>
Number of gas customers	633,776	687,244	688,912
Annual therms delivered ('000)	1,143,604	1,372,367	1,459,123
Annual therms delivered per account	3,740	4,223	4,300
Therms delivered per \$1,000 of gas plant	1,109	1,234	1,161
Density of system <sup>2</sup>	56.7	62.1	63.4
Firm sales <sup>3</sup>	93.0%	92.9%	92.9%
<b>Gas utilities</b>	<b>54 Firms</b>	<b>50 Firms</b>	<b>53 Firms</b>
Number of gas customers	767,388	836,826	754,029
Annual therms delivered ('000)	1,309,351	1,602,230	1,606,898
Annual therms delivered per account	1,982	2,268	2,600
Therms delivered per \$1,000 of gas plant	546	627	587
Density of system <sup>2</sup>	52.7	57.2	60.3
Firm sales <sup>3</sup>	94.0%	94.0%	94.3%
<b>Comb. Gas &amp; Electric Utilities<sup>1</sup></b>	<b>19 Firms</b>	<b>20 Firms</b>	<b>20 Firms</b>
Number of gas customers	603,719	669,329	691,121
Annual therms delivered ('000)	1,158,474	1,311,524	1,399,239
18 Firms Annual therms delivered per account	1,800	1,852	1,997
Therms delivered per \$1,000 of gas plant	520	458	487
Density of system <sup>2</sup>	63.9	75.0	70.4
Firm sales <sup>3</sup>	93.8%	93.5%	91.8%
<b>Municipal Utilities</b>	<b>9 Firms</b>	<b>9 Firms</b>	<b>9 Firms</b>
Number of gas customers	166,612	152,161	170,967
Annual therms delivered ('000)	394,765	552,338	469,121
Annual therms delivered per account	17,410	21,436	23,987
Therms delivered per \$1,000 of gas plant	5,601	6,885	7,598
Density of system <sup>2</sup>	67.1	66.4	68.0
Firm sales <sup>3</sup>	85.9%	84.7%	85.5%

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

<sup>1</sup> Data for "Combination Gas & Electric Utilities is from gas operations only.

<sup>2</sup> "Density" refers to the number of customers per mile of pipe in service.

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

#### IV-B. REVENUE PERFORMANCE

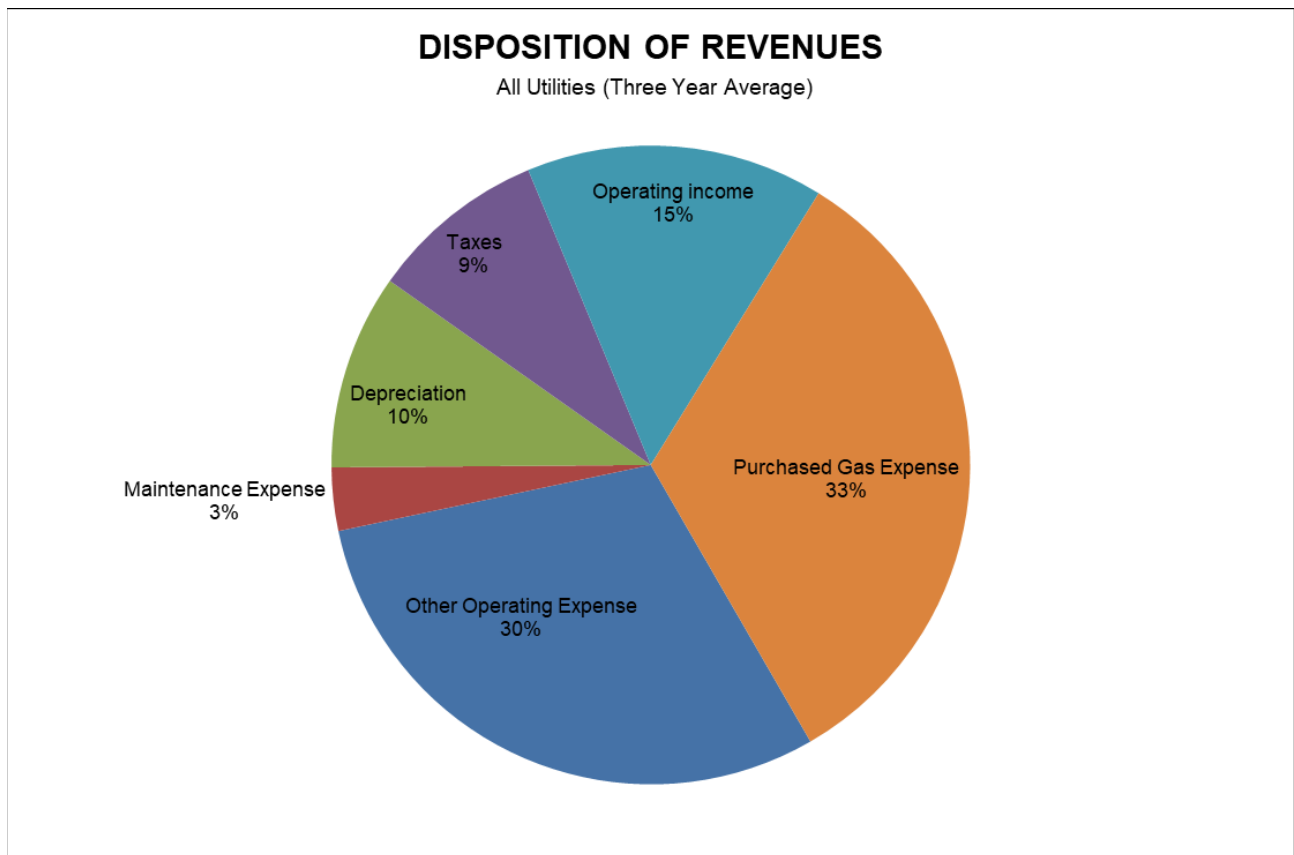
Figure 1 shows the allocation of average revenue for the three years studied. Table 2 summarizes average industry revenue performance by segment. Weather patterns impacted revenues per customer, while changing gas costs impacted both revenues per customer and per therm.

<b>TABLE 2</b> <b>UTILITY REVENUE PERFORMANCE</b> <b>Annual Average Values per Group</b> <b>Data Based on Segment Averages</b>			
	2017	2018	2019
<b>All Companies</b>			
Operating revenue ('000)	\$591,227	\$675,601	\$678,863
Per customer	\$1,152	\$1,175	\$1,206
Per therm	\$0.738	\$0.686	\$0.682
Gross sales margin (Rev. less Pur. Gas, '000)	\$380,734	\$410,256	\$439,967
Per customer	\$694	\$694	\$745
Per therm	\$0.468	\$0.468	\$0.446
Collection period (days)	38.2	37.7	34.6
<b>Gas Utilities</b>			
Operating revenue ('000)	\$670,981	\$766,827	\$699,838
Per customer	\$1,151	\$1,127	\$1,229
Per therm	\$0.747	\$0.624	\$0.647
Gross sales margin (Rev. less Pur. Gas, '000)	\$370,355	\$323,444	\$463,539
Per customer	\$666	\$666	\$753
Per therm	\$0.502	\$0.502	\$0.440
Collection period (days)	42.9	41.1	36.3
<b>Comb. Gas &amp; Electric Utilities<sup>1</sup></b>			
Operating revenue ('000)	\$664,056	\$766,805	\$792,832
Per customer	\$1,100	\$1,181	\$1,181
Per therm	\$0.831	\$0.857	\$0.764
Gross sales margin (Rev. less Pur. Gas, '000)	\$409,997	\$655,988	\$487,721
Per customer	\$820	\$820	\$764
Per therm	\$0.483	\$0.483	\$0.515
Collection period (days)	28.9	32.7	30.9
<b>Municipal Utilities</b>			
Operating revenue ('000)	\$165,340	\$167,485	\$188,431
Per customer	\$1,079	\$1,176	\$1,107
Per therm	\$0.678	\$0.670	\$0.720
Gross sales margin (Rev. less Pur. Gas, '000)	\$446,341	\$346,508	\$118,317
Per customer	\$599	\$599	\$579
Per therm	\$0.342	\$0.342	\$0.496
Collection period (days)	31.9	32.7	31.6

Source: AGA

<sup>1</sup> Figures for gas operations only.

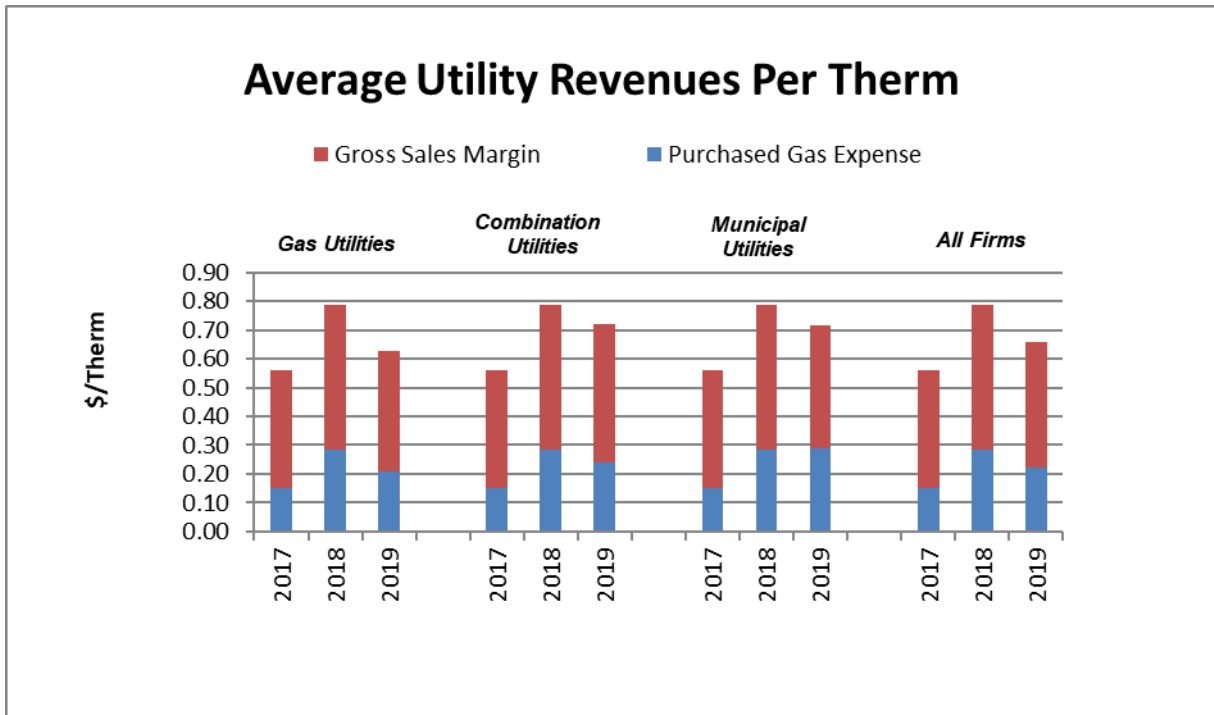
**FIGURE 1**



#### 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 <sup>1</sup>		
	2017	2018	2019	2017	2018	2019
<b>VALUES PER THERM</b>						
Gas-only revenues	\$0.8044	\$0.7018	\$0.6475	\$0.8313	\$0.8572	\$0.7641
Purchased-gas expense	\$0.2827	\$0.2581	\$0.2101	\$0.2249	\$0.2687	\$0.2393
Gross sales margin	\$0.5023	\$0.4153	\$0.4157	\$0.4834	\$0.3882	\$0.4828
	\$0.3021	\$0.2866	\$0.2317	\$0.2200	\$0.2785	\$0.2813
Total production costs <sup>2</sup>						
Storage & LNG	\$0.0032	\$0.0037	\$0.0026	\$0.0007	\$0.0028	\$0.0040
Transmission	\$0.0090	\$0.0099	\$0.0115	\$0.0197	\$0.0157	\$0.0081
Distribution	\$0.0765	\$0.0661	\$0.0658	\$0.0734	\$0.0763	\$0.0693
Customer accounts	\$0.0297	\$0.0242	\$0.0235	\$0.0311	\$0.0212	\$0.0278
Customer svc. & info.	\$0.0127	\$0.0073	\$0.0073	\$0.0059	\$0.0142	\$0.0203
Sales	\$0.0059	\$0.0021	\$0.0033	\$0.0154	\$0.0036	\$0.0022
<u>Admin. &amp; general</u>	\$0.1030	\$0.0746	\$0.0753	\$0.1218	\$0.0601	\$0.0703
Total O&M	\$0.5423	\$0.4748	\$0.4210	\$0.4879	\$0.4725	\$0.4833
<b>SAME-SIZE ANALYSIS</b>						
Gas-only revenues	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Purchased-gas expense	35.15%	36.78%	32.46%	27.05%	31.35%	31.31%
Gross sales margin	62.44%	59.17%	64.21%	58.15%	45.29%	63.18%
	37.56%	40.83%	35.79%	26.47%	32.50%	36.82%
Total production costs <sup>2</sup>						
Storage & LNG	0.40%	0.52%	0.40%	0.08%	0.32%	0.52%
Transmission	1.12%	1.41%	1.77%	2.37%	1.84%	1.06%
Distribution	9.51%	9.42%	10.16%	8.82%	8.91%	9.07%
Customer accounts	3.70%	3.45%	3.64%	3.74%	2.47%	3.64%
Customer svc. & info.	1.58%	1.04%	1.13%	0.71%	1.66%	2.66%
Sales	0.74%	0.30%	0.51%	1.85%	0.42%	0.29%
<u>Admin. &amp; general</u>	12.81%	10.63%	11.63%	14.65%	7.01%	9.19%
Total O&M	67.42%	67.65%	65.03%	58.69%	55.13%	63.26%

Source: AGA, USR.

<sup>1</sup> Figures for gas operations only.

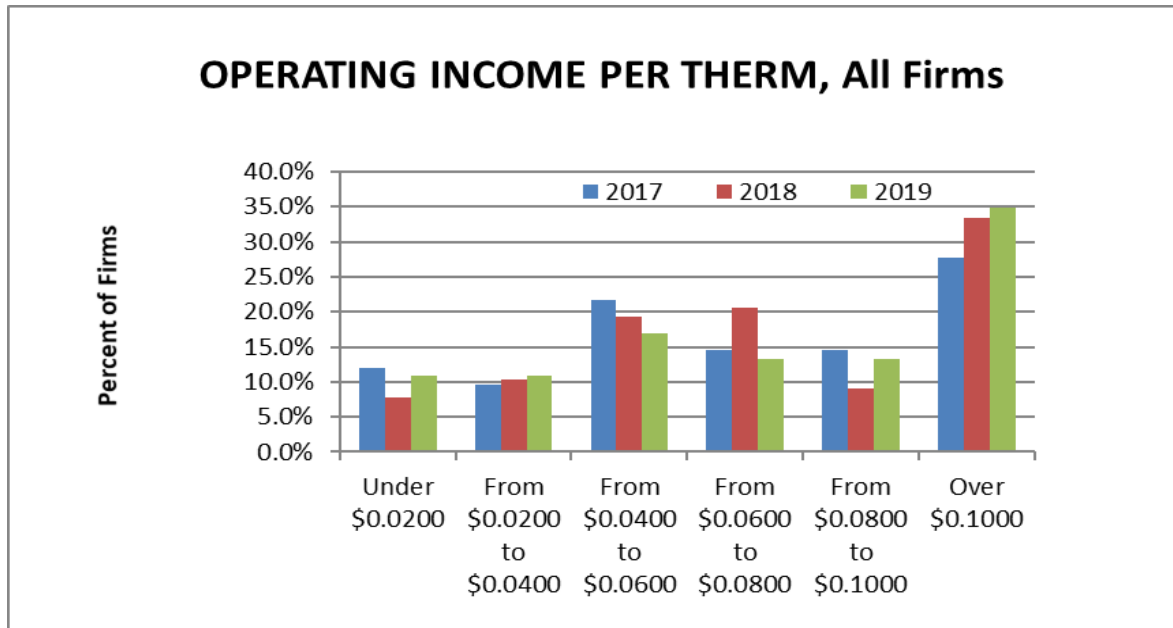
<sup>2</sup> Purchased-gas expense is subsumed within total production costs.

**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 <sup>1</sup>		
	2017	2018	2019	2017	2018	2019
Operating revenue, \$000	\$670,981	\$766,827	\$699,838	\$664,056	\$766,805	\$792,832
Total O&M, \$000	\$425,249	\$508,574	\$442,371	\$425,502	\$508,280	\$498,414
Operating income, \$000	\$98,678	\$103,981	\$107,677	\$97,385	\$115,551	\$135,010
<b>Percent of Revenue</b>						
Total O&M	63.38%	66.32%	63.21%	64.08%	66.29%	62.87%
Operating income	14.71%	13.56%	15.39%	14.67%	15.07%	17.03%
<b>Per Therm</b>						
Revenue	\$0.747	\$0.624	\$0.647	\$0.831	\$0.857	\$0.764
Total O&M	\$0.506	\$0.422	\$0.421	\$0.550	\$0.578	\$0.483
Operating income	\$0.069	\$0.081	\$0.092	\$0.109	\$0.119	\$0.124
<b>Per Customer</b>						
Revenue	\$1,151	\$1,127	\$1,229	\$1,100	\$1,181	\$1,181
Total O&M	\$811	\$783	\$821	\$721	\$789	\$751
Operating income	\$94	\$140	\$147	\$153	\$172	\$194
<b>Per Dollar of Gas Plant</b>						
Revenue	\$0.293	\$0.318	\$0.278	\$0.292	\$0.274	\$0.267
Total O&M	\$0.207	\$0.229	\$0.195	\$0.199	\$0.186	\$0.174
Operating income	\$0.029	\$0.035	\$0.033	\$0.036	\$0.039	\$0.043
<b>Per Mile of Main<sup>2</sup></b>						
Revenue	\$59,880	\$67,507	\$72,210	\$76,742	\$95,871	\$90,502
Total O&M	\$40,350	\$46,927	\$47,823	\$47,432	\$61,616	\$54,573
Operating income	\$6,815	\$7,979	\$9,745	\$12,728	\$15,359	\$15,936

Source: AGA, USR.

<sup>1</sup> Figures for gas operations only.

<sup>2</sup> 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.

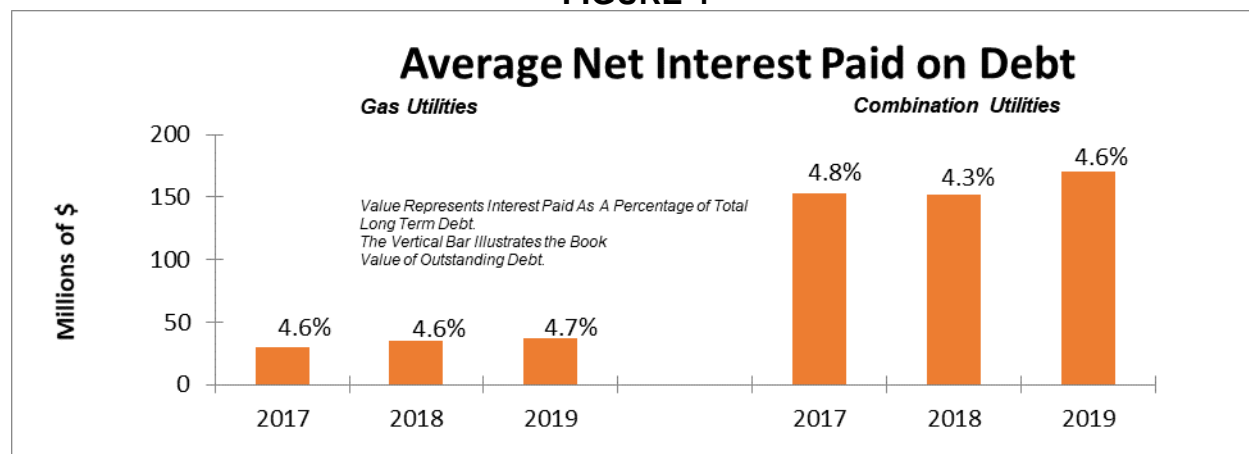
The total cost of capital for a utility reflects that of both debt and equity financing.<sup>5</sup> Table 5 shows summary descriptors of capital costs for utilities by industry segment.

<b>TABLE 5</b>			
<b>UTILITY DEBT AND DEBT COVERAGE</b>			
<b>AVERAGE VALUES</b>			
	<b>2017</b>	<b>2018</b>	<b>2019</b>
<b>Gas utilities</b>			
Total LT Debt to Total Assets	22.45%	21.87%	22.17%
LT Debt to Total Capitalization	38.48%	37.10%	36.57%
EBITDA Interest Coverage	21.1x	8.3x	8.8x
<b>Combination Utilities<sup>1</sup></b>			
Total LT Debt to Total Assets	29.67%	31.04%	30.79%
LT Debt to Total Capitalization	46.92%	48.37%	47.88%
EBITDA Interest Coverage	8.3x	7.7x	7.4x

Source: AGA, USR.

<sup>1</sup>Figures represent combined gas and electric operations.

**FIGURE 4**



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

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.

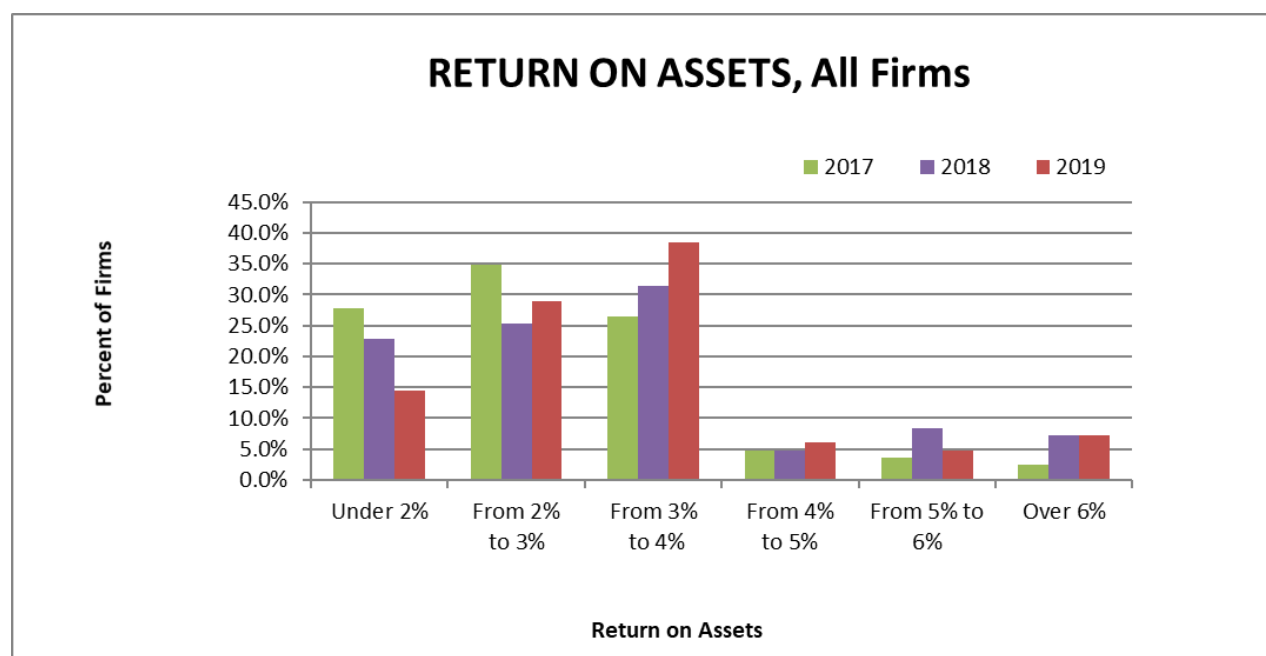
<sup>5</sup> For combination utilities, such measures necessarily reflect combined gas and electric financials. Some municipal utilities in this study have similar combined activity financing.

#### 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**



<sup>1</sup> 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			
	2017	2018	2019
<b>Gas Utilities</b>			
Asset Turnover	0.28X	0.28X	0.29X
Financial Leverage	68.21%	68.21%	64.87%
Equity Multiplier	3.17	3.17	2.85
Profit Margin	8.58%	8.58%	10.44%
ROA <sup>2</sup>	2.58%	2.58%	2.94%
ROE <sup>2</sup>	8.47%	8.47%	8.11%
Current Ratio	0.67	0.67	0.69
Current Assets/Total Assets	9.43%	9.43%	7.17%
<b>Combination Utilities<sup>1</sup></b>			
Asset Turnover	0.28X	0.28X	0.25X
Financial Leverage	68.30%	68.30%	65.75%
Equity Multiplier	3.26	3.26	3.06
Profit Margin	9.68%	9.68%	13.19%
ROA <sup>2</sup>	2.80%	2.80%	3.25%
ROE <sup>2</sup>	9.04%	9.04%	9.91%
Current Ratio	0.91	0.91	0.89
Current Assets/Total Assets	6.98%	6.98%	6.07%

Source: AGA, USR.

<sup>1</sup> Figures represent combined gas and electric operations.

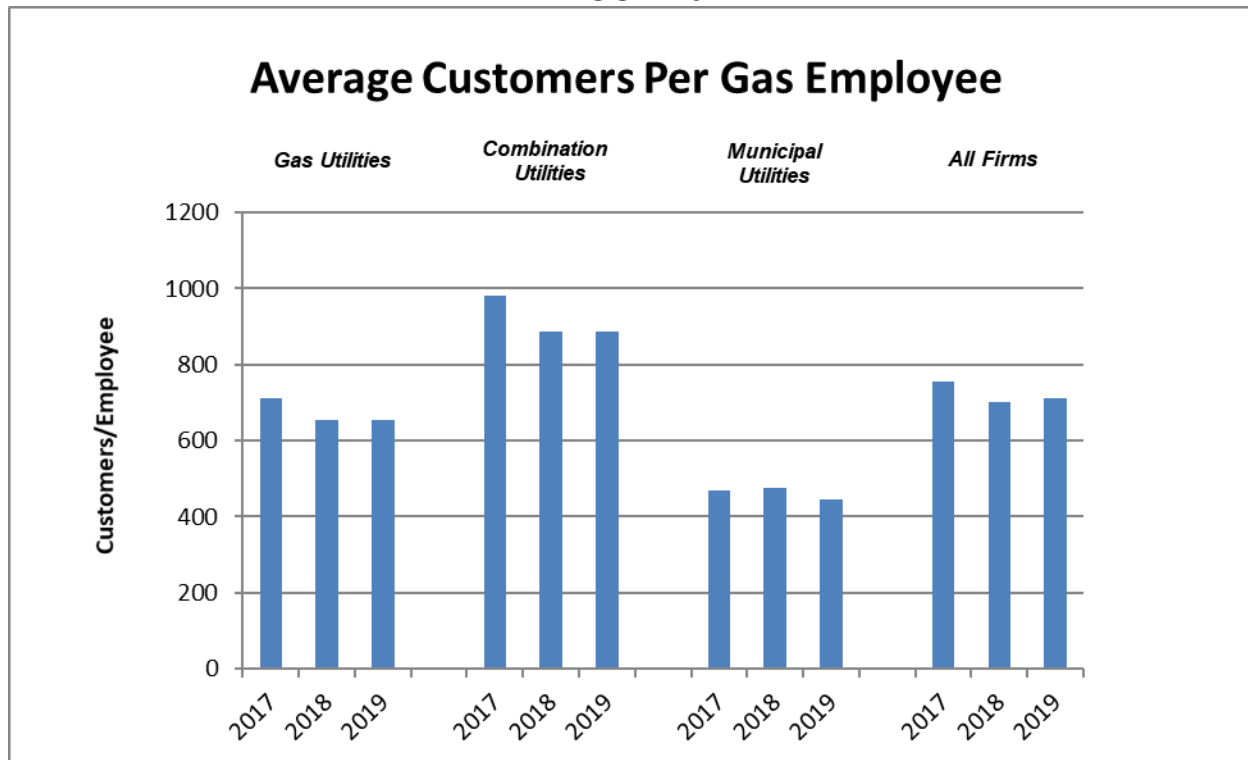
<sup>2</sup> When referring to combined gas and electric operations, the balance sheet items (i.e., total end-of-year assets) refer to the total firm, which could include non-utility assets, gas transmission assets and "other" utility assets (e.g., water), while income statement items (i.e., total revenues) 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**

	2017	2018	2019	3-Year Average
<b>All Firms</b>				
Number of employees at year-end				
Total salaries and wages	848	867	827	847
Total benefits and pensions	\$91,966	\$99,645	\$98,500	\$96,704
Total salaries, benefits, and pensions	\$26,598	\$25,705	\$22,679	\$24,994
Ratio of total benefits to total compensation	\$118,565	\$125,350	\$121,179	\$121,698
Therms sold per employee	23.8%	21.1%	19.4%	21.4%
Customers per employee	2,430,797	2,619,901	2,782,161	2,610,953
	701	695	713	703
<b>Gas Utilities</b>				
Number of employees at year-end				
Total salaries and wages	988	985	878	950
Total benefits and pensions	\$83,098	\$90,749	\$91,079	\$88,309
Total salaries, benefits, and pensions	\$21,951	\$20,607	\$20,319	\$20,959
Ratio of total benefits to total compensation	\$105,049	\$111,356	\$111,398	\$109,268
Therms sold per employee	21.7%	18.2%	18.0%	19.3%
Customers per employee	1,209,747	1,471,925	1,601,075	1,427,582
	653	671	654	659
<b>Combination Utilities<sup>1</sup></b>				
Number of employees at year-end				
Total salaries and wages	854	933	949	912
Total benefits and pensions	\$129,791	\$131,261	\$130,077	\$130,376
Total salaries, benefits, and pensions	\$32,914	\$30,532	\$21,726	\$28,391
Ratio of total benefits to total compensation	\$162,704	\$161,793	\$151,804	\$158,767
Therms sold per employee	22.0%	19.7%	14.8%	18.8%
Customers per employee	1,691,435	1,525,284	1,744,118	1,653,612
	888	874	888	883
<b>Municipal Utilities</b>				
Number of employees at year-end				
Total salaries and wages	354	320	368	347
Total benefits and pensions	\$70,131	\$74,464	\$61,173	\$68,589
Total salaries, benefits, and pensions	\$38,516	\$45,639	\$40,568	\$41,575
Ratio of total benefits to total compensation	\$108,647	\$120,104	\$101,741	\$110,164
Therms sold per employee	36.3%	38.5%	41.2%	38.6%
Customers per employee	10,583,830	12,670,372	14,563,240	12,605,814

Source: AGA, USR.

<sup>1</sup> 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 (2<sup>nd</sup> 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.).

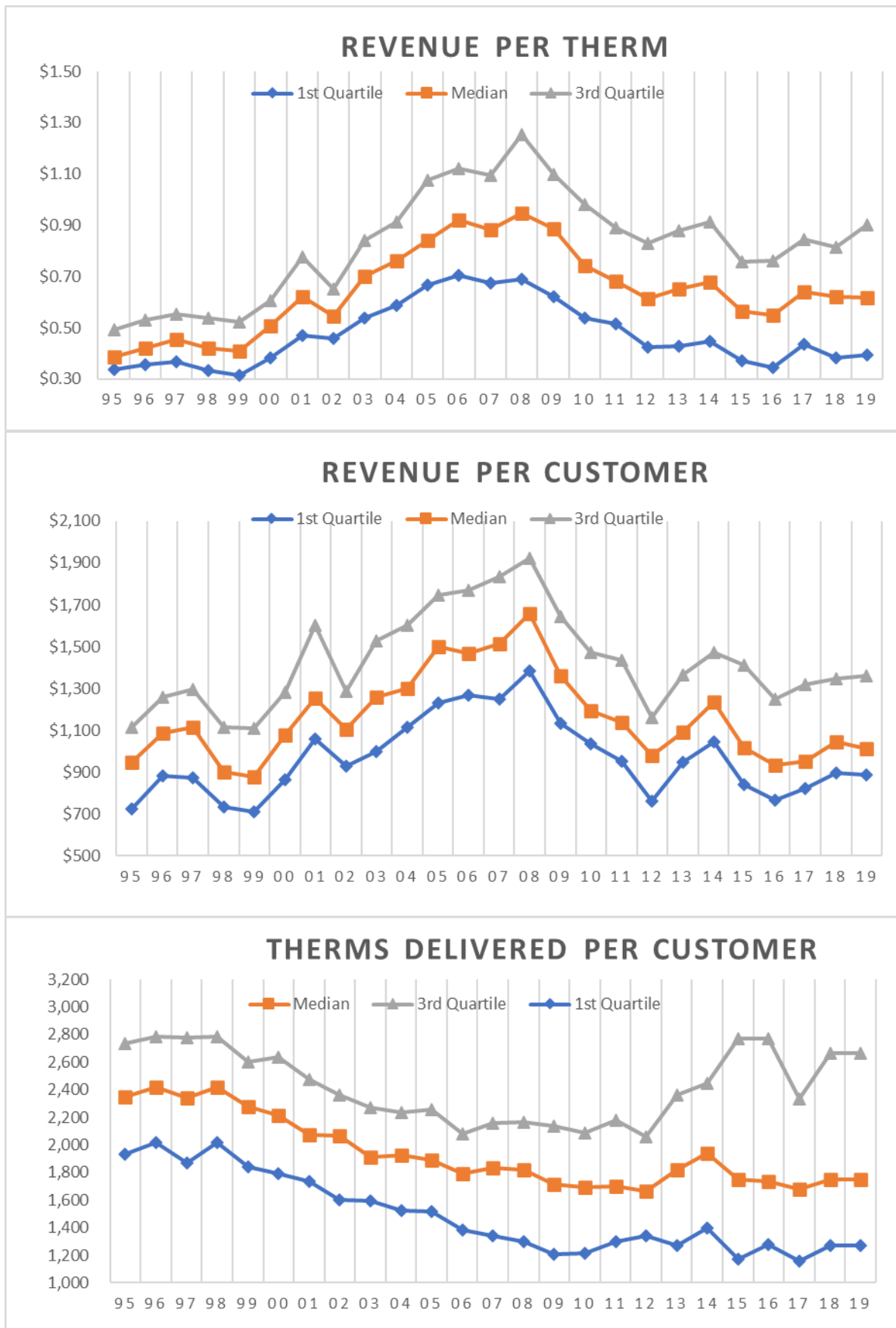
**ASSET TURNOVER:** Influenced by revenue and composition/age of gas plant.

**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.

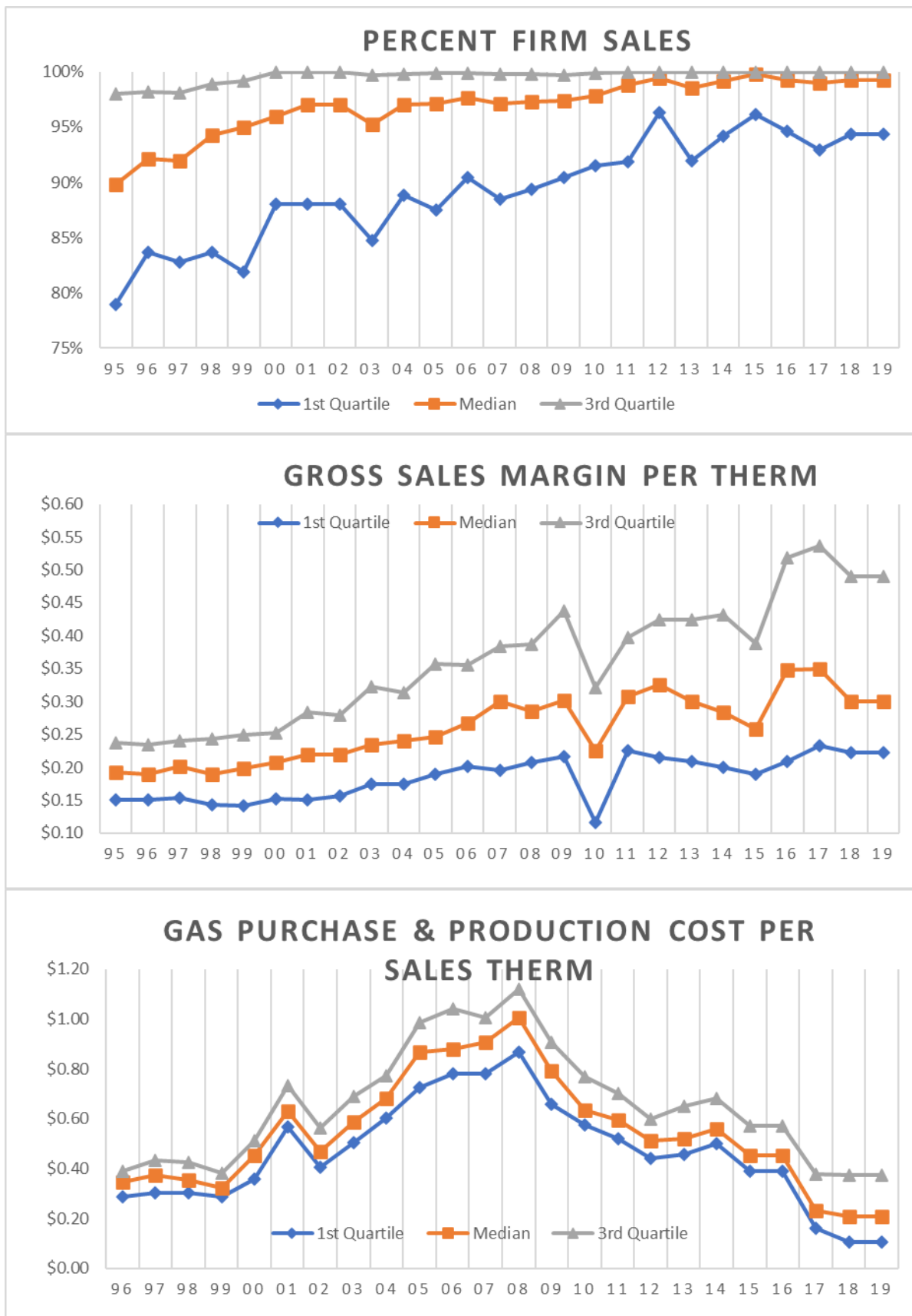
**NOTE:** Recent results of metrics involving miles of main are not comparable for years prior to 2004 because of changes in the definition of miles of main changed (no longer includes services) and in the data source (now derived from the US Department of Transportation, Office of Pipeline Safety database).

## Appendix 2: Multi-year Charts for All Companies



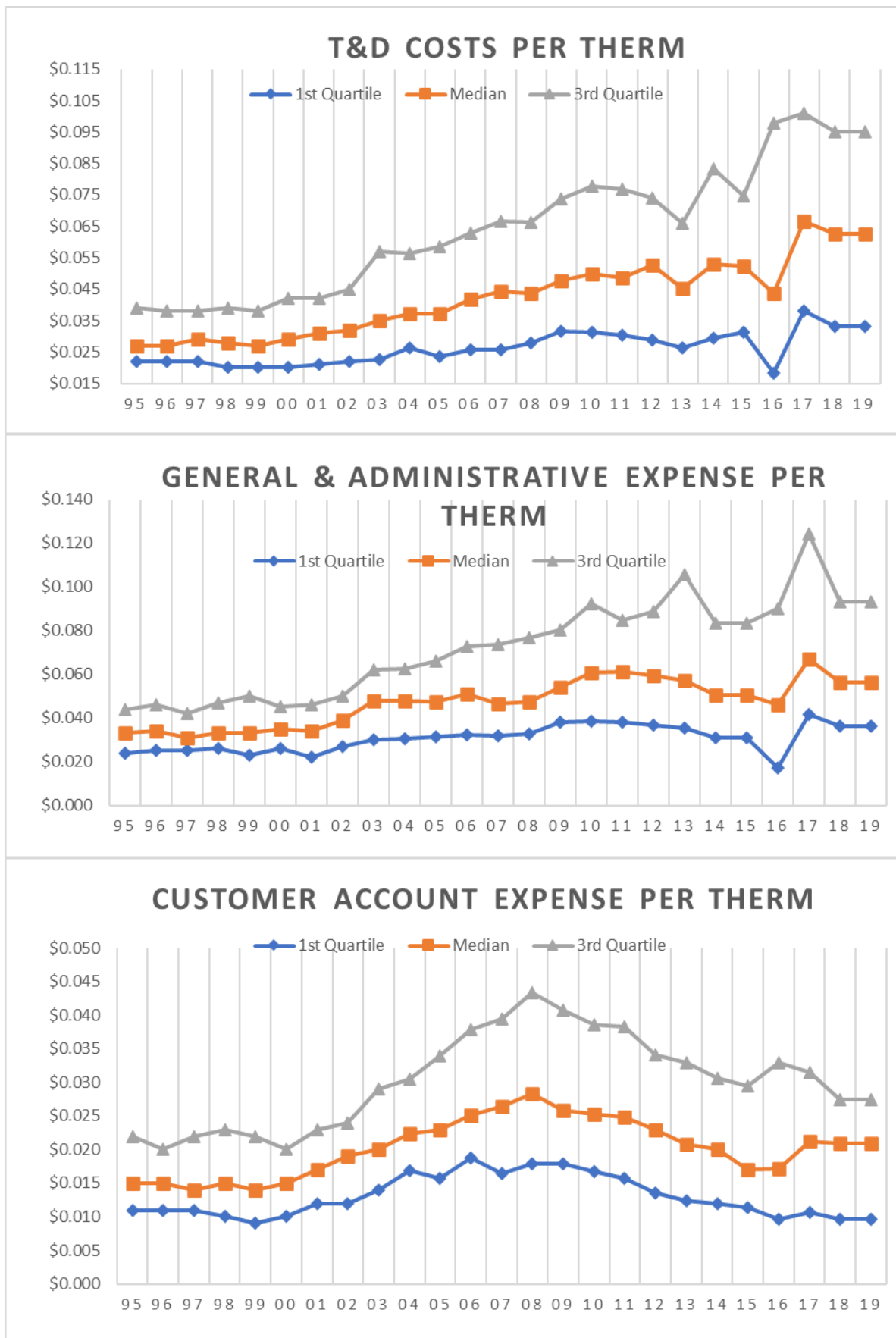
**Note:** Sample size and individual company participation vary by year, impairing trend analysis

## Appendix 2: Multi-year Charts for All Companies



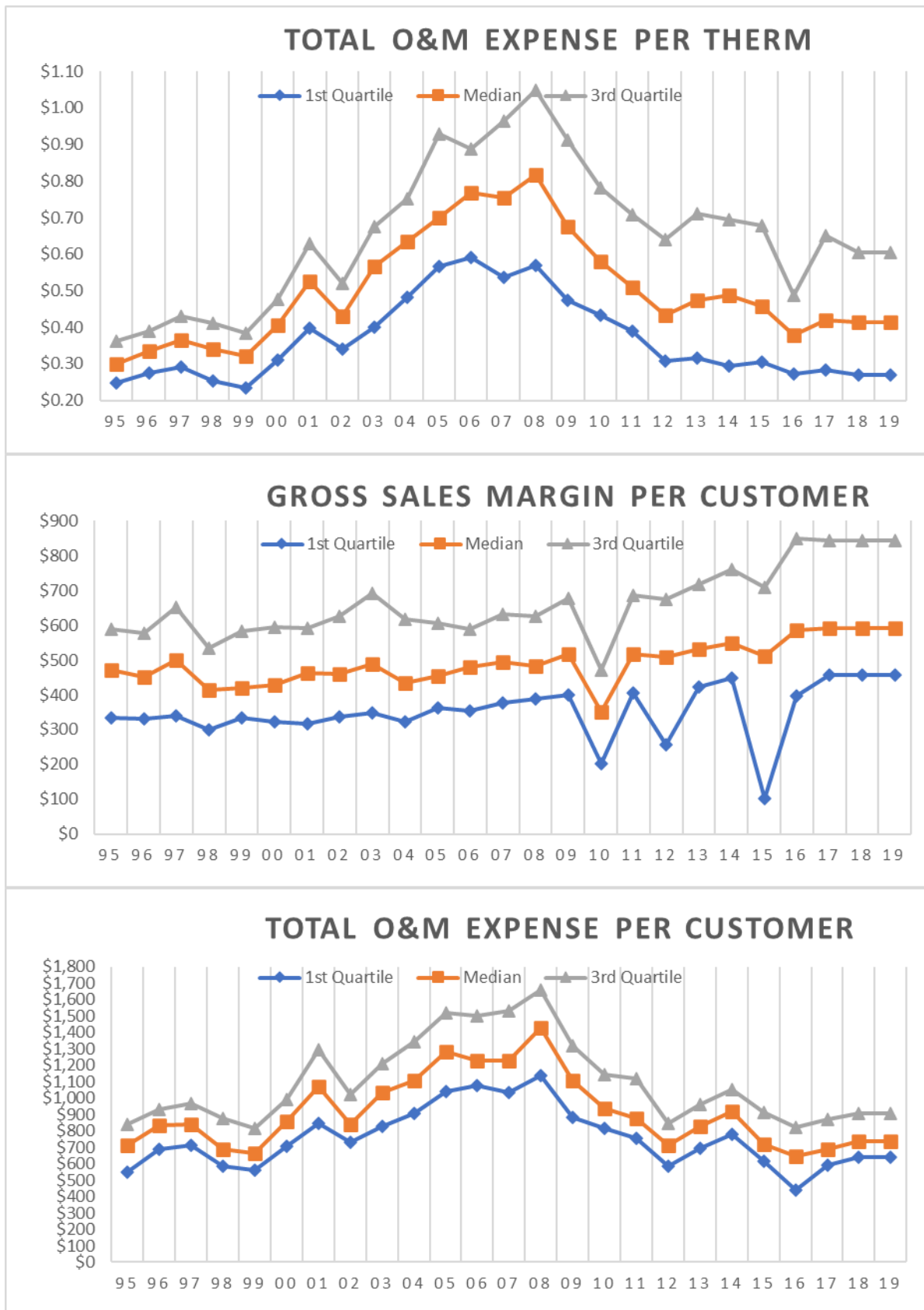
**Note:** Sample size and individual company participation vary by year, impairing trend analysis

## Appendix 2: Multi-year Charts for All Companies



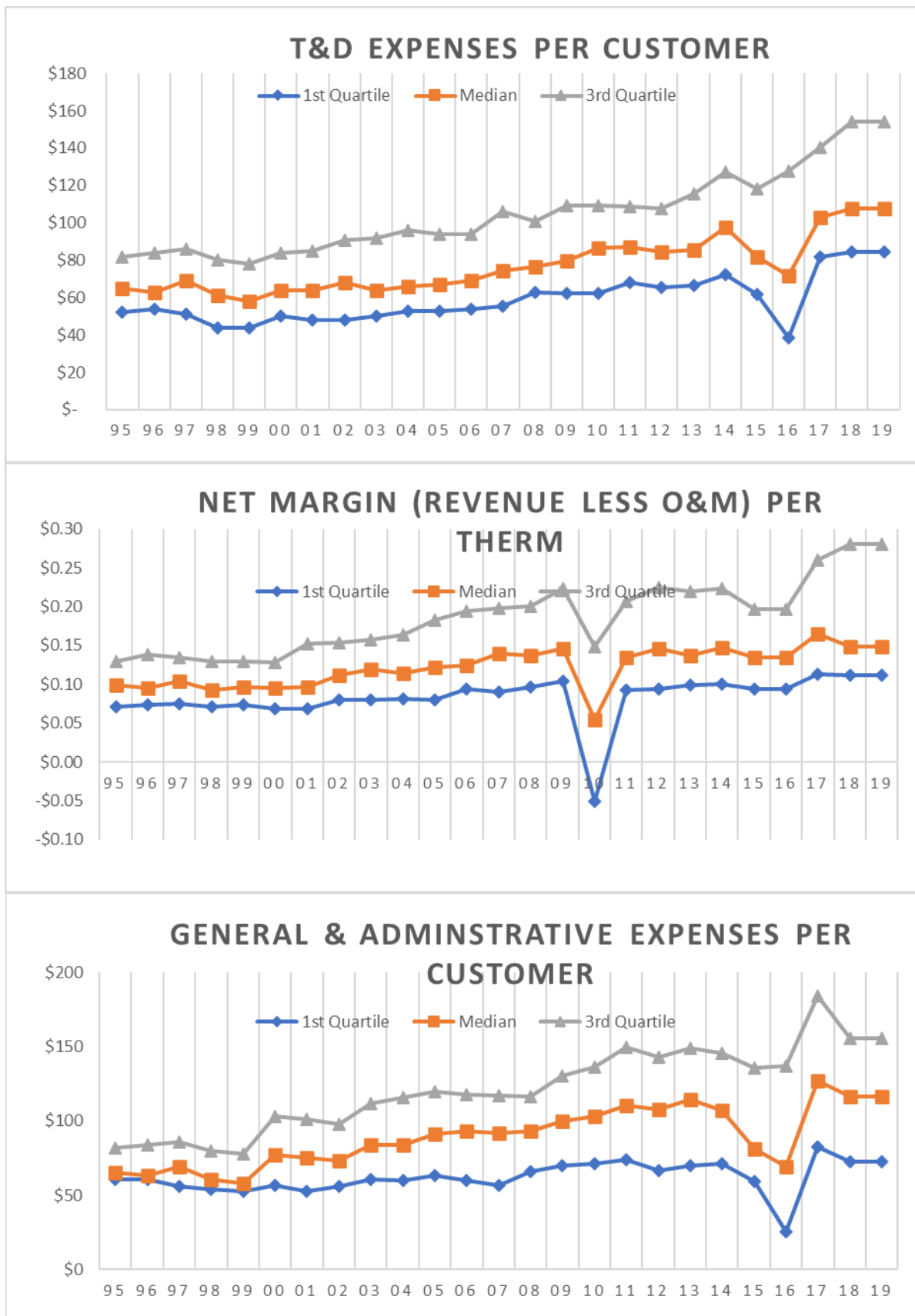
**Note:** Sample size and individual company participation vary by year, impairing trend analysis

## Appendix 2: Multi-year Charts for All Companies



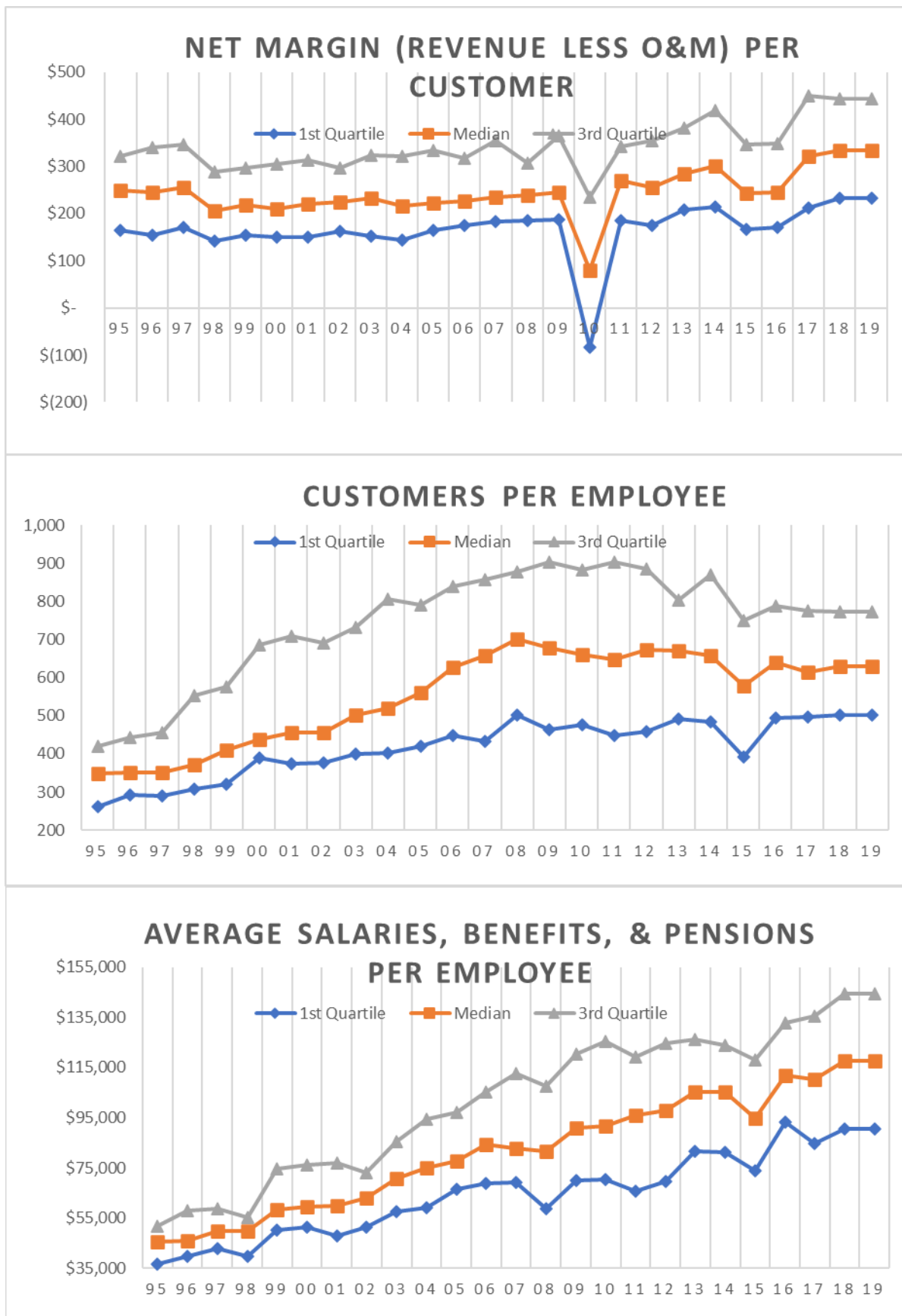
**Note:** Sample size and individual company participation vary by year, impairing trend analysis

## Appendix 2: Multi-year Charts for All Companies



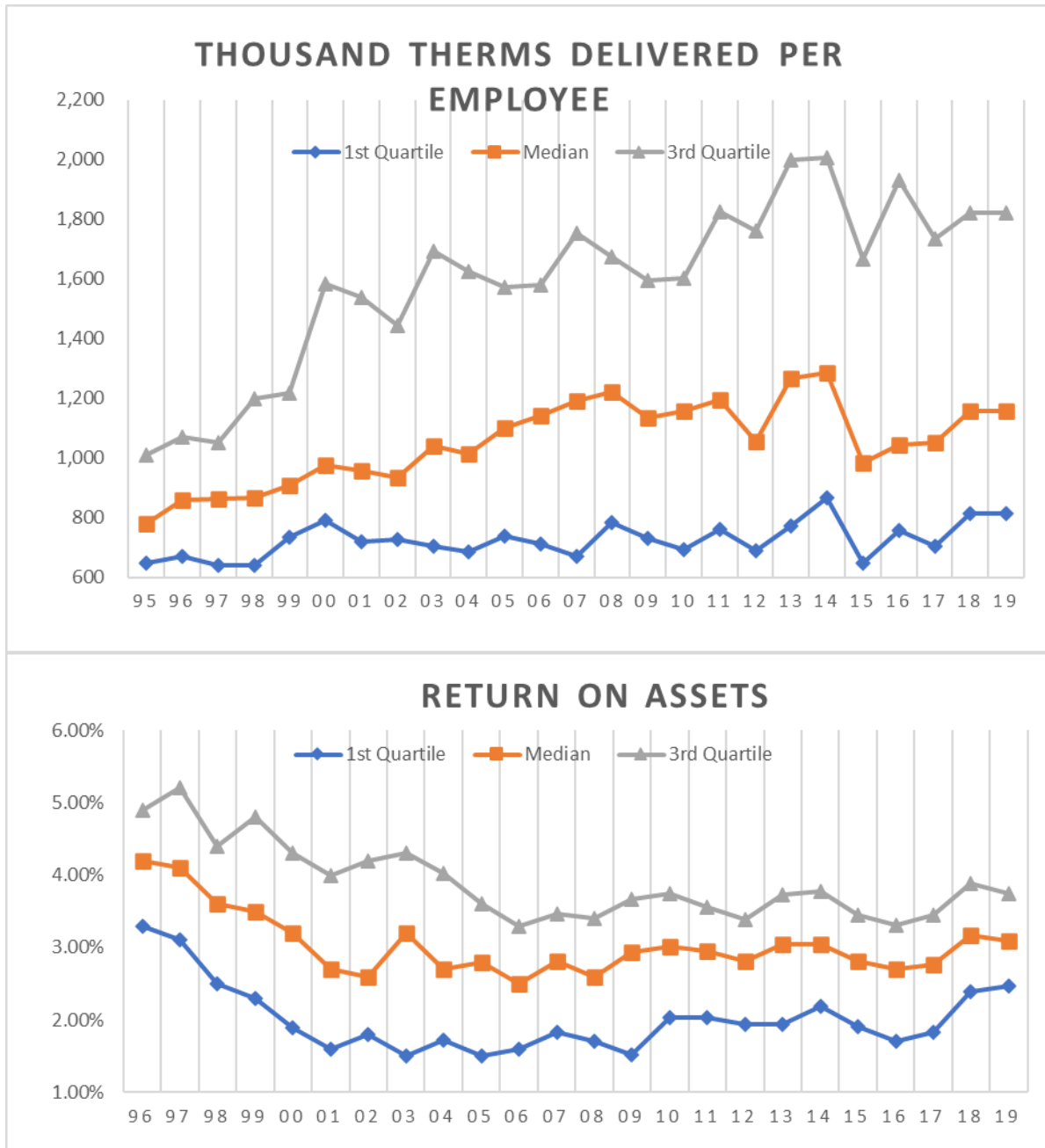
**Note:** Sample size and individual company participation vary by year, impairing trend analysis

## Appendix 2: Multi-year Charts for All Companies



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

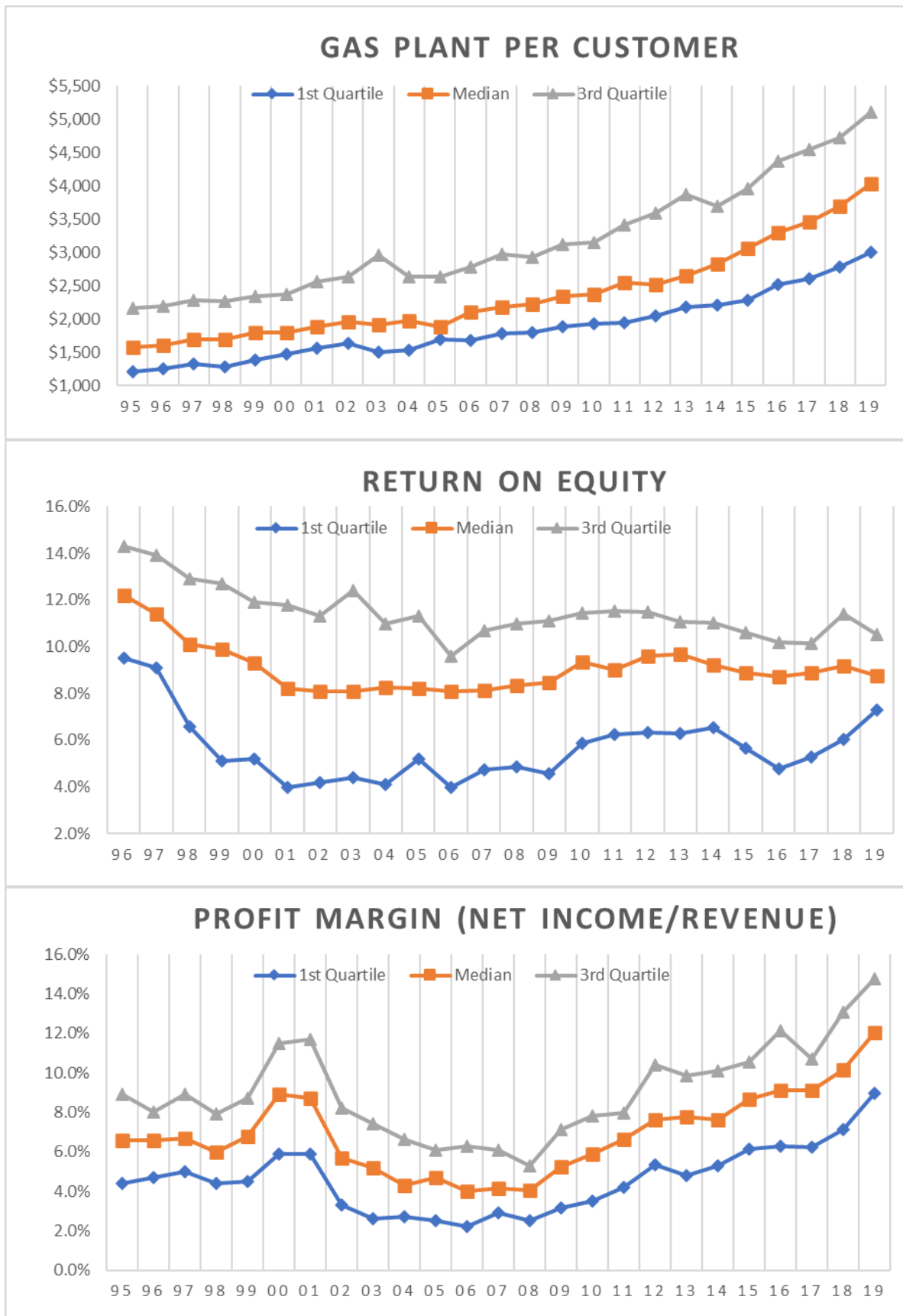
## Appendix 2: Multi-year Charts for All Companies



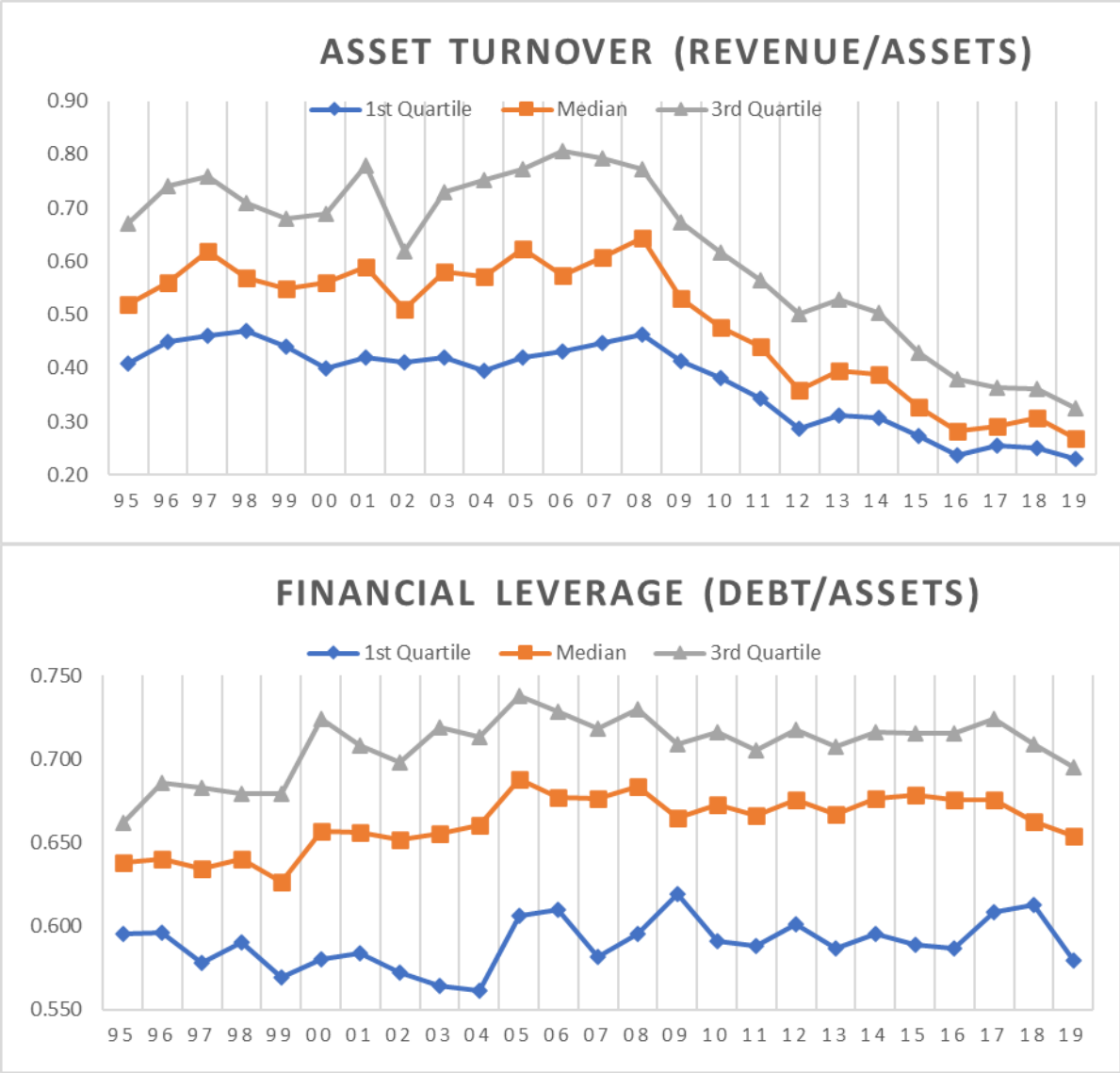
**Note:** Sample size and individual company participation vary by year, impairing trend analysis



## Appendix 2: Multi-year Charts for All Companies



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



## APPENDIX 3a: GAS UTILITY SYSTEM PROFILES AND DELIVERY VOLUMES

2019 Data, 82 Utilities Reporting  
Stratified by Type of Company

	Gas Utilities 53 firms				Combination Utilities 20 firms				Municipal Utilities 9 firms				All Companies 82 firms			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
<b>SYSTEM PROFILE 1/</b>																
Total Therms delivered	77,741	840,428	1,912,740	1,606,898	399,675	993,419	1,977,296	1,399,239	96,558	244,733	557,683	469,121	114,605	812,821	1,752,994	1,459,123
Total Sales Volume	36,192	296,744	862,985	673,850	335,229	598,997	1,052,438	866,804	93,643	231,701	396,601	419,902	84,725	392,773	925,734	699,233
Transportation Volume	19,839	286,450	911,235	933,049	-	110,230	623,258	532,435	1,027	3,510	8,405	49,219	1,301	233,693	792,248	759,889
Gas customers	42,532	398,481	945,384	754,029	285,318	640,758	940,185	691,121	55,023	101,874	222,174	170,967	66,952	378,030	891,137	688,912
Miles of main in use	1,500	5,934	13,917	11,784	4,129	8,248	17,364	10,469	1,956	2,611	2,948	2,405	2,089	5,629	13,865	10,663
Density (meters/mile of distrib. system)	30.8	48.7	65.4	60.3	47.1	56.7	66.9	70.4	36.5	50.7	81.3	68.0	36.3	51.3	65.7	63.4

### THERM VOLUME BY CUSTOMER CLASS 2/

Residential heating	19,984	179,220	584,637	403,803	182,967	311,927	704,511	497,010	38,614	133,088	269,834	206,357	31,867	220,918	612,739	409,681
Residential non-heating	-	-	730	1,806	-	1,909	11,533	34,064	-	-	2,316	4,924	-	-	2,177	9,940
Commercial, firm	12,951	81,090	163,953	169,419	86,794	156,625	279,086	221,505	24,987	72,403	83,119	161,846	19,708	88,019	199,891	181,476
Commercial, interruptible	-	-	-	3,679	-	80	1,358	4,998	-	185	9,139	7,448	-	-	179	4,322
Industrial, firm	-	2,316	17,292	69,602	1,417	6,753	40,867	27,184	4,579	6,717	15,063	17,372	0	3,880	24,351	54,798
Industrial, interruptible	-	-	282	4,609	-	-	974	1,571	-	-	4,113	6,458	-	-	686	4,026
Electric utility generation, firm	-	-	-	161	-	-	-	-	-	-	-	89	-	-	-	116
Electric utility generation, interup.	-	-	-	6,888	-	-	-	-	-	-	622	3,044	-	-	-	4,880
Non-utility generation, firm	-	-	-	119	-	-	-	-	-	-	-	-	-	-	-	80
Non-utility generation, interup.	-	-	-	-	-	-	-	297	-	-	-	-	-	-	-	72
NGV	-	-	-	3,267	-	-	-	-	-	-	-	-	-	-	-	2,191
Municipal & public	-	-	59	7,204	-	-	-	9,469	-	-	5,819	11,743	-	-	7	8,144
Interdepartmental	-	-	-	13	-	-	971	10,013	-	-	532	619	-	-	-	2,504
Other	-	-	-	3,281	-	-	-	60,693	-	-	-	-	-	-	-	17,004

### NUMBER OF CUSTOMERS BY CUSTOMER CLASS

Residential heating	29,893	258,169	658,363	592,663	207,607	493,534	842,419	565,886	49,690	92,241	202,193	152,705	56,558	272,635	699,654	548,575
Residential non-heating	-	-	2,581	14,088	-	3,594	19,901	48,439	-	-	1,157	2,830	-	-	5,862	21,505
Commercial, firm	3,234	20,650	48,907	41,674	25,934	35,890	61,906	56,670	5,173	9,542	19,325	11,961	5,037	24,442	52,068	42,795
Commercial, interruptible	-	-	-	47	-	-	9	37	-	-	2	3	-	-	1	41
Industrial, firm	-	39	446	830	43	329	2,016	1,163	13	64	177	153	0	62	535	854
Industrial, interruptible	-	-	-	42	-	-	7	11	-	-	11	8	-	-	5	32
Electric utility generation, firm	-	-	-	3	-	-	-	-	-	-	-	0	-	-	-	2
Electric utility generation, interup.	-	-	-	0	-	-	-	-	-	-	1	0	-	-	-	0
Non-utility generation, firm	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	0
Non-utility generation, interup.	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	0
NGV	-	-	-	30	-	-	-	-	-	-	-	-	-	-	-	20
Municipal & public	-	-	2	349	-	-	-	212	-	-	32	642	-	-	1	341
Interdepartmental	-	-	-	1	-	-	0	7	-	-	-	1	-	-	-	2
Other	-	-	-	35	-	-	-	71	-	-	-	-	-	-	-	41

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

2019 Data, 82 Utilities Reporting  
Stratified by Type of Company

	Gas Utilities 53 firms				Combination Utilities 20 firms				Municipal Utilities 9 firms				All Companies 82 firms			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
<b>GAS-ONLY INCOME STATEMENT</b>																
Operating revenue	58,529	372,018	890,405	699,838	299,394	693,513	984,201	792,832	49,153	108,552	194,876	188,431	91,371	438,148	870,689	678,863
Operating expense	32,245	239,809	568,220	418,160	208,139	376,743	626,971	465,964	36,038	69,114	128,588	120,250	53,454	259,627	525,171	404,388
Maintenance expense	1,395	11,964	26,838	24,211	8,257	30,065	42,160	32,450	1,528	2,906	9,524	10,220	2,273	12,949	35,115	25,026
Total O&M	34,889	253,656	600,176	442,371	213,442	414,034	663,022	498,414	38,366	69,114	138,111	130,470	55,093	274,172	565,283	429,414
Depreciation	6,974	39,011	82,662	76,104	22,736	64,142	96,260	75,090	4,025	8,185	14,772	16,530	8,219	39,428	76,963	70,771
Depletion	-	-	-	199	-	-	107	1,375	-	-	-	-	-	-	-	469
Amortization	-	27	3,175	3,723	-	4,441	17,563	11,820	-	-	18	10	-	36	6,138	5,381
Prop. loss charged to operations	-	-	-	702	-	-	-	-	-	-	-	-	-	-	-	471
Total taxes	5,038	24,277	67,628	69,062	18,173	48,820	83,436	71,123	5	2,398	5,833	3,273	4,835	24,209	60,686	63,948
Other operating income	-	-	-	424	-	-	-	(186)	-	-	-	-	-	-	-	239
Total operating income	10,666	60,092	141,570	107,677	36,978	119,416	161,632	135,010	5,545	18,697	42,434	38,148	12,790	57,602	146,872	108,408
<b>BALANCE SHEET</b>																
Gas plant	302,563	1,399,883	3,471,361	3,082,253	1,071,375	2,798,989	4,031,792	3,215,713	188,637	411,397	532,385	624,686	375,763	1,409,523	3,491,318	2,905,012
Common plant	-	-	-	4,253	94,850	323,654	809,025	588,369	-	-	-	-	-	-	-	146,357
Other plant	-	-	-	5,608	-	-	4,422	175,438	-	-	-	499,609	-	-	-	89,201
Total plant in service	302,563	1,457,756	4,121,147	3,201,170	5,501,906	12,206,788	16,664,298	13,291,670	188,637	411,397	1,558,566	1,499,125	434,264	2,527,363	6,414,236	5,516,971
Accumulated depreciation	105,957	495,802	1,057,072	1,008,650	1,740,331	3,782,746	5,573,232	3,925,734	78,136	143,149	670,674	610,179	144,426	830,638	2,072,182	1,686,118
Construction work-in-progress	353	17,490	90,299	98,515	181,705	268,243	534,204	504,933	1,042	21,316	65,854	58,120	2,113	64,812	236,153	194,193
Net utility plant	251,345	1,234,619	2,922,324	2,295,543	3,866,079	8,081,405	10,850,518	9,904,184	133,367	292,090	952,483	947,066	320,581	1,839,997	4,378,661	4,036,195
Gas storage (non-current)	-	-	36	3,930	-	-	5,460	5,970	-	-	19	5,295	-	-	113	4,544
Customer accts. receivable	3,054	28,409	83,441	83,605	102,306	172,861	271,578	252,396	4,346	5,938	57,331	36,093	5,172	51,457	150,624	120,717
Total current & accrued assets	14,575	84,579	252,589	253,796	270,334	502,074	902,999	785,380	57,283	75,411	297,795	180,209	56,543	163,357	425,991	377,169
Total deferred debits	13,000	115,677	548,117	502,227	695,534	1,007,925	1,455,098	1,767,186	3,519	5,426	86,676	57,253	20,656	241,664	855,226	772,768
Total assets	283,585	1,406,757	3,864,654	3,146,479	5,512,194	9,599,564	15,051,118	12,707,819	197,770	369,662	1,393,140	1,221,156	397,725	2,278,973	6,154,091	5,314,157
Common stock	-	1,515	45,014	93,466	46,805	154,324	530,144	329,664	-	-	-	-	-	1,960	79,559	143,096
Retained earnings	20,652	135,860	591,763	429,834	698,286	1,182,061	1,859,966	2,120,295	123,810	234,362	323,180	458,928	51,825	353,081	876,601	844,625
Total common stock equity	109,698	531,305	1,223,475	1,093,669	1,913,863	3,300,498	4,322,119	4,052,047	123,810	234,362	343,731	464,799	167,344	797,623	2,117,938	1,761,541
Total long-term (LT) debt	22,285	324,000	900,975	781,611	1,688,284	2,405,482	4,051,755	3,725,748	20,601	112,624	602,594	510,830	104,205	512,506	1,864,944	1,476,578
Total capitalization	177,572	766,564	2,185,036	1,889,998	3,499,415	5,720,711	8,326,039	7,796,516	144,410	346,986	946,325	975,630	275,002	1,414,180	4,134,529	3,252,556
Total non-current other liabilities	-	2,038	50,777	72,495	192,510	263,613	746,820	618,896	-	3,129	7,754	70,281	-	7,137	207,528	205,575
Current & accrued liabilities	19,630	171,543	489,734	406,298	426,169	670,509	1,143,705	930,694	10,812	16,993	119,133	153,357	34,197	279,487	678,293	512,607
Total deferred credits	32,144	246,435	783,984	742,897	1,177,047	2,174,033	4,450,311	3,269,660	1,059	2,463	30,631	21,746	38,018	422,878	1,626,866	1,297,619
Total capitalization & liabilities	283,585	1,406,757	3,864,654	3,146,479	5,512,194	9,599,564	15,051,118	12,707,819	197,770	369,662	1,393,140	1,221,156	397,725	2,278,973	6,154,091	5,314,157

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

2019 Data, 82 Utilities Reporting Stratified by Type of Company	Gas Utilities 53 firms	Combination Utilities 20 firms	Municipal Utilities 9 firms	All Companies 82 firms
<b>GAS-ONLY INCOME STATEMENT - Based on average values</b>				
Operating revenue	100.0	100.0	100.0	100.0
Operating expense	62.6	58.7	66.2	61.8
Maintenance expense	2.4	4.6	4.3	3.2
Total O&M	65.0	63.3	70.5	65.0
Depreciation	10.3	9.4	8.7	9.9
Depletion	0.1	0.3	-	0.1
Amortization	0.9	1.1	0.0	0.9
Prop. loss charged to operations	0.0	-	-	0.0
Total taxes	9.4	9.8	3.2	9.0
Other operating income	(0.1)	(0.0)	-	(0.1)
Total operating income	14.3	16.2	17.6	15.1
<b>BALANCE SHEET - Based on average values</b>				
Gas plant	98.0	25.3	51.2	54.7
Common plant	0.1	4.6	-	2.8
Other plant	0.2	1.4	40.9	1.7
Total plant in service	101.7	104.6	122.8	103.8
Accumulated depreciation	32.1	30.9	50.0	31.7
Construction work-in-progress	3.1	4.0	4.8	3.7
Net utility plant	73.0	77.9	77.6	76.0
Gas storage (non-current)	0.1	0.0	0.4	0.1
Customer accts. receivable	2.7	2.0	3.0	2.3
Total current & accrued assets	8.1	6.2	14.8	7.1
Total deferred debits	16.0	13.9	4.7	14.5
Total assets	100.0	100.0	100.0	100.0
Common stock	3.0	2.6	-	2.7
Retained earnings	13.7	16.7	37.6	15.9
Total common stock equity	34.8	31.9	38.1	33.1
Total long-term (LT) debt	24.8	29.3	41.8	27.8
Total capitalization	60.1	61.4	79.9	61.2
Total non-current other liabilities	2.3	4.9	5.8	3.9
Current & accrued liabilities	12.9	7.3	12.6	9.6
Total deferred credits	23.6	25.7	1.8	24.4
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

2019 Data, 82 Utilities Reporting Stratified by Type of Company	Gas Utilities 53 firms				Combination Utilities 20 firms				Municipal Utilities 9 firms				All Companies 82 firms			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
	GAS-ONLY INCOME STATEMENT - Per Annual Therms Delivered															
Operating revenue	\$0.3816	\$0.5817	\$0.7927	\$0.6475	\$0.4579	\$0.6429	\$0.9150	\$0.7641	\$0.6231	\$0.6803	\$0.9754	\$0.7201	\$0.3932	\$0.6183	\$0.9002	\$0.6821
Operating expense	\$0.2317	\$0.3573	\$0.5281	\$0.4052	\$0.2870	\$0.3818	\$0.5237	\$0.4482	\$0.4271	\$0.5018	\$0.6085	\$0.4765	\$0.2340	\$0.3827	\$0.5447	\$0.4218
Maintenance expense	\$0.0068	\$0.0151	\$0.0261	\$0.0159	\$0.0111	\$0.0223	\$0.0379	\$0.0351	\$0.0076	\$0.0203	\$0.0523	\$0.0309	\$0.0075	\$0.0164	\$0.0381	\$0.0218
Total O&M	\$0.2440	\$0.3711	\$0.5617	\$0.4210	\$0.3046	\$0.4041	\$0.5637	\$0.4833	\$0.4557	\$0.5221	\$0.6394	\$0.5074	\$0.2461	\$0.3947	\$0.5749	\$0.4436
Depreciation	\$0.0337	\$0.0504	\$0.0796	\$0.0666	\$0.0373	\$0.0666	\$0.0949	\$0.0717	\$0.0397	\$0.0492	\$0.0951	\$0.0629	\$0.0337	\$0.0519	\$0.0835	\$0.0675
Depletion	\$0.0000	\$0.0000	\$0.0000	\$0.0004	\$0.0000	\$0.0000	\$0.0001	\$0.0021	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0008
Amortization	\$0.0000	\$0.0000	\$0.0050	\$0.0061	\$0.0000	\$0.0026	\$0.0130	\$0.0085	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0001	\$0.0066	\$0.0062
Prop. loss charged to operations	\$0.0000	\$0.0000	\$0.0000	\$0.0001	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0001
Total taxes	\$0.0255	\$0.0393	\$0.0643	\$0.0609	\$0.0173	\$0.0533	\$0.1099	\$0.0749	\$0.0000	\$0.0105	\$0.0373	\$0.0227	\$0.0179	\$0.0397	\$0.0724	\$0.0611
Other operating income	\$0.0000	\$0.0000	\$0.0000	-\$0.0005	\$0.0000	\$0.0000	\$0.0000	-\$0.0003	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0000	-\$0.0004
Total operating income	\$0.0402	\$0.0684	\$0.1149	\$0.0923	\$0.0624	\$0.0928	\$0.1624	\$0.1235	\$0.0829	\$0.1586	\$0.1815	\$0.1269	\$0.0459	\$0.0760	\$0.1240	\$0.1029
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
GAS-ONLY INCOME STATEMENT - Per Average Annual Customers Served																
Operating revenue	\$859	\$1,008	\$1,372	\$1,229	\$955	\$1,012	\$1,314	\$1,181	\$898	\$963	\$1,196	\$1,107	\$888	\$1,011	\$1,363	\$1,206
Operating expense	\$550	\$665	\$791	\$797	\$588	\$664	\$791	\$701	\$632	\$673	\$744	\$759	\$575	\$669	\$796	\$770
Maintenance expense	\$20	\$30	\$56	\$25	\$23	\$43	\$56	\$50	\$22	\$64	\$77	\$55	\$20	\$36	\$58	\$33
Total O&M	\$570	\$700	\$845	\$821	\$640	\$697	\$838	\$751	\$686	\$700	\$798	\$814	\$597	\$700	\$855	\$803
Depreciation	\$72	\$98	\$123	\$147	\$81	\$98	\$135	\$109	\$69	\$83	\$128	\$97	\$74	\$98	\$128	\$133
Depletion	\$0	\$0	\$0	\$1	\$0	\$0	\$0	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2
Amortization	\$0	\$0	\$13	\$11	\$0	\$6	\$21	\$11	\$0	\$0	\$0	\$1	\$0	\$0	\$14	\$10
Prop. loss charged to operations	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total taxes	\$53	\$73	\$132	\$101	\$49	\$91	\$148	\$111	\$0	\$16	\$35	\$23	\$47	\$73	\$133	\$97
Other operating income	\$0	\$0	\$0	\$1	\$0	\$0	\$0	-\$1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total operating income	\$95	\$140	\$203	\$147	\$126	\$161	\$240	\$194	\$139	\$166	\$201	\$173	\$109	\$144	\$223	\$161
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
GAS-ONLY INCOME STATEMENT - Per Dollar of Gas Plant																
Operating revenue	\$0.2216	\$0.2563	\$0.3029	\$0.2784	\$0.2420	\$0.2561	\$0.2759	\$0.2674	\$0.2734	\$0.3538	\$0.3759	\$0.3478	\$0.2344	\$0.2609	\$0.3099	\$0.2817
Operating expense	\$0.1168	\$0.1586	\$0.2010	\$0.1870	\$0.1392	\$0.1513	\$0.1772	\$0.1633	\$0.1703	\$0.2351	\$0.2458	\$0.2385	\$0.1302	\$0.1587	\$0.2010	\$0.1856
Maintenance expense	\$0.0048	\$0.0087	\$0.0120	\$0.0075	\$0.0063	\$0.0103	\$0.0130	\$0.0102	\$0.0074	\$0.0187	\$0.0245	\$0.0174	\$0.0049	\$0.0088	\$0.0135	\$0.0090
Total O&M	\$0.1160	\$0.1649	\$0.2106	\$0.1945	\$0.1482	\$0.1607	\$0.1877	\$0.1735	\$0.1830	\$0.2589	\$0.2624	\$0.2559	\$0.1417	\$0.1671	\$0.2183	\$0.1946
Depreciation	\$0.0212	\$0.0241	\$0.0291	\$0.0248	\$0.0209	\$0.0232	\$0.0275	\$0.0245	\$0.0226	\$0.0274	\$0.0316	\$0.0291	\$0.0209	\$0.0242	\$0.0286	\$0.0251
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	\$0.0003
Amortization	\$0.0000	\$0.0000	\$0.0029	\$0.0025	\$0.0000	\$0.0016	\$0.0049	\$0.0026	\$0.0000	\$0.0000	\$0.0001	\$0.0002	\$0.0000	\$0.0001	\$0.0030	\$0.0023
Prop. loss charged to operations	\$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 taxes	\$0.0137	\$0.0188	\$0.0306	\$0.0231	\$0.0143	\$0.0219	\$0.0306	\$0.0224	\$0.0000	\$0.0036	\$0.0126	\$0.0070	\$0.0128	\$0.0189	\$0.0302	\$0.0216
Other operating income	\$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	\$0.0000
Total operating income	\$0.0296	\$0.0369	\$0.0435	\$0.0333	\$0.0329	\$0.0407	\$0.0459	\$0.0435	\$0.0456	\$0.0506	\$0.0611	\$0.0557	\$0.0309	\$0.0387	\$0.0458	\$0.0377
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
GAS-ONLY INCOME STATEMENT - Per Mile of Distribution Pipe																
Operating revenue	\$33,476	\$47,809	\$82,141	\$72,210	\$48,657	\$65,754	\$84,525	\$90,502	\$37,239	\$63,763	\$84,832	\$78,880	\$37,043	\$51,455	\$82,835	\$77,241
Operating expense	\$20,190	\$30,354	\$48,562	\$45,773	\$31,051	\$39,814	\$49,012	\$50,380	\$23,982	\$41,666	\$60,729	\$51,779	\$22,463	\$33,089	\$49,467	\$47,409
Maintenance expense	\$725	\$1,622	\$2,925	\$2,051	\$1,412	\$2,347	\$3,412	\$4,193	\$880	\$2,038	\$5,858	\$4,402	\$782	\$1,958	\$3,342	\$2,774
Total O&M	\$21,243	\$31,531	\$49,704	\$47,823	\$32,739	\$42,675	\$53,732	\$54,573	\$25,001	\$43,010	\$66,587	\$56,181	\$24,311	\$34,144	\$53,517	\$50,183
Depreciation	\$3,286	\$4,974	\$7,619	\$7,091	\$3,839	\$5,942	\$9,347	\$8,533	\$2,899	\$5,182	\$7,017	\$6,923	\$3,477	\$5,162	\$8,482	\$7,429
Depletion	\$0	\$0	\$0	\$37	\$0	\$0	\$8	\$216	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$78
Amortization	\$0	\$2	\$618	\$524	\$0	\$297	\$1,574	\$973	\$0	\$0	\$12	\$29	\$0	\$15	\$737	\$591
Prop. loss charged to operations	\$0	\$0	\$0	\$14	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9
Total taxes	\$2,352	\$3,423	\$6,674	\$6,976	\$2,716	\$5,474	\$8,512	\$10,271	\$2	\$1,332	\$2,294	\$1,298	\$2,144	\$3,387	\$6,739	\$7,295
Other operating income	\$0	\$0	\$0	\$52	\$0	\$0	\$0	-\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$29
Total operating income	\$4,507	\$6,982	\$12,823	\$9,745	\$7,120	\$9,919	\$14,997	\$15,936	\$5,784	\$7,524	\$15,616	\$14,448	\$4,841	\$7,594	\$13,894	\$11,656

## APPENDIX 3e: GAS UTILITY FINANCIAL RATIOS

2019 Data, 82 Utilities Reporting  
Stratified by Type of Company

	Gas IOUs 53 firms				Combination IOUs 20 firms				Municipal LDCs 9 firms				All Companies 82 firms			
	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG	LQ	MED	UQ	AVG
Therms delivered (avg.) per acct.	1,235	1,948	2,585	2,600	1,218	1,624	2,672	1,997	1,107	1,340	1,483	23,987	1,203	1,761	2,599	4,300
Therms per \$1,000 of gas plant	0.308	0.551	0.770	0.587	0.270	0.408	0.656	0.487	0.311	0.335	0.569	7.598	0.304	0.445	0.754	1.161
Value of gas plant per customer	\$2,996	\$4,160	\$5,124	\$6,398	\$3,581	\$4,176	\$5,141	\$4,514	\$2,655	\$3,159	\$4,021	\$3,324	\$2,999	\$4,038	\$5,103	\$5,667
%Sales firm (not interruptible)	95.4%	99.6%	100.0%	94.3%	96.4%	98.6%	99.7%	91.8%	84.0%	85.2%	96.5%	85.5%	94.7%	99.0%	100.0%	92.9%
Collection period (days)	23.9	33.4	44.3	36.3	22.6	27.9	38.6	30.9	21.0	25.2	35.9	31.6	23.2	31.3	41.7	34.6
Gas O&M expense as pct. of revenue	58.9%	65.9%	72.0%	65.8%	60.2%	64.6%	71.2%	64.2%	67.5%	72.1%	78.1%	72.8%	59.7%	65.9%	71.8%	66.0%
Gas operating income as pct. of revenue	11.4%	15.0%	20.0%	14.0%	12.8%	17.2%	18.9%	16.5%	11.5%	17.2%	19.4%	16.4%	11.7%	15.6%	19.2%	14.8%
Gas operating revenue per customer	\$864	\$1,014	\$1,376	\$1,229	\$955	\$1,012	\$1,314	\$1,181	\$898	\$963	\$1,196	\$1,107	\$888	\$1,011	\$1,363	\$1,206
Gas O&M expense per customer	\$582	\$700	\$850	\$821	\$640	\$697	\$838	\$751	\$686	\$700	\$798	\$814	\$597	\$700	\$855	\$803
Gas operating income per customer	\$100	\$140	\$206	\$147	\$126	\$161	\$240	\$194	\$139	\$166	\$201	\$173	\$109	\$144	\$223	\$161
Gas revenue per dollar of gas plant	\$0.222	\$0.256	\$0.303	\$0.278	\$0.242	\$0.256	\$0.276	\$0.267	\$0.273	\$0.354	\$0.376	\$0.348	\$0.234	\$0.261	\$0.310	\$0.282
Gas O&M expense per dollar of gas plant	\$0.116	\$0.165	\$0.211	\$0.195	\$0.148	\$0.161	\$0.188	\$0.174	\$0.183	\$0.259	\$0.262	\$0.256	\$0.142	\$0.167	\$0.218	\$0.195
Gas operating income per \$ of gas plant	\$0.030	\$0.037	\$0.043	\$0.033	\$0.033	\$0.041	\$0.046	\$0.043	\$0.046	\$0.051	\$0.061	\$0.056	\$0.031	\$0.039	\$0.046	\$0.038
Gas revenue per mile of pipe	\$33,476	\$47,809	\$82,141	\$72,210	\$48,657	\$65,754	\$84,525	\$90,502	\$37,239	\$63,763	\$84,832	\$78,880	\$37,043	\$51,455	\$82,835	\$77,241
Gas O&M expense per mile of pipe	\$21,243	\$31,531	\$49,704	\$47,823	\$32,739	\$42,675	\$53,732	\$54,573	\$25,001	\$43,010	\$66,587	\$56,181	\$24,311	\$34,144	\$53,517	\$50,183
Gas operating income per mile of pipe	\$4,507	\$6,982	\$12,823	\$9,745	\$7,120	\$9,919	\$14,997	\$15,936	\$5,784	\$7,524	\$15,616	\$14,448	\$4,841	\$7,594	\$13,894	\$11,656
Long-term debt - total assets ratio	19.0%	24.4%	29.6%	22.2%	26.5%	30.1%	31.3%	30.8%	17.0%	25.3%	37.6%	27.5%	21.4%	26.1%	30.7%	24.7%
Long-term debt - total capitalization ratio	34.7%	41.0%	47.2%	36.6%	43.9%	47.1%	49.2%	47.9%	26.9%	27.8%	42.2%	36.6%	35.6%	43.3%	48.0%	39.3%
Net interest - long-term debt ratio	4.2%	5.1%	5.9%	271.0%	4.1%	4.6%	5.0%	4.5%	2.2%	3.9%	4.2%	3.1%	4.0%	4.8%	5.4%	172.3%
EBITDA interest coverage	6.0x	7.4x	8.5x	8.8x	6.8x	7.1x	8.2x	7.4x	7.5x	13.0x	35.6x	28.6x	6.1x	7.6x	8.7x	10.3x
Return on assets	2.3%	2.9%	3.6%	3.0%	2.6%	3.3%	3.4%	3.1%	3.7%	5.1%	5.9%	4.9%	2.5%	3.1%	3.7%	3.2%
Gross sales margin per therm	\$0.226	\$0.319	\$0.548	\$0.440	\$0.255	\$0.384	\$0.626	\$0.515	\$0.310	\$0.451	\$0.651	\$0.496	\$0.230	\$0.359	\$0.578	\$0.446
Gross sales margin per customer	\$194	\$652	\$824	\$753	\$561	\$653	\$900	\$764	\$417	\$508	\$652	\$579	\$512	\$646	\$902	\$745

**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)

Based on Segment Averages

VALUES PER THERM	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Gas-only revenues	\$0.8044	\$0.7018	\$0.6475	\$0.8313	\$0.8572	\$0.7641	\$0.6784	\$0.6696	\$0.7201	\$0.7377	\$0.6861	\$0.6821
Purchased-gas expense	\$0.2827	\$0.2581	\$0.2101	\$0.2249	\$0.2687	\$0.2393	\$0.2196	\$0.1592	\$0.2906	\$0.2549	\$0.2467	\$0.2241
Gross sales margin	\$0.5023	\$0.4153	\$0.4157	\$0.4834	\$0.3882	\$0.4828	\$0.3419	\$0.3450	\$0.4262	\$0.4682	\$0.4118	\$0.4330
Total production costs <sup>1</sup>	\$0.3021	\$0.2866	\$0.2317	\$0.2200	\$0.2785	\$0.2813	\$0.2390	\$0.2051	\$0.2939	\$0.2695	\$0.2742	\$0.2491
Storage & LNG	\$0.0032	\$0.0037	\$0.0026	\$0.0007	\$0.0028	\$0.0040	\$0.0005	\$0.0042	\$0.0000	\$0.0023	\$0.0033	\$0.0027
Transmission	\$0.0090	\$0.0099	\$0.0115	\$0.0197	\$0.0157	\$0.0081	\$0.0028	\$0.0110	\$0.0094	\$0.0104	\$0.0113	\$0.0105
Distribution	\$0.0765	\$0.0661	\$0.0658	\$0.0734	\$0.0763	\$0.0693	\$0.0781	\$0.0478	\$0.0772	\$0.0764	\$0.0710	\$0.0676
Customer accounts	\$0.0297	\$0.0242	\$0.0235	\$0.0311	\$0.0212	\$0.0278	\$0.0202	\$0.0215	\$0.0237	\$0.0288	\$0.0249	\$0.0246
Customer svc. & info.	\$0.0127	\$0.0073	\$0.0073	\$0.0059	\$0.0142	\$0.0203	\$0.0072	\$0.0060	\$0.0202	\$0.0098	\$0.0099	\$0.0116
Sales	\$0.0059	\$0.0021	\$0.0033	\$0.0154	\$0.0036	\$0.0022	\$0.0007	\$0.0002	\$0.0150	\$0.0074	\$0.0032	\$0.0040
Admin. & general	<u>\$0.1030</u>	<u>\$0.0746</u>	<u>\$0.0753</u>	<u>\$0.1218</u>	<u>\$0.0601</u>	<u>\$0.0703</u>	<u>\$0.0837</u>	<u>\$0.0577</u>	<u>\$0.0679</u>	<u>\$0.1024</u>	<u>\$0.0718</u>	<u>\$0.0735</u>
Total O&M	\$0.5423	\$0.4748	\$0.4210	\$0.4879	\$0.4725	\$0.4833	\$0.4323	\$0.3535	\$0.5074	\$0.5070	\$0.4698	\$0.4436
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	35.1%	36.8%	32.5%	27.0%	31.3%	31.3%	32.4%	23.8%	40.4%	34.5%	36.0%	32.9%
Gross sales margin	62.4%	59.2%	64.2%	58.2%	45.3%	63.2%	50.4%	51.5%	59.2%	63.5%	60.0%	63.5%
Total production costs <sup>1</sup>	37.6%	40.8%	35.8%	26.5%	32.5%	36.8%	35.2%	30.6%	40.8%	36.5%	40.0%	36.5%
Storage & LNG	0.4%	0.5%	0.4%	0.1%	0.3%	0.5%	0.1%	0.6%	0.0%	0.3%	0.5%	0.4%
Transmission	1.1%	1.4%	1.8%	2.4%	1.8%	1.1%	0.4%	1.6%	1.3%	1.4%	1.7%	1.5%
Distribution	9.5%	9.4%	10.2%	8.8%	8.9%	9.1%	11.5%	7.1%	10.7%	10.4%	10.4%	9.9%
Customer accounts	3.7%	3.5%	3.6%	3.7%	2.5%	3.6%	3.0%	3.2%	3.3%	3.9%	3.6%	3.6%
Customer svc. & info.	1.6%	1.0%	1.1%	0.7%	1.7%	2.7%	1.1%	0.9%	2.8%	1.3%	1.4%	1.7%
Sales	0.7%	0.3%	0.5%	1.9%	0.4%	0.3%	0.1%	0.0%	2.1%	1.0%	0.5%	0.6%
Admin. & general	<u>12.8%</u>	<u>10.6%</u>	<u>11.6%</u>	<u>14.7%</u>	<u>7.0%</u>	<u>9.2%</u>	<u>12.3%</u>	<u>8.6%</u>	<u>9.4%</u>	<u>13.9%</u>	<u>10.5%</u>	<u>10.8%</u>
Total O&M	67.4%	67.7%	65.0%	58.7%	55.1%	63.3%	63.7%	52.8%	70.5%	68.7%	68.5%	65.0%
VALUES PER CUSTOMER												
Gas-only revenues	\$ 993	\$ 1,053	\$ 1,008	\$ 923	\$ 941	\$ 1,012	\$ 928	\$ 1,024	\$ 963	\$ 952	\$ 1,045	\$ 1,011
Purchased-gas expense	\$ 390	\$ 433	\$ 373	\$ 343	\$ 424	\$ 397	\$ 380	\$ 302	\$ 382	\$ 384	\$ 423	\$ 378
Gross sales margin	\$ 592	\$ 621	\$ 652	\$ 646	\$ 525	\$ 633	\$ 521	\$ 657	\$ 578	\$ 593	\$ 615	\$ 640
Total production costs <sup>1</sup>	\$ 419	\$ 462	\$ 392	\$ 315	\$ 421	\$ 417	\$ 394	\$ 432	\$ 446	\$ 394	\$ 446	\$ 401
Storage & LNG	\$ -	\$ -	\$ 0	\$ -	\$ 0	\$ 1	\$ 0	\$ 3	\$ -	\$ -	\$ 0	\$ 0
Transmission	\$ 6	\$ 3	\$ 7	\$ 10	\$ 12	\$ 8	\$ 0	\$ 7	\$ -	\$ 5	\$ 6	\$ 7
Distribution	\$ 92	\$ 94	\$ 84	\$ 82	\$ 86	\$ 87	\$ 81	\$ 80	\$ 109	\$ 89	\$ 89	\$ 88
Customer accounts	\$ 32	\$ 37	\$ 34	\$ 33	\$ 31	\$ 40	\$ 36	\$ 36	\$ 27	\$ 32	\$ 35	\$ 35
Customer svc. & info.	\$ 8	\$ 5	\$ 3	\$ 3	\$ 2	\$ 22	\$ 8	\$ 8	\$ 14	\$ 5	\$ 5	\$ 7
Sales	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$ 0	\$ 1	\$ 0	\$ 2	\$ 1	\$ 1	\$ 1
Admin. & general	<u>\$ 129</u>	<u>\$ 121</u>	<u>\$ 122</u>	<u>\$ 102</u>	<u>\$ 103</u>	<u>\$ 107</u>	<u>\$ 138</u>	<u>\$ 122</u>	<u>\$ 80</u>	<u>\$ 127</u>	<u>\$ 116</u>	<u>\$ 112</u>
Total O&M	\$ 736	\$ 749	\$ 700	\$ 893	\$ 790	\$ 751	\$ 754	\$ 709	\$ 700	\$ 688	\$ 736	\$ 700

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



## APPENDIX 5: WAGES & BENEFITS

### 2019 Data, 82 Utilities Reporting

Stratified by Type of Company

	Gas Utilities 53 firms				Combination Utilities 20 firms				Municipal Utilities 9 firms				All Companies 82 firms			
	LQ	MED	UQ	AVG.	LQ	MED	UQ	AVG.	LQ	MED	UQ	AVG.	LQ	MED	UQ	AVG.
Average number of employees	72	636	1,170	939	242	492	1,327	912	79	176	323	373	125	466	1,175	854
Number of Employees at year-end	66	607	1,169	878	284	528	1,330	949	81	186	291	368	131	460	1,171	827
O&M wages ('000)	\$2,490	\$31,607	\$81,032	\$66,585	\$23,335	\$53,135	\$78,795	\$63,796	\$2,129	\$9,178	\$22,270	\$24,908	\$3,809	\$28,176	\$76,684	\$59,433
Construction wages ('000)	\$296	\$6,687	\$39,512	\$26,748	\$8,252	\$31,883	\$46,917	\$50,796	\$0	\$72	\$2,435	\$2,574	\$619	\$7,616	\$38,020	\$29,004
Total pensions ('000)	\$301	\$8,962	\$23,465	\$23,439	\$2,606	\$15,760	\$28,492	\$16,502	\$3,044	\$4,795	\$12,870	\$20,803	\$704	\$7,746	\$25,241	\$20,780
PER YEAR END EMPLOYEE:																
Total salary & wages	\$77,401	\$86,275	\$96,173	\$91,079	\$100,493	\$122,543	\$151,474	\$130,077	\$42,801	\$65,776	\$88,813	\$61,173	\$77,436	\$90,244	\$111,828	\$98,500
Tot. benefits & pension	\$14,051	\$20,729	\$29,575	\$20,319	\$11,602	\$19,710	\$31,418	\$21,726	\$27,777	\$43,441	\$61,766	\$40,568	\$12,240	\$21,701	\$32,811	\$22,679
Total salary, benefits, and pension	\$90,968	\$104,739	\$122,050	\$111,398	\$124,153	\$135,569	\$169,961	\$151,804	\$74,572	\$111,715	\$145,173	\$101,741	\$90,629	\$112,456	\$142,538	\$121,179
Ratio: avg. benefits to avg. compensation	16%	19%	26%	18%	10%	17%	21%	15%	34%	40%	45%	41%	15%	19%	26%	19%
Therms delivered per year-end employee	739,619	1,054,855	1,938,149	1,601,075	753,174	1,258,687	2,074,292	1,744,118	330,819	547,410	772,070	14,563,240	758,456	1,137,836	2,211,467	2,782,161
Customers per year-end employee	468	649	776	654	609	656	1,088	888	354	488	526	446	481	643	813	713

**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>	<b>Gas Utilities</b>			<b>Combination Utilities</b>			<b>Municipal Utilities</b>			<b>All Companies</b>		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2016	2017	2019
Asset Turnover	0.27X	0.28X	0.29X	0.28X	0.28X	0.25X	0.33X	0.36X	0.33X	0.28X	0.29X	0.27X
Financial Leverage	65.8%	68.2%	64.9%	68.3%	68.3%	65.7%	41.6%	41.7%	40.3%	67.6%	67.6%	65.4%
Debt/Equity Ratio	74.6%	67.0%	69.4%	87.4%	89.0%	89.1%	42.0%	53.0%	38.5%	75.7%	79.2%	77.0%
Equity Multiplier	3.02	3.17	2.85	3.20	3.26	3.06	1.73	1.73	1.69	3.10	3.15	2.90
Profit Margin	8.0%	8.6%	10.4%	10.3%	9.7%	13.2%	8.2%	8.8%	17.2%	9.1%	9.1%	12.0%
ROA	2.4%	2.6%	2.9%	2.8%	2.8%	3.3%	2.9%	2.6%	5.1%	2.7%	2.8%	3.1%
ROE	7.1%	8.5%	8.1%	9.8%	9.0%	9.9%	5.3%	4.2%	9.4%	8.7%	8.9%	8.8%
Current Ratio	0.67	0.67	0.69	0.99	0.91	0.89	2.25	3.65	3.44	0.84	0.78	0.78
Current Assets/Total Assets	8.8%	9.4%	7.2%	7.1%	7.0%	6.1%	25.1%	25.1%	21.0%	8.8%	9.3%	7.1%

<i>Based on Segment Averages</i>	<b>Gas Utilities</b>			<b>Combination Utilities</b>			<b>Municipal Utilities</b>			<b>All Companies</b>		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Asset Turnover	0.32X	0.33X	0.32X	0.28X	0.27X	0.25X	0.37X	0.38X	0.33X	0.32X	0.33X	0.31X
Financial Leverage	62.7%	64.8%	60.9%	67.2%	66.8%	66.9%	44.7%	46.6%	48.2%	62.2%	63.4%	61.2%
Debt/Equity Ratio	66.7%	76.2%	73.5%	97.0%	103.8%	105.0%	85.5%	105.0%	100.5%	77.3%	85.8%	83.5%
Equity Multiplier	3.41	4.67	3.43	3.25	3.26	3.24	2.58	2.69	2.87	3.25	4.01	3.34
Profit Margin	5.7%	6.1%	9.7%	11.0%	12.2%	12.9%	8.9%	7.6%	15.5%	7.7%	7.9%	11.0%
ROA	2.0%	2.1%	3.0%	3.1%	3.1%	3.1%	2.7%	2.4%	4.9%	2.4%	2.4%	3.2%
ROE	4.7%	0.4%	7.0%	9.8%	9.6%	10.1%	7.5%	6.9%	14.8%	6.7%	4.0%	8.4%
Current Ratio	0.71	0.71	0.72	1.15	1.03	1.06	3.25	3.65	3.85	1.15	1.13	1.07
Current Assets/Total Assets	10.5%	10.5%	9.0%	7.5%	7.2%	6.1%	23.6%	26.1%	24.0%	11.7%	12.0%	9.6%

**APPENDIX 7a: GAS UTILITY INCOME STATEMENTS (Based on Segment Averages)**

	Units	Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
GAS-ONLY INCOME STATEMENT - Per Annual Therms Delivered													
Operating revenue	\$/THERM	\$ 0.7467	\$ 0.6239	\$ 0.6475	\$ 0.8313	\$ 0.8572	\$ 0.7641	\$ 0.6784	\$ 0.6696	\$ 0.7201	\$ 0.7377	\$ 0.6861	\$ 0.6821
Operating expense	\$/THERM	\$ 0.4555	\$ 0.3959	\$ 0.4052	\$ 0.5116	\$ 0.5436	\$ 0.4482	\$ 0.5159	\$ 0.4887	\$ 0.4765	\$ 0.4642	\$ 0.4431	\$ 0.4218
Maintenance expense	\$/THERM	\$ 0.0505	\$ 0.0258	\$ 0.0159	\$ 0.0380	\$ 0.0347	\$ 0.0351	\$ 0.0335	\$ 0.0238	\$ 0.0309	\$ 0.0428	\$ 0.0267	\$ 0.0218
Total O&M	\$/THERM	\$ 0.5060	\$ 0.4218	\$ 0.4210	\$ 0.5496	\$ 0.5783	\$ 0.4833	\$ 0.5494	\$ 0.5125	\$ 0.5074	\$ 0.5070	\$ 0.4698	\$ 0.4436
Depreciation	\$/THERM	\$ 0.0915	\$ 0.0571	\$ 0.0666	\$ 0.0755	\$ 0.0790	\$ 0.0717	\$ 0.0553	\$ 0.0502	\$ 0.0629	\$ 0.0802	\$ 0.0595	\$ 0.0675
Depletion	\$/THERM	\$ 0.0004	\$ 0.0004	\$ 0.0004	\$ 0.0019	\$ 0.0024	\$ 0.0021	\$ -	\$ -	\$ -	\$ 0.0007	\$ 0.0009	\$ 0.0008
Amortization	\$/THERM	\$ 0.0058	\$ 0.0051	\$ 0.0061	\$ 0.0059	\$ 0.0065	\$ 0.0085	\$ 0.0004	\$ 0.0002	\$ 0.0001	\$ 0.0049	\$ 0.0072	\$ 0.0062
Prop. loss charged to operations	\$/THERM	\$ 0.0000	\$ 0.0000	\$ 0.0001	\$ (0.0000)	\$ 0.0007	\$ -	\$ -	\$ -	\$ -	\$ 0.0000	\$ 0.0002	\$ 0.0001
Total taxes	\$/THERM	\$ 0.0739	\$ 0.0587	\$ 0.0609	\$ 0.0894	\$ 0.0716	\$ 0.0749	\$ 0.0133	\$ 0.0181	\$ 0.0227	\$ 0.0683	\$ 0.0573	\$ 0.0611
Other operating income	\$/THERM	\$ (0.0018)	\$ (0.0009)	\$ (0.0005)	\$ (0.0001)	\$ (0.0021)	\$ (0.0003)	\$ (0.0001)	\$ (0.0001)	\$ -	\$ (0.0008)	\$ (0.0010)	\$ (0.0004)
Total operating income	\$/THERM	\$ 0.0690	\$ 0.0807	\$ 0.0923	\$ 0.1090	\$ 0.1186	\$ 0.1235	\$ 0.0601	\$ 0.0885	\$ 0.1269	\$ 0.0768	\$ 0.0911	\$ 0.1029

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

	Units	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
GAS-ONLY INCOME STATEMENT - Per Average Annual Customers Served													
Operating revenue	\$/CUSTOMER	\$ 1,151	\$ 1,127	\$ 1,229	\$ 1,100	\$ 1,181	\$ 1,181	\$ 1,079	\$ 1,176	\$ 1,107	\$ 1,152	\$ 1,175	\$ 1,206
Operating expense	\$/CUSTOMER	\$ 729	\$ 741	\$ 797	\$ 671	\$ 742	\$ 701	\$ 821	\$ 855	\$ 759	\$ 744	\$ 775	\$ 770
Maintenance expense	\$/CUSTOMER	\$ 82	\$ 41	\$ 25	\$ 49	\$ 47	\$ 50	\$ 56	\$ 50	\$ 55	\$ 68	\$ 43	\$ 33
Total O&M	\$/CUSTOMER	\$ 811	\$ 783	\$ 821	\$ 721	\$ 789	\$ 751	\$ 877	\$ 905	\$ 814	\$ 812	\$ 818	\$ 803
Depreciation	\$/CUSTOMER	\$ 155	\$ 97	\$ 147	\$ 94	\$ 102	\$ 109	\$ 87	\$ 88	\$ 97	\$ 130	\$ 97	\$ 133
Depletion	\$/CUSTOMER	\$ 1	\$ 1	\$ 1	\$ 3	\$ 4	\$ 4	\$ -	\$ -	\$ -	\$ 1	\$ 2	\$ 2
Amortization	\$/CUSTOMER	\$ 7	\$ 9	\$ 11	\$ 7	\$ 8	\$ 11	\$ 1	\$ 1	\$ 1	\$ 6	\$ 10	\$ 10
Prop. loss charged to operations	\$/CUSTOMER	\$ 0	\$ 0	\$ 0	\$ (0)	\$ 1	\$ -	\$ -	\$ -	\$ -	\$ 0	\$ 0	\$ 0
Total taxes	\$/CUSTOMER	\$ 83	\$ 97	\$ 101	\$ 122	\$ 104	\$ 111	\$ 15	\$ 19	\$ 23	\$ 88	\$ 91	\$ 97
Other operating income	\$/CUSTOMER	\$ (3)	\$ (1)	\$ 1	\$ (0)	\$ (3)	\$ (1)	\$ (7)	\$ (13)	\$ -	\$ (1)	\$ (3)	\$ 0
Total operating income	\$/CUSTOMER	\$ 94	\$ 140	\$ 147	\$ 153	\$ 172	\$ 194	\$ 99	\$ 164	\$ 173	\$ 114	\$ 156	\$ 161

	Units	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
GAS-ONLY INCOME STATEMENT - Per Dollar of Gas Plant													
Operating revenue	per \$GAS PLANT	\$ 0.2931	\$ 0.3182	\$ 0.2784	\$ 0.2924	\$ 0.2738	\$ 0.2674	\$ 0.3785	\$ 0.4095	\$ 0.3478	\$ 0.3047	\$ 0.3166	\$ 0.2817
Operating expense	per \$GAS PLANT	\$ 0.1959	\$ 0.2188	\$ 0.1870	\$ 0.1860	\$ 0.1758	\$ 0.1633	\$ 0.2944	\$ 0.3045	\$ 0.2385	\$ 0.2068	\$ 0.2173	\$ 0.1856
Maintenance expense	per \$GAS PLANT	\$ 0.0110	\$ 0.0105	\$ 0.0075	\$ 0.0125	\$ 0.0101	\$ 0.0102	\$ 0.0183	\$ 0.0172	\$ 0.0174	\$ 0.0118	\$ 0.0108	\$ 0.0090
Total O&M	per \$GAS PLANT	\$ 0.2069	\$ 0.2294	\$ 0.1945	\$ 0.1985	\$ 0.1859	\$ 0.1735	\$ 0.3127	\$ 0.3216	\$ 0.2559	\$ 0.2187	\$ 0.2281	\$ 0.1946
Depreciation	per \$GAS PLANT	\$ 0.0263	\$ 0.0266	\$ 0.0248	\$ 0.0247	\$ 0.0241	\$ 0.0245	\$ 0.0277	\$ 0.0286	\$ 0.0291	\$ 0.0261	\$ 0.0257	\$ 0.0251
Depletion	per \$GAS PLANT	\$ 0.0002	\$ 0.0002	\$ 0.0002	\$ 0.0008	\$ 0.0010	\$ 0.0008	\$ -	\$ -	\$ -	\$ 0.0003	\$ 0.0004	\$ 0.0003
Amortization	per \$GAS PLANT	\$ 0.0026	\$ 0.0028	\$ 0.0025	\$ 0.0021	\$ 0.0020	\$ 0.0026	\$ 0.0002	\$ 0.0002	\$ 0.0002	\$ 0.0020	\$ 0.0024	\$ 0.0023
Prop. loss charged to operations	per \$GAS PLANT	\$ 0.0000	\$ 0.0000	\$ 0.0000	\$ (0.0000)	\$ 0.0003	\$ -	\$ -	\$ -	\$ -	\$ 0.0000	\$ 0.0001	\$ 0.0000
Total taxes	per \$GAS PLANT	\$ 0.0280	\$ 0.0244	\$ 0.0231	\$ 0.0304	\$ 0.0221	\$ 0.0224	\$ 0.0063	\$ 0.0059	\$ 0.0070	\$ 0.0260	\$ 0.0214	\$ 0.0216
Other operating income	per \$GAS PLANT	\$ (0.0007)	\$ (0.0012)	\$ 0.0001	\$ (0.0001)	\$ (0.0011)	\$ (0.0001)	\$ (0.0024)	\$ (0.0041)	\$ -	\$ (0.0004)	\$ (0.0014)	\$ 0.0000
Total operating income	per \$GAS PLANT	\$ 0.0291	\$ 0.0350	\$ 0.0333	\$ 0.0359	\$ 0.0386	\$ 0.0435	\$ 0.0316	\$ 0.0531	\$ 0.0557	\$ 0.0316	\$ 0.0384	\$ 0.0377

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

**APPENDIX 7a: GAS UTILITY INCOME STATEMENTS Cont'd (Based on Segment Averages)**

		Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
	Units	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
GAS-ONLY INCOME STATEMENT - Per Mile of Distribution Pipe													
Operating revenue	per mile of pipe	\$ 59,880	\$ 67,507	\$ 72,210	\$ 76,742	\$ 95,871	\$ 90,502	\$ 73,735	\$ 79,313	\$ 78,880	\$ 66,244	\$ 76,609	\$ 77,241
Operating expense	per mile of pipe	\$ 37,247	\$ 43,609	\$ 45,773	\$ 43,701	\$ 57,477	\$ 50,380	\$ 54,962	\$ 56,163	\$ 51,779	\$ 41,587	\$ 49,072	\$ 47,409
Maintenance expense	per mile of pipe	\$ 3,103	\$ 3,318	\$ 2,051	\$ 3,730	\$ 4,139	\$ 4,193	\$ 4,187	\$ 4,001	\$ 4,402	\$ 3,257	\$ 3,464	\$ 2,774
Total O&M	per mile of pipe	\$ 40,350	\$ 46,927	\$ 47,823	\$ 47,432	\$ 61,616	\$ 54,573	\$ 59,149	\$ 60,164	\$ 56,181	\$ 44,844	\$ 52,536	\$ 50,183
Depreciation	per mile of pipe	\$ 6,029	\$ 5,768	\$ 7,091	\$ 6,705	\$ 8,388	\$ 8,533	\$ 5,868	\$ 6,011	\$ 6,923	\$ 6,146	\$ 6,434	\$ 7,429
Depletion	per mile of pipe	\$ 29	\$ 32	\$ 37	\$ 148	\$ 366	\$ 216	\$ -	\$ -	\$ -	\$ 51	\$ 118	\$ 78
Amortization	per mile of pipe	\$ 396	\$ 525	\$ 524	\$ 575	\$ 654	\$ 973	\$ 28	\$ 29	\$ 29	\$ 374	\$ 512	\$ 591
Prop. loss charged to operations	per mile of pipe	\$ 8	\$ 1	\$ 14	\$ (1)	\$ 152	\$ -	\$ -	\$ -	\$ -	\$ 4	\$ 40	\$ 9
Total taxes	per mile of pipe	\$ 6,253	\$ 6,274	\$ 6,976	\$ 9,155	\$ 9,336	\$ 10,271	\$ 1,069	\$ 1,100	\$ 1,298	\$ 6,384	\$ 6,421	\$ 7,295
Other operating income	per mile of pipe	\$ (158)	\$ (25)	\$ 52	\$ (9)	\$ (240)	\$ (23)	\$ (368)	\$ (636)	\$ -	\$ (83)	\$ (141)	\$ 29
Total operating income	per mile of pipe	\$ 6,815	\$ 7,979	\$ 9,745	\$ 12,728	\$ 15,359	\$ 15,936	\$ 7,622	\$ 12,010	\$ 14,448	\$ 8,440	\$ 10,549	\$ 11,656
NOTE: Starting in 2004, services are excluded from the pipe calculation													

## APPENDIX 7b: GAS UTILITY FINANCIAL RATIOS (Based on Segment Averages)

Based on Segment Average  
Stratified by Type of Company

		Gas Utilities			Combination Utilities			Municipal Utilities			All Companies		
		2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Therms delivered (avg.) per acct.		1,982	2,268	2,600	1,800	1,852	1,997	17,410	21,436	23,987	3,740	4,223	4,300
Therms per \$1,000 of gas plant		0.546	0.627	0.587	0.520	0.458	0.487	5.601	6.885	7.598	1.109	1.234	1.161
Value of gas plant per customer		\$ 6,457	\$ 3,831	\$ 6,398	\$ 3,866	\$ 4,340	\$ 4,514	\$ 3,082	\$ 3,013	\$ 3,324	\$ 5,370	\$ 3,982	\$ 5,667
%Sales firm (not interruptible)		94%	94%	94%	94%	94%	92%	86%	85%	86%	93%	93%	93%
Collection period (days)	1/	42.9	41.1	36.3	28.9	32.7	30.9	31.9	32.7	31.6	38.2	37.7	34.6
Gas O&M expense as pct. of revenue		68%	68%	66%	67%	67%	64%	81%	77%	73%	69%	69%	66%
Gas oper. income as pct. of revenue		11%	13%	14%	13%	14%	17%	9%	14%	16%	11%	14%	15%
Gas operating revenue per customer		\$ 1,151	\$ 1,127	\$ 1,229	\$ 1,100	\$ 1,181	\$ 1,181	\$ 1,079	\$ 1,176	\$ 1,107	\$ 1,152	\$ 1,175	\$ 1,206
Gas O&M expense per customer		\$ 811	\$ 783	\$ 821	\$ 721	\$ 789	\$ 751	\$ 877	\$ 905	\$ 814	\$ 812	\$ 818	\$ 803
Gas operating income per customer		\$ 94	\$ 140	\$ 147	\$ 153	\$ 172	\$ 194	\$ 99	\$ 164	\$ 173	\$ 114	\$ 156	\$ 161
Gas revenue per dollar of gas plant		\$ 0.2931	\$ 0.3182	\$ 0.2784	\$ 0.2924	\$ 0.2738	\$ 0.2674	\$ 0.3785	\$ 0.4095	\$ 0.3478	\$ 0.3047	\$ 0.3166	\$ 0.2817
Gas O&M expense per \$ of gas plant		\$ 0.2069	\$ 0.2294	\$ 0.1945	\$ 0.1985	\$ 0.1859	\$ 0.1735	\$ 0.3127	\$ 0.3216	\$ 0.2559	\$ 0.2187	\$ 0.2281	\$ 0.1946
Gas oper. income per \$ of gas plant		\$ 0.0291	\$ 0.0350	\$ 0.0333	\$ 0.0359	\$ 0.0386	\$ 0.0435	\$ 0.0316	\$ 0.0531	\$ 0.0557	\$ 0.0316	\$ 0.0384	\$ 0.0377
Gas revenue per mile of pipe	2/	\$ 59,880	\$ 67,507	\$ 72,210	\$ 76,742	\$ 95,871	\$ 90,502	\$ 73,735	\$ 79,313	\$ 78,880	\$ 66,244	\$ 76,609	\$ 77,241
Gas O&M expense per mile of pipe	2/	\$ 40,350	\$ 46,927	\$ 47,823	\$ 47,432	\$ 61,616	\$ 54,573	\$ 59,149	\$ 60,164	\$ 56,181	\$ 44,844	\$ 52,536	\$ 50,183
Gas oper. income per mile of pipe	2/	\$ 6,815	\$ 7,979	\$ 9,745	\$ 12,728	\$ 15,359	\$ 15,936	\$ 7,622	\$ 12,010	\$ 14,448	\$ 8,440	\$ 10,549	\$ 11,656
LT debt - total assets ratio	1/	22.5%	21.9%	22.2%	29.7%	31.0%	30.8%	29.4%	26.4%	27.5%	25.1%	25.1%	24.7%
LT debt - total capitalization ratio	1/3/	38.5%	37.1%	36.6%	46.9%	48.4%	47.9%	37.9%	35.5%	36.6%	40.8%	40.5%	39.3%
Net interest - long-term debt ratio	1/	7.8%	5.8%	271.0%	4.7%	4.3%	4.5%	1.9%	2.4%	3.1%	6.2%	5.0%	172.3%
EBITDA interest coverage	1/	21.1x	8.3x	8.8x	8.3x	7.7x	7.4x	83.4x	9.6x	28.6x	23.5x	8.2x	10.3x
Return on assets		2.1%	3.0%	3.0%	3.1%	3.0%	3.1%	2.4%	4.1%	4.9%	2.4%	3.2%	3.2%

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		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Average number of employees	974	972	939	738	810	912	360	326	373	815	830	854
Number of Employees at year-end	988	985	878	854	933	949	354	320	368	848	867	827
O&M wages ('000)	\$63,632	\$68,455	\$66,585	\$58,579	\$62,513	\$63,796	\$23,758	\$21,300	\$24,908	\$55,010	\$58,909	\$59,433
Construction wages ('000)	\$24,571	\$25,772	\$26,748	\$41,388	\$47,079	\$50,796	\$2,034	\$2,315	\$2,574	\$24,075	\$27,219	\$29,004
Total pensions ('000)	\$25,603	\$23,841	\$23,439	\$23,436	\$19,841	\$16,502	\$19,924	\$21,856	\$20,803	\$23,696	\$21,964	\$20,780
PER EMPLOYEE(1/):												
Total salary & wages	\$83,098	\$90,749	\$91,079	\$129,791	\$131,261	\$130,077	\$70,131	\$74,464	\$61,173	\$91,966	\$99,645	\$98,500
Tot. benefits & pension	\$21,951	\$20,607	\$20,319	\$32,914	\$30,532	\$21,726	\$38,516	\$45,639	\$40,568	\$26,598	\$25,705	\$22,679
Total salary, benefits, and pension	\$105,049	\$111,356	\$111,398	\$162,704	\$161,793	\$151,804	\$108,647	\$120,104	\$101,741	\$118,565	\$125,350	\$121,179
Ratio: avg. benefits to avg. compensation	21.7%	18.2%	18.0%	22.0%	19.7%	14.8%	36.3%	38.5%	41.2%	23.8%	21.1%	19.4%
Therms sold per year-end employee	1,209,747	1,471,925	1,601,075	1,691,435	1,525,284	1,744,118	10,583,830	12,670,372	14,563,240	2,430,797	2,619,901	2,782,161
Customers per year-end employee	653	671	654	888	874	888	476	470	446	701	695	713

## APPENDIX 9: Companies Studied

Consolidations are limited to LDC business units.

<b>GAS IOUs</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>GAS IOUs (cont.)</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Southern Company Gas	X	X		Summit Natural Gas of Missouri, Inc.	X		X
Arkansas Oklahoma Gas Corp	X	X	X	Summit Natural Gas of Maine, Inc.	X		X
Atmos Energy Corporation	X	X	X	TECO Peoples Gas	X	X	X
Black Hills 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	<b>COMBINATION IOUs</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
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	X	Baltimore Gas & Electric Co.	X	X	X
Delta Natural Gas Company	X	X	X	Central Hudson Gas & Electric Corp.	X	X	X
Dominion East Ohio Gas Company	X	X	X	Cheyenne Light, Fuel, & Power			
DTE Gas Company	X	X	X	Consolidated Edison of New York	X	X	X
Eastern Natural Gas Company	X	X	X	Consumers Energy	X	X	X
Enstar Natural Gas Company	X	X	X	Florida Public Utilities Company	X	X	X
Hope Gas, Inc.	X			Gainesville Regional Utilities	X	X	X
Illinois Gas Company	X	X	X	Madison Gas & Electric Company	X	X	X
Indiana Gas Company, Inc.	X			National Grid - Niagara Mohawk		X	X
Kansas Gas Service	X	X	X	Northern Indiana Public Service Co.	X	X	X
KeySpan Energy Delivery - NYC	X	X	X	Northwestern Energy			X
KeySpan Energy Delivery New England	X	X	X	Pacific Gas & Electric	X		
KeySpan Gas East - LILCO	X	X	X	Public Service Enterprises	X		X
Spire Missouri	X			Puget Sound Energy	X	X	X
MDU Resources Corporation		X	X	San Diego Gas & Electric	X	X	X
Spire Gulf		X	X	UGI Utilities, Inc.	X	X	X
Mountaineer Gas	X		X	WE Energies	X	X	X
Mt. Carmel Public Utility	X		X	Wisconsin Public Service Corp			X
Narragansett Gas Co.	X						
National Fuel Gas Company	X	X	X	<b>MUNICIPALS</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
National Grid - Rhode Island	X	X	X	Colorado Springs Utilities	X	X	X
New Jersey Natural Gas Company	X	X	X	Knoxville Utilities Board	X		X
New Mexico Gas Company	X	X	X	Memphis Light, Gas & Water Div	X	X	
Northwest Natural Gas Company		X	X	Metropolitan Util Dist-Omaha	X	X	X
Ohio Gas Company	X	X	X	Middle Tenn Nat Gas Util Dist	X	X	X
Oklahoma Natural Gas	X	X	X	Okaloosa County Gas District	X	X	X
Peoples Natural Gas	X	X	X	Owatonna Public Utilities	X	X	
Piedmont Natural Gas Company	X	X	X	Philadelphia Gas Works	X	X	X
Pike Natural Gas Company	X	X	X	Richmond Dept. of Pub. Util., City of	X	X	
Dominion Energy - Questar Gas	X	X	X	Westfield Gas & Electric	X	X	X
Semco Energy (S.E. Michigan)	X	X	X				
Southeastern Natural Gas Co							
Southern California Gas	X	X	X				
Southwest Gas Corporation	X	X	X				
Southwestern Virginia Gas Co.	X	X	X				