

EXHIBIT AMM-1

QUALIFICATIONS OF ADRIEN M. MCKENZIE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Adrien M. McKenzie. My business address is 3907 Red River St., Austin, Texas 78751.

Q. PLEASE STATE YOUR OCCUPATION.

A. I am a principal in FINCAP, Inc., a firm engaged primarily in financial, economic, and policy consulting in the field of public utility regulation.

Q. PLEASE DESCRIBE YOUR QUALIFICATIONS AND EXPERIENCE.

A. I received B.A. and M.B.A. degrees with a major in finance from The University of Texas at Austin, and hold the Chartered Financial Analyst (CFA[®]) designation. Since joining FINCAP in 1984, I have participated in consulting assignments involving a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation. I have extensive experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. I have personally sponsored direct and rebuttal testimony in over 130 proceedings filed with the Federal Energy Regulatory Commission ("FERC") and regulatory agencies in Alaska, Arkansas, Colorado, Hawaii, Idaho, Indiana, Iowa, Kansas, Kentucky, Maryland, Michigan, Montana, Nebraska, New Mexico, Ohio, Oklahoma, Oregon, South Dakota, Texas, Virginia, Washington, West Virginia, and Wyoming. My testimony addressed the establishment of risk-comparable proxy groups, the application of alternative quantitative methods, and the consideration of regulatory standards and

policy objectives in establishing a fair rate of return on equity for regulated electric, gas, and water utility operations. In connection with these assignments, my responsibilities have included critically evaluating the positions of other parties and preparation of rebuttal testimony, representing clients in settlement negotiations and hearings, and assisting in the preparation of legal briefs.

FINCAP was formed in 1979 as an economic and financial consulting firm serving clients in both the regulated and competitive sectors. FINCAP conducts assignments ranging from broad qualitative analyses and policy consulting to technical analyses and research. The firm's experience is in the areas of public utilities, valuation of closely-held businesses, and economic evaluations (e.g., damage and cost/benefit analyses). Prior to joining FINCAP, I was employed by an oil and gas firm and was responsible for operations and accounting. I am a member of the CFA Institute, the CFA Society of Austin. A resume containing the details of my qualifications and experience is attached below.

ADRIEN M. MCKENZIE

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Summary of Qualifications

Adrien McKenzie has an MBA in finance from the University of Texas at Austin and holds the Chartered Financial Analyst (CFA[®]) designation. He has over 30 years of experience in economic and financial analysis for regulated industries, and in preparing and supporting expert witness testimony before courts, regulatory agencies, and legislative committees throughout the U.S. and Canada. Assignments have included a broad range of economic and financial issues, including cost of capital, cost of service, rate design, economic damages, and business valuation.

Employment

President
FINCAP, Inc.
(June 1984 to June 1987)
(April 1988 to present)

Economic consulting firm specializing in regulated industries and valuation of closely-held businesses. Assignments have involved electric, gas, telecommunication, and water/sewer utilities, with clients including utilities, consumer groups, municipalities, regulatory agencies, and cogenerators. Areas of participation have included rate of return, revenue requirements, rate design, tariff analysis, avoided cost, forecasting, and negotiations. Develop cost of capital analyses using alternative market models for electric, gas, and telephone utilities. Prepare pre-filed direct and rebuttal testimony, participate in settlement negotiations, respond to interrogatories, evaluate opposition testimony, and assist in the areas of cross-examination and the preparations of legal briefs. Other assignments have involved preparation of technical reports, valuations, estimation of damages, industry studies, and various economic analyses in support of litigation.

Manager,
McKenzie Energy Company
(Jan. 1981 to May. 1984)

Responsible for operations and accounting for firm engaged in the management of working interests in oil and gas properties.

Education

M.B.A., Finance,
University of Texas at Austin
(Sep. 1982 to May. 1984)

Program included coursework in corporate finance, accounting, financial modeling, and statistics. Received Dean's Award for Academic Excellence and Good Neighbor Scholarship.

Professional Report: *The Impact of Construction Expenditures on Investor-Owned Electric Utilities*

B.B.A., Finance,
University of Texas at Austin
(Jan. 1981 to May 1982)

Electives included capital market theory, portfolio management, and international economics and finance. Elected to Beta Gamma Sigma business honor society. Dean's List 1981-1982.

Simon Fraser University,
Vancouver, Canada and University
of Hawaii at Manoa, Honolulu,
Hawaii
(Jan. 1979 to Dec 1980)

Coursework in accounting, finance, economics, and liberal arts.

Professional Associations

Received Chartered Financial Analyst (CFA[®]) designation in 1990.

Member – CFA Institute.

Bibliography

“A Profile of State Regulatory Commissions,” A Special Report by the Electricity Consumers Resource Council (ELCON), Summer 1991.

“The Impact of Regulatory Climate on Utility Capital Costs: An Alternative Test,” with Bruce H. Fairchild, *Public Utilities Fortnightly* (May 25, 1989).

Presentations

“ROE at FERC: Issues and Methods,” *Expert Briefing on Parallels in ROE Issues between AER, ERA, and FERC*, Jones Day (Sydney, Melbourne, and Perth, Australia) (April 15, 2014).

Cost of Capital Working Group eforum, Edison Electric Institute (April 24, 2012).

“Cost-of-Service Studies and Rate Design,” General Management of Electric Utilities (A Training Program for Electric Utility Managers from Developing Countries), Austin, Texas (October 1989 and November 1990 and 1991).

Representative Assignments

Mr. McKenzie has prepared and supported prefiled testimony submitted in over 250 regulatory proceedings. In addition to filings before regulators in over thirty state jurisdictions, Mr. McKenzie has considerable expertise in preparing expert analyses and testimony before the Federal Energy Regulatory Commission (“FERC”) on the issue of rate of return on equity (“ROE”), and has broad experience in applying and evaluating the results of quantitative methods to estimate a fair ROE, including discounted cash flow approaches, the Capital Asset Pricing Model, risk premium methods, and other quantitative benchmarks. Other representative assignments have included developing cost of service and cost allocation studies, the application of econometric models to analyze the impact of anti-competitive behavior and estimate lost profits; development of explanatory models for nuclear plant capital costs in connection with prudence reviews; and the analysis of avoided cost pricing for cogenerated power.

ROE ANALYSES

**Exhibit AMM-2
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SUMMARY OF RESULTS

| Method | Average | Midpoint |
|------------------------------------|----------------|-----------------|
| <u>DCF</u> | | |
| Value Line | 10.3% | 10.9% |
| IBES | 8.4% | 9.1% |
| Zacks | 9.1% | 10.0% |
| Internal br + sv | 9.4% | 9.8% |
| <u>CAPM</u> | | |
| Current Bond Yield | 9.4% | 9.7% |
| Projected Bond Yield | 9.8% | 10.1% |
| <u>Empirical CAPM</u> | | |
| Current Bond Yield | 10.3% | 10.5% |
| Projected Bond Yield | 10.6% | 10.8% |
| <u>Utility Risk Premium</u> | | |
| Current Bond Yields | | 9.5% |
| Projected Bond Yield | | 10.2% |
| <u>Expected Earnings</u> | 10.3% | 9.9% |

| <u>Cost of Equity Recommendation</u> | | | |
|---|-------------|-------------|--------------|
| Cost of Equity Range | 9.4% | -- | 10.4% |
| Flotation Cost Adjustment | | | |
| Dividend Yield | | 2.7% | |
| Flotation Cost Percentage | | <u>2.9%</u> | |
| Adjustment | | 0.08% | |
| Recommended ROE Range | 9.5% | -- | 10.5% |

REGULATORY MECHANISMS

Exhibit AMM-3
Page 1 of 1

GAS GROUP

| Holding Company/ State | Gas Cost Adjust | Conserv. Program Expense | Decoupling | | Weather Normal- ization | Infra- structure Tracker | Environ- mental Compliance | Bad Debt Rider | Other | |
|--------------------------------------|--------------------|--------------------------------|------------|---------|-------------------------------|--------------------------------|----------------------------------|----------------------|-------|----------------------------------|
| | | | Full | Partial | | | | | | |
| Atmos Energy Corp. | | | | | | | | | | |
| Atmos Energy | KS | ✓ | -- | -- | ✓ | ✓ | ✓ | -- | ✓ | Certain taxes and franchise fees |
| Atmos Energy | KY | ✓ | ✓ | -- | ✓ | ✓ | ✓ | -- | ✓ | Certain taxes and franchise fees |
| Atmos Energy | LA | ✓ | -- | -- | FRM | ✓ | ✓ | -- | -- | |
| Atmos Energy | MS | ✓ | ✓ | -- | FRM | ✓ | ✓ | -- | -- | |
| Atmos Energy | TN | ✓ | -- | -- | FRM | ✓ | -- | -- | -- | Capacity management |
| Atmos Energy | TX | ✓ | -- | -- | FRM | ✓ | ✓ | -- | ✓ | |
| Chesapeake Utilities | | | | | | | | | | |
| Chesapeake Utilities | DE | ✓ | -- | -- | -- | -- | ✓ | ✓ | -- | Certain taxes and fees |
| Florida Public Utilities | FL | ✓ | ✓ | -- | -- | -- | ✓ | ✓ | -- | Certain taxes and fees |
| New Jersey Resources | | | | | | | | | | |
| New Jersey Natural Gas | NJ | ✓ | ✓ | ✓ | -- | -- | ✓ | ✓ | -- | Certain taxes and fees |
| NiSource Inc. | | | | | | | | | | |
| Northern Indiana Public Service | IN | ✓ | ✓ | -- | -- | -- | ✓ | -- | ✓ | |
| Columbia Gas of Kentucky | KY | ✓ | ✓ | -- | ✓ | ✓ | ✓ | -- | ✓ | Certain taxes and franchise fees |
| Columbia Gas of Maryland | MD | ✓ | ✓ | -- | ✓ | ✓ | ✓ | -- | -- | Certain taxes and fees |
| Bay State Gas | MA | ✓ | ✓ | ✓ | -- | -- | ✓ | ✓ | -- | Pensions, post-empl benefits |
| Columbia Gas of Ohio | OH | *** | ✓ | -- | -- | -- | ✓ | -- | ✓ | Certain taxes and fees |
| Columbia Gas of Pennsylvania | PA | ✓ | -- | -- | ✓ | ✓ | ✓ | -- | -- | Certain taxes and franchise fees |
| Columbia Gas of Virginia | VA | ✓ | ✓ | -- | ✓ | ✓ | ✓ | -- | ✓ | |
| Northwest Natural Holding Co. | | | | | | | | | | |
| Northwest Natural Gas | OR | ✓ | ✓ | -- | ✓ | ✓ | -- | ✓ | -- | |
| Northwest Natural Gas | WA | ✓ | ✓ | -- | -- | -- | -- | -- | -- | |
| ONE Gas, Inc. | | | | | | | | | | |
| Kansas Gas Service | KS | ✓ | -- | -- | ✓ | ✓ | ✓ | -- | ✓ | Certain taxes and fees, pensions |
| Oklahoma Natural Gas | OK | ✓ | ✓ | -- | ✓ | ✓ | -- | -- | ✓ | Certain taxes and franchise fees |
| Texas Gas Service | TX | ✓ | -- | -- | ✓ | ✓ | ✓ | -- | -- | |
| South Jersey Industries | | | | | | | | | | |
| Elizabethtown Gas | NJ | ✓ | ✓ | -- | ✓ | ✓ | ✓ | ✓ | -- | Certain taxes and fees |
| South Jersey Gas | NJ | ✓ | ✓ | ✓ | -- | -- | ✓ | ✓ | -- | Certain taxes and fees |
| Southwest Gas | | | | | | | | | | |
| Southwest Gas | AZ | ✓ | ✓ | ✓ | -- | -- | ✓ | -- | -- | Franchise fees |
| Southwest Gas | CA | ✓ | -- | ✓ | -- | -- | -- | -- | -- | |
| Southwest Gas | NV | ✓ | -- | ✓ | -- | -- | ✓ | -- | ✓ | |
| Spire Inc. | | | | | | | | | | |
| Spire Alabama | AL | ✓ | -- | -- | ✓ | -- | -- | -- | -- | Certain taxes |
| Spire Gulf | AL | ✓ | -- | -- | ✓ | ✓ | -- | -- | -- | Certain taxes |
| Spire Missouri Inc. - East | MO | ✓ | -- | -- | ✓ | ✓ | ✓ | -- | -- | Certain taxes and franchise fees |
| Spire Missouri Inc. - West | MO | ✓ | -- | -- | -- | ✓ | ✓ | -- | -- | Certain taxes and franchise fees |

Sources:

- (a) S&P Global, "Adjustment Clauses - A State-by-State Overview," RRA Regulatory Focus (Nov. 12, 2019).
- (b) Company Form 10-K Reports.

FRM - Formula Rate Mechanism

*** - Suppliers bid to directly serve customers

DCF MODEL - GAS GROUP

Exhibit AMM-4

Page 1 of 4

DIVIDEND YIELD

| | (a) | (b) | |
|---------------------------|--------------|------------------|--------------|
| Company | Price | Dividends | Yield |
| 1 Atmos Energy Corp. | \$ 116.54 | \$ 2.33 | 2.0% |
| 2 Chesapeake Utilities | \$ 96.18 | \$ 1.68 | 1.7% |
| 3 New Jersey Resources | \$ 42.94 | \$ 1.25 | 2.9% |
| 4 NiSource Inc. | \$ 29.23 | \$ 0.84 | 2.9% |
| 5 Northwest Natural | \$ 74.33 | \$ 1.91 | 2.6% |
| 6 ONE Gas, Inc. | \$ 94.61 | \$ 2.16 | 2.3% |
| 7 South Jersey Industries | \$ 31.76 | \$ 1.25 | 3.9% |
| 8 Southwest Gas | \$ 77.53 | \$ 2.30 | 3.0% |
| 9 Spire Inc. | \$ 84.71 | \$ 2.49 | 2.9% |
| Average | | | 2.7% |

(a) Average of closing prices for 30 trading days ended Feb. 20, 2020.

(b) The Value Line Investment Survey, *Summary & Index* (Feb. 21, 2020).

DCF MODEL - GAS GROUP

**Exhibit AMM-4
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GROWTH RATES

| Company | (a) | (b) | (c) | (d) |
|---------------------------|------------------------|-------------|--------------|---------------|
| | Earnings Growth | | | br+sv |
| | V Line | IBES | Zacks | Growth |
| 1 Atmos Energy Corp. | 7.0% | 7.1% | 7.2% | 9.5% |
| 2 Chesapeake Utilities | 9.0% | 6.0% | 7.0% | 11.0% |
| 3 New Jersey Resources | 2.5% | 6.0% | 8.0% | 4.5% |
| 4 NiSource Inc. | 2.5% | 4.1% | 5.2% | 5.5% |
| 5 Northwest Natural | 22.5% | 3.8% | 5.0% | 6.8% |
| 6 ONE Gas, Inc. | 7.0% | 5.0% | 5.5% | 5.2% |
| 7 South Jersey Industries | 9.5% | 4.6% | 8.5% | 7.1% |
| 8 Southwest Gas | 8.0% | 8.2% | 6.0% | 7.3% |
| 9 Spire Inc. | 5.5% | 4.7% | 5.2% | 3.8% |

(a) The Value Line Investment Survey (Feb. 28, 2020).

(b) www.finance.yahoo.com (retrieved Feb. 20, 2020).

(c) www.zacks.com (retrieved Feb. 20, 2020, except SJI which was retrieved Dec. 30, 2019).

(d) See Exhibit AMM-5.

DCF MODEL - GAS GROUP

Exhibit AMM-4

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DCF COST OF EQUITY ESTIMATES

| Company | (a) | (a) | (a) | (a) |
|---------------------------|------------------------|-------------|--------------|---------------|
| | Earnings Growth | | | br+sv |
| | V Line | IBES | Zacks | Growth |
| 1 Atmos Energy Corp. | 9.0% | 9.1% | 9.1% | 11.5% |
| 2 Chesapeake Utilities | 10.7% | 7.7% | 8.7% | 12.8% |
| 3 New Jersey Resources | 5.4% | 8.9% | 10.9% | 7.5% |
| 4 NiSource Inc. | 5.4% | 6.9% | 8.0% | 8.3% |
| 5 Northwest Natural | 25.1% | 6.3% | 7.6% | 9.3% |
| 6 ONE Gas, Inc. | 9.3% | 7.3% | 7.8% | 7.4% |
| 7 South Jersey Industries | 13.4% | 8.5% | 12.4% | 11.0% |
| 8 Southwest Gas | 11.0% | 11.2% | 9.0% | 10.2% |
| 9 Spire Inc. | 8.4% | 7.6% | 8.1% | 6.8% |
| Average (b) | 10.3% | 8.4% | 9.1% | 9.4% |
| Midpoint (b,c) | 10.9% | 9.1% | 10.0% | 9.8% |

(a) Sum of dividend yield (Exhibit AMM-4, p. 1) and respective growth rate (Exhibit AMM-4, p. 2).

(b) Excludes highlighted figures.

(c) Average of low and high values.

DCF MODEL - GAS GROUP

Exhibit AMM-4

Page 4 of 4

LOW-END THRESHOLD ADJUSTMENT

Atlantic Path 15 / Startrans / So. Cal Edison

Pioneer Transmission

| | <u>Baa Yield</u> | | <u>Baa Yield</u> |
|---|------------------|---------------------|---------------------|
| Jun-07 | 6.54% | Apr-08 | 6.81% |
| Jul-07 | 6.49% | May-08 | 6.79% |
| Aug-07 | 6.51% | Jun-08 | 6.93% |
| Sep-07 | 6.45% | Jul-08 | 6.97% |
| Oct-07 | 6.36% | Aug-08 | 6.98% |
| Nov-07 | 6.27% | Sep-08 | 7.15% |
| | | | |
| | | <u>Current</u> | <u>Projected</u> |
| Historical Baa Bond Yield | | 6.69% (a) | 6.69% (a) |
| Current Baa Bond Yield | | 3.69% (b) | 5.07% (c) |
| Change in Bond Yield | | <u>-3.00%</u> | <u>-1.62%</u> |
| | | | |
| Risk Premium/Interest Rate Relationship | | <u>-0.46993 (d)</u> | <u>-0.46993 (d)</u> |
| Adjustment to Low-end Threshold | | 1.41% | 0.76% |
| | | | |
| Current Baa Bond Yield | | 3.69% | 5.07% |
| Original Threshold | | 1.00% | 1.00% |
| Adjustment | | <u>1.41%</u> | <u>0.76%</u> |
| Adjusted Low-end Threshold | | <u>6.10%</u> | <u>6.83%</u> |

- (a) Average Baa utility bond yield for 6-mo. periods ending Nov. 2007 and Sep. 2008.
- (b) Average Baa utility bond yield for 6-months ended Jan. 2020.
- (c) Average Baa utility bond yield for 2021-25 based on data from Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 28, 2020); IHS Global Insight, Long-Term Macro Forecast - Baseline (Oct. 15, 2019), Moody's Investors Service at www.credittrends.com.
- (d) Exhibit AMM-8, page 5.

DCF MODEL - GAS GROUP

**Exhibit AMM-5
Page 1 of 2**

SUSTAINABLE GROWTH RATE

| Company | (a) | | | b | r | (b) | | | br | (d) | | | br + sv |
|---------------------------|-------------|------------|-------------|----------|----------|-------------------|-------------------|------|-----------|--------------------|-----------|--------------|----------------|
| | 2024 | | | | | Adjustment | | | | "sv" Factor | | | |
| | EPS | DPS | BVPS | | | Factor | Adjusted r | | s | v | sv | | |
| 1 Atmos Energy Corp. | \$6.00 | \$3.00 | \$66.20 | 50.0% | 9.1% | 1.0512 | 9.5% | 4.8% | 0.0870 | 0.5434 | 4.73% | 9.5% | |
| 2 Chesapeake Utilities | \$5.50 | \$2.30 | \$56.90 | 58.2% | 9.7% | 1.0676 | 10.3% | 6.0% | 0.0896 | 0.5623 | 5.04% | 11.0% | |
| 3 New Jersey Resources | \$2.40 | \$1.57 | \$26.15 | 34.6% | 9.2% | 1.0519 | 9.7% | 3.3% | 0.0349 | 0.3463 | 1.21% | 4.5% | |
| 4 NiSource Inc. | \$2.25 | \$1.16 | \$15.35 | 48.4% | 14.7% | 1.0059 | 14.7% | 7.1% | (0.0300) | 0.5614 | -1.69% | 5.5% | |
| 5 Northwest Natural | \$3.50 | \$1.97 | \$29.85 | 43.7% | 11.7% | 1.0192 | 12.0% | 5.2% | 0.0250 | 0.6148 | 1.54% | 6.8% | |
| 6 ONE Gas, Inc. | \$4.75 | \$2.80 | \$49.60 | 41.1% | 9.6% | 1.0253 | 9.8% | 4.0% | 0.0187 | 0.6032 | 1.13% | 5.2% | |
| 7 South Jersey Industries | \$2.50 | \$1.40 | \$21.30 | 44.0% | 11.7% | 1.0559 | 12.4% | 5.5% | 0.0350 | 0.4675 | 1.64% | 7.1% | |
| 8 Southwest Gas | \$6.00 | \$2.75 | \$62.30 | 54.2% | 9.6% | 1.0480 | 10.1% | 5.5% | 0.0518 | 0.3442 | 1.78% | 7.3% | |
| 9 Spire Inc. | \$5.15 | \$3.00 | \$72.00 | 41.7% | 7.2% | 1.0442 | 7.5% | 3.1% | 0.0224 | 0.3143 | 0.70% | 3.8% | |

DCF MODEL - GAS GROUP

**Exhibit AMM-5
Page 2 of 2**

SUSTAINABLE GROWTH RATE

| Company | (a) | (a) | (f) | (a) | (a) | (f) | (g) | (a) | (a) | (h) | (a) | (a) | (g) | |
|---------------------------|-----------------|----------------|---------------|-----------------|----------------|---------------|-------------------|-------------------|------------|-------------|----------------------|-------------|-------------|---------------|
| | <u>Eq Ratio</u> | <u>Tot Cap</u> | <u>Com Eq</u> | <u>Eq Ratio</u> | <u>Tot Cap</u> | <u>Com Eq</u> | <u>Chg Equity</u> | <u>2024 Price</u> | | | <u>Common Shares</u> | | | |
| | | <u>2019</u> | | | <u>2024</u> | | | <u>High</u> | <u>Low</u> | <u>Avg.</u> | <u>M/B</u> | <u>2019</u> | <u>2024</u> | <u>Growth</u> |
| 1 Atmos Energy Corp. | 62.0% | \$9,280 | \$5,753 | 60.0% | \$16,000 | \$9,600 | 10.8% | \$160.00 | \$130.00 | \$145.00 | 2.190 | 119.34 | 145.00 | 3.97% |
| 2 Chesapeake Utilities | 59.0% | \$980 | \$578 | 65.0% | \$1,750 | \$1,138 | 14.5% | \$150.00 | \$110.00 | \$130.00 | 2.285 | 16.50 | 20.00 | 3.92% |
| 3 New Jersey Resources | 50.2% | \$3,089 | \$1,551 | 56.5% | \$4,615 | \$2,607 | 11.0% | \$45.00 | \$35.00 | \$40.00 | 1.530 | 89.34 | 100.00 | 2.28% |
| 4 NiSource Inc. | 45.0% | \$14,180 | \$6,381 | 45.0% | \$15,040 | \$6,768 | 1.2% | \$40.00 | \$30.00 | \$35.00 | 2.280 | 374.00 | 350.00 | -1.32% |
| 5 Northwest Natural | 52.0% | \$1,520 | \$790 | 52.5% | \$1,825 | \$958 | 3.9% | \$85.00 | \$70.00 | \$77.50 | 2.596 | 30.50 | 32.00 | 0.96% |
| 6 ONE Gas, Inc. | 62.0% | \$3,415 | \$2,117 | 62.0% | \$4,400 | \$2,728 | 5.2% | \$145.00 | \$105.00 | \$125.00 | 2.520 | 53.00 | 55.00 | 0.74% |
| 7 South Jersey Industries | 42.5% | \$3,550 | \$1,509 | 44.0% | \$6,000 | \$2,640 | 11.8% | \$45.00 | \$35.00 | \$40.00 | 1.878 | 93.00 | 102.00 | 1.86% |
| 8 Southwest Gas | 50.0% | \$5,000 | \$2,500 | 56.5% | \$7,150 | \$4,040 | 10.1% | \$115.00 | \$75.00 | \$95.00 | 1.525 | 55.00 | 65.00 | 3.40% |
| 9 Spire Inc. | 55.0% | \$4,626 | \$2,544 | 55.0% | \$7,200 | \$3,960 | 9.3% | \$120.00 | \$90.00 | \$105.00 | 1.458 | 50.97 | 55.00 | 1.53% |

- (a) The Value Line Investment Survey (Feb. 28, 2020).
- (b) Computed using the formula $2 \times (1 + 5\text{-Yr. Change in Equity}) / (2 + 5 \text{ Yr. Change in Equity})$.
- (c) Product of average year-end "r" for 2024 and Adjustment Factor.
- (d) Product of change in common shares outstanding and M/B Ratio.
- (e) Computed as $1 - B/M$ Ratio.
- (f) Product of total capital and equity ratio.
- (g) Five-year rate of change.
- (h) Average of High and Low expected market prices divided by 2024 BVPS.

CAPM - CURRENT BOND YIELD

**Exhibit AMM-6
Page 1 of 2**

GAS GROUP

| | | (a) | (b) | (c) | | (d) | | (d) | (e) | | |
|----------------|-------------------------|---|---------------------|-----------------------|-----------------------|---------------------|-------------|------------------------------------|-------------------|------------------------|--------------------|
| | | <u>Market Return (R_m)</u> | | | | | | | | | |
| Company | | Div Yield | Proj. Growth | Cost of Equity | Risk-Free Rate | Risk Premium | Beta | Unadjusted K_e | Market Cap | Size Adjustment | CAPM Result |
| 1 | Atmos Energy Corp. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.55 | 7.6% | \$14,700 | 0.50% | 8.1% |
| 2 | Chesapeake Utilities | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.60 | 8.1% | \$1,600 | 1.58% | 9.7% |
| 3 | New Jersey Resources | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.65 | 8.6% | \$4,200 | 1.26% | 9.8% |
| 4 | NiSource Inc. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.55 | 7.6% | \$11,300 | 0.84% | 8.4% |
| 5 | Northwest Natural | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.55 | 7.6% | \$2,300 | 1.54% | 9.1% |
| 6 | ONE Gas, Inc. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.60 | 8.1% | \$5,100 | 0.82% | 8.9% |
| 7 | South Jersey Industries | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.80 | 10.0% | \$3,000 | 1.26% | 11.3% |
| 8 | Southwest Gas | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.65 | 8.6% | \$4,300 | 1.26% | 9.8% |
| 9 | Spire Inc. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 0.60 | 8.1% | \$4,500 | 1.26% | 9.3% |
| | Average | | | | | | | | | | 9.4% |
| | Midpoint (f) | | | | | | | | | | 9.7% |

- (a) Weighted average for www.valueline.com (retrieved Feb. 7, 2020).
- (b) Average of weighted average earnings growth rates from IBES, Zacks, and Value Line for dividend-paying stocks in the S&P 500 based on data from <http://finance.yahoo.com> (retrieved Feb. 7, 2020), www.valueline.com (retrieved Feb. 7, 2020), and www.zacks.com (retrieved Feb. 7, 2020).
- (c) Average yield on 30-year Treasury bonds for the six-months ending Jan. 2020 based on data from <https://fred.stlouisfed.org/>.
- (d) The Value Line Investment Survey (Feb. 28, 2020).
- (e) Duff & Phelps, 2019 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
- (f) Average of low and high values.

CAPM - PROJECTED BOND YIELD

**Exhibit AMM-6
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GAS GROUP

| | | (a) | (b) | (c) | (d) | (d) | (e) | | | | |
|----------------|-------------------------|---|-----------------------|-----------------------|---------------------|-------------|------------------------------------|-------------------|------------------------|--------------------|--------------|
| | | Market Return (R_m) | | | | | | | | | |
| Company | Div Yield | Proj. Growth | Cost of Equity | Risk-Free Rate | Risk Premium | Beta | Unadjusted K_e | Market Cap | Size Adjustment | CAPM Result | |
| 1 | Atmos Energy Corp. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.55 | 8.1% | \$14,700 | 0.50% | 8.6% |
| 2 | Chesapeake Utilities | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.60 | 8.5% | \$1,600 | 1.58% | 10.1% |
| 3 | New Jersey Resources | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.65 | 9.0% | \$4,200 | 1.26% | 10.2% |
| 4 | NiSource Inc. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.55 | 8.1% | \$11,300 | 0.84% | 8.9% |
| 5 | Northwest Natural | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.55 | 8.1% | \$2,300 | 1.54% | 9.6% |
| 6 | ONE Gas, Inc. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.60 | 8.5% | \$5,100 | 0.82% | 9.3% |
| 7 | South Jersey Industries | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.80 | 10.3% | \$3,000 | 1.26% | 11.5% |
| 8 | Southwest Gas | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.65 | 9.0% | \$4,300 | 1.26% | 10.2% |
| 9 | Spire Inc. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 0.60 | 8.5% | \$4,500 | 1.26% | 9.8% |
| | Average | | | | | | | | | | 9.8% |
| | Midpoint (f) | | | | | | | | | | 10.1% |

- (a) Weighted average for www.valueline.com (retrieved Feb. 7, 2020).
- (b) Average of weighted average earnings growth rates from IBES, Zacks, and Value Line for dividend-paying stocks in the S&P 500 based on data from <http://finance.yahoo.com> (retrieved Feb. 7, 2020), www.valueline.com (retrieved Feb. 7, 2020), and www.zacks.com (retrieved Feb. 7, 2020).
- (c) Average yield on 30-year Treasury bonds for 2021-25 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 28, 2020); IHS Global Insight, Long-Term Macro Forecast - Baseline (Oct. 15, 2019); & Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2019).
- (d) The Value Line Investment Survey (Feb. 28, 2020).
- (e) Duff & Phelps, 2019 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
- (f) Average of low and high values.

EMPIRICAL CAPM - CURRENT BOND YIELD

**Exhibit AMM-7
 Page 1 of 2**

GAS GROUP

| Company | Market Return (R_m) | | Cost of Equity | Risk-Free Rate | Risk Premium | Unadjusted RP | | Beta | Adjusted RP | | Total RP | Unadjusted K_e | Market Cap | Size Adjustment | ECAPM Result |
|---------------------------|-------------------------|--------------|----------------|----------------|--------------|---------------|--------|------|-------------|--------|----------|------------------|------------|-----------------|--------------|
| | Div Yield | Proj. Growth | | | | Weight | RP^1 | | Weight | RP^2 | | | | | |
| | (a) | (b) | | | | (d) | (e) | | (d) | (e) | | | | | |
| 1 Atmos Energy Corp. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.55 | 75% | 4.0% | 6.5% | 8.7% | \$14,700 | 0.50% | 9.2% |
| 2 Chesapeake Utilities | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.60 | 75% | 4.4% | 6.9% | 9.1% | \$1,600 | 1.58% | 10.6% |
| 3 New Jersey Resources | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.65 | 75% | 4.8% | 7.2% | 9.4% | \$4,200 | 1.26% | 10.7% |
| 4 NiSource Inc. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.55 | 75% | 4.0% | 6.5% | 8.7% | \$11,300 | 0.84% | 9.5% |
| 5 Northwest Natural | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.55 | 75% | 4.0% | 6.5% | 8.7% | \$2,300 | 1.54% | 10.2% |
| 6 ONE Gas, Inc. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.60 | 75% | 4.4% | 6.9% | 9.1% | \$5,100 | 0.82% | 9.9% |
| 7 South Jersey Industries | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.80 | 75% | 5.9% | 8.3% | 10.5% | \$3,000 | 1.26% | 11.8% |
| 8 Southwest Gas | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.65 | 75% | 4.8% | 7.2% | 9.4% | \$4,300 | 1.26% | 10.7% |
| 9 Spire Inc. | 2.3% | 9.7% | 12.0% | 2.2% | 9.8% | 25% | 2.5% | 0.60 | 75% | 4.4% | 6.9% | 9.1% | \$4,500 | 1.26% | 10.3% |
| Average | | | | | | | | | | | | | | | 10.3% |
| Midpoint (g) | | | | | | | | | | | | | | | 10.5% |

- (a) Weighted average for www.valueline.com (retrieved Feb. 7, 2020).
- (b) Average of weighted average earnings growth rates from IBES, Zacks, and Value Line for dividend-paying stocks in the S&P 500 based on data from <http://finance.yahoo.com> (retrieved Feb. 7, 2020), www.valueline.com (retrieved Feb. 7, 2020), and www.zacks.com (retrieved Feb. 7, 2020).
- (c) Average yield on 30-year Treasury bonds for the six-months ending Jan. 2020 based on data from <https://fred.stlouisfed.org/>.
- (d) Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 190.
- (e) The Value Line Investment Survey (Feb. 28, 2020).
- (f) Duff & Phelps, 2019 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
- (g) Average of low and high values.

EMPIRICAL CAPM - PROJECTED BOND YIELD

**Exhibit AMM-7
Page 2 of 2**

GAS GROUP

| Company | Market Return (R_m) | | Cost of Equity | Risk-Free Rate | Risk Premium | Unadjusted RP | | Beta | Adjusted RP | | Total RP | Unadjusted K_e | Market Cap | Size Adjustment | ECAPM Result |
|---------------------------|-------------------------|--------------|----------------|----------------|--------------|---------------|--------|------|-------------|--------|----------|------------------|------------|-----------------|--------------|
| | Div Yield | Proj. Growth | | | | Weight | RP^1 | | Weight | RP^2 | | | | | |
| | (a) | (b) | | | | (c) | (d) | | (e) | (d) | | | | | |
| 1 Atmos Energy Corp. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.55 | 75% | 3.6% | 5.8% | 9.1% | \$14,700 | 0.50% | 9.6% |
| 2 Chesapeake Utilities | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.60 | 75% | 3.9% | 6.1% | 9.4% | \$1,600 | 1.58% | 11.0% |
| 3 New Jersey Resources | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.65 | 75% | 4.2% | 6.4% | 9.7% | \$4,200 | 1.26% | 11.0% |
| 4 NiSource Inc. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.55 | 75% | 3.6% | 5.8% | 9.1% | \$11,300 | 0.84% | 9.9% |
| 5 Northwest Natural | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.55 | 75% | 3.6% | 5.8% | 9.1% | \$2,300 | 1.54% | 10.6% |
| 6 ONE Gas, Inc. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.60 | 75% | 3.9% | 6.1% | 9.4% | \$5,100 | 0.82% | 10.2% |
| 7 South Jersey Industries | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.80 | 75% | 5.2% | 7.4% | 10.7% | \$3,000 | 1.26% | 12.0% |
| 8 Southwest Gas | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.65 | 75% | 4.2% | 6.4% | 9.7% | \$4,300 | 1.26% | 11.0% |
| 9 Spire Inc. | 2.3% | 9.7% | 12.0% | 3.3% | 8.7% | 25% | 2.2% | 0.60 | 75% | 3.9% | 6.1% | 9.4% | \$4,500 | 1.26% | 10.6% |
| Average | | | | | | | | | | | | | | | 10.6% |
| Midpoint (g) | | | | | | | | | | | | | | | 10.8% |

- (a) Weighted average for www.valueline.com (retrieved Feb. 7, 2020).
- (b) Average of weighted average earnings growth rates from IBES, Zacks, and Value Line for dividend-paying stocks in the S&P 500 based on data from <http://finance.yahoo.com> (retrieved Feb. 7, 2020), www.valueline.com (retrieved Feb. 7, 2020), and www.zacks.com (retrieved Feb. 7, 2020).
- (c) Average yield on 30-year Treasury bonds for 2021-25 based on data from the Value Line Investment Survey, Forecast for the U.S. Economy (Feb. 28, 2020); IHS Global Insight, Long-Term Macro Forecast - Baseline (Oct. 15, 2019); & Wolters Kluwer, Blue Chip Financial Forecasts (Dec. 1, 2019).
- (d) Roger A. Morin, "New Regulatory Finance," *Public Utilities Reports, Inc.* (2006) at 190.
- (e) The Value Line Investment Survey (Feb. 28, 2020).
- (f) Duff & Phelps, 2019 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.
- (g) Average of low and high values.

GAS UTILITY RISK PREMIUM

Exhibit AMM-8

Page 1 of 5

CURRENT BOND YIELDS

Current Equity Risk Premium

| | |
|---|----------------|
| (a) Avg. Yield over Study Period | 7.93% |
| (b) Single-A Utility Bond Yield | <u>3.36%</u> |
| Change in Bond Yield | -4.57% |
| (c) Risk Premium/Interest Rate Relationship | <u>-0.4699</u> |
| Adjustment to Average Risk Premium | 2.15% |
| (a) Average Risk Premium over Study Period | <u>3.63%</u> |
| Adjusted Risk Premium | 5.78% |

Implied Cost of Equity

| | |
|------------------------------------|--------------|
| (b) Triple-B Utility Bond Yield | 3.69% |
| Adjusted Equity Risk Premium | <u>5.78%</u> |
| Risk Premium Cost of Equity | 9.47% |

(a) Exhibit AMM-8, page 4.

(b) Average bond yield for six-months ending Jan. 2020 based on data from Moody's Investors Service at www.credittrends.com.

(c) Exhibit AMM-8, page 5.

GAS UTILITY RISK PREMIUM

Exhibit AMM-8

Page 2 of 5

PROJECTED BOND YIELDS

Current Equity Risk Premium

| | |
|---|----------------|
| (a) Avg. Yield over Study Period | 7.93% |
| (b) Single-A Utility Bond Yield 2021-2025 | <u>4.74%</u> |
| Change in Bond Yield | -3.19% |
| (c) Risk Premium/Interest Rate Relationship | <u>-0.4699</u> |
| Adjustment to Average Risk Premium | 1.50% |
| (a) Average Risk Premium over Study Period | <u>3.63%</u> |
| Adjusted Risk Premium | 5.13% |

Implied Cost of Equity

| | |
|---|---------------|
| (b) Triple-B Utility Bond Yield 2021-25 | 5.07% |
| Adjusted Equity Risk Premium | <u>5.13%</u> |
| Risk Premium Cost of Equity | 10.20% |

(a) Exhibit AMM-8, page 4.

(b) Based on data from IHS Global Insight, Long-Term Macro Forecast - Baseline (Oct. 15, 2019); Energy Information Administration, Annual Energy Outlook 2020 (Jan. 29, 2020); Moody's Investors Service at www.credittrends.com.

(c) Exhibit AMM-8, page 5.

AUTHORIZED RETURNS

| Year | Qtr. | (a) | (b) | Risk Premium | Year | Qtr. | (a) | (b) | Risk Premium |
|------|------|-------------|-----------------------------|--------------|------|--------|-------------|-----------------------------|--------------|
| | | Allowed ROE | Single-A Utility Bond Yield | | | | Allowed ROE | Single-A Utility Bond Yield | |
| 1980 | 1 | 13.45% | 13.49% | -0.04% | 1990 | 1 | 12.60% | 9.72% | 2.88% |
| | 2 | 14.38% | 12.87% | 1.51% | | 2 | 12.81% | 9.91% | 2.90% |
| | 3 | 13.87% | 12.88% | 0.99% | | 3 | 12.34% | 9.93% | 2.41% |
| | 4 | 14.35% | 14.11% | 0.24% | | 4 | 12.77% | 9.89% | 2.88% |
| 1981 | 1 | 14.69% | 14.77% | -0.08% | 1991 | 1 | 12.69% | 9.58% | 3.11% |
| | 2 | 14.61% | 15.82% | -1.21% | | 2 | 12.53% | 9.50% | 3.03% |
| | 3 | 14.86% | 16.65% | -1.79% | | 3 | 12.43% | 9.33% | 3.10% |
| | 4 | 15.70% | 16.57% | -0.87% | | 4 | 12.38% | 9.02% | 3.36% |
| 1982 | 1 | 15.55% | 16.72% | -1.17% | 1992 | 1 | 12.42% | 8.91% | 3.51% |
| | 2 | 15.62% | 16.26% | -0.64% | | 2 | 11.98% | 8.86% | 3.12% |
| | 3 | 15.72% | 15.88% | -0.16% | | 3 | 11.87% | 8.47% | 3.40% |
| | 4 | 15.62% | 14.56% | 1.06% | | 4 | 11.94% | 8.53% | 3.41% |
| 1983 | 1 | 15.41% | 14.15% | 1.26% | 1993 | 1 | 11.75% | 8.07% | 3.68% |
| | 2 | 14.84% | 13.58% | 1.26% | | 2 | 11.71% | 7.81% | 3.90% |
| | 3 | 15.24% | 13.52% | 1.72% | | 3 | 11.39% | 7.28% | 4.11% |
| | 4 | 15.41% | 13.38% | 2.03% | | 4 | 11.15% | 7.22% | 3.93% |
| 1984 | 1 | 15.39% | 13.56% | 1.83% | 1994 | 1 | 11.12% | 7.55% | 3.57% |
| | 2 | 15.07% | 14.72% | 0.35% | | 2 | 10.81% | 8.29% | 2.52% |
| | 3 | 15.37% | 14.47% | 0.90% | | 3 | 10.95% | 8.51% | 2.44% |
| | 4 | 15.33% | 13.38% | 1.95% | | 4 | 11.64% | 8.87% | 2.77% |
| 1985 | 1 | 15.03% | 13.31% | 1.72% | 1995 | 1 | (c) | -- | -- |
| | 2 | 15.44% | 12.95% | 2.49% | | 2 | 11.00% | 7.93% | 3.07% |
| | 3 | 14.64% | 12.11% | 2.53% | | 3 | 11.07% | 7.72% | 3.35% |
| | 4 | 14.44% | 11.49% | 2.95% | | 1996 | 4 | 11.56% | 7.37% |
| 1986 | 1 | 14.05% | 10.18% | 3.87% | 1 | | 11.45% | 7.44% | 4.01% |
| | 2 | 13.28% | 9.41% | 3.87% | 2 | | 10.88% | 7.98% | 2.90% |
| | 3 | 13.09% | 9.39% | 3.70% | 3 | | 11.25% | 7.96% | 3.29% |
| | 4 | 13.62% | 9.31% | 4.31% | 1997 | 4 | 11.32% | 7.62% | 3.70% |
| 1987 | 1 | 12.61% | 8.96% | 3.65% | | 1 | 11.31% | 7.76% | 3.55% |
| | 2 | 13.13% | 9.77% | 3.36% | | 2 | 11.70% | 7.88% | 3.82% |
| | 3 | 12.56% | 10.61% | 1.95% | | 3 | 12.00% | 7.49% | 4.51% |
| | 4 | 12.73% | 11.05% | 1.68% | 4 | 11.01% | 7.25% | 3.76% | |
| 1988 | 1 | 12.94% | 10.32% | 2.62% | 1998 | 1 | (c) | -- | -- |
| | 2 | 12.48% | 10.71% | 1.77% | | 2 | 11.37% | 7.12% | 4.25% |
| | 3 | 12.79% | 10.94% | 1.85% | | 3 | 11.41% | 6.99% | 4.42% |
| | 4 | 12.98% | 9.98% | 3.00% | | 4 | 11.69% | 6.97% | 4.72% |
| 1989 | 1 | 12.99% | 10.13% | 2.86% | 1999 | 1 | 10.82% | 7.11% | 3.71% |
| | 2 | 13.25% | 9.94% | 3.31% | | 2 | 10.82% | 7.48% | 3.34% |
| | 3 | 12.56% | 9.53% | 3.03% | | 3 | (c) | -- | -- |
| | 4 | 12.94% | 9.50% | 3.44% | | 4 | 10.33% | 8.05% | 2.28% |

AUTHORIZED RETURNS

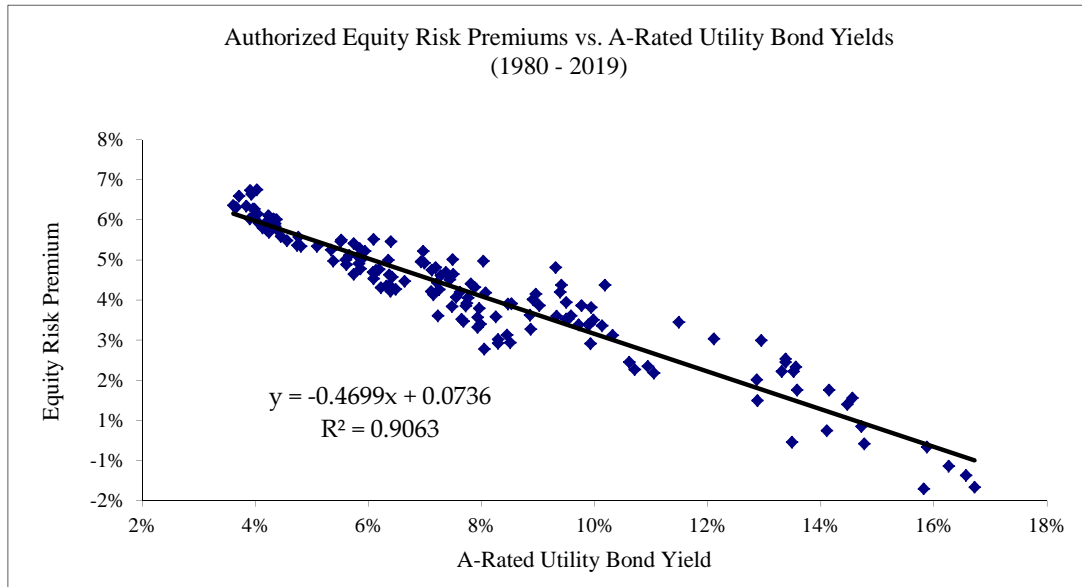
| Year | Qtr. | (a) | (b) | | Year | Qtr. | (a) | (b) | |
|------|------|-------------|--------------------|--------------|----------------|------|---------------|--------------------|--------------|
| | | Allowed ROE | Utility Bond Yield | Risk Premium | | | Allowed ROE | Utility Bond Yield | Risk Premium |
| 2000 | 1 | 10.71% | 8.29% | 2.42% | 2010 | 1 | 10.24% | 5.83% | 4.41% |
| | 2 | 11.08% | 8.45% | 2.63% | | 2 | 9.99% | 5.61% | 4.38% |
| | 3 | 11.33% | 8.25% | 3.08% | | 3 | 9.93% | 5.09% | 4.84% |
| | 4 | 12.50% | 8.03% | 4.47% | | 4 | 10.09% | 5.34% | 4.75% |
| 2001 | 1 | 11.16% | 7.74% | 3.42% | 2011 | 1 | 10.10% | 5.60% | 4.50% |
| | 2 | 10.75% | 7.93% | 2.82% | | 2 | 9.85% | 5.38% | 4.47% |
| | 3 | (c) | -- | -- | | 3 | 9.65% | 4.81% | 4.84% |
| | 4 | 10.65% | 7.68% | 2.97% | | 4 | 9.88% | 4.37% | 5.51% |
| 2002 | 1 | 10.67% | 7.65% | 3.02% | 2012 | 1 | 9.63% | 4.39% | 5.24% |
| | 2 | 11.64% | 7.50% | 4.14% | | 2 | 9.83% | 4.23% | 5.60% |
| | 3 | 11.50% | 7.19% | 4.31% | | 3 | 9.75% | 3.98% | 5.77% |
| | 4 | 10.78% | 7.15% | 3.63% | | 4 | 10.07% | 3.93% | 6.14% |
| 2003 | 1 | 11.38% | 6.93% | 4.45% | 2013 | 1 | 9.57% | 4.18% | 5.39% |
| | 2 | 11.36% | 6.40% | 4.96% | | 2 | 9.47% | 4.23% | 5.24% |
| | 3 | 10.61% | 6.64% | 3.97% | | 3 | 9.60% | 4.74% | 4.86% |
| | 4 | 10.84% | 6.35% | 4.49% | | 4 | 9.83% | 4.76% | 5.07% |
| 2004 | 1 | 11.10% | 6.09% | 5.01% | 2014 | 1 | 9.54% | 4.56% | 4.98% |
| | 2 | 10.25% | 6.48% | 3.77% | | 2 | 9.84% | 4.32% | 5.52% |
| | 3 | 10.37% | 6.13% | 4.24% | | 3 | 9.45% | 4.20% | 5.25% |
| | 4 | 10.66% | 5.94% | 4.72% | | 4 | 10.28% | 4.03% | 6.25% |
| 2005 | 1 | 10.65% | 5.74% | 4.91% | 2015 | 1 | 9.47% | 3.66% | 5.81% |
| | 2 | 10.52% | 5.52% | 5.00% | | 2 | 9.43% | 4.13% | 5.30% |
| | 3 | 10.47% | 5.51% | 4.96% | | 3 | 9.75% | 4.35% | 5.40% |
| | 4 | 10.40% | 5.82% | 4.58% | | 4 | 9.68% | 4.35% | 5.33% |
| 2006 | 1 | 10.63% | 5.85% | 4.78% | 2016 | 1 | 9.48% | 4.18% | 5.30% |
| | 2 | 10.50% | 6.37% | 4.13% | | 2 | 9.42% | 3.90% | 5.52% |
| | 3 | 10.45% | 6.19% | 4.26% | | 3 | 9.47% | 3.61% | 5.86% |
| | 4 | 10.14% | 5.86% | 4.28% | | 4 | 9.68% | 4.04% | 5.64% |
| 2007 | 1 | 10.44% | 5.90% | 4.54% | 2017 | 1 | 9.60% | 4.18% | 5.42% |
| | 2 | 10.12% | 6.09% | 4.03% | | 2 | 9.47% | 4.06% | 5.41% |
| | 3 | 10.03% | 6.22% | 3.81% | | 3 | 10.14% | 3.91% | 6.23% |
| | 4 | 10.27% | 6.08% | 4.19% | | 4 | 9.68% | 3.84% | 5.84% |
| 2008 | 1 | 10.38% | 6.15% | 4.23% | 2018 | 1 | 9.68% | 4.03% | 5.65% |
| | 2 | 10.17% | 6.32% | 3.85% | | 2 | 9.43% | 4.24% | 5.19% |
| | 3 | 10.49% | 6.42% | 4.07% | | 3 | 9.69% | 4.28% | 5.41% |
| | 4 | 10.34% | 7.23% | 3.11% | | 4 | 9.53% | 4.45% | 5.08% |
| 2009 | 1 | 10.24% | 6.37% | 3.87% | 2019 | 1 | 9.55% | 4.25% | 5.30% |
| | 2 | 10.11% | 6.39% | 3.72% | | 2 | 9.73% | 3.96% | 5.77% |
| | 3 | 9.88% | 5.74% | 4.14% | | 3 | 9.80% | 3.71% | 6.09% |
| | 4 | 10.27% | 5.66% | 4.61% | | 4 | 9.73% | 3.77% | 5.96% |
| | | | | | Average | | 11.56% | 7.93% | 3.63% |

(a) Regulatory Research Associates, Inc., Major Rate Case Decisions, (Jan. 31, 2020, Jan. 14, 2016, Jan. 7, 2011, Apr. 5, 2004, Jan. 21, 1998, July 12, 1991, and Jan. 16, 1990).

(b) Moody's Investors Service.

(c) No decisions reported.

REGRESSION RESULTS



SUMMARY OUTPUT

| <i>Regression Statistics</i> | |
|------------------------------|-----------|
| Multiple R | 0.9519962 |
| R Square | 0.9062967 |
| Adjusted R Square | 0.9056882 |
| Standard Error | 0.0050491 |
| Observations | 156 |

ANOVA

| | <i>df</i> | <i>SS</i> | <i>MS</i> | <i>F</i> | <i>Significance F</i> |
|------------|-----------|-------------|------------|------------|-----------------------|
| Regression | 1 | 0.037972191 | 0.03797219 | 1489.48482 | 4.5049E-81 |
| Residual | 154 | 0.003926 | 2.5494E-05 | | |
| Total | 155 | 0.041898191 | | | |

| | <i>Coefficients</i> | <i>Standard Error</i> | <i>t Stat</i> | <i>P-value</i> | <i>Lower 95%</i> | <i>Upper 95%</i> | <i>Lower 95.0%</i> | <i>Upper 95.0%</i> |
|--------------|---------------------|-----------------------|---------------|----------------|------------------|------------------|--------------------|--------------------|
| Intercept | 0.0736 | 0.001046755 | 70.2678 | 6.693E-119 | 0.07148533 | 0.075621 | 0.07148533 | 0.07562103 |
| X Variable 1 | -0.4699 | 0.012176339 | -38.5938444 | 4.5049E-81 | -0.49398593 | -0.445878 | -0.4939859 | -0.4458775 |

EXPECTED EARNINGS APPROACH

Exhibit AMM-9

Page 1 of 1

GAS GROUP

| | | (a) | (b) | (c) |
|---|-------------------------|---|------------------------------|---|
| | Company | Expected Return on Common Equity | Adjustment Factor | Adjusted Return on Common Equity |
| 1 | Atmos Energy Corp. | 9.0% | 1.0512 | 9.5% |
| 2 | Chesapeake Utilities | 9.5% | 1.0676 | 10.1% |
| 3 | New Jersey Resources | 9.0% | 1.0519 | 9.5% |
| 4 | NiSource Inc. | 12.5% | 1.0059 | 12.6% |
| 5 | Northwest Natural | 11.5% | 1.0192 | 11.7% |
| 6 | ONE Gas, Inc. | 9.5% | 1.0253 | 9.7% |
| 7 | South Jersey Industries | 11.5% | 1.0559 | 12.1% |
| 8 | Southwest Gas | 9.5% | 1.0480 | 10.0% |
| 9 | Spire Inc. | 7.0% | 1.0442 | 7.3% |
| | Average | | | 10.3% |
| | Midpoint (d) | | | 9.9% |

(a) The Value Line Investment Survey (Feb. 28, 2020).

(b) Adjustment to convert year-end return to an average rate of return from Exhibit AMM-5.

(c) (a) x (b).

(d) Average of low and high values.

FLOTATION COST STUDY

Exhibit AMM-10
 Page 1 of 1

VALUE LINE UTILITY INDUSTRIES

| No. | Sym | Company | (1) | (2) | (3) | | (4) | (5) | (6) | (7) | (8) | (9) |
|-----|------|-------------------------------------|------------|---------------|----------------|----------------------|-----------------------|------------------|-----------------------|-----------------------------------|--------------------|---------------|
| | | | Date | Shares Issued | Offering Price | Discount (per share) | Underwriting Discount | Offering Expense | Total Flotation Costs | Gross Proceeds Before Flot. Costs | Flotation Cost (%) | |
| 1 | ALE | ALLETE | 2/27/2014 | 3,220,000 | \$49.75 | \$1.74125 | \$5,606,825 | \$450,000 | \$6,056,825 | \$160,195,000 | 3.781% | |
| 2 | LNT | Alliant Energy | 11/14/2019 | 3,717,502 | \$52.63 | \$0.39500 | \$1,468,413 | \$500,000 | \$1,968,413 | \$195,652,130 | 1.006% | |
| 3 | AEE | Ameren Corp. | 8/5/2019 | 7,549,205 | \$74.30 | \$0.12000 | \$905,905 | \$750,000 | \$1,655,905 | \$560,905,932 | 0.295% | |
| 4 | AEP | American Elec Pwr | 4/2/2009 | 69,000,000 | \$24.50 | \$0.73500 | \$50,715,000 | \$400,000 | \$51,115,000 | \$1,690,500,000 | 3.024% | |
| 5 | AGR | Avangrid, Inc. | | | | | N/A | | | | | |
| 6 | AVA | Avista Corp. | 12/13/2006 | 3,162,500 | \$25.05 | \$0.48000 | \$1,518,000 | \$300,000 | \$1,818,000 | \$79,220,625 | 2.295% | |
| 7 | BKH | Black Hills Corp. | 11/19/2015 | 6,325,000 | \$40.25 | \$1.40875 | \$8,910,344 | \$1,200,000 | \$10,110,344 | \$254,581,250 | 3.971% | |
| 8 | CNP | CenterPoint Energy | 9/27/2018 | 60,550,459 | \$27.25 | \$0.75000 | \$45,412,844 | \$1,000,000 | \$46,412,844 | \$1,650,000,008 | 2.813% | |
| 9 | CMS | CMS Energy Corp. | 3/31/2005 | 23,000,000 | \$12.25 | \$0.42880 | \$9,862,400 | \$325,000 | \$10,187,400 | \$281,750,000 | 3.616% | |
| 10 | ED | Consolidated Edison (a) | 5/7/2019 | 5,800,000 | \$84.83 | \$0.59000 | \$3,422,000 | \$400,000 | \$3,822,000 | \$492,014,000 | 0.777% | |
| 11 | D | Dominion Energy (a) | 3/29/2018 | 20,000,000 | \$67.33 | \$1.89420 | \$37,884,000 | \$450,000 | \$38,334,000 | \$1,346,516,000 | 2.847% | |
| 12 | DTE | DTE Energy Co. | 10/29/2019 | 2,400,000 | \$126.00 | \$3.15000 | \$7,560,000 | \$300,000 | \$7,860,000 | \$302,400,000 | 2.599% | |
| 13 | DUK | Duke Energy Corp. (a) | 11/18/2019 | 25,000,000 | \$85.99 | \$2.66000 | \$66,500,000 | \$592,000 | \$67,092,000 | \$2,149,750,000 | 3.121% | |
| 14 | EIX | Edison International | 7/30/2019 | 28,000,000 | \$68.50 | \$1.62688 | \$45,552,500 | \$725,000 | \$46,277,500 | \$1,918,000,000 | 2.413% | |
| 15 | EE | El Paso Electric Co. | | | | | N/A | | | | | |
| 16 | ETR | Entergy Corp. | 6/8/2018 | 13,289,037 | \$75.25 | \$0.80000 | \$10,631,230 | \$650,000 | \$11,281,230 | \$1,000,000,034 | 1.128% | |
| 17 | EVRG | Eversource Energy | | | | | N/A | | | | | |
| 18 | ES | Eversource Energy | 5/30/2019 | 15,600,000 | \$71.48 | \$1.69000 | \$26,364,000 | \$615,000 | \$26,979,000 | \$1,115,088,000 | 2.419% | |
| 19 | EXC | Exelon Corp. | 6/13/2014 | 57,500,000 | \$35.00 | \$1.05000 | \$60,375,000 | \$600,000 | \$60,975,000 | \$2,012,500,000 | 3.030% | |
| 20 | FE | FirstEnergy Corp. | 9/15/2003 | 32,200,000 | \$30.00 | \$0.97500 | \$31,395,000 | \$423,000 | \$31,818,000 | \$966,000,000 | 3.294% | |
| 21 | FTS | Fortis Inc. | | | | | N/A | | | | | |
| 22 | HE | Hawaiian Elec. | 3/20/2013 | 7,000,000 | \$26.75 | \$1.00312 | \$7,021,840 | \$450,000 | \$7,471,840 | \$187,250,000 | 3.990% | |
| 23 | IDA | IDACORP, Inc. | 12/10/2004 | 4,025,000 | \$30.00 | \$1.20000 | \$4,830,000 | \$300,000 | \$5,130,000 | \$120,750,000 | 4.248% | |
| 24 | MGEE | MGE Energy | 9/10/2004 | 1,265,000 | \$31.85 | \$1.03500 | \$1,309,275 | \$125,000 | \$1,434,275 | \$40,290,250 | 3.560% | |
| 25 | NEE | NextEra Energy, Inc. (a) | 11/3/2016 | 13,800,000 | \$124.00 | \$1.89000 | \$26,082,000 | \$750,000 | \$26,832,000 | \$1,711,200,000 | 1.568% | |
| 26 | NWE | NorthWestern Corp. (a) | 9/30/2015 | 1,100,000 | \$51.81 | \$1.33000 | \$1,463,000 | \$1,000,000 | \$2,463,000 | \$56,991,000 | 4.322% | |
| 27 | OGE | OGE Energy Corp. | 8/22/2003 | 5,324,074 | \$21.60 | \$0.79000 | \$4,206,018 | \$325,000 | \$4,531,018 | \$114,999,998 | 3.940% | |
| 28 | OTTR | Otter Tail Corp. | | | | | N/A | | | | | |
| 29 | PNW | Pinnacle West Capital | 4/9/2010 | 6,900,000 | \$38.00 | \$1.33000 | \$9,177,000 | \$190,000 | \$9,367,000 | \$262,200,000 | 3.572% | |
| 30 | PNM | PNM Resources | 1/7/2020 | 5,375,000 | \$47.21 | \$1.99000 | \$10,696,250 | \$750,000 | \$11,446,250 | \$253,753,750 | 4.511% | |
| 31 | POR | Portland General Elec. | 6/13/2013 | 12,765,000 | \$29.50 | \$0.95875 | \$12,238,444 | \$600,000 | \$12,838,444 | \$376,567,500 | 3.409% | |
| 32 | PPL | PPL Corp. | 5/10/2018 | 55,000,000 | \$27.00 | \$0.29430 | \$16,186,500 | \$1,000,000 | \$17,186,500 | \$1,485,000,000 | 1.157% | |
| 33 | PEG | Pub Sv Enterprise Grp. | 10/2/2003 | 9,487,500 | \$41.75 | \$1.25250 | \$11,883,094 | \$350,000 | \$12,233,094 | \$396,103,125 | 3.088% | |
| 34 | SRE | Sempra Energy | 1/5/2018 | 26,869,158 | \$107.00 | \$1.92600 | \$51,749,998 | \$1,500,000 | \$53,249,998 | \$2,874,999,906 | 1.852% | |
| 35 | SO | Southern Company (a) | 8/18/2016 | 32,500,000 | \$49.30 | \$1.66000 | \$53,950,000 | \$557,000 | \$54,507,000 | \$1,602,250,000 | 3.402% | |
| 36 | WEC | WEC Energy Group | | | | | N/A | | | | | |
| 37 | XEL | Xcel Energy Inc. (a) | 10/30/2019 | 10,300,000 | \$62.69 | \$0.63000 | \$6,489,000 | \$650,000 | \$7,139,000 | \$645,707,000 | 1.106% | |
| | | Average | | | | | | | | | | 2.779% |
| 1 | ATO | Atmos Energy Corp. | 11/30/2018 | 7,008,087 | \$92.75 | \$0.97690 | \$6,846,200 | \$1,000,000 | \$7,846,200 | \$650,000,069 | 1.207% | |
| 2 | CPK | Chesapeake Utilities | 9/23/2016 | 960,488 | \$62.26 | \$2.33000 | \$2,237,937 | \$162,046 | \$2,399,983 | \$59,799,983 | 4.013% | |
| 3 | NJR | New Jersey Resources | 12/4/2019 | 5,700,000 | \$41.25 | \$1.23750 | \$7,053,750 | \$500,000 | \$7,553,750 | \$235,125,000 | 3.213% | |
| 4 | NI | NiSource Inc. | 5/3/2017 | N/A | N/A | N/A | \$10,000,000 | \$57,950 | \$10,057,950 | \$500,000,000 | 2.012% | |
| 5 | NWN | Northwest Nat. Holding Co. | 6/4/2019 | 1,250,000 | \$67.00 | \$2.17750 | \$2,721,875 | \$400,000 | \$3,121,875 | \$83,750,000 | 3.728% | |
| 6 | OGS | ONE Gas, Inc. | | | | | N/A | | | | | |
| 7 | SJI | South Jersey Industries | 4/20/2018 | 11,016,949 | \$29.50 | \$1.03250 | \$11,375,000 | \$700,000 | \$12,075,000 | \$324,999,996 | 3.715% | |
| 8 | SWX | Southwest Gas | 11/28/2018 | 3,100,000 | \$75.50 | \$2.54810 | \$7,899,110 | \$600,000 | \$8,499,110 | \$234,050,000 | 3.631% | |
| 9 | SR | Spire Inc. | 5/9/2018 | 2,000,000 | \$63.05 | \$2.10938 | \$4,218,760 | \$325,000 | \$4,543,760 | \$126,100,000 | 3.603% | |
| 10 | UGI | UGI Corporation | 3/18/2004 | 8,625,000 | \$32.10 | \$1.40440 | \$12,112,950 | \$1,149,550 | \$13,262,500 | \$276,862,500 | 4.790% | |
| | | Average | | | | | | | | | | 3.324% |
| | | Average - Electric & Gas | | | | | | | | | | 2.902% |

Column Notes:

- (1-4) SEC Form 424B for each company.
- (5) Column (2) * Column (4)
- (6) SEC Form 424B for each company.
- (7) Column (5) + Column (6)
- (8) Column (2) * Column (3)
- (9) Column (7) / Column (8)

Note (a): Underwriting discount computed as the difference between the current market price and the price offered to the issuing company by the underwriters.

DCF MODEL - NON-UTILITY GROUP

Exhibit AMM-11

Page 1 of 3

DIVIDEND YIELD

| | Company | Industry Group | (a) Price | (b) Dividends | Yield |
|----|--------------------------|-----------------------|----------------------|--------------------------|--------------|
| 1 | Allstate Corp. | Insurance (Prop/Cas.) | \$ 111.29 | \$ 2.00 | 1.8% |
| 2 | Altria Group | Tobacco | \$ 50.27 | \$ 3.36 | 6.7% |
| 3 | Amdocs Ltd. | IT Services | \$ 71.31 | \$ 1.14 | 1.6% |
| 4 | Amer. Tower 'A' | Wireless Networking | \$ 220.15 | \$ 4.42 | 2.0% |
| 5 | AT&T Inc. | Telecom. Services | \$ 38.56 | \$ 2.08 | 5.4% |
| 6 | AvalonBay Communities | R.E.I.T. | \$ 210.11 | \$ 6.40 | 3.0% |
| 7 | Bristol-Myers Squibb | Drug | \$ 62.29 | \$ 1.80 | 2.9% |
| 8 | Brown-Forman 'B' | Beverage | \$ 66.13 | \$ 0.70 | 1.1% |
| 9 | Campbell Soup | Food Processing | \$ 48.18 | \$ 1.40 | 2.9% |
| 10 | Cboe Global Markets | Brokers & Exchanges | \$ 118.29 | \$ 1.44 | 1.2% |
| 11 | Church & Dwight | Household Products | \$ 69.87 | \$ 0.91 | 1.3% |
| 12 | Clorox Co. | Household Products | \$ 151.68 | \$ 4.24 | 2.8% |
| 13 | CME Group | Brokers & Exchanges | \$ 203.78 | \$ 3.00 | 1.5% |
| 14 | Coca-Cola | Beverage | \$ 54.49 | \$ 1.66 | 3.0% |
| 15 | Colgate-Palmolive | Household Products | \$ 68.36 | \$ 1.72 | 2.5% |
| 16 | Equity Residential | R.E.I.T. | \$ 81.81 | \$ 2.41 | 2.9% |
| 17 | Federal Rlty. Inv. Trust | R.E.I.T. | \$ 128.50 | \$ 4.22 | 3.3% |
| 18 | Gen'l Mills | Food Processing | \$ 52.80 | \$ 1.96 | 3.7% |
| 19 | Hershey Co. | Food Processing | \$ 147.25 | \$ 3.20 | 2.2% |
| 20 | Hormel Foods | Food Processing | \$ 44.99 | \$ 0.93 | 2.1% |
| 21 | Intercontinental Exch. | Brokers & Exchanges | \$ 93.09 | \$ 1.10 | 1.2% |
| 22 | Johnson & Johnson | Med Supp Non-Invasive | \$ 142.77 | \$ 3.80 | 2.7% |
| 23 | Kellogg | Food Processing | \$ 67.29 | \$ 2.32 | 3.4% |
| 24 | Kimberly-Clark | Household Products | \$ 136.78 | \$ 4.28 | 3.1% |
| 25 | Lilly (Eli) | Drug | \$ 126.57 | \$ 2.96 | 2.3% |
| 26 | Lockheed Martin | Aerospace/Defense | \$ 392.84 | \$ 9.60 | 2.4% |
| 27 | McCormick & Co. | Food Processing | \$ 168.99 | \$ 2.48 | 1.5% |
| 28 | McDonald's Corp. | Restaurant | \$ 197.83 | \$ 5.00 | 2.5% |
| 29 | PepsiCo, Inc. | Beverage | \$ 136.35 | \$ 3.95 | 2.9% |
| 30 | Procter & Gamble | Household Products | \$ 124.12 | \$ 2.98 | 2.4% |
| 31 | Public Storage | R.E.I.T. | \$ 211.13 | \$ 8.40 | 4.0% |
| 32 | Realty Income Corp. | R.E.I.T. | \$ 73.98 | \$ 2.80 | 3.8% |
| 33 | Republic Services | Environmental | \$ 89.30 | \$ 1.65 | 1.8% |
| 34 | Smucker (J.M.) | Food Processing | \$ 104.08 | \$ 3.56 | 3.4% |
| 35 | Sysco Corp. | Retail/Wholesale Food | \$ 83.78 | \$ 1.80 | 2.1% |
| 36 | Verizon Communic. | Telecom. Services | \$ 60.72 | \$ 2.46 | 4.1% |
| 37 | Walmart Inc. | Retail Store | \$ 118.98 | \$ 2.16 | 1.8% |
| 38 | Waste Management | Environmental | \$ 113.20 | \$ 2.05 | 1.8% |
| | Average | | | | 2.7% |

(a) Average of closing prices for 30 trading days ended Jan. 10, 2020.

(b) The Value Line Investment Survey, *Summary & Index* (Jan. 3, 2019).

DCF MODEL - NON-UTILITY GROUP

Exhibit AMM-11

Page 2 of 3

GROWTH RATES

| | Company | (a) | (b) | (c) |
|----|--------------------------|------------------------------|-------------|--------------|
| | | Earnings Growth Rates | | |
| | | V Line | IBES | Zacks |
| 1 | Allstate Corp. | 10.50% | 9.17% | 8.33% |
| 2 | Altria Group | 8.50% | 6.17% | 6.40% |
| 3 | Amdocs Ltd. | 10.00% | 5.50% | 8.50% |
| 4 | Amer. Tower 'A' | 7.50% | 22.80% | 18.44% |
| 5 | AT&T Inc. | 5.50% | 4.16% | 4.42% |
| 6 | AvalonBay Communities | n/a | 2.54% | 6.18% |
| 7 | Bristol-Myers Squibb | 9.00% | 15.05% | 13.36% |
| 8 | Brown-Forman 'B' | 14.50% | 6.90% | 7.50% |
| 9 | Campbell Soup | 2.00% | 7.36% | 5.95% |
| 10 | Cboe Global Markets | 14.50% | 2.14% | 5.91% |
| 11 | Church & Dwight | 9.00% | 8.03% | 8.70% |
| 12 | Clorox Co. | 3.50% | 3.44% | 5.08% |
| 13 | CME Group | 3.00% | 6.09% | 8.03% |
| 14 | Coca-Cola | 6.50% | 5.08% | 6.55% |
| 15 | Colgate-Palmolive | 5.50% | 0.89% | 4.34% |
| 16 | Equity Residential | n/a | 2.70% | 6.18% |
| 17 | Federal Rlty. Inv. Trust | n/a | 6.70% | 4.63% |
| 18 | Gen'l Mills | 4.50% | 5.53% | 7.00% |
| 19 | Hershey Co. | 7.00% | 8.04% | 7.00% |
| 20 | Hormel Foods | 10.50% | 3.20% | 6.06% |
| 21 | Intercontinental Exch. | 10.50% | 9.49% | 8.53% |
| 22 | Johnson & Johnson | 12.00% | 5.87% | 6.84% |
| 23 | Kellogg | 3.50% | -0.70% | 6.00% |
| 24 | Kimberly-Clark | 7.50% | 5.39% | 5.49% |
| 25 | Lilly (Eli) | 12.00% | 11.80% | 11.31% |
| 26 | Lockheed Martin | 12.50% | 13.55% | 7.09% |
| 27 | McCormick & Co. | 8.00% | 6.10% | 7.05% |
| 28 | McDonald's Corp. | 8.50% | 6.05% | 8.42% |
| 29 | PepsiCo, Inc. | 6.50% | 4.24% | 6.99% |
| 30 | Procter & Gamble | 9.00% | 8.37% | 7.47% |
| 31 | Public Storage | n/a | 17.00% | 3.58% |
| 32 | Realty Income Corp. | n/a | 5.45% | 3.67% |
| 33 | Republic Services | 11.50% | 8.40% | 8.38% |
| 34 | Smucker (J.M.) | 3.50% | 1.15% | 2.50% |
| 35 | Sysco Corp. | 10.50% | 8.33% | 9.87% |
| 36 | Verizon Communic. | 4.00% | 2.34% | 3.22% |
| 37 | Walmart Inc. | 7.50% | 5.18% | 4.95% |
| 38 | Waste Management | 8.50% | 8.25% | 8.24% |

(a) The Value Line Investment Survey (various editions as of Jan. 10, 2020).

(b) www.finance.yahoo.com (retrieved Jan 13, 2020).

(c) www.zacks.com (retrieved Jan. 20, 2019).

DCF MODEL - NON-UTILITY GROUP

Exhibit AMM-11

Page 3 of 3

DCF COST OF EQUITY ESTIMATES

| | (a) | (a) | (a) |
|-----------------------------|---------------|--------------|--------------|
| Company | V Line | IBES | Zacks |
| 1 Allstate Corp. | 12.3% | 11.0% | 10.1% |
| 2 Altria Group | 15.2% | 12.9% | 13.1% |
| 3 Amdocs Ltd. | 11.6% | 7.1% | 10.1% |
| 4 Amer. Tower 'A' | 9.5% | 24.8% | 20.4% |
| 5 AT&T Inc. | 10.9% | 9.6% | 9.8% |
| 6 AvalonBay Communities | n/a | 5.6% | 9.2% |
| 7 Bristol-Myers Squibb | 11.9% | 17.9% | 16.2% |
| 8 Brown-Forman 'B' | 15.6% | 8.0% | 8.6% |
| 9 Campbell Soup | 4.9% | 10.3% | 8.9% |
| 10 Cboe Global Markets | 15.7% | 3.4% | 7.1% |
| 11 Church & Dwight | 10.3% | 9.3% | 10.0% |
| 12 Clorox Co. | 6.3% | 6.2% | 7.9% |
| 13 CME Group | 4.5% | 7.6% | 9.5% |
| 14 Coca-Cola | 9.5% | 8.1% | 9.6% |
| 15 Colgate-Palmolive | 8.0% | 3.4% | 6.9% |
| 16 Equity Residential | n/a | 5.6% | 9.1% |
| 17 Federal Rlty. Inv. Trust | n/a | 10.0% | 7.9% |
| 18 Gen'l Mills | 8.2% | 9.2% | 10.7% |
| 19 Hershey Co. | 9.2% | 10.2% | 9.2% |
| 20 Hormel Foods | 12.6% | 5.3% | 8.1% |
| 21 Intercontinental Exch. | 11.7% | 10.7% | 9.7% |
| 22 Johnson & Johnson | 14.7% | 8.5% | 9.5% |
| 23 Kellogg | 6.9% | 2.7% | 9.4% |
| 24 Kimberly-Clark | 10.6% | 8.5% | 8.6% |
| 25 Lilly (Eli) | 14.3% | 14.1% | 13.6% |
| 26 Lockheed Martin | 14.9% | 16.0% | 9.5% |
| 27 McCormick & Co. | 9.5% | 7.6% | 8.5% |
| 28 McDonald's Corp. | 11.0% | 8.6% | 10.9% |
| 29 PepsiCo, Inc. | 9.4% | 7.1% | 9.9% |
| 30 Procter & Gamble | 11.4% | 10.8% | 9.9% |
| 31 Public Storage | n/a | 21.0% | 7.6% |
| 32 Realty Income Corp. | n/a | 9.2% | 7.5% |
| 33 Republic Services | 13.3% | 10.2% | 10.2% |
| 34 Smucker (J.M.) | 6.9% | 4.6% | 5.9% |
| 35 Sysco Corp. | 12.6% | 10.5% | 12.0% |
| 36 Verizon Communic. | 8.1% | 6.4% | 7.3% |
| 37 Walmart Inc. | 9.3% | 7.0% | 6.8% |
| 38 Waste Management | 10.3% | 10.1% | 10.1% |
| Average (b) | 10.7% | 9.4% | 9.3% |
| Midpoint (b,c) | 10.9% | 10.6% | 10.2% |

(a) Sum of dividend yield (Exhibit AMM-11, p. 1) and respective growth rate (Exhibit AMM-11, p. 2).

(b) Excludes highlighted figures.

(c) Average of low and high values.

CAPITAL STRUCTURE

**Exhibit AMM-12
 Page 1 of 1**

GAS GROUP

| | Year-End 2019 (a) | | Value Line Projected (b) | |
|-----------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| | Debt | Common Equity | Debt | Common Equity |
| 1 Atmos Energy Corp. | 38.0% | 62.0% | 40.0% | 60.0% |
| 2 Chesapeake Utilities | 46.4% | 53.6% | 35.0% | 65.0% |
| 3 New Jersey Resources | 50.1% | 49.9% | 43.5% | 56.5% |
| 4 NiSource Inc. | 56.8% | 43.2% | 55.0% | 45.0% |
| 5 Northwest Natural | 50.4% | 49.6% | 47.5% | 52.5% |
| 6 ONE Gas, Inc. | 37.9% | 62.1% | 38.0% | 62.0% |
| 7 South Jersey Industries | 64.1% | 35.9% | 56.0% | 44.0% |
| 8 Southwest Gas | 49.6% | 50.4% | 43.5% | 56.5% |
| 9 Spire Inc. | 45.5% | 54.5% | 45.0% | 55.0% |
| Average | 48.7% | 51.3% | 44.8% | 55.2% |
| Average - Ex. High and Low | 48.1% | 51.9% | 44.6% | 55.4% |

- (a) SEC Form 10-K reports at fiscal year-end Sep. 30 for Atmos Energy, New Jersey Resources, and Spire Inc.; at fiscal year-end Dec. 31 for Chesapeake Utilities, NiSource, Northwest Natural, One Gas Inc., South Jersey Industries, and Southwest Gas.
- (b) The Value Line Investment Survey (Feb. 28, 2020).