

WHAT IS “ROE,” AND WHY DOES IT MATTER IN SETTING RATES FOR MOBILE GAS?

Stephen G. Hill¹

EXECUTIVE SUMMARY

- ROE is an acronym for the “return on equity,” and is the profit a utility is allowed to earn. It is different from the “weighted return” or overall cost of capital.
- Utility capital costs are lower now than they have been in 50 years.
- The cost of equity for a utility is determined by the return investors require in order to commit capital, i.e., to buy utility common stock.
- The ROE allowed by utility regulators should be equal to the cost of common equity capital in to order balance the interests of stockholders and ratepayers.
- The average allowed ROE for gas and electric utilities in 1990 was between 12% and 13%. The average allowed ROE for utilities in the U.S. in 2012 is approximately 10%.
- The current environment of low capital costs and low interest rates is likely to continue for several years absent a very strong and rapid recovery in the U.S. economy.
- The current RSE for Mobile Gas allows the Company’s ROE to re-set at 13.6%; considerably higher than the average allowed ROE in the U.S. for gas distributors.
- The RSE mechanism imparts lower operating risk to Alabama utilities compared to traditional rate-of-return/rate base regulation.
- If the ROE of Alabama utilities were lowered it would not affect any of the utilities’ operating expenses (salaries, fuel costs, interest expense, etc.) because the ROE is profit—a residual calculated *after* all operating expenses are met.
- A reduction in Mobile Gas’ ROE from 13.6% to 10.0% would reduce rates annually by approximately \$4 Million, or about \$45 per customer.
- ROE and the “weighted return” are not comparable measures of return. The “weighted return” is the weighted-average rate of return of all forms of capital (including debt), while ROE is the return on common equity, the return to the utility stockholder.

¹ Mr. Hill, who is an Alabama native, graduated from Auburn University with a degree in Chemical Engineering, also received an MBA from Tulane and has testified in over 275 regulatory proceedings over the past 30 years on the subject of the cost of capital and other issues related to corporate finance and economics. Mr. Hill’s vitae is attached.

WHAT IS “ROE,” AND WHY DOES IT MATTER IN SETTING RATES FOR MOBILE GAS?

Stephen G. Hill

This paper provides a discussion of the return on equity (ROE), capital structure, and the overall weighted return (ROR) used in utility ratemaking, and why those factors are important to the utility and its stockholders as well as to utility ratepayers. Included in the discussion is a review of the current state of the capital markets and the ROEs currently being allowed for regulated utilities in the United States in comparison to the equity returns being allowed in Alabama. This paper also describes the distinction between ROE and the weighted return (ROR).

What is ROE?

“ROE” is an acronym for “return on equity,” or the return on the common stock of a company. The return on equity, which is usually expressed as a percentage, is calculated by dividing the dollar amount of the return earned by the dollar amount of the equity investment of the utility’s stockholders. If stockholders have invested \$100 in a utility and the utility earns \$10 a year for the stockholders, then the return on equity, ROE, is 10% ($\$10/\100).

In the very simplest terms, the dollar amount of the return on equity (ROE) is the profit or net income earned by the utility. It is the dollar amount left over *after* the utility has paid *all* of its expenses (fuel costs, purchased power or gas costs, salaries, depreciation, taxes, pension costs, as well as any interest or other debt costs).

If regulators allow a utility to earn an ROE of, say, 10%, then, the utility will be expected to earn a profit of 10% after all its expenses and costs of doing business have been met. That 10% level of profit is included in the price charged for utility service along with all the other expenses expected to be incurred by the utility. After those expenses are realized, what is left is the utility’s profit—its ROE. This is a different measure than the “weighted return,” or ROR, which is a blended return of all types of capital used by the utility. That distinction between ROE and ROR is described in detail below

Why does a utility need to earn a profit if it is a monopoly?

A utility needs to earn a profit in order to be able to attract the investment capital necessary to build the utility plant needed to meet the customers’ needs.

Utilities are capital-intensive businesses, which means that the costs of the facilities necessary to produce utility services (generating plants, gas pipelines, transmission lines) are very high relative to the capital requirements of other kinds of industries.

Utilities have to be able to have access to the capital markets to acquire the necessary capital from investors. That access to capital is broadened when investors have incentive to commit capital to the utility, and in order to provide that incentive to investors, the utility needs to make a profit. However, because utilities do not operate in a competitive marketplace that can naturally control prices, it is the role of regulation to ensure that utilities have an opportunity to earn a fair, but not an excessive, profit.

How do investors provide capital to a utility?

There are two primary means by which investors supply capital to utilities: a common equity investment (buying the utility's stock) or a debt investment (buying the utility's bonds).² A common equity investment conveys ownership in the utility to the investor, i.e., the investor has a vote in the matters of corporate governance and, essentially, owns a portion of the company.

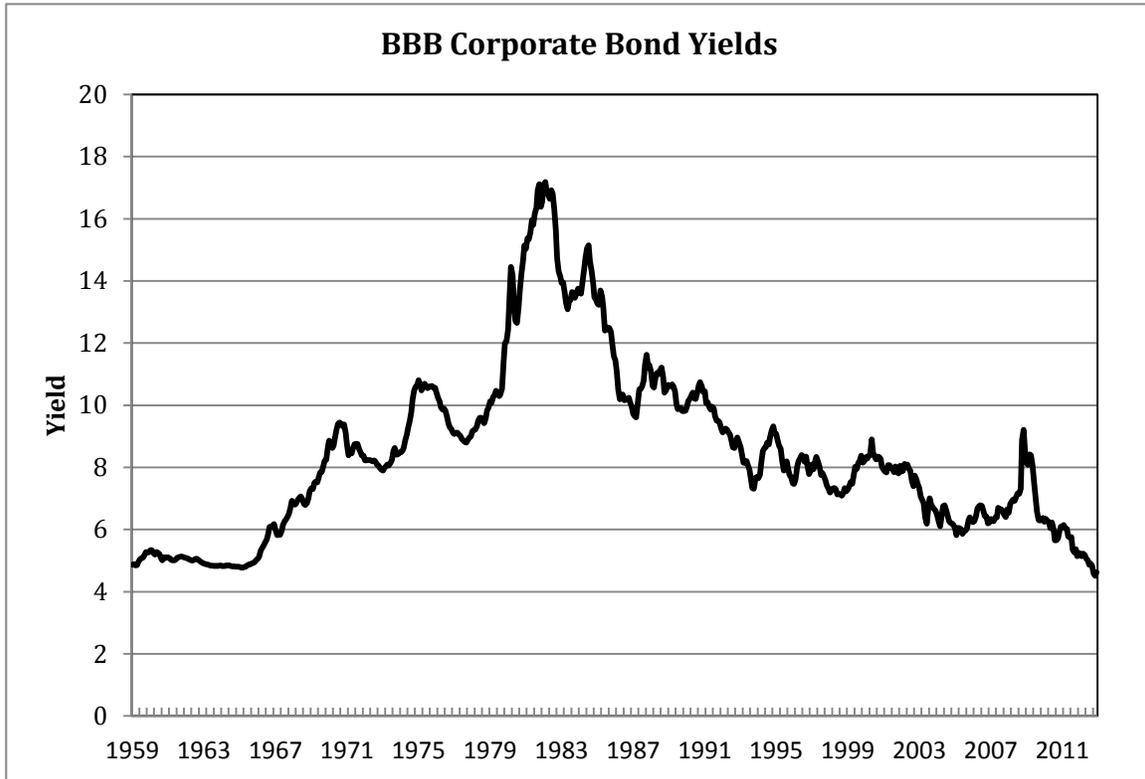
Bonds

A bond investor does not receive any ownership interest in the utility. However, utility debt carries with it a contractual guarantee that the borrower (the utility) will pay the lender (the utility debt investor) a certain percentage of the face value of the bond every year (usually in bi-annual payments). For example, in today's capital markets, long-term (20-30 year) utility debt yields are approximately 4.5%. That means, for every \$100 invested in long-term utility debt, the annual dollar return that investors require in order to contribute funds to the utility by buying utility debt is \$4.50. Therefore, the current cost of utility long-term debt capital is approximately 4.5%.

Chart I below, shows the yield on BBB-rated corporate debt in the U.S. over the past 50 years. The data are published on the website of the Federal Reserve Board (Statistical Release H.15). As is evident in the Chart, the current yield on corporate debt is now lower than it has been since the late 1950s and early 1960s. Current debt capital costs to corporations in the U.S. (including utilities) are low because the return required by investors for that type of capital is lower now than it has been in 50 years. Chart I also shows that capital costs have been declining steadily since their peak in the early 1980s.

² Of course, there are other sub-categories of equity and debt. For example, debt can be either short-term (bank loans, commercial paper) or long-term (mortgage bonds or debentures). Also, there is a hybrid form of capital called preferred stock, which conveys ownership to the investor (like common stock) but has a contractual return associated with it (like debt). That return for preferred stock is between the return for debt and the return for equity. However, in this discussion we will focus only on the general categories of investor-supplied capital: debt and common equity.

Chart I



Stock

The other type of investor-supplied capital, common stock (common equity), does not have a specified or contractual return and is, therefore, a riskier investment than an investment in utility debt. However, utility common stocks reliably pay dividends and those stocks are considered to be relatively conservative (low-risk) investments. Nevertheless, the dividend to the stockholder is not guaranteed contractually as is a debt payment, and dividends may be reduced or even omitted if a utility company finds itself in financial difficulty.

Risk and return are directly related, i.e., as the risk of the investment increases the return required to attract investors also increases. As a result, the return required by investors in order to invest in the common equity of a utility will be higher than the return required by debt investors. So, the current cost of common equity is higher than the current 4.5% cost of long-term debt due to the increased investment risks associated with common equity.

How is the cost of equity for a public utility determined by regulators?

While the cost of debt to the utility is easily determined due to the contractual nature of that form of capital, there is no similar contract between the equity investor (the stockholder) and the utility. Therefore, the cost of equity to a utility must be estimated through econometric modeling techniques.

As with debt capital, the cost to the utility of common equity capital is the rate of return investors require in order to commit their money to that type of investment. If the investor requires a 10% return in order to invest in utility common equity capital (to buy stock in a utility company), then the cost of common equity capital to the utility is 10%.

The primary methods used to estimate the cost of equity are the Discounted Cash Flow method (DCF) and a type of Risk Premium method called the Capital Asset Pricing Model (CAPM). Both of those methodologies were developed in the 1960s and began to be widely applied in utility regulation during the 1970s.³

The DCF relies on the theory of compound interest. For example, when we borrow money to buy a car our monthly car payments are determined through a compound interest calculation. The DCF analysis assumes that the current stock price (P) is the present value of all dividends that are to be paid to the stockholder in the future. Through the DCF analysis, the discount rate that equates the expected dividend stream with the current stock price is estimated. That discount rate is the rate of return that equity investors require in order to invest in utility stock, which is the cost of capital for utility common equity.

With the CAPM analysis, a percentage risk premium (commensurate with the risk of utility equity capital) is added to a risk-free rate of interest. The risk-free rate of interest is the current yield on long-term U.S. government bonds (Treasury bonds), and the risk of a utility investment compared to that of the stock market as a whole is estimated by a “beta” coefficient.⁴ The sum of the risk-free rate and the risk-adjusted return premium required by utility investors used in the CAPM analysis provides another method with which the investors’ required return can be estimated.

There are other methods used to estimate the cost of equity, but the DCF and the CAPM/Risk Premium methods are the most widely used in regulation.

Should the ROE allowed by regulators relate to current conditions in the capital markets?

Yes. There are several reasons why the ROE awarded by the regulatory body and included in utility rates should be equal to the current cost of equity capital determined by investors in the capital markets.

First, utility rates are designed to be cost-based. That is, in order to be both economically efficient and fair to both the utility and its ratepayers, the rates for the utility should be based on the actual costs the company will incur—no more, no less. The cost of common equity is a necessary cost of doing business. Unless the utility is

³ Prior to the time when modern financial methods were developed to estimate the cost of equity, a methodology termed “Comparable Earnings” was used. With that methodology, utilities were allowed returns similar to the returns being earned by other similar-risk firms.

⁴ “Beta” is a relative risk measure based on the volatility of the return of a particular type of stock to that of the stock market as a whole. A stock with volatility risk equal to that of the market has a beta of 1.0, and stocks like utilities that are considered to be less risky than the market as a whole have betas lower than 1.0. Currently electric utility betas are approximately 0.75.

able to offer the investor the return he or she requires it will not be able to attract the capital necessary to undertake its public service obligations. Therefore, the cost of equity capital should be recovered in rates just as any other legitimate cost of doing business.

Second, regulation is designed to implement the discipline of the competitive marketplace in a situation where competition does not exist.⁵ In a fully competitive environment investors can only earn a return equivalent to the cost of capital.

For example, if one firm in a fully competitive market begins to earn a profit higher than the cost of capital (the technical term for that is “extracting economic rents”), other firms will enter the market, driving down the price and lowering the earned return for all firms back to the cost of equity capital.

If, on the other hand, the competitors are earning a return below their cost of capital, some will not be able to attract the capital necessary to continue the business and will leave that competitive sector. With fewer competitors, the profitability of sector is improved—but only up to the cost of capital. Therefore, if regulation is to duplicate the discipline of the competitive market place in order to promote economic efficiency and a balanced distribution of resources, the ROE allowed should equal the cost of equity capital—the return investors require.

Third, if the allowed ROE is different from the cost of equity capital, it will have an impact on the rate of utility investment. If we assume, for example, that a utility’s cost of equity capital is 10% and regulators set rates for the utility using an ROE of 8% (less than the cost of equity capital), the utility will still be able to meet its debt service obligations but the resulting profit (8%) is below the investors’ required return. In that case, in order to achieve his or her required return the equity investors bid down the stock price of the utility so that the required return is earned.

In that case, there is a wealth transfer *to* ratepayers (who have paid a utility rate that was too-low) *from* stockholders (who have suffered a capital loss through a lower stock price). Moreover, in the situation where the allowed return is below the cost of capital, utility management does not have incentive to invest in additional utility plant because it will not earn a return sufficient to pay for the capital used to build it. The result will be under-investment in utility plant and, ultimately, an inability to provide the necessary utility services.

However, if the allowed ROE is, say, 12% and exceeds the cost of equity capital (10%), there will be a wealth transfer from ratepayers to stockholders. Investors’ required return doesn’t change, remaining at 10%. Therefore, with a higher allowed profit level, the stock price will be bid up to the point where the investors are earning their required return. Stockholders benefit from the capital gain occasioned by the

⁵ Utilities operate as the sole provider of a particular service in a franchised service territory because that is the most economically efficient means of delivering a necessary service to society. For example, it would not be efficient or cost effective to have several sets of distribution wires for different competing electric companies in every neighborhood because that would be too costly to build and maintain. So, generally, one company in a particular service territory provides utility service, and the price of that service—including the allowed profit or ROE—is regulated and set by a regulatory commission.

higher stock price while ratepayers provide an equity return in rates (the allowed 12% ROE) that exceeds the cost of that type of capital.

Also, when the allowed return exceeds the cost of capital, there exists an incentive to over-invest in utility rate base. If utility management is able to earn a return on rate base that exceeds the cost of capital used to build plant, there will be incentive for the utility to over-capitalize (over-build) its utility plant. Again, the results are sub-optimal: ratepayers have contributed monies unnecessarily to the utility and the utility has built plant that is not needed.

Investments are undertaken by the utility with no wealth transfer between ratepayers and stockholders *only* when the ROE is set equal to the current cost of equity capital. In that situation the expected earnings generated by the utility plant investment are just sufficient to cover the cost of the capital used to build the plant. Therefore, the only regulatory policy that will produce the optimal utility plant investment at the minimum cost to the company and its ratepayers is to set the allowed return on equity (ROE) equal to the cost of equity capital.

What ROEs are currently being allowed for gas and electric utilities in the U.S?

Chart II, below, which is data from the Edison Electric Institute (EEI), shows the allowed return on equity (ROE) for the electric utility industry from 1990 through the first quarter of 2012. Those data show that the allowed ROE has declined from the 12.5% to 13% range in 1990 to approximately 10% in 2012.

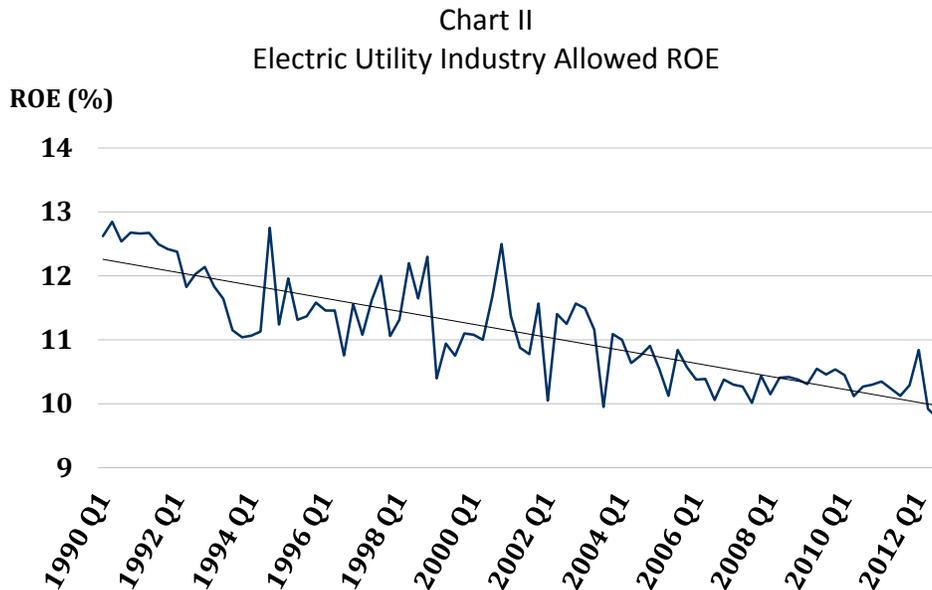
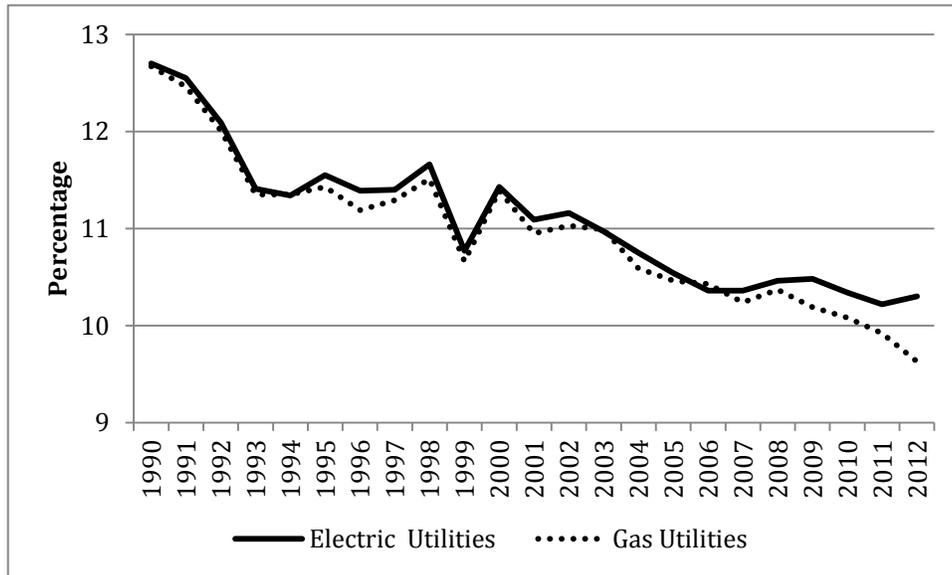


Chart III, below, shows allowed ROE data from Regulatory Research Associates (RRA) for both electric utilities as well as gas distribution utilities. Chart III shows allowed return data from 1990 through the first quarter of 2012, and the same downward trend in the allowed return. Also, Chart III shows that the allowed returns for gas and electric

utilities were very similar until recently, when the allowed returns for gas utilities trended downward to approximately 9.5% while the allowed ROEs for electric utilities followed by RRA remained slightly above 10% (about 10.3%).

Chart III
Electric and Gas Utility Allowed ROE



The most recently available published data, therefore, indicate that the ROE allowed by regulators for both gas and electric utilities was between 12% and 13% two decades ago (1990) but, as capital costs and allowed returns have declined, most recently, the average allowed returns for gas and electric utilities in the U.S. have ranged from approximately 9.5% to 10.3%.

What is the current outlook for the economy and interest rates?

The current outlook over the next couple of years is that the U.S. economic recovery will gain strength and, as a result, the Federal Reserve will discontinue keeping interest rates low in order to ward off potential inflation normally associated with an advancing economy and interest rates will rise to some degree. However, that has been the “outlook” now for several years, and the promised increase in economic activity and the increase in interest rates have not occurred.

It is reasonable to believe that when the U.S. economy begins to advance at a more rapid pace (say, a GDP of 3% to 4% instead of 1%), interest rates and the cost of capital, generally, will begin to increase modestly. However, it is not clear when, or even if, that improvement in economic activity will occur. Therefore, it is just as likely that the economic condition we have seen over the past couple of years (low economic growth, low interest rates) is the “new normal,” and interest rates and capital costs will remain low over the next few years.

What ROE is included in the current Rate Stabilization and Equalization (RSE) tariff for Mobile Gas?

Under the current RSE, which is filed quarterly, Mobile Gas Service Corporation (Mobile Gas, or the Company) is allowed to earn an ROE of between 13.35% and 13.85%.⁶ If the Company's earnings are above or below that amount, rates are to be adjusted so that the earned return will be 13.6%. The return on equity currently being allowed Mobile Gas Service Corporation, as evidenced by the 10% ROEs currently being allowed for other utilities in the U.S., exceeds the Company's cost of common equity capital.

In addition, it is important to note that the RSE mechanism currently in effect in Alabama imparts lower operating or business risk to the utilities under the purview of the Alabama P.S.C. than traditional rate-base/rate-of-return regulation. With the RSE mechanism, the allowed ROE is effectively a guaranteed return, with rates being re-set quarterly in order to achieve the target return (the Adjusting Point in the Equity Return Range). With traditional regulation, rates are set that include an allowed return and are not re-set until the utility comes in for another rate case. During the interim, utilities operating under traditional regulation have far less certainty with regard to their expected profitability. An earnings stream that is more certain (less volatile) is less risky than on that is less certain (more volatile). Therefore, because of the RSE equity return make-whole mechanism, Alabama utilities have lower operating risk than other utilities in the U.S., and the allowed ROEs should reflect that lower risk in order to balance the interests of ratepayers and the companies' stockholders.

If ROEs for Alabama utilities were lowered from current levels to the U.S. average of about 10%, would that have any impact on the utilities' ability to cover its operating costs such as salaries, fuel costs or interest expense?

No. As I noted previously, the ROE or profit is a residual, that is, ROE is what remains *after* all other corporate expenses have been met. So, changing the allowed ROE does not mean the utility will have less money to pay employees, executives, pension costs, coal costs, interest expense or any other operating expense. It only means that the amount of money left over after each of those operating expenses has been met will be smaller.

If Mobile Gas Service Company's ROE were reduced from the current 13.6% target to a 10% target how much would that reduce the Company's rates?

The following analysis will provide an estimate of the rate impact. Mobile Gas' RSE filed February 23, 2013 shows that the Company's return on common equity was \$9.34 Million on a common equity base of \$71.76 Million, which indicates an earned ROE of 13.01%. Trued-up to the 13.6% target currently allowed, rates will be adjusted to

⁶ Alabama PSC Docket 28101.

produce a return on equity of \$9.76 Million. [\$71.76 Million of common equity x 13.6% target ROE = \$9.76 Million]

If the ROE target were 10% instead of 13.6%, the Company’s allowed ROE would be \$7.18 Million. [\$71.76 Million common equity x 10% target ROE = \$7.18 Million] The lower allowed ROE would reduce the Company’s after-tax equity return by \$2.58 Million. [\$9.76 Million - \$7.18 Million = \$2.58 Million]

From a ratepayer perspective, however, the reduction would be larger because utility ratepayers have to pay not only the allowed ROE but also the income taxes associated with that ROE. Therefore, assuming the expected income tax rate is 35%, the taxes associated with the \$2.58 Million difference in net income due to a lower allowed ROE would be an additional \$1.39 Million. [\$2.58 Million / (1-35% tax rate) = \$3.97 Million pre-tax return, less \$2.58 Million = \$1.39 Million in taxes]

Reducing the target return for Mobile Gas Service Corporation from 13.6% to 10%, therefore, would reduce the Company’s rates by approximately \$4 Million annually [\$3.97 Million]. The Company reports total revenues at fiscal year-end 2012 of \$85.5 Million. A revenue decrease of approximately \$4 Million would imply a rate reduction of approximately 4.67%. [\$4 Mill./\$85.5 Mill.] Finally, with roughly 88,000 customers (2012 FERC Form 2), a \$4 Million rate reduction would, if divided equally among the Company’s customers, save each customers about \$45 per year. [\$4 Million/88,000 = \$45.45]

Is the ROE different from the overall weighted return, or ROR?

Yes, those parameters are very different. In order to understand ROR and the differences between ROR and ROE we must first understand what a capital structure is and how the weighted-average cost of capital is calculated.

What is the capital structure of a utility?

As I noted previously, there are two general forms of investor-supplied capital for utilities: common equity and debt. Those elements form the basis of a utility’s “capital structure.” If a utility’s rate base has a value of \$200 and it is financed with \$100 of common equity capital and \$100 of debt capital, then the capital structure of that utility (the mix of capital used to finance the utility operations), will consist of 50% common equity and 50% debt.

Table I
Utility Capital Structure

| | Amount | Percent |
|----------------|--------------|--------------|
| Common Equity | \$100 | 50.0% |
| Long-term Debt | <u>\$100</u> | <u>50.0%</u> |
| Total | \$200 | 100.0% |

Referring to the January 2013 FERC Form 2 filing of Mobile Gas Service Corporation, pp. 112-113, that Company's fiscal year end capital structure is shown below in Table II. Those data indicate that Mobile Gas' plant investment is capitalized with roughly equal amounts of common equity and long-term debt: 52.2% common equity and 47.8% long-term debt.

Table II
Mobile Gas Service Corporation Capital Structure
September 30, 2012

| | Amount | Percent |
|----------------|---------------------|--------------|
| Common Equity | \$68,246,466 | 52.2% |
| Long-term Debt | <u>\$62,410,145</u> | <u>47.8%</u> |
| Total | \$130,656,611 | 100.0% |

What is the overall weighted return (ROR) and how is it calculated?

Once we have established the utility's capital structure, in order to calculate the overall rate of return, or ROR, we need to know the cost of each type of capital used by the utility. Using Mobile Gas Service Company as an example, that Company reports long term debt of \$62.4 Million at 9/30/2012 and net interest expense for the year of \$3.26 Million (FERC Form 2, p. 116). Therefore, an approximate cost of debt for Mobile Gas is the Company's net interest expense (\$3.26 Million) divided by the amount of its outstanding debt (\$62.4 Million), or 5.22%. We'll use that 5.22% as an estimate of the Company's cost of debt capital. Using the Company's current target ROE of 13.6% as the cost of equity capital, the overall rate of return (ROE) can be calculated as shown below in Table III.

Table III
Mobile Gas Service Corporation
Overall Rate of Return (ROR)

| | Amount | Percent | Cost Rate | Wt. Average Cost Rate |
|----------------|---------------------|---------------|------------|--------------------------|
| Common Equity | \$68,246,466 | 52.23% | 13.60% | 7.10% |
| Long-term Debt | <u>\$62,410,145</u> | <u>47.77%</u> | 5.22% | <u>2.49%</u> |
| Total | \$130,656,611 | 100.00% | ROR | 9.60% |

Table III shows that the percentage of common equity in Mobile Gas' capital structure (52.23%) multiplied by its current allowed return (13.6%) produces a "weighted average cost of equity" of 7.10%. That means, simply, the return on equity weighted or adjusted by the amount of common equity in the capital structure. In

addition, Table III shows that the Company’s debt ratio (47.77%) multiplied by the estimated cost of long-term debt (5.22%) produces a “weighted average cost of debt” of 2.49%. Adding together the weighted costs of the capital structure components (equity and debt) results in the determination of the overall rate of return, or ROR. In this instance it is 9.60%.

If the allowed return on equity (ROE) for Mobile Gas were reduced to 10% the overall rate of return for the Company would be 7.72%: calculated as shown below in Table IV.

Table IV
Mobile Gas Services
Overall Rate of Return with 10% ROE

| | Amount | Percent | Cost Rate | Wt. Average Cost Rate |
|----------------|---------------------|---------------|------------|-----------------------|
| Common Equity | \$68,246,466 | 52.23% | 10.00% | 5.22% |
| Long-term Debt | <u>\$62,410,145</u> | <u>47.77%</u> | 5.22% | <u>2.49%</u> |
| Total | \$130,656,611 | 100.00% | ROR | 7.72% |

The ROR shown in Table III under the current RSE for Mobile Gas, 9.60%, is similar to the recent average 10% ROE awards by utility regulators in the U.S. Are the ROR and the ROE comparable figures?

No. ROE and ROR, or the weighted return, are *not* comparable figures. The ROE is the allowed return on common equity—the profit allowed the utility. That is a very different parameter than the ROR—the overall rate of return. The ROR is the weighted average cost of *all* forms of capital used to finance the utility. It includes the cost of debt *as well* as the cost of common equity, and debt capital carries a much lower cost than common equity. ROR is a different value that describes the average cost of all the capital used by the utility and is not comparable to the cost of equity capital or the allowed ROE.

Also, once the debt costs have been paid by the utility, what remains is the equity return or ROE; and it is the equity return that is the measure of the profit allowed. That is the important figure when making comparisons to other utility returns. The cost of debt is fixed by contractual agreement with the bond investor and is beyond the control of the regulator. It is the equity return or ROE that must be determined by the regulator and, as discussed previously, that return should balance the interests of stockholders and ratepayers. A reliable measure of the reasonableness of the allowed ROE can be obtained only through the comparison to other allowed ROEs. Weighted returns, or RORs, are not relevant to the determination of a fair profit.

In this particular case, the fact that Mobile Gas’ estimated ROR (9.60%) is similar to the average 10% ROE allowed by regulatory bodies in the U.S. does *not* mean that the allowed profitability of Mobile Gas is similar to that of other utilities in the U.S. In fact,

because debt has a much lower cost rate than common equity, because Mobile Gas' weighted return is similar to the average allowed ROE in the U.S. indicates that the ROE currently allowed Mobile Gas is too high. The appropriate comparison is ROE to ROE, which shows that Mobile Gas is currently allowed an ROE (13.6%)—substantially in excess of the ROEs being awarded other gas utility companies in the U.S (10%).

EDUCATION AND EMPLOYMENT HISTORY
OF
STEPHEN G. HILL

EDUCATION

Auburn University - Auburn, Alabama - Bachelor of Science in Chemical Engineering (1971); Honors - member Tau Beta Pi national engineering honorary society, Dean's list, candidate for outstanding engineering graduate; Organizations - Engineering Council, American Institute of Chemical Engineers

Tulane University - New Orleans, Louisiana - Masters in Business Administration (1973); concentration: Finance; awarded scholarship; Organizations - member MBA curriculum committee, Vice-President of student body, academic affairs

Continuing Education - NARUC Regulatory Studies Program at Michigan State University

EMPLOYMENT

West Virginia Air Pollution Control Commission (1975)

Position: Engineer ; Responsibility: Overseeing the compliance of all chemical companies in the State with the pollution guidelines set forth in the Clean Air Act.

West Virginia Public Service Commission-Consumer Advocate (1982)

Position: Rate of Return Analyst ; Responsibility: All rate of return research and testimony promulgated by the Consumer Advocate; also, testimony on engineering issues, when necessary.

Hill Associates (1989)

Position: Principal; Responsibility: Expert testimony regarding financial and economic issue in regulated industries.

PUBLICATIONS

"The Market Risk Premium and the Proper Interpretation of Historical Data,"
Proceedings of the Fourth NARUC Biennial Regulatory Information Conference, Volume I, pp. 245-255.

"Use of the Discounted Cash Flow Has Not Been Invalidated," Public Utilities Fortnightly, March 31, 1988, pp. 35-38.

"Private Equity Buyouts of Public Utilities: Preparation for Regulators," National Regulatory Research Institute, Paper 07-11, December 2007.

MEMBERSHIPS

American Institute of Chemical Engineers; Society of Utility and Regulatory Financial Analysts (Certified Rate of Return Analyst, Member of the Board of Directors, Currently Vice President)

MR. HILL'S PRIOR EXPERIENCE

Mr. Hill is a Certified Rate of Return Analyst, doing business as Hill Associates. He has testified in more than 275 regulatory proceedings over the past thirty years on cost of capital, financial, economic, and corporate governance issues related to regulated industries. He has provided testimony in electric, gas, telephone, and water utility rate proceedings as well as in proceedings related to utility diversification, deregulation, and management financial policy. In those cases, he has testified on behalf of consumer advocates, attorneys general and utility commissions. In addition, he has testified on cost of capital issues in auto, homeowners and workers' compensation insurance rate proceedings. Mr. Hill has also been an advisor to the Arizona Corporation Commission on matters of utility finance in bankruptcy proceedings.

Mr. Hill has testified before the West Virginia Public Service Commission, the Connecticut Department of Public Utility Control, the Oklahoma State Corporation Commission, the Public Utilities Commission of the State of California, the Pennsylvania Public Utilities Commission, the Maryland Public Service Commission, the Public Utilities Commission of the State of Minnesota, the Ohio Public Utilities Commission, the Insurance Commissioner of the State of Texas, the North Carolina Insurance Commissioner, the Rhode Island Public Utilities Commission, the City Council of Austin, Texas, the Texas Railroad Commission, the Arizona Corporation Commission, the South Carolina Public Service Commission, the Public Utilities Commission of the State of Hawaii, the New Mexico Corporation Commission, the State of Washington Utilities and Transportation Commission, the Georgia Public Service Commission, the Public Service Commission of Utah, the Kentucky Public Utilities Commission, the Illinois Commerce Commission, the Kansas Corporation Commission, the Indiana Utility Regulatory Commission, the Virginia Corporation Commission, the Montana Public Service Commission, the Public Service Commission of the State of Maine, the Public Service Commission of Wisconsin, the Vermont Public Service Board, the Federal Communications Commission and the Federal Energy Regulatory Commission.