COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF DELTA NATURAL	**)**	
GAS COMPANY, INC. FOR AN	**)**	**CASE NO. 2007-00089**
ADJUSTMENT OF RATES	**)**	

DIRECT TESTIMONY OF

MARTIN J. BLAKE

Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A: My name is Martin J. Blake. My business address is 6435 W. Highway 146, Suite 2, Crestwood, Kentucky 40014.

Q: BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A: I am a Member and Principal of The Prime Group, LLC. The Prime Group provides consulting services in the areas of marketing, market research, rate and regulatory support, training, and strategic planning for energy industry clients.

Professional Qualifications & Experience

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A: I received my Ph.D. in Agricultural Economics in 1976 from the University of Missouri, Columbia. My doctoral work centered on the areas of marketing and econometrics. I also hold a Master of Arts in Economics from the University of Missouri, Columbia, which I received in 1972. In addition, I received a Bachelor of Arts degree in Economics from Illinois Benedictine College in 1970.

Q: HAVE YOU FILED TESTIMONY REGARDING THE APPROPRIATE RETURN ON EQUITY IN OTHER PROCEEDINGS?

A: Yes. I have filed testimony regarding the appropriate return on equity in Federal Energy Regulatory Commission Docket No. ER01-1938 in support of Southern Indiana Gas and Electric Companyôs request for a revision in transmission and ancillary service rates including cost of capital testimony. I have filed testimony regarding the appropriate return on equity in Federal Energy Regulatory Commission Docket No. ER02-708 in support of Central Illinois Power Companyôs request for a revision in transmission and ancillary service rates including cost of capital testimony. I have filed testimony

regarding the appropriate return on equity in Docket Nos. 99-046 and 04-00067before the Kentucky Public Service Commission regarding the return on equity in support of Delta Natural Gas Companyôs requests for adjustments in rates.

Q: PLEASE BRIEFLY SUMMARIZE YOUR AREAS OF PROFESSIONAL EXPERIENCE PRIOR TO JOINING THE PRIME GROUP.

A: I have professional experience as an economist and professor of economics, as a utility regulator, and as a utility manager and executive.

Q: PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AS AN ECONOMIST.

A: From January 1977 to December 1986, I was employed first as an Assistant Professor, then as an Associate Professor, and finally as a Professor of Agricultural Economics at New Mexico State University in Las Cruces, New Mexico ("NMSU"). I was the head of the undergraduate program and taught economics, agricultural economics and econometrics. While at NMSU, I also worked as a consultant for various clients, providing price forecasting, load forecasting, and marketing services. Since 1992, I have taught mathematical economics and econometrics as an Adjunct Professor in the Economics Department at the University of Louisville. Prior to my joining the faculty at NMSU, I served in the U. S. Army as an instructor of economics, statistics, and accounting at the U. S. Army Institute of Administration at Fort Benjamin Harrison, Indianapolis, Indiana.

I also have a wealth of experience with the application of economics to utility public policy issues. In addition to my experience as a utility regulator and executive, which I describe below, I have taught ratemaking for utilities at the NARUC Annual Regulatory Studies Program at Michigan State University since 1993. From May 1983 to August

1983, while on a sabbatical leave from NMSU, I served as a Policy Analyst for the Assistant Secretary for Land and Water at the U. S. Department of Interior.

Q: PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AS A UTILITY REGULATOR.

A: From January 1987 to November 1990, I served as a Commissioner and as the Chairman of the New Mexico Public Service Commission. As a Commissioner, my duties included making policy and adjudicatory decisions regarding rates, terms of service, financing, certificates of public convenience and necessity, and complaints for electric, gas, water, and sewer utilities. As Chairman, I supervised a staff of thirty-two professionals and sixteen support staff. During my tenure on the New Mexico Commission, I also served as Chairman of the Western Conference of Public Service Commissioners Electric Committee and as Chairman of the Committee on Regional Electric Power Cooperation, a group composed of state public service commissioners and representatives from the state energy offices of the thirteen western states.

As a Commissioner, I interpreted legislation, reviewed prior Commission cases to determine the precedents that they provided, drafted rules and regulations, wrote Orders, conducted hearings, ruled on motions, and served as an arbitrator in alternative dispute resolution proceedings. I performed adjudicatory and regulatory functions for the four years that I served on the Commission.

Q: PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE AS A UTILITY MANAGER.

A: From December, 1990 to June 1996, I was employed by Louisville Gas and Electric Company ("LG&E"). Initially, I served as LG&E's Director of Regulatory Planning. In this position, I was responsible for coordinating all of LG&E's state and federal regulatory efforts, and prepared and presented testimony to regulators. My areas of responsibility were expanded in April 1994 to include marketing and strategic planning.

As the Director, Marketing, Planning and Regulatory Affairs, I was responsible for coordinating LG&E's retail gas and electric marketing, strategic planning, and state and federal regulatory efforts. I continued to be employed in that capacity at LG&E until June 1996, when I joined the Prime Group as one of its Principals.

Q: PLEASE DESCRIBE THE INDUSTRY GROUPS IN WHICH YOU HAVE PARTICIPATED.

A: I have served on several regional transmission coordination groups such as the Interregional Transmission Coordination Forum, and the General Agreement on Parallel Paths, as well as the following committees of the Edison Electric Institute ("EEI") -- Economics and Public Policy Executive Advisory Committee, Strategic Planning Executive Advisory Committee, Transmission Task Force, and Power Supply Policy Technical Task Force. Currently, I am a member of the Midwest ISO Transmission Owners Committee and the Transmission Owners Tariff Working Group representing Southern Illinois Power Cooperative and Hoosier Energy. I serve as the Vice-Chairman of the Transmission Owners Tariff Working Group.

Q: HAVE YOU TAUGHT ANY COURSES OR SEMINARS IN THE AREA OF UTILITY RESTRUCTURING?

A: Yes. In addition to teaching ratemaking for electric utilities at the NARUC Annual Regulatory Studies Program since 1993, I have also taught a course regarding the institutions and organizations of the new electric utility industry. Each year, I also teach and conduct numerous workshops and programs, and deliver invited presentations to utility managers and regulators on a variety of subjects including ratemaking, marketing, utility finance, and industry restructuring.

Q. IN WHICH CASES HAVE YOU PREVIOUSLY TESTIFIED?

A. A list of the cases in which I have previously testified is included in Exhibit MJB-1.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. Delta Natural Gas Company, Inc. (ñDeltaò) engaged The Prime Group to conduct an

analysis of and to provide a recommendation regarding the appropriate cost of common equity for use in determining Delta's weighted cost of capital in this proceeding. My testimony contains the results of this analysis and identifies the fair rate of return on equity that Delta should be given the opportunity to earn during the period when the new rates will be in effect. My analysis utilizes appropriate financial valuation techniques and incorporates the factors that affect the return on equity that shareholders expect when investing in Delta and in other companies of corresponding risk. My testimony also addresses the reasons for allowing Delta to implement and recover the costs and an appropriate incentive for its Consumer Conservation and Efficiency (ñCEPò) program and the reasons for allowing Delta to implement an experimental Customer Rate Stabilization (ñCRSò) program.

Return on Equity

Q. PLEASE DESCRIBE DELTA'S BUSINESS OPERATIONS.

A. Delta purchases, produces and stores gas for distribution to retail customers, and also provides transportation service to industrial customers and interconnected pipelines through facilities located in 23 counties in central and southeastern Kentucky. The company had about 37,330 retail customers at the end of 2006. Its service territory is more rural than most publicly traded, investor owned natural gas distribution companies and consists mainly of light industry, farming and coal mining operations. More than 86% of Delta's customers are residential.

Exhibit MJB-2 shows Delta's total capitalization compared to other publicly traded, investor owned natural gas distribution utilities. The data in Exhibit MJB-2 was taken from a report titled Natural Gas Industry Summary Quarterly Financial & Common Stock Information issued by Edward Jones Co. December 31, 2006. This report classifies companies that provide natural gas into three categories: 1) diversified companies, 2)

combination gas and electric companies and 3) natural gas distribution companies. Delta is classified as a natural gas distribution company. Among the publicly traded, investor owned natural gas distribution utilities included in this report Delta was the third lowest with respect to total capitalization.

It is important to note that the earned return on shareholder equity for Energy West, which has the lowest capitalization of all of the natural gas distribution companies in the panel, has been over 13% for the past 4 years and has averaged over 13% over the past eight years according to the September 15, 2006 Value Line. The two natural gas distribution utilities in Exhibit MJB-2 with a lower total capitalization than Delta had percentages of equity of 57% and 52%, which are higher than Delta's 47% equity. These equity percentages are calculated using long term debt and equity and do not include short term debt in the calculation of the equity percentage for a company. Thus, the percent equity in the Edward Jones report is different than the percentage of equity in the capital structure for Delta in this proceeding. However, because it uses the same calculation for all companies in the panel, the Edward Jones report does provide a good basis for comparing the companies in the panel with regard to the equity component of their capitalizations. Thus, Delta can be characterized as a small, publicly traded, investor owned, natural gas distribution utility with an essentially rural service territory and with a relatively highly leveraged capital structure relative to other natural gas distribution utilities of similar size.

Q. IS THERE A PUBLIC BENEFIT TO PROVIDING NATURAL GAS SERVICE TO RURAL AREAS?

A. Yes. If natural gas service is available in an area, customers have a choice whether to use natural gas or electricity for particular applications. Customersô ability to switch between natural gas and electricity helps to keep downward pressure on the prices of both products. Furthermore, the availability of natural gas service can help in attracting industrial loads to an area and thus assist in economic development efforts. However, if natural gas service is

to be provided to rural areas, the companies providing such service must have the opportunity to earn adequate returns or they will no longer be able or willing to provide such service. Additionally, in order to expand Delta's service into additional rural areas, either through main extensions or through acquisition of distressed natural gas companies, Delta needs a sufficiently high return on equity to increase the percentage of equity in its capital structure to a level more appropriate for a company of its size, decrease its payout ratio which is above the industry average, and increase its interest coverage which is below the industry average. None of this can be done with a return on equity that is inadequate.

Q. WHAT ARE THE TRENDS IN THE NATURAL GAS DISTRIBUTION INDUSTRY AT THE PRESENT TIME?

A. Recently, Value Line issued an industry report for the Natural Gas Distribution industry in which Delta is included (Exhibit MJB-3). This report stated that:

> The earnings performance for many Natural Gas (Distribution) companies has been hurt by warmer-than-normal temperatures and conservation by customers. To offset the losses, many companies have recently been applying for regulatory policies that protect against both of these issues. Moreover, it should be noted that the key features of owning a utility stock are their Safety and better-than-average dividend yields, rather than price performance or appreciation potential. However, with interest rates at higher levels compared to the past few years, some of the positive attributes of owning these stocks may be reduced. (The Value Line Investment Survey September 15, 2006, p. 459).

This shows that Delta is not alone in pursuing the mechanisms that it is seeking in this filing to stabilize its returns. Additionally, it should be noted that Value Line forecasts a return on shareholder equity for the Natural Gas Distribution industry as a whole of 12% for the period 2009 through 2011. A return on equity of 12% is forecast even though it is noted that many natural gas distribution companies either have or are seeking mechanisms to stabilize their returns. This helps to provide a context for the return on

equity that Delta is seeking in this proceeding.

Q. HOW SHOULD THE RATE OF RETURN BE DETERMINED UNDER PUBLIC UTILITY REGULATION?

A. The purpose of public utility regulation with respect to rate of return is to permit a utility to earn its cost of capital while avoiding monopoly profits. Long-run earnings above the cost of capital would imply monopoly profits, while long-run earnings below the cost of capital would impair a utilityôs ability to attract capital on reasonable terms. A rate of return based on a utilityôs cost of capital is consistent with the guidelines established by the U.S. Supreme Court in *Bluefield Water Works & Improvement Co. v. Public Service Commission of West Virginia*, 262 U.S. 679 (1923) and *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1944). These cases require that a utility be allowed to earn a rate of return that: 1) is comparable to alternative investment opportunities of corresponding risk, 2) will permit capital attraction on reasonable terms, and 3) will maintain a utilityôs financial integrity.

In the Hope case, the U.S. Supreme Court stated that:

> From the investor or company point of view, it is important that there be enough revenue not only for operating expenses, but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. (emphasis added) [Federal Power Commission v. Hope Natura1 Gas Co., 320 U.S. 591, 603 (1944).]

It is important to note that the U.S. Supreme Court did not limit the return on equity to being commensurate with other utilities. It stated that the return on equity should be

commensurate with other companies having corresponding risk. This is important because there are not many investor owned utilities as small as Delta. However, there are a number of companies that are comparable to Delta with similar size and with similar risk profiles as measured by calculated beta coefficients in other industries.

Q. HOW DO YOU INTERPRET THE REQUIREMENT THAT A UTILITY HAVE AN OPPORTUNITY TO EARN A FAIR RATE OF RETURN?

A. An opportunity to earn a fair rate of return implies that a utility has a reasonable assurance that it will be allowed to earn a rate of return that is sufficient to attract capital, that will maintain its financial integrity and that is comparable to the return earned by alternative investments of comparable risk. While there are numerous factors that may result in an actual rate of return that is higher or lower than the allowed rate of return in any given year, a utility that consistently earns less than the allowed rate of return or which has averaged significantly less than the allowed rate of return for a long period of time cannot be said to have a reasonable assurance of earning the allowed rate of return. Thus, an assurance of earning a fair and reasonable rate of return could be viewed statistically as the arithmetic average of a series of returns over a period of time equaling the allowed rate of return. The problem with this approach is that, if there is significant variability in the returns, several years of earning below the allowed rate of return could cause severe financial harm to a utility while waiting for the years of above average returns to materialize. Thus, it may make sense for regulators to not only deal with the mean value of the distribution of returns, as they do when they set the allowed rate of return in a rate case, but to also deal with the variability of the returns through a mechanism such as the CRS mechanism that I will address later in my testimony.

Q. WOULD YOU REGARD DELTA'S CURRENT RATES AS PROVIDING AN OPPORTUNITY TO EARN AN ADEQUATE RETURN FOR PROVIDING NATURAL GAS SERVICE TO RURAL AREAS?

A. No, I would not. In December, 1997, the Commission issued an Order in Case No. 97-066

which set new rates for Delta which became effective in January, 1998. In this case, the Commission allowed a return on common equity of 11.6%. In December, 1999, the Commission issued an Order in Case No. 99-046 which set new rates for Delta which became effective in January, 2000. In this case, the Commission also allowed a return on common equity of 11.6%. In November, 2004, the Commission issued an Order in Case No. 2004-00067 which set new rates for Delta which became effective on October 7, 2004. In this case, the Commission allowed a return on common equity of 10.5%. However, Exhibit MJB-4 shows that since 1995, Delta has never earned an actual return on shareholders equity that was as high as the 11.6% ROE allowed by the Commission in Case Nos. 97-066 and 99-046. For the last twelve years, Delta has averaged a 9.13% return on shareholder equity with the return on equity in any single year never equaling or exceeding 11.3%. This is especially distressing in the years immediately following these three rate cases that were the first years that the new rates went into effect. In 1998, the first year that new rates were in effect pursuant to Case No. 97-066, Delta actually earned a return on shareholder equity of 8.2% which is 340 basis points below the Commission allowed ROE of 11.6%. In 2000, the first year that new rates were in effect pursuant to Case No. 99-046, Delta actually earned a return on shareholder equity of 11.1% which is 50 basis points below the Commission allowed ROE of 11.6%. In 2005, the first year full year that new rates were in effect pursuant to Case No. 2004-00067, Delta actually earned a return on shareholder equity of 9.8% which is 70 basis points below the Commission allowed ROE of 10.5%. If there was ever a time when it could be expected that a utility would earn its allowed rate of return, it would be the first year that new rates went into effect. When Delta has not earned a return on shareholder equity as high as the allowed rate of return in any of the last twelve years, even though it has been in three times during that period of time for rate cases, it cannot be said to have a reasonable assurance of earning the allowed rate of return. Delta's actual annual earned returns on equity should have the same mean as the allowed rate of return with actual annual earned returns both

above and below the allowed rate of return. This has not been the case for the last twelve years, and it indicates a problem that the Commission could remedy by allowing Delta to implement the experimental CRS mechanism that it is proposing in this proceeding.

Q. WHAT FACTORS DO YOU BELIEVE HAVE CAUSED DELTA TO UNDER EARN COMPARED TO ITS ALLOWED RATE OF RETURN ON EQUITY?

A. I believe that there are several factors: 1) Delta's equity as a percentage of total capitalization is lower than other natural gas distribution companies of similar size, 2) Deltaôs predominantly rural service territory, 3) customer conservation in response to higher natural gas prices, and 4) efficiency gains of natural gas appliances. Customer conservation in response to higher prices and efficiency gains of natural gas appliances result in under recovery of Deltaôs fixed costs and margin when any portion of fixed cost and margin are collected through a volumetric charge rather than through a fixed charge per customer per month. With a portion of Deltaôs fixed costs and margins currently collected using a volumetric charge, both customer conservation and appliance efficiency gains have lead to under recovery as these factors have reduced the per customer usage of natural gas.

Q. PLEASE DESCRIBE DELTA'S EQUITY AS A PERCENTAGE OF TOTAL CAPITALIZATION COMPARED TO OTHER NATURAL GAS DISTRIBUTION COMPANIES.

A. As described above, Exhibits MJB-2 and MJB-3 provide data for natural gas distribution companies ranked by total capitalization and percentage equity, respectively taken from Natural Gas Industry Summary Monthly Financial & Common Stock Information published by Edward Jones. The mean percentage of equity is calculated as 51% for the panel of fifteen natural gas distribution utilities with a median of 52%. These percentages are calculated using long term debt and equity and do not include short term debt in the calculation of the equity percentage for a company. Thus, the percent equity in the Edward Jones report is different than the percentage of equity in the capital structure for Delta in

this proceeding. However, because it uses the same calculation for all companies in the panel, it does provide a good basis for comparing the companies in the panel with regard to the equity component of their capitalizations. The percentage of equity for the two companies smaller than Delta are 57% and 52%. The percentage of equity for the company that is the next largest is 59%. Delta's reported percentage of equity of 47% is 4% below the mean and 5% below the median for this panel. It is also below natural gas distribution companies of similar size which makes Delta more heavily leveraged than other natural gas distribution utilities of similar size.

Q. DOES A LOWER PERCENTAGE OF EQUITY RELATIVE TO TOTAL CAPITALIZATION MAKE DELTA A RISKIER INVESTMENT?

A. Yes. The more debt that a firm has as a part of its total capitalization, the greater are the fixed interest payments that the firm will have to make to bond holders out of any given revenue stream that it generates. A company is required to make payments to the bond holders in specified amounts at specified times, while it is under no such obligation to its common equity holders. Thus, the more equity the firm has, the greater is its ability to weather revenue fluctuations. However, this flexibility comes at a cost, as equity is more expensive than debt because of the greater risk that shareholders bear. As a companyôs business environment becomes riskier and its business risk becomes greater, the company should increase its equity and lower its debt ratio. By reducing its debt ratio, its fixed obligations to bond holders would be reduced and the company would be better able to manage the financial fluctuations that result from a riskier business environment. Furthermore, a utilityôs equity ratio must be high enough to allow additional debt capital to be issued without an adverse effect on its credit rating. This would be consistent with the criteria established in the Bluefield and Hope cases that the rate of return be sufficient to permit capital attraction on reasonable terms. If the capital structure does not permit some margin for additional debt financing at all times, a utility is subject to the potential adverse impact of unanticipated tight credit conditions, thus making it a riskier

investment. Delta has increased the percent of equity in its overall capitalization since its last rate case, but it is still below the average percentage equity for both the panel of fifteen natural gas distribution companies and below the average percentage equity for natural gas distribution companies of similar size as Delta. Getting Delta's percentage of equity closer to the average for natural gas distribution companies of a similar size will only occur if the Commission allows a high enough rate of return to accommodate this long term improvement in Delta's equity ratio.

Q. HOW WOULD DELTA'S LOW EQUITY RATIO AFFECT THE RETURN ON EQUITY THAT IT EARNS?

A. Because Delta is about 60% debt financed based on the capital structure in this proceeding, its fixed obligations to bondholders are high, thus exacerbating the impact on the return on equity resulting from any revenue reductions that Delta might experience. This is an important factor that contributes to the fact that Delta has not earned its allowed rate of return in any of the past twelve years.

Q. COULD YOU GIVE AN EXAMPLE OF HOW LEVERAGE MIGHT AFFECT THE ACTUAL RETURN ON EQUITY EARNED BY DELTA?

A. Yes. Exhibit MJB-5 provides several examples of how a change in the percentage of equity in Delta's overall capitalization would affect the actual return on equity earned by Delta. All three examples in Exhibit MJB-5 have the same total capitalization, but have different equity ratios. The first example in Exhibit MJB-5, uses the same percentage of equity and debt as Delta's capital structure in this proceeding and assumes a return on equity of 12.5% and an interest rate of 7% on the debt. The dollar value of the return elements for equity and debt are calculated by multiplying the dollar value of the equity and debt capitalization by their respective rates of return and interest. In Example 1, the dollar value of the return element for equity would be $6,514,444 and the dollar value of the return element for debt would be $5,391,144. Next assume that Delta experiences a decrease in earnings of $2,000,000. Delta would still have to pay $5,391,144 to debt

holders and now would have only $4,514,444 to provide to shareholders. Dividing $4,514,444 by the $52,115,554 of equity capitalization would result in an actual return on equity of 8.66%.

Example 2 uses a capital structure that reflects the industry average as calculated in Exhibit MJB-2 and uses the same rates of return and interest as in Example 1. Thus, the only factor that is changing is the equity and debt ratios. Again a decrease in earnings of $2,000,000 is assumed. Delta would still have to pay $4,429,224 to debt holders and now would have only $6,232,159 to provide to shareholders. Dividing $6,232,159 by the $65,857,269 of equity capitalization would result in an actual return on equity of 9.46%. In both Examples 1 and 2, the $2,000,000 decrease in earnings is a result of operations and is not influenced by the capital structure used to finance the company. However, this same $2,000,000 decrease in earnings has a very different impact on the actual return on equity depending on the debt leverage of the company.

A comparison of Examples 1 and 2 also illustrates another important point. In Example 2, the return element included in the revenue requirement would be $12,661,383, while in Example 1 the return element included in the revenue requirement would be $11,905,588, which is $755,795 lower. Thus, with a lower percentage equity ratio than the industry as a whole, Delta's customers pay lower rates while Delta experiences a significant adverse effect on its ability to earn its allowed rate of return if it experiences any earnings shortfalls. This is simply not an equitable result.

Example 3 simply repeats the above example for a capital structure consisting solely of equity. In Example 3, the $2,000,000 decrease in earnings would result in an actual return on equity of 10.95%.

These three examples illustrate that Delta's equity ratio, which is below both the industry average and the average for natural gas distribution companies of similar size, has a significant adverse effect on its ability to earn its allowed rate of return. Any given earnings shortfall for Delta will result in a lower actual return on equity than for the average natural gas distribution company. These examples help in understanding why Delta has not earned its allowed rate of return in any of the past twelve years. This significant adverse impact on Delta's ability to earn its allowed rate of return must be considered by the Commission in setting an appropriate rate of return for Delta.

Q. HOW WOULD DELTA'S PREDOMINANTLY RURAL SERVICE TERRITORY AFFECT THE RETURN ON EQUITY THAT IT EARNS?

A. Delta serves an area in eastern Kentucky that is predominantly rural with low population density. This low population density results in higher fixed cost per customer for serving rural areas compared to the fixed cost per customer incurred in an urban area. This higher fixed cost per customer results from both a higher cost of installing the pipe needed to serve a customer and the higher cost of maintaining the lines. Furthermore, these rural customers tend to have a lower annual usage and a larger proportion of temperature sensitive load than urban customers. This relatively high fixed cost to serve small highly temperature sensitive loads translates to a higher fixed cost burden for Delta and a more variable revenue stream. The higher fixed costs resulting from operations compounds the problem of high fixed obligations to bond holders resulting from a low equity ratio, and exacerbates the impact on the return on equity resulting from any revenue reductions that Delta might experience, as demonstrated above. Thus, the low population density in rural areas that results in a higher fixed cost burden for Delta with more variability in the return stream due to the large amount of temperature sensitive load for these rural customers would justify a higher allowed rate of return for Delta. It would be very difficult, if not impossible, to quantify the separate impact on return on equity resulting from the rural character of Deltaôs service territory. However, this factor combined with a lower than

average equity ratio for Delta, would justify a higher than average rate of return on equity for Delta.

Q. HOW WOULD YOU ASSESS THE BUSINESS ENVIRONMENT WITHIN WHICH DELTA OPERATES?

A. Delta provides natural gas service in a service territory that substantially overlaps the electric service territory of Kentucky Utilities Company, which has some of the lowest electric rates in the nation. This direct competition with a low cost electric utility increases Deltaôs business risk. Additionally, Delta is a small company with a capitalization that would fall in the smallest micro-cap stock range as defined in the Risk Premia Over Time Report: 2006 published by Ibbotson Associates (Exhibit MJB-6), which includes companies with market capitalizations at or below $169,195,000. Small companies are generally regarded as riskier than larger companies and have correspondingly higher rates of return. Fama and French reported that:

> If assets are priced rationally, our results suggest that stock risks are multidimensional. One dimension of risk is proxied by size, ME. Another dimension of risk is proxied by BE/ME, the ratio of the book value of common equity to its market value. (Eugene F. Fama and Kenneth R. French, ñThe Cross-Section of Expected Stock Returnsò, The Journal of Finance, Vol. 47, June, 1992, p. 428.)

Fama and French went on to report that:

> The size effect (smaller stocks have higher average returns) is thus robust in the 1963-1990 returns on NYSE, AMEX, and NASDAQ stocks. In contrast to the consistent explanatory power of size, the FM [Fama-MacBeth] regressions show that market ∃ does not help explain average stock returns for 1963-1990. (Fama and French, p. 438)

Thus, this research means that small companies such as Delta are riskier than companies with larger capitalizations and a higher rate of return on equity would be appropriate for such companies. This is particularly true in Kentucky. It is simply not consistent with

these research results to allow all natural gas distribution companies in Kentucky essentially the same return on equity when the other investor-owned natural gas companies in Kentucky are a part of corporations that are over 30 times larger than Delta. Interestingly, even Atmos, which has the largest capitalization of all fifteen companies in the Edward Jones natural gas distribution panel, only falls in the fourth decile of companies in the Ibbotson report (Exhibit 6) and should have 1.1% added to any CAPM calculations based on its size.

Additionally, natural gas commodity prices have become much more volatile since the decision issued by the Commission in Delta's last rate case. The run up of natural gas prices after hurricanes Katrina and Rita along with the recent reduction to current levels are a good indication of just how volatile natural gas prices can be.

Q. DOES THE INCREASED VOLATILITY IN NATURAL GAS PRICES AFFECT THE RETURN ON EQUITY THAT DELTA SHOULD BE ALLOWED TO EARN?

A. Yes. Exhibit MJB-7 is a table that shows United States natural gas wellhead prices and city gate prices since Delta's last rate case. This table illustrates the volatility of natural gas prices since the Order issued by the Commission in Delta's last rate case in November 2004. Delta has a Gas Cost Recovery (ñGCRò) mechanism that is calculated quarterly. Any under or over recoveries during a quarter are recovered over the next twelve months. Delta is not allowed to earn a return on any money that it has devoted to funding such under-recoveries. The increased price volatility since its last rate case has resulted in significant under-recoveries and deferred gas costs that Delta has had to finance with no interest. In December 2004, 2005 and 2006, Delta had deferred gas costs of about $7.5

million, $7.4 million, and $1.1 million, respectively. Delta has had to finance these under-recoveries with a mix of internal financing and short term borrowing. As noted above, the interest that Delta incurs in financing any under-recoveries is an expense that is not recovered by Delta through the GCR. This has helped to generate earnings shortfalls that are exacerbated by Delta's low equity ratio as demonstrated above. A higher return on equity would provide a larger pool of internal resources to finance such under-recoveries and would help to mitigate Delta's reliance on short term borrowing. This natural gas commodity price volatility is a significant risk factor when Delta has to finance these costs with no interest recovery allowed. The Commission should allow a return on equity that would help to provide Delta with the internal capital necessary to fund such under-recoveries and mitigate the necessity of using short term debt for these purposes.

Q. PLEASE DESCRIBE THE DISCOUNTED CASH FLOW ("DCF") METHOD FOR ESTIMATING THE APPROPRIATE RETURN ON EQUITY.

A. The DCF method for estimating an appropriate return on equity is based on the following equation, which defines the long run expected return (the appropriate return on equity) as the discount rate that equates the current stock price with the stream of expected future dividends:

$$P_0 = \frac{D_1}{(1+k)^1} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \frac{D_4}{(1+k)^4} + \cdots$$

where,

P = the current price of the stock,

D_i = the dividend in year i, and

k = the investorsô discount rate or expected rate of return.

If the growth is a constant rate, g, this equation can be expressed as the sum of an infinite

geometric series:

$$k = \frac{D_1}{P} + g$$

While the DCF method is usually calculated using this formula, it can also be described in words. The terms in the DCF formula represent investors' assessment of expected future cash flows they will receive in relation to the price that they pay for a share of stock. The DCF formula says that the return that any investor expects from the purchase of a stock consists of two components. The first is an initial cash flow in the form of a dividend. The second is the cash flow resulting from dividend growth in the future. Although investors know that negative growth and losses can occur, they expect long term positive dividend growth. Rational investors expect long term positive growth, or they would hold cash rather than invest with the expectation of a loss. The sum of the rates of these two flows, initial and future, equals the return that investors require from their investment in the stock at the current price. Investors adjust the price they are willing to pay for the stock until the sum of the dividend yield and the annual rate of expected future growth in dividends equals the rate of return they expect from other investments of comparable risk. The DCF calculation determines what shareholders require from a company in terms of present and future dividends relative to the current market price of the company's stock. If the DCF model indicated a return on equity of 8% and the current stock price used to calculate this return on equity was $25, this tells us that shareholders are expecting an 8% return on equity in return for their $25 investment in the stock. i.e. an 8% return on the market equity, not on the book equity or on rate base which have little or no relation to the market equity.

Q. DOESN'T THE GROWTH RATE THAT IS ULTIMATELY SELECTED BY THE COMMISSION IN CALCULATING RETURN ON EQUITY USING THE DCF METHODOLOGY BECOME A SELF-FULFILLING PROPHECY?

A. Yes. If the Commission selects a high growth rate resulting in a higher return on equity, there will be sufficient earnings to grow dividends and increase the equity component of Delta's capital structure. If the Commission selects a low growth rate, the lower level of earnings will only allow dividends to increase slightly, if at all. Thus, looking at historic

dividend growth rates is not a good indicator of investor expectations with regard to dividends. It simply reflects the return on equity that the Commission has allowed Delta in the past. And as noted above, the deck seems stacked against Delta even earning the allowed rate of return, with Delta's actual earned return being lower than the allowed rate of return in each of the past twelve years.

Q. WHAT WOULD THE DCF MODEL YIELD AS AN EXPECTED RETURN ON EQUITY FOR DELTA?

A. The results of the DCF analysis for Delta are shown in Exhibits MJB-8 and MJB-9. The high and low stock prices for the year and the most recent annual dividend for the DCF calculation were obtained from the Value Line Investment Survey - Small and Mid-Cap Edition, December 15, 2006 (Exhibit MJB-10). Even though the Value Line Investment Survey for large companies reports forecasted future dividend growth rates for companies included in this edition, the Value Line Investment Survey - Small and Mid-Cap Edition did not report a forecasted dividend growth rate for Delta. I ultimately used two growth rates in the DCF calculations for Delta. The first growth rate that I used was the sustainable growth rate calculated from the following formula:

$$g = br + sv,$$

where: b is the expected retention ratio;

r is the expected earned rate of return on common equity;

s is the percent of common equity expected to be issued annually as new common stock; and

v is the equity accretion rate.

The amount of common stock that Delta issues annually is minimal, so the second term of the equation for all practical purposes is zero. The calculation of the sustainable growth rate using this formula was based on data from Value Line and is shown in Exhibit MJB-8. The resulting sustainable growth rate for Delta was 2.37% and this is the growth rate used in the DCF calculations in Exhibit MJB-8.

The second growth rate that I used in the DCF calculations was the average of the dividend growth rates for the nine large companies in the Edward Jones panel that were covered by the Value Line Investment Survey. Only natural gas distribution companies with a positive dividend growth rate were used in calculating the average. As discussed above, rational investors expect a positive growth rate and including companies with a negative or zero dividend growth rates would not be representative of investor expectations. The average dividend growth rate for the nine natural gas distribution companies covered by the large company edition of Value Line was 3.67%, and this is the growth rate that was used in the DCF calculations in Exhibit MJB-9.

The high and low annual stock prices during 2006 were used in calculating a range of estimated returns in the DCF analysis. Use of the high stock price in the DCF analysis with a sustainable growth rate of 2.37% resulted in an estimated ROE of 6.84%, and use of the low stock price in the DCF analysis resulted in an estimated ROE of 7.35%. Use of the high stock price in the DCF analysis with an average growth rate of 3.67% resulted in an estimated ROE of 8.14%, and use of the low stock price in the DCF analysis resulted in an estimated ROE of 8.65%.

Q. CAN THESE CALCULATED RETURNS ON EQUITY USING THE DCF MODEL BE APPLIED TO BOOK VALUE CAPITALIZATION?

A. No. The DCF calculations in Exhibits MJB-8 and MJB-9 that resulted in the estimates of 6.84%, 7.35%, 8.14% and 8.65% for return on equity were made using the current stock price, and so these returns on equity are meaningful only when applied to market capitalization. As explained above, if the DCF model indicated a return on equity of 8% and the current stock price used to calculate this return on equity was $25, this tells us that shareholders are expecting an 8% return on equity in return for their $25 investment in the

stock. They are not expecting an 8% return on the book value capitalization of the company, which has little or no relationship o the market value of the stock. If the returns on equity calculated using the DCF formula are to be applied to the book value of equity, further calculations are necessary.

In Exhibit MJB-8, the estimated returns on equity calculated using the high and low stock prices are multiplied by the market capitalization calculated at the high and low stock prices to obtain the actual dollars that shareholders expect to receive annually from their investment. The market capitalization was calculated by multiplying the high and low stock price by the number of outstanding shares of stock, which for Delta was 3,261,034 shares. To convert this to a return on equity that could be applied to book capitalization, it is necessary to divide the actual dollars that shareholders expect to receive annually from their investment by Delta's book value of equity. These calculations resulted in returns on equity that could be appropriately applied to Delta's book value capitalization of 11.82% at the high stock price and 11.41% at the low stock price. These calculations in Exhibit MJB-8 were made using the sustainable growth rate of 2.37%. Similar calculations in Exhibit MJB-9 resulted in returns on equity that could be appropriately applied to Delta's book value capitalization of 14.07% at the high stock price and 13.43% at the low stock price. These calculations were made using the sustainable growth rate of 3.67%.

Q. DO THESE CALCULATIONS SEEM REASONABLE?

A. Yes. In fact, making the conversion from an ROE that should be applied to the value of market equity to an ROE that should be applied to book equity resolves a number of paradoxes that result from applying the ROE estimates from the DCF formula directly to

the book equity component of Delta's capitalization. One thing that has always concerned me in performing DCF calculations was that the high stock price resulted in a lower calculated ROE than the low stock price. Looking at Exhibit MJB-8, the high stock price of $26.82 resulted in an ROE estimate of 6.84% while the low stock price of $24.11 resulted in an ROE estimate of 7.35%. This says that an investor would be willing to pay $26.82 for an investment generating a return on equity of 6.84% while he would only be willing to pay $24.11 for an investment generating a return on equity of 7.35%. This simply doesn't make sense if these calculated returns on equity are applied directly to book equity, which is $50,633,040 in this proceeding. A 7.35% return on book equity would be $3,721,528 annually while a 6.84% return on book equity would be $3,463,300 annually. What investor in their right mind would pay $24.11 per share for an investment generating $3,721,528 annually while paying $26.82 per share for an investment only generating $3,463,300 annually.

However, this does make sense if these calculated ROEs are applied to market capitalization. In Exhibit MJB-8, the ROE of 6.84% calculated using the high stock price is applied to the market capitalization of $87,460,932 and the result is an annual dollar flow of $5,986,065 that shareholders expect from this investment. Similarly, the ROE of 7.35% calculated using the low stock price is applied to the market capitalization of $78,623,530, which was also calculated using the low stock price, and the result is an annual dollar flow of $5,776,618 that shareholders expect from this investment. This makes sense. Investors would be willing to pay a higher price for a stock that generated a larger dollar flow and a lower stock price for an investment that generated a lower dollar

flow. This sensible result does not occur when the ROEs calculated using DCF are applied directly to book equity.

Q. IS IT NECESSARY TO APPLY AN ESTIMATED RETURN ON EQUITY IN A MANNER THAT IS CONSISTENT WITH THE WAY THAT IT IS CALCULATED?

A. Yes. As discussed above, the DCF calculation determines what shareholders require from a company in terms of present and future dividends relative to the current market price of the company's stock. Thus, returns on equity estimated in this manner must be applied to the market capitalization which is also calculated using the current market price of the stock. The DCF methodology does not determine what shareholders require from a company in terms of present and future dividends relative to the company's book value of equity. Thus application of ROEs estimated using the DCF methodology directly to a company's book value of equity or rate base is an inconsistent and an inappropriate application of these estimates. It is taking an estimate generated for one purpose and using it for a completely different and unrelated purpose. The ROE estimates calculated using the DCF methodology can only be applied to book value equity after converting them for such use as shown in Exhibits MJB-8 and MJB-9.

Q. WHAT WOULD THE CAPITAL ASSET PRICING MODEL YIELD AS AN EXPECTED RETURN ON EQUITY FOR DELTA?

A. The CAPM approach could be utilized to estimate the return on equity for Delta. The basic CAPM formula is:

$K = R_f + \exists (R_m - R_f)$

where:

K = the prospective market cost of equity for a specific investment,

∃ = the company specific beta coefficient,

R_f = the risk free rate of return (usually U.S. Treasury bonds),

R_m = the overall stock market return, and

$R_m - R_f$ = the equity risk premium.

The Value Line Investment Survey - Small and Mid-Cap Edition (Exhibit MJB-10) provided an estimate for ∃ of 0.55 for Delta. Ibbotson's Risk Premia Over Time Report: 2006 (Exhibit MJB-6) calculated a long-horizon expected equity risk premium of 7.1% which was calculated as the difference between large company stock total returns minus long-term government bond returns for the period 1926 through 2005. With an interest rate on 20-Year U.S. Treasury bonds in the neighborhood of 5.0% during the period January 19, 2007 through February 2, 2007 (Exhibit MJB-11) and a beta coefficient of 0.55, the Capital Asset Pricing Model produces an initial estimated return on equity of 8.905% as shown in Exhibit MJB-12.

However, as noted in the Stocks, Bonds, Bills and Inflation 2003 Yearbook:

> Based on historical return data on the NYSE/AMEX/NASDAQ decile portfolios, the smaller deciles have had returns that are not fully explainable by the CAPM. This return in excess of CAPM, grows larger as one moves from the largest companies in decile 1 to the smallest in decile 10. The excess return is especially pronounced for micro-cap stocks (deciles 9-10). This size related phenomenon has prompted a revision to the CAPM, which includes the addition of a size premium. (Stocks, Bonds, Bills and Inflation 2003 Yearbook, Ibbotson Associates, 2003, p. 135.)

The size premium that must be added to CAPM calculations to obtain the appropriate ROE estimates for micro-cap companies, such as Delta, is reported in Ibbotson's Risk Premia Over Time Report: 2006 as 9.83% (Exhibit MJB-6). This size premium was calculated from data for the period 1926 through 2005. When this 9.83% micro-cap size

premium is added to the initial ROE estimate, the final estimate for ROE using the Capital Asset Pricing Model is 18.735% as shown in Exhibit MJB-12 and is calculated as:

ROE Estimate Including Micro-Cap Size Premium = 5.0 + (0.55 x 7.1) + 9.83 = 18.735.

Inclusion of this size premium is appropriate because not only does Delta fall within the micro-capitalization group as defined by Ibbotson, but as can be seen from Exhibit MJB-2, Delta has one of the smallest total capitalizations of the investor owned natural gas distribution companies in the panel.

Q. WHAT RATE OF RETURN ON EQUITY WOULD THE RISK PREMIUM INDICATE WAS APPROPRIATE?

A. The long-horizon expected equity risk premium reported in Risk Premia Over Time Report: 2006 (Exhibit MJB-6) by Ibbotson Associates is 7.1% calculated by subtracting long-term government bond returns from large company stock total returns for the period 1926 to 2005. This estimate of the risk premium is calculated using a past average of ex-post risk premiums over a sufficiently long period of time to include several ups and downs in dividend yields and provides a good estimate of the future risk premium. This long-horizon expected equity risk premium was calculated using stock market data for the companies in the Standard and Poorôs 500 Index and for U. S. Treasury Bonds having a 20-year maturity. The interest rate on 20-Year U.S. Treasury bonds was in the neighborhood of 5.0% during the period January 19, 2007 through February 2, 2007 as reported by FRED® [Federal Reserve Economic Data] available on the Federal Reserve Bank of St. Louis web site (Exhibit MJB-11). Adding the long-horizon risk premium of 7.1% to the 20-year U.S. Treasury bond yield of 5.0% produces a return on equity of 12.1%. It is important to note that the risk premium of 7.1% was calculated using large company stock data and that an appropriate return for a smaller company, like Delta, should be higher. However, these estimated returns on equity for the market as a whole do

help to demonstrate that the estimated returns on equity for Delta using the DCF and capital asset pricing model results discussed earlier are reasonable.

Q. WHAT IS A REASONABLE RANGE FOR THE RETURN ON EQUITY IN THIS PROCEEDING?

A. Based on the above analysis, a reasonable range for return on equity in this proceeding would be between 11.17% and 18.73% as summarized in the table below.

Method	ROE Range	
	High	Low
DCF (Sustainable Growth)	11.82%	11.41%
DCF (Average panel growth)	14.07%	13.43%
CAPM	18.73%	18.73%
Risk Premium	12.1%	12.1%

These estimates do not make any adjustment for Delta's lower than average percentage of equity in its total capitalization compared to other natural gas distribution companies in the panel.

Q. WHAT RETURN ON EQUITY DO YOU RECOMMEND BE UTILIZED IN CALCULATING THE REVENUE REQUIREMENT IN THIS PROCEEDING?

A. I recommend using a 12.1% return on equity in this proceeding, which is the return on equity derived using the risk premium approach. The risk premium approach is simple and straightforward and does not require that the Commission directly address the adjustments necessary to apply the return on equity derived using the DCF methodology to book value equity. The adjustments for converting the returns on equity that were derived from data that reflect the market value of equity to returns on equity that could be applied to book value equity is new ground for the Commission. In this testimony, I will use these adjustments to demonstrate that the return on equity I am recommending is well within the reasonable range rather than confront the Commission with a new approach for applying DCF on which it would need to rule in this proceeding. This will provide the Commission

with ample time to carefully consider and research this approach before ruling on it in future proceedings. The 12.1% that I am recommending is well within the reasonable range as indicated by my analysis. In determining the appropriate return on equity for Delta, the Commission needs to consider that Delta is different than the other investor owned utilities that the Commission regulates. Delta is the smallest investor owned natural gas utility that the Commission regulates with one of the lowest equity ratios in the industry. The size premium for small companies is well documented and has been calculated based on a data set that covers a number of economic cycles that include both wars and a depression. In deciding on the appropriate return on equity for Delta and whether it is appropriate to approve the experimental CRS mechanism that Delta is requesting in this proceeding, it is important for the Commission to note that Delta has not earned its allowed rate of return in any of the past 12 years (Exhibit MJB-4). Additionally, Delta's low percentage of equity compared to other natural gas distribution companies makes it harder for Delta to earn any rate of return allowed by the Commission as illustrated in Exhibits MJB-4 and MJB-5. This is particularly true when combined with factors such as the financial hit that Delta experiences from financing deferred gas costs with no interest recovery. After analyzing all of the relevant factors, I believe that 12.1% is a reasonable return on equity for Delta in this proceeding if this return on equity is applied to the book equity component of Delta's capitalization and the Commission approves the experimental CRS mechanism that Delta is requesting. If the Commission does not approve the experimental CRS mechanism that Delta is requesting, a higher allowed rate of return would be appropriate so that Delta has a real opportunity to earn the return on equity that the Commission allows.

Q. DOES THE RETURN ON EQUITY THAT YOU RECOMMEND PRODUCE A REASONABLE RESULT?

A. Yes. Exhibits MJB-14 and MJB-15 calculate estimated returns on equity for the other fourteen companies in the Edward Jones panel of natural gas distribution companies using a discounted cash flow analysis and the capital asset pricing model. Exhibit MJB-14 calculates the estimated returns on equity for these companies using sustainable growth rates for the companies from the Value Line Investment Survey - Small and Mid Cap Edition, for which forecasted dividend growth rates were not reported, while Exhibit MJB-15 makes the DCF calculations using the average growth rate for the other nine companies in the panel for these companies. All of the other data for calculating estimated returns on equity using the DCF model and the CAPM model come from the September 15, 2006 edition of Value Line (Exhibit MJB-16). Calculations were not made for SEMCO Energy because it paid no dividends which made calculation of an estimated return on equity using the DCF methodology impossible. In Exhibit MJB-14, the average return on book equity for the panel of natural gas distribution companies was 14.7% using the high stock price and 12.97% using the low stock price based on the DCF methodology using sustainable growth rates for companies without forecasted dividend growth rates in Value Line (Exhibit MUB-14, page3). In Exhibit MJB-15, the average return on book equity for the panel of natural gas distribution companies using the average growth rate for the companies in the panel without forecasted dividend growth rates in Value Line and using the DCF methodology was 14.43% using the high stock price and 12.86% using the low stock price. Thus, based on similar DCF calculations for companies in the Edward Jones panel, the recommended 12.1% return on equity for Delta is below all of these

average returns on equity and is very reasonable.

The CAPM results in Exhibits MJB-14 and MJB-15 are calculated using a risk free rate of return of 5.0% which was the value around which the yield on 20-Year Treasury Bonds fluctuated during the period January 19, 2007 through February 2, 2007. It also uses a long-horizon equity premium of 7.1% and a size premium that is appropriate for the utility's total capitalization from Risk Premia Over Time Report: 2006 by Ibbotson Associates. The calculations for the remaining companies in the panel in MJB-14 show that the average return on equity calculated using CAPM was 13.94% (Exhibit MJB-14, page 1). Again, the 12.1% return on equity that I recommend for Delta is very reasonable compared to this average.

Q. CAN YOU PROVIDE ADDITIONAL EVIDENCE THAT THE RETURN ON EQUITY THAT YOU RECOMMEND PRODUCES A REASONABLE RESULT?

A. Yes. As discussed above, it is important to note that the U.S. Supreme Court did not limit the return on equity to being commensurate with other utilities. It stated that the return on equity should be commensurate with other companies having corresponding risk. Thus, I did a search for companies in the Value Line Investment Survey - Small and Mid Cap Edition that had total assets of less than $200 million and a beta coefficient of between 0.50 and 0.60. The results of this search are contained in Exhibit MJB-17. A search using these parameters takes account of both the risk captured in the calculation of beta and also the size related risk that is not captured in beta, as noted by Fama and French in the research cited above. One advantage that this panel has is that the returns on equity for these companies have not been determined by regulatory commissions, but by the market. The Return on Shareholder Equity for 2005, the last full year reported for all companies, and the five-year total shareholder returns that includes both appreciation and dividends

are reported in Exhibit MJB-18. The average return on equity for unregulated companies of corresponding size and risk was 12.96% and the median return on equity was 13.5%. Furthermore, the five-year total shareholder returns are about 4 times smaller for Delta than for unregulated companies of corresponding size and risk. These results for unregulated companies of corresponding size and risk show that the 12.1% return on equity that I am recommending for Delta is very reasonable.

Q. HOW DOES THE INTEREST COVERAGE FOR DELTA COMPARE TO THE INTEREST COVERAGE FOR THE OTHER NATURAL GAS DISTRIBUTION COMPANIES IN THE EDWARD JONES PANEL IF THE COMMISSION WERE TO ALLOW DELTA A 12.1% RETURN ON EQUITY?

A. Exhibit MJB-19 shows the interest coverage for the 15 natural gas distribution companies in the panel reported by Edward Jones, which is calculated by dividing net income plus interest on long term debt by the interest on long term debt. Delta has an interest coverage of 2.56x, which is third lowest in the panel of natural gas distribution utilities covered in the report. The mean interest coverage for the panel is 3.26x with a median interest coverage of 3.18x. If the revenue requirement for Delta is determined based on a 12.1% return on equity and based on the capital structure in this proceeding, the resulting interest coverage would be 2.66x. As can be seen from Exhibit MJB-19, the resulting interest coverage from using a 12.1% rate of return would still be the fourth lowest in the panel and well below the mean and median interest coverages for the fifteen natural gas distribution companies included in the Edward Jones report. Based on the resulting level of interest coverage compared to natural gas distribution industry averages, I believe that application of the recommended 12.1% rate of return on equity to the existing capital structure is reasonable. It would take even a higher rate of return on equity to produce a level of interest coverage and an equity ratio that is more representative of the other companies in the panel of natural gas distribution companies. The revenue requirement that would result from utilizing the 12.1% return on equity that I recommend would be a

start to increasing Delta's equity ratio to a level more appropriate for a natural gas distribution company of Delta's size, and to increasing the interest coverage to a level that is closer to the industry average. However, even when this recommended ROE is placed into effect, it will take several years before there is significant improvement in these key financial measures.

Experimental Customer Rate Stabilization Mechanism

Q: PLEASE EXPLAIN WHY THE EXPERIMENTAL CRS MECHANISM THAT DELTA IS PROPOSING IS APPROPRIATE.

A: Deltaôs current rate design recovers a significant portion of its fixed costs and margins through a volumetric charge assessed on a CCF basis. The customer charge of $19.74 per customer per month that is being proposed for the residential class in this proceeding does not fully cover the customer related fixed costs and margins identified in the cost of service study. Mr. Seelyeôs testimony shows that a large portion of Deltaôs customer related fixed costs will be recovered through volumetric charges under Deltaôs proposed rates. The remaining customer related fixed costs are recovered through a volumetric charge along with the costs that are identified as demand related in the cost of service study. Thus, Deltaôs recovery of fixed cost and margin is heavily dependent on its ability to achieve a throughput volume per customer in the future that equals that which is used in designing the rates that the Commission approves here. Per customer volumes higher than those used in designing the rates in this proceeding will result in an over-recovery of fixed costs and margins, while volumes lower than those used in designing the rates will result in an under-recovery of fixed costs and margins. Delta has experienced a

consistently declining use per customer over the past ten years which has contributed significantly to Delta not earning its allowed rate of return in any of these years, as shown in Exhibit MJB-4. If this declining trend in customer use continues, Delta will not have a reasonable opportunity to earn its allowed rate of return. Deltaôs proposed CRS mechanism would adjust for this problem and result in Delta actually having a fair opportunity to earn the rate of return allowed by the Commission. Delta has invested in plant to meet its customersô needs in good faith which has resulted in significant fixed costs that must be recovered. Delta should not be penalized with a lower earned rate of return because of an on-going downward trend in natural gas usage per customer. It would not be appropriate for the Commission to ignore this downward trend and, in effect, make it essentially impossible for Delta to earn the rate of return that the Commission will identify as fair in this proceeding.

Q: WOULD THE PROPOSED CRS MECHANISM BE DUPLICATIVE OF THE CEP MECHANISM THAT IS ALSO BEING PROPOSED IN THIS PROCEEDING?

A: No. The CEP mechanism would break the linkage between the volume of natural gas used and fixed cost and margin recovery only for those customers participating in the CEP. The CEP mechanism is a targeted mechanism that would only adjust for lost revenues resulting from customers participating in any of the three components of the CEP, and would not adjust for under-recovery of fixed costs and margin due to a declining trend in per customer volumes.

Q: HAVE RATE STABILIZATION MECHANISMS SIMILAR TO THE PROPOSED CRS BEEN ADOPTED BY OTHER STATE REGULATORY COMMISSIONS?

A: Yes. Both Alabama and South Carolina employ rate stabilization mechanisms similar to the CRS that Delta is proposing in this proceeding. Alabama Gas Company has had a Rate Stabilization and Equalization (ñRSEò) mechanism in place since 1983. When the Alabama Public Service Commission originally approved the RSE mechanism for Alabama Gas Company in 1983, it found that:

> the ratemaking principles reflected in Rate RSE...constitute a significantly improved method of setting natural gas utility rates sufficient to provide the Company with stable and adequate returns, to provide the public with the lowest possible rates consistent with the cost of service, to ameliorate the impact of increases required, and to decrease rates promptly if the designate rates of return are exceeded." Alabama Gas Corporation, Dockets 18046, 18328 and 18622, Order p. 3 (Jan. 25, 1983).

When the Alabama Public Service Commission renewed its approval of the RSE mechanism in 2002, it found that:

> The Commission herein reaffirms that after nineteen years of successful operation, Rate RSE is an appropriate and effective ratemaking mechanism for the consumers of Alabama and for the Company. é In addition, RSE's implementation and continuation as a regulatory tool in Alabama has streamlined and stabilized the regulatory and ratemaking process, has replaced the Company's requests for large, complicated rate increases with quarterly rate adjustments that are easier to understand, less significant and easier to monitor, and has enhanced the effectiveness and reduced the cost of utility regulation in Alabama. Alabama Gas Corporation, Dockets 18046 and 18328, Order p. 3 (June 10, 2002).

From this language, it is clear that the Alabama Public Service Commission believes that rate stabilization mechanisms similar to the one proposed by Delta here benefit both the utility and its ratepayers.

Q: WHAT HAS BEEN THE EXPERIENCE WITH RATE STABILIZATION MECHANISMS IN SOUTH CAROLINA?

A: South Carolina has adopted legislation entitled ñThe Natural Gas Rate Stabilization Actò which allows utilities to elect to have their rates regularly adjusted pursuant to the provisions of the Act. Quarterly rate adjustments are made to keep the natural gas utilityôs cost of equity within a 1% band specified by the South Carolina Public Service Commission. This 1% band includes a range of 0.5% below and 0.5% above the cost of equity on which rates have been set. If the natural gas utility's earnings exceed the upper end of the range established by the Commission, the utilityôs rates are reduced to lower its return on equity to the midpoint of the range that the Commission set. If the natural gas utility's earnings are below the lower range established by the Commission, the utilityôs rates are increased to raise its return on equity to the midpoint of the range that the Commission set. The experimental CRS that is being proposed by Delta includes the same 1% band feature that has been used successfully in other jurisdictions such as South Carolina.

Q: IS IT NECESSARY TO REDUCE THE RATE OF RETURN ON EQUITY TO ACCOUNT FOR DECREASED RISK IF THE CRS MECHANISM THAT IS BEING PROPOSED BY DELTA IS APPROVED BY THE COMMISSION IN THIS PROCEEDING?

A: Based on a recent decision by the Alabama Public Service Commission, which has over 20 years experience with rate stabilization mechanisms similar to the one being proposed by Delta, it does not appear that such a reduction is necessary. An Order in a case setting rates for Mobile Natural Gas Company issued on June 10, 2002, stated that:

> As noted in the Commission's Report and Order dated October 3, 2001, in this docket, the Attorney General agreed in concept not to oppose the Company's regulation under Rate RSE or any similar regulatory treatment. The Attorney

> General also agreed to incorporate the rate of return on common equity developed in this docket (13.60%) into the Company's proposed RSE tariff. Rate RSE requires a range of rate of return on average common equity and the parties agreed that, for evaluation purposes, the range would be from 13.35% to 13.85%, with a mid-point of the 13.60%. Mobile Gas Service Corporation, Docket 28101, Order p. 2 (June 10, 2002).

A midpoint of 13.6% is consistent with the estimated rates of return reported earlier in my testimony and does not indicate that a downward adjustment was made for any reduced risk that the company might experience. Indeed, since the company is simply being allowed a real opportunity to actually earn the return on equity that the Commission found to be fair, no such adjustment is necessary or appropriate. Later in the same Order the Alabama Commission went on to state that:

> RSE's implementation and continuation as a regulatory tool in Alabama has streamlined and stabilized the regulatory and ratemaking process, has replaced the Company's requests for large, complicated rate increases with quarterly rate adjustments that are easier to understand, less significant and easier to monitor, and has enhanced the effectiveness and reduced the cost of utility regulation in Alabama. Mobile Gas Service Corporation, Docket 28101, Order p. 4 (June 10, 2002).

This statement reflects the Alabama Public Service Commissionôs belief that the rate stabilization mechanisms that it has approved for natural gas utilities are an improvement over the rate cases that natural gas companies filed before the use of this mechanism. I believe that similar benefits could be achieved through the use of the CRS mechanism that Delta is proposing for use in Kentucky.

Consumer Conversation and Efficiency Program

Q: IS THE RATE TREATMENT THAT DELTA IS REQUESTING FOR ITS CONSUMER CEP CONSISTENT WITH FEDERAL ENERGY POLICY?

A: Yes. Provisions of the Energy Policy Act of 1992 that are codified as 15 USC § 3202 establish the following Federal standard:

> Investments in conservation and demand management. The rates charged by any State regulated gas utility shall be such that the utility's prudent investments in, and expenditures for, energy conservation and load shifting programs and for other demand-side management measures which are consistent with the findings and purposes of the Energy Policy Act of 1992 are at least as profitable (taking into account the income lost due to reduced sales resulting from such programs) as prudent investments in, and expenditures for, the acquisition or construction of supplies and facilities. This objective requires that (A) regulators link the utility's net revenues, at least in part, to the utility's performance in implementing cost-effective programs promoted by this section; and (B) regulators ensure that, for purposes of recovering fixed costs, including its authorized return, the utility's performance is not affected by reductions in its retail sales volumes. (15 USC § 3202(b)(4))

Deltaôs proposed CEP Mechanism consists of three components designed to promote reductions in demand for natural gas that will benefit Deltaôs customers. The three components of the CEP are: 1) high efficiency appliances, 2) home energy audits and 3) customer awareness. These three components promote conservation and reduced usage of natural gas by residential customers and are consistent with the purposes of the Energy Policy Act of 1992. Thus, pursuant to these Federal standards, it would be appropriate for the Commission to allow Delta to recover the cost of implementing these programs, an incentive for pursuing these demand side programs and recovery of lost sales resulting from these programs.

Q: IS THE RATE TREATMENT THAT DELTA IS REQUESTING FOR ITS CEP CONSISTENT WITH KENTUCKY STATUTES?

A: Yes. The provisions in Kentucky Statutes that authorize the Commission to grant the rate treatment that Delta is seeking for its CEP are contained in KRS 278.285 which states as follows:

> A proposed demand-side management mechanism including:
>
> (a) Recover the full costs of commission-approved demand-side

management programs and revenues lost by implementing these programs;
(b) Obtain incentives designed to provide financial rewards to the utility for implementing cost-effective demand-side management programs; or
(c) Both of the actions specified

may be reviewed and approved by the commission as part of a proceeding for approval of new rate schedules initiated pursuant to KRS 278.190 or in a separate proceeding initiated pursuant to this section which shall be limited to a review of demand-side management issues and related rate-recovery issues as set forth in subsection (1) of this section and in this subsection. (KRS 278.285(2))

Thus, it would be appropriate for the Commission to allow Delta to recover the cost of implementing the CEP programs, an incentive for pursuing these demand side programs and recovery of lost sales resulting from these programs.

Q: WOULD THE CEP MECHANISM THAT DELTA IS PROPOSING IN THIS PROCEEDING REMOVE A SIGNIFICANT DISINCENTIVE FOR DELTA TO PURSUE DEMAND SIDE MANAGEMENT AND ENERGY CONSERVATION PROGRAMS?

A: Yes. Deltaôs current rate design recovers a significant portion of its fixed costs and margin through a volumetric charge per CCF. This existing volumetric rate design tends to force natural gas utilities to choose between either advocating conservation or attempting to achieve adequate financial performance by selling more gas. However, if the relationship between cost recovery and customer throughput is severed with regard to CEP participation, as Delta is proposing, Delta can both recoup its legitimate costs and sponsor conservation efforts without harming its shareholders.

In July 2004, the AGA and the Natural Resources Defense Council ("NRDC") issued a Joint Statement titled "Energy Efficiency Problem: Regulated Natural Gas Utilities are Penalized for Aggressively Promoting Energy Efficiency," which discussed the fact that

the vast majority of the non-commodity costs of running a gas distribution utility are fixed and do not vary significantly from month to month. However, Deltaôs current rates are designed to capture a large portion of its approved revenue requirements for fixed costs through volumetric retail sales of natural gas, so that Delta can recover these costs fully only if its customers consume a certain minimum amount of natural gas. The AGA and NRDC Joint Statement went on to state that:

> When customers use less natural gas, utility profitability almost always suffers, because recovery of fixed costs is reduced in proportion to the reduction in sales. Thus, conservation may prevent the utility from recovering its authorized fixed costs and earning its state-allowed rate of return. In this important respect, traditional utility rate practices fail to align the interests of utility shareholders with those of utility customers and society as a whole.

Deltaôs proposed CEP mechanism would sever the relationship between cost recovery and customer throughput with regard to CEP participation and would remove a significant disincentive for Delta to aggressively purse demand side management programs.

Q: DOES THE NATIONAL ASSOCIATION OF REGULATORY COMMISSIONERS ENCOURAGE THE ADOPTION OF RATE MECHANISMS FOR NATURAL GAS THAT PROVIDE INCENTIVES FOR ENERGY CONSERVATION?

A: Yes. On November 16, 2005 at its annual convention in Indian Wells, California, the National Association of Regulatory Utility Commissioners (ñNARUCò) adopted a resolution that encouraged ñState commissions and other policy makers to review the rate designs they have previously approved to determine whether they should be reconsidered in order to implement innovative rate designs that will encourage energy conservation and energy efficiency that will assist in moderating natural gas demand and reducing upward pressure on natural gas prices.ò This NARUC resolution stated that energy conservation and energy efficiency are, in the short term, the actions most likely to reduce upward pressure on natural

gas prices and to assist in bringing energy prices down, to the benefit of all natural gas consumers and recognized that current forms of rate design may tend to create a misalignment between the interests of natural gas utilities and their customers. The CEP mechanism that Delta is proposing in this proceeding would correct this misalignment for customers participating in the CEP program.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes it does.