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Before the

TENNESSEE REGULATORY AUTHORITY

In re: Petition of Atmos Energy Corporation for Approval of Adjustment of Its Rates and Revised Tariff	**)))**	**Docket No. 08-00197**

****

DIRECT TESTIMONY
OF
STEVE BROWN

****

January 16, 2009

I. Introduction.

Q_1. Please state your name.

A_1. Dr. Stephen Brown.

Q_2. Where do you work?

A_2. I am an Economist in the Consumer Advocate and Protection Division, Office of the Tennessee Attorney General. A statement of my credentials appears at the end of this testimony.

II. Summary

The comparable companies for setting just and reasonable rates in Tennessee for Atmos Energy Corporation (AEC) are AGL Resources, New Jersey Resources, NICOR, Northwest Natural Gas, Piedmont Natural Gas, Southwest Gas, WGL Holdings, and South Jersey Industries. These are local gas distribution companies.

My capital structure is based on the five year average capital structure derived from the comparable companies where the equity ratio is 45.8%, the short-term debt ratio is 13.1%, and the remaining components are gathered into the long-term debt ratio, 41.1%.

My short-tem debt cost is 2.5%, my long-tem debt cost is 6.27% and my equity cost of 7.8%. My total weighted capital cost is 6.5%.

There are two general methods used in setting the equity return: The Discounted Cash Flow (DCF) method and Capital Asset Pricing Model (CAPM). Of the two general methods, DCF and CAPM, my opinion is that the DCF is more appropriate because it tracks the actual flow of a company's payments to shareholders. I place only marginal emphasis on the CAPM and rely primarily on the DCF analysis

My equity return of 7.8 percent for AEC in Tennessee means that Tennessee's residences and businesses would pay $6.8 million in equity returns to AEC.

III. Comparable Companies

The Chairman and CEO of AEC, Mr. Best, said in a press conference on November 2, 2008, where he and other AEC officials discussed AEC's financial performance for the fiscal year 2008:

> *"As you know, the foundation of our business lies in the regulated distribution business."* [[http://seekingalpha.com/article/105633-atmos-energy-corp-f4q08-qtr-end-09-30-08-earnings-call-transcript].

In my opinion regulated distribution activities should be fundamental to the comparable companies, in the sense they should derive most of their income from such activities.

The comparable companies for setting just and reasonable rates in Tennessee for AEC’s customers are AGL Resources, New Jersey Resources, NICOR, Northwest Natural Gas, Piedmont Natural Gas, Southwest Gas, WGL Holdings, and South Jersey Industries. These are same companies that formed the basis of AEC’s most recent rate case in Tennessee. In TRA Docket 07-00105 AEC’s cost-of-capital witness, Dr. Murry, and I agreed that these companies formed a reasonable basis of comparison. Keeping these companies as a basis of comparison provides continuity for setting AEC’s rates in Tennessee.

Of the eight companies which I use, Dr. Vander Weide uses six of them, omitting WGL Holdings and NJR Resources. He bases his opinions on ten companies, but four of them are akin to domestic oil companies. These four companies are Energen, ONEOK, Questar, and Equitable.

Q_3. In your opinion are oil companies comparable to AEC?

A_3. No. In my opinion these companies are not comparable. They derive very small portions of income from regulated distribution operations.

I do not accept Energen, ONEOK, Questar, and Equitable as companies comparable to AEC. Energen is not a comparable company because the cost of equity of its regulated utility subsidiary, Alagasco, is not established via inspection of market evidence. According to Energen:

> *"As an Alabama utility, Alagasco is subject to regulation by the Alabama Public Service Commission (APSC) which established the Rate Stabilization and Equalization (RSE) rate-setting process in 1983. RSE was extended in 2007, 2002, 1996, 1990, 1987 and 1985. On December 21, 2007, the APSC extended RSE for a seven-year period through December 31, 2014. Under the terms of the extension, RSE will continue after December 31, 2014, unless, after notice to the Company and a hearing, the APSC votes to modify or discontinue the RSE methodology. Alagasco's allowed range of return on average equity remains 13.15 percent to 13.65 percent throughout the term of the order. Alagasco is on a September 30 fiscal year for rate-setting purposes (rate year)." [ENERGEN, 10-K Filed 2008_02_25, Page 7]*

Energen's return has not been set via market evidence for 26 years. This disqualifies Energen as a comparable company.

Also, natural gas distribution is not fundamental to Energen. The next image shows that Energen separates its operating income into natural gas distribution and into oil and gas operations. For the fiscal year 2007 gas distribution accounted for less than 15% of Energen's operating income. This, too, disqualifies Energen as a comparable company.

Energen Corporation:10K 2008-02-25 Pg 21.	SELECTED BUSINESS SEGMENT DATA				
Years ended December 31,	**2007**	2006	2005	2004	2003
OIL AND GAS OPERATIONS	***(dollars in thousands)***				
Operating income	451,567	405,149	243,876	180,379	153,325
NATURAL GAS DISTRIBUTION					
Operating income	72,742	74,274	72,922	66,199	66,848

The following remarks by Questar and ONEOK in their SEC Form 10-Ks prove that natural gas distribution is not fundamental to their businesses.

" Retail Gas Distribution - Questar Gas. General: Questar Gas distributes natural gas as a public utility in Utah, southwestern Wyoming and a small portion of southeastern Idaho. It generated approximately 9% of the Company's operating income in 2007." [QUESTAR, 10-K Filed 2008_02_27, Page 10]

"Operating income from our Distribution segment was 21 percent, 16 percent and 21 percent of our consolidated operating income from continuing operations excluding the gain on sale of assets in 2007, 2006 and 2005, respectively. Our Distribution segment had no single external customer from which it received 10 percent or more of consolidated revenues. Intersegment sales accounted for less than one percent of our Distribution segment's revenues in 2007 and 2006, and there were none in 2005." [ONEOK, 10-K Filed 2008_02_27, Page 10].

The following chart and remarks are drawn from Equitable's SEC From 10-K. They also prove that that natural gas distribution is not fundamental to Equitable.

"Equitable Resources, Inc. is an integrated energy company, with an emphasis on Appalachian area natural gas activities, including production, gathering and processing, and distribution, transmission, storage and marketing. The Company and its subsidiaries offer energy (natural gas, and a limited amount of natural gas liquids and crude oil) products and services to wholesale and retail customers. The results of operations of the Company for the year ended December 31, 2007 are reported in this Form 10-K through two business segments: Equitable Supply and Equitable Utilities. These reporting segments reflect the Company's lines of business and are reported in the same manner the Company evaluated its operating performance through December 31, 2007." [EQUITABLE RESOURCES, 10-K Filed 2008_02_22, Page 6].

Equitable's Segment Operating Income:	
Supply Segment Components:	Utilities Segment Components:
Production	**Distribution Operations**
Gathering	**Pipeline (Transportation and Storage) Operations**
	Energy Marketing
"Equitable Supply generated approximately 64% of the Company's net operating revenues in 2007." Pg 7.	**Equitable Utilities generated approximately 36% of the Company's net operating revenues in 2007. Pg. 10.**

Also Dr. Vander Weide is well aware that ONEOK, Questar, and Equitable have always had very low portions of income stem from distribution activities. The next at page 7 of my testimony is from his rebuttal testimony dated January 24, 2005 in FERC Docket 03-398-000, Exhibit NNG-164, page 7.

According to his rebuttal testimony, for the three year period of 2001-2003 these three companies derived no more than 25% of their operating income from distribution. Since then the companies have derived even smaller portions of income from gas distribution.

Exhibit No. NNG-164

UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Northern Natural Gas Company) Docket Nos. RP03-398-000
RP04-155-000
(Consolidated)

REBUTTAL TESTIMONY

OF

JAMES H. VANDER WEIDE

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1 on average operating income over the most recent three years as shown in the

2 companies' annual reports.)

3 **Table 1**

4 **Gas Diversified Companies' Average Business Segment Income 2001 – 2003**

	% Gas Pipeline	% Electric	% LDC	% Other
Equitable Resources	8.2%	-	21.0%	70.7%
National Fuel Gas	31.8%	-	46.1%	22.0%
ONEOK	14.6%	-	25.6%	59.8%
Questar Corporation	22.1%	-	20.3%	57.6%

Dr. Vander Weide is also aware that the other companies in his group have always derived most of their income from regulated distribution operations. The next image is from his rebuttal testimony dated February 20, 2004 in FERC Docket 03-398-000, Exhibit NNG-86, page 5.

Table 2
LDCs' 3-Year Average Business Segment Income

	% Gas Pipeline	% Electric	% LDC	% Other
AGL Resources	-	-	91%	9%
Atmos Energy	-	-	87%	13%
New Jersey Resources	-	-	85%	15%
NICOR	-	-	86%	14%
Peoples Energy	-	7%	87%	6%
Piedmont Natural Gas	-	-	100%	-0.3%
South Jersey Industries	-	-	91%	9%

This evidence supports my opinion that Dr. Vander Weide has an inappropriate mix of companies in his comparable group. Regarding WGL and New Jersey Resources, which I use and which Dr. Vander Weide does not, natural gas distribution comprises about 90 percent WGL's assets and income.

New Jersey Resources is a bit different than it used to be. In fiscal year 2008 natural gas distribution accounted for 37% of NJR’s income but 67% of NJR’s assets. NJR has an unregulated subsidiary, NJR Energy Services (NJRES), which accounts for over 60% of NJR’s income. NJR says its unregulated subsidiary “focuses on creating value from underutilized natural gas assets, which are typically amassed through contractual rights to natural gas transportation and storage capacity… [and through] asset management services.” NJRES is the asset manager for NJR’s utility subsidiary. Therefore, natural gas distribution is fundamental to NJR Resources. This is a situation similar to AEC and its unregulated subsidiary, Atmos Energy Marketing (AEM). In its most recent 10-K AEC said:

> *“AEM aggregates and purchases gas supply, arranges transportation and storage logistics and ultimately delivers gas to customers at competitive prices. To facilitate this process, we utilize proprietary and customer-owned transportation and storage assets to provide various services our customers request, including furnishing natural gas supplies at fixed and market-based prices, contract negotiation and administration, load forecasting, gas storage acquisition and management services, transportation services, peaking sales and balancing services, capacity utilization strategies and gas price hedging through the use of financial instruments.” [AEC, 10-K Filed 2008_11_19, Page .13]*

Both NJR and AEC derive income from their unregulated subsidiaries, and in each case the unregulated business relies on assets of the regulated distribution sector. Thus NJR Resources is comparable to AEC, despite the income level of NJR’s utility subsidiary. This also means that the name of a “business segment” is not necessarily descriptive of the foundation which underlies the segment.

IV. Capital Structure

In my opinion just and reasonable rates in Tennessee flow from a capital structure based on the audited capital-balances of the comparable companies.

IV. A. Capital Structure Components Include All Sources Of Capital.

In the same press conference I mentioned earlier, AEC’s CEO said:

> *“Our debt capitalization was 54.6% at the end of fiscal 2008. We keep this ratio on our list of top priorities and stand committed to preserving a debt capitalization range of 50% to 55% and maintaining solid investment grade credit ratings. These fundamental business principals have served us well during this time of disruption in the credit markets.”* *[[http://seekingalpha.com/article/105633-atmos-energy-corp-f4q08-qtr-end-09-30-08-earnings-call-transcript].*

His statement is consistent with the basis for choosing a capital structure: It includes equity, long-tem debt and short-term debt.

The ratio he mentioned, 54.6%, is consistent with AEC's United States Securities and Exchange Commission's (SEC) Form 10-K for the fiscal year 2008 filed with the SEC in November 2008. The equity ratio was 45.4%. Add the two ratios together and the result is 100%.

AEC's 54.6% ratio is composed of a long-term debt ratio and a short-term debt ratio. The left side of the next image at page 12 of my testimony displays the components of AEC's capital structure compiled from AEC's most recent SEC Form 10-K, which is an audited financial statement. The right side of the image displays the CEO's statement again to emphasize that he included short-term debt in his capital structure.

AEC's Capital Structure Per AEC's CEO Statement At Press Conference, Nov. 2, 2008.		"These fundamental business principals have served us well during this time of disruption in the credit markets."
Source Of Capital	**% OF TOTAL**	
Short-term Debt	***7.8%***	
Long-term Debt	***46.8%***	
Total Debt Ratio	***54.6%***	
Common Equity	**45.4%**	
Total	**100.0%**	

However, Dr. Vander Weide recommends a capital structure very much different than what AEC's CEO referred to. AEC's witness ignores short-term debt as a source of capital. He presents his capital structure at page 28 of his testimony. I display his capital structure at page 13 of my testimony:

SOURCE OF CAPITAL	% OF TOTAL
Long-term Debt	50%
Common Equity	50%
Total	100%

Q_4. In your opinion is Dr. Vander Weide's capital structure consistent with AEC's public representations that a "54.6%" debt ratio served Atmos well?

A_4. No. Dr. Vander Weide's capital structure is not consistent with public representations made by AEC about a "54.6%" debt ratio serving Atmos well. In addition, Dr. Vander Weide's capital structure is not drawn from an analysis of the comparable companies' capital structure, despite his emphasis that

> *"In utility regulation, the practice of using a group of comparable companies, called the comparable company approach, is further supported by the United States Supreme Court standard that the utility should be allowed to earn a return on its investment that is commensurate with returns being earned on other investments of the same risk." [Vander Weide, Direct Page 2, lines 26-29].*

His omissions are very consequential to Tennessee's ratepayers:

- Year-after-year the comparable companies use large amounts of short-term debt, upwards of 13% of their capital structure.

- Short-term debt has a very low cost right now. In its SEC form 10-K filed December 28, 2008 Piedmont recently said that its short-term debt cost was equal to the "30-day LIBOR rate plus .75% to 1.75%" based on its credit ratings.

> *"Effective December 3, 2008, we entered into a syndicated seasonal credit facility with aggregate commitments totaling $150 million. Advances under this seasonal facility bear interest at a rate based on the 30-day LIBOR rate plus from .75% to 1.75%, based on our credit ratings. Any borrowings under this agreement are due by March 31, 2009. We entered into this facility to provide lines of credit in addition to the senior revolving credit facility discussed above in order to have additional resources to meet seasonal cash flow requirements and general corporate needs."*

The next image at page 15 of my testimony displays short-term debt rates, the "1 Month", "3 Month", and "6 Month" LIBOR rates as of December 31, 2008 at the web site, bankrate.com.

http://www.bankrate.com/brm/ratewatch/other-indices.asp

LIBOR, other interest rate indexes

By Bankrate.com

Print E-mail

The LIBOR is among the most common of benchmark interest rate indexes used to make adjustments to adjustable rate mortgages. This page also lists some other less-common indexes.

LIBOR, other interest rate indexes **Updated 12/31/2008**

Click on the links below to find a fuller explanation of the term.

	This week	Month ago	Year ago
Bond Buyer's 20 bond index	5.33	5.39	4.44
FNMA 30 yr Mtg Com del 60 days	4.61	5.08	5.96
1 Month LIBOR Rate	0.45	1.90	4.60
3 Month LIBOR Rate	1.44	2.21	4.70
6 Month LIBOR Rate	1.78	2.57	4.60
Call Money	2.00	2.75	6.00
1 Year LIBOR Rate	2.09	2.77	4.30

On December 31, 2008 the average of the “1 Month”, “3 Month”, and “6 Month” LIBOR rates was 1.22 percent. Like the comparable companies, AEC borrows short-term debt at LIBOR rates plus a markup, as AEC said in reply to CAPD discovery request 52 which I display at page 16 of my testimony:

Atmos Energy Corporation, Tennessee
Docket No. 08-00197
Responses to CAPD First Discovery Request

52. If Atmos expects any changes in the terms of short-term debt, commercial paper and credit line agreements now in effect, or any changes in the interest rates charged in such agreements, or any new agreements regarding short-term debt, commercial paper or credit lines, then describe the changes Atmos expects and identify the Atmos witnesses who discuss such changes.

Response: The Company does not expect any changes in the terms of any of the agreements now in effect prior to their maturity. The interest rates applicable to borrowings under these agreements will change as the underlying market rates (such as LIBOR) fluctuate, but the borrowing spreads and fees specified in these agreements are not expected to change. The yield on the Company's commercial paper that is demanded by investors will also fluctuate according to conditions in the short-term credit markets.

Dr. Vander Weide's omission of short-term debt from his capital structure is harmful to Tennessee's ratepayers. He is weighting the capital structure towards a substantially higher debt cost than AEC's overall debt cost and a substantially higher debt cost than of the comparable companies as a group. The next image at page 17 of my testimony displays the capital structures described by AEC's CEO, by Dr. Vander Weide and by me. Mine are based on an analysis of the comparable companies' capital structures for the most recent year and for the past five fiscal years. Clearly, the comparable companies have a stable capital structure from year to year. Dr. Vander Weide's capital structure is so unlike AEC's current capital structure and so unlike the capital structures of the comparable companies that his capital structure is inappropriate for rate making in Tennessee.

	Capital Structure Components Per:			
Capital Structure Components:	***AEC's CEO Public Statement***	***Dr. Vander Weide***	***8 Comparable Companies Most Recent FY***	***8 Comparable Companies Average Of Past Five FY***
Short-Term Debt	7.8%	0.0%	13.1%	13.1%
Long-Term Debt	46.8%	50.0%	41.9%	41.1%
Common Equity	45.4%	50.0%	45.0%	45.8%
Total	100.0%	100.0%	100.0%	100.0%

In my opinion, the appropriate capital structure in this case is in the far-right column of the image.

IV. B. Investors Rely On Capital Structures That Have Been Verified By Independent Auditors.

Q_5. **In your opinion does AEC rely on audited statements to represent its financial condition to investors?**

A_5. Yes. When AEC's CEO said "Our debt capitalization was 54.6% at the end of fiscal 2008" he was referring to an audited financial statement.

The CEO’s reliance on an audited statement as representative of AEC’s capital structure is consistent with AEC’s past representations to investors that the audited statements represent AEC’s financial condition. The next image on this page is from AEC’s SEC Form 424B2 filed December 8, 2006, page S-4.

	As of September 30, 2006		2005		2004	
Consolidated Balance Sheet Data						
Net property, plant and equipment (6)	$	3,629,156	$	3,374,367	$	1,722,521
Working capital (6)	$	(1,616)	$	151,675	$	283,310
Total assets (6)	$	5,719,547	$	5,653,527	$	2,912,627
Debt						
Long-term debt (7)	$	2,180,362	$	2,183,104	$	861,311
Short-term debt (7)		385,602		148,073		5,908
Total debt	$	2,565,964	$	2,331,177	$	867,219
Shareholders' equity	$	1,648,098	$	1,602,422	$	1,133,459

Form 424B2 is a prospectus supplement for potential investors. It displays audited balance sheet entries for short-term debt, long-term debt and common equity for AEC for the fiscal years 2002 to 2006, although I show only 2006 to 2004 here. The prospectus does not contain unaudited balance sheet data regarding the capital structure nor did AEC say in that prospectus that investors should rely on unaudited information. Nor did AEC tell investors that they should rely on a projected capital structure for AEC. This is consistent with the principle that investors rely on audited data.

The ties between just and reasonable rates in Tennessee, capital structure, the public trust, the 10-K, and the faithful reporting of financial conditions by independent certified public accountants were made clear by the U.S. Supreme Court in a 1984 case, UNITED STATES v. ARTHUR YOUNG & COMPANY:

> *"An independent certified public accountant performs a different role from an attorney whose duty, as his client's confidential adviser and advocate, is to present the client's case in the most favorable possible light. In certifying the public reports that depict a corporation's financial status, the accountant performs a public responsibility transcending any employment relationship with the client, and owes allegiance to the corporation's creditors and stockholders, as well as to the investing public… This "public watchdog" function demands that the accountant maintain total independence from the client at all times and requires complete fidelity to the public trust."*

The Court recognized that investors rely on audited data:

> *"In an effort to control the accuracy of the financial data available to investors in the securities markets, various provisions of the federal securities laws require publicly held corporations to file their financial statements with the Securities and Exchange Commission. Commission regulations stipulate that these financial reports must be audited by an independent certified public accountant in accordance with generally accepted auditing standards….The SEC requires the filing of audited financial statements in order to obviate the fear of loss from reliance on inaccurate information, thereby encouraging public investment in the nation's industries."*

In the instant docket AEC is not relying on comparable companies or audited statements as the basis for a capital structure. At pages 6 and 7 of her testimony, AEC witness Laurie Sherwood suggests that a capital structure can be made from audited and unaudited reports beginning at the time AEC acquired TXU, September 30, 2004:

> *"If one evaluates all of the 10-Q and 10-K filings made by the Company since the acquisition of TXU Gas Company…"*

She proposes the capital structure be split 50 percent to equity and 50 percent to long-term debt with nothing for short-term debt.

> *"Proposed Capital Structure: For the purpose of setting rates in this case, the capital structure that should be applied is 50% long-term debt and 50% shareholders' equity." [Sherwood, Direct Page 12]*

If investors look to audited statements to verify a company's financial condition, then the same consideration should be extended to Tennessee's ratepayer. But neither Ms. Sherwood nor Dr. Vander Weide make the effort. As I mentioned, Dr. Vander Weide also recommends this capital structure without examining the comparable companies' capital structures. Thus AEC ignores two principles central to ratemaking, the use of an audited balance sheet and the comparability principles.

IV. C. Short-term Debt Is A Permanent Part Of A Capital Structure

AEC has not applied the comparable company principle to capital structure. AEC adheres to its long-standing rate-case strategy that short-term debt be excluded from capital structure. This strategy contrasts with AEC's remarks about its sources of capital.

In its SEC Form 10-K, page 22, filed in November 2008 AEC said "We rely upon access to both short-term and long-term credit markets to satisfy our liquidity requirement." AEC also said that it has credit lines of about $780 million and that its long-term debt was rated as "investment grade," meaning that AEC could secure short-term borrowing from institutional lenders.

In an earlier TRA docket Piedmont, one of the comparable companies, readily acknowledged that short-term capital can be used for any purpose. Thus short-term debt is a permanent capital source which reduces the need for long-term capital and common equity. The image at page 22 of my testimony displays Piedmont's reply to a CAPD discovery request in TRA Docket 99-00994:

NASHVILLE GAS COMPANY
DOCKET NO. 99-00994
CONSUMER ADVOCATE DATA REQUEST # 1

122. Prevailing interest rates for "A" rated debt from Nov. 1997 through in Jan. 1999, according to the Federal Reserve and other sources, ranged from a low of 6.91% to 7.26%. Explain why the company issued its new debt in Sept. 1999 instead of the time period of Nov. 1997 through Apr. 1999.

Response:

The Company forecasts construction and operating expenditures for the purpose of anticipating both short term and long term capital requirements. During the time period November 1997 through April 1999, capital requirements were met by internally generated funds and short term bank loans with rates more favorable than prevailing long term debt rates.

The Treasurer of Piedmont testified in Docket 03-00313:

> *"Why don't you just sell common stock and long-term debt and avoid the use of long-term debt on short notice?"*
>
> *"We can sell short-term debt on very short notice. We cannot sell common stock and long-term on short notice..." [Docket 03-00313, Dzuricky Rebuttal Sept. 2, 2003, P. 17 L. 25 – P. 18, L. 5-7]*

Because AECs' cash flows are predictable and its long-term debt is "investment grade," there is no question that short-term debt be included in AEC's capital structure.

Investors expect to see short-term debt in a company's capital structure, just as AEC told potential investors in December 2006 when AEC went through a public offering of new shares and specifically included short-term debt in its consolidated balances in the SEC Form 424B2 which I referred to earlier.

IV. D. Short-Term Debt Cost.

In my opinion the appropriate short-term debt cost is the average of the three short-term LIBOR rates, 1.22%, plus a markup of 1.25%, where the markup is mid point of the markups described by Piedmont which I cited earlier. I round this result to 2.5%.

IV. E. Long-term Debt Cost.

I accept AEC's proposed cost of 6.27% for long-term debt. However, I do not accept 50% as the long-term debt ratio.

IV. F. Equity Ratio

AEC suggests that it needs a 50% equity ratio and a rate increase in Tennessee to prevent its equity from declining. CAPD discovery request 80 asked AEC if it expected its equity to decline in Tennessee. The question and reply are:

> *"Does Atmos expect its equity return in Tennessee to decline? Provide a detailed explanation of your response, including all supportive documents."*

"Response: If the currently effective rates in Tennessee remain in place, then the Company expects its equity return in Tennessee will continue to decline."

IV. G. AEC's Stock Options Program Has Deprived It Of Capital That Could Have Boosted AEC's Equity.

Although AEC is asking its Tennessee customers to pay over $11 million in equity returns, I discovered that AEC gave up $33 million of equity by issuing over 2.6 million shares at discounts ranging up to 50% of market price in the fiscal years 2004 to 2008, as displayed in the next image at page 25 of my testimony. Line 3, "Paid in Capital per Share Exercised," indicates the magnitude of the discount.

AEC Gave Up $33 Million In Equity Proceeds From 2004 - 2008						
Option Category	Fiscal Year Data					
1998 Long-term Incentive Plan	2004	2005	2006	2007	2008	Total
1. Shares Exercised - As Reported In AEC's SEC From 10-K For The Fiscal Year	498,230	745,788	366,905	511,584	538,450	2,660,957
2. Paid In Capital - Dollars As Reported In AEC's SEC From 10-K For The Fiscal Year	$11,848,000	$14,116,000	$8,976,000	$7,547,000	$5,592,000	$48,079,000
3. Paid In Capital Per Share Exercised - Dollars: Line 2 /Line 1	23.78018	18.92763	24.46410	14.75222	10.38537	
4. Av Daily Closing Price Per Share Of AEC in Fiscal Year - Dollars	25.12000	27.59516	27.04968	30.75840	27.16613	
5. Difference: Paid In Capital Per Share less Market Price Per Share: Line 4 - Line 3	1.33982	8.66753	2.58558	16.00618	16.78076	
6. Estimated Exercise Price Per Share - Dollars	22.44036	10.26010	21.87852	NA	NA	
7. Difference: Market Price Per Share Less Estimated Exercise Price Per Share: Line 4 - Line 6	2.67964	17.33505	5.17117	16.00618	16.78076	
8. Equity Lost Due To Discount Off Of Market Price: Line1 Times Line 7 - Dollars	$1,335,075	$12,928,275	$1,897,327	$8,188,505	$9,035,601	$33,384,783

AEC's policy of giving deep discounts contrasts with the policy of one comparable company, Northwest Natural Gas. Its policy is to set option prices equal to market prices on the date the option is granted:

> *"All options are granted at an option price not less than the market value at the date of grant and may be exercised for a period not exceeding 10 years from the date of grant."[Northwest Natural Gas 10-K filed 2007_02_28, page 88]*

I checked AEC's daily closing price per share for the year 1998 and found that that the average daily closing price was $28.94, the maximum price was $32.06 and the minimum price was $24.75. These prices are not much different than the prices from 2004 to 2008. It is clear that the options granted through the 1998 Incentive Plan were given at deep discounts to market price, whether in 1998 or from 2004 to 2008. With regard to the current rate case, it is very fair that Mr. Peters of CAPD excludes long-term incentive expenses from this rate case.

IV. H. AEC Has Blurred The Distinction Between Its Shareholders and AEC Itself By Issuing Over 25% Of New Shares Internally, Rather Than To The Public.

The data on AEC's stock options caused me to review AEC's issues of new stock since 2001. I found that AEC issued much more new stock than the comparable companies, and that AEC issued a large portion of the new stock to itself.

In my opinion this makes AEC a less attractive company to investors because it means AEC is seen as a company willing to dilute its shares.

Since 2001 over 26% of AEC shares were issued internally. Since 2004 over 17% of new shares were issued internally. However, AEC has not provided any forecast of new share issues expected in the future. In TRA Docket 04-00034 the Authority concluded that no flotation costs were needed because the company had not forecasted a need for new financing. The following image displays my compilation of AEC’s new shares issued since 2001.

New Shares Issued BY AEC Per SEC Forms 10-K

	Total Shares issued	Shares Issued Internally As Percent:	Shares Issued To Public As Percent:	Total Percent	Shares Outstanding As Of *	Change In Shares From Prior Year	As Of Date
2001	8,839,161	23.7%	76.3%	100.0%	40,791,501		* Sep. 30, 2001
2002	884,431	100.0%	0.0%	100.0%	41,675,932	884,431	* Sep. 30, 2002
2003	9,799,853	58.2%	41.8%	100.0%	51,475,785	9,799,853	* Sep. 30, 2003
2004	11,323,925	12.2%	87.8%	100.0%	62,799,710	11,323,925	* Sep. 30, 2004
2005	17,739,691	9.2%	90.8%	100.0%	80,613,517	17,813,807	* Nov. 11, 2005
2006	1,200,115	100.0%	0.0%	100.0%	81,823,767	1,210,250	* Nov. 08, 2006
2007	7,587,021	16.6%	83.4%	100.0%	89,749,755	7,925,988	* Nov. 20, 2007
2008	1,488,146	100.0%	0.0%	100.0%	91,133,742	1,383,987	* Nov. 12, 2008
2004-2008 Total	39,338,898	17.7%	82.3%	100.0%			
2001-2008 Total	58,862,343	26.6%	73.4%	100.0%			

The next image at page 29 of my testimony displays shares outstanding for the past 6 fiscal years for the 8 comparable companies and Atmos, whose data is displayed at the bottom of the image. In comparison to the comparable companies, AEC has issued a large number of shares in the past several years, making AEC appear as a company where share dilution is a problem and perhaps depressing share price.

Shares OutStanding

Company	Ticker	FY6	FY5	FY4	FY3	FY2	FY1
		Oldest	....	....	....	....	Most Recent
AGL Resources	ATG	63,229,898	64,586,932	76,953,218	77,849,574	77,752,515	76,439,305
NICOR Inc.	GAS	44,011,206	44,039,432	44,113,480	44,192,259	44,911,933	45,135,079
New Jersey Resources	NJR	27,383,317	27,832,819	27,577,025	27,678,310	27,753,340	42,120,169
Northwest Nat. Gas	NWN	25,637,524	25,989,395	27,335,881	27,553,685	27,582,296	27,547,346
Piedmont Natural Gas	PNY	33,177,794	33,780,260	76,624,547	76,612,685	74,606,758	73,233,664
South Jersey Industries	SJI	12,241,272	13,549,849	13,931,308	29,015,539	29,340,537	29,624,492
Southwest Gas	SWX	33,534,271	34,517,481	37,208,075	39,557,464	41,997,015	43,044,024
WGL Holdings Inc.	WGL	48,626,243	48,674,581	48,753,828	48,885,617	49,449,357	49,971,614
Atmos	ATO	51,475,785	62,799,710	80,613,517	81,823,767	89,749,755	91,133,742

Method To Increase Shares OutStanding

Company	Ticker	Public Offerings Of New Stock	Stock Splits
AGL Resources	ATG	One Public Offering In FY4	None
NICOR Inc.	GAS	None	None
New Jersey Resources	NJR	None	3 for 2, March 4, 2008
Northwest Nat. Gas	NWN	None	None
Piedmont Natural Gas	PNY	One Public Offering In FY4	2 for 1, Nov 1, 2004
South Jersey Industries	SJI	None	2 for 1, July 1, 2005
Southwest Gas	SWX	None	None
WGL Holdings Inc.	WGL	None	None
Atmos	ATO	Several	None

IV. I. Final Capital Structure And Capital Costs.

In my opinion there is no good reason to accept AEC's proposal that its capital structure be set according to its projections and unaudited data. The next image displays the capital structure and capital costs which provide just and reasonable rates for AEC's customers in Tennessee.

CAPD: Capital Structure Components And Cost Per Component TRA Docket 08-00197			
Source Of Capital:	Components: Average Of Past Five FY	Cost	Weighted Cost
Short-Term Debt	13.1%	2.5%	0.3%
Long-Term Debt	41.1%	6.3%	2.6%
Common Equity	45.8%	7.8%	3.6%
Total	100.0%		6.5%

The average capital structure components for the eight comparables for each of the past five fiscal years is presented in the next image at page 31 of my testimony, where FY1 represents the most recent year and FY5 represents the oldest fiscal year.

Capital Structure Components:		Average FY Capital Structure All Comparable Companies: FY1	FY2	FY3	FY4	FY5	5 -Yr Average
Short-Term Debt: Notes Due		13.09%	12.77%	14.35%	11.78%	13.48%	13.09%
Short-Term Debt: Current Portion of Long-Term Debt		1.77%	0.70%	1.38%	1.12%	1.34%	1.26%
Long-Term Debt Net Of Current Portion		37.64%	39.49%	39.07%	41.07%	39.74%	39.40%
Common Equity		47.33%	46.85%	44.99%	45.77%	43.96%	45.78%
Preferred		0.18%	0.20%	0.20%	0.26%	1.49%	0.47%
Total		100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

The equity ratio of 45.8% is a bit higher than AEC’s fiscal year 2008 equity ratio of 45.4% and much higher than AEC’s average equity ratio of 42.9% for the fiscal years 2005 to 2008. The image at page 30 of my testimony displays the record of AEC’s capital structure balances since 1997. The image at page 31 of my testimony displays the record of AEC’s capital structure ratios since 1997. They and are based on the audited balances since 1997. The capital structure as of September 30, 2004 reflects AEC’s preparations for its merger with TXU and is not a normal fiscal year capital structure for AEC. The next two images at pages 32 and 33 of my testimony display annual audited balances in rounded dollar amounts, as expressed in each company’s oldest SEC Form 10-K, and in percentage amounts for each fiscal year per each company’s SEC Form 10-K. These tables also appear as excel files in my workpapers.

Atmos Balance Sheet Entries From Its SEC 10-K						
Capital Structure Components As Of:	*Short-Term Debt: Notes Due*	*Short-Term Debt: Current Portion of Long-Term Debt*	*Long-Term Debt*	*Common Equity*	*Preferred*	*Total*
2008: Sep 30	*$350,542*	*$785*	*$2,119,792*	*$2,052,492*	*$0*	*$4,523,611*
2007: Sep 30	*$150,599*	*$3,831*	*$2,126,315*	*$1,965,754*	*$0*	*$4,246,499*
2006: Sep 30	*$382,416*	*$3,186*	*$2,180,362*	*$1,648,098*	*$0*	*$4,214,062*
2005: Sep 30	*$144,809*	*$3,264*	*$2,183,104*	*$1,602,422*	*$0*	*$3,933,599*
2004: Sep 30	*$0*	*$5,908*	*$861,311*	*$1,133,459*	*$0*	*$2,000,678*
2003: Sep 30	*$118,595*	*$9,345*	*$862,500*	*$857,517*	*$0*	*$1,847,957*
2002: Sep 30	*$145,791*	*$21,980*	*$670,463*	*$573,235*	*$0*	*$1,411,469*
2001: Sep 30	*$201,247*	*$20,695*	*$692,399*	*$583,864*	*$0*	*$1,498,205*
2000: Sep 30	*$250,047*	*$17,566*	*$380,764*	*$392,466*	*$0*	*$1,040,843*
1999: Sep 30	*$168,304*	*$17,848*	*$395,331*	*$377,663*	*$0*	*$959,146*
1998: Sep 30	*$17,491*	*$57,783*	*$456,331*	*$371,158*	*$0*	*$902,763*
1997: Sep 30	*$119,178*	*$15,201*	*$318,182*	*$327,260*	*$0*	*$779,821*

Atmos Ratios From Balance Sheet Entries Of Its SEC 10-K						
Capital Structure Components As Of:	***Short-Term Debt: Notes Due***	***Short-Term Debt: Current Portion of Long-Term Debt***	***Long-Term Debt***	***Common Equity***	***Preferred***	***Total***
2008: Sep 30	***7.7%***	***0.0%***	***46.9%***	***45.4%***	***0.0%***	***100.0%***
2007: Sep 30	***3.5%***	***0.1%***	***50.1%***	***46.3%***	***0.0%***	***100.0%***
2006: Sep 30	***9.1%***	***0.1%***	***51.7%***	***39.1%***	***0.0%***	***100.0%***
2005: Sep 30	***3.7%***	***0.1%***	***55.5%***	***40.7%***	***0.0%***	***100.0%***
2004: Sep 30	***0.0%***	***0.3%***	***43.1%***	***56.7%***	***0.0%***	***100.0%***
2003: Sep 30	***6.4%***	***0.5%***	***46.7%***	***46.4%***	***0.0%***	***100.0%***
2002: Sep 30	***10.3%***	***1.6%***	***47.5%***	***40.6%***	***0.0%***	***100.0%***
2001: Sep 30	***13.4%***	***1.4%***	***46.2%***	***39.0%***	***0.0%***	***100.0%***
2000: Sep 30	***24.0%***	***1.7%***	***36.6%***	***37.7%***	***0.0%***	***100.0%***
1999: Sep 30	***17.5%***	***1.9%***	***41.2%***	***39.4%***	***0.0%***	***100.0%***
1998: Sep 30	***1.9%***	***6.4%***	***50.5%***	***41.1%***	***0.0%***	***100.0%***
1997: Sep 30	***15.3%***	***1.9%***	***40.8%***	***42.0%***	***0.0%***	***100.0%***

			Fiscal Year Balances Per SEC Form 10-K, Per Audit By Independent Registered Public Accounting Firm				
Stk Symbo	Company	Description	FY 1	FY 2	FY 3	FY 4	FY 5
ATG	AGL	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
ATG	AGL	Short-Term Debt: Notes Due	$580	$528	$522	$334	$306
ATG	AGL	Short-Term Debt: Current Portion of Long-Term Debt	$0	$11	$0	$0	$77
ATG	AGL	Long-Term Debt Net Of Current Portion	$1,674	$1,615	$1,615	$1,623	$731
ATG	AGL	Common Equity	$1,661	$1,609	$1,499	$1,385	$945
ATG	AGL	Trust Preferred Securities	$0	$0	$0	$0	$225
ATG	AGL	Total	$3,915	$3,763	$3,636	$3,342	$2,285
GAS	NICOR	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
GAS	NICOR	Short-Term Debt: Notes Due	$369	$350	$586	$490	$575
GAS	NICOR	Short-Term Debt: Current Portion of Long-Term Debt	$75	0	50	0	0
GAS	NICOR	Long-Term Debt Net Of Current Portion	$423	$498	$486	$495	$497
GAS	NICOR	Common Equity	$945	$873	$811	$749	$755
GAS	NICOR	Preferred	$1	$1	$1	$2	$2
GAS	NICOR	Total	$1,813	$1,721	$1,934	$1,736	$1,828
NJR	New Jersey Resources	Capital Structure Components As Of:	2008: Sep 30	2007: Sep 30	2006: Sep 30	2005: Sep 30	2004: Sep 30
NJR	New Jersey Resources	Short-Term Debt: Notes Due	$178	$256	$281	$174	$260
NJR	New Jersey Resources	Short-Term Debt: Current Portion of Long-Term Debt	$60	$4	$4	$3	$28
NJR	New Jersey Resources	Long-Term Debt Net Of Current Portion	$455	$383	$332	$317	$316
NJR	New Jersey Resources	Common Equity	$727	$645	$622	$438	$468
NJR	New Jersey Resources	Preferred	$0	$0	$0	$0	$0
NJR	New Jersey Resources	Total	$1,420	$1,289	$1,238	$933	$1,071
NWN	Northwest Natural Gas	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
NWN	Northwest Natural Gas	Short-Term Debt: Notes Due	$143,100	$100,100	$126,700	$102,500	$85,200
NWN	Northwest Natural Gas	Short-Term Debt: Current Portion of Long-Term Debt	$5,000	$29,500	$8,000	$15,000	$0
NWN	Northwest Natural Gas	Long-Term Debt Net Of Current Portion	$512,000	$517,000	$521,500	$484,027	$500,319
NWN	Northwest Natural Gas	Common Equity	$594,751	$599,545	$586,931	$568,517	$506,316
NWN	Northwest Natural Gas	Preferred	$0	$0	$0	$0	$0
NWN	Northwest Natural Gas	Total	$1,254,851	$1,246,145	$1,243,131	$1,170,044	$1,091,835
PNY	Piedmont	Capital Structure Components As Of:	2008: Oct 31	2007: Oct 31	2006: Oct 31	2005: Oct 31	2004: Oct 31
PNY	Piedmont	Short-Term Debt: Notes Due	$406,500	$195,500	$170,000	$158,500	$109,500
PNY	Piedmont	Short-Term Debt: Current Portion of Long-Term Debt	$30	$0	$0	$35,000	$0
PNY	Piedmont	Long-Term Debt Net Of Current Portion	$794,261	$824,887	$825,000	$625,000	$660,000
PNY	Piedmont	Common Equity	$887,244	$878,374	$882,925	$884,192	$854,898
PNY	Piedmont	Preferred	$0	$0	$0	$0	$0
PNY	Piedmont	Total	$2,088,035	$1,898,761	$1,877,925	$1,702,692	$1,624,398
SJI	South Jersey Industries	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
SJI	South Jersey Industries	Short-Term Debt: Notes Due	$118,290	$194,600	$147,300	$92,300	$112,800
SJI	South Jersey Industries	Short-Term Debt: Current Portion of Long-Term Debt	$106	$2,369	$2,364	$5,348	$5,273
SJI	South Jersey Industries	Long-Term Debt Net Of Current Portion	$357,896	$358,022	$319,066	$328,914	$308,781
SJI	South Jersey Industries	Common Equity	$481,080	$443,036	$393,645	$343,363	$296,412
SJI	South Jersey Industries	Preferred	$0	$0	$0	$1,690	$1,690
SJI	South Jersey Industries	Total	$957,372	$998,027	$862,375	$771,615	$724,956
SWX	Southwest Gas	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
SWX	Southwest Gas	Short-Term Debt: Notes Due	$9,000	$0	$24,000	$100,000	$52,000
SWX	Southwest Gas	Short-Term Debt: Current Portion of Long-Term Debt	$38,079	$27,545	$83,215	$29,821	$6,435
SWX	Southwest Gas	Long-Term Debt Net Of Current Portion	$1,366,067	$1,386,354	$1,324,898	$1,262,936	$1,221,164
SWX	Southwest Gas	Common Equity	$983,673	$901,425	$751,135	$705,676	$630,467
SWX	Southwest Gas	Preferred	$0	$0	$0	$0	$0
SWX	Southwest Gas	Total	$2,396,819	$2,315,324	$2,183,248	$2,098,433	$1,910,066
WGL	WGL Holdings	Capital Structure Components As Of:	2008: Sep 30	2007: Sep 30	2006: Sep 30	2005: Sep 30	2004: Sep 30
WGL	WGL Holdings	Short-Term Debt: Notes Due	$270,955	$184,247	$177,376	$40,876	$95,634
WGL	WGL Holdings	Short-Term Debt: Current Portion of Long-Term Debt	$75,994	$21,094	$60,994	$50,122	$60,639
WGL	WGL Holdings	Long-Term Debt Net Of Current Portion	$603,738	$616,419	$576,139	$584,150	$590,164
WGL	WGL Holdings	Common Equity	$1,047,564	$980,767	$921,807	$893,992	$853,424
WGL	WGL Holdings	Preferred	$28,173	$28,173	$28,173	$28,173	$28,173
WGL	WGL Holdings	Total	$2,026,424	$1,830,700	$1,764,489	$1,597,313	$1,628,034

			Fiscal Year Capital Structure Per SEC Form 10-K, Per Audit By Independent Registered Public Accounting Firm				
Stk Symbol	Company	Description	FY 1	FY 2	FY 3	FY 4	FY 5
ATG	AGL	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
ATG	AGL	Short-Term Debt: Notes Due	14.81%	14.03%	14.36%	9.99%	13.41%
ATG	AGL	Short-Term Debt: Current Portion of Long-Term Debt	0.00%	0.29%	0.00%	0.00%	3.37%
ATG	AGL	Long-Term Debt Net Of Current Portion	42.76%	42.92%	44.42%	48.56%	31.99%
ATG	AGL	Common Equity	42.43%	42.76%	41.23%	41.44%	41.37%
ATG	AGL	Trust Preferred Securities	0.00%	0.00%	0.00%	0.00%	9.86%
ATG	AGL	Total	100.00%	100.00%	100.00%	100.00%	100.00%
GAS	NICOR	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
GAS	NICOR	Short-Term Debt: Notes Due	20.36%	20.34%	30.30%	28.23%	31.45%
GAS	NICOR	Short-Term Debt: Current Portion of Long-Term Debt	4.14%	0.00%	2.59%	0.00%	0.00%
GAS	NICOR	Long-Term Debt Net Of Current Portion	23.33%	28.91%	25.13%	28.53%	27.18%
GAS	NICOR	Common Equity	52.15%	50.71%	41.95%	43.15%	41.27%
GAS	NICOR	Preferred	0.03%	0.03%	0.03%	0.09%	0.10%
GAS	NICOR	Total	100.00%	100.00%	100.00%	100.00%	100.00%
NJR	New Jersey Resources	Capital Structure Components As Of:	2008: Sep 30	2007: Sep 30	2006: Sep 30	2005: Sep 30	2004: Sep 30
NJR	New Jersey Resources	Short-Term Debt: Notes Due	12.55%	19.90%	22.67%	18.67%	24.24%
NJR	New Jersey Resources	Short-Term Debt: Current Portion of Long-Term Debt	4.23%	0.34%	0.30%	0.35%	2.59%
NJR	New Jersey Resources	Long-Term Debt Net Of Current Portion	32.04%	29.73%	26.83%	34.01%	29.49%
NJR	New Jersey Resources	Common Equity	51.18%	50.03%	50.20%	46.97%	43.68%
NJR	New Jersey Resources	Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
NJR	New Jersey Resources	Total	100.00%	100.00%	100.00%	100.00%	100.00%
NWN	Northwest Natural Gas	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
NWN	Northwest Natural Gas	Short-Term Debt: Notes Due	11.40%	8.03%	10.19%	8.76%	7.80%
NWN	Northwest Natural Gas	Short-Term Debt: Current Portion of Long-Term Debt	0.40%	2.37%	0.64%	1.28%	0.00%
NWN	Northwest Natural Gas	Long-Term Debt Net Of Current Portion	40.80%	41.49%	41.95%	41.37%	45.82%
NWN	Northwest Natural Gas	Common Equity	47.40%	48.11%	47.21%	48.59%	46.37%
NWN	Northwest Natural Gas	Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
NWN	Northwest Natural Gas	Total	100.00%	100.00%	100.00%	100.00%	100.00%
PNY	Piedmont	Capital Structure Components As Of:	2008: Oct 31	2007: Oct 31	2006: Oct 31	2005: Oct 31	2004: Oct 31
PNY	Piedmont	Short-Term Debt: Notes Due	19.47%	10.30%	9.05%	9.31%	6.74%
PNY	Piedmont	Short-Term Debt: Current Portion of Long-Term Debt	0.00%	0.00%	0.00%	2.06%	0.00%
PNY	Piedmont	Long-Term Debt Net Of Current Portion	38.04%	43.44%	43.93%	36.71%	40.63%
PNY	Piedmont	Common Equity	42.49%	46.26%	47.02%	51.93%	52.63%
PNY	Piedmont	Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
PNY	Piedmont	Total	100.00%	100.00%	100.00%	100.00%	100.00%
SJI	South Jersey Industries	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
SJI	South Jersey Industries	Short-Term Debt: Notes Due	12.36%	19.50%	17.08%	11.96%	15.56%
SJI	South Jersey Industries	Short-Term Debt: Current Portion of Long-Term Debt	0.01%	0.24%	0.27%	0.69%	0.73%
SJI	South Jersey Industries	Long-Term Debt Net Of Current Portion	37.38%	35.87%	37.00%	42.63%	42.59%
SJI	South Jersey Industries	Common Equity	50.25%	44.39%	45.65%	44.50%	40.89%
SJI	South Jersey Industries	Preferred	0.00%	0.00%	0.00%	0.22%	0.23%
SJI	South Jersey Industries	Total	100.00%	100.00%	100.00%	100.00%	100.00%
SWX	Southwest Gas	Capital Structure Components As Of:	2007: Dec 31	2006: Dec 31	2005: Dec 31	2004: Dec 31	2003: Dec 31
SWX	Southwest Gas	Short-Term Debt: Notes Due	0.38%	0.00%	1.10%	4.77%	2.72%
SWX	Southwest Gas	Short-Term Debt: Current Portion of Long-Term Debt	1.59%	1.19%	3.81%	1.42%	0.34%
SWX	Southwest Gas	Long-Term Debt Net Of Current Portion	57.00%	59.88%	60.68%	60.18%	63.93%
SWX	Southwest Gas	Common Equity	41.04%	38.93%	34.40%	33.63%	33.01%
SWX	Southwest Gas	Preferred	0.00%	0.00%	0.00%	0.00%	0.00%
SWX	Southwest Gas	Total	100.00%	100.00%	100.00%	100.00%	100.00%
WGL	WGL Holdings	Capital Structure Components As Of:	2008: Sep 30	2007: Sep 30	2006: Sep 30	2005: Sep 30	2004: Sep 30
WGL	WGL Holdings	Short-Term Debt: Notes Due	13.37%	10.06%	10.05%	2.56%	5.87%
WGL	WGL Holdings	Short-Term Debt: Current Portion of Long-Term Debt	3.75%	1.15%	3.46%	3.14%	3.72%
WGL	WGL Holdings	Long-Term Debt Net Of Current Portion	29.79%	33.67%	32.65%	36.57%	36.25%
WGL	WGL Holdings	Common Equity	51.70%	53.57%	52.24%	55.97%	52.42%
WGL	WGL Holdings	Preferred	1.39%	1.54%	1.60%	1.76%	1.73%
WGL	WGL Holdings	Total	100.00%	100.00%	100.00%	100.00%	100.00%

V. CAPD Equity Return – General Economic Conditions

In my opinion just and reasonable rates in Tennessee include consideration of consumers' ability to pay the utility's bill. There is no doubt Tennessee's businesses and consumers have been hurt by the changes in the state's and the nation's economy. AEC's CEO explicitly acknowledged the "ability-to-pay-problem" in the press conference of November 2, 2008:

> *"Now of course we're all concerned with the current economic conditions that our customers may have more difficulty in paying all of their bills, credit cards and utility bills and we're certainly in the middle of all of that. But we have a very effective collections team in place and good trackers in our terrace." [http://seekingalpha.com/article/105633-atmos-energy-corp-f4q08-qtr-end-09-30-08-earnings-call-transcript].*

Letting a collections team handle the **“ability-to-pay-problem”** is one solution, but a more effective strategy is to moderate AEC’s proposed rate increase by setting rates based on the current state of the economy. The current rate case is AEC’s third one in three years. Because AEC’s rate cases are occurring at regular intervals (this is case is the third one in three years), current economic conditions will not weigh disproportionately on AEC’s long-term outlook. AEC itself is keenly aware of current conditions. Mr. Cocklin, AEC’s President said in the press conference, “…capital and expense budgets are being reviewed almost on a daily basis right now to keep in contact with the economic climate.”

AEC’s keen awareness has not flowed to its current rate case. In CAPD discovery request 63 CAPD asked AEC if it had evaluated the impact of its rate increase on its customers in Tennessee. The question and reply are:

> *“Provide copies of any study or report performed by Atmos or on its behalf where Atmos' proposed rate increase is evaluated for its financial impact on its customers in Tennessee.”*
>
> *“Response: The only study or report performed concerning the impact of the rate increase to the Company’s customers was provided as Schedule PJC-3 “Present vs. Proposed Rates.”*

AEC's cost of capital witness, Dr. Vander Weide, proposes that **residential and business customers pay AEC $11.2 million in equity, a return of 11.7 percent. Investors will not make and do not expect to make double-digit returns in the current economy. One expert, Mr. Gross of Pimco Bonds Inc. has said there is no end in sight for the current situation and that investors "be content with single-digit returns in future years:"**

> *"A recession may be replaced by a depression…Investors need to recognize these titanic shifts in markets and public policies and be content with single-digit returns in future years." [Bill Gross, http://money.cnn.com/galleries/_ fortune/0812/gallery.market_gurus.fortune./jump.html]*

The same expectations appear in the minutes of the Federal Open Market Committee for December 15 and 16, 2008:

"Real GDP appeared likely to decline substantially in the fourth quarter of 2008 as conditions in the labor market deteriorated more steeply than previously anticipated; the decline in industrial production intensified; consumer and business spending appeared to weaken; and financial conditions, on balance, continued to tighten. Rising unemployment, the declines in stock market wealth, low levels of consumer sentiment, weakened household balance sheets, and restrictive credit conditions were likely to continue to hinder household spending over the near term. Homebuilding was expected to contract further. Business expenditures were also likely to be held back by a weaker sales outlook and tighter credit conditions. Oil prices, which dropped significantly during the intermeeting period, were assumed to rise over the next two years in line with the path indicated by futures market prices, but to remain below the levels of October 2008. All told, real GDP was expected to fall much more sharply in the first half of 2009 than previously anticipated." [Minutes of the Federal Open Market Committee, December 15-16, 2008, page 6, http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20081216.pdf].

The Congressional Budget Office testified to Congress on January 8, 2009. The CBO said there will be:

"A marked contraction in the U.S. economy in calendar year 2009, with real (inflation-adjusted) gross domestic product (GDP) falling by 2.2 percent [and]an unemployment rate that will exceed 9 percent early in 2010." [Statement of Robert A. Sunshine, Acting Director, CBO, before the Committee on the Budget United States Senate, January 8, 2009, [http://www.cbo.gov/ftpdocs/99xx/doc9958/01-08-Outlook_Testimony.pdf CBO testimony]

The outlook in Tennessee is no different. **Knoxville station WBIR featured at its web site the story displayed in the next image at page 39 of my testimony: "All the news is bad news." A report from the University Of Tennessee said the state's unemployment would reach 8.3% in 2009.**

In sum there is ample evidence suggesting that investors are not expecting an 11.7 percent return on equity in the current economy.

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live_online> Shuttle Discovery to launch pad

"All the news is bad news" for economy, UT reports

Jake Jost • Updated: 10/31/2008 11:29:52 AM • Posted: 10/31/2008 11:15:50 AM

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A report from the UT Center for Business and Economic Research is all gloom and doom for the short-term economy.

The report indicates more bad news is ahead for jobs, earnings, investments, and unemployment rates.

The fall 2008 Economic Report to the Governor was released today, and it said the path forward is nothing other than "downright ugly."

It cites housing starts at their lowest since 1945, job losses every month, and a shrinking Gross Domestic Product as indicators.

The report's authors expect the GDP to keep shrinking through the middle of 2009.

"My mother often told me that if I did not have anything good to say, I should say nothing at all. If I followed my mother's advice, this would be a very brief narrative. Unfortunately all the news is bad news," Matt Murray wrote in one section of the report.

A tight credit market is slowing a potential rebound, with more restrictive lending criteria meaning fewer people are getting credit for purchases like cars and homes.

The report does mention that a slowing global economy has put a damper on inflation, dropping the cost of energy and many commodities. But with decreased household wealth also part of the picture, consumers aren't in a position to increase spending.

The report predicts nationwide growth will return in the second and third quarters of 2009, but home values will remain down through 2012.

The unemployment rate is predicted to reach 7.2 percent next year, nationwide. Tennessee's unemployment rate is expected to reach 8.3 percent in the third quarter of 2009, its highest rate since the 1982 recession.

As for Tennessee's economy, the report says the data don't show a bottoming out or turnaround. "There is no upside potential for growth through 2009, only downside risk," the report indicates.

More News headlines
- Goody's files for bankruptcy, again
- Local lawmaker: Turn fly-ash into economic tool for East Tennessee (3)
- Knoxville approves downtown developments (5)
- UT students will pay more (3)

V. A. CAPD DCF Analysis

My DCF analysis is based on the dividend yields and dividend payment of the comparable companies. These represent the actual cash flows to shareholders from the companies. My estimated DCF return is 7.5% and is displayed in the far right corner of the image 41 of my testimony. My calculated figure is 7.5%, but I raised that amount to 7.8% to ensure a 1.5% markup over the cost of AEC's long-term debt. The return is well above the current prime rate of 3.25% as of January 14, 2009. In my opinion a 7.8% return is ample to attract prudent investors, those who are not primarily motivated by capital gains as a source of income.

Dr. Vander Weide's 11.7% return is premised on investors expecting substantial capital gains from investing in AEC:

> *"Likewise, investors value an investment in a firm's stock because they expect to receive a sequence of dividend payments and, perhaps, expect to sell the stock at a higher price sometime in the future." [Vander Weide Direct, Page 9, Lines 26-28.]*

In contrast, I rely on the DCF model because it approximates the real cash flow to investors and is not tied to hypothetical capital gains which create cash flow burdens which must be supported by AEC's Tennessee rate payers. This is consistent with my testimony in TRA Docket 05-00258:

Cost Of Equity: DCF Model

Fiscal Year Dividends Per Share

Ticker	Company	2002	2003	2004	2005	2006	2007	2008
ATO	Atmos Energy	1.2000	1.2200	1.2200	1.2400	1.2600	1.2800	1.3000
ATG	AGL Resources	1.0800	1.1100	1.1500	1.3000	1.4800	1.6400	
NJR	New Jersey Resources	1.2000	1.2400	1.3000	1.3600	1.4400	1.5200	
GAS	NICOR Inc.	1.8400	1.8600	1.8600	1.8600	1.8600	1.8600	
NWN	Northwest Nat. Gas	1.2600	1.2700	1.3000	1.3200	1.3900	1.4400	
PNY	Piedmont Natural Gas	0.7925	0.8225	0.8525	0.9050	0.9500	0.9900	1.0300
SWX	Southwest Gas	0.8200	0.8200	0.8200	0.8200	0.8200	0.8600	
WGL	WGL Holdings Inc.		1.2775	1.2950	1.3225	1.3450	1.3650	1.4075
SJI	South Jersey Industries	0.7600	0.7800	0.8200	0.8600	0.9200	1.0100	

FY Dividend Growth Year To Year

Ticker	Company	2003	2004	2005	2006	2007	2008	5 Yr Average	Av. Daily Div. Yield 20080701-20090102	DCF Return: Yield + Growth
ATO	Atmos Energy		0.0%	1.6%	1.6%	1.6%	1.6%	1.3%	5.2%	6.5%
ATG	AGL Resources	2.8%	3.6%	13.0%	13.8%	10.8%		8.8%	5.4%	14.3%
NJR	New Jersey Resources		4.8%	4.6%	5.9%	5.6%		5.2%	3.2%	8.4%
GAS	NICOR Inc.	1.1%	0.0%	0.0%	0.0%	0.0%		0.2%	4.5%	4.7%
NWN	Northwest Nat. Gas	0.8%	2.4%	1.5%	5.3%	3.6%		2.7%	3.2%	5.9%
PNY	Piedmont Natural Gas	3.8%	3.6%	6.2%	5.0%	4.2%	4.0%	4.6%	3.5%	8.1%
SWX	Southwest Gas	0.0%	0.0%	0.0%	0.0%	4.9%		1.0%	3.1%	4.1%
WGL	WGL Holdings Inc.		1.4%	2.1%	1.7%	1.5%	3.1%	2.0%	3.3%	5.2%
SJI	South Jersey Industries	2.6%	1.9%	8.9%	5.8%	5.5%		4.9%	4.4%	9.3%
	Average: Comparables	1.8%	2.2%	4.5%	4.7%	4.5%	3.6%	3.7%	3.8%	7.5%

> *"Tennessee's ratepayers must provide a reasonable equity return to the providers of natural-gas distribution services, but such a return must be based on verified information, and the return must be free from the influence of capital-gains speculation….In my opinion Tennessee's ratepayers are obliged to fund Atmos's investments through a return to equity motivated by wealth-creation through dividends rather than wealth-creation through capital-gains speculation." [Brown Direct, TRA Docket 05-00258, page 2, July 17, 2006]*

In Docket *05-00258* my opinion was criticized by Dr. Murry, the witness for AEC:

> *"With regard to Dr. Brown's testimony, I have some -- a number of theoretical and mechanical questions; however, I think it -- I think we can narrow this down and focus on two issues that I think are very important. I think they're very fundamental, and, frankly, I think they're fatal to his testimony as to his recommendation. The first of those applies to his DCF method and his essentially or practically -- I don't know any other way to explain it -- creating a new theory of value for economics and finance by not recognizing the value of capital gains. He limits his DCF analysis, and he says at several points in his testimony that all value comes from dividends and he essentially ignores the prospect of investors investing in a common stock for a capital gains purposes." [Dr. Murry, Page 18, Line 20 – Page 19, Line 10, Transcript Of Proceedings ,Thursday, August 31, 2006 Volume VIII]*

In fact, all of AEC's shareholder value has come from dividend payments and dividend growth since at least January 2, 2004. I base this on my selection of a holding period to reflect Dr. Vander Weide's assumption that an equity return is premised on investors having a "holding time."

Dr. Vander Weide says:

> *"Rather than buying and selling frequently in anticipation of highly volatile price movements, most investors employ a strategy of buying and holding a diversified portfolio of stocks. This buy-and-hold strategy will allow an investor to achieve a much more predictable long run return on stock investments and at the same time will minimize transaction costs." [Vander Weide Direct, Page 22, Lines 4-8.]*

To make an assessment of Dr. Vander Weide's claims, CAPD asked Dr. Vander Weide in CAPD discovery request 88 if there was such a thing as a start time and an end time to a holding period. He replied that he "has not studied" whether investors have start and end dates in a holding period. His reply is displayed in the next image:

Atmos Energy Corporation, Tennessee
Docket No. 08-00197
Responses to CAPD First Discovery Request

88. Do investors have a start date and an end date when they employ a strategy of buying and holding a stock? Provide a detailed explanation of your response, including all supportive documents.

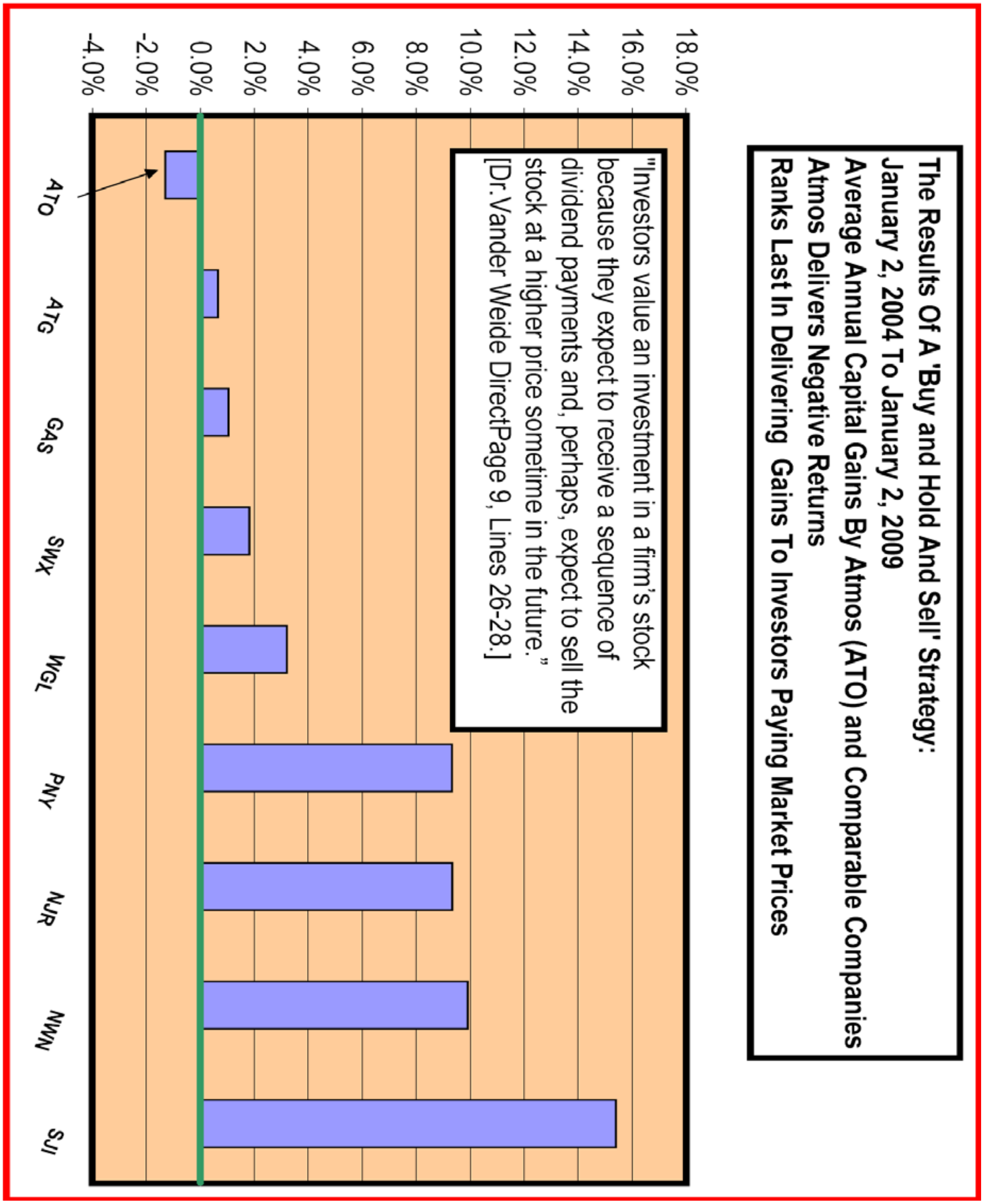
Response:

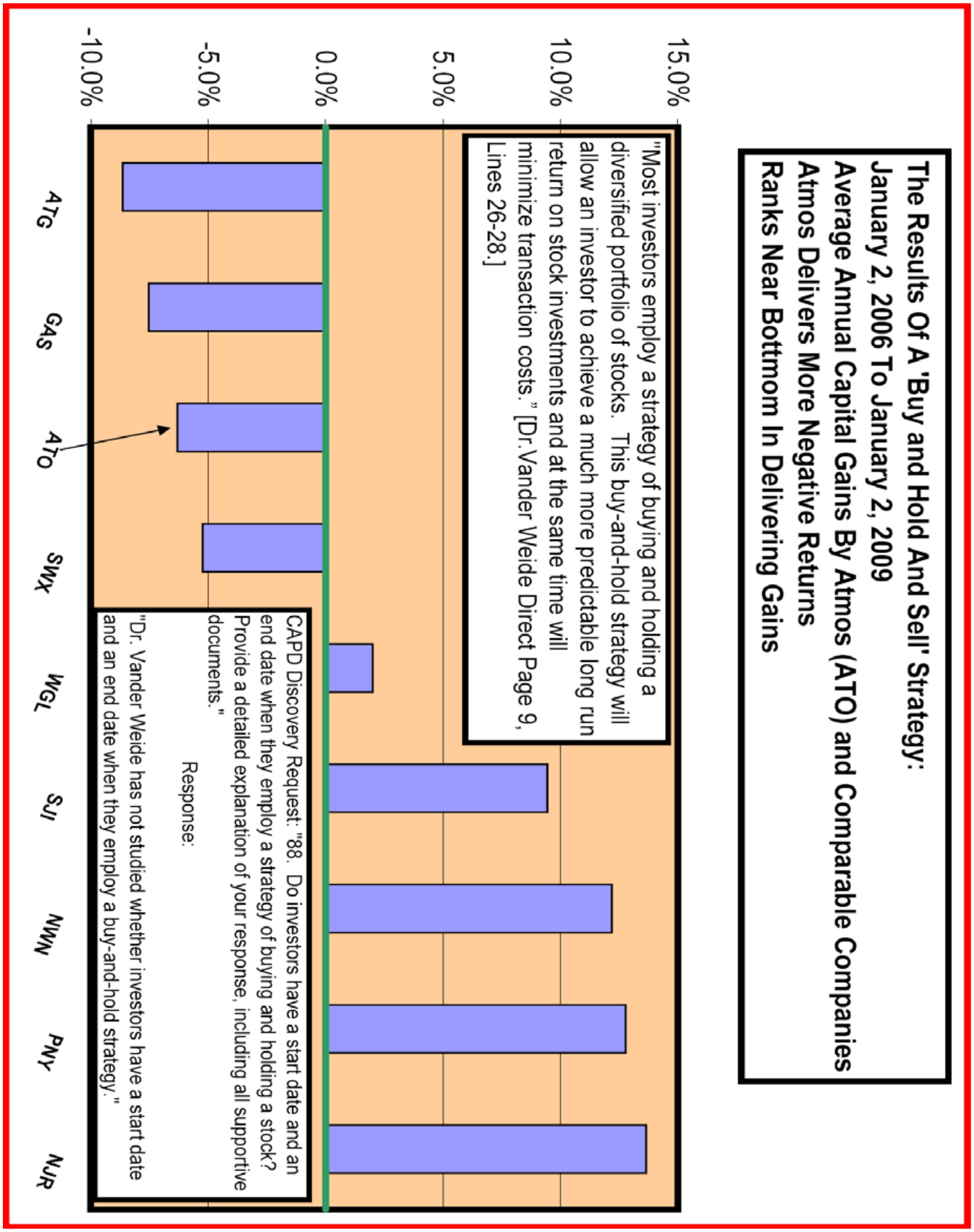
In addition to its general objections, AEC objects on the ground that this request is vague and indefinite. Subject to and without waiving its general and specific objections to this data request, Atmos Energy responds as follows:

Dr. Vander Weide has not studied whether investors have a start date and an end date when they employ a buy-and-hold strategy.

Given Dr. Vander Weide’s lack of knowledge about a start date and end date for an investor’s buy and hold and sell strategy, I chose two periods to determine the market’s full impact on investors. One period was from January 2, 2004 to January 2, 2009. The other period was January 2, 2006 to January 2, 2009.

The two charts at pages 45 and 46 of my testimony display the results of my analysis. In each chart the rate of capital gains is shown on the left axis and the company ticker, such as ATO for Atmos Energy, is shown at the bottom of the chart. Clearly AEC is not a source of capital gains for investors who have paid a market price for AEC’s stock. Thus in the last two rate cases Tennessee’s rate payers have funded AEC for capital gains which never occurred.


The Results Of A 'Buy and Hold And Sell' Strategy:
January 2, 2004 To January 2, 2009
Average Annual Capital Gains By Atmos (ATO) and Comparable Companies
Atmos Delivers Negative Returns
Ranks Last In Delivering Gains To Investors Paying Market Prices
"Investors value an investment in a firm's stock because they expect to receive a sequence of dividend payments and, perhaps, expect to sell the stock at a higher price sometime in the future."
[Dr. Vander Weide DirectPage 9, Lines 26-28.]
18.0%
16.0%
14.0%
12.0%
10.0%
8.0%
6.0%
4.0%
2.0%
0.0%
-2.0%
-4.0%
ATO
ATG
GAS
SWX
WGL
PNY
NJR
NWN
SJI


The Results Of A 'Buy and Hold And Sell' Strategy:
January 2, 2006 To January 2, 2009
Average Annual Capital Gains By Atmos (ATO) and Comparable Companies
Atmos Delivers More Negative Returns
Ranks Near Bottmom In Delivering Gains
"Most investors employ a strategy of buying and holding a diversified portfolio of stocks. This buy-and-hold strategy will allow an investor to achieve a much more predictable long run return on stock investments and at the same time will minimize transaction costs." [Dr. Vander Weide Direct Page 9, Lines 26-28.]
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
ATG
GAS
ATO
SWX
WGL
SJI
NWN
PNY
NJR
CAPD Discovery Request: "88. Do investors have a start date and an end date when they employ a strategy of buying and holding a stock? Provide a detailed explanation of your response, including all supportive documents."
Response:
"Dr. Vander Weide has not studied whether investors have a start date and an end date when they employ a buy-and-hold strategy."

My opinion is that most of the equity payments made by Tennessee's rate payers will not reach those Atmos's investors who have paid the market price for AEC's stock.

The next image at page 48 of my testimony is my compilation of where the cash will flow once it leaves the ratepayers, as proposed by Dr. Vander Weide and me. AEC's dividend growth since 2001 is very low, about 1.6%, in comparison to the comparable companies. Although dividend growth is assumed to come from retained earnings, it is clear that AEC's shareholders can expect little dividend growth in the future. Thus, Dr. Vander Weide's proposed 11.7% equity return, to the extent it exceeds AEC's actual dividend yield and dividend growth, will create a capital-gains cash flow to AEC without that flow being passed on to shareholders.

Equity Cost-of-Capital Summary: Payments From Tennessee Businesses and Residential Customers:						
Amount Of Cash Flow From Ratepayers, As Proposed By Party:			Purpose Of Cash Flow From RatePayers, As Proposed By Party:		Use Of Cash Flow From Ratepayers Once Cash Reaches Atmos, As Proposed By Party:	
Beneficiaries Of Cash Flow From Ratepayers	**Atmos**	**Consumer Advocate**	**Atmos - Pay Shareholders Via:**	**Consumer Advocate - Pay Shareholders Via:**	**Atmos**	**Consumer Advocate**
Shareholders	*$3,352,743*	*$3,352,743*	*Dividends*	*Dividends*	*Pay Dividends*	*Pay Dividends*
Atmos	*$7,823,068*	*$3,352,743*	*Capital Gains*	*Increased Dividend Growth*	*Atmos Keeps The Cash - Shareholders Must Get Capital Gains From The Market. The $7,823,068 Is Not Passed On To Shareholders*	*Atmos Passes Cash On To Shareholders - By Increasing Dividend Growth. Most Of the $3,352,743 Is Passed On To Shareholders*
Total Equity Return	***$11,175,811***	***$6,705,487***				

V. B. CAPD's DCF Return Is Consistent With Atmos's Risk

Dr. Vander Weide enumerates five items from pages 8 to 9 in his testimony that he believes constitute risk for AEC - high operating leverage, demand uncertainty, supply uncertainty, investment uncertainty, and peak demand.

I do not agree with him. In my opinion Atmos has little risk. I agree with the risk-assessment made by a Morningstar analyst on January 5, 2009:

> *"With so many different jurisdictions, however, Atmos is more insulated from individual negative rulings. It also enjoys some highly favorable rate mechanisms in its territories. The company is protected from weather-related fluctuations in customer usage for approximately 95% of its meter base, with a completely decoupled rate structure for another 2%. Even better, Atmos has managed to achieve rate increases without having to file a formal rate case before its regulators. Roughly 90% of its rate increases during the last three years were accomplished through automatic mechanisms--a truly impressive statistic. All of these factors combine to allow Atmos to generate relatively predictable cash flows."* *[http://quicktake.morningstar.com/StockNet/MorningstarAnalysis.aspx?Country=USA&Symbol=ATO]*

Also, AEC witness Pat Childers notes in her direct testimony at page 7 that AEC "currently collects approximately 45% of its base rate margin through the customer charge." This too enhances the predictability of AEC's cash flows.

The notion that predictable cash flows minimize risk is perfectly consistent with a 7.8% equity return and with Dr. Vander Weide’s past testimonies before the Tennessee Public Service Commission (TPSC) and the FERC.

In TPSC docket 95-02164 Dr. Vander Weide said in his rebuttal testimony:

> *“According to basic financial theory, the required rate of return on any investment is related to that investment's risk, which is based on the uncertainty of its future cash flows.” [TPSC Docket 95-02614, “Bellsouth Telecommunications, Inc.”, Dr. Vander Weide Rebuttal Testimony, Oct. 30, 1995, Page 5, lines 20-23.]*

In FERC Docket RP03-398-000 Dr. Vander Weide said:

> *“Investors are only concerned with the future stream of cash flows they expect to receive from their investment.” [FERC Consolidated Docket R03-398-000, "Northern Natural Gas Company", Exhibit NNG-164, Jan. 21, 2005, Page 2.]*

Predictable cash flow is the attractive feature of owning AEC’s stock considering the history of AEC’s stock price. AEC’s share price on January 2, 2009 was $23.71. On January 2, 2004 AEC’s share price was $24.55. In the past five years AEC’s shareholders have either had price losses or no price gains. AEC’s shareholders’ returns have approximated 5% and have been in the form of dividends and dividend growth.

Despite the losses on price, AEC continues to attract capital, its shares continue to trade, and its long-term debt continues to be rated as “investment grade.” Dr. Vander Weide makes no attempt to reconcile his opinion, that AEC must return 11.7% to its shareholders, with the low actual returns flowing to AEC’s shareholders. The charts on pages 45 and 46 confirm that AEC’s shareholders have been receiving returns composed of dividends and dividend growth, not capital gains. The market has been treating AEC’s stock as if it were a bond in the sense that investors are willing to live with the lack of capital gains from AEC.

V. C. CAPD’s DCF Return Is Consistent With The Position That A Cost Of Equity Can Be Established Without Referring To A CAPM Model For Verification.

The following article at Morningstar.com clearly says that no CAPM model and no beta are needed to arrive at a cost of equity.

> *“Morningstar.com, Factoring in Risk in Valuation, Friday March 2, 6:00 am ET By Brian Lund”*
>
> *“There are a lot of strong opinions out there about beta. To devotees of Modern Portfolio Theory, the longtime guiding light of financial academia, beta is a measure of a stock's sensitivity to macroeconomic events relative to the overall stock market, and this volatility is important to consider when one is building a portfolio with optimum risk levels. To fundamental investors who strongly object to the notion of an efficient market, beta is just a pile of noise that has nothing to do with future cash flows, and should not therefore influence any estimate of value.”*

"Berkshire Hathaway (brk.b.B) chairman Warren Buffett derides the concept, because it implies that a stock that has fallen sharply in value is ipso facto more risky than it was before it fell. He uses the example of Washington Post (NYSE:WPO - News), which plummeted 1973 just before Berkshire bought it. Buffett believed that the company was a substantially less risky investment after the fall, because he was getting the same great company at a better price, despite the rise in its beta following its decline."

"This last point is the bottom line for Morningstar: Because we advise investors to think like long-term owners of a company rather than short-term traders of stock, we fall squarely on the Buffett end of the spectrum. We don't use beta to determine our costs of equity, or anything else for that matter." [http://news.morningstar.com/articlenet/article.aspx?id=104896].

VI. Dr. Vander Weide's Cost Of Equity

In contrast, Dr. Vander Weide suggests a return of 11.7%, which has a spread of 5.5% over AEC's long-term debt cost. Dr. Vander Weide offers five equity methods which appear at page 5 of his direct testimony:

TABLE 1
COST OF EQUITY MODEL RESULTS

Method	Cost of Equity
Discounted Cash Flow	11.1%
Ex Ante Risk Premium	11.1%
Ex Post Risk Premium	11.3%
Historical CAPM	11.3%
DCF CAPM	13.3%

VI. A. Dr. Vander Weide's Equity Methods Are Not Reasonable.

Dr. Vander Weide's 5 distinct methods in fact are not distinct methods. They suffer from infirmities:

- The DCF method is a recycling of Dr. Vander Weide's testimony in 2003;

- The Ex Ante method is a restatement of the DCF method, and it is no surprise that it yields an 11.1% return:

  "My ex ante risk premium method is based on studies of the DCF expected return on my comparable group of natural gas companies [11.1% - This Is CAPD's Note] compared to the interest rate on Moody's A-rated utility bonds. Specifically, for each month in my study period, I calculate the risk premium using the equation, RPPROXY = DCFPROXY – IA." [Vander Weide, Direct Page 19, lines 13-17].

- The Ex Post method is not based on comparable companies. Dr. Vander Weide describes the method:

"I first performed a study of the comparable returns received by bond and stock investors over the last 71 years. I estimated the returns on stock and bond portfolios, using stock price and dividend yield data on the S&P 500 and bond yield data on Moody's A rated Utility Bonds. My study consisted of making an investment of one dollar in the S&P 500 and Moody's A rated Utility Bonds at the beginning of 1937, and reinvesting the principal plus return each year to 2007. The return associated with each stock portfolio is the sum of the annual dividend yield and capital gain (or loss) which accrued to this portfolio during the year(s) in which it was held. The return associated with the bond portfolio, on the other hand, is the sum of the annual coupon yield and capital gain (or loss) which accrued to the bond portfolio during the year(s) in which it was held. The resulting annual returns on the stock and bond portfolios purchased in each year between 1937 and 2008 are shown on Schedule 3. The average annual return on an investment in the S&P 500 stock portfolio was 11.4 percent, while the average annual return on an investment in the Moody's A rated utility bond portfolio was 6.4 percent. Thus, the risk premium on the S&P 500 stock portfolio is 5.0 percent." [Vander Weide, Direct Page 20, line 22 – Page 21, line 12].

- The “DCF CAPM” method is an inappropriate mix between Dr. Vander Weide’s Historical CAPM analysis of the comparable companies and his estimate of a DCF return to the S&P500 companies. I have taken his tables 7 and 6 and joined them into the single image at page 56 of this testimony. The image’s top portion is his table 7, his “DCF CAPM” analysis. I have circled his estimate of 13.9%, his estimate of an expected return to the S&P500 companies. The bottom portion is his table 6, which is his CAPM analysis of the comparable companies. Each table has 6 numbered lines with line 6 of each titled as “CAPM cost of equity.” The identical titles prove the arbitrary nature of Dr. Vander Weide’s testimony regarding the CAPM analyses. They can be fashioned at the expert’s whim.

Line			
1	Risk-free rate	4.53%	Long-term (20-year) Treasury bond yield[7]
2	Beta	0.94	Average Beta Proxy Companies
3	DCF S&P 500	13.9%	DCF Cost of Equity S&P 500 (see following)
4	Risk Premium	9.37%	
5	Beta x Risk Premium	8.81%	
6	CAPM cost of equity	13.3%	

Line			
1	Risk-free Rate	4.53%	Long-term (20-year) Treasury bond yield[6]
2	Beta	0.94	Average Beta Proxy Companies
3	Risk Premium	7.1%	Long-horizon Ibbotson risk premium
4	Beta x Risk Premium	6.67%	
5	Flotation Cost	0.14%	
6	CAPM cost of equity	11.3%	

VI. B. Dr. Vander Weide's DCF Results Are Identical To Results He Produced In 2003 And A Recycling Of His 2003 Analysis.

Dr. Vander Weide ignores the current state of the economy. The best proof that his analysis in the instant docket is a recycling of an analysis he performed in FERC Docket ER04-242-000 in November 2003. The image below appears at page 14-43 of Dr. Vander Weide's testimony in 2003.

EXHIBIT PGE-14

PACIFIC GAS AND ELECTRIC COMPANY
EXHIBIT PGE-14-4
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR THE VALUE LINE NATURAL GAS DISTRIBUTION COMPANIES
USING A QUARTERLY DCF MODEL

Line No.	Company	Dividend	Price	Growth	Cost of Equity
1	AGL Resources	0.280	26.127	5.53%	10.3%
2	Atmos Energy	0.300	24.273	6.09%	11.8%
3	Energen	0.180	33.057	7.00%	9.5%
4	Keyspan	0.445	35.322	6.64%	12.6%
5	New Jersey Resources	0.310	35.197	6.50%	10.6%
6	NICOR	0.465	35.502	4.38%	10.3%
7	Northwest Natural Gas	0.315	27.633	4.67%	9.9%
8	ONEOK	0.170	20.032	8.80%	12.8%
9	Peoples Energy	0.530	42.658	4.99%	10.7%
10	Piedmont Natural Gas	0.415	38.937	5.00%	9.8%
11	Southwest Gas	0.205	21.152	5.25%	9.7%
12	UGI	0.285	32.532	6.33%	10.3%
13	WGL Holdings	0.320	27.058	4.43%	9.8%
14	Market-Weighted Average				11.1%

The next image is from the instant docket, Dr. Vander Weide's direct testimony, Schedule 1, which appears on an unnumbered page that is two pages after page 28 of his direct testimony:

ATMOS ENERGY
SCHEDULE 1
SUMMARY OF DISCOUNTED CASH FLOW ANALYSIS
FOR NATURAL GAS COMPANIES

Line No.	Company	D_0	P_0	Growth	Cost of Equity
1	AGL Resources	0.420	34.140	5.25%	10.9%
2	Atmos Energy	0.325	26.760	5.00%	10.6%
3	Energen Corp.	0.120	67.378	10.75%	11.6%
4	Equitable Resources	0.220	60.942	11.67%	13.5%
5	Nicor Inc.	0.465	42.023	4.25%	9.3%
6	Northwest Nat. Gas	0.375	46.147	4.83%	8.5%
7	ONEOK Inc.	0.380	46.787	9.07%	12.9%
8	Piedmont Natural Gas	0.260	26.771	5.75%	10.1%
9	South Jersey Inds.	0.270	36.922	6.67%	9.9%
10	Questar Corp.	0.123	60.583	9.00%	10.0%
11	Southwest Gas	0.225	29.380	6.00%	9.5%
12	Market-Weighted Average				11.1%

In November 2003 he found that 11.1 percent was the DCF “Market-Weighted Average” cost of equity. In October 2008, he found the DCF “Market-Weighted Average” was 11.1 percent. The next image is from an analysis he performed in FERC Docket ER04-109-000 in October 2003 when he discussed the differential between the return to equity and the cost of debt:

EXHIBIT PGE-14

A 97 My studies provide strong evidence that investors today require an equity return of approximately 4.61 to 5.22 percentage points above the expected yield on A-rated utility bonds. The average interest rate on Moody's seasoned A-rated utility bonds for the three months May through July 2003 has ranged from 6.21 percent to 6.57 percent. On the basis of this information and my knowledge of current market conditions, I conclude that investors would expect a long-term yield of approximately 6.5 percent on A-rated utility bonds. Adding a 4.6 to 5.2 percentage point risk premium to an expected yield of 6.5 percent on A-rated utility bonds, I obtain an expected return on equity in the range 11.1 to 11.7 percent, with a midpoint of 11.4 percent. Adding a 25 basis-point allowance for flotation costs,[7] I obtain an estimate of 11.7 percent as the cost of equity for PG&E using the ex post risk premium method.

The next image is from Dr. Vander Weide's direct testimony, at page 24, line 26 to page 25, line 6, in the instant docket:

A. 1 My studies provide strong evidence that investors today require an equity return of approximately 4.6 to 5.0 percentage points above the expected yield on A-rated utility bonds. The average interest rate on Moody's A - rated utility bonds at August 2008 is 6.4 percent. Adding a 4.6 to 5.0 percentage point risk premium to an expected yield of 6.4 percent on A-rated utility bonds, I obtain an expected return on equity in the range 11.0 percent to 11.4 percent, with a midpoint of 11.2 percent. Because the ex post methodology does not reflect flotation costs, I have added a 14 basis-point allowance for flotation costs, which I determined by calculating the difference in my DCF results with and without a flotation cost allowance. Adding a 14 basis-point allowance for flotation costs, I obtain an estimate of 11.3 percent as the cost of equity for Atmos Energy using the ex post risk premium method.

It is standard fare for Dr. Vander Weide's forward looking cost of capital analyses to be consistent with and substantially no different than the costs long ago.

Therefore, it is no surprise that he finds AEC's current cost of equity to be 11.7%, nearly identical to AEC's cost of 11.8%, which he found in FERC Docket ER04-242-000 in November 2003. That estimate, the one he made in 2003, was wrong by a large margin. As I pointed out in my DCF analysis, AEC's investors have not earned 11.8% since 2004.

In reply to CAPD discovery request 64 Dr. Vander Weide said his market models "implicitly incorporate information on the current state of the economy:"

Atmos Energy Corporation, Tennessee
Docket No. 08-00197
Responses to CAPD First Discovery Request

64. Is an examination of the current state of the economy essential for understanding the current level of capital market costs? Provide a detailed explanation of your response, including all supportive documents.

Response: Generally, an examination of the current state of the economy is not required to estimate the cost of equity because the cost of equity can be estimated from market models such as the discounted cash flow, risk premium, and CAPM which already implicitly incorporate information on the current state of the economy. However, in periods of severe market disruption such as the present, where some companies cannot obtain capital at any cost, knowledge of the current state of the economy may be helpful for understanding the current level of capital market costs.

Of course his answer is wrong; otherwise he would not have found 11.1% as a DCF "Market-Weighted Average" cost of equity in November 2003 and October 2008.

Dr. Vander Weide's reply to discovery request 64, that "an examination of the current state of the economy is not" essential to understand the current level of capital costs is quite different than his direct testimony in Tennessee Public Service Commission (TPSC) Docket 95-02614, where he explicitly said at pages 5 to 6 that "an examination of the current state of the economy is essential" as displayed at page 62 of my testimony:

III. <u>CURRENT STATE OF THE ECONOMY</u>

Q. WHY DID YOU CONSIDER THE CURRENT STATE OF THE ECONOMY AND THE CAPITAL MARKETS?

A. An examination of the current state of the economy is essential for understanding the current level of capital market costs. This information is necessary in order to determine the market required rate of return on equity for South Central Bell.

The evidence I have presented here supports my opinion that Dr. Vander Weide's analysis is not representative of AEC's current cost of equity.

VI. C. Dr. Vander Weide's DCF Method Relies On I/B/E/S Earnings Growth Forecasts Which Have History of Overestimation And Are Not Applied In A MainStream Way.

Dr. Vander Weide's summary table of his DCF analysis is displayed in the next image. In my opinion the growth estimates are inappropriate.

Line No.	Company	D_0	P_0	Growth	Cost of Equity
1	AGL Resources	0.420	34.140	5.25%	10.9%
2	Atmos Energy	0.325	26.760	5.00%	10.6%
3	Energen Corp.	0.120	67.378	10.75%	11.6%
4	Equitable Resources	0.220	60.942	11.67%	13.5%
5	Nicor Inc.	0.465	42.023	4.25%	9.3%
6	Northwest Nat. Gas	0.375	46.147	4.83%	8.5%
7	ONEOK Inc.	0.380	46.787	9.07%	12.9%
8	Piedmont Natural Gas	0.260	26.771	5.75%	10.1%
9	South Jersey Inds.	0.270	36.922	6.67%	9.9%
10	Questar Corp.	0.123	60.583	9.00%	10.0%
11	Southwest Gas	0.225	29.380	6.00%	9.5%
12	Market-Weighted Average				11.1%

Dr. Vander Weide's direct testimony at page 13, lines 25 to 28, explains his reliance on a firm called I/B/E/S:

> *"I/B/E/S growth rates are... widely circulated in the financial community ... include the projections of reputable financial analysts ...are reported on a timely basis ... are widely used ... by investors."*

There is such a long history of over-estimation by I/B/E/S that its accuracy is doubtful, as the past Chairman of the Federal Reserve Board emphasized:

> *"...long-term earnings forecasts of brokerage-based securities analysts, on average, have been persistently overly optimistic. Three-to five-year earnings forecasts for each of the S&P 500 corporations, compiled from projections of securities analysts by I/B/E/S, averaged almost 12 percent per year between 1985 and 2001. Actual earnings growth over that period averaged about 7 percent." [Remarks by Chairman Alan Greenspan, "Corporate Governance" At the Stern School of Business, New York University, New York, New York March 26, 2002]*

When a past Chairman of the Federal Reserve Board singles out a firm and its data as a source of over-optimism or exaggeration, that firm's projections should have no role in rate-making for Tennessee's consumers. Therefore, I disregard Dr. Vander Weide's analyses which rely on I/B/E/S.

Of course, Chairman Greenspan's comments reflect widely-held and general knowledge about the status of broker-established expectations on rate of return. For example, economists Eugene Fama and Kenneth R. French authored an article, "The Equity Premium" which was published in the Journal of Finance in mid 2002. The authors wrote:

> *"Moreover, though the issue is controversial... Claus and Thomas find that analysts forecasts are biased; they tend to be substantially above observed growth rates.... In short, we find no evidence to support a forecast of strong future dividends or earnings growth.." [The Equity Premium by Eugene Fama and Kenneth French in The Journal of Finance, Vol. 67, No. 2, April 2002, p.639, p. 651]*

The doubts about I/B/E/S are also reflected in FERC’s rate setting procedures. FERC has required for years that its rates be set through the DCF model. On July 19, 2007 FERC issued a policy statement regarding the use of proxy companies in setting equity cost. The next image at page 65 of my testimony displays paragraph 3 of that statement:

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;
Suedeen G. Kelly, Marc Spitzer,
Philip D. Moeller, and Jon Wellinghoff.

Composition of Proxy Groups for Determining Gas and Oil Pipeline Return on Equity — Docket No. PL07-2-000

PROPOSED POLICY STATEMENT

(Issued July 19, 2007)

3. The Commission uses a two-step procedure for determining the constant growth of dividends: averaging short-term and long-term growth estimates.[2] Security analysts’ five-year forecasts for each company in the proxy group, as published by Institutional Brokers Estimate System (IBES), are used for determining growth for the short term; long-term growth is based on forecasts of long-term growth of the economy as a whole, as reflected in the Gross Domestic Product. The short-term forecast receives a 2/3 weighting and the long-term forecast receives a 1/3 weighting in calculating the growth rate in the DCF model.[3]

FERC uses I/B/E/S but weights it by a factor of two-thirds. The remaining portion of FERC’s growth rate is an average of the long-term forecasts of the Gross Domestic Product (GDP) by the Energy Information Administration, the Social Security Administration, and Global Insights.

I was unable to find these rates at the web sites of these organizations. However, in FERC Docket IS08-390-002 I found testimony filed on October 16, 2008 where the witness followed FERC procedures, using a GDP forecast of 2.46% and weighting it by one-third. I have included that filing in my workpapers. I applied that method to the 6 gas distribution companies in Dr. Vander Weide’s group. The results are shown in the next image. The DCF return of 8.70% is much closer to my DCF result than Dr. Vander Weide’s and supports the results of my DCF return of 7.8%.

Application Of FERC's DCF Procedures To Dr. Vander Weide's DCF Model.

Company	d_0	P_0	I/B/E/S Growth	Cost of Equity	Implied Dividend Yield (5) - (4)	FERC Weights I/B/E/S Growth By Two-Thirds	FERC Adds Forecasted Long-Term GDP Growth, 2.46% Currently, Weighted By One-Third	FERC Total DCF Growth	FERC Total DCF
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
AGL Resources	**0.42**	**34.14**	5.25%	10.90%	5.65%	3.50%	0.82%	4.32%	9.97%
Nicor Inc.	**0.465**	**42.023**	4.25%	9.30%	5.05%	2.83%	0.82%	3.65%	8.70%
Northwest Nat. Gas	**0.375**	**46.147**	4.83%	8.50%	3.67%	3.22%	0.82%	4.04%	7.71%
Piedmont Natural Gas	**0.26**	**26.771**	5.75%	10.10%	4.35%	3.84%	0.82%	4.65%	9.00%
South Jersey Inds.	**0.27**	**36.922**	6.67%	9.90%	3.23%	4.45%	0.82%	5.27%	8.50%
Southwest Gas	**0.225**	**29.38**	6.00%	9.50%	3.50%	4.00%	0.82%	4.82%	8.32%
Weighted Average			5.46%	11.10%	4.24%	3.64%	0.82%	4.46%	8.70%

Despite the doubts over the accuracy of I/B/E/S forecasts, Dr. Vander Weide’s position in the past is that accuracy does not matter:

"As Dr. Vander Weide notes, the I/B/E/S growth forecasts are more highly correlated with stock prices than other growth rates, and the intervenors' argument that I/B/E/S growth rates have failed to predict future growth in recent years is irrelevant because the DCF model requires the growth forecasts of investors, whether or not those forecasts subsequently turn out to be accurate." [FERC Docket RP03-398-000 Exhibit No. NNG-164 Rebuttal Testimony Summary Of James Vander Weide, Page 3]

This reasoning serves the economic interest of any company asking for a rate increase and creates an incentive to overestimate the ROE because it is the ratepayers that bear the burden of the error, not the company.

In his testimony at page 17 line 9 Dr. Vander Weide says "The DCF model also requires a reliable estimate of a company's expected future growth." In CAPD discovery request 82, CAPD asked Dr. Vander Weide if analysts' forecasts were sometimes unreliable. The question and rely are provided below:

"Are analysts forecasts' sometimes unreliable? Provide a detailed explanation of your response, including all supportive documents."

"Dr. Vander Weide does not know the intended meaning of the word "unreliable." Since the future is unknown, analysts' forecasts represent the analysts' best estimates of companies' future earnings growth. Dr. Vander Weide's research indicates that analysts' forecasts are generally the best proxy for investors' growth expectations"

Dr. Vander Weide's assessment has been opposed in at least one ongoing case known as "JDS Uniphase Corporation Securities Litigation." I found a declaration by an expert witness, Mr. Terrence L. Barnich, a former Chairman of the Illinois Commerce Commission, where Mr. Barnich responded to opinions expressed by Dr. Vander Weide on analysts' forecasts. The next image displays the cover page of Mr. Barnich's declaration:

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

OAKLAND DIVISION

IN RE JDS UNIPHASE CORPORATION SECURITIES LITIGATION	Master File No. C 02-1486 CW (EDL) <u>CLASS ACTION</u>
This Document Relates To: All Actions	**DECLARATION OF TERRENCE L. BARNICH IN SUPPORT OF LEAD PLAINTIFF'S OPPOSITION TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT** Date: July 26, 2007 Time: 2 p.m. Ctrm: 2, 4th Floor Before: Hon. Claudia Wilken

DECLARATION OF TERRENCE L. BARNICH IN OPPOSITION TO MOTION FOR SUMMARY JUDGMENT
MASTER FILE NO. C 02-1486 CW

The next page displays his assessment of Dr. Vander Weide's opinions, noting that Dr. Vander Weide used "unreliable forecasts:"

Case 4:02-cv-01486-CW Document 1184-3 Filed 06/07/2007 Page 3 of 11

REBUTTAL EXPERT REPORT OF
TERRENCE L. BARNICH

This rebuttal supplements my initial report of February 5, 2007 to address the opinions expressed by Dr. James H. Vander Weide, Defendants' industry expert, in his report of the same date. After reading Mr. Vander Weide's report and the documents he relies upon, I reaffirm my opinion that, by at least August of 2000, Defendants were privy to non-public information showing that JDSU was about to experience significant decline in its business in late 2000. Dr. Vander Weide bases his report on unreliable forecasts using data predating the carrier financing collapse in May of 2000, and on analysis by publications either lacking any industry expertise or

The next page shows that in Mr. Barnich’s opinion forecasters simply take “management’s word for its forecasted numbers.”

Together, these pieces fit to form a mosaic of a landscape in which, in JDS Uniphase executive Roger Miskowicz' phrase, there existed a REDACTED

F. Continued Sales Growth Begs the Issue Of Being On Notice Of Impending Reduced Growth Rates

In their pleadings, defendants correctly point out that JDS Uniphase's sales continued to grow throughout 2000, and that Wall Street analysts were still recommending the stock. However, as Mr. Miskowicz so picturesquely characterized, there was a cliff up ahead that JDS Uniphase management could see but did not disclose publicly. After all, analysts see the company's historic numbers, but rely on management's word for its forecasted numbers.

If Mr. Barnich's declaration is accurate, then Dr. Vander Weide's logic clearly serves the economic interests of a company making the forecast. Dr. Vander Weide says his research indicates that analysts' forecasts are generally the "best proxy for investors' growth expectations." But another expert, Mr. Barnich, says analysts "rely on management's word for its forecasted numbers." If Mr. Barnich is correct, then Dr. Vander Weide's I/B/E/S forecasts are not independent and are simply recycled forecasts of a company itself. Mr. Greenspan's assessment of the I/B/E/S forecasts and FERC's policy of automatically reducing I/B/E/S forecasts by one-third, support Mr. Barnich's assessment. The convergence of three different opinions, Greenspan's, FERC's and Mr. Barnich's, clearly imply that I/B/E/S forecasts are not reliable. I have the same opinion. Thus Dr. Vander Weide's DCF analysis is not an appropriate basis for setting just and reasonable rates in Tennessee.

VI. D. Dr. Vander Weide's Reservations About CAPM Methods.

Dr. Vander Weide's CAPM equity returns of 11.3% and 13.4% may suggest that his DCF return of 11.1% is reasonable. Dr. Vander Weide's CAPM analysis is a kind of regulatory straw-man, where 13.4% and 11.3% are presented as reasonable returns that that can be sacrificed for a lower one of 11.1%.

However, he is on record that as judging the CAPM to be an inappropriate method to estimate the cost of equity.

At pages 20-21 in his rebuttal testimony dated February 20, 2004 in FERC Docket 03-398-000, Exhibit NNG-86, Dr. Vander Weide gave a cogent critique of the CAPM method, and I include it here:

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"Do you have reservations about the use of the CAPM at this time?"

"Yes. The CAPM is a theoretical model of capital market equilibrium based on certain simplifying assumptions about how investors behave, their beliefs about the probability distributions of returns on different securities, and the available opportunities in the market place. On the basis of these simplifying assumptions, the CAPM concludes that investors are sensitive to only one risk factor, how a company's stock varies in proportion to movements in the market as a whole. Relaxing the assumptions in the CAPM in the direction of more realism leads to new capital market equilibrium models that incorporate additional risk factors which affect the cost of equity. Using a single-factor model such as the CAPM, when the cost of equity actually depends on multiple risk factors, introduces a bias into the estimate of the cost of equity. Unfortunately, financial economists are in considerable disagreement about which risk factors should be included in multi-factor capital market models."

"In addition to the fact that the CAPM does not capture all the risks that affect the cost of equity, there are significant problems in estimating the model's basic parameters, the risk-free rate, the beta, and the expected return on the market portfolio. Because the CAPM is a single-period model, it gives no guidance on the time frame that should be used to measure the risk-free rate"

"Furthermore, since the CAPM is, in theory, forward looking, the beta factor is supposed to reflect the co variation between the expected return on security i in the single period and the expected return on the market portfolio in that single period. Thus, beta is a hypothetical construct measured from returns in hypothetical future states. In practice, an analyst is generally confined to the use of historical data in measuring beta, a severe restriction when the risk of the candidate firm is changing dramatically. In addition, the use of historical data can provide misleading results. If a random shock such as industry restructuring causes the risk of a company to increase, its stock price, and thus, its historical return, will decline. If the decline in historical returns occurs at a time when the general stock market is increasing, the company's measured beta will decline at a time when the fundamental risk of the business is increasing."

"Measuring the expected return on the market portfolio, or, equivalently, the market risk premium, is also a difficult task. In general, there are two approaches to measuring the expected market risk premium. First, one can calculate the expected return on the market using a methodology such as the DCF model applied to the S&P 500, and subtract the interest rate on a risk-free investment. This approach means that, since the DCF model is used to measure the expected risk premium, the CAPM application is essentially a DCF application, especially for firms whose betas are very close to 1.0. A second approach is to measure the expected risk premium on the market portfolio from historical data on earned returns on stock and bond portfolios. This approach is subject to the criticism that historical returns may not reflect future expected returns. Thus, use of CAPM, in my opinion, is inappropriate at this time."

Dr. Vander Weide has not explained why these reservations do not apply in the current case, or why “returns in hypothetical future states” are now acceptable. In TRA Docket 04-00288, Dr. Vander Weide was silent on the CAPM, never mentioning it in his testimony. Thus he has changed his position on the CAPM without explaining why it is now appropriate to use the CAPM. Therefore, his CAPM analysis is arbitrary and is not a basis for just and reasonable rates in Tennessee.

VI. E. Betas From Several Sources Show That Dr. Vander Weide’s Beta Is Inappropriate For The CAPM Model.

Dr. Vander Weide’s CAPM results are displayed in his table 6, which I reproduce here:

Line		
1	Risk-free Rate	4.53%
2	Beta	0.94
3	Risk Premium	7.1%
4	Beta x Risk Premium	6.67%
5	Flotation Cost	0.14%
6	CAPM cost of equity	11.3%

Dr. Vander Weide’s beta of .94 is from Value Line.

In CAPD discovery request 78 CAPD asked Dr. Vander Weide if it was “reasonable to expect that investors place greater weight on a single Value Line” beta than on an average of betas from different source. Although CAPD asked Dr. Vander Weide about investors, he began his reply by saying “Dr. Vander Weide does not use a single Value Line beta.” The question and reply are displayed in the next image:

78. Is it reasonable to expect that investors place greater weight on a single Value Line's beta rather than an average of betas from different sources? Provide a detailed explanation of your response, including all supportive documents.

Response:

In addition to its general objections, AEC objects on the ground that this request is vague and indefinite. Subject to and without waiving its general and specific objections to this data request, Atmos Energy responds as follows:

Dr. Vander Weide does not use a single Value Line beta to estimate the cost of equity using the CAPM. Rather, he uses an average of the Value Line betas for his comparable companies. Dr. Vander Weide believes it is reasonable for investors to use average Value Line betas for a group of comparable companies because the use of average betas reduces the measurement errors in individual company betas. In addition, Dr. Vander Weide believes that it is reasonable for investors to use Value Line betas rather than betas from other sources because Value Line adjusts its beta estimates for the tendency of betas to move toward the overall mean beta of 1.0 over time. Furthermore, the Value Line betas are easily accessible to investors; and the Value Line adjustment process partially accounts for the well-documented tendency of the CAPM to underestimate the future return on investments in companies whose betas are less than 1.0.

Dr. Vander Weide’s response is based on his knowledge as an expert in finance and economics. No supporting documents are required.

Dr. Vander Weide’s suggestion that investors would rely only on Value Line instead of multiple sources contradicts his reasoning in his rebuttal testimony in TPSC Docket 95-01264, where he rejected my use of Value Line for earnings forecasts. Then his opinion was that multiple sources were “far more reasonable” for investors than reliance on one source:

> *“I disagree with Dr. Brown's reliance on Value Line…it is far more reasonable to expect that investors would place weight on a consensus of analysts' forecasts than on a single analyst such as Value Line.”[Dr. Vander Weide Rebuttal Testimony, TPSC Docket 95-01264,page 15 lines 13-16.]*

By the same reasoning, investors would place more weight on betas from several sources rather than relying on Value Line as single source.

I compiled betas from the New York Stock Exchange (NYSE), NASDAQ, YAHOO and ScotTrade web sites and display them and Value Line’s betas in the image at page 76 of my testimony.

Comparison Of Betas From Value Line And Other Sources

Comparable Companies: Betas By Sources Of Betas

CAPD Comparables - Company Name	Stock Symbol	NYSE.Com	NASDAQ.Com	YAHOO.Com	ScotTrade.com	Value Line	Average: Sources Other Than Value Line	Ratio: Value Line Beta To Other Betas
Atmos Energy	ATO	0.650	0.560	0.460	0.540	0.8500	0.553	154%
AGL Resources	ATG	0.660	0.740	0.300	0.310	0.8500	0.503	169%
Nicor Inc.	GAS	0.790	0.760	0.360	0.440	0.9500	0.588	162%
New Jersey Resources	NJR	0.610	0.730	0.120	0.180	0.8000	0.410	195%
Northwest Nat. Gas	NWN	0.530	0.680	0.310	0.420	0.8000	0.485	165%
Piedmont Natural Gas	PNY	0.620	0.850	-0.020	0.100	0.8500	0.388	219%
South Jersey Inds.	SJI	0.590	0.730	0.240	0.330	0.8500	0.473	180%
Southwest Gas	SWX	0.860	0.880	0.680	0.680	0.9000	0.775	116%
WGL	WGL	0.640	0.820	0.170	0.300	0.8500	0.483	176%
Average 8 Comparables		**0.663**	**0.774**	**0.270**	**0.345**	**0.856**	**0.517**	**166%**
Dr. Vander Weide's 4 Oil Production Companies								
Energen Corp.	EGN	1.160	1.460	1.330	1.310	1.0000	1.315	76%
Equitable Resources	EQT	1.260	1.450	0.900	0.920	0.9500	1.133	84%
ONEOK Inc.	OKE	1.130	1.310	0.920	0.970	0.9000	1.083	83%
Questar Corp.	STR	1.500	1.710	1.000	0.950	1.0500	1.290	81%
Average 4 Oil Companies		**1.263**	**1.483**	**1.038**	**1.038**	**0.975**	**1.205**	**81%**

The NYSE, the traditional source of stock market information for over a century, shows AEC's beta as .65 but Value Line's is .85. The NYSE shows Questar's beta as 1.50, but Value Line's is 1.05. For my comparable companies, Value Line's betas are twice as large as the betas from the other sources. Regarding Energen, Equitable, ONEOK and Questar, the four companies which I reject as comparable to AEC, Value Line's betas are just 80% of the betas from the other sources.

When I discussed comparable companies I pointed out the wide disparity between my comparable companies and Dr. Vander Weide's four oil companies regarding the source of operating income. That wide disparity is repeated in the betas from sources other than Value Line.

Value Line betas and the four oil companies are two sides of the same coin in Dr. Vander Weide's testimony. By declaring these companies as comparable and using Value Line's beta as evidence of comparability, he has inappropriately raised AEC's risk and its cost of equity. This further shows how a Value Line beta distorts the measurement of risk.

If I were to accept all of Dr. Vander Weide's CAPM analysis except for its Value Line beta, and apply the analysis to my comparable group, my CAPM cost of equity would equal 4.53% + (.51 X 7.1%) or 8.2%.

If I were to accept all of Dr. Vander Weide's CAPM analysis except for its Value Line beta, and use the gas distribution companies that we have in common(exclude New Jersey Resources and WGL) my beta would be .54 and my CAPM cost of equity would equal 4.53% + (.54 X 7.1%) or 8.33%.

If I were to accept all of Dr. Vander Weide's CAPM analysis, apply it to my comparable group, and include all betas in the calculation of an average beta, then my beta would be .582 and my CAPM cost of equity would equal 4.53% + (.582 X 7.1%) or 8.65%.

If I were to accept all of Dr. Vander Weide's CAPM analysis, apply it to the gas distribution companies that we have in common (exclude New Jersey Resources and WGL), and include all betas in the calculation of an average beta, then my beta would be .60 and my CAPM cost of equity would equal 4.53% + (.60 X 7.1%) or 8.80%.

Again, I recommend a cost of equity from my DCF analysis with an adjustment upwards. A return of 7.8% is a healthy return under the current economic circumstances which affect us all. Market losses in the past year have ranged from 30% to 40%. AEC itself has gained no market value in 5 years.

Excluding the flotation costs and correcting for the fact that AEC is not nearly as risky as Dr. Vander Weide suggests, and less risky than most of the comparable companies, a CAPM range of 8.2% to 8.8% may reflect the cost of equity in the near future if the general economic conditions improve soon, rather than deteriorating as expected.

Statement of Credentials and Experience

Q_6. What experience do you have regarding utilities?

A_6. In 1995 I began work as an economist in the Consumer Advocate and Protection Division (CAPD) of the Attorney General's Office. I have also appeared as a witness for CAPD in several cases before the Tennessee Regulatory Authority (TRA). From 1986 to 1995 I was employed by the Iowa Utilities Board as Chief of the Bureau of Energy Efficiency, Auditing and Research, and Utility Specialist and State Liaison Officer to the U.S. Nuclear Regulatory Commission.

From 1984 to 1986 I worked for Houston Lighting & Power as Supervisor of Rate Design. From 1982 to 1984 I worked for Arizona Electric Power Cooperative as a Rate Analyst. From 1979 to 1982 I worked for Tri-State Generation and Transmission Association as Power Requirements Supervisor and Rate Specialist.

Q_7. **What is your educational background?**

A_7. I have an M.S. in Regulatory Economics from the University of Wyoming, an M.A. and Ph.D. in International Relations with a specialty in International Economics from the University of Denver, and a B.A. from Colorado State University.

Q_8. **Dr. Brown, have you authored any articles relating to your profession?**

A_8. Yes, my articles have appeared in Public Utilities Fortnightly.

Q_9. **Are you and have you been a member of any professional organizations?**

A_9. Yes, I am a past member of the NARUC Staff Committee on Management Analysis, a past trustee of and a member of the Board for the Automatic Meter Reading Association, and a current member of the National Association of Business Economists.

Q_10. **Have you studied mathematics and statistics as part of your education?**

A_10. Yes. This concludes my testimony.

Before the

TENNESSEE REGULATORY AUTHORITY

In re: Petition of Atmos Energy Corporation for Approval of Adjustment of Its Rates and Revised Tariff	)))	**Docket No. 08-00197**

AFFIDAVIT

I, Steve Brown, Economist, for the Consumer Advocate Division of the Attorney General's Office, hereby certify that the attached Direct Testimony represents my opinion in the above-referenced case and the opinion of the Consumer Advocate Division.

Steve Brown
STEVE BROWN

Sworn to and subscribed before me this 16th day of Jan., 2009.

Emily Knight
NOTARY PUBLIC

EMILY KNIGHT STATE OF TENNESSEE NOTARY PUBLIC DAVIDSON COUNTY, TENN.
My Commission Expires AUG. 23, 2011

My commission expires: Aug. 23, 2011