

Before the

TENNESSEE REGULATORY AUTHORITY

**IN RE: PETITION OF CHATTANOOGA GAS COMPANY TO INCREASE
RATES, INCLUDING A COMPREHENSIVE RATE DESIGN PROPOSAL AND
REVISED TARIFF**

DOCKET NO. 06-00175

**DIRECT TESTIMONY
OF
DANIEL W. McCORMAC, CPA**

October 16, 2006

BEFORE THE TENNESSEE REGULATORY AUTHORITY

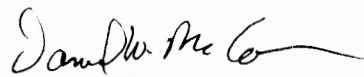
AT NASHVILLE, TENNESSEE

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REVISED TARIFF**

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AFFIDAVIT

I, Daniel W. McCormac, Coordinator of Analysts for the Consumer Advocate and Protection 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 and Protection Division.



DANIEL W. McCORMAC

Sworn to and subscribed before me
this 16th day of October, 2006.


NOTARY PUBLIC

My commission expires: Sept. 22, 2007

1 **Q. Would you state your name for the record?**

2 A. My name is Daniel W. McCormac.

3

4 **Q. By whom are you employed and what is your position?**

5 A. I am employed by the Attorney General's Office as Coordinator of Analysts
6 for the Consumer Advocate and Protection Division.

7

8 **Q. What are your qualifications as a witness?**

9 A. Please see Appendix A for my education, licenses, and work experience.

10

11 **Q. Are CGC's projections a reasonable basis for setting rates?**

12 A. No. The accepted and proven standard used to set rates is to properly
13 match revenues, expenses and investment. The use of reasonably
14 anticipated and properly matched capital structure, revenues, investments
15 and costs assures CGC's investors a reasonable opportunity to earn a
16 reasonable return on those investments. However, several of CGC's
17 projections are not supported by the evidence in this petition.

18

19 CGC's stated reasons for filing for this proposed rate increase were:¹

20 Decrease in operating margin \$2.2 million

21 Change in capital structure \$1.3 million

22 Increase in Rate Base \$1.2 million

23 Change in ROE \$1.0 million

24 Increase in cost of service \$0.1 million

25

26 These reasons are overstated.

27 The decline in operating margins is \$.3 million as I will explain below. CCG

¹CGC Direct testimony, Morley, page 4, lines 10-14.

1 has overstated this by \$1.9 million.

2 Using the capital structure and the 10.2% ROE previously adopted by the
3 TRA, updating for the slight changes in debt costs, would change cost of
4 service by less than \$0.1 million. Using Dr. Brown's proposed capital
5 structure without reducing the ROE would add \$1.1 million to the cost of
6 service compared to the structure currently approved by the TRA. The
7 change in ROE to 8% lowers cost of service \$1.8 million rather than
8 increasing the cost of service by \$1.0 million. The cost of service is lower
9 due to proposed corrections in depreciation and taxes.
10

11 **Q. Would you please summarize the major issues that will be addressed**
12 **by the CAPD?**

13 A. Yes. The CAPD looked at each component of Chattanooga Gas Company's
14 ("CGC") projected cost of service and found several areas of major
15 disagreement indicating that an 18% rate increase is not warranted. In fact,
16 rates should be reduced by \$1,506,061 or a rate reduction of 5%. The
17 summary of the CAPD's adjustments is shown on Exhibit CAPD-1, Schedule
18 2.

19 Adjustment 1 shows that CGC underestimated revenues by \$476,000
20 because of the effects of more current gas prices and the resulting impact
21 on gas sales.

22 Adjustment 2 increases forfeited discounts or late payment fees to correct
23 a \$50,000 error in CGC's calculation. CGC's estimate is not consistent with
24 actual results.

25 Adjustment 3 reduces the Long Term Incentive bonus pay by \$212,000 to
26 reflect TRA policy on employee bonuses based on higher earnings for CGC
27 shareholders.

28 Adjustment 4 increases uncollectible expense by \$2,000 to reflect the effects
29 of adjustments 1 and 2 above.

1 Adjustment 5 reduces energy conservation plan expenses by \$739,000
2 because the analysis of this plan will be addressed in phase two of this
3 docket.

4 Adjustment 6 reduces depreciation expense by \$1,700,000 to reflect more
5 current and reasonable depreciation rates and to correct an error.

6 Adjustment 7 reduces other taxes by \$226,000 to reflect the actual taxes
7 expected to be paid for the attrition year.

8 Adjustment 8 increases income taxes by \$1,337,000 to reflect the effects of
9 all other adjustments.

10 Adjustment 9 reduces gas plant in service by \$690,000 to reflect the actual
11 beginning balances as of June 1, 2006.

12 Adjustment 10 increases construction work in progress by \$371,000 to
13 reflect the actual beginning balances as of June 1, 2006.

14 Adjustment 11 reduces storage gas inventory by \$1,555,000 to reflect the
15 effects of lower gas prices since CGC filed its case.

16 Adjustment 12 reduces accumulated depreciation by \$1,155,000 to reflect
17 the effects of adjustment 6 above.

18 Adjustment 13 decreases the fair rate of return by 1.74% to reflect the capital
19 structure and cost of equity recommended by Dr. Brown.

20
21 **Q. What is your assignment in this docket?**

22 A. I reviewed the projected revenues under the current rates as approved by
23 the TRA in Docket No. 04-00034. These base rates have been in effect
24 since November 1, 2004. I reviewed revenues, CGC's proposed tariffs, gas
25 inventory in rate base, and the proposed forfeited discounts and
26 uncollectible expense ratios. I supervised the review of Chattanooga Gas
27 Company's other projected expenses and investments ("rate base") for the
28 attrition year ending December 31, 2007. I also reviewed the proposed
29 changes in tariffs and rate design. I summarize the major concerns about

1 CGC's petition and explain the effects of each proposed adjustment and the
2 consolidated impact on the total cost of service as shown in Exhibit CAPD-1.
3 I also discuss the CAPD's recommended rate design.
4

5 Mr. Terry Buckner will testify on the remaining expense and rate base
6 adjustments. Mr. Michael Chrysler will testify regarding the reporting of
7 service metrics and in opposition to CGC's proposal to get an automatic rate
8 increase each year based on one narrow aspect of CGC's cost of service
9 related to certain main replacements. Dr. Stephen Brown will testify on the
10 appropriate capital structure, cost of common equity and return on rate base
11 as summarized on Exhibit CAPD-1, Schedule 11 and supported in detail in
12 Dr. Brown's testimony and exhibits.
13

14 **Q. How did the CAPD test the reasonableness of CGC's projected**
15 **investments, revenues and expenses?**

16 A. We analyzed the reported financials, variances from previous years,
17 historical trends and CGC's proposed adjustments to ascertain whether the
18 Company has presented a reasonable estimate of these elements of CGC's
19 cost of service for the twelve months ending December 31, 2007. Where
20 CGC has failed to provide adequate support for the projected cost of service,
21 we propose certain adjustments to present a more reasonable estimate of
22 the cost of service.
23

24 **Q. What were the conclusions from the Consumer Advocate's analysis?**

25 A. We conclude that CGC's rates should be reduced by \$1,506,061. The
26 results of the Consumer Advocate's analysis are presented in Exhibit CAPD-
27 1 and Exhibit CAPD-SB. The cost of service is summarized on Schedule 1
28 of Exhibit CAPD-1. Rates should be calculated on a Rate Base of
29 \$107,517,000, an Operating Income at Present Rates of \$7,875,000 and a

1 gross revenue conversion factor of 1.64509 as shown on Exhibit CAPD-1,
2 Schedule 1. Rates should be reduced to produce a fair rate of return of no
3 more than 6.9% as summarized on Schedule 11 and supported by CAPD
4 witness Dr. Brown.

5
6 **Q. What would the results be if the TRA applied Dr. Brown's proposed 8%**
7 **cost of equity to the same capital structure as approved by the TRA in**
8 **the last rate case in Docket 04-00034?**

9 A. Using the capital structure that was approved by the TRA in Docket No. 04-
10 00034 in 2004 would reduce revenue requirements another \$742,000 for a
11 total rate reduction of \$2,249,000. The summary schedules attached as
12 Exhibit CAPD-DM, Schedule 2 support this estimate.

13
14 **Q. Would you discuss adjustment #1 to account for changing margins?**

15 A. I approached the analysis of CGC's margins from two perspectives.

16
17 First, I used the traditional approach to projecting revenues based on an
18 analysis of revenues reported by CGC as normalized for rate adjustments.
19 This type of analysis includes the effects of growth in customers, declines in
20 usage per customer and the effects of price changes from 1999 to 2006.

21
22 As shown on Exhibit CAPD-DM, Schedule 1, Page 1,² this analysis shows
23 that margins have increased slightly for the 7 year period from 1999 to 2006.
24 To avoid starting from a high or low point in history, I chose the margins for
25 the 12 months ended May 31, 2002 as the starting point. Margins declined
26 slightly from \$30,120,240 in 2002 to \$29.9 million for the year ended May 31,
27 2006. This represents an annual growth factor of .9983 or a negative growth

²The supporting calculations for this schedule are on Exhibit CAPD-DM,
Schedule 1, Page 2

1 rate of 0.17% per year as shown on Exhibit CAPD-DM, Schedule 1, Page 2
2 of 2. This approach produces a forecast of \$29,830,216 for the 12 months
3 ending December 31, 2007. I also looked at more recent years which seem
4 to show a faster rate of decline in revenues. For example, revenues
5 declined by .48% per year from the year ended May 31, 2003 to the year
6 ended May 31, 2006. This would produce a forecast of \$29.7 million.
7 However gas prices increased from the \$3 to \$4 range for the 12 months
8 ended May 2003 to an average of close to \$10 for the year ended May 31,
9 2006. This sudden and unusual price increase probably caused some of the
10 "abnormal" decline in revenues over the last three years. I have therefore
11 used the longer term negative growth rate of .17% per year as a more
12 reasonable estimate. This approach produces a forecast of \$29,830,216.

13
14 The second approach involves an analysis of the model filed by CGC. This
15 model is complex and uses many variables with the primary variable subject
16 to dispute being the price of natural gas. The theory behind the math in
17 CGC's model is that as prices rise, sales decline. The theory of gas price's
18 effect on gas sales is a reasonable theory until you try to put it into practice
19 as shown by the effects of various assumptions as shown on Exhibit CAPD-
20 DM, Schedule 3. At the time CGC filed its case, the price variable caused
21 the margin forecast to decrease by \$600,000. As of the date of preparation
22 of this testimony³, the price variable was worth \$147,000 producing a
23 forecast of \$29.8 million or about the same as the long term growth analysis
24 discussed above. By the hearing date, there will no doubt be a different
25 impact. And by the time rates go into effect, the price will have changed
26 again. If we adjust CGC's forecast to reflect a more reasonable long term
27 price of gas at around \$5.00, the result would be \$30.0 million. Each \$1
28 increase in gas cost lowers the forecast by \$73,000. But each \$1 decrease

³Reflects prices as of October 10, 2006.

1 in gas cost also raises the forecast by \$73,000.

2
3 The long term margin trend reflects and includes modest increases in the
4 cost of gas until just the last few years. Adjusting the growth factor back to
5 the long term trend rate of -.17% per year appears reasonable when
6 compared with the possible outcomes of using CGC's model as discussed
7 above. In fact, if prices do not continue to increase as is reflected in the long
8 term trend, it is likely that revenues will be higher than the \$29.8 million that
9 I project.

10
11 As an alternative to using price as a variable, I propose that we use a longer
12 term perspective as we have done in all other cases. The longer term trend
13 analysis recognizes the effects of all variables over time and also recognizes
14 that the passage of time is the only variable that we can predict with any
15 accuracy. Of course we should use good judgement in the analysis of the
16 appropriate growth factor to use.

17
18 In conclusion, I recommend a margin of \$29,830,216. If the TRA chooses
19 to update the WNA factor to reflect the effects of more recent weather as
20 included in CGC's analysis, this margin must be reduced by \$755,545 to
21 reflect the shift of margin from the WNA to the base rates being proposed by
22 CGC in this docket. The CAPD's projection updated to reflect the new
23 normal WNA factor is \$29,074,672. This result is \$476,311 higher than
24 CGC's projection. This total includes the base revenues or margins,
25 forfeited discounts revenue, and other revenues shown on CAPD-1,
26 Schedule 2, lines 3, 4, and 5.

27
28 **Q. Would you discuss adjustment #2 to forfeited discounts?**

29 Since the gross sales and margins projected for 2007 are very close to the

1 actual levels billed in 2005, I have used the actual forfeited discounts billed
2 in 2005 without adjustment. CGC's method of projecting forfeited discounts
3 is unclear and appears to rely on an abnormally low ratio of forfeited
4 discounts to revenues. As a result, our forecast is \$49,586 higher than
5 CGC's forecast.

6
7 **Q. Please discuss adjustment #4 to uncollectible expense.**

8 A. This adjustment is based on .44% of adjustment #1 and #2 in concert with
9 the .44% uncollectible ratio on Schedule 10 of Exhibit CAPD-1.

10
11 **Q. Would you discuss adjustment #11 to gas inventories?**

12 This adjustment represents the change in gas inventories due to the falling
13 gas prices this summer and fall. CGC provided this updated estimate based
14 on the latest actual results.

15
16 **Q. What is your recommendation for designing rates?**

17 A. The CAPD proposes that any adjustment be applied equally across the rate
18 classes. Our analysis shows that rates should be reduced by 2.7% for each
19 customer class as shown on Exhibit CAPD-1, Schedule 1. When coupled
20 with the margin shift associated with the updated WNA factors, the net rate
21 adjustment would be a rate reduction of 5.3%. Since the rate adjustments
22 resulting from this case should be minor, there should be no significant shift
23 in rate design.

24
25 In addition, the cost of service approach recommended by CGC is only one
26 of many factors that may be considered in designing rates. The effects on
27 usage and conservation may be of more concern in light of the current high
28 cost of natural gas. As CGC has shown in its reply to TRA discovery
29 response FG-41, residential rates are already __% higher (filed as

1 confidential) than equivalent rates for consumers using a heat pump. Any
2 unnecessary increase would only compound this current problem.

3
4 CGC's proposal also does not encourage conservation. The desire to
5 encourage conservation should be considered in any significant change in
6 rate design. CGC is proposing to raise the fixed charge on consumers from
7 \$7.50 per month to \$13.00 per month in the winter and \$10.00 per month for
8 May through October. **CGC's proposal discourages conservation.** Under
9 CGC's proposed structure, even if a consumer reduced consumption by
10 100%, their transportation bill could actually increase. With respect to
11 conservation, the current rate structure, which has higher volumetric and
12 lower fixed rates, incents consumers to conserve more than the rate
13 structure proposed by CGC.

14
15 In fact, reducing the \$7.50 fixed charge to \$0 and raising the volumetric
16 charge would encourage conservation. The fixed charge is a higher
17 percentage of the bill for low volume users than it is for high volume users.
18 Stated another way, the average rate paid by low volume users is higher
19 than for the average rate paid by high volume users. Thus, the \$7.50 charge
20 discourages conservation. Completely eliminating the customer charge
21 would charge all customers the same rate, thus rewarding the smaller user
22 with a lower transportation charge. A customer using 1 MCF would pay only
23 10% of what a customer who uses 10 MCF would pay.

24
25 The CAPD supports conservation efforts and is working with many
26 Tennessee stakeholders in the TRA's Home Energy Conservation Task
27 Force to explore ways that consumers can be assisted in conservation
28 efforts without unjustly rewarding gas companies with automatic rate
29 increases.

1 **Q. Would you explain the Company’s proposed Chattanooga Assisted**
2 **Rate for Energy Service (“CARES”) Tracker?**

3 A. CARES, as outlined by the Company, proposes to provide elderly, low
4 income customers a discount of \$13.00 (November - April) and \$10.00 (May
5 - October) per month, which is the customer-charge portion of CGC’s
6 proposed rates. To qualify for the rate, customers who are age 65 or older
7 with annual incomes less than or equal to the most recent U.S. Commerce
8 Department, Bureau of Census poverty thresholds will qualify.

9
10 **Q. What is the estimated annual revenue discount to eligible CARES**
11 **customers; i.e., program cost?**

12 A. An estimate provided by CGC witness Nikolich (exhibit DJN-8) falls between
13 \$122, 641 and \$490,565 per year.

14
15 **Q. How will the CARES program be funded?**

16 A. CGC proposes to include the costs associated with CARES in the cost of
17 service and recovered from consumers.

18
19 **Q. What is the CAPD’s position on the CARES Program?**

20 A. Rather than raising the fixed charge and then giving a discount as proposed
21 by CGC, we propose no change or the elimination of the fixed charge for all
22 consumers. CGC requested a similar mechanism in the last rate case and
23 later withdrew it. The Consumer Advocate opposes the CARES program as
24 filed. While the intention of the program is laudable, the mechanics of
25 assessment and implementation do not appear to be in the best interests of
26 all of the customers of Chattanooga Gas Company. CARES is similar in
27 purpose and function to LIHEAP (Low Income Home Energy Assistance
28 Program), which began in 1982. LIHEAP is a federally funded program
29 which seems to meet the same needs as CARES without requiring

1 surcharges to other consumers. Since there is a federal program in place
2 to assist low income customers, there does not appear to be as great a need
3 for an additional program funded by ratepayers' dollars on an involuntary
4 basis.

5
6 The Consumer Advocate is of the opinion that the program is a
7 commendable effort on the part of the Company to benefit their locale.
8 However, if the Company wishes to implement another assistance program,
9 it should be funded by the Company's shareholders. Since the Company is
10 making millions of dollars in profits from gas sales derived using assets that
11 ratepayers are paying for⁴, this would not appear to be unduly burdensome
12 to the shareholders. Funding the program would cost stockholders a small
13 fraction of these excess profits and would greatly enhance the Company's
14 public image.

15
16 On the other hand, if the shareholders of the Company do not wish to fund
17 the program, another alternative could be to offer a voluntary program. In
18 voluntary programs that currently exist at other utilities in Nashville and
19 Chattanooga such as "Project HELP" and "Warm Neighbors," customers who
20 may not wish to participate in the program are not forced to do so. Instead
21 of a voluntary program, CGC is proposing that consumers be forced to make
22 a charitable donation which they may not wish to make. It does not seem
23 equitable to force consumers who may have difficulty paying their own bills
24 to assist in paying bills for other residents. Under CGC's proposal,
25 customers will have no rights to decide whose bills to pay.

26
27 In addition, although it is essentially a charitable contribution, each individual
28 consumer would not receive the benefit of a tax deduction for their

⁴The profits from these transactions is the subject of phase two of this docket.

1 "contribution." Charitable contributions have traditionally been "below the
2 line" expenses. In other words, they are not considered in the computation
3 of net operating income. The rationale for this accounting treatment is
4 clear: these donations are discretionary expenses controlled by
5 management which are outside the scope of a company's normal operations.
6 A company cannot exist without expenses such as salaries, wages, rent,
7 utilities, etc., but choosing to make a contribution is clearly not a decision
8 that impacts a company's ability to continue to operate in it's chosen field.
9 For this reason alone, the program should be funded by the shareholders.

10
11 CGC's proposal would also cause hidden cost increases to the citizens of
12 Tennessee. There are obviously some costs associated with a new program
13 such as training, personnel, facilities to house paperwork, etc., all at the
14 expense of the TRA and ratepayers.

15
16 The Electric Power Board of Chattanooga supplies electricity to
17 approximately 150,000 customers in the Chattanooga area. "Warm
18 Neighbors" is the name that is given the program which the Power Board has
19 implemented to solicit contributions from their customers to assist low-
20 income customers pay their energy bills. In "Warm Neighbors," there is a
21 voluntary contribution of \$1.00 made each month when an electric bill is
22 paid.

23
24 These funds are then disbursed to those who need financial assistance in
25 order to pay their energy bill. Another important distinction between "Warm
26 Neighbors" and CARES is that United Way is responsible for administering
27 the funds that are collected by the Power Board, not the Power Board itself.
28 Therefore, there is no additional cost to the customer for administration of
29 the program, and it does not impact the staff of the TRA and increase its

1 costs.

2

3 **Q. Does CGC already recover the costs associated with unpaid bills?**

4 A. Yes. CGC is recovering all additional costs associated with unpaid bills
5 through the PGA and through uncollectible accounts expense.

6

7 **Q. When will the other proposed rate design issues such as CGC's ECP
8 program be addressed?**

9 A. These issues will be addressed in phase two of this docket.

10

11 **Q. Does this conclude your pre-filed direct testimony?**

12 A. Yes.

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Q. What is your educational background and what degrees and licenses do you hold?

A. I have a Bachelor of Science Degree in Accounting from David Lipscomb College and I am a licensed Certified Public Accountant in the State of Tennessee.

Q. What is your experience in the field of ratemaking and regulatory accounting?

A. I have 30 years of experience in the field of utility ratemaking and regulatory accounting including more than two years with the Certified Public Accounting firm of Wilson, Work, Fossett & Greer as the supervisor in the utility consulting segment. I served sixteen years with the Tennessee Public Service Commission, including one year as Technical Assistant to the Commissioners. I served two years as Chief of Energy and Water at the Tennessee Regulatory Authority ("TRA") and ten years with the Office of the Attorney General. While employed by the Commission and the Attorney General's Office, I supervised the preparation of many utility rate cases and earnings reviews. As part of these investigations, we developed financial exhibits to present to the Commission or TRA. These investigations supplied evidence to the TRA to enable it to set just and reasonable rates for utility services. In addition, I participated in various special studies and provided technical assistance in other cases in which I did not testify.

As the Technical Assistant to the Commissioners I observed hearings and analyzed the issues in each case from an independent technical perspective. I responded to the Commissioners' requests for expert assistance in evaluating and interpreting the financial evidence in the record. I also provided and checked calculations based on that evidence. In each position, my responsibilities have included making decisions on whether the

information provided was adequate and suitable for deciding the questions presented.

My duties with the Consumer Advocate and Protection Division ("CAPD") are similar, but also include the review of various tariffs filed before the TRA. I assist in the decision making process as to whether the terms and conditions of the numerous filings are just and reasonable or whether additional evidence is needed to support the filings. When significant consumer interests appear to be in jeopardy, we investigate further and provide expert testimony before the TRA when needed.

Q. What expertise do you have related to the natural gas industry?

A. Since 1976 I have been involved in auditing gas companies, reviewing testimony, tariffs and exhibits, negotiating rates and preparing testimony and exhibits relating to various revenue, expense and rate base issues of all major Tennessee gas distribution companies. I have prepared testimony in every major case involving a gas utility since my employment with the Attorney General's office in 1994.

Chattanooga Gas Company
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For the 12 Months Ending December 31, 2007

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Chattanooga Gas Company
Revenue Deficiency
For the 12 Months Ending December 31, 2007

Line No.		CAPD		Company	E/	Difference
1	Rate Base	107,516,809	A/	108,236,152		(719,343)
2	Operating Income at Present Rates	7,874,875	B/	5,811,096		2,063,779
3	Earned Rate of Return	7.32%		5.369%		1.96%
4	Fair Rate of Return	6.90%	C/	8.636%		-1.74%
5	Required Operating Income	7,418,660		9,347,274		(1,928,614)
6	Operating Income Deficiency	(456,216)		3,536,178		(3,992,394)
7	Gross Revenue Conversion Factor	<u>1.645090</u>	D/	<u>1.645090</u>		<u>0.000000</u>
8	Revenue Deficiency (Surplus)	<u>(750,516)</u>		<u>5,817,331</u>		<u>(6,567,847)</u>
9	Current Margins (per Sch. 6)	<u>28,173,006</u>		<u>27,696,695</u>		
10	New Total Margin	27,422,490		33,514,026		
11	% Increase	-2.66%		20.65%		
12	Margin shift from WNA to base rates	<u>755,545</u>	F/	<u>755,545</u>		
13	Net rate increase	(1,506,061)		5,061,787		
14	% Increase (net of WNA shift)	-5.35%		18.28%		

A/ Schedule 3, line 11

B/ Schedule 5, line 15

C/ Schedule 11, line 5

D/ Schedule 10, line 10

E/ Company Forecast

F/ 2007 GP using 30 yr. normal DDD ending 2000 29,304,320

2007 GP using 30 yr. normal DDD ending 2005 28,548,775

Overstatement of rate incr. (shift--WNA to base) 755,545

Chattanooga Gas Company
Adjustments Summary
For the 12 Months Ending December 31, 2007

<u>Line #</u>	<u>A/ COMPANY FORECAST 2007</u>	<u>ADJUSTMENTS</u>	<u>B/ CAPD FORECAST 2007</u>
1 Revenues - Sales & Transportation	\$ 122,084,127	\$ 476,311 ADJ#1	\$ 122,560,438
2 Cost of Gas	94,387,432	-	94,387,432
3 Base Revenues	27,696,695	476,311	28,173,006
4 Forfeited Discounts Revenue	428,951	49,586 ADJ#2	478,537
5 Other revenues	423,129	-	423,129
6 AFUDC	247,000	-	247,000
7 Operating Margin	<u>\$ 28,795,775</u>	<u>\$ 525,897</u>	<u>\$ 29,321,672</u>
8 Labor	\$ 1,957,671	\$ -	\$ 1,957,671
9 Long Term Incentive Pay ("LTIP")	261,000	(212,500) ADJ#3	48,500
10 Uncollectible Expense	126,670	2,334 ADJ#4	129,004
11 Energy Conservation Plan	738,980	(738,980) ADJ#5	-
12 Other Operations & Maintenance ("O&M") Exp	8,626,766	-	8,626,766
13 Total Operations and Maintenance Expense	11,711,087	(949,146)	10,761,941
14 Interest on customer deposits	123,850	-	123,850
15 Depr. & Amort. Expense	5,812,351	(1,700,466) ADJ#6	4,111,885
16 Taxes Other Than Income Taxes	4,079,007	(225,666) ADJ#7	3,853,341
17 Income Taxes	1,258,384	1,337,395 ADJ#8	2,595,779
18 Total Operating Expenses	<u>\$ 22,984,679</u>	<u>\$ (1,537,882)</u>	<u>\$ 21,446,797</u>
19 Net Operating Income("NOI")	<u>\$ 5,811,096</u>	<u>\$ 2,063,779</u>	<u>\$ 7,874,875</u>
29 Rate Base			
30 Gas Plant in Service	\$ 180,219,191	\$ (690,125) ADJ#9	\$ 179,529,066
31 Construction work in progress	5,026,589	370,690 ADJ#10	5,397,279
32 Materials and supplies/Storage gas	24,483,680	(1,555,176) ADJ#11	22,928,504
33 Working capital	(1,303,073)	-	(1,303,073)
34 Total	<u>\$ 208,426,387</u>	<u>\$ (1,874,611)</u>	<u>\$ 206,551,776</u>
35 Deductions:			
36 Accumulated Depreciation	\$ 83,137,986	\$ (1,155,268) ADJ#12	\$ 81,982,718
37 Contributions & advances in aid of construction	2,187,929	-	2,187,929
38 Accumulated deferred tax-accelerated depr.	14,864,320	-	14,864,320
39 Total	<u>\$ 100,190,235</u>	<u>\$ (1,155,268)</u>	<u>\$ 99,034,967</u>
40 Rate Base(Line 28-Line 36)	<u>\$ 108,236,152</u>	<u>\$ (719,343)</u>	<u>\$ 107,516,809</u>
41 Rate of Return(Line 20/Line 37)	5.37%		7.32%
42 Fair Rate of Return	8.64%	-1.74% ADJ#13	6.90%
43 Deficient (Excess) Rate of Return	3.27%		-0.42%
44 Deficient (Excess) NOI	<u>\$ 3,536,178</u>		<u>\$ (456,216)</u>
45 Gross Revenue Conversion Factor	1.64509		1.64509
46 Revenue Deficiency (Surplus)	<u>\$ 5,817,331</u>	<u>\$ (6,567,847)</u>	<u>\$ (750,516)</u>

A/ Co. Testimony and work papers.

B/ CAPD Schedules

Chattanooga Gas Company
Comparative Rate Base
For the 12 Months Ending December 31, 2007

Line No.		CAPD	Company ^{B/}	Difference
1	Utility Plant in Service	179,529,066	180,219,191	(690,125)
2	Construction Work in Progress	5,397,279	5,026,589	370,690
3	Working Capital	21,625,431 ^{A/}	23,180,607	(1,555,176)
4	Total Additions	206,551,776	208,426,387	(1,874,611)
5	Accumulated Depreciation	81,982,718	83,137,986	(1,155,268)
6	Accumulated Deferred Income Taxes	14,864,320	14,864,320	-
7	Contributions In Aid of Construction	1,901,535	1,901,535	-
8	Customer Advances for Construction	286,394	286,394	-
9	Pre-1971 Unamortized Investment Tax Credit	-	-	-
10	Total Deductions	99,034,967	100,190,235	(1,155,268)
11	Rate Base	107,516,809	108,236,152	(719,343)

A/ Schedule 4, Line 13

B/ Company Exh. MJM-3

Chattanooga Gas Company
Comparative Working Capital
For the 12 Months Ending December 31, 2007

Line No.		CAPD ^{A/}	Company ^{B/}	Difference
1	Lead Lag Results	1,859,258	1,859,258	-
2	Materials and Supplies	64,199	64,199	-
3	Gas Inventories	22,928,504	24,483,680	(1,555,176)
4	Prepayments	-	-	-
5	Other Accounts Receivable	17,984	17,984	-
6	Deferred Rate Case	<u>250,000</u>	<u>250,000</u>	<u>-</u>
7	Total Additions	<u>25,119,945</u>	<u>26,675,121</u>	<u>(1,555,176)</u>
8	Reserve for Uncollectible Accts.	526,795	526,795	-
9	Customer Deposits	2,064,159	2,064,159	-
10	Accrued Interest on Customer Deposits	903,560	903,560	-
11	Other Liabilities	<u>-</u>	<u>-</u>	<u>-</u>
12	Total Deductions	<u>3,494,514</u>	<u>3,494,514</u>	<u>-</u>
13	Working Capital	<u><u>21,625,431</u></u>	<u><u>23,180,607</u></u>	<u><u>(1,555,176)</u></u>

A/ Same as Co. exept gas inventory balance

B/ Company Exh. MJM-3

Chattanooga Gas Company
Income Statement at Current Rates
For the 12 Months Ending December 31, 2007

Line No.		CAPD	Company D/	Difference
1	Revenues - Sales & Transportation	122,560,438	122,084,127	476,311
2	Cost of Gas	94,387,432	94,387,432	-
3	Base Revenues	28,173,006	27,696,695	476,311
4	Forfeited Discounts Revenue	478,537	428,951 E/	49,586
5	Other revenues	423,129	423,129	-
6	AFUDC	247,000	247,000	-
7	Operating Margin	29,321,672	28,795,775	525,897
8	Other Operation and Maintenance	10,761,941 A/	11,711,087	(949,146)
9	Interest on Customer Deposits	123,850	123,850	-
10	Depreciation and Amortization Exp.	4,111,885	5,812,351	(1,700,466)
11	Taxes Other Than Income	3,853,341 B/	4,079,007	(225,666)
12	State Excise Tax	449,684 C/	228,063	221,621
13	Federal Income Tax	2,146,096 C/	1,030,321	1,115,775
14	Total Operating Expense	21,446,797	22,984,679	(1,537,882)
15	Net Operating Income for Return	7,874,875	5,811,096	2,063,779

Reconciliation:

Revenues - Sales & Transportation	122,560,438	122,084,127	476,311
Forfeited Discounts Revenue	478,537	428,951	49,586
Other revenues	423,129	423,129	-
AFUDC	247,000	247,000	-
Total Revenues	123,709,104	123,183,207	525,897

A/ Schedule 7, Line 30

B/ Schedule 8, Line 7

C/ Schedule 9, Line 12 & Line 20

D/ Company Exh. MJM-1, MJM-2

E/ Exh. PGB-6, P. 7 of 14

Chattanooga Gas Company
Income Statement at Proposed Rates
For the 12 Months Ending December 31, 2007

Line No.		Current Rates	Rate Adjustments	Proposed Rates
1	Revenues - Sales & Transportation	122,560,438	(750,516) B/	121,809,922
2	Cost of Gas	94,387,432	-	94,387,432
3	Base Revenues	28,173,006	(750,516)	27,422,490
4	Forfeited Discounts Revenue	478,537	(3,493) C/	475,044
5	Other revenues	423,129	-	423,129
6	AFUDC	247,000	-	247,000
7	Operating Margin	29,321,672	(754,009)	28,567,663
8	Other Operations and Maintenance	10,761,941 A/	(3,346) C/	10,758,596
9	Interest on Customer Deposits	123,850	-	123,850
10	Depreciation and Amortization Exp.	4,111,885	-	4,111,885
11	Taxes Other Than Income	3,853,341	-	3,853,341
12	State Excise Tax	449,684	(48,793) C/	400,890
13	Federal Income Tax	2,146,096	(245,655) C/	1,900,441
14	Total Operating Expense	21,446,797	(297,793)	21,149,003
15	Net Operating Income for Return	7,874,875	(456,216)	7,418,660

Reconciliation:

Revenues - Sales & Transportation	122,560,438	(750,516)	121,809,922
Forfeited Discounts Revenue	478,537	(3,493)	475,044
Other revenues	423,129	-	423,129
AFUDC	247,000	-	247,000
Total Revenues	123,709,104	(754,009)	122,955,095

A/ Schedule 7, Line 30

B/ Schedule 1, Line 8

C/ Line 1 x Schedule 11 (appropriate conversion factor effects)

Chattanooga Gas Company
Operation & Maintenance Expenses
For the 12 Months Ending December 31, 2007

Line No.		CAPD	Company	A/	Difference
1	Salaries and Wages	1,957,671	1,957,671		-
2	Other Allocated Costs	4,967,700	4,967,700		-
3	Long Term Incentive Pay ("LTIP")	48,500	261,000		(212,500) C/
4	Storage Expense	677,709	677,709		-
5	LNG Maintenance	-	-		-
6	Fleet Services and Facilities	609,499	609,499		-
7	Distribution - CIE	-	-		-
8	Distribution - Maintenance	-	-		-
9	Customer Acc. Exp. (Excl. Uncol.)	141,809	141,809		-
10	Uncollectible Accounts Expense	129,004	126,670		2,334 D/
11	Energy Conservation Plan	-	738,980		(738,980) B/
12	Customer Service	-	-		-
13	Sales Expense	-	-		-
14	Sales Promotion Expense	78,873	78,873		-
15	Pension Expense	37,744	37,744		-
16	Injuries and Damages	-	-		-
17	Employee Benefits - Insurance	371,395	371,395		-
18	Employee Savings Plan	-	-		-
19	Other Employee Benefits	-	-		-
20	Property Insurance	-	-		-
21	Other Administrative and General Exp.	502,587	502,587		-
22	Reg. Comm. Expense	-	-		-
23	Outside Services	1,239,450	1,239,450		-
24	Misc. General	-	-		-
25	Misc. Expense	-	-		-
26	Rents	-	-		-
27	Training	-	-		-
28	Transferred Credit	-	-		-
29	Corporate Office Allocation Adjust.	-	-		-
30	Total O&M Expense	<u>10,761,941</u>	<u>11,711,087</u>		<u>(949,146)</u>

A/ Company Forecast (MJM-2)

B/ Excludes energy conservation costs.

C/ CAPD work paper, E-LTIP.

D/ Uncollectible Accounts ratio x margin & FDR adjust. (0.004437 x 525,897)
Sch. 10, Line 4 Sch. 5, Line 7

Chattanooga Gas Company
Taxes Other Than Income Taxes
For the 12 Months Ending December 31, 2007

Line No.		CAPD	Company ^{A/}	Difference
1	Property Tax	2,274,877	2,274,877	-
2	State Gross Receipts Tax	829,380	1,055,046	(225,666) B/
3	Payroll Taxes	148,024	148,024	-
4	Franchise Tax	344,060	344,060	-
5	Other General Taxes	-	-	-
6	TRA Utility Fee	257,000	257,000	-
7	Total Taxes Other Than Income Taxes	3,853,341	4,079,007	(225,666)

A/ Company Forecast

B/ CAPD work paper, T-OTAX.

Chattanooga Gas Company
Excise and Income Taxes
For the 12 Months Ending December 31, 2007

Line No.		Attrition Amount		Proposed Rates Attrition Amount A/
1	Operating Margin	29,321,672	A/	28,567,663
2	Other Operation and Maintenance	10,761,941	A/	10,758,596
3	Depreciation and Amortization Expense	4,111,885	A/	4,111,885
4	Taxes Other Than Income	3,853,341	A/	3,853,341
5	NOI Before Excise and Income Taxes	10,594,505		9,843,841
6	less Interest on Customer Deposits	123,850	A/	123,850
7	less Interest Expense	3,565,257	B/	3,565,257 B/
8	Pre-tax Book Income	6,905,397		6,154,734
9	Schedule M Adjustments	12,811		12,811
10	Excise Taxable Income	6,918,208		6,167,545
11	Excise Tax Rate	6.50%		6.50%
12	Excise Tax	449,684		400,890
13	Pre-tax Book Income	6,905,397		6,154,734
14	Excise Tax	449,684		400,890
15	Schedule M Adjustments	12,811		12,811
16	FIT Taxable Income	6,468,525		5,766,655
17	FIT Rate	35.00%		35.00%
18	FIT Before Amortization of Def. Tax	2,263,984		2,018,329
19	Amortization of Deferred Tax Liability	(117,888)		(117,888)
20	Federal Income Tax Expense	2,146,096		1,900,441

A/ Schedule 6

B/ Rate Base * Weighted Cost of Debt

(Schedule 2, Line 11 * Schedule 12 Line 1 + Line 2 + Line 3)

Chattanooga Gas Company
Revenue Conversion Factor
For the 12 Months Ending December 31, 2007

Line No.		<u>Amount</u>		<u>Balance</u>
1	Operating Revenues			1.000000
2	Add: Forfeited Discounts	0.004654	A/	<u>0.004654</u>
3	Balance			1.004654
4	Uncollectible Ratio	0.004437	A/	<u>0.004458</u>
5	Balance			1.000196
6	State Excise Tax	0.065000	B/	<u>0.065013</u>
7	Balance			0.935184
8	Federal Income Tax	0.350000	B/	<u>0.327314</u>
9	Balance			<u>0.607869</u>
10	Revenue Conversion Factor (1 / Line 9)			<u><u>1.645090</u></u>

A/ Exhibit MJM-1, Schedule 3

B/ Statutory rate

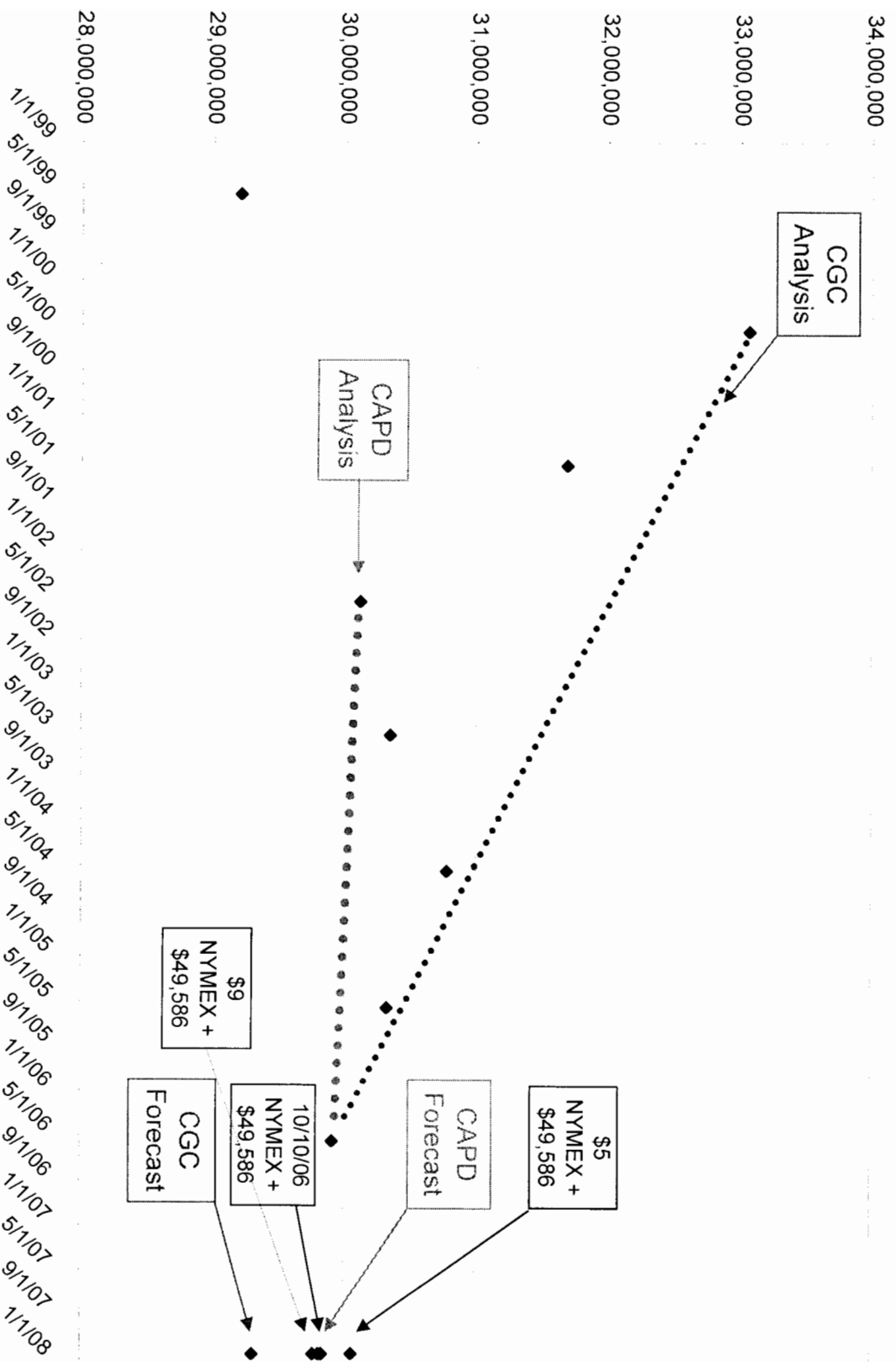
Chattanooga Gas Company
Cost of Capital
For the 12 Months Ending December 31, 2007

Line No.		Ratio	A/ Cost	Weighted Cost
1	Short Term Debt	11.90%	5.11% B/	0.61%
2	Long Term Debt	43.10%	6.26% B/	2.70%
3	Preferred Stock	0.20%	6.26% B/	0.01%
4	Stockholder's Equity	<u>44.80%</u>	8.00% A/	<u>3.58%</u>
5	Total	<u>100.00%</u>		<u>6.90%</u>

A/ Testimony of SNB

B/ Company filing (later revised per Mike Morely - LTD is 6.24%, weighed with Preferred = 6.26%)

Chattanooga Gas Company Gross Margin Forecast



Chattanooga Gas Company
Analysis of Gross Margin
For the 12 Months Ending December 31, 2007

	Year	Reported / Projected Gross Margin	Rate change WNA & Forfeited Disc. Adj.	Adjusted Gross Margin
	5/31/99	28,562,119	642,777	29,204,896
	5/31/00	32,421,024	642,777	33,063,801
	5/31/01	31,052,000	642,777	31,694,777
	5/31/02	29,477,463	642,777	30,120,240
	5/31/03	29,702,866	642,777	30,345,643
	5/31/04	30,134,899	642,777	30,777,676
	5/31/05	29,951,849	374,953	30,326,802
	5/31/06	29,912,287	0	29,912,287
CGC filing	12/31/07	28,548,775	755,545	29,304,320
Adj. 10/10 NYMEX + \$49,586 FDR	12/31/07	29,001,395	805,131	29,806,526
Adj. to NYMEX @ \$5.00 + \$49,586 FDR	12/31/07	29,252,825	805,131	30,057,956
Adj. to NYMEX @ \$9.00 + \$49,586 FDR	12/31/07	28,960,755	805,131	29,765,886
CAPD as adjusted for FDR & WNA shift	12/31/07	29,074,672	755,545	29,830,216
	5/31/06			29,912,287
	579 days			1.5863 years
	Growth factor $(.9983^{1.5863})$			<u>0.9973</u>
	12/31/07 Profit before WNA shift			29,830,216
	WNA shift			<u>755,545</u>
	Gross profit after WNA shift			29,074,672
	2002 to 2006			0.9931
	Annual growth rate $(.9931^{(1/4)})$			0.9983

Adjusted 1997 through Nov. 1, 2004 to add \$642,777 for Rate increase in 04-00034
Previous rate reduction was in 1998.

Chattanooga Gas Company
Revenue Deficiency Adjusted to TRA Approved Capital Structure
For the 12 Months Ending December 31, 2007

Line No.		CAPD		Company	E/	Difference
1	Rate Base	107,516,809	A/	108,236,152		(719,343)
2	Operating Income at Present Rates	8,100,504	B/	5,811,096		2,289,408
3	Earned Rate of Return	7.53%		5.369%		2.17%
4	Fair Rate of Return	6.69%	C/	8.636%		-1.95%
5	Required Operating Income	7,192,875		9,347,274		(2,154,400)
6	Operating Income Deficiency	(907,629)		3,536,178		(4,443,807)
7	Gross Revenue Conversion Factor	<u>1.645090</u>	D/	<u>1.645090</u>		<u>0.000000</u>
8	Revenue Deficiency (Surplus)	<u>(1,493,132)</u>		<u>5,817,331</u>		<u>(7,310,463)</u>
9	Current Margins (per Sch. 6)	<u>28,173,006</u>		<u>27,696,695</u>		
10	New Total Margin	26,679,874		33,514,026		
11	% Increase	-5.30%		20.65%		
12	Margin shift from WNA to base rates	<u>755,545</u>	F/	<u>755,545</u>		
13	Net rate increase	(2,248,676)		5,061,787		
14	% Increase (net of WNA shift)	-7.98%		18.28%		

A/ Schedule 3, line 11

B/ Schedule 5, line 15

C/ Schedule 11, line 5

D/ Schedule 10, line 10

E/ Company Forecast

F/ 2007 GP using 30 yr. normal DDD ending 2000 29,304,320

2007 GP using 30 yr. normal DDD ending 2005 28,548,775

Overstatement of rate incr. (shift--WNA to base) 755,545

Chattanooga Gas Company
Cost of Capital Adjusted to TRA Approved Capital Structure
Revenue Deficiency Adjusted to TRA Approved Capital Structure

Line No.		Ratio	A/	Cost	Weighted Cost
1	Short Term Debt	16.40%		5.11% B/	0.84%
2	Long Term Debt	37.90%		6.26% B/	2.37%
3	Preferred Stock	10.20%		6.26% B/	0.64%
4	Stockholder's Equity	<u>35.50%</u>		8.00% C/	<u>2.84%</u>
5	Total	<u>100.00%</u>			<u>6.69%</u>

A/ TRA Order on October 20, 2004, Docket 04-00034, p. 59

B/ Company filing (later revised per Mike Morely - LTD is 6.24%, weighed with Preferred = 6.26%)

C/ Testimony of SNB

Chattanooga Gas Company
Revenue Model - PGA Study

1 of 1

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
	10.402	10.412	10.202	8.262	8.087	8.184	8.299	8.394	8.512	8.682	9.372	10.052
	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879	1.6879
	9.348	9.348	9.348	9.4679	9.4479	9.5379	9.6279	9.6879	9.7479	9.8379	10.4179	10.9779
	8.204	8.204	7.65	7.65	7.593	7.593	7.593	7.593	8.228	8.228	8.228	9.715
	16.8189	16.5939	16.0939	12.6689	12.1289	12.1239	12.1489	12.1739	11.8239	14.6889	15.8709	16.4189
	9.348	9.348	9.348	9.4679	9.4479	9.5379	9.6279	9.6879	9.7479	9.8379	10.4179	10.9779
	9.348	9.348	9.348	\$ 9.47	\$ 9.45	\$ 9.54	\$ 9.63	\$ 9.69	\$ 9.75	\$ 9.84	\$ 10.42	\$ 10.98
Mar. 07												

Can use actual NYMEX plus spread because inventory gas is not a significant factor until Dec.

[illegible]