

Before the

TENNESSEE REGULATORY AUTHORITY

**IN RE: DOCKET TO EVALUATE CHATTANOOGA GAS COMPANY'S GAS
PURCHASES AND RELATED SHARING INCENTIVES**

DOCKET NO. 07-00224

**SURREBUTTAL TESTIMONY
OF
STEVE BROWN**

June 10, 2009

Before the

TENNESSEE REGULATORY AUTHORITY

IN RE: DOCKET TO EVALUATE CHATTANOOGA GAS COMPANY'S GAS
PURCHASES AND RELATED SHARING INCENTIVES

DOCKET NO. 07-00224

AFFIDAVIT

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

Sworn to and subscribed before me
this 10th day of June, 2009.

Emily Knight
NOTARY PUBLIC



Steve Brown
STEVE BROWN

My commission expires: Aug. 23, 2011

I. Surrebuttal Testimony Summary.

Q_1. Please state your name.

A_1. Dr. Stephen Brown.

Q_2. What is the purpose of your testimony?

A_2. My testimony refutes Mr. Sherwood's supplemental testimony of April 1, 2009 in the Tennessee Regulatory Authority's Docket 07-00224.

Mr. Sherwood's testimony has three broad sections in the following order:

- Section 1: "Dr. Brown's Errors In Interpreting AGLC Docket 24960-U And How It Applies To Design Day Load And Capacity Portfolio For CGC." [Sherwood Supplemental, page 6 line 15 to page 16 line 5];
- Section 2: "Dr. Brown's Errors In Describing CGC's Use Of The ETNG OBA."¹ [Sherwood Supplemental, page 16 line 7 to page 20 line 12];
- Section 3: "Dr. Brown's Lack Of Support For His Value Proposition Theory." [Sherwood Supplemental, page 20 line 14 to page 30 line 6].

¹ The term OBA refers to the Operating Balance Agreement between Chattanooga Gas Company (CGC) and the East Tennessee Natural Gas Pipeline (ETNG).

1 Mr. Sherwood does not confine his
2 discussion of an issue to just one section
3 in his testimony. For example, Mr.
4 Sherwood discusses the OBA extensively in
5 Section 3 as well as in Section 2. He
6 discusses AGLC Docket 24960-U in Section 3
7 as well as in Section 1. Thus his
8 testimony is not a group of arguments
9 where one argument is clearly severable
10 from another. They are an interrelated,
11 integrated subject matter.
12

13 Accordingly, my testimony provides a
14 complete and accurate rebuttal to Mr.
15 Sherwood's testimony because I identify
16 his testimony which I intend to rebut and
17 then do so.
18

19 **II. Mr. Sherwood's Exhibit TSS-17**
20 **Fails to Rebut the Contention**
21 **that CGC Used the ETNG Pipeline**
22 **Less and Less from 2003 to 2005.**
23
24

25 Q_3. Did Mr. Sherwood dispute your contention
26 that CGC used the ETNG pipeline less and
27 less from 2003 to 2005?
28

29 A_3. Yes. He disputes my position on that point
30 in his Exhibit TSS-17.
31

32 Q_4. What was the specific point of Mr.
33 Sherwood's rebuttal in TSS-17?
34

1 A_4. He made two points about the purpose of
2 the exhibit:
3
4

5 To rebut my opinion that from the years
6 2003 to 2005 "CGC used ETNG less to
7 enhance Sequent's access to ETNG, after it
8 placed the Patriot Project into
9 service..." [Brown Rebuttal, Page 35,
10 Lines 17-19].
11

12 To support his opinion that from the years
13 2003 to 2005 the decline in energy
14 delivered to CGC's ETNG delivery points
15 was caused by third parties shifting their
16 supply source from ETNG to the Southern
17 Natural Gas Pipeline.
18
19

20 Q_5. **Do you agree with Mr. Sherwood's opinion**
21 **that you "inappropriately added third**
22 **party deliveries with deliveries for CGC's**
23 **sales customers?"**
24

25 A_5. No. I disagree with his opinion.
26

27 Mr. Sherwood used the term "third parties"
28 in TSS-17, but he has not specifically
29 defined this term. I have interpreted
30 "third parties" to reference
31 "Transportation of Gas of Others Through
32 Transmission Facilities", i.e., Transport
33 Customers, as defined by FERC Form 2.
34

1 Regarding ETNG's publicly available data
2 on energy deliveries to CGC, there is
3 nothing in the data which allows anyone to
4 separate deliveries according to who
5 scheduled the delivery or who uses the
6 energy. Therefore, it was not possible for
7 me to add deliveries for third parties to
8 deliveries for CGC sales.

9
10 The delivery point operator, in this case
11 CGC or Atlanta Gas, should have the data
12 to identify in granular detail who
13 scheduled the energy delivery and who used
14 the energy.

15
16 However, in discovery CGC said:

17
18 *"The Company does not have, track or store firm customer usage*
19 *by delivery meter. Delivered quantities ultimately consumed by*
20 *firm customers are not discernable from quantities consumed by*
21 *non-firm customers at any given delivery meter." [CGC Responses*
22 *and Objections to CAPD's Third Discovery Request, (May 12,*
23 *2009), Question 23.]*

24
25
26 In view of CGC's admission, Mr. Sherwood's
27 testimony that I "inappropriately added
28 third party deliveries with deliveries for
29 CGC's sales customers" is not accurate.

30
31 Also, CGC's admission begs the question:
32 if, on a delivery point basis, the Company
33 cannot separately identify energy
34 delivered for firm customers from energy
35 delivered for nonfirm customers, then how
36 can the Company make such identifications
37 in total?

1
2 Q_6. Do you agree with Mr. Sherwood's statement
3 that "comparing 2003 to 2005, third party
4 volume deliveries shifted from ETNG to
5 SNG, while CGC's deliveries from ETNG
6 increased from 54% to 61%"?
7

8 A_6. No. I disagree that his table proves that
9 deliveries shifted in the way he
10 describes. There are two issues with TSS-
11 17: A) If Cycle Billed Volumes, as set
12 forth in CGC Discovery Response 14, are
13 substituted for throughput, the data in
14 TSS-17 becomes nonsensical and B) even if
15 you retain the throughput data in TSS-17,
16 the volumes for "Third Party Gas"
17 (throughput by CGC's transportation
18 customers) are too large for the
19 transportation capacity which the third
20 parties had contracted for in 2003 and
21 2005. These two problems are displayed as
22 "Issue A" and "Issue B" in Brown
23 Surrebuttal Exhibit 1.
24

- 25 • See Brown Surrebuttal Exhibit 1.
- 26

1 Regarding "Issue A", the amounts for
2 throughput are much larger than cycle
3 billed volumes, which are supposed to
4 equate to actual deliveries rather than
5 scheduled deliveries. If he had started
6 his analysis with cycle billed volumes
7 instead of throughput, his results would
8 not have demonstrated that deliveries
9 shifted in the way he describes. TSS-17 is
10 not reliable when the starting point is
11 throughput.

12
13 Regarding "Issue B", TSS-17 is not
14 reliable because, even if cycle billed
15 volume is not substituted for throughput,
16 based on the throughput values for "Third
17 Party Gas" the third parties were using
18 too much capacity relative to their
19 contracts. I base my opinion on the fact
20 that the third party load factors exceed
21 100 percent.

22
23 A load factor measures how much capacity
24 is used throughout the year. In Brown
25 Surrebuttal Exhibit 3 and 4, the load
26 factor is calculated as follows:
27 $(\text{Throughput} \times 1000) / (\text{Capacity} \times 365)$. This
28 measure has an upper limit of 100 percent,
29 meaning that the capacity is constantly
30 used, and a lower limit of zero percent,
31 meaning that the capacity is never used.
32 The normal use of capacity leads to an
33 annual load factor between these two
34 extremes.

1 The abnormally high load factors again
2 show that Mr. Sherwood's exhibit is not
3 persuasive.

4
5 Brown Surrebuttal Exhibit 3 shows that the
6 Third Parties had annual load factor of
7 322 percent in 2003 on ETNG.

8
9 Brown Surrebuttal Exhibit 4 shows that in
10 2005, the Third Parties had annual load
11 factor of 340 percent on SONAT and 155
12 percent on ETNG.

13
14 According to my analysis of TSS-17, in
15 2003 the values for "Third Party Gas" for
16 SONAT are negative. Refer to columns (4)
17 and (6) in Brown Surrebuttal Exhibit 2.
18 Clearly Mr. Sherwood's exhibit raises
19 issues regarding its reliability.

20
21 In 2005 "CGC Net Purchases" and "Third
22 Party Gas" turn out to have the same
23 proportions per pipeline.

24
25 For example, in 2005 "CGC Net Purchases"
26 were distributed as 61.29 percent to ETNG
27 and 38.7 percent to SONAT. "Third Party
28 Gas" is distributed in almost the same
29 proportions, 63.46 percent to ETNG and
30 36.5 percent to SONAT. Refer to columns
31 (4) and (6) in Brown Surrebuttal Exhibit
32 2.
33

1 In my opinion these results mean that Mr.
2 Sherwood has not accurately separated firm
3 sales and non-firm sales and that TSS-17
4 is not reliable because the Third Parties
5 were using their capacity in excess of the
6 capacity rights they had in their
7 contracts with the pipelines. This is
8 evident to me based on the annual load
9 factors which underlie TSS-17.

10
11
12 **Q_7. Do you believe that the best way to**
13 **resolve the differing opinions over the**
14 **data in TSS-17 between you and Mr.**
15 **Sherwood would be to have an independent**
16 **review of the gas supply plan and asset**
17 **manager program?**

18
19 **A_7. Yes I do. The data involved in the gas**
20 **supply plan and asset management agreement**
21 **is complex and a discussion of it in a**
22 **case like this appears as a "battle of**
23 **experts."**
24

1 An independent review would allow the
2 public and the TRA to have more confidence
3 in the data supplied by CGC in regulatory
4 filings, as well as cases like this. For
5 example, in the present case, CGC has
6 provided, through the discovery process,
7 data on billing and deliveries that rarely
8 comes close to being reconciled. This, on
9 an annual basis, is at odds with the
10 general principle that deliveries should
11 reconcile with cycle billed volumes. The
12 un-reconciled data calls for an
13 explanation, which an independent reviewer
14 could provide.
15

- 16 • See Brown Direct Exhibit 7; TRA
17 Docket 07-00224, Reply To CAPD
18 Discovery Request (April 11, 2008)
19 Question 90.
20

21 The data I am referring to comes from
22 Discovery responses 14 and 15, where CGC
23 provides billing data entitled "Cycle
24 Billed Volumes" and "Throughput". The data
25 rarely matches up on an annual basis.
26

27 **Q_8. Can you think of any explanation for the**
28 **lack of reconciliation of billed volumes**
29 **and throughput on an annual basis?**
30

1 A_8. Yes. The billing cycle could make a
2 difference. That is, there is a lag in the
3 billing cycle because the bills don't go
4 out exactly on December 31st. However, the
5 swings in data where annual billed volumes
6 are off as much as 10% or 15% from
7 throughput volumes in a ten year period is
8 troubling.

9
10 Certainly, interested parties who often
11 follow or participate in rate cases, such
12 as the Chattanooga Manufacturers
13 Association or the AARP, have the right to
14 understand the reason for and source of
15 the differences. Such parties, I believe,
16 would feel much better if an independent
17 third party looked at such information and
18 provided an explanation.
19
20

21 **III. Mr. Sherwood's Explanation Of**
22 **ETNG's Operating Balance**
23 **Agreements Is Mistaken Because**
24 **CGC Is Not A Balancing Party On**
25 **ETNG's System, But Atlanta Gas**
26 **Light Is A Balancing Party And**
27 **All Of CGC's Imbalances Are**
28 **Accumulated As Atlanta Gas**
29 **Light's Imbalances.**
30
31

1 Q_9. Mr. Sherwood stated on page 17 of his
2 Supplemental Testimony that you are wrong
3 in implying that CGC could facilitate
4 deliveries off system because CGC could
5 schedule more deliveries than it needs and
6 the imbalance could be taken as a delivery
7 at another point on ETNG's system. Do you
8 agree with Mr. Sherwood's opinion?
9

10
11 A_9. No, I disagree. CGC could schedule more
12 deliveries than it needs while an
13 affiliate, such as Sequent, could schedule
14 less deliveries than it needs. As a
15 result, Atlanta Gas Light could
16 potentially reconcile the differences
17 between the over scheduling and the under
18 scheduling.
19

20 According to FERC filings, CGC and Sequent
21 are not listed as a balancing parties on
22 ETNG. The pipeline has specifically said
23 that imbalances on East Tennessee are
24 resolved by balancing parties rather than
25 by shippers, such as CGC.
26

- 27 • See Brown Direct Exhibit 46; FERC
28 Docket RP00-469-000, East Tennessee
29 Natural Gas Company Order No. 637
30 Compliance Filing, Statement Of
31 Nature, Reasons, And Basis, at 15, 16.
32
33

• Brown Rebuttal Exhibit 30, Page 31 of 32; FERC Docket RP04-234-000, East Tennessee Natural Gas 2002-2003 Cash Report And Refund Plan (March 29, 2004).

• Brown Rebuttal Exhibit 33; FERC Docket RP06-280-001, East Tennessee Natural Gas 2004-2005 Cash Report And Refund Plan (April 3, 2006), at Appendix C Schedule 1.

However, Atlanta Gas Light is identified as a balancing party.

As a balancing party, Atlanta Gas Light consolidates the imbalances of its affiliates doing business on ETNG.

Q_10. Isn't it true that Mr. Sherwood's Exhibit TSS-08 shows CGC's monthly imbalances as close to zero from August 2005 through December 2007?

A_10. Yes. It is true. However, in my opinion TSS-08 is inconsistent with CGC's data on throughput and cycle billed volumes. I examined the data in TSS-08 for the year 2006 and summed the data in the column titled "Mo. Imbalance" and discovered that annual imbalance for the year 2006 was close to zero.

1 CGC cannot have an annual imbalance of nearly
2 zero in 2006 while at the same time including
3 transportation-customer-imbalances in CGC's
4 imbalances, and having throughput exceed cycle
5 billed volumes over 1.1 million dekatherms.
6 Each one of these conditions contradicts the
7 other.

8
9 However, these imbalances could potentially be
10 reconciled by the balancing party, Atlanta Gas
11 Light.

12
13 **Q_11. Are transportation customers included in CGC's**
14 **cycle billed volumes data?**

15
16 **A_11.** Yes. cycle billed volumes to transportation
17 customers are included in CGC's cycle billed
18 volumes, as shown in Brown Direct Exhibit 3.

19
20
21 **Q_12. What evidence have you provided in this docket**
22 **to support your opinion that Atlanta Gas Light**
23 **reconciles imbalances of its affiliates'**
24 **activities on ETNG?**

25
26 **A_12.** I provide the evidence in Brown Rebuttal
27 Exhibit 35, at 5. ETNG says it offers customers
28 imbalance management services in the form of
29 operational balancing agreements under Rate
30 Schedule LMS-MA and Rate Schedule LMS-PA. ETNG
31 further says a customer with an entitlement to
32 ship 1,000 dekatherms from receipt point A to
33 delivery point B could balance the deliveries
34 across other delivery points through an OBA.
35 This would result in the customer being able to
36 nominate the 1,000 Dth from point A to point B,

1 but actually take the 1,000 Dth at another
2 point that it had not nominated (for instance,
3 point C), so long as the customer remains in
4 balance under its operational balancing
5 agreement.
6

7 In my opinion, Atlanta Gas Light, as a
8 balancing party on ETNG's system, could
9 possibly implement the example above.
10
11

12 **Q_13. In Brown Rebuttal Exhibit 30 what pipeline rate**
13 **schedules does ETNG identify as applying to**
14 **imbalances?**
15

16 **A_13.** ETNG identifies rate schedules LMS-MA, LMS-PA,
17 and PAL as applying to imbalances. Furthermore,
18 these schedules apply to AGL only, not CGC or
19 Sequent. In my opinion, these rate schedules
20 are applied to a balancing party, but are not
21 applied to a shipper who is not a balancing
22 party. So these rates appear to be applied to
23 Atlanta Gas Light, but not Sequent or CGC.
24

25 **Q_14. Does Mr. Sherwood agree with you, that CGC**
26 **can facilitate deliveries as described in**
27 **ETNG's example?**
28

29 **A_14.** No. Mr. Sherwood says CGC cannot
30 facilitate deliveries:
31

1 *"However, as illustrated in Exhibit TSS-15, CGC's capacity on*
2 *ETNG cannot be used to reach the Patriot Pipeline. The*
3 *Company's capacity on ETNG does not provide firm delivery*
4 *rights east of the ETNG's Top Side constraint point. Even the*
5 *relatively small amount of capacity held by CGC with receipt*
6 *rights in Dickenson County with firm delivery rights to CGC*
7 *distribution system do not provide rights to Saltville, Patriot*
8 *Pipeline, or Transco. [Sherwood Supplemental Testimony, Page*
9 *28, Lines 12-17]*

10
11
12 Q_15. **Did you testify that energy has to flow**
13 **from CGC's facilities to Sequent's to**
14 **achieve deliveries elsewhere via an OBA?**

15
16 A_15. No. I did not testify that energy has to
17 flow from CGC's facilities to Sequent's to
18 achieve deliveries elsewhere, as Mr.
19 Sherwood seems to suggest.

20
21 Q_16. **What are the implications of CGC being able to**
22 **facilitate off system deliveries, through the**
23 **actions of AGL and Sequent?**

24
25 A_16. To understand the importance of AGL's ability
26 to balance loads across all of its
27 affiliates/subsidiaries, you must understand
28 the role of an asset manager on these systems
29 and the mechanisms by which assets are billed
30 to ratepayers. Sequent as an asset manager
31 will take over all of the capacity and storage
32 paid for in advance by CGC's ratepayers via the
33 Purchase Gas Adjustment, as well as the
34 capacity and storage of Sequent's other
35 customers. It will then use these resources or
36 "assets" to deliver any needed commodity to
37 points specified by its customers as needed.

1
2 It is also essential to understand that
3 capacity and storage on the ETNG system is at a
4 premium relative to capacity and storage on
5 other systems due to ETNG's relatively less
6 restrictive transportation and balancing
7 policies as well as its location relative to
8 other pipelines. This makes excess capacity
9 and storage on the ETNG system desirable to any
10 asset manager, particularly one with other
11 assets on this and neighboring systems.
12

13 This creates a situation in which CGC, an
14 affiliate of Sequent, has the potential
15 incentive or motive for its ratepayers to
16 retain excess capacity and storage on the ETNG
17 system while paying for the assets via the
18 Purchase Gas Adjustment. These assets could
19 then be used by Sequent in its asset management
20 operations for all of its customers, which
21 would in turn strengthen the bottom line of
22 AGL, the parent company of both CGC and
23 Sequent. These operating circumstances create a
24 potential motive to retain excess capacity,
25 which underscores the need for a regular review
26 or audit.
27
28

29 **IV. Rebuttal Of Mr. Sherwood's**
30 **Testimony That CGC's Design Day**
31 **Is Not Overstated.**
32
33
34

1 Q_17. What is your response to Mr. Sherwood's
2 testimony that you are wrong in your opinion
3 that CGC's design day load is overstated
4 because you did not consider customer count
5 when forming your opinion?
6

7 A_17. I disagree with him. In the source that I
8 referenced for the Rome Pool there was no
9 mention of the number of customers or the usage
10 per customer.
11

12 Mr. Sherwood identifies the design day usage
13 per customer in Rome as 1.485 dekatherms, and
14 Atlanta as 1.623 dekatherms. He also provides
15 the customer count in Chattanooga, 62,187
16 customers. This was enough information to
17 derive CGC's design day customer use of 2.087
18 dekatherms, which is the result of the
19 projected peak load of 129,761 dekatherms,
20 shown in Mr. Sherwood's Exhibit TSS-02, divided
21 by 62,187 customers, or $2.087 = (129,761 / 62,187)$.
22 CGC's design day customer use of 2.087 exceeds
23 Rome's use of 1.485 dekatherms by 41 percent,
24 even though both areas are assumed to have the
25 same design day temperature, 8 degrees above
26 zero.
27

28 Q_18. In your opinion is CGC's design day usage per
29 customer reasonable?
30

31 A_18. No, it is not reasonable in the context of the
32 usage per customer in Rome and Atlanta. I have
33 also compared the per customer usage to the
34 Knoxville Utility Board (KUB), a major
35 municipal gas utility in Tennessee. I obtained
36 the information from KUB's public records.

1
2 The design day capacities on a per customer
3 basis are summarized below:
4

- 5 • Rome Pool 1.485
- 6
- 7 • Atlanta 1.623
- 8
- 9 • CGC 2.087
- 10
- 11 • KUB 1.645
- 12

13 In reply to questions 31 and 33 of CAPD's Third
14 Discovery Request, CGC said it described its
15 projection of firm customers in Chattanooga and
16 Rome as being affected by "housing starts and
17 foreclosures". There is no logical reason for a
18 house in Chattanooga to use 41 percent more
19 energy than a house in Rome at the same
20 temperature.
21

22
23 The service territories of CGC, KUB and Rome
24 are in close geographic proximity to one
25 another. The difference between CGC's usage
26 per customer and those of Atlanta, Rome, and
27 Knoxville supports my opinion, which Mr.
28 Sherwood disputes, that CGC's design day is
29 overstated.
30
31

**V. Rebuttal Of Mr. Sherwood's
Testimony That CGC's Design Day
Load Is Not Influenced By CGC's
Strategic Location.**

Q_19. What is your response to Mr. Sherwood's testimony that the strategic location of CGC on ETNG does not influences CGC's design day forecast?

A_19. I disagree. Mr. Sherwood testifies:

"he is incorrect in his assertion that the strategic location of CGC with regard to ETNG influences the capacity planning and design day forecast. The analysis done to project design day load is done to determine the level of firm deliverability needed by the utility to keep firm customers supplied with natural gas during periods of extreme cold weather conditions." [Sherwood Supplemental, page 8, lines 11-14].

If strategic location was not the determining factor of the per customer design day use, CGC's design day customer use would not exceed Rome's by 41 percent. Because both areas are assumed to have the same design day temperature, 8 degrees above zero, there should be only a small difference between the usage per customer.

1 Because CGC's usage per customer is so large in
2 comparison to Rome's and Atlanta's, growth in
3 the number of CGC's customers will cause CGC to
4 add transportation capacity more quickly in
5 Chattanooga than in any other location. Mr.
6 Sherwood testified that seasonal capacity is
7 not available to Chattanooga:

8
9 *"More importantly, neither Southern Natural Gas nor East*
10 *Tennessee have firm seasonal capacity posted as available on their*
11 *systems and both have specifically refused to provide such service*
12 *to CGC, if CGC were not willing to accept interruptions in service*
13 *in the winter period or pay the same annual price for the service."*
14 *[Sherwood Direct (July 30, 2008, Pages 13, lines 7-10].*
15

16 Mr. Sherwood has testified that

17
18 *"CGC's LNG peaking facility is located on the distribution system*
19 *and therefore benefits the system by allowing the LDC to contract*
20 *for a lower level of firm pipeline transportation."* *[Sherwood*
21 *Direct (July 30, 2008, Page 6, lines 13-15].*
22

23 Of course, the LNG plant's capacity is a fixed
24 amount that cannot be increased as the design
25 day load increases. There is only one source
26 left for new capacity. CGC could meet its
27 design day load by adding capacity to its year-
28 round transportation contracts. This is the
29 most expensive option according to Mr.
30 Sherwood:

31
32 *"firm transportation resources are typically available every day,*
33 *but usually have the highest fixed costs."* *[Sherwood Supplemental,*
34 *page 14, lines 14-64].*
35

1 According to CGC's design day process, a 1
2 dekatherm increase in the peak load means
3 adding 1 dekatherm of firm transportation
4 capacity for each day the year. Said
5 another way, a 1 dekatherm increase in the
6 CGC's design day peak load gives the asset
7 manager 364 dekatherms of capacity to
8 market throughout the remainder of the
9 year. CGC's methodology adds year-round
10 capacity to meet a single day's load under
11 the worst conditions. This is how CGC
12 creates excess capacity, which is then
13 added to the asset manager's portfolio.
14 This outcome is consistent the strategic
15 location of CGC on the ETNG pipeline,
16 which is an avenue to east coast gas
17 markets.

18
19
20 This concludes my surrebuttal testimony.

Issue A

TSS - 17

In 2003 and 2005 Throughput Exceeds Cycle Billed Volumes By 15%.

2003 Billed Volumes 14,586.52
2005 Billed Volumes 14,194.22

Source For Cycled Billed Volumes
Brown Direct Exhibit 3; TRA Docket 07-00224, CGC Reply To CAPD
Discovery Request (April 18, 2008) Question 14, Attachment.

Source For Throughput

Brown Direct Exhibit 4; TRA Docket 07-00224, CGC
Reply To CAPD Discovery Request (April 18, 2008)
Question 15.

2003 a/

CGC Net Purchases b/
Third Party Gas c/

2005 a/

CGC Net Purchases b/
Third Party Gas c/

ThroughPut
Dekatherms

16,867.40

9,726.43
7,140.97

16,624.23
10,652.09
5,972.14

Nominations on

CGC's ETNG

Delivery Points

Dekatherms

12,195.59

5,252.67
6,942.91

8,776.66

6,528.90
2,247.77

SONAT Supply: Col 2

-Col 3

4,671.81

4,473.75
198.06

7,847.57

4,123.20
3,724.38

Source For Nominations
ETNG Electronic Bulletin Board
<http://link.spectraenergy.com/pipecap/CapacityMain.asp?bu=et&mapType=OCP>

a/ Brown Rebuttal Page 43
b/ Purchased Gas and Pipeline I Invoices
c/ Dr. Brown Volumes less CGC Purchases

Issue B

TSS-17's Issues

A. Billed Volumes And Throughput Do Not Match
B. Third-Party Load Factors Exceed 100%

Chattanooga Gas Company
CGC Gas by Pipeline & Third Party Gas by Pipeline
Compared with Dr. Brown Analysis

Third Parties' Throughput (Third
Party Gas) On ETNG And SONAT Is
Too Large Given The
Transportation Capacity Which
The Third Parties Had Contracted
For In 2003 and 2005.

	ETNG Supply/CGC ThroughPut	SONAT Supply/CGC Throughput
	72.3%	27.7%
	54.00%	46.00%
	97.23%	2.77%
	52.79%	47.21%
	61.29%	38.71%
	37.64%	62.36%

How TSS-17 Is Affected When The Starting Point Is Annual Billed Volumes, Per Brown Direct Exhibit 03

Mr. Sherwood's Calculations Steps:

1. Step "a/" - Start With Billed Volumes Reported By CGC In Brown Direct Exhibit 3
2. Step "b/" - Subtract CGC Net Purchases
3. Step "c/" - Result Is CGC's Transportation For Third Parties

Column (1)	Column (2)	Column (3)	Column (4)	Column (5)	Column (6)
	Billed Volumes	Nominations On CGC's ETNG Delivery Points	SONAT Supply: Col 2 -Col 3	ETNG Supply/CGC ThroughPut	SONAT Supply/CGC Throughput
2003					
a/	14,586.527	12,195.590	2,390.937	83.6%	16.4%
CGC Net Purchases	b/ 9,726.430	5,252.670	4,473.760	54.0%	46.0%
Third Party Gas	c/ 4,860.097	6,942.910	-2,082.813	142.9%	-42.9%
2005					
a/	14,194.220	8,776.660	5,417.560	61.83%	38.2%
CGC Net Purchases	b/ 10,652.090	6,528.900	4,123.190	61.29%	38.7%
Third Party Gas	c/ 3,542.130	2,247.770	1,294.360	63.46%	36.5%

2003 Transportation Capacity Per SONAT FERC Customer Index

Report: Year And Quarter

	2003/01	2003/04	2003/07	2003/10	Annual Reported Capacity
CHATTANOOGA GAS COMPANY	27,000	27,000	27,000	27,000	27,000
SONAT CGC Throughput Per Mr. Sherwood Exhibit TSS-17					4,474
CGC Annual Load Factor On SONAT					45.4%
Third Parties:					
SOUTHSTAR ENERGY SERVICES LLC	2003/01	2003/04	2003/07	2003/10	Annual Reported Capacity
TEXICAN NATURAL GAS COMPANY	1,754	1,754	1,754	1,754	1,754
Total Third Party Capacity	650	650	650	650	650
SONAT Third Party Throughput Per Mr. Sherwood Exhibit TSS-17	2,404	2,404	2,404	2,404	2,404
Third Party Annual Load Factor					22.6%

2003 Transportation Capacity Per ETNG FERC Customer Index

Report: Year And Quarter

	2003/01	2003/04	2003/07	2003/10	Annual Reported Capacity
CHATTANOOGA GAS COMPANY	46,350	46,350	46,350	46,350	46,350
ETNG CGC Throughput Per Mr. Sherwood Exhibit TSS-17					5,253
CGC Annual Load Factor On ETNG					31.0%
Third Parties:					
Alliance Energy Services	2003/01	2003/04	2003/07	2003/10	Annual Reported Capacity
Archer Daniels Midland Company	4,400	4,400	4,400	4,400	4,400
Total Third Party Capacity	1,500	1,500	1,500	1,500	1,500
ETNG Third Party Throughput Per Mr. Sherwood Exhibit TSS-17	5,900	5,900	5,900	5,900	5,900
Third Party Annual Load Factor					322.4%

2005 Transportation Capacity Per SONAT FERC Customer Index Report: Year And Quarter

	2005/01	2005/04	2005/07	2005/10	Annual Reported Capacity
CHATTANOOGA GAS COMPANY	27,425	27,425	27,425	27,425	27,425
SONAT CGC Throughput Per Mr. Sherwood Exhibit TSS-17					4,123
CGC Annual Load Factor					41.2%
Third Parties:					
Southstar Energy Services LLC	2005/01	2005/04	2005/07	2005/10	Annual Reported Capacity
	1,754	1,791	1,791	1,791	1,782
Texican Natural Gas Company	650	664	664	664	661
Jefferson - Cocke County Utility District	350	357	357	357	355
Powell - Clinch Utility District	200	204	204	204	203
Total Third Party Capacity	2,954	3,016	3,016	3,016	3,001
SONAT Third Party Throughput Per Mr. Sherwood Exhibit TSS-17					3,724
Third Party Annual Load Factor					340.1%

2005 Transportation Capacity Per ETNG FERC Customer Index Report: Year And Quarter

	2005/01	2005/04	2005/07	2005/10	Annual Reported Capacity
CHATTANOOGA GAS COMPANY	46,350	46,350	46,350	46,350	46,350
ETNG CGC Throughput Per Mr. Sherwood Exhibit TSS-17					6,529
CGC Annual Load Factor					38.6%
Third Parties:					
Constellation New Energy-Gas Division, Llc.	2005/01	2005/04	2005/07	2005/10	Annual Reported Capacity
	3,500	3,500	3,500	3,500	3,500
Enbridge Marketing (U.S.) L.P.	1,800				450
Total Third Party Capacity	5,300	3,500	3,500	3,500	3,950
ETNG Third Party Throughput Per Mr. Sherwood Exhibit TSS-17					2,248
Third Party Annual Load Factor					155.9%