

BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION
NASHVILLE, TENNESSEE

IN RE:)	
)	
CHATTANOOGA GAS)	
COMPANY PETITION TO OPT)	
INTO AN ANNUAL)	
REVIEW OF RATES)	Docket No.
MECHANISM PURSUANT TO)	19-00047
TENN CODE ANN. §65-5-)	
103(d)(6))	
)	
)	

SUPPLEMENTAL TESTIMONY OF

ARCHIE R. HICKERSON

ON BEHALF OF

CHATTANOOGA GAS COMPANY IN

SUPPORT OF SETTLEMENT AGREEMENT

1 **Q. Please state your name, position, and business address.**

2 A. Archie R. Hickerson, Director of Rates and Tariff Administration for Southern
3 Company Gas (“SCG”), 10 Peachtree Place NE, Atlanta, Georgia 30309.

4
5 **Q. Are you the same Archie Hickerson who previously filed direct testimony in**
6 **this proceeding?**

7 A. Yes, I am.

8
9 **Q. What is the purpose of your supplemental testimony?**

10 A. The purpose of my testimony is to present information to the Commission
11 concerning the agreed to revisions to the proposed Annual Review Mechanism
12 (“ARM”) that was filed by Chattanooga Gas Company on April 15, 2019, and to
13 support the Settlement and Stipulation Agreement (“Agreement”) filed in this
14 proceeding July 26, 2019. The revisions to the proposed ARM and the Agreement
15 are the result of discussions and negotiations between Chattanooga Gas Company,
16 the Consumer Advocate, the Chattanooga Regional Manufactures Association, and
17 the Commission Party Staff (collectively, “Parties”) that are participating in this
18 proceeding.

19
20 **Q. Are you sponsoring any exhibits?**

21 A. Yes. I am sponsoring Exhibit ARH-2 (the Stipulation Agreement Attachment A,
22 Chattanooga Gas Company Annual Review Mechanism), along with Exhibit ARH-
23 3 (Stipulation Attachment B, Chattanooga Gas ARM Schedules). Exhibit ARH-2

1 is the revised version of Exhibit ARH-1 that was attached to my pre-filed direct
2 testimony. Exhibit ARH-3 is the listing of schedules, workpapers, and other
3 information to be included in the annual ARM filings that was worked out with the
4 Parties to the Settlement Agreement.

5
6 **Q. How do you characterize the revisions to the proposed ARM?**

7 A. There are two categories of revisions:

- 8 1. Revisions that impact operation of ARM, and
- 9 2. Revisions that address the supporting documentation and information that
10 is to be included in the annual filing

11
12 **Q. Did any of the revisions change the basic nature of the ARM as proposed in**
13 **the April 15, 2019, filing?**

14 A. No. The revisions as agreed to by the Parties, do not change the nature of the ARM
15 that was initially filed. As revised, the ARM continues to require one annual filing
16 that addresses both the reconciliation of the previous year's earnings with the
17 authorized earnings and the resulting adjustment of rates on a going forward bases.
18 The annual filing remains to be based on actual financial data for the Historic Base
19 Period and is not based on forecasted or budgeted data. As originally proposed,
20 adjustments to the historical data will be made in accordance with the method
21 adopted in the Docket 18-00017 or in a subsequent general rate case.

1 **Q. Will you summarize the revision that impact the operation of the Annual**
2 **Review Mechanism?**

3 A. Yes. The first revision is the change in the filing date and the effective date of the
4 resulting rate adjustment. As initially proposed, the annual filings were to be
5 made on March 20 each year with the resulting rate adjustments to be effective on
6 August 1. As revised, the annual filings have been delayed one month and now
7 will be made on April 20 with rates effective the on September 1. This change is
8 in recognition of similar filings made by other utilities and the impact that the
9 filing will have on the workload of the Commission's and Consumer Advocate's
10 Staffs. Delaying the annual filing one month will help to reduce the overlap of the
11 review with the review for the filings by other utilities.

12
13 The next revision is the change in the calculation of the Overall Rate of
14 Return used in computing the earnings excess or deficiency and the Annual True-
15 Up Revenue Requirement Rate Adjustment ("True-Up Rate" or "Annual Rate
16 Reset"). As originally filed, the Overall Rate of Return was to be adjusted annually
17 to reflect changes in the capital structure and changes in the cost of long-term and
18 short-term debt, with the cost of equity to remain the same as adopted in Docket
19 18-00017. As revised, the Authorized Overall Rate of Return will be computed
20 using the capital structure adopted in Docket No. 18-00017, consisting of 6.30%
21 Short-Term Debt, 44.47% Long-Term Debt, and 49.23% Equity or as may adopted
22 by the Commission in a subsequent general rate case. The cost of Short-Term
23 Debt and Long-Term Debt, respectively 3.01% and 4.73%, will be fixed at the rates

1 adopted in Docket 18-00017 or as may adopted by the Commission in a subsequent
2 general rate case. While this was not CGC's initial proposal, the Company believes
3 that it is reasonable.

4
5 The next material change to the ARM is the allocation of the Annual True-
6 Up Rate Adjustment ("Rate Reset") to the individual rate schedules. As filed on
7 April 15, 2019, the Annual True-Up Rate Adjustment Rate Increase or Reduction
8 was to be allocated to the individual Rate Schedule in the same proportion as the
9 revenue requirement was allocated in Docket No. 18-00017. In the ARM as now
10 revised, this allocation requirement is removed. The Company will be required to
11 include in each annual filing a proposal for how to allocate any revenue
12 excess/deficiency to the Rate Schedules and to propose a specific rate design for
13 each Rate Schedule. Any party intervening in the annual review proceeding may
14 also file its own proposal for how the revenue excess/deficiency should be allocated
15 to the individual Rate Schedules along with a proposed rate design. Ultimately,
16 the Commission will determine the allocation and rate design. The Commission
17 may adopt CGC's proposal, an intervenor's proposal, or such other rate allocation
18 and rate design that the Commission finds to be in the public interest. While this
19 change may introduce a degree of controversy since CGC and the intervening
20 parties may have different ideas of the appropriate allocation of the revenue
21 requirement and how rates should be designed, it provides the Commission with
22 the ability to determine the allocation and rate design that is appropriate based upon
23 the facts and circumstances developed in the record each year. This approach

1 recognizes that the revenue requirement and the rate design adopted in Docket 18-
2 0017 may not be appropriate every year in the future.

3
4 The next revision concerns material one-time non-recurring items. As I
5 discussed in my pre-filed direct testimony, there could be other adjustments that
6 should be made relative to one-time or seldom recurring items that were not
7 addressed in Docket 18-00017 or addressed in the initial ARM filing. As revised,
8 the ARM includes the following provision to address such material items:

9 Material Changes. CGC may identify and document material one-time,
10 non-recurring items that impact operating income or costs and, as
11 appropriate, propose to adjust such items out of the annual True-Up Rate
12 Adjustment (Annual Rate Reset) calculation. Any party to an annual rate
13 review proceeding may itself identify material one-time, non-recurring
14 items that impact operating income or costs and, as appropriate, propose to
15 adjust such items out of the rate reset calculation.
16

17 This revision clearly provides for CGC or other intervening party to propose such
18 adjustments when appropriate.

19
20 **Q. Will you discuss the changes to the supporting documentation and information**
21 **that is to be included in the annual filing?**

22 **A.** Much of the additional information would likely have been included in the annual
23 filings and supporting workpapers, but CGC did not specifically address the
24 detailed documents to be filed each year in its ARM proposal as it was originally
25 filed. The revisions now agreed to by the Parties provide more specific directions
26 for the information that is required to be filed each year, which should provide the
27 Commission and intervenors with the ability to begin their review immediately

1 upon filing and hopefully help to reduce the amount of discovery that otherwise
2 may be needed thus streamlining the overall review process. While much of the
3 additional information and documents is in direct support of the computations of
4 the earnings excess or deficiency for the Historic Base Period or for the calculation
5 of the rate reset, some of the information is for informational purposes only and
6 will not directly impact the ARM filing. An example of data being provided for
7 informational purposes is, Schedule/Document 30 – CGC Budget for the year
8 subsequent to the Historic Base Period. As I’ve explained, the earnings excess or
9 deficiency and the rate adjustments are based on historic data and not dependent on
10 forward looking, forecasted or budgeted data. While the budgeted information will
11 not impact the ARM filing for the year, it will provide the Commission some insight
12 into Company projected operation in the immediate future.

13
14 **Q. Do you have a revised list of the schedules and information that will be**
15 **included in the annual filing?**

16 A. Yes, Exhibit ARH-3 is the revised list of schedules or documents that are to be
17 included in the ARM filing. This exhibit also identifies the items that will be
18 provided in hard copy and the more voluminous documents that will be provided
19 only electronically. It should be noted that Schedule Item 34 the Historic Base
20 Period FERC Form II that is filed separately with the Commission will be
21 incorporated into the annual ARM filing. As explained in the ARM document
22 (Exhibit ARH-2) copies of the FERC Form II will be provided to the Consumer
23 Advocate and other parties that intervene in the annual ARM review. This revised

1 list of schedules, documents, and information is also included in the revised ARM
2 document (Exhibit ARH-2). This information that will be provided with each
3 annual filing will include detailed information needed to properly review and
4 evaluate the reported earnings excess or deficiency for the Historic Base Period and
5 the annual rate reset on a going forward basis. Nothing in the ARM proposal or
6 stipulation prohibits the Consumer Advocate, intervening Parties, or the
7 Commission from requesting additional information if needed.

8
9 **Q. Will the ARM, as revised, provide the Commission and CGC's customers with**
10 **greater transparency regarding Company's operations and how its business**
11 **translates into the rates?**

12 A. Yes. An annual review process will provide the Commission, intervenor parties, and
13 ultimately CGC's customers with a better understanding of how CGC is working to
14 meet the needs of its customers to provide safe, efficient, and sufficient service.

15
16 **Q. Will the ARM as revised provide for more efficient and timelier rate making**
17 **process?**

18 A. Yes. The documentation to accompany the filing each year when combined with the
19 annual review process will provide the Commission, Consumer Advocate, and the
20 public with greater familiarity and knowledge of what CGC is doing, which over time
21 will make the reviews more efficient and productive.

22
23 **Q. Is the adoption of the ARM as revised, in the public interest?**

1 A. Yes. The Commission should approve the Stipulation and Settlement Agreement,
2 and the corresponding revised ARM and supporting schedules, with CGC filing for
3 its first annual review on or about April 20, 2020, for the Historic Base Period of
4 2019.

5

6 **Q. Does this conclude your supplemental testimony in support of the Stipulation**
7 **and Settlement Agreement and CGC's ARM plan and schedules as revised?**

8 A. Yes.

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Supplemental Testimony

Archie Hickerson

Exhibit ARH-2

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Applicable

To all gas sold and/or transported under tariff services, excluding approved special contracts.

Purpose

This Annual Review Mechanism ("ARM") is implemented under the provisions of Tennessee Code Annotated Section 65-5-103(d)(6), which authorizes the Company to opt for an annual review of the Company's rates. Pursuant to this ARM and the annual filings described herein, the Company's tariff rates (excluding approved special contract rates) shall be adjusted to provide that the Company earns the Authorized Return on Equity. The rate adjustments implemented under this mechanism will reflect changes in the Company's jurisdictional revenues, cost of service, and rate base. Jurisdictional revenues and expenses exclude Asset Management Agreement revenues, revenue and the related cost of off-system sales of Liquid Natural Gas ("LNG"), and other non-jurisdictional transactions as determined by the Commission. The ARM may be terminated or modified as provided under Tennessee Code Annotated Section 65-5-103(d)(6)(D).

Definitions

- A) **Annual ARM Rate Effective Date** shall be the date the rate and rate adjustments established in the Annual ARM proceeding are effective. The Annual ARM Rate Effective Date shall be September 1 each year.
- B) **Annual Filing Date** shall be the date the Company will make its annual ARM filing with the Tennessee Public Utility Commission. The Annual Filing Date shall be no later than April 20 of each year.
- C) **Annual Reconciliation Balance** is the sum of the Historic Base Period Earning Deficiency or Excess and the carrying charges from the mid-point to the end of the Historic Base Period multiplied by the Income Tax Gross-Up factor.
- D) **Annual True-Up Revenue Requirement Rate Adjustment (True-Up Rate Adjustments or Annual Rate Reset)** is the rate adjustment necessary to allow the Company to recover or credit to the customers the Historic Base Period earning deficiency or excess respectively and earn its Authorized Return on Equity on a going forward basis.

The Annual True-Up Revenue Requirement Rate Adjustment Annual Rate Reset shall be based on the Historic Base Period revenues, expenses, and rate base with the following adjustments:

**Chattanooga Gas Company
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1. Sales and transportation margin shall be weather normalized based on the weather normalized use per customer for Rate Schedules R-1, R-4, C-1 and C-2 adopted in Docket No. 18-00017 or subsequent general rate case. The revenues for customer served under the following Rate Schedules or combination of Rate Schedules F-1, I-1, T-1, F-1/T-2, F1/T-2/T1, and Special Contracts shall be the actual revenues for the Historic Base Period.
2. "Other Revenues" shall be the average for the Historic Base Period and the previous three (3) years.
3. AFUDC shall be the AFUDC-Debt and the AFUDC-Equity for the Historic Base Period.
4. Uncollectible (Bad Debt) Expense shall be the average for the Historic Base Period and the four (4) previous years.
5. Interest on Customer Deposits shall be the average balance of Customer Deposits included in the Rate Base multiplied by the Customer Deposit interest rate as stated in the Company's tariff.
6. The Historic Base Period rate making Operating Expenses shall be increased to include the recovery of a positive Historic Base Period Annual Reconciliation Balance or reduced to credit a negative Historic Base Period Reconciliation Balance.
7. Depreciation shall be computed on the depreciable plant balances as of December 31 of the Historic Base Period and the Commission approved depreciation rates.
8. Material Changes. CGC may identify and document material one-time, non-recurring items that impact operating income or costs and, as appropriate, propose to adjust such items out of the annual True-Up Rate Adjustment (Annual Rate Reset) calculation. Any party to an annual rate review proceeding may itself identify material one-time, non-recurring items that impact operating income or costs and, as appropriate, propose to adjust such items out of the rate reset calculation.
9. State Excise Tax and Federal Income Tax shall be computed based on the adjusted revenues and expenses, and synchronized interest computed by multiplying the Rate Base by the weighted cost of debt.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

10. The rate base shall be adjusted to include:
 1. The average unamortized balance of the Annual Reconciliation Balance (positive or negative) and the related deferred income tax assuming amortization over twelve (12) months, and
 2. The historic average balance for the Historic Base Period and the previous two years for:
 - i. The Materials and Supplies,
 - ii. Prepayments;
 - iii. Gas Inventory;
 - iv. The Reserves for Uncollectibles (Bad Debt);
 - v. The Reserve for Health Insurance; or
 - vi. As otherwise adjusted by the Commission in a subsequent general rate case.
 11. In the annual ARM filing, CGC shall include a proposal for how to allocate any revenue excess/deficiency among CGC's rate classes and the specific rate design for how rates are to be decreased/increased for each class. Any intervenor party to the annual review proceeding may make its own proposal for how the revenue excess/deficiency should be allocated to the classes and the rate design for any decrease/increase in rates should be accomplished in the Annual Rate Reset. Based upon a final determination that rates need to be decreased/increased, the Commission shall order such decrease/increase in rates based upon the proposals of the parties or such other rate allocation and rate design decision as it may find to be in the public interest
- E) **Approved Methodology** is defined as the methodology adopted by the Commission in Docket No. 18-00017 or in any subsequent general rate case, whichever is more recent, or as otherwise approved by the Commission.
- F) **ARM Regulatory Asset or Regulatory Liability** shall be the Annual Reconciliation Balance and the related deferred income tax. The related deferred income tax is the Annual Reconciliation Balance multiplied by the composite Tennessee Excise and Federal Income Tax rate.
1. The average unamortized balance of the ARM Regulatory Asset or Regulatory Liability and the related Deferred Income Tax for the current Historic Base Period shall be components of the Annual True-Up Rate Adjustment Rate Base assuming amortization uniformly over twelve (12) months.

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Annual Review Mechanism ("ARM")**

- G) **Authorized Overall Rate of Return** will be computed based on the capital structure adopted in Docket No. 18-00017 consisting of 6.30% Short-Term Debt, 44.47% Long-Term Debt, and 49.23% Equity or as adopted by the Commission in a subsequent general rate case. The cost of Short-Term and Long-Term Debt, respectively 3.01% and 4.73%, will be fixed at the rates adopted in Docket No. 18-00017 or as adopted by the Commission in a subsequent general rate case.
- H) **Authorized Return on Equity** is defined as the 9.8% return on equity established in TPUC Docket No. 18-00017, or in any subsequent general rate case, whichever is more recent.
- I) **Earning Deficiency or Excess** shall be the net operating income for the Historic Base Period less the net operating income required to produce the authorized return on equity. The revenues shall be actual jurisdictional revenues for the Historic Base Period, and the jurisdictional expenses shall be adjusted consistent with Docket No. 18-00017:
1. Excluding 50% of the direct and allocated short-term incentive pay,
 2. Excluding 100% of direct and allocated long-term incentive pay,
 3. Excluding 100% of promotional advertising,
 4. Excluding 100% of lobbying expense,
 5. Excluding 100% of Supplemental Executive Retirement Plan (SERP) Expense,
 6. Excluding Pension and Other Post-Employment Benefits computed in accordance with GAAP and including actual contributions,
 7. State Excise Tax and Federal Income Tax shall be computed based on the Historic Base Period revenues, the adjusted expenses, and synchronized interest computed by multiplying the Rate Base by the weighted cost of debt,
- or
8. As otherwise adjusted in a subsequent general rate case.
- J) **Historic Base Period** is defined as the twelve-month period ending December 31 of each year prior to each Annual Filing Date.
- K) **New Matters** refers to any issue, adjustment, and/or ambiguity in or for any account, method of accounting or estimation, or ratemaking topic that would directly or indirectly affect the Annual ARM Filing for which there is no explicit prior determination by the Commission regarding the Company.

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Annual Review Mechanism ("ARM")**

- L) **Operating Income Deficiency or Excess** shall be the amount resulting from subtracting the Historic Base Period operating income for the authorized operating income computed by multiplying the Historic Base Period rate base by the authorized weighted Return on Equity adopted in TPUC Docket No. 18-00017 or subsequent general rate case. The result is an Operating Income Deficiency if the authorized operating income is greater than the Historic Base Period net operating income, and an Operating Income Excess if the authorized operating income is less than the Historic Base Period net operating income.
- M) **Revenue Conversion Factor** is the adjustment factor necessary to translate any excess or deficiency in Net Operating Income NOI into a Revenue Deficiency or Surplus as adopted by the Commission in Docket No. 18-00017 or subsequent general rate case.
- N) **Revenue Deficiency or Excess** shall be the Earning Deficiency for the Historic Base Period multiplied by the Revenue Conversion Factor adopted in TPUC Docket No. 18-00017 or subsequent general rate case.
- O) **Income Tax Gross-Up Factor** is $1 / (1 - \text{Composite Income Tax Rate})$. The Composite Income Tax Rate is $(\text{Tennessee Excise Tax Rate} + (1 - \text{Tennessee Excise Tax Rate}) \times \text{Federal Income Tax Rate})$.

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P) Annual ARM Filing.

On the Annual Filing Date each year, the Company shall file with the Commission schedules and supporting work papers that reflect the actual annual amounts as recorded on the books and records of the Company for the Historic Base Period, the calculation of the Annual Reconciliation Revenue Deficiency/Surplus, and the rates adjustments for the Company to recover or refund the earning deficiency or surplus respectively for the Historic Base Period, and earn its authorized return on equity on a going forward basis. The filing shall include the following Schedules, documents, and information.

<u>Schedule/ Document</u>	<u>Description</u>	<u>Physical Copy Filed</u>	<u>Electronic Copy Filed Excel Format</u>
1	Revenue Deficiency/Excess	Yes	Yes
2	Rate Base	Yes	Yes
2A	Rate Base -13 Month Average- Workpaper	Yes	Yes
2A1	Allocated Plant, Accumulated Depreciation Deferred Income Tax -Workpaper	No	Yes
3	Lead Lag Results	Yes	Yes
4	Working Capital-Expense Lead/Lag	Yes	Yes
4.1	Calculation of Other Operating Expense for Lead Lag	No	Yes
5	Income Statements	Yes	Yes
5.1	Revenue Reconciliation	No	Yes
6	Revenue Summary	Yes	Yes
6.1	Revenue Summary-Margin Reconciliation	No	Yes
6.1A	Department 8100 Income Statement (If there are off-system sales of LNG.)	No	Yes
7	Operating and Maintenance Expense	Yes	Yes
7A	O&M Roll-Up Summary	No	Yes
7B	Administrative and General	No	Yes
7C	Other Distribution and Storage	No	Yes
8	Taxes Other than Income	Yes	Yes
9	Excise and Income Tax	Yes	Yes
10	Income Tax – Proposed Rates	Yes	Yes
11	Rate of Return Summary	Yes	Yes
12	Revenue Conversion Factor	Yes	Yes
13	Margin by Rate Schedule	No	Yes

**Chattanooga Gas Company
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14	Depreciation and Amortization Expense-Historic Base Period December 31, Plant Balances	Yes	Yes
14.1	Monthly Summaries of Plant, Plant Additions, Plant Retirements, and Transfers-Historic Base Period	No	Yes
14.2	Monthly Summaries of Accumulated Depreciation, Depreciation Expense, Retirements, Cost of Removal, and Transfers-Historic Base Period	No	Yes
15	Summary Jurisdictional Non-Gas Revenue at Current Rates-Historic Base Period	No	Yes
15.1	Monthly Detailed Margin Review-Historic Base Period		
16.1	Weather Normalized Volumes-Historic Base Period	Yes	Yes
16.1A	Workpaper-Weather Normalized Usage Rate Schedules R-1, R-4, C-1, and C-2 adopted in Docket 18-00017	No	Yes
16.2	Weather Normalized Revenue Rate Schedules R-1, R-4, C-1, and C-2	Yes	Yes
16.3	Weather Normalized Revenue Adjustments Rate Schedules R-1, R-4, C-1, and C-2	Yes	Yes
16.4	Billed Volumes by Rate Schedule-Historic Base Period	No	Yes
17	Proof of Revenue-Proposed Rates	Yes	Yes
17.1	Revenue Increase Allocated to Rate Schedules	Yes	Yes
18	Other Revenue by Month-Historic Base Period	Yes	Yes
19	CGC Income Statement -Historic Base Period (containing formulas to calculate subtotal and totals)	No	Yes
19.1	CGC Income Statement – Historic Base Period Mapped to FERC Accounts	No	Yes
19.2	CGC Income Statement in Hyperion	No	Yes
20	AGSC Income Statement -Historic Base Period (containing formulas to calculate subtotal and totals)	No	Yes
20.1	AGSC Income Statement -Historic Base Period Mapped to FERC Accounts	No	Yes

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

21	General Ledger CGC, AGSC, and SCG-Historic Base Period	No	Yes
21.1	CGC Trial Balance-December 31-Historic Base Period	No	Yes
22	Capital Expenditures by Category -Historic Base Period	Yes	Yes
23	Allocated Cost Adjustment	Yes	Yes
23.1	Allocated Cost-Workpaper	No	Yes
24	Lobbying Expense, Charitable Contributions, Social Club Membership -Adjustment	Yes	Yes
24.1	Lobbying Workpaper-Support for Schedule 24		
24.2	Lobbying Workpaper-Dept 1637 Expense		
25	Pension and OPEBs Adjustment	Yes	Yes
26	Advertising Expense-Adjustment	Yes	Yes
26.1	Advertising Expense Workpaper	No	Yes
27	CGC Incentive Compensation Adjustment	Yes	Yes
28	Rate Reset Normalization Adjustments	Yes	Yes
29	Carrying Charge and Historic Base Period Annual Reconciliation Balance	Yes	Yes
30	CGC Budget for year subsequent to Historic Base Period including capital expenditures by category, revenues, and expense (included projected allocated expense).	No	Yes
31	Historic Base Period FERC Form II filed with the Tennessee Public Utility Commission. A copy will be provided to the Consumer Advocate and Other Intervening Party. (Since the report is separately filed with the Commission, a copy will not be included in the ARM filing.)	No	No
32	Cost Allocation Manual ("CAM")	No	Text in PDF format Attachments in Excel format
33	Southern Company Organization Structure	Yes	PDF
34	A copy of the pension/OPEB actuarial reports covering results associated with CGC and service company employees for the Historic Base Period	Yes	PDF

**Chattanooga Gas Company
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35	Additional Workpapers as required referenced to applicable schedule	No	Yes
36	Current Departmental Chart of CGC for the Historic Base Period	No	Yes
37	Accounting for Contingencies in excess of \$25,000.	No	Yes
38	The impact of any new Accounting Pronouncement implemented during the Historic Base Period.	No	Yes

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 1: Annual Reconciliation Revenue Deficiency/Excess.

For the Historic Base Period show the calculation of the Revenue Deficiency or Surplus computed consistently and using the approved methodologies adopted in Docket No. 18-00017 or subsequent general rate case. The following shall be identified for the Historic Base Period.

Line		Adopted Docket 18- 00017	Prior Year Filing Adopted	Historic Base Period	Historic Base Period Normalized	Annual True- Up Revenue Requirement Rate Adjustment
1	Rate Base-Sch 2					
2	Operating Income - Schedule 5					
3	Earned Return L2/L1					
4	Fair Return Sch					
5	Return Deficiency (Surplus) L4-L3					
6	Operating Income Deficiency L5 X L1					
7	Gross Revenue Conversion Factor					
8	Revenue Deficiency (Surplus) 16 X L7					

Chattanooga Gas Company Annual Review Mechanism ("ARM")

Schedule 2: Rate Base.

Line #		Adopted Docket 18- 00017	Prior Year Adopted	Historic Base Period a/	Adjustment to Remove Prior Year Avg ARM Asset (Liability) and Related Deferred Income Tax and Include Current year ARM Asset (Liability) and Related Deferred Tax and Normalization Adjustments		Annual True- Up Rate Adjustment Rate Base
		13 Month Average	13 Month Average	13 Month Average	Remove	Add	
Additions							
1	Utility Plant in Service						
2	Construction Work in Progress						
3	Materials and Supplies						
4	Prepayments						b/
5	Gas Inventory						b/
6	Deferred Rate Case Expense						b/
7	Working Capital						
8	Unamortized ARM Reconciliation Balance-Asset (Liability)						c/
9	Other Rate Base Components						d/
10	Total Additions (L1:L9)						
Deductions							
11	Accumulated Depreciation						
12	Accumulated Deferred Income Tax						
13	Regulatory Liability-Excess Deferred Income Tax						
14	Deferred Income Tax-ARM Reconciliation Balance						
15	Customer Advance for Construction						
16	Reserve for Uncollectibles						b/
17	Reserve for Health Insurance						b/
18	Other Reserves						b/
19	Customer Deposits						
20	Accrued Interest on Customer Deposits						
21	Total Deductions (L10:L20)						
22	Rate Base L10-L21						

a/ Detailed workpaper. b/Schedule 28. c/Schedule 29. d/ as approved by the Commission

Chattanooga Gas Company Annual Review Mechanism ("ARM")

Schedule 2A: Rate Base-13 Month Average Workpaper.

This workpaper shows the monthly balances and the development of the 13-month average of the Rate Base Components included in Schedule 2-Rate Base

Allocated Plant, Accumulated Depreciation, Deferred Income Tax-Workpaper.

This workpaper supports the allocated plant in service, accumulated depreciation, and deferred income tax included in the in Schedule 2A.

Schedule 2A1: Allocated Plant, Accumulated Depreciation, Deferred Income Tax-Workpaper.

This workpaper supports the allocated plant in service, accumulated depreciation, and deferred income tax included in the in Schedule 2-Rate Base.

Schedule 3: Lead -Lag Results.

Line	Item	Docket 18-00017	Prior Year Approved	Historic Base Period
1	Revenue Lag Days (Docket No. 18-00017)	43.79	43.79	43.79
2	Expense Lag (Schedule 4)			
3	Net Lag Days (L1-L2)			
4	Daily Cost of Service (Schedule 4)			
5	Lead Lag Study (L3 X L4)			
6	Less: Average Balance Tax Collections Withheld (Schedule 2 A)			
7	Net Working Capital			

1. Revenue Lag as adopted by the Commission in Docket No. 18-00017 or subsequent general rate case.
2. Expense Lag computed using the expense lag days adopted by the Commission in Docket No. 18-00017 or subsequent general rate case as shown on ARM Schedule 4 Working Capital Expense Lag.
3. Net Lag (Revenue lag less Expense Lag)
4. Daily Cost of Service (Total Cost for the Working Capital Expense Lag Schedule divided by 365.
5. Lead Lag Study (Net Lag multiplied by Daily Cost of Service).
6. Less the average balance of Tax Collections Withheld during the Historic Base Period.
7. Net Working Capital Provided.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 4: Working Capital Expense Lag.

This Schedule shall show the calculation of the Expense lag computed using the expense amounts for the Historic Base Period and the corresponding Lag Day for those expenses adopted by the Commission in Docket No. 18-00017 or subsequent general rate case.

Line No.	Col A Item	Col B Docket 18- 00017	Col C Prior Year Approved	Col D Historic Base Period Amount	Col E Lag Days Most Recent General Rate Case	Col F \$ Days Col D X Col E
Operating and Maintenance Expense						
1	Purchased Gas				40.94	
2	O&M Wages				14.01	
3	Pension Expense				0	
4	Post-Retirement Benefits Other than Pensions Expense				0	
5	Miscellaneous Employee Benefits				4.47	
6	401 K Benefits				12.07	
7	Health/Life Insurance Expense				8.98	
8	Allocated Cost				21.94	
9	Uncollectible				43.79	
10	Other Operating Expense				31.49	
Taxes						
11	Taxes other than Income Tax				171.16	
12	State Excise Income Tax-Current				37.88	
13	State Excise (Income) Tax-Deferred				0	
14	Federal (Income) Tax-Current				37.88	
15	Federal (Income) Tax-Deferred				0	
Other						
16	Depreciation Expense				0	
17	Interest on Customer Deposits				0	
18	Interest Short-Term Debt				(51.36)	
19	Interest Long-Term Debt				45.76	
20	Total Working Capital Requirements [Total L1:L19]					
21	Net Lead (Lag) Days [Col E L20/Col C L20]					
22	Col D -Daily Working Capital Requirement Col D L20/365					
23	Return on Equity					
24	Total Cos of Service					

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 4.1 Calculation of Operating Expense for Lead Lag.

This workpaper shows the calculation of "Other Operating Expense" for use in the computation of the Expense Lag.

Line				Reference
1	Total O&M		\$ XXXXXXXXXX	
2	O&M Labor-Payroll	\$ XXXXXXX		
3	Pension	XXXXXXX		
4	Post-Employment Benefits other than Pension	XXXXXXX		
5	Miscellaneous Employee Benefits	XXXXXXX		
6	401 K Benefits	XXXXXXX		
7	Health/Life Insurance Expense	XXXXXXX		
8	AGL Services Company Allocations	XXXXXXX		
9	Bad Debt Expense (Uncollectible)	XXXXXXX		
10	Total		\$ XXXXXXXXXX	
11	Other Operating Expense (L1-L10)		\$ XXXXXXXX	

Chattanooga Gas Company Annual Review Mechanism ("ARM")

Schedule 5: Income Statement Historic Base Period.

This Schedule is the Income Statement for the Historic Base Period with expenses presented in accordance with the methodology adopted by the Commission in Docket No. 18-00017, in a subsequent general rate case, or as otherwise modified by the Commission.

Line		Dkt 18-00017	Prior Yr Adopted	Historic Base Period	Ratemaking Adjustments	Historic Base Period Adjusted	Normalization Adjustments	Adjustments to Exclude Amortization of Prior Year ARM Asset (Liability) and Included Current Year	Annual True-Up Revenue Requirement Rate Adjustment
	Revenue								
1	Gas Sales & Transport a/								
2	Other Revenues b/								
3	AFUDC-Int								
4	AFUDC-Equity								
5	Total Oper Revenue								
	Operating and Maintenance Expense								
6	Purchased Gas								
7	O&M Labor								
8	O&M Non-Labor c/								
9	Total O&M Expense								
	Other Expense								
10	Depreciation								
11	Amortization Prior Yr Earning Deficiency /(Liability)								
12	Interest-Customer Deposits d/								
13	Taxes Other Than Income								
14	State Excise Tax								
15	Federal Income Tax e/								
16	Total Operating Expense e/								
17	Utility Operating Income								
a/	Weather Normalized Sch 16								
b/	Normalized Sch 28								

d/Avg Customer Deposits Sch 2 X Tariffed Interest Rate 6%

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 5.1-Revenue Reconciliation.

This Schedule shall reconcile the revenue per book for the Historic Base Period with the revenue on Schedule 5.

Schedule 6: Revenue Summary.

This Schedule shall summarize utility actual and Weather Normalized Revenues for the Historic Base Period and shall include:

Line	Sales & Transportation	Docket 18-00017	Prior Year Adopted	Historic Base Period	Weather Normalized Adj Sch 16.3	Normal Revenues
1	Residential (R-1)					
2	Multi-Family Housing (R-4)					
3	Commercial (C-1)					
4	Commercial (C-2)					
5	Industrial (F-1/T-2)					
6	Industrial (I-1)					
7	Industrial (T-1)					
8	Industrial (T-1/T-2)					
9	Industrial (T-3)					
10	Special Contract					
11	Total Margin					
12	Gas Cost					
13	Total Sales and Transportation					
14	Other Revenues a/					
15	Total Revenue					

a/ Normalized Other Revenues is the Average of the Historic Base Period and previous 3 years.
Schedule 28.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 6.1 Revenue Summary-Margin Reconciliation.

This Schedule shall provide the reconciliation of the Historic Base Period per books with the Historic Base Period Revenue on Schedule 6.

Schedule 6.1A: CGC Department 8100 Income Statement.

This Schedule shall be included if there are off-system sales of Liquid Natural Gas (LNG) during the Historic Base Period.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 7: Operating and Maintenance Expense Summary.

This schedule is a summary of the Operating and Maintenance Expense for the Historic Base Period reported consistently with the methodology adopted by the Commission in Docket No. 18-00017, subsequent general rate case, or as otherwise modified by the Commission. It shall include:

Line		Dkt 18-00017	Prior Year Adopted	Historic Base Period Per Books	Rate Making Adjustments a/	Historic Base Period Adjusted
1	Payroll Expense					
2	Pension					
3	Post-Retirement Benefits Other than Pension					
4	Miscellaneous Employee Benefits					
5	Health/Life Insurance					
6	Benefits Capitalized					
7	Fleet Service & Facilities Expense					
8	Outside Services					
9	Bad Debt					
10	Sales and Promotion Expense					
11	Customer Service & Accounting Expense					
12	Administrative & General					
13	Administrative & General Capitalized					
14	Other Distribution & Storage Expense					
15	AGLC Service Allocations					
16	Total Operating and Maintenance Expense					

a/ Detailed workpapers shall be provided for each rate making adjustment.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 7A: O&M Roll-Up Summary.

On this Schedule the O&M expense accounts are classified into the categories from Docket 18-00017 as presented on Schedule 7.

Schedule 7B: Administrative and General.

On this Schedule show the expense accounts that compose the Administrative and General Expense presented on Schedule 7A.

Schedule 7C: Other Distribution and Storage.

On this Schedule show the calculation of the Other Distribution and Storage Expense presented on Schedules 7 and 7A.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 8: Taxes Other than Income Tax.

This Schedule is a summary of the Taxes Other than Income Tax for the Historic Base Period reported consistently with the methodology adopted by the Commission in Docket No. 18-00017, subsequent general rate case, or as otherwise modified by the Commission. It shall include:

Line	Tax/Fee	Dkt 18-00017	Prior Year Adopted	Historic Base Period Per Books	Ratemaking Adjustments	Adjusted Taxes Other than Income Tax
1	Property Tax					
2	Tennessee Utility Commission Inspection Fee					
3	Payroll Tax					
4	Franchise Tax					
5	Gross Receipt Tax					
6	Allocated & Other Tax					
7	Total Tax Other than Income Tax					

Schedule 9: Excise and Income Tax.

This Schedule shows the calculation of the Tennessee Excise and Federal Income Tax and shall be computed in accordance with the methodology adopted by the Commission in Docket No. 18-00017, a subsequent general rate case, or as otherwise modified by the Commission.

[illegible]

13	Excise Tax Rate											
14	Excise Tax	L12 X L13										
15	Less: Excess Deferred Excise Tax Liability Amortization											
16	Net Excise Tax Expense	SUM(112:15)										
17	Excise Tax -Current	L16-L18										
18	Excise Tax- Deferred	Sch 19										
Federal Income Tax Calculation												
19	Net Income Before Excise and Income Tax	L12										
20	Less: Excise Tax Expense	L 16										
21	Net Income before FIT	L19-L20										
22	FIT Rate											
23	Federal Income Tax	L21 X L22										
24	Less: After tax Amortization of Excess Deferred FIT-Protected	Workpaper										
25	Less: After tax Amortization of Excess Deferred FIT-Unprotected	Workpaper										
26	Net Federal Income Tax Expense	L23-L24-L25										
27	Federal Income Tax -Current	L26-L28										
28	Federal Income Tax -Deferred	Sch 19										

A/ Income Statement Sch 5

B/Synchronized Interest (Weighted Cost of Debt Sch11 Rate of Return X Rate Base Sch 2)

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 10: Income Statement at Proposed Rates.

This Schedule shows for the Historic Base Period the Income Statement under Current and under Proposed Rates as adjusted for rate making methodology adopted by the Commission in Docket No. 18-00017, a subsequent general rate case, or as otherwise modified by the Commission.

Line		Annual True-Up Revenue Requirement Rate Adjustment Current Rates Schedule 5	Rate Increase (Reduction)	Proposed Rates
	Operating Revenue			
1	Gas Sales and Transportation Revenues			
2	Other Revenues			
3	AFUDC			
4	Total Operating Revenues L1+L2+L3			
	Operating and Maintenance Expense			
5	Purchased Gas Cost			
6	Operating & Maintenance - Labor			
7	Operating & Maintenance – Non-Labor			
8	Total Operating & Maintenance Expense L5+L6+L7			
	Other Expense			
9	Depreciation Expense			
10	Amortization-Current ARM Regulatory Asset/(Liability)			
11	Interest on Customer Deposits			
12	Taxes Other than Income Tax			
13	State Excise Tax			
14	Federal Income Tax			
15	Total Other Expense L9+L10+L11+L12+L13+L14			
16	Total Operating Expense L8+L15			
17	Total Operating Income L4-L16			
18	Rate Base			
19	Return on n Rate Base L17/L18			
20	Authorized Return			
20	Return Deficiency (Surplus) L19-L20			

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 11: Capital Structure and Rate of Return Summary.

This Schedule shows the capital structure Adopted in Docket No. 18-00017 or subsequent general rate case, the cost of debt, authorized return on equity, the weighted cost of debt, the weighted cost of equity, the overall rate of return, and the computation of the interest expense and computation of interest on customer deposits:

Line	Class of Capital	Rate Case Capital Structure and Cost Rates
1	Short – Term Debt % of Total Capital	6.30%
2	Long – Term Debt % of Total Capital	44.47%
3	Equity- % of Total Capital	49.23%
	Cost Rate	
4	Short – Term Debt	3.01%
5	Long – Term Debt	4.73%
6	Equity-	9.8%
	Weighted Cost	
7	Short – Term Debt L1 X L4	0.19%
8	Long – Term Debt L2 X L5	2.01%
9	Equity- L3 X L6	4.825%
10	Overall Cost of Capital L7+L8+L9	7.12%
11	Rate Base – Schedule 2	
	Interest Expense	
12	Short Term L7 X L11	
13	Long Term L8 X L11	
14	Total Interest L 12+ L13	
15	Required Net Operating Income L10 X L 11	
16	Customer Deposit-13 Month Average Sch 2	
17	Customer Deposit Interest Rate -Tariff	6%
18	Interest on Customer Deposits	

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 12: Revenue Conversion and Income Tax Gross-up Factors.

This Schedule shall show the calculation of the Revenue Conversion Factor and shall be the same as that adopted by the Commission in Docket No. 18-00017, a subsequent general rate case, unless otherwise modified by the Commission. The Revenue Conversion Factor is computed as follows:

Line #		Balance
1	Operating Revenue	100%
2	Add: Forfeited Discounts (Late Payments)	<u>0.008796</u>
3	Balance L1+L2	1.008796
4	Uncollectible Ratio	0.003825
5	Uncollectible Adjustment [L4 X L3]	<u>0.003859</u>
6	Balance [L3-L5]	1.004937
7	State Excise Rate	0.065000
8	State Excise Tax Adjustment [L7 X L6]	<u>0.065321</u>
9	Balance [L6-L8]	0.939617
10	Federal Income Tax Rate	0.21000
11	Federal Income Tax Adjustment [L9 X L10]	<u>0.197319</u>
12	Balance [L9-L11]	0.742298
13	Revenue Conversion Factor [1/L12]	1.347169
	Composite Income Tax Factor	
14	Balance	100%
15	Tennessee Excise Tax	6.50%
16	Balance L14-L15	93.50%
17	Federal Income Tax Rate	21.00%
18	L16 X L17	19.635%
19	Composite Income Tax Rate L 15 + L18	26.135%
20	Income Tax Gross-Up Factor 1/L19	1.35382

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 13: Margin by Rate Schedule under Current and Proposed Rates.

This Schedule shows for each Rate Schedule the margin under current rates, the margin under proposed rates, the change in the margin, and the percentage changes based the billing determinants for the Historic Base Period (the number of customers, the volumes sold, the volumes transported, the demand determinants)

Line	Rate Schedule	Margin Docket 18-00017	Normalized Margin Current Rates Sch 6	Normalized Margin Proposed Rates Sch 17	Margin Change	% Change
1	Residential (R-1)					
2	Multi-Family Housing (R-4)					
3	Commercial (C-1)					
4	Commercial (C-2)					
5	Industrial (F-1/T-2)					
6	Industrial (I-1)					
7	Industrial (T-1)					
8	Industrial (F-1/T-2/T-1)					
9	Industrial (T-3)					
10	Special Contracts					
11	Total Sales and Transportation					
12	Other Revenues					
13	Total Margin					

**Chattanooga Gas Company
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Schedule 14 Depreciation and Amortization Expense.

This Schedule shall show the calculation of the depreciation and amortization expense based on the Historic Base Period End of Period Plant investment balances that shall be used in the calculation of the Annual True-Up Revenue Requirement Rate Adjustment.

If the Company performs and files a new depreciation study with the Commission, and the Commission approves new depreciation rates, the Company shall calculate depreciation using the new rates beginning on the effective date of the new rates as approved by the Commission. Detailed workpapers shall be provided supporting the depreciation and amortization expense shall be included in the filing.

Schedule 14.1: Summary of changes in plant, and accumulated depreciation for the Historic Base Period.

This Schedule shall show for each month and each plant account:

- a. The beginning plant balance.
- b. The plant additions.
- c. The plant retirements.
- d. The plant transfers.

Schedule 14.2: Summary of the accumulated depreciation for the Historic Base Period.

This Schedule shall show for each month and each plan account:

- a. The beginning month accumulated depreciation balance.
- b. The depreciation for the month.
- c. The retirements.
- d. The Cost of Removal.
- e. Accumulated Depreciation transferred.

**Chattanooga Gas Company
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Schedule 15: Summary - Historic Base Period Jurisdictional Non-Gas Revenues - Current Rates.

This Schedule shall provide for each month of the Historic Base Period the applicable billing determinants, and the revenues for each Rate Schedule per book, and other revenues. The following shall be presented for each Rate Schedule for each month:

- a. Number of Bills.
- b. Customer Charge.
- c. Base Customer Charge Revenue.
- d. Total Usage Volume.
- e. Usage Rate(s).
- f. Total Usage Revenue.
- g. Weather Normalized Adjustment ("WNA") Revenue, for applicable Rate Schedules.
- h. Total Demand Determinants, for applicable Rate Schedules.
- i. Demand Charge, for applicable Rate Schedules.
- j. Total Demand Charge Revenue, for applicable Rate Schedules.
- k. Total Capacity Determinants, for applicable Rate Schedules.
- l. Total Capacity Charge Revenue for applicable Rate Schedules.
- m. Total Revenue.

Schedule 15.1 Monthly Detailed Margin Review – Historic Base Period.

This Schedule provides a monthly reconciliation of the margin for each rate schedule with the revenue recorded on the general ledger.

Chattanooga Gas Company Annual Review Mechanism ("ARM")

Schedule 16.1: Weather Normalized Volume for Historic Base Period.

This Schedule shows the weather normalized for the Historic Base Period volumes for the Rate Schedules subject to Weather Normalization (Rate Schedules: Residential R-1, Multi-Family R-4, Commercial C-1, and Commercial C-2). The Weather Normalized Volumes for these Rate Schedule shall be computed by multiplying the average number of bills or R-4 units during the Historic Base Period by the average normalized use per bill or unit adopted in Docket No. 18-00017.

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6 (Col 2 X Col 4)	Col 7 (Col # X Col5)
Residential R-1		Number of Bills		Average Normalized Use Per Bill a/ 51.881		Normalized Usage Col 3 X Col 5
Multi-Family R-4	Number of Winter Units	Number of Summer Units	Average Normalized Use Per Units Winter a/	Average Normalized Use Per Units Summer a/ 16.94	Normalized Winter Usage	Normalized Summer Usage
Commercial C-1	Number of Winter Bills	Number of Summer Bills	Average Normalized Use Per Bill Winter a/ 158.53	Average Normalized Use Per Bill Summer a/ 22.75	Normalized Winter Usage	Normalized Summer Usage
Commercial C-2	Number Winter Bills	Number Summer Bills	Average Normalized Use Per Bill Winter a/	Average Normalized Use Per Bill Summer a/	Normalized Winter Usage	Normalized Summer Usage
Therms						
0-3,000			361.43	136.73		
3,001-5,000			42.98	16.26		
5,001-15,000			56.13	21.24		
Over 15,000			17.97	6.8		
Total C-2						

a/ Computed from TPUC 1/15/2019 Order Docket 18-00017 Attachment 2. Weather Normalized usage adopted divided by Bills, or Units as applicable.

**Chattanooga Gas Company
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Schedule 16.2: Weather Normalized Base Revenue- Historic Base Period.

This Schedule shows the weather normalized volumetric base revenues for the Historic Base Period for the Rate Schedules subject to Weather Normalization. (Rate Schedules: Residential R-1, Multi-Family R-4, Commercial C-1, and Commercial C-2).

Schedule 16.2

Weather Normalized Volumetric Revenue for the Historic Base Period Ended December 31

Col 1	Col 2	Col 3	Col 4	Col 5	Col 6	Col 7	Col 8
Residential R-1	Normalized Usage Sch 16.1			Volumetric Base Rate		Normalized Volumetric Revenue Col 2 X Col 5	Total Volumetric Revenue Col 6 + Col 7
Multi-Family R-4	Normalized Winter Usage Sch 16.1	Normalized Summer Usage Sch 16.1	Winter Volumetric Rate	Summer Volumetric Rate	Normalized Winter Volumetric Revenue Col 2 X Col 4	Normalized Summer Volumetric Revenue Col 3 X Col 5	Total Volumetric Revenue Col 6 + Col 7
Commercial C-1	Normalized Winter Usage Sch 16.1	Normalized Summer Usage Sch 16.1	Winter Volumetric Rate	Summer Volumetric Rate	Normalized Winter Volumetric Revenue Col 2 X Col 4	Normalized Summer Volumetric Revenue Col 3 X Col 5	Total Volumetric Revenue Col 6 + Col 7
Commercial C-2	Normalized Winter Usage Sch 16.1	Normalized Summer Usage Sch 16.1	Winter Volumetric Rate	Summer Volumetric Rate	Normalized Winter Volumetric Revenue Col 2 X Col 4	Normalized Summer Volumetric Revenue Col 3 X Col 5	Total Volumetric Revenue Col 6 + Col 7
Therms							
0-3,000							
3,001-5,000							
5,001-15,000							
Over 15,000							
Total C-2							

**Chattanooga Gas Company
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Schedule 16.3: Weather Normalized Revenue Adjustment for the Historic Base Period.

This Schedule shows the weather normalized adjustment for the Historic Base Period for the Rate Schedules subject to Weather Normalization (Rate Schedules: Residential R-1, Multi-Family R-4, Commercial C -1, and Commercial C-2.)

Line	Col 1	Col 2	Col 3	Col 4
	Residential R-1	Volumetric Base Revenue Historic Base Period	Weather Normalized Base Revenue Sch 16.2	Weather Normalized Adjustment Col 2-Col 3
1	R-1 Adjustment			
	Multi-Family R-4	Volumetric Base Revenue Historic Base Period	Weather Normalized Base Revenue Sch 16.2	Weather Normalized Adjustment Col 2-Col 3
2	R-4 Adjustment			
	Commercial C-1	Volumetric Base Revenue Historic Base Period	Weather Normalized Base Revenue Sch 16.2	Weather Normalized Adjustment Col 2-Col 3
3	C-1 Adjustment			
	Commercial C-1	Volumetric Base Revenue Historic Base Period	Weather Normalized Base Revenue Sch 16.	Weather Normalized Adjustment Col 2-Col 3
4	C-2 Adjustment			
5	Total Weather Normalization Revenue Adjustment (11+L2+L3+L4)			
6	Forfeited Discount Factor Dkt 18-00017			.008796
7	Adjusted Forfeited Discount Revenue		(L5 X L6)	
8	Uncollectible Factor Dkt 18-00017			.003825
9	Uncollectible Adjustment		(L+L7) X L9	
10	Tennessee Excise Tax Rate			6.5%
11	Tennessee Excise Tax Adjustment		(L5+L7-L9) X L10	
12	Federal Income Tax Rate			21%
13	Federal Income Tax Adjustment		(15+L7-L9-L11) X L12	

**Chattanooga Gas Company
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Schedule 16.4: Billed Volumes by Rate Schedule.

This Schedule shall show the billed volumes for each Rate Schedule for each month of the Historic Base Period.

Schedule 17: Proof of Revenue-Proposed Rates.

The Proposed Rates shall be based on the number of customers served in the Historic Base Period, the normalized volumes (where applicable), the demand determinants (where applicable), and the capacity determinants (where applicable) for each Rate Schedule during the Base Historic Base Period. This Schedule shall show for each Rate Schedule:

- a. The number of Summer (May-Oct) bills;
- b. The number of Winter (Nov-Apr) bills;
- c. The current Summer Customer Charge Rate;
- d. The current Winter Customer Charge Rate;
- e. The Summer Customer Charge Revenue-Current Rates;
- f. The Winter Customer Charge Revenue-Current Rates;
- g. Summer sales and transported volumes (for Rate Schedules R-1, R-4, C-1, and C-2 the volumes will be weather normalized);
- h. The Winter sales and transported volumes (for Rate Schedules R-1, R-4, C-1 and C-2 the volumes will be weather normalized; for Rate Schedules with rate blocks, the volumes will be distributed to the rate blocks proportionately to the distribution in Docket No. 18-00017 or subsequent general rate case);
- i. The Summer Volumetric rate(s)-Current;
- j. The Winter Volumetric rate(s)-Current;
- k. Summer Volumetric Revenue-Current Rates;
- l. Winter Volumetric Revenue-Current Rates;
- m. Total Base Revenue-Current-Current Rates;
- n. Proposed Summer Customer Charge Rate;
- o. Proposed Winter Customer Charge Rate;
- p. Summer Customer Charge Revenue-Proposed Rates;
- q. Winter Customer Charge Revenue-Proposed Rates;
- r. Proposed Summer Volumetric Rate(s);
- s. Proposed Winter Volumetric Rate(s);
- t. Summer Volumetric Revenue-Proposed Rates;
- u. Winter Volumetric Revenue-Proposed Rates;
- v. Total Base Revenue-Proposed Rates;
- w. Proposed Percent Increase;
- x. Total Base Revenue Under Current Rates for all Rate Schedules;
- y. Total Base Revenue Under Proposed Rates for all Rate Schedules;
- z. Percent Increase in Total Base Revenue.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 17.1: Revenue Increase /Reduction allocated to Rate Schedules.

This Schedule shall show the propose allocation of any rate increase or reduction to the individual Rate Schedules.

Schedule 18: Other Revenues.

Provide a breakdown by charge of all revenues shown as "Other Operating Revenues" for the Prior Year and the Historic Base Period.

Schedule 19: Chattanooga Gas Company detailed Income Statement.

For each month of the Historic Base Period provide the income statements that show the salary and wages and other operating and maintenance expense separately.

The income statements will be provided in electronic format only.

Schedule 19.1: CGC Detailed Income Statement Historic Base Period mapped to the corresponding FERC accounts.

The income statement will be provided in electronic format only.

Schedule 19.2: CGC Income Statement in Hyperion Format, Historic Base Period.

The income statement will be provided in electronic format only.

Schedule 20: AGL Services Company Income Statement.

For each month of the Historic Base Period provide the income statements that show the salary and wages and other operating and maintenance expense separately.

The income statements will be provided by native account and mapped to FERC accounts. The income statements will be provided in electronic format only.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 21: General Ledger for Chattanooga Gas, AGL Service Company ("AGSC"), and Southern Company Gas for each month of the Historic Base Period and two previous years.

The General Ledgers will be provided in electronic format only.

Schedule 21.1: CGC and AGSC Trial Balances, December 31, Historic Base Period.

The Trial Balances shall be provided in electronic format only.

Schedule 22: Capital Expenditures.

Provide:

1. The monthly plant additions by plant account for the Historic Base Period.
2. The annual capital expenditures broken into the following Prioritization Categories for the Historic Base Period:
 - a. Safety.
 - b. Regulatory.
 - c. Reliability/Integrity.
 - d. Obsolesce/Update.
 - e. Productivity/New Business.
 - f. Business Projects.

**Chattanooga Gas Company
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Schedule 23: Allocated Cost Adjustment.

- I. For each month of the Historic Base Period, and account identify the amount of:
 - a. Direct charged,
 - d. Direct assigned, and
 - c. Allocated charges to Chattanooga Gas Company from the:
 - i. Parent Company,
 - ii. An Affiliated Utility Service Company, and
 - iii. Other Affiliate.
2. For allocated cost identify the total amount subject to allocation for each:
 - a. The Parent Company,
 - b. An Affiliate Utility Service Company, and
 - c. Other Affiliate that allocated cost to CGC.
3. Provide the amount of any revenue or credits resulting from transactions with each affiliate for each month of the Historic Base Period.
4. Identify the amount of any allocated cost adjustments.

Schedule 23.1: Allocated Cost Workpaper.

This workpaper supports the Cost Allocation Adjustment as shown on Schedule 23.

**Chattanooga Gas Company
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**Schedule 24: Lobbying Expense, charitable contribution, social club membership
Adjustment.**

Provide the amount of:

- a. Lobbying expense,
- b. Charitable contribution,
- c. Social club membership, and
- d. Athletic event recorded on the Company's books either directly incurred by the Company or allocated to Chattanooga Gas Company by its Parent, an Affiliated Utility Service Company or other Affiliated for each month of the Historic Base Period.

Provide the same information and breakdown of any amounts that are included in cost of service to be recovered in regulated rates.

Schedule 24.1 Lobbying Worksheet.

Supporting workpaper for Schedule 24.

**Schedule 24.2 Lobbying Workpaper – Dept 1637 Operating Expense by Month of the
Historic Base Period.**

Schedule 25: Pension and Other Post-Employment Benefits Adjustment.

1. For each month of the Historic Base Period identify:
 - a. The amount of pension expense recorded on the Company's books;
 - b. The actual pension contribution;
 - c. The pension expense included in the cost of service for the ARM Filing;
 - d. The amount of Post-Employee Benefits Expense recorded on the Company's books;
 - e. The actual Post Employment Benefit Contribution;
 - f. The amount of Post-Employment Benefit Expense included in the cost of service for the ARM Filing.

**Chattanooga Gas Company
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Schedule 26: Advertising Expense Adjustment

1. Provide details of the advertising expense for the Historic Base Period. For each month, identify the amount of advertising classified as follows:
 - a. Institutional.
 - b. Conservation.
 - c. Informational.
 - d. Promotional.
 - e. Promotional for the sale of appliances.
 - f. For each of the above, identify the amount included in the ARM Cost of service.

Schedule 26.1: Advertising Expense workpaper.

This workpaper provides detailed support for the Advertising Expense Adjustment on Schedule 26.

Schedule 27: Incentive Compensation Adjustment.

1. Provide incentive plan documents for the Historic Base Period.
2. Identify the amount and account charged for Incentive Compensation:
 - a. During the Historic Base Period, and
 - b. The amount included in the ARM Cost of Service.

**Chattanooga Gas Company
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Schedule 28: Rate Reset Normalization Adjustments-Non-Weather Adjustments.

Revenue and Uncollectible Accounts					
Linc #		Other Revenue 4 Year Average	Uncollectible Expense 5 Year Average		
1	Historic Base Period				
2	Previous Year				
3	2 nd Previous Year				
4	3 rd Previous Year				
5	4 th Previous Year				
6	Average				
7	Adjustment L6-L1				
Rate Base Normalization Adjustments					
		Material and Supplies 3 Yr Average	Prepayments 3 Yr Average	Gas Inventory 3 Yr Average	Reserve for Uncollectibles 3 Yr Average
8	Historic Base Period				
9	Previous Year				
10	2 nd Previous Year				
11	Average				
12	Adjustment L11-L8				
				Reserve for Health Insurance 3 Yr Average	Other Reserves 3 Yr Average
13	Historic Base Period				
14	Previous Year				
15	2 nd Previous Year				
16	Average				
17	Adjustment L16-L13				
Depreciation					
				Depreciation Expense	
18	Historic Base Period				
19	Computed-Historic Base Period Sch 14				
20	Adjustment L19-L18				

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 29: Carrying Charges and Historic Period annual Reconciliation Balance.

Line			Historic Base Period
1	Gas Sales and Transportation Revenue	Schedule 5	
2	AFUDC-Interest	Schedule 5	
3	AFUDC-Equity	Schedule 5	
4	Other Revenue	Schedule 5	
5	Total Operating Revenue	L1+L2+L3+L4	
6	Purchased Gas Expense	Schedule 5	
7	Operating & Maintenance Expense-Labor	Schedule 5 a/	
8	Operating & Maintenance Expense -Non-Labor	Schedule 5 a/	
9	Total Operating & Maintenance Expense	L6+L7+L8	
10	Depreciation Expense	Schedule 5	
11	Amortization of Prior Years Reconciliation Balance	Schedule 5	
12	Interest on Customer Deposits	Schedule 5	
13	Taxes Other than Income	Schedule 5	
14	State Excise (Income) Tax	Schedule 5 b/	
15	Federal Income Tax Expense	Schedule 5 b/	
16	Total Operating Expense	L9+L10+L11+L12+L13+ L14+L15	
17	Utility Operating Income	L5-L16	
18	Historic Base Period Interest	L20 X L21	
19	Net Income	L17-L18	
20	Rate Base-Historic Base Period	Schedule 2	
21	Weighted Cost of Debt	Schedule 11	
22	Weighted Cost of Equity	Schedule 11	
23	Required Net Income	L20 X L22	
24	Earning Deficiency (Excess)	L23-L119	
25	Authorized ROR	Schedule 11	
26	Annual Carrying Charges	L25 X L24	
27	½ Year Accrual		0.5
28	Carrying Charge	L 26 X L27	
29	Earnings Deficiency (Excess) + Carrying Charges	L24+L28	
30	Tax Gross-Up Factor	Schedule 12	1.3538211
31	ARM Reconciliation Balance	L30 X L29	
32	Average Balance Assuming 12 Month Amortization	L31/2	

a/ Excludes expenses disallowed for ratemaking

b/Based on Ratemaking Revenues, Expenses, and synchronized interest

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 30: CGC Budget for the year subsequent to the Historic Base Year.

The ARM filing shall include a copy of CGC's budget for the year subsequent to the Historic Base Period. The budget shall include capital expenditures, operating revenues, and expenses (including allocated costs). A corporate officer shall attest or affirm that the budget included with the filing is the same budget used within the overall Southern Company forecasted earnings supplied to investors, subject to any noted exceptions or exclusions, which shall be highlighted and described by CGC in detail. This budget is not to be used in the determination of the revenue requirement, as the current year budget shall be provided solely for informational purposes. Rates subject to the annual rate reset shall be based upon the review of the historic information as set forth in CGC's Petition.

The budgeted capital expenditures shall be broken into the following Prioritization Categories:

- i. Safety.
- ii. Regulatory.
- iii. Reliability/Integrity.
- iv. Obsolesce/Update.
- v. Productivity/New Business.
- vi. Business Projects.

Schedule 31: Historic Base Period FERC Form II filed with the Tennessee Public Utility Commission.

A copy of FERC Form II for the Historic Base Period filed with the Tennessee Public Utility Commission will be provided to the Consumer Advocate and Other Intervening Party. (Since the report is separately filed with the Commission, a copy will not be included in the ARM filing.)

Schedule 32: Cost Allocation Manual ("CAM").

An electronic copy of the Cost Allocation Manual ("CAM") effective for the Historic Base Period shall be filed. The text shall be in PDF format and attachments shall be in Excel format.

**Chattanooga Gas Company
Annual Review Mechanism ("ARM")**

Schedule 33: Southern Company Organization Structure.

The ARM filing shall include a copy of the Southern Company organization charge as of December 31 of the Historic Base Period.

Schedule 34: Pension/OPEBs Actuarial Reports.

The ARM filing shall include a copy of the Pension/OPEB actuarial reports covering results associated with CGC and service company employees for the Historic Base Period;

Schedule 35: Additional Workpapers.

The ARM filing shall include additional properly cross-referenced schedules and workpapers as needed to support adjustments proposed by the Company.

Schedule 36: Current Departmental chart of CGC for the Historic Base Period.

Schedule 37: Accounting for Contingencies in excess of \$25,000.

The ARM filing shall include a listing of all recorded contingencies in excess of \$25,000 recorded on CGC's books and records or allocated to CGC.

Schedule 38: Impact of any new Accounting Pronouncement implemented in the Historic Base Period.

The ARM filing shall include a listing and the impact on cost of each new Accounting Pronouncement implemented during the Historic Base Period.

Supplemental Testimony

Archie Hickerson

Exhibit ARH-3

Chattanooga Gas Company ARM Schedules

Schedule	Description	Physical Copy Filed	Electronic Copy Filed Excel Format
1	Revenue Deficiency/Excess	Yes	Yes
2	Rate Base	Yes	Yes
2A	Rate Base -13 Month Average Workpaper	Yes	Yes
2A1	Allocated Plant, Accumulated Depreciation, Deferred Income Tax -Workpaper	No	Yes
3	Lead Lag Results	Yes	Yes
4	Working Capital	Yes	Yes
4.1	Calculation of Other Operating Expense for Lead Lag	No	Yes
5	Income Statements	Yes	Yes
5.1	Revenues Reconciliation	No	Yes
6	Revenue Summary	Yes	Yes
6.1	Revenue Summary -Margin Reconciliation	No	Yes
6.1A	Department 8100 Income Statement (If there are off- system sales of LNG)	No	Yes
7	Operating and Maintenance Expense	Yes	Yes
7A	O&M Roll-Up Summary	No	Yes
7B	Administrative and General	No	Yes
7C	Other Distribution & Storage	No	Yes
8	Taxes Other than Income	Yes	Yes
9	Excise and Income Tax	Yes	Yes
10	Income Statement -Proposed Rates	Yes	Yes
11	Rate of Return Summary	Yes	Yes
12	Revenue Conversion Factor	Yes	Yes

13	Margin by Rate Schedule	No	Yes
14	Depreciation and Amortization Expense-Historic Base Period December 31 Plant Balances	Yes	Yes
14.1	Monthly Summaries of Plant, Plant Additions, Plant Retirements, and Transfers-Historic Base Period	No	Yes
14.2	Monthly Summaries of Accumulated Depreciation, Depreciation, Retirements, Cost of Removal, and Transfers - the Historic Base Period	No	Yes
15	Summary Jurisdictional Non-Gas Revenue Current Rates Historic Base Period	No	Yes
15.1	Monthly Detailed Margin Review-Historic Base Period	No	Yes
16.1	Weather Normalized Volumes-Historic Base Period	Yes	Yes
16.1A	Workpaper-Weather Normalized Usage Rate Schedules R-1, R-4, C-1, & C-2 adopted in Docket 18-00017	No	Yes
16.2	Weather Normalized Revenue Rate Schedules R-1, R-4, C-1, & C-2	Yes	Yes
16.3	Weather Normalized Revenue Adjustments Rate Schedules R-1, R-4, C-1, & C-2	Yes	Yes
16.4	Billed Volumes by Rate Schedule by Month – Historic Base Period	No	Yes
17	Proof of Revenue-Proposed Rates	No	Yes
17.1	Revenue Increase Allocated to Rate Schedules	Yes	Yes
18	Other Revenues by Month-Historic Base Period	Yes	Yes
19	CGC Income Statement Historic Base Period (containing formulas to calculate subtotals and totals)	No	Yes
19.1	CGC Income Statement Historic Base Period Mapped to FERC Accounts	No	Yes
19.2	CGC Income Statement – Hyperion-Historic Base	No	Yes
20	AGSC Income Statement – Historic Base Period (containing formulas to calculate subtotals and totals)	No	Yes
20.1	AGSC Income Statement – Historic Base Period Mapped to FERC Accounts	No	Yes
21	General Ledger CGC, AGSC, and SCG -Historic Base Period	No	Yes
21.1	CGC and AGSC Trial Balance-December 31-Historic Base Period	No	Yes
22	Capital Expenditures by Category-Historic Base Period	Yes	Yes

23	Allocated Cost Adjustment	Yes	Yes
23.1	Sch 23.1 Allocated Cost-Workpaper	No	Yes
24	Lobbying Expense, Charitable Contributions, Social Club Membership-Adjustment	Yes	Yes
24.1	Lobbying Worksheet	No	Yes
24.2	Lobbying Workpaper-Dept 1637	No	Yes
25	Pension & OPEB Expense Adjustment	Yes	Yes
26	Advertising Expense-Adjustment	Yes	Yes
26.1	Allocated Advertising Expense- Workpaper	No	Yes
27	CGC Incentive Compensation-Adjustment	Yes	Yes
28	Rate Reset Normalization Adjustments – Non-weather	Yes	Yes
29	Carrying Charges and Historic Base Period Annual Reconciliation Balance	Yes	Yes
30	CGC Budget for year subsequent to Historic Base Period including capital expenditures by category, operating revenues, and expenses (including allocated costs).	No	Yes
31	Historic Base Period FERC Form II filed with the Tennessee Public Utility Commission. A copy will be provided to the Consumer Advocate and Other Intervening Party. (Since the report is separately filed with the Commission, a copy will not be included in the ARM filing.)	No	No
32	Cost Allocation Manual (CAM)	No	Text in PDF format Attachments in Excel format
33	Southern Company Organization Structure	Yes	PDF
34	A copy of the pension/OPEB actuarial reports covering results associated with CGC and service company employees for the Historic Base Period	Yes	PDF

35	Additional Workpapers as required referenced to applicable Schedule	No	Yes
36	Current Departmental chart of CGC for the Historic Base Period	No	Yes
37	Accounting for Contingencies in excess of \$25,000	No	Yes
38	The impact of any new Accounting pronouncement implemented in the Historic Base Period	No	Yes