

**BEFORE THE TENNESSEE PUBLIC UTILITY COMMISSION
NASHVILLE, TENNESSEE**

May 11, 2018

IN RE:)
)
CHATTANOOGA GAS COMPANY)
PETITION FOR APPROVAL OF AN)
ADJUSTMENT IN RATES AND)
TARIFF; THE TERMINATION OF)
THE AUA MECHANISM AND THE)
RELATED TARIFF CHANGES AND)
REVENUE DEFICIENCY)
RECOVERY; AND AN ANNUAL)
RATE REVIEW MECHANISM)

Docket No.
18-00017

**DIRECT TESTIMONY OF GARY TUCKER
SUBSTITUTING FOR THE DIRECT
TESTIMONY OF RACHEL D. JOHNSON FILED
ON BEHALF OF
CHATTANOOGA GAS COMPANY**

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

2 A. Gary Tucker, Supervisor, Regulatory Reporting, Southern Company Gas
3 ("SCG"). My business address is Ten Peachtree Place, Location 1686, Atlanta,
4 Georgia 30309.

5 **Q. Please describe your professional background and education.**

6 A. I graduated Magna Cum Laude from Georgia State University in 2011 with a
7 Bachelor of Business Administration degree in Accounting. The following year, I
8 joined Georgia Power Company's Regulatory Accounting Department. In the
9 Regulatory Accounting Department I supported, prepared, and reviewed various
10 regulatory filings. The filings included Georgia Power Company's 2013 Base
11 Rate Case, 2015 and 2016 Base Rate Updates, Nuclear Construction Cost
12 Recovery NCCR-5 Tariff adjustment, and 2015 Annual Surveillance Report. In
13 2016 I moved to Georgia Power Company's Property Accounting Department
14 where I was primarily responsible for compiling and reporting on Georgia Power
15 Company's regulated assets and construction work-in-progress. In 2017 I began
16 working at Southern Company Gas as the Regulatory Reporting Supervisor. In
17 this position, I am responsible for the preparation, review and filing of monthly
18 and annual financial information to state regulatory commissions, including rate
19 case proceedings.

20 **Q. Have you previously submitted testimony before the Tennessee Regulatory**
21 **Authority or any other regulatory commission?**

22 A. No. I have not submitted testimony to any regulatory commission.

23 **Q. What is the purpose of your testimony?**

1 A. I will present various financial and accounting data in support of Chattanooga Gas
2 Company's ("CGC" or the "Company") proposed rate increase of \$7.0 million in
3 this proceeding, including (A) the proposed revenue adjustment required, (B)
4 CGC's cost of service, (C) the determination of rate base, and (D) the capital
5 structure and cost of debt financing.

6 **Q. Please explain the historic test period and the attrition period used in**
7 **preparation of the Company's case?**

8 A. The Company's historic test period is the twelve months ended June 30, 2017.
9 This period represented the most recent time period for which public financial
10 data was available when the Company began preparing its case. The attrition
11 period for which the Company's estimated revenue requirement is based on is the
12 12 months ending June 30, 2019, which represents forecast amounts for the
13 twelve months succeeding July 1, 2018. New rates are expected to be
14 implemented September 1, 2018. Additionally, please note that due to the tax
15 legislation passed December 22, 2017, filing guideline schedules and responses
16 have been updated through December 31, 2017, where applicable.

17 **Q. Please identify the Minimum Filing Guidelines ("MFG") Schedules that you**
18 **will be sponsoring.**

19 A. In preparing the rate case filing, we utilized the minimum filing guidelines
20 ("MFGs") that are available on the TPUC website. While the Commission has
21 not formally adopted minimum filing requirements, CGC has utilized these MFGs
22 in preparation of the case as the Company did in its last rate case in 2009-2010,
23 Docket No. 09-00183.

1 The specific MFGs that I will be supporting are the following with
2 exceptions noted:

- 3 • General schedules #14-28.
- 4 • Expense schedules #42-59 (except for #55 which relates to the cost
5 of service study and supported by witness Daniel Yardley).
- 6 • Tax schedules #60-63.
- 7 • Rate base schedules #64-71 and are outlined in more detail in this
8 document.
- 9 • Working capital schedules #72-74 (except for #72 which relates to
10 the lead lag study and supported by witness Michael Adams).
- 11 • Merchandise & Jobbing and other non-regulated operations
12 schedules #75-78.
- 13 • Cost of capital schedules #79-99.

14 **Q. Are you sponsoring exhibits in connection with your testimony?**

15 A. Yes. I am sponsoring the following exhibits in support of CGC's base revenue
16 requirement for the twelve month attrition period ending June 30, 2019:

- 17 • Exhibit RDJ-1 – CGC's Statement of Income before and after the
18 proposed rate adjustment and calculations of the proposed base revenue
19 adjustment, base revenue conversion factor and Tennessee excise and
20 federal income taxes. Please refer to MFG 25 as it will provide the
21 support for the operating income calculation.
- 22 • Exhibit RDJ-2 – The elements of estimated average rate base, working
23 capital requirement, and lead lag requirement after revenue adjustment as

1 of June 30, 2019. Please refer to MFG 69 for support of these
2 components.

- 3 • Exhibit RDJ-3 – A summary of the Company’s estimated cost of capital as
4 of June 30, 2019. Please refer to MFG 81 for the calculation of the cost of
5 capital.

6 **Q. Were these exhibits and related schedules prepared by you or under your**
7 **direction and supervision?**

8 A. Yes.

9 **Q. Has the Company incorporated the impacts of the newly adopted Tax Cuts**
10 **and Jobs Act (“the Act”)?**

11 A. Yes. The Company has incorporated all known and measurable impacts that the
12 Act will have on the Company’s financial condition. These impacts include the
13 following:

- 14 • Federal income tax rate of 21%.
- 15 • Establishment of a regulatory liability for the recalculation of accumulated
16 deferred income taxes at the federal tax rate of 21%. This is also referred
17 to as excess deferred income taxes (“EDIT”) and included on Exhibit RDJ
18 2-1, line 7.
- 19 • Amortization of protected EDIT and basis adjustments to property using
20 the average rate adjustment mechanism (“ARAM”) and unprotected EDIT
21 using a five year straight line method included in MFG 61-2, line 27 for
22 federal and state purposes.

- Elimination of bonus depreciation in 2018 with the exception of property acquired prior to September 30, 2017, and placed in service in 2018.
- Incorporation of a higher equity ratio at Southern Company Gas to mitigate the effects of reduced cash flows due to the elimination of bonus depreciation and flow back of EDIT to customers, which in turn has an adverse impact on Southern Company Gas' credit metrics.

I. CALCULATION OF REVENUE REQUIREMENT

Q. Please summarize the information contained in Exhibit RDJ-1, supporting the Company's calculated base revenue requirement?

A. Schedule 1 reflects the attrition period base revenue deficiency and proposed rate adjustment necessary to allow the Company the opportunity to earn a fair and reasonable return on its investment. Column 1 provides an income statement for the attrition period per books; Column 2 provides the Company's proposed rate adjustment; and Column 3 provides an income statement for the attrition period after the Company's proposed rate adjustment. Additionally, Line 15 of Schedule 1 includes the calculated rate of return of 4.61% before the proposed rate adjustment. Schedule 2 of Exhibit RDJ-1 provides the calculation of the proposed base revenue adjustment in the amount of \$7.0 required for the Company's proposed rate of return of 7.83%. This calculation is based on the Company's anticipated gross revenue conversion factor, as calculated on Schedule 2 of Exhibit RDJ-1. Schedule 3 of the Exhibit provides the calculation of the Tennessee excise and federal income taxes before and after the proposed rate adjustment.

1 **Q. Please summarize the primary components of the proposed revenue**
2 **adjustment?**

3 A. The primary components of base rates are detailed in the RDJ exhibits and
4 summarized below:

- 5 • Increase in operating revenue (\$3 million)
- 6 • Increase in cost of capital \$1 million
- 7 • Increase in rate base \$6 million
- 8 • Increase in cost of service \$5 million
- 9 • Decrease in income tax (\$2 million)

10 **(a). Income Statement.**

11 **Q. Please explain in detail how you developed the forecasted operating income**
12 **for the attrition period contained in Schedule 1 of Exhibit RDJ-1, column 1.**

13 A. Revenues

14 The first component of the forecasted operating income is Operating Revenues.

15 The forecast of Operating Revenues, Gas Cost and Other Revenues for the
16 attrition period is provided in the direct testimony of Heath Brooks. Allowance
17 for Funds Used during Construction (“AFUDC”) was forecast by multiplying the
18 forecasted balance of Construction Work in Progress (“CWIP”) for the attrition
19 period by the proposed weighted average cost of capital (“WACC”) for the
20 attrition period. The estimated balance of CWIP is based on the 13 month
21 average CWIP for the attrition year.

22 **(b). Operation and Maintenance Expenses.**

1 **Q. How did you forecast operations and maintenance expense for the attrition**
2 **period?**

3 A. The Company based its attrition period expense forecast for July 1, 2018-
4 December 31, 2018 on the Company's annual 2018 budget, please refer to MFG
5 68 for a description of the budget process. The Company uses a zero based
6 budget approach and considers this to be the best estimate of expenses for the first
7 half of the attrition period. The 2019 portion for the attrition period expenses is
8 based on known changes or applied growth rate deemed appropriate for that
9 expense category. The forecasts of some of the major expense components are
10 based on specific expense forecasts while others are based upon a general
11 expected percentage increase.

12 **(c). O&M Expense Specifically Forecast.**

13 **Payroll Expense**

14 **Q. Please identify and explain the forecast for payroll expense.**

15 A. The payroll forecast is comprised of two components – fixed compensation and
16 variable compensation. Fixed compensation includes base pay and after normal
17 hours pay (overtime, beeper pay, etc.); and variable compensation primarily
18 includes the Company's Pay for Performance Plan ("PPP"), Long Term Incentive
19 Plan ("LTI") compensation plans, and service awards.

20 **Q. How did you determine the forecast for fixed compensation?**

21 A. Fixed compensation was forecast based on the 2018 Budget amount multiplied by
22 the average annual merit increase of 3%. These amounts incorporate estimate

1 increases in costs associated with the workforce initiatives discussed in the
2 testimony of Wendell Dallas.

3 **Q. How did the Company forecast variable compensation?**

4 A. The estimated attrition period cost for variable compensation was determined
5 using the 2018 Budget amount multiplied by 3% which is the average merit
6 increase. The allocation between O&M and capital is based on the payroll
7 capitalization percentages calculated for the 2018 budget.

8 **(d). Bad Debt Expense.**

9 **Q. Please explain how you estimated bad debt expense.**

10 A. Bad debt expense was estimated based on CGC's actual write-off experience for
11 the 24 months ended December 2017. The actual write-off percentage includes
12 only the non-gas portion of customers' bills since the gas portion is recovered
13 through the Company's purchased gas adjustment. The percentage was then
14 applied to the estimated margin, excluding revenues for recovery of damages to
15 the distribution system.

16 **(e). Employee Benefits Expense.**

17 **Q. What are the components of employee benefits expense included in the**
18 **attrition period?**

19 A. Employee benefits expense in the attrition period includes costs associated with
20 401(k) benefits, group health benefits, pension expense, post-retirement benefits
21 other than pensions.

22 **Q. How did the Company estimate 401(k) benefits costs?**

1 A. 401K benefits were forecast based on the 2018 Budget amount multiplied by the
2 average annual merit increase of 3%.

3 **Q. Please describe how group health and other benefits were calculated.**

4 A. Group health benefits were based on the recent collection of data for medical,
5 prescription drug, and behavioral health claims. Historical trends, estimated
6 changes to enrollment, plan design changes, and administrative costs were
7 considered when developing future estimates.

8 **Q. How did you estimate pension and post-retirement expenses for the attrition**
9 **period?**

10 A. The Company's pension and post retirement plans are based on an estimate
11 provided by Mercer, the Company's actuary. The total expense amount was
12 estimated in accordance with Statement of Financial Accounting Standards for
13 Postretirement Benefits Other Than Pensions.

14 **(f). Expenses Based on the General Growth Percentage.**

15 **Q. Please identify and explain the forecast of each element of O&M based on the**
16 **general growth percentage.**

17 A. The general growth percentage is the estimated change in the consumer price
18 index from the end of test period through the end of the attrition period and
19 provided in detail on MFG 43. All expense categories were forecast using the
20 general growth percentage except for fixed and variable compensation, benefits,
21 intercompany billing, and AGL Services Company ("AGSC") allocation amounts
22 which are based on the 2018 budget and increased by 3% for the six months
23 January – June 2019.

1 **(g). Depreciation and Amortization Expense.**

2 **Q. Please describe your forecast of depreciation and amortization expense.**

3 A. Depreciation and amortization expense was estimated using the composite
4 depreciation rates resulting from a deprecation study as proposed in the direct
5 testimony of Mr. Dane Watson and the estimated average utility plant in service
6 for the attrition period. Depreciation also includes an allocated amount of
7 depreciation expense from AGSC which is based upon December 2017 allocation
8 factors.

9 **(h). Taxes Other Than Income.**

10 **Q. Please identify and explain the forecast of each element of taxes other than**
11 **income.**

12 A. Taxes other than income include property, gross receipts, and net worth tax as
13 well as payroll taxes and allocated taxes other than income. As with depreciation
14 expense a portion of AGSC allocated costs for both the attrition period and the
15 test period are assigned to taxes other than income.

16 **Q. How did the Company estimate its attrition period franchise and payroll**
17 **taxes?**

18 A. Franchise and payroll tax expense calculation utilized estimates based upon the
19 Budget year activity and then applied growth percentages of CPI and 3% (as
20 related to the average annual merit increase), respectively for each tax.

21 **II. DETERMINATION OF RATE BASE**

22 **Q. Would you summarize the information contained in Exhibit RDJ-2, Schedule**
23 **1 supporting the Company's calculation of base revenue requirement?**

1 A. Exhibit RDJ-2, Schedule 1 summarizes the attrition period forecast of the
2 Company's rate base, which includes plant in service, CWIP, pensions,
3 postretirement benefits other than pensions ("PBOP"), working capital, and
4 certain deductions from rate base. The forecasted attrition period rate base is
5 \$159.9 million. The forecast is based on a 13 month average, which normalizes
6 rate base over the attrition period and takes into account any fluctuations during
7 the attrition period.

8 **Q. Please summarize the change between the test period and the attrition period**
9 **average rate base.**

10 A. The primary differences between the test period and attrition periods can be
11 attributed to the following:

- 12 • Utility Plant in Service (including CWIP) \$42 million
- 13 • Pension \$6 million
- 14 • Working Capital & Materials \$5 million
- 15 • Accumulated Depreciation (\$8 million)
- 16 • Accumulated Deferred Inc. Tax \$18 million
- 17 • Excess Deferred (\$21 million)

18 **(a). Utility Plant and CWIP.**

19 **Q. Please describe how you calculated the forecast of Utility Plant in Service and**
20 **CWIP.**

21 A. MFG 69 provides for the estimated average balance of utility plant in service for
22 the attrition period of \$301.4 million and was calculated starting with the actual
23 balance as of June 30, 2017 and subsequently updated for actual balances to

1 December 31, 2017. Additions for January 2018 through December 2018 are
2 based on the Company's budget for 2018. Additions for January 2019 through
3 June 2019 are based on a forecast specifically prepared for this proceeding.
4 Estimated retirements of plant are based on the average retirements for the four
5 years ended June 2017. MFG 69 provides for the estimated average balance of
6 CWIP for the attrition period of \$11 million and is based on the 13 month average
7 balance as of the attrition period utilizing capital expenditures and in-service
8 additions during 2018 and 2019.

9 The Company has also included in utility plant and CWIP an allocated
10 portion of AGSC attrition period forecasted average utility plant and CWIP. The
11 forecast of AGSC utility plant is based on a combination of forecasts and
12 preliminary budget data from the end of the test year through the attrition period
13 and an estimate of retirements based on historic experience. The forecast of
14 AGSC CWIP is based on the 13 month average balance as of the attrition period
15 utilizing capital expenditures and in-service additions.

16 The forecasted balance of AGSC attrition period utility plant and CWIP
17 allocated to CGC is based on the ratio of AGSC expenses allocated to CGC to
18 total AGSC expenses allocated to all AGSC affiliates. This ratio is 1.9% and can
19 be supported by calculations found in MFG 71. Allocation of rate base items
20 from AGSC is necessary to reflect the investment made by AGSC in providing
21 services to CGC.

22 **(b). Pension and Post-Retirement Assets.**

1 **Q. Please describe the pension and post-retirement assets and how it was**
2 **calculated**

3 A. The pension and post-retirement asset amounts are based on statements provided
4 by Mercer, the Company's actuary and included with MFG 50.

5 **Q. Is this the Company proposing a change to how pension expense and the**
6 **associated rate base is treated in this case?**

7 A. Yes. The Company is proposing to recover pension expense in accordance with
8 generally accepted accounting principles ("GAAP"). This is consistent with the
9 manner in which the company recovers OPEB expense and provides a consistent
10 method of recording expense for both GAAP and ratemaking purposes.

11 **(c). Working Capital Requirement.**

12 **Q. Please explain the components of the working capital requirement and how**
13 **each component was calculated.**

14 A. The components of the estimated working capital requirement for the attrition
15 period are included in Schedules 2 and 3 of Exhibit RDJ-2 and were calculated as
16 follows:

17 **(d). Requirement for Lead-lag.**

18 The requirement for lead lag was calculated based on the lead lag study as
19 proposed in the direct testimony of Mr. Michael Adams. There have been no
20 significant changes to the Company's operations that would materially impact the
21 lead lag study. The calculation of the requirement for lead lag is provided in
22 Exhibit RDJ-2, Schedule 3 and supported by MFG 72.

23 **(e). Materials and Supplies.**

1 This calculation is based upon a 13-month average for the test period, June 2016
2 through June 2017. The use of a 13 month average allows for the reflection of
3 any seasonality of these accounts.

4 **(f). Stored Gas Inventory.**

5 The starting point for the calculation of average stored gas inventory was the
6 actual volumes and dollar amounts of inventory as of December 31, 2017. These
7 balances were then projected monthly as follows: From January 2018 through
8 June 2019, injections were forecast based on the Company's current injection
9 schedule, ratably April through October for two of the underground storages,
10 Firm Storage Production Area or FSPA and Firm Storage Market Area or FSMA,
11 and liquefied natural gas storage and May through September for Contract
12 Storage Service or CSS, the third underground storage. Injection volumes in each
13 year are based on the Company's March 31st ending balance and the targeted
14 storage levels entering the winter season. Injections are forecast and managed by
15 AGSC's Gas Supply Group. Withdrawals were forecasted based on the estimated
16 need to utilize stored gas inventory during the winter season while maintaining an
17 adequate level of storage to mitigate any unseen circumstances or events.
18 Withdrawals are also forecast and managed by AGSC's Gas Supply Group.

19 Pricing for the injections was calculated using the NYMEX futures price
20 for natural gas as of October 21, 2017 plus the variable costs incurred to inject the
21 gas into the Company's storage facilities. Pricing for the withdrawals was
22 calculated using the monthly weighted average cost of gas, which was re-
23 calculated each month based on the applicable withdrawals, injections and

1 NYMEX futures price. Additionally, the cost of liquefaction is included in the
2 calculation for the LNG storage facility. The thirteen month average for the
3 attrition period (June 2018 through June 2019) was then calculated using the
4 monthly projected balances of the stored gas inventory.

5 **(g). Deferred Rate Case Costs.**

6 The deferred rate case costs included in MFG 58 represent the estimated external
7 costs that have been or will be incurred in this case including legal, depreciation
8 study, class cost of service, and cost of equity.

9 **(h). Reserve for Uncollectible Accounts.**

10 MFG 69 provides details regarding the average reserve for uncollectible accounts.
11 The average reserve was calculated using the ratio of the average historical
12 reserve balance from January 2016 through December 2017 to the average
13 historical operating margin for the same period. This ratio was then applied to the
14 estimated operating margin for the attrition period.

15 **(i). Customer Deposits and Related Accrued Interest.**

16 Customer deposits are based on the December 2017 13-month average balance,
17 adjusted for the most recent 3-year average growth rate. Accrued interest on
18 customer deposits for the attrition period was based on actual amounts for the
19 period ended December 2017. Support for both calculations are provided for on
20 MFG 69.

21 **(j). Accumulated Depreciation.**

22 MFG 69 provides support for accumulated depreciation. Accumulated
23 depreciation is estimated to be \$127.9 million for the attrition period. The

1 balance of accumulated provision for depreciation was calculated starting with the
2 actual balance as of December 31, 2017. This balance was then projected through
3 the end of the attrition period by adding estimated depreciation expense and
4 subtracting estimated plant retirements and the net cost of removal. Depreciation
5 expense for January 2018 through June 2018 was calculated by multiplying the
6 average plant balances during those time periods by the currently authorized rates.
7 Depreciation expense for July 2018 through June 2019 was calculated by
8 multiplying the average plant balance for the 13 months ending June 2019 by the
9 proposed depreciation rates from the depreciation study supported by the direct
10 testimony of Mr. Watson.

11 **(k). Accumulated Deferred Income Tax.**

12 ADIT was calculated using the account balances as of December 31, 2017, and
13 then projecting through June 2019 for changes to the components of the
14 accumulated deferred income tax balances. The primary component of the ADIT
15 projection is the increase due to the difference in tax depreciation and book
16 depreciation through the end of the attrition period. Tax and book depreciation
17 were estimated based on the existing property balances and estimated changes to
18 those balances. The difference multiplied by the income tax rates results in the
19 change in ADIT. The Company also estimated other ADIT items either based on
20 specific forecasts or historic experience.

21 As discussed previously in my testimony and included with MFG 69 , the
22 effect of the newly adopted Tax Cuts and Jobs Act has also been incorporated in
23 the determination of ADIT. The tax depreciation calculation includes Modified

1 Accelerated Cost Recovery System (“MACRS”) rates for years 2018 and 2019
2 without bonus depreciation, with the exception of \$3.6 million of assets acquired
3 during Q4 2017 and expected to be placed in service during the Q1 2018 that
4 qualify for bonus depreciation. The regulatory liability associated with the
5 Company’s EDIT is also included as a component of ADIT and included in
6 Exhibit RDJ 2-1, line 7. The Calculation of the amortization of the EDIT is
7 included in MFG 61-2, line 27.

8 **(I). Contributions in Aid of Construction and Customer Advances for**
9 **Construction.**

10 Consistent with the Federal Energy Regulatory Commission System of Accounts,
11 the Company includes contributions in aid of construction (“CIAC”) as a
12 reduction to plant balances and net with CWIP. As a result of the purchase of
13 Power Plan, CIAC activity is no longer tracked in separate accounts but instead
14 net with the assets as a part of CWIP included on Exhibit RDJ, Schedule 1.
15 Additionally, The Company does not expect a change to customer advances for
16 construction.

17 **III. COST OF CAPITAL**

18 **Q. Would you summarize the information contained in Exhibit RDJ-3, Schedule 1**
19 **supporting the Company’s Cost of Capital?**

20 A. Exhibit RDJ-3, Schedule 1 is the Summary of Estimated Cost of Capital as of June
21 30, 2019. Column 1 provides the capitalization ratios of each component of the
22 capital structure. Column 2 provides the cost of each component of capital, both
23 supported by MFG 81, and column 3 provides the weighted average cost of capital.

1 **Q. Would you explain how you calculated the proposed capital structure?**

2 A. The Company's proposed capital structure is 44.47% long-term debt, 6.30% short-
3 term debt and 49.23% equity. The calculations are shown on Exhibit RDJ-3,
4 Schedule 1 and based on the consolidated capital structure of Southern Company
5 Gas adjusted for non-ratemaking components such as other comprehensive
6 income and the impact of the acquisition by Southern Company.

7 **Q. How did the newly adopted Tax Cuts and Jobs Act impact the capitalization**
8 **ratios of Southern Company Gas?**

9 A. One of the key credit metrics used by ratings agencies to analyze and assess the
10 credit worthiness of companies is the ratio of funds from operations ("FFO") to
11 total debt. One of the items included in FFO is the cash flow impact of deferred
12 income taxes. Under previous tax law, bonus depreciation was allowed at 40% in
13 2018 and 30% in 2019. This provided for immediate depreciation of plant placed
14 in service in 2018 and 2019 at 40% and 30%, respectively of the basis of the plant
15 asset. This provided additional cash in-flows with a corresponding increase to
16 ADIT. The effect of the elimination of bonus depreciation in the Act is to
17 decrease FFO thereby reducing the FFO to total debt ratio. Long-term
18 deterioration of the FFO to total debt ratio would result in a downgrade in credit
19 ratings for Southern Company Gas resulting in higher debt costs for Southern
20 Company Gas and ultimately customers. To mitigate the impact of the Act on
21 Southern Company Gas' credit rating, Southern Company Gas will begin
22 increasing its equity component of the capital structure. This will reduce the long-

1 term debt component and allow Southern Company Gas to maintain its strong
2 credit ratings.

3 **Q. How did the Company determine the cost of short-term debt?**

4 A. The estimated cost of short-term debt is based on Southern Company Gas'
5 projected short-term debt cost of its commercial paper program and credit facility.
6 The projected short-term debt cost includes the monthly average of the forward
7 curve for the 30-day London Inter-Bank Offering Rate ("LIBOR") from
8 September 2017-December 2018, plus the estimated spread between LIBOR and
9 the commercial paper rate and the estimated costs associated with Southern
10 Company Gas's credit facility and other short-term debt related costs.

11 **Q. How did the Company determine the cost of long-term debt?**

12 A. The cost of long-term debt includes the cost of senior notes, medium-term notes,
13 and revenue bonds within the consolidated debt structure of Southern Company
14 Gas, excluding Northern Illinois Gas Company d/b/a Nicor Gas Company
15 ("Nicor") for the reason that Nicor issues its own long and short term debt. The
16 Company calculated the cost projection using actual interest rates and monthly
17 amortization of debt costs, as well as forecasted debt issuances expected to be
18 made during the period January 1, 2018-June 30, 2019.

19 **Q. How was the cost of common equity determined?**

20 A. The calculation of the cost of common equity of 11.25% is discussed in the pre-filed
21 direct testimony of Dr. James Vander Weide.

22 **Q. Does this conclude your direct testimony?**

23 A. Yes.

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

2 A. Gary Tucker, Supervisor, Regulatory Reporting~~Rachel Johnson, Director,~~
3 ~~Regulatory Accounting and Revenue Recovery Mechanisms~~, Southern Company
4 Gas (“SCG”). My business address is Ten Peachtree Place, Location 1686,
5 Atlanta, Georgia 30309.

6 **Q. Please describe your professional background and education.**

7 A. I graduated Magna Cum Laude from Georgia State University in 2011 with a
8 Bachelor of Business Administration degree in Accounting. The following year, I
9 joined Georgia Power Company’s Regulatory Accounting Department. In the
10 Regulatory Accounting Department I supported, prepared, and reviewed various
11 regulatory filings. The filings included Georgia Power Company’s 2013 Base
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17 working at Southern Company Gas as the Regulatory Reporting Supervisor. In
18 this position, I am responsible for the preparation, review and filing of monthly
19 and annual financial information to state regulatory commissions, including rate
20 case proceedings.~~I received a Bachelor of Science in Accounting from Nova~~
21 ~~Southeastern University in 1992 and a Master of Taxation from University of~~
22 ~~Denver in 1994. Upon graduation, I held several tax positions in the state of~~
23 ~~Colorado. In 2003, I moved to the state of Georgia and continued to work in the~~

1 ~~tax field. In 2008, I was hired as the Income Tax Manager for AGL Resources~~
2 ~~and was promoted to the Tax Director in 2012. In the tax roles, my~~
3 ~~responsibilities included: (1) tax provisions, (2) separate and consolidated tax~~
4 ~~returns, (3) international and US taxation, (4) local and federal audits, and (5)~~
5 ~~supervision of the income tax department. In 2016, I transferred into the~~
6 ~~Regulatory Department. In this position, I am responsible for the review of~~
7 ~~various regulatory filings, Sarbanes Oxley controls, preparation, review, and~~
8 ~~management of rate case documentation for various jurisdictions.~~

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22 data was available when the Company began preparing its case. The attrition
23 period for which the Company's estimated revenue requirement is based on is the

1 12 months ending June 30, 2019, which represents forecast amounts for the
2 twelve months succeeding July 1, 2018. New rates are expected to be
3 implemented September 1, 2018. Additionally, please note that due to the tax
4 legislation passed December 22, 2017, filing guideline schedules and responses
5 have been updated through December 31, 2017, where applicable.

6 **Q. Please identify the Minimum Filing Guidelines (“MFG”) Schedules that you**
7 **will be sponsoring.**

8 A. In preparing the rate case filing, we utilized the minimum filing guidelines
9 (“MFGs”) that are available on the TPUC website. While the Commission has
10 not formally adopted minimum filing requirements, CGC has utilized these MFGs
11 in preparation of the case as the Company did in its last rate case in 2009-2010,
12 Docket No. 09-00183.

13 The specific MFGs that I will be supporting are the following with
14 exceptions noted:

- 15 • General schedules #14-28.
- 16 • Expense schedules #42-59 (except for #55 which relates to the cost
17 of service study and supported by witness Daniel Yardley).
- 18 • Tax schedules #60-63.
- 19 • Rate base schedules #64-71 and are outlined in more detail in this
20 document.
- 21 • Working capital schedules #72-74 (except for #72 which relates to
22 the lead lag study and supported by witness Michael Adams).

1 • Merchandise & Jobbing and other non-regulated operations
2 schedules #75-78.

3 • Cost of capital schedules #79-99.

4 **Q. Are you sponsoring exhibits in connection with your testimony?**

5 A. Yes. I am sponsoring the following exhibits in support of CGC's base revenue
6 requirement for the twelve month attrition period ending June 30, 2019:

7 • Exhibit RDJ-1 – CGC's Statement of Income before and after the
8 proposed rate adjustment and calculations of the proposed base revenue
9 adjustment, base revenue conversion factor and Tennessee excise and
10 federal income taxes. Please refer to MFG 25 as it will provide the
11 support for the operating income calculation.

12 • Exhibit RDJ-2 – The elements of estimated average rate base, working
13 capital requirement, and lead lag requirement after revenue adjustment as
14 of June 30, 2019. Please refer to MFG 69 for support of these
15 components.

16 • Exhibit RDJ-3 – A summary of the Company's estimated cost of capital as
17 of June 30, 2019. Please refer to MFG 81 for the calculation of the cost of
18 capital.

19 **Q. Were these exhibits and related schedules prepared by you or under your**
20 **direction and supervision?**

21 A. Yes.

22 **Q. Has the Company incorporated the impacts of the newly adopted Tax Cuts**
23 **and Jobs Act ("the Act")?**

1 A. Yes. The Company has incorporated all known and measurable impacts that the
2 Act will have on the Company's financial condition. These impacts include the
3 following:

- 4 • Federal income tax rate of 21%.
- 5 • Establishment of a regulatory liability for the recalculation of accumulated
6 deferred income taxes at the federal tax rate of 21%. This is also referred
7 to as excess deferred income taxes ("EDIT") and included on Exhibit RDJ
8 2-1, line 7.
- 9 • Amortization of protected EDIT and basis adjustments to property using
10 the average rate adjustment mechanism ("ARAM") and unprotected EDIT
11 using a five year straight line method included in MFG 61-2, line 27 for
12 federal and state purposes.
- 13 • Elimination of bonus depreciation in 2018 with the exception of property
14 acquired prior to September 30, 2017, and placed in service in 2018.
- 15 • Incorporation of a higher equity ratio at Southern Company Gas to
16 mitigate the effects of reduced cash flows due to the elimination of bonus
17 depreciation and flow back of EDIT to customers, which in turn has an
18 adverse impact on Southern Company Gas' credit metrics.

19 **I. CALCULATION OF REVENUE REQUIREMENT**

20 **Q. Please summarize the information contained in Exhibit RDJ-1, supporting**
21 **the Company's calculated base revenue requirement?**

22 A. Schedule 1 reflects the attrition period base revenue deficiency and proposed rate
23 adjustment necessary to allow the Company the opportunity to earn a fair and

reasonable return on its investment. Column 1 provides an income statement for the attrition period per books; Column 2 provides the Company's proposed rate adjustment; and Column 3 provides an income statement for the attrition period after the Company's proposed rate adjustment. Additionally, Line 15 of Schedule 1 includes the calculated rate of return of 4.61% before the proposed rate adjustment. Schedule 2 of Exhibit RDJ-1 provides the calculation of the proposed base revenue adjustment in the amount of \$7.0 required for the Company's proposed rate of return of 7.83%. This calculation is based on the Company's anticipated gross revenue conversion factor, as calculated on Schedule 2 of Exhibit RDJ-1. Schedule 3 of the Exhibit provides the calculation of the Tennessee excise and federal income taxes before and after the proposed rate adjustment.

Q. Please summarize the primary components of the proposed revenue adjustment?

A. The primary components of base rates are detailed in the RDJ exhibits and summarized below:

- Increase in operating revenue (\$3 million)
- Increase in cost of capital \$1 million
- Increase in rate base \$6 million
- Increase in cost of service \$5 million
- Decrease in income tax (\$2 million)

(a). Income Statement.

1 **Q. Please explain in detail how you developed the forecasted operating income**
2 **for the attrition period contained in Schedule 1 of Exhibit RDJ-1, column 1.**

3 A. Revenues

4 The first component of the forecasted operating income is Operating Revenues.
5 The forecast of Operating Revenues, Gas Cost and Other Revenues for the
6 attrition period is provided in the direct testimony of Heath Brooks. Allowance
7 for Funds Used during Construction (“AFUDC”) was forecast by multiplying the
8 forecasted balance of Construction Work in Progress (“CWIP”) for the attrition
9 period by the proposed weighted average cost of capital (“WACC”) for the
10 attrition period. The estimated balance of CWIP is based on the 13 month
11 average CWIP for the attrition year.

12 **(b). Operation and Maintenance Expenses.**

13 **Q. How did you forecast operations and maintenance expense for the attrition**
14 **period?**

15 A. The Company based its attrition period expense forecast for July 1, 2018-
16 December 31, 2018 on the Company’s annual 2018 budget, please refer to MFG
17 68 for a description of the budget process. The Company uses a zero based
18 budget approach and considers this to be the best estimate of expenses for the first
19 half of the attrition period. The 2019 portion for the attrition period expenses is
20 based on known changes or applied growth rate deemed appropriate for that
21 expense category. The forecasts of some of the major expense components are
22 based on specific expense forecasts while others are based upon a general
23 expected percentage increase.

1 **(c). O&M Expense Specifically Forecast.**

2 **Payroll Expense**

3 **Q. Please identify and explain the forecast for payroll expense.**

4 A. The payroll forecast is comprised of two components – fixed compensation and
5 variable compensation. Fixed compensation includes base pay and after normal
6 hours pay (overtime, beeper pay, etc.); and variable compensation primarily
7 includes the Company's Pay for Performance Plan ("PPP"), Long Term Incentive
8 Plan ("LTI") compensation plans, and service awards.

9 **Q. How did you determine the forecast for fixed compensation?**

10 A. Fixed compensation was forecast based on the 2018 Budget amount multiplied by
11 the average annual merit increase of 3%. These amounts incorporate estimate
12 increases in costs associated with the workforce initiatives discussed in the
13 testimony of Wendell Dallas.

14 **Q. How did the Company forecast variable compensation?**

15 A. The estimated attrition period cost for variable compensation was determined
16 using the 2018 Budget amount multiplied by 3% which is the average merit
17 increase. The allocation between O&M and capital is based on the payroll
18 capitalization percentages calculated for the 2018 budget.

19 **(d). Bad Debt Expense.**

20 **Q. Please explain how you estimated bad debt expense.**

21 A. Bad debt expense was estimated based on CGC's actual write-off experience for
22 the 24 months ended December 2017. The actual write-off percentage includes
23 only the non-gas portion of customers' bills since the gas portion is recovered

1 through the Company's purchased gas adjustment. The percentage was then
2 applied to the estimated margin, excluding revenues for recovery of damages to
3 the distribution system.

4 **(e). Employee Benefits Expense.**

5 **Q. What are the components of employee benefits expense included in the**
6 **attrition period?**

7 A. Employee benefits expense in the attrition period includes costs associated with
8 401(k) benefits, group health benefits, pension expense, post-retirement benefits
9 other than pensions.

10 **Q. How did the Company estimate 401(k) benefits costs?**

11 A. 401K benefits were forecast based on the 2018 Budget amount multiplied by the
12 average annual merit increase of 3%.

13 **Q. Please describe how group health and other benefits were calculated.**

14 A. Group health benefits were based on the recent collection of data for medical,
15 prescription drug, and behavioral health claims. Historical trends, estimated
16 changes to enrollment, plan design changes, and administrative costs were
17 considered when developing future estimates.

18 **Q. How did you estimate pension and post-retirement expenses for the attrition**
19 **period?**

20 A. The Company's pension and post retirement plans are based on an estimate
21 provided by Mercer, the Company's actuary. The total expense amount was
22 estimated in accordance with Statement of Financial Accounting Standards for
23 Postretirement Benefits Other Than Pensions.

1 **(f). Expenses Based on the General Growth Percentage.**

2 **Q. Please identify and explain the forecast of each element of O&M based on the**
3 **general growth percentage.**

4 A. The general growth percentage is the estimated change in the consumer price
5 index from the end of test period through the end of the attrition period and
6 provided in detail on MFG 43. All expense categories were forecast using the
7 general growth percentage except for fixed and variable compensation, benefits,
8 intercompany billing, and AGL Services Company (“AGSC”) allocation amounts
9 which are based on the 2018 budget and increased by 3% for the six months
10 January – June 2019.

11 **(g). Depreciation and Amortization Expense.**

12 **Q. Please describe your forecast of depreciation and amortization expense.**

13 A. Depreciation and amortization expense was estimated using the composite
14 depreciation rates resulting from a deprecation study as proposed in the direct
15 testimony of Mr. Dane Watson and the estimated average utility plant in service
16 for the attrition period. Depreciation also includes an allocated amount of
17 depreciation expense from AGSC which is based upon December 2017 allocation
18 factors.

19 **(h). Taxes Other Than Income.**

20 **Q. Please identify and explain the forecast of each element of taxes other than**
21 **income.**

22 A. Taxes other than income include property, gross receipts, and net worth tax as
23 well as payroll taxes and allocated taxes other than income. As with depreciation

1 expense a portion of AGSC allocated costs for both the attrition period and the
2 test period are assigned to taxes other than income.

3 **Q. How did the Company estimate its attrition period franchise and payroll**
4 **taxes?**

5 A. Franchise and payroll tax expense calculation utilized estimates based upon the
6 Budget year activity and then applied growth percentages of CPI and 3% (as
7 related to the average annual merit increase), respectively for each tax.

8 **II. DETERMINATION OF RATE BASE**

9 **Q. Would you summarize the information contained in Exhibit RDJ-2, Schedule**
10 **1 supporting the Company's calculation of base revenue requirement?**

11 A. Exhibit RDJ-2, Schedule 1 summarizes the attrition period forecast of the
12 Company's rate base, which includes plant in service, CWIP, pensions,
13 postretirement benefits other than pensions ("PBOP"), working capital, and
14 certain deductions from rate base. The forecasted attrition period rate base is
15 \$159.9 million. The forecast is based on a 13 month average, which normalizes
16 rate base over the attrition period and takes into account any fluctuations during
17 the attrition period.

18 **Q. Please summarize the change between the test period and the attrition period**
19 **average rate base.**

20 A. The primary differences between the test period and attrition periods can be
21 attributed to the following:

- 22 • Utility Plant in Service (including CWIP) \$42 million
- 23 • Pension \$6 million

- 1 • Working Capital & Materials \$5 million
- 2 • Accumulated Depreciation (\$8 million)
- 3 • Accumulated Deferred Inc. Tax \$18 million
- 4 • Excess Deferred (\$21 million)

5 **(a). Utility Plant and CWIP.**

6 **Q. Please describe how you calculated the forecast of Utility Plant in Service and**
7 **CWIP.**

8 A. MFG 69 provides for the estimated average balance of utility plant in service for
9 the attrition period of \$301.4 million and was calculated starting with the actual
10 balance as of June 30, 2017 and subsequently updated for actual balances to
11 December 31, 2017. Additions for January 2018 through December 2018 are
12 based on the Company's budget for 2018. Additions for January 2019 through
13 June 2019 are based on a forecast specifically prepared for this proceeding.
14 Estimated retirements of plant are based on the average retirements for the four
15 years ended June 2017. MFG 69 provides for the estimated average balance of
16 CWIP for the attrition period of \$11 million and is based on the 13 month average
17 balance as of the attrition period utilizing capital expenditures and in-service
18 additions during 2018 and 2019.

19 The Company has also included in utility plant and CWIP an allocated
20 portion of AGSC attrition period forecasted average utility plant and CWIP. The
21 forecast of AGSC utility plant is based on a combination of forecasts and
22 preliminary budget data from the end of the test year through the attrition period
23 and an estimate of retirements based on historic experience. The forecast of

1 AGSC CWIP is based on the 13 month average balance as of the attrition period
2 utilizing capital expenditures and in-service additions.

3 The forecasted balance of AGSC attrition period utility plant and CWIP
4 allocated to CGC is based on the ratio of AGSC expenses allocated to CGC to
5 total AGSC expenses allocated to all AGSC affiliates. This ratio is 1.9% and can
6 be supported by calculations found in MFG 71. Allocation of rate base items
7 from AGSC is necessary to reflect the investment made by AGSC in providing
8 services to CGC.

9 **(b). Pension and Post-Retirement Assets.**

10 **Q. Please describe the pension and post-retirement assets and how it was**
11 **calculated**

12 A. The pension and post-retirement asset amounts are based on statements provided
13 by Mercer, the Company's actuary and included with MFG 50.

14 **Q. Is this the Company proposing a change to how pension expense and the**
15 **associated rate base is treated in this case?**

16 A. Yes. The Company is proposing to recover pension expense in accordance with
17 generally accepted accounting principles ("GAAP"). This is consistent with the
18 manner in which the company recovers OPEB expense and provides a consistent
19 method of recording expense for both GAAP and ratemaking purposes.

20 **(c). Working Capital Requirement.**

21 **Q. Please explain the components of the working capital requirement and how**
22 **each component was calculated.**

1 A. The components of the estimated working capital requirement for the attrition
2 period are included in Schedules 2 and 3 of Exhibit RDJ-2 and were calculated as
3 follows:

4 **(d). Requirement for Lead-lag.**

5 The requirement for lead lag was calculated based on the lead lag study as
6 proposed in the direct testimony of Mr. Michael Adams. There have been no
7 significant changes to the Company's operations that would materially impact the
8 lead lag study. The calculation of the requirement for lead lag is provided in
9 Exhibit RDJ-2, Schedule 3 and supported by MFG 72.

10 **(e). Materials and Supplies.**

11 This calculation is based upon a 13-month average for the test period, June 2016
12 through June 2017. The use of a 13 month average allows for the reflection of
13 any seasonality of these accounts.

14 **(f). Stored Gas Inventory.**

15 The starting point for the calculation of average stored gas inventory was the
16 actual volumes and dollar amounts of inventory as of December 31, 2017. These
17 balances were then projected monthly as follows: From January 2018 through
18 June 2019, injections were forecast based on the Company's current injection
19 schedule, ratably April through October for two of the underground storages,
20 Firm Storage Production Area or FSPA and Firm Storage Market Area or FSMA,
21 and liquefied natural gas storage and May through September for Contract
22 Storage Service or CSS, the third underground storage. Injection volumes in each
23 year are based on the Company's March 31st ending balance and the targeted

1 storage levels entering the winter season. Injections are forecast and managed by
2 AGSC's Gas Supply Group. Withdrawals were forecasted based on the estimated
3 need to utilize stored gas inventory during the winter season while maintaining an
4 adequate level of storage to mitigate any unseen circumstances or events.
5 Withdrawals are also forecast and managed by AGSC's Gas Supply Group.

6 Pricing for the injections was calculated using the NYMEX futures price
7 for natural gas as of October 21, 2017 plus the variable costs incurred to inject the
8 gas into the Company's storage facilities. Pricing for the withdrawals was
9 calculated using the monthly weighted average cost of gas, which was re-
10 calculated each month based on the applicable withdrawals, injections and
11 NYMEX futures price. Additionally, the cost of liquefaction is included in the
12 calculation for the LNG storage facility. The thirteen month average for the
13 attrition period (June 2018 through June 2019) was then calculated using the
14 monthly projected balances of the stored gas inventory.

15 **(g). Deferred Rate Case Costs.**

16 The deferred rate case costs included in MFG 58 represent the estimated external
17 costs that have been or will be incurred in this case including legal, depreciation
18 study, class cost of service, and cost of equity.

19 **(h). Reserve for Uncollectible Accounts.**

20 MFG 69 provides details regarding the average reserve for uncollectible accounts.
21 The average reserve was calculated using the ratio of the average historical
22 reserve balance from January 2016 through December 2017 to the average

1 historical operating margin for the same period. This ratio was then applied to the
2 estimated operating margin for the attrition period.

3 **(i). Customer Deposits and Related Accrued Interest.**

4 Customer deposits are based on the December 2017 13-month average balance,
5 adjusted for the most recent 3-year average growth rate. Accrued interest on
6 customer deposits for the attrition period was based on actual amounts for the
7 period ended December 2017. Support for both calculations are provided for on
8 MFG 69.

9 **(j) Accumulated Depreciation.**

10 MFG 69 provides support for accumulated depreciation. Accumulated
11 depreciation is estimated to be \$127.9 million for the attrition period. The
12 balance of accumulated provision for depreciation was calculated starting with the
13 actual balance as of December 31, 2017. This balance was then projected through
14 the end of the attrition period by adding estimated depreciation expense and
15 subtracting estimated plant retirements and the net cost of removal. Depreciation
16 expense for January 2018 through June 2018 was calculated by multiplying the
17 average plant balances during those time periods by the currently authorized rates.
18 Depreciation expense for July 2018 through June 2019 was calculated by
19 multiplying the average plant balance for the 13 months ending June 2019 by the
20 proposed depreciation rates from the depreciation study supported by the direct
21 testimony of Mr. Watson.

22 **(k). Accumulated Deferred Income Tax.**

1 ADIT was calculated using the account balances as of December 31, 2017, and
2 then projecting through June 2019 for changes to the components of the
3 accumulated deferred income tax balances. The primary component of the ADIT
4 projection is the increase due to the difference in tax depreciation and book
5 depreciation through the end of the attrition period. Tax and book depreciation
6 were estimated based on the existing property balances and estimated changes to
7 those balances. The difference multiplied by the income tax rates results in the
8 change in ADIT. The Company also estimated other ADIT items either based on
9 specific forecasts or historic experience.

10 As discussed previously in my testimony and included with MFG 69 , the
11 effect of the newly adopted Tax Cuts and Jobs Act has also been incorporated in
12 the determination of ADIT. The tax depreciation calculation includes Modified
13 Accelerated Cost Recovery System (“MACRS”) rates for years 2018 and 2019
14 without bonus depreciation, with the exception of \$3.6 million of assets acquired
15 during Q4 2017 and expected to be placed in service during the Q1 2018 that
16 qualify for bonus depreciation. The regulatory liability associated with the
17 Company’s EDIT is also included as a component of ADIT and included in
18 Exhibit RDJ 2-1, line 7. The Calculation of the amortization of the EDIT is
19 included in MFG 61-2, line 27.

20 **(I). Contributions in Aid of Construction and Customer Advances for**
21 **Construction.**

22 Consistent with the Federal Energy Regulatory Commission System of Accounts,
23 the Company includes contributions in aid of construction (“CIAC”) as a

1 reduction to plant balances and net with CWIP. As a result of the purchase of
2 Power Plan, CIAC activity is no longer tracked in separate accounts but instead
3 net with the assets as a part of CWIP included on Exhibit RDJ, Schedule 1.
4 Additionally, The Company does not expect a change to customer advances for
5 construction.

6 **III. COST OF CAPITAL**

7 **Q. Would you summarize the information contained in Exhibit RDJ-3, Schedule 1**
8 **supporting the Company's Cost of Capital?**

9 A. Exhibit RDJ-3, Schedule 1 is the Summary of Estimated Cost of Capital as of June
10 30, 2019. Column 1 provides the capitalization ratios of each component of the
11 capital structure. Column 2 provides the cost of each component of capital, both
12 supported by MFG 81, and column 3 provides the weighted average cost of capital.

13 **Q. Would you explain how you calculated the proposed capital structure?**

14 A. The Company's proposed capital structure is 44.47% long-term debt, 6.30% short-
15 term debt and 49.23% equity. The calculations are shown on Exhibit RDJ-3,
16 Schedule 1 and based on the consolidated capital structure of Southern Company
17 Gas adjusted for non-ratemaking components such as other comprehensive
18 income and the impact of the acquisition by Southern Company.

19 **Q. How did the newly adopted Tax Cuts and Jobs Act impact the capitalization**
20 **ratios of Southern Company Gas?**

21 A. One of the key credit metrics used by ratings agencies to analyze and assess the
22 credit worthiness of companies is the ratio of funds from operations ("FFO") to
23 total debt. One of the items included in FFO is the cash flow impact of deferred

1 income taxes. Under previous tax law, bonus depreciation was allowed at 40% in
2 2018 and 30% in 2019. This provided for immediate depreciation of plant placed
3 in service in 2018 and 2019 at 40% and 30%, respectively of the basis of the plant
4 asset. This provided additional cash in-flows with a corresponding increase to
5 ADIT. The effect of the elimination of bonus depreciation in the Act is to
6 decrease FFO thereby reducing the FFO to total debt ratio. Long-term
7 deterioration of the FFO to total debt ratio would result in a downgrade in credit
8 ratings for Southern Company Gas resulting in higher debt costs for Southern
9 Company Gas and ultimately customers. To mitigate the impact of the Act on
10 Southern Company Gas' credit rating, Southern Company Gas will begin
11 increasing its equity component of the capital structure. This will reduce the long-
12 term debt component and allow Southern Company Gas to maintain its strong
13 credit ratings.

14 **Q. How did the Company determine the cost of short-term debt?**

15 A. The estimated cost of short-term debt is based on Southern Company Gas'
16 projected short-term debt cost of its commercial paper program and credit facility.
17 The projected short-term debt cost includes the monthly average of the forward
18 curve for the 30-day London Inter-Bank Offering Rate ("LIBOR") from
19 September 2017-December 2018, plus the estimated spread between LIBOR and
20 the commercial paper rate and the estimated costs associated with Southern
21 Company Gas's credit facility and other short-term debt related costs.

22 **Q. How did the Company determine the cost of long-term debt?**

23 A. The cost of long-term debt includes the cost of senior notes, medium-term notes,

1 and revenue bonds within the consolidated debt structure of Southern Company
2 Gas, excluding Northern Illinois Gas Company d/b/a Nicor Gas Company
3 (“Nicor”) for the reason that Nicor issues its own long and short term debt. The
4 Company calculated the cost projection using actual interest rates and monthly
5 amortization of debt costs, as well as forecasted debt issuances expected to be
6 made during the period January 1, 2018-June 30, 2019.

7 **Q. How was the cost of common equity determined?**

8 A. The calculation of the cost of common equity of 11.25% is discussed in the pre-filed
9 direct testimony of Dr. James Vander Weide.

10 **Q. Does this conclude your direct testimony?**

11 A. Yes.