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December 2, 2020

Chairman Kenneth C. Hill
ATTN: Ectory Lawless, Docket Clerk
Tennessee Public Utility Commission
502 Deaderick Street, 4th Floor
Nashville, TN 37243

20-00131

Re: Chattanooga Gas Company
Petition for Approval of Pipe Replacement Program

Dear Chairman Hill:

Please find attached for filing a Petition by Chattanooga Gas Company to address a multiyear pipe replacement program and to seek approval for its implementation. The Petition is supported by the direct testimony from Paul Leath accompanied by 4 exhibits and supported by the direct testimony from Archie Hickerson accompanied with 1 exhibit.

The original and four copies of the filing will be placed in the mail to the TPUC Docket Clerk accompanied with a $25.000 check for the filing fee.

A courtesy copy of this filing has been provided to the Consumer Advocate.

Yours truly,

Butler Snow LLP

J.W. Luna

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Enclosures

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I. WITNESS IDENTIFICATION

Q. Please state your name and business address.

A. Archie R. Hickerson, Ten Peachtree Place, Atlanta, Georgia 30309.

Q. By whom and in what position are you employed?

A. I am employed as the Director of Rates and Tariff Administration at AGL Services Company ("AGSC"), a subsidiary of Southern Company Gas. Southern Company Gas is also the is the parent holding company for four natural gas local distribution companies ("LDCs"), including Chattanooga Gas Company, and AGSC provides various services to these LDCs. The other LDCs are in Georgia, Illinois, and Virginia.

Q. What are your duties in your position as Director - Rates and Tariff Administration?

A. I oversee the development, coordination, and review analytical activities related to rates and tariff administration for Chattanooga Gas Company and the other natural gas distribution companies that are subsidiaries of Southern Company Gas.

Q. For whom are you testifying?

A. I am testifying on behalf of Chattanooga Gas Company ("Company" or "CGC").

II. BACKGROUND AND INTRODUCTION

Q. Please summarize your education background and experience.

A. I received a Bachelor of Science degree with a major in mathematics and later accounting from Austin Peay State University in Clarksville, Tennessee. I am a Chartered Global Management Accountant, and I am licensed as a Certified Public

Accountant in the State of Tennessee. I have over 44 years of experience with utility ratemaking, utility accounting, and the regulation of public utilities. Over this period, I have worked for consumers of utilities and others in addition to my work for Southern Company Gas. Prior to becoming Director - Rates and Tariff Administration in 2013, I served as Director- Regulatory Affairs and Planning for AGL Services Company from 2010-2013, Director - Regulatory Affairs for Chattanooga Gas Company and Virginia Natural Gas from 2004-2010, and Manager - Rates for AGL Services Company from 2000-2004. Prior to joining AGL Resources, I was the Director of the Consumer Advocate Division Staff with the Tennessee Office of the Attorney General and Reporter 1994-2000, where I often appeared as an expert witness to present comments on utility cost of service, cost allocation and rate design, and supervised the technical staff, notably in proceedings before the Tennessee Public Service Commission ("TPSC") and the Tennessee Regulatory Authority ("TRA"). I also served on the National Association of State Utility Consumer Advocates' ("NASUCA") Accounting and Tax Committee, and as an observer member of the National Association of Regulatory Utility Commissions' ("NARUC") Staff Subcommittee on Accounts. From 1976-1982, I was a financial Analyst for TPSC, then served as Assistant Director of the TPSC Accounting Division for four years (1982-1986), and later as the Deputy Director of the TPSC's Utility Rate Division for approximately seven years (1987-1994). While employed by the TPSC, I served on the NARUC Staff Subcommittee on Communications, the NARUC Staff Subcommittee on Accounts, and the NARUC's Southern Accounting Taskforce. My work at TPSC, like much

of my later experience, included significant work with compliance and management audits, cost of service, rate design and earnings, and rate investigations of utilities.

Q. Have you previously testified before any state regulatory commission other than the Tennessee Public Service Commission, the Tennessee Regulatory Authority, or the Tennessee Public Utility Commission?

A. Yes. I have testified before the Georgia Public Service Commission, the Virginia State Corporation Commission, and the Illinois Commerce Commission.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide the Commission with an overview of the rate impact of CGC's proposed pipeline replacement program ("PRP") and CGC's use of the ARM process as the PRP cost recovery mechanism.

Q. Are you including any exhibits in connection with your testimony

A. Yes. Exhibit ARH-1.

III. PRP COST AND CUSTOMER RATE IMPACTS

Q. Why is CGC proposing the pipeline replacement program?

A. As discussed by Mr. Leath, , after the Commission's Natural Gas Pipeline Safety Division conducted an investigation, CGC was requested to develop and implement a five to seven-year plan for the removal of all Aldyl-A pipe from its system. In responding to this investigation, CGC evaluated the information regarding Aldyl-A pipe as well as other vintage plastic pipe. The Company also identified additional inadequately coated steel considered to be at risk and requiring replacement sooner

than its normal life expectancy. After discussions with the Commission's Staff, CGC developed proposals to replace the Aldyl-A. other vintage places, and inadequately coated steel pipe over five-year, seven-year, ten-year, and fifteen-year periods. My Exhibit ARH-1 shows the projected impact on the average residential (R-1) customer's annual and monthly bill under each of the proposals.

Q. How did CGC calculate the cost of its PRP?

A. The Company's engineering and budgeting teams have a lot of experience in assessing pipe replacement costs, especially given the previous cast iron and bare steel replacement program as well as from the ongoing Distribution Integrity Management Program ("DIMP"). Based upon the Company's usual assessment and budgeting processes, the cost to replace the 73 miles of pipe described by Mr. Leath is estimated to be approximately $118 million.

Q. How does this $118 million cost impact CGC's customers?

A. We typically assess customer rate impact on our R-1 customers since this is by far the largest class of customers. For this purpose, I have prepared Exhibit ARH-1.

Q. Please describe what Exhibit ARH-1 shows.

A. The objective is to show, in isolation, the impact on R-1 rates of the PRP. Exhibit ARH-1 reflects only the increase in the revenue requirement that is projected to result for the investment related to the replacement of the Aldyl-A, other vintage plastic, and the bare or inadequately coated steel pipe. There are no adjustments for growth in customers, volumes, or operating expenses included in the analysis. Other than the five-year analysis, it is assumed that the PRP investment the first few years would be less than the average cost of dividing the $118 million out

evenly due to other priorities discussed by Mr. Leath. The analysis does reflect the increase in depreciation, the increase in the investment net of accumulated depreciation and deferred income tax, the return on investment, and the resulting increase in income tax as a result of the investment in new pipe. The following are the assumptions adopted in the analysis:

Average Annual Residential Usage Per Customer	619.08 Therms
Average Annual Residential Non-Gas Bill-Current Rates	$293.54
Total Sales and Transportation (Non-Gas Revenue) Docket 20-00049	$38,628,817
Authorized Rate of Return	7.12%
Total Investment in Pipe Replacement Program	$118,000,000
Pipe Depreciation Rate (Book)	2%
Tax Depreciation	MACRS 20Yr. Life
Federal Income Tax Rate	21%
Tennessee Excise Tax Rate	6.5%
Composite Income Tax Rate	26.135%
Late Fee/Uncollectible Net Factor	0.46131%
Rate Increase to be assigned to Rate Schedules on a Uniform % increase basis as adopted in CGC's 2020 ARM filing.	

Q. What is the impact on the average residential customer's annual bill assuming the adoption of a five-year replacement program under these assumptions?

A. As shown on Exhibit A-1, over the five-year program, the average Residential Customer's annual bill is projected to cumulatively increase $88.34 or $7.36/month. The Average annual bill is projected to increase from $293.54 to

$381.88 while the average monthly bill is projected to increase from $24.46 to $31.77 over the five-year period.

Q. What is the projected impact assuming a seven-year program is adopted?

A. Over a seven-year program, the average Residential Customer's annual bill is projected to cumulatively increase $87.10 or $7.26/month. The Average annual bill is projected to increase from $293.54 to $380.64 while the average monthly bill is projected to increase from $24.46 to $31.72 over the seven-year period.

Q. What is the projected impact assuming a ten-year program is adopted?

A. Similar to the seven-year program, the average Residential Customer's annual bill is projected to cumulatively increase $85.46 or $7.12/month. The average annual bill would increase from $293.54 to $379.00 and the monthly charge would increase from $24.46 to $31.58. While the increase in rates are similar, the speed of the increase slower under the ten-year program.

Q. Is the projected impact similar for a fifteen-year program?

A. Yes. The increase in rates is more gradual since the investment is spread over fifteen years. The total cumulative increase in the average Residential Customer's annual bill is $79.31 to $372.85 and the monthly charge is projected to increase $6.61/month to $31.07. As shown on Exhibit ARH-1 to cumulative impacts for each of the five-year, seven-year, ten-year, and the fifteen-year programs are very similar, assuming 100 percent of the $118 million cost is recovered exclusively through the PRP, which as Mr. Leath discusses in more detail, may not occur due to some of these replacements occurring through the DIMP process. As the length of the program is increased, the amount of accumulated depreciation and

accumulated deferred income tax results in a somewhat lower impact on the Customers' bills. The primary difference is not the ultimate amount of the increase, but the speed that the rates increase.

IV. COST RECOVERY THROUGH THE ANNUAL ARM DOCKET

Q. How does CGC propose to recover the costs of its PRP?

A. It is important to first note that CGC is not seeking the recovery of any costs in this docket. Rather, CGC believes that the most efficient and cost-effective way for CGC's PRP costs to be evaluated is through the annual ARM docket process approved by the Commission in Docket No. 19-00047 and the Commission's Order Approving Settlement Agreement issued October 7, 2019, along with any subsequent modifications to CGC's ARM that may be approved prior to each year's annual ARM filing. By utilizing the ARM process, the Commission will be utilizing an established and well documented process. With the ARM, the Commission will be evaluating for cost recovery only the actual pipe replacement expenditures for the prior year. By approving this Petition, the Commission will be approving the appropriateness of replacing the identified vintage plastic and bare steel pipe, the number of years over which such pipe should be recovered, and that actual costs be recovered through each year's ARM case.

Q. How would the adoption of the pipe replacement program impact CGC's annual ARM filings?

A. Since the pipe replacement capital expenditures would be recorded in the plant accounts on CGC's books as are other capital expenditures, the investment would

naturally flow into the ARM rate base, as would the related accumulated depreciation and accumulated deferred income tax. The depreciation on the increased plant balances would also flow through the income statement and be included in the ARM filing. The adoption of a pipe replacement program does not require that the ARM be modified.

Q. Is CGC proposing that the PRP costs be recovered in any particular manner through the ARM?

A. No. CGC recognizes that under the ARM Order, there is no specific rate design that is specified. Rather, the ARM Order allows CGC, any parties, or the Commission to propose a rate design, with the Commission picking an appropriate rate design for the cost recovery methodology based upon the record presented in each individual ARM case. While my Exhibit ACH-1 assumes for comparison purposes that the rate increase is applied to the customer base charge, that is illustrative only. In requesting that CGC be allowed to utilize the ARM process, the actual cost recovery mechanism for the approved PRP costs shall be addressed as a part of CGC's rate design proposal in each ARM Docket.

Q. Will CGC be providing any additional documentation in its annual ARM filing to support its PRP costs?

A. Yes. CGC shall provide one or more additional PRP-specific schedules that clearly identify the pipeline replaced and the actual associated costs for that replacement for the calendar year. In addition, while CGC is already obligated under its ARM to provide its budget and other construction data for the next year, CGC will further supplement the budget filing as appropriate to separately itemize the specific

budgeted PRP expenditures with information indicating any variance from the amounts scheduled under the approved PRP. Further, in the ARM filing CGC shall provide a PRP variance report reflecting any increases or decreases in the mileage replaced each year and such additional information regarding why the mileage increased or decreased. If the Commission requires any further additional documentation be provided, either in this docket or as a result of an annual rate review in one of CGC's ARM dockets, then CGC shall certainly comply with such requirements

V. CONCLUSION.

Q. Do you have any concluding remarks?

A. My testimony provides the overall estimated cost of the PRP and the estimated R-1 customer impacts assuming the different periods of time proposed for the PRP. In addition, my testimony supports the recovery only of actual costs each year through the current CGC ARM process that looks at actual, historic costs for the prior calendar year. By authorizing the replacement program, the number of years in which the identified pipe should be replaced, and CGC to recover those costs through the annual ARM process, the Commission will have taken an significant step toward improving the safety and reliability of CGC's system.

Q. Does this conclude your direct testimony?

A. Yes.

5 Year Replacement Program

Year	Projected Pipeline Replacement Capital Expenditure	Estimated Annual Increase In Avg R-1 Annual Bill	Estimated Cumulative Increase In Avg R-1 Annual Bill	Estimated Avg Cumulative Monthly Increase
2021	$23,600,000	$9.46	$9.46	$0.79
2022	$23,600,000	$18.66	$28.12	$2.34
2023	$23,600,000	$18.14	$46.26	$3.86
2024	$23,600,000	$17.65	$63.91	$5.33
2025	$23,600,000	$17.17	$81.08	$6.76
2026	$0	$7.26	$88.34	$7.36
Total	$118,000,000		$88.34	$7.36

7 Year Replacement Program

Year	Projected Pipeline Replacement Capital Expenditure	Estimated Annual Increase In Avg R-1 Annual Bill	Estimated Cumulative Increase In Avg R-1 Annual Bill	Estimated Avg Cumulative Monthly Increase
2021	$8,000,000	$3.21	$3.21	$0.27
2022	$15,000,000	$9.13	$12.34	$1.03
2023	$15,000,000	$11.68	$24.02	$2.00
2024	$15,000,000	$11.36	$35.38	$2.95
2025	$25,000,000	$15.07	$50.45	$4.20
2026	$22,000,000	$17.46	$67.91	$5.66
2027	$18,000,000	$14.19	$82.10	$6.84
2028	$0	$5.00	$87.10	$7.26
Total	$118,000,000		$87.10	$7.26

10 Year Replacement Program

Year	Projected Pipeline Replacement Capital Expenditure	Estimated Annual Increase In Avg R-1 Annual Bill	Estimated Cumulative Increase In Avg R-1 Annual Bill	Estimated Avg Cumulative Monthly Increase
2021	$1,800,000	$0.72	$0.72	$0.06
2022	$4,400,000	$2.47	$3.19	$0.27
2023	$4,800,000	$3.60	$6.79	$0.57
2024	$8,400,000	$5.10	$11.89	$0.99
2025	$17,000,000	$9.85	$21.74	$1.81
2026	$16,900,000	$13.00	$34.74	$2.90
2027	$16,800,000	$12.55	$47.29	$3.94
2028	$16,000,000	$11.86	$59.15	$4.93
2029	$16,000,000	$11.23	$70.38	$5.87
2030	$15,900,000	$10.89	$81.27	$6.77
2031	$0	$4.19	$85.46	$7.12
Total	$118,000,000		$85.46	**$7.12**

15 Year Replacement Program

Year	Projected Pipeline Replacement Capital Expenditure	Estimated Annual Increase In Avg R-1 Annual Bill	Estimated Cumulative Increase In Avg R-1 Annual Bill	Estimated Avg Cumulative Monthly Increase
2021	$1,800,000	$0.72	$0.72	$0.06
2022	$4,400,000	$2.47	$3.19	$0.27
2023	$4,800,000	$3.60	$6.79	$0.57
2024	$8,000,000	$4.94	$11.73	$0.98
2025	$9,000,000	$6.49	$18.22	$1.52
2026	$9,000,000	$6.72	$24.94	$2.08
2027	$9,000,000	$6.53	$31.47	$2.62
2028	$9,000,000	$6.37	$37.84	$3.15
2029	$9,000,000	$6.19	$44.03	$3.67
2030	$9,000,000	$6.03	$50.06	$4.17
2031	$9,000,000	$5.87	$55.93	$4.66
2032	$9,000,000	$5.72	$61.65	$5.14
2033	$9,000,000	$5.55	$67.20	$5.60
2034	$9,000,000	$5.40	$72.60	$6.05
2035	$9,000,000	$5.24	$77.84	$6.49
	$0	$1.47	$79.31	$6.61
Total	$118,000,000		$79.31	**$6.61**