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AOBA
APARTMENT AND OFFICE BUILDING ASSOCIATION OF METROPOLITAN WASHINGTON

August 14, 2020

By Electronic Filing

Brinda Westbrook-Sedgwick
Commission Secretary
D.C. Public Service Commission
1325 G Street, N.W., Suite 800
Washington, D.C. 20005

Re: Formal Case No. 1162
In the Matter of the Application of Washington Gas Light Company
for Authority to Increase Existing Rates and Charges for Gas Service

Dear Ms. Westbrook-Sedgwick:

Enclosed for filing is the Direct Testimony of Bruce R. Oliver and Timothy B. Oliver on behalf of the Apartment and Office Building Association of Metropolitan Washington in the above-captioned proceeding.

If you have any questions, please contact me at ffrancis@aoba-metro.org or call me on my cell at (301) 518-9700. Thank you for your attention in this matter.

Sincerely,

Frann G. Francis

Frann G. Francis, Esq.

cc: All parties of record

BOMA International

1025 Connecticut Avenue, NW Suite 1005 Washington, DC 20036
p: 202.296.3390 f: 202.296.3399
www.aoba-metro.org

NAA NATIONAL APARTMENT ASSOCIATION

AOBA (A)

Before the

PUBLIC SERVICE COMMISSION
OF THE
DISTRICT OF COLUMBIA

IN THE MATTER OF	)	
	)	
The Application of Washington Gas Light	)	
Company for Authority to Increase Existing	)	**Formal Case No. 1162**
Rates and Charges for Gas Service	)	

VOLUME I OF I: DIRECT TESTIMONY OF AOBA WITNESS BRUCE R. OLIVER

August 14, 2020

Apartment and Office Building Association
of Metropolitan Washington
1025 Connecticut Ave, NW, Suite 1005
Washington, D.C. 20036
(202) 296-3390

FRANN G. FRANCIS
EXCETRAL K. CALDWELL
NICOLA Y. WHITEMAN
Counsel for the Apartment and
Office Building Association of
Metropolitan Washington
1025 Connecticut Ave., NW, Suite 1005
Washington, D.C. 20036
(202) 296-3390

DIRECT TESTIMONY OF BRUCE R. OLIVER
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DIRECT TESTIMONY OF BRUCE R. OLIVER
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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Bruce R. Oliver. My business address is 7103 Laketree Drive Fairfax Station, Virginia, 22039.

Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A. I am employed by Revilo Hill Associates, Inc., and serve as President of the firm, and I manage the firm's business and consulting activities. I direct the preparation and presentation of economic, utility planning, and policy analyses for clients.

Q. ON WHOSE BEHALF DO YOU APPEAR IN THIS PROCEEDING?

A. I appear on behalf of the Apartment and Office Building Association of Metropolitan Washington (AOBA).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony in this proceeding addresses issues relating to the Washington Gas Light Company ("Washington Gas," "WG" or "the Company")[1] Application for

[1] To avoid confusion between Washington Gas Light Company and other affiliates under the WGL Holdings umbrella, this testimony uses the acronym "WG" to refer to Washington Gas. The acronym "WGL" is reserved for WGL Holdings and affiliates that include the acronym in their names.

authority to increase its existing rates and charges for gas service. This testimony responds to portions of the pre-filed direct testimony and schedules of witnesses O'Brien, Tuoriniemi, Gibson, White, Raab, as well as the Supplemental Direct Testimonies of witnesses Tuoriniemi, Gibson, and Lawson.

Q. PLEASE SUMMARIZE YOUR EXPERIENCE AND QUALIFICATIONS.

A. I am an economist specializing in the areas of utility rates, energy, and regulatory policy matters. I have over 40 years of experience in the analysis of energy and utility policy issues. That experience includes employment in management positions in the rate departments of two major utilities (the Pacific Gas and Electric Company and the Potomac Electric Power Company), as well as service in management and senior staff positions for three firms engaged in energy, utility and public policy consulting. Those firms include: Revilo Hill Associates, Inc., the Resource Dynamics Corporation, and ICF Incorporated.

As a consultant, I have served a diverse group of clients on issues encompassing a wide range of energy and utility related activities. My clients have included state regulatory commissions, utilities, state Attorneys General, state-funded consumer advocacy groups, municipal governments, hospitals and universities, federal agencies, commercial and industrial energy users, suppliers of equipment and services to utility markets, residential consumer intervenors, the Electric Power Research Institute (EPRI), and the World Bank. Projects for those clients have included work on gas, electric, water, and wastewater utility

regulatory proceedings, as well as analyses and forecasts of supply, demand, and prices for utility and non-utility energy markets. I have also assisted a number of commercial, institutional, and industrial energy users in the negotiation of a wide range of energy service contracts, including contracts for the procurement of competitive electricity and natural gas services.

To date, I have filed more than 400 separate pieces of testimony in over 250 proceedings before regulatory commissions in 26 jurisdictions. The regulatory jurisdictions in which I have testified include: the states of Pennsylvania, New York, New Jersey, Maryland, Delaware, Virginia, North Carolina, Rhode Island, Vermont, Connecticut, Massachusetts, Ohio, Illinois, Wisconsin, South Dakota, Arizona, New Mexico, Utah, and California, as well as the District of Columbia, Guam, the Virgin Islands, the City of Philadelphia, the Provence of Alberta, Canada, and the U.S. Federal Energy Regulatory Commission (FERC). My testimonies in those jurisdictions have addressed such topics as industry restructuring, utility mergers and acquisitions, divestiture of generation assets, sighting of energy facilities, utility revenue requirements, costs of capital, capacity planning, cost of service allocations, rate design, rate unbundling, incentive rate-making, revenue decoupling, capacity expansion planning, demand-side management, energy conservation, contracts for non-tariff service provided to large energy users, natural gas procurement practices, gas cost and fuel cost adjustment mechanisms, gas transportation service, interruptible service, natural gas processing, competitive bidding, economic development rates, load re-

search, load forecasting, weather normalization, metering, and fuel pricing issues. I have also testified before legislative committees in Virginia, Maryland, and the District of Columbia.

Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THIS COMMISSION?

A. Yes, I have appeared before this Commission in a number of prior gas and electric rate proceedings. The prior WG proceedings before this Commission in which I have testified include: Formal Case Nos. 787, 840, 845, 890, 922, 934, 989, 1016, 1054, 1079, 1093, 1115, 1137, 1142, and 1154.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN PROCEEDINGS IN OTHER JURISDICTIONS RELATING TO WASHINGTON GAS LIGHT COMPANY?

A. Yes, I have testified in numerous Washington Gas Light Company cases before the Maryland Public Service Commission (MDPSC) and the Virginia State Corporation Commission (VASSC). The Washington Gas Light Company proceedings in Maryland in which I have testified include: Case Nos. 7649, 8060, 8119, 8191, 8545, 8819, 8920 (Phases I and II), 8959, 8991, 9104, 9158, 9267, 9322, 9335, 9433, 9449, 9481, and 9605. The WG proceedings in Virginia in which I have submitted testimony include: Case Nos. PUE 830008, PUE 830029, PUE 880024, PUE 900016, PUE 910047, PUE 920041, PUE 940031, PUE 960296, PUE 980812, PUE 000584, PUE 2002-00364, PUE 2003-00603, PUE 2005-00010, PUE 2006-00059, PUE 2010-00139, PUE-2016-00001, and PUR

2018-00080. In total, I have participated in a total of more than 50 Washington Gas rate proceedings in DC, MD, and VA.

Q. WERE THIS TESTIMONY AND ACCOMPANYING EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION AND CONTROL?

A. Yes, they were.

II. OVERVIEW AND SUMMARY

Q. WHAT IS YOUR OVERALL ASSESSMENT OF THE COMPANY'S FILING IN THIS PROCEEDING?

A. Washington Gas' revenue increase request in this proceeding is driven by: (a) soaring costs for leak response and leak repair activities; and (b) an unjustifiably high requested ROE.

Washington Gas' leaks and leak management costs are **out of control** both in the District of Columbia and system-wide! Since 2010 the annual numbers of **hazardous leaks** on the Company's distribution system in the District of Columbia have increased **128%**.[2] The Company's DC distribution system also has the third highest ratio of leaks per mile of distribution mains

[2] Formal Case Nos. 1115, 1142, and 1154, Exhibit AOBA (A), page 30, lines 7-9, Figure 3. Figure 2 in that testimony also indicates that total leaks on the Company's District of Columbia distribution system have increased sharply over the period from 2010 to 2019.

among large gas distribution utilities in the U.S.[3] The Company's significantly increased leak rates in all three of its service jurisdictions have also contributed to a rise in its Unaccounted for Gas percentage. The Company's reported Unaccounted for Gas percentage for 2019 was **4.3%**.

Twice in the last three years, Washington Gas has had to declare a "***catastrophic incident***" and seek assistance from other gas utilities to meet its leak response and leak repair requirements.[4] Furthermore, the high volume of leak response and repair requirements experienced by the Company has caused its costs for Overtime wages paid to Union workers to more than **triple** over the last four years, rising from $5.25 million in 2015 to **$16.48 million** for 2019.[5] Over the same period Washington Gas has had the lowest replacement rate for old, leak-prone cast Iron mains for any major gas distribution system in the U.S. That low rate of pipe replacement is particularly difficult to rationalize when consideration is given to: (1) the fact that nearly **one-third** of its distribution system in the District of Columbia relies on very old Cast Iron mains,[6] most of which were installed pre-1940 (i.e., than more than 80 years ago) and have

[3] Based on annual gas distribution utility reports filed with the Pipeline and Hazardous Materials Safety Administration ("PHMSA") for 2019 Washington Gas had **41.77** leaks per 100 miles of distribution mains. Among 198 large gas distribution systems (i.e., systems with more than 500 miles of mains and over 25,000 services), only Consolidated Edison of New York and Keyspan Energy Delivery – New York City had higher ratios of hazardous leaks per 1,000 miles of distribution mains. The average for the industry was **3.26** hazardous leaks per 1,000 miles of mains. Thus, WG's hazardous leaks per 1,000 miles in the District of Columbia in 2019 were nearly **13 times** the national average. See Formal Case Nos. 1115, 1142, and 1154, Exhibit AOBA (A), page 27, Table 4.

[4] WG's response to AOBA Data Request 8-9.c., and the Attachment to that response, page 3 of 3.

[5] WG's Response to OPC 4-17a(i), page 1 of 10.

[6] See WG's response to AOBA Data Request 3-2, Attachment 1. WG's 2019 Annual Report to the Pipeline and Hazardous Materials Safety Administration ("PHMSA") for its District of Columbia distribution system indicates that as of the time of that report Washington Gas' distribution system in DC had 1,223 total miles of mains of which 405 miles were Cast Iron mains.

exceeded their expected useful lives; and (2) old Cast Iron mains represent over 90% of the Company's 100 main segments in the District for which Washington Gas has found the highest Optimain scores.

The Company's need to address significantly increased leak response and leak repair requirements is draining its resources and further constraining its ability to accelerate its pipe replacement activities. In fact, over the last nine years WG has averaged only 2.5 miles of Cast Iron main replacement per year.[7] At that rate it would take the Company another 80 years to replace all of its Cast Iron mains. The only element of WG pipe replacement activity that has been "*accelerated*" is its recovery of costs. These observations are **not** reflective of a well-managed system.

With respect to the Company's ROE, Washington Gas asks for the Commission's approval of a 10.40% return on equity. That is a whopping **115 basis points** above the 9.25% ROE level that this Commission approved for Washington Gas in Formal Case No. 1137 and reflects no consideration of gradualism in the adjustment of authorized ROEs. It is also 120 basis points above the 9.20% authorized ROE established for Washington Gas in the Company's most recent base rate case in Virginia that was decided on December 20, 2019.[8] Moreover, considering that interest rates have fallen and the risk free cost of debt (as suggested by the yields on 30-Year U.S. Treasury

[7] See AOBA's response to Staff Data Request 1-13 in Formal Case No. 1154, submitted on July 23, 2020.

[8] Virginia State Corporation Commission, Case No. PUR-2018-00080, FINAL ORDER, dated December 20, 2019, page 25.

bonds) have fallen to near zero, the dramatic increase in WG's authorized ROE that the Company requests in this proceeding would be unconscionable, even without consideration of Covid-19 impacts. Considering the effects of the Covid-19 pandemic on the District's economy, as well as the Company's failure to stem the rapid growth in hazardous leaks on its DC distribution system, an increase in the equity return for WG's sole shareholder, AltaGas, cannot be justified.

A. Summary of Findings

Q. ARE THERE OTHER KEY FINDINGS THAT RESULT FROM YOUR REVIEW OF WG'S FILING IN THIS PROCEEDING THAT YOU WOULD LIKE TO NOTE AT THIS TIME?[9]

A. Yes. The additional findings of note include the following:

Covid-19 Impacts

- Due to the seasonality of gas use and the timing of the start of Covid-19 pandemic restrictions in this area, WG has been somewhat insulated from the impacts of Covid-19 to date.

[9] The following is not offered as a comprehensive listing of all findings presented in this testimony nor is it intended to suggest the relative importance of findings presented herein. Omission from this listing of any finding set forth elsewhere in this testimony is not intended to suggest that such a finding is of lesser importance or can be ignored.

- The Commission has already provided Washington Gas a means of recovering incremental Covid-19 related costs.

- Small C&I Heating and Non-Heating customers are generally perceived to be among the customers most severely impacted by the Covid-19 pandemic. Yet, they represent less than 2% of WG's annual throughput and annual base rate revenues.

- Owners and managers of apartment and office buildings in the District are presently restricted by the District government from raising rents and evicting tenants who are in arrears in their rent payments. As a result, they have no ability to recover the costs of rate increases at this time. Moreover, the impacts those restrictions on the finances of apartment and office buildings in the District are likely to extend well beyond the period of the pandemic.

WG's Proposed RNA

- As we have seen with Pepco, a revenue decoupling mechanism does not function well in the context of major economic upheaval or a global pandemic.

- WG's proposed Revenue Normalization Adjustment Mechanism ("RNA") does not provide the Company the ability to segregate impacts on gas use resulting from governmentally imposed mandates from variations in usage resulting from weather fluctuations and/or voluntary energy efficiency/conservation measures.

- Although Witness Raab characterizes WG's proposed RNA mechanism as a "*non-volumetric rate design*" the Company's proposal is designed to recover costs on a **volumetric** basis.

- As presented in the Company's proposed tariff pages, WG's suggested $0.05 per therm cap that Washington Gas proposes for monthly rate adjustments under its requested RNA mechanism is inappropriately high. It also only applies to the "Current Factor" and thereby fails to constrain either rate adjustments resulting from the "Reconciliation Factor" or the combined impact of the "Current Factor" and the "Reconciliation Factor."

- The Company's proposed RNA tariff pages do not clearly specify that monthly RNA adjustments would be computed separately for each subclass of the Company's broader Residential, C&I and

GMA classes such that heating and non-heating customers within each class would experience different rate adjustments.

- WG's proposed RNA does not provide for the tracking of customer movements between subdivisions of the C&I and GMA rate classes. Thus, WG's proposal creates the potential that the Company could inappropriately profit from customers migration that has little or no impact on its costs of providing service but would significantly increase its authorized revenues.

- WG's proposed customer growth adjustment to Peak Usage Therms lacks sound analytical foundation.

- The financial impacts that Witness Raab estimates would result if the Company's proposed RNA is not accepted by the Commission are substantially inflated by elements of the Company's revenue increase request in this proceeding that should not be approved with or without approval of the Company's requested RNA mechanism.

WG's Normal Weather Study

- WG's Normal Weather Study uses a significantly altered assessment of "normal" heating degree days.

- Regardless of the method used to estimate normal weather heating degree days the determination of normal weather HDDs is not a precise process.

- The downward adjustment that Washington Gas proposes to its determination of normal weather Heating Degree Days ("HDDs") in this proceeding is inappropriate and unwarranted.

- The methods WG uses to estimate normal weather therm use by rate class are, at best, questionable from an analytic and statistical perspective and warrant further investigation by this Commission.

Other Issues

- The Company's treatment of Special Contract service effectively requires its Firm gas service customers in the District to subsidize service to customers served under Special Contracts.

- WG's Unaccounted-for Gas percentage is significantly above the industry average for large gas distribution systems.

- The Commission's current ratemaking approach for addressing Unaccounted-for Gas allowance provides the Company no incentive to limit increases in its Unaccounted-for Gas Percentage.

WG's Depreciations Study

- Washington Gas' Depreciation Study does not properly recognize the age and expected lives of the Cast Iron mains in the Company's District of Columbia distribution system.

- The average age of the Company's Cast Iron distribution mains in the District already exceeds the sum of the projected average service life for those mains and the estimated remaining life for the Company's Cast Iron mains.

- The parameters used for Cast Iron mains in WG's Depreciation Study are inconsistent with the Company's pipe replacement plans.

B. Summary of Recommendations

Q. WHAT ACTIONS DO YOU RECOMMEND THAT THE COMMISSION TAKE WITH RESPECT TO THE COMPANY'S PROPOSALS IN THIS PROCEEDING?

A. Major elements of the recommendations that I present in this testimony are summarized below. This summary is not necessarily comprehensive, and thus, omission from this summary of any recommendation that appears elsewhere in this testimony is not intended to suggest that it is of lesser importance or priority.

Covid-19

1. The Commission should refrain from increasing gas service rates for owners and managers of apartments and office buildings as long as they are restricted by law from increasing rents and/or evicting tenants for non-payment of rents.

2. The Commission should establish a Task Force dedicated to reviewing the impacts of the Covid-19 pandemic and how to best address impacted customer groups, review the adequacy of existing financial relief programs and evaluate potential new programs, and set standards for the identification of Covid-19 related incremental costs.

WG's Proposed Revenue Normalization Adjustment

3. The Commission should find that WG's proposed Revenue Normalization Adjustment ("RNA") mechanism is inappropriate for implementation in the context of the economic dislocations resulting from the Covid-19 pandemic.

4. The Commission should find that WG's proposed application of monthly RNA rate adjustments on a two-month lagged basis is inappropriate for a utility such as Washington Gas that has large seasonal fluctuations in gas use and, as a result, could significantly erode the predictability of billed charges and greatly impede the ability of individual customers to budget for gas service costs.

5. The Commission should find that individual customers and individual customer classes should not be held responsible for revenues not collected by WG as a result of requirements for reduced energy use legislated by the DC City Council.

6. The Commission should reject the Company's proposed Revenue Normalization Adjustment ("RNA") mechanism. However, if a RNA

mechanism is adopted, rate adjustments should only be made on an annual basis with rate adjustments spread proportionally overall months.

7. The Commission should reject the Company's RNA as inequitable and not well conceived. If contrary to this recommendation, the Commission elects to approve a RNA mechanism for Washington Gas, its application should be limited to the Company's Residential class as the Company's proposal is not appropriately applied to classes of customers that include customers with diverse gas usage characteristics.

8. The Commission should find that the tariff language WG proposes for its RNA mechanism is inadequate to ensure an open and transparent rate adjustment process.

9. The Commission should find that WG's proposed RNA mechanism is primarily a risk mitigation strategy for the Company that provides no benefit to District ratepayers.

10. If the Commission elects to approve the Company's proposed RNA, it should require that monthly RNA rate adjustments be shown as a

separate line item on customers' bills to facilitate customers understanding of their bills and the relationship of amounts billed to the Company's published base rate charges.

WG's Normal Weather Study

11. The Commission should reject the Heating Degree Day estimate presented by WG Witness Raab, and instead it should approve the use of 10-year average HDDs as a more straightforward, understandable, and gradual approach to recognition of HDD trends in the setting of rates for WG's gas service in the District.

12. The Commission should retain an independent statistical expert experienced in weather normalization analyses to objectively assess the methods WG employs to compute normal weather gas use by rate class.

13. The Commission should find that the Peak Usage Therms WG employs to design rates and allocate costs to its GMA Heating and GMA Non-Heating classes **substantially** overstate historical levels of billed Peak Usage Therms for those classes.

Other Issues

14. The Commission should find that WG's treatment of Special Contract customers shifts approximately **$2.4 million** in cost responsibilities from non-tariff Special Contract customers to customers who utilize the Company's regulated gas tariff services.

15. The Commission should find WG's proposed application of an inflation factor to its overall non-labor expenses inappropriate and not reflective of the factors that drive those costs.

16. The Commission should provide incentives for Washington Gas to reduce its Unaccounted-for Gas percentage. The incentives should take two forms. First, the Commission should set a cap on the permissible percentage of Unaccounted-for Gas for Washington Gas, where the permissible level should initially be set at the Company's historic average Unaccounted-for Gas percentage for the years 2012-2017. Second, WG should be rewarded for achieving actual Unaccounted-for Gas percentages more than 10 basis points below the established cap as explained herein.

17. The Commission should penalize Washington Gas for further increases in its annual numbers of hazardous leaks on its District of Columbia Distribution system. However, the Commission should also reward the Company for achieved reductions of more than 10% below its three-year average annual number of total hazardous gas leaks.

WG's Depreciation Study

18. The Commission should find that Washington Gas' Depreciation Study does not appropriately reflect the aging of the Cast Iron distribution mains that constitute nearly one-third of the total miles of mains that are presently part of the Company's District of Columbia distribution system.

19. Washington Gas should be required to place funds provided as costs of removal into a reserve account to assist in the funding of pipe replacement activities.

III. DISCUSSION OF ISSUES

Q. HOW IS YOUR DISCUSSION OF ISSUES RELATING TO WG'S DIRECT TESTIMONY AND SCHEDULES IN THIS PROCEEDING ORGANIZED?

A. My Discussion of Issues is presented in five sections:

Section A	Discusses the impacts of the Covid-19 pandemic on the Commission's considerations in this proceeding.
Section B	Presents my assessment of the Revenue Normalization Adjustment ("RNA") mechanism that Washington Gas proposed in this proceeding;
Section C	Examines the Company Normal Weather Study in this proceeding;
Section D	Critiques elements of the Company's revenue requirements calculations;
Section E	Addresses specific elements of the Depreciation Study that Witness White presents on behalf of Washington Gas.

A. THE IMPACTS OF COVID-19 ON THIS PROCEEDING

Q. HAS THE OPERATIONS OF WASHINGTON GAS IN THE DISTRICT OF COLUMBIA BEEN IMPACTED BY THE COVID-19 PANDEMIC?

A. Yes. It is hard to imagine any business in the District that has not been impacted by the Covid-19 pandemic.

Q. IS THERE REASON TO ASSESS THAT THE IMPACTS OF COVID-19 ON WASHINGTON GAS HAVE BEEN MORE SEVERE THAN THOSE FELT BY OTHER COMMERCIAL OR PUBLIC SERVICE ENTITIES THAT OPERATE IN THE DISTRICT OF COLUMBIA?

A. No. To the contrary, it would appear that the seasonality of gas use may have actually served to insulate Washington Gas from some of the impacts of Covid-19. The largest portion of the winter of 2019-20 was completed before the worst of the Covid-19 impacts on business activity and individual incomes were experienced. Although WG may have experienced increases in late payments and arrearages, a substantial portion of its winter revenues were billed and collected before Covid-19 resulted in special actions by local and federal governments to aid individuals and businesses whose activities and incomes impact by Covid-19 restrictions. As the District's Chief Financial Officer, Jeffrey S. DeWitt observed:

> "*On February 1st, when we were looking at the revenue, our sales taxes were up 10 percent, more than projected, our income taxes were up 6 percent. The economy was really, really, humming along."* [10]

The District did not begin to impose Covid-19 related restrictions on individual and business activities until the second week of March 2020. Moreover, this Commission has already acted to provide Washington Gas a

[10] The Washington Post, "*Local governments in the D.C. region revise budgets, halt projects to blunt economic impact of Covid-19*," April 8, 2020,

means of recovering incremental Covid-19 related costs. By contrast, owners and managers of apartment and office buildings in the District are restricted from raising rents and evicting tenants and have been provided no offer of a mechanism for future recovery of Covid-19 related incremental costs.

Furthermore, small C&I Heating and Non-Heating customers who are generally perceived to be among the customers most severely impacted by the Covid-19 pandemic, yet they represent less than 2% of WG's annual throughput and annual base rate revenues. Although many small businesses have shuttered or greatly curtailed their operations during the pandemic, those actions should not have large impacts on WG's revenues. With those mitigating circumstances being unique to the gas distribution business, it is hard to rationalize that WG has been impacted to a greater degree by Covid-19 than the customers that they serve. In light of that, this Commission should prioritize the mitigation of customer impacts in this proceeding given WG's unique ability to track incremental costs related to Covid-19 for future recovery.

Q. WHAT ACTIONS SHOULD BE TAKEN BY THIS COMMISSION TO MITIGATE THE CUSTOMER IMPACTS IN THIS PROCEEDING?

A. The Commission should refrain from increasing gas service rates for owners and managers of apartments and office buildings as long as they are restricted by law from increasing rents and/or evicting tenants for non-payment of rents. Landlords of apartment and office buildings in the District are presently restricted

by legislation from raising rents and evicting tenants who are in arrears in their rent payments, as a result, have no ability to recover the costs of rate increases at this time.

Additionally, The Commission should establish a Task Force dedicated to reviewing the impacts of the Covid-19 pandemic and how to best address impacted customer groups, review the adequacy of existing financial relief programs and evaluate potential new programs, and set standards for the identification of Covid-19 related incremental costs for both Washington Gas and Pepco.

B. WG's PROPOSED RNA MECHANISM

Q. HAS WASHINGTON GAS RENEWED ITS REQUEST FOR APPROVAL OF A REVENUE NORMALIZATION ("RNA") MECHANISM IN THIS PROCEEDING?

A. Yes, as it has done in every case since Formal Case No. 1093, Washington Gas once again, seeks approval of a RNA mechanism in this proceeding.

Q. WHAT SUPPORT HAS WG PRESENTED FOR THE REVENUE NORMALIZATION ADJUSTMENT ("RNA") MECHANISM IT PROPOSES IN THIS PROCEEDING?

A. WG's support for its proposed RNA is presented by three witnesses. The Direct Testimony and Exhibits of witness Raab, Exhibits WG (G) explains the rationale

for the Company's proposal.[11] Witness O'Brien also addresses part of the rationale for the Company's RNA proposal in Exhibit WG (A).[12] In addition, Witness Lawson's Direct Testimony, Exhibit WG (H)-4, Section V., addresses the mechanics of WG's proposed RNA.[13] In addition, Witness Lawson provides a quantitative example of the operation of the Company's proposed RNA mechanism, as well as tariff provisions (labeled General Service Provision 30) that are intended to support implementation of the Company's RNA proposal.[14]

Q. DOES THE COMPANY'S PROPOSED RNA MECHANISM IN THIS PROCEEDING DIFFER SUBSTANTIALLY FROM THE RNA MECHANISM THAT WG PROPOSED IN FORMAL CASE NO. 1137?

A. No. The RNA tariff language presented in Witness Lawson's Exhibit WG (H)-4, pages 30 and 31of 63, is virtually identical to that presented by WG Witness Wagner in Formal Case No. 1137.[15] The only substantive difference is that Washington Gas did not initially propose a "cap" on monthly RNA rate adjustments in Formal Case No. 1137. However, in response to AOBA's Direct Testimony Witness Wagner suggested in his Rebuttal Testimony in Formal Case No. 1137 that, if the Commission found a cap on monthly rate adjustments

[11] Exhibits WG (G) and (G)-5 through (G)-8
[12] Exhibit WG (A), page 13, lines 3-8.
[13] Exhibit WG (H), pages 12-15.
[14] Exhibit WG (H)-3 and pages 31-32 and 61-62 of Exhibit WG (H)-4.
[15] See Exhibit WG (M)-5, pages 33 and 34 of 66, in Formal Case No. 1137.

appropriate, WG would recommend a cap of $0.05 per therm.[16] But, no tariff language to support the implementation of that recommended cap was offered by Washington Gas in either Witness Wagner's Direct or Rebuttal testimonies in Formal Case No. 1137.

Q. HOW DO YOU STRUCTURE YOUR PRESENTATION WITH RESPECT TO WG'S PROPOSED RNA MECHANISM?

A. My discussion of the Company's RNA proposal is presented in three parts. The first part addresses the concepts and rationales that witnesses for WG offer in support of the Company's proposal. The second part examines the specifics of the Company's RNA proposal in the context of the tariff language that Witness Lawson proposes for that rate mechanism in Exhibit WG (H)-4, pages 30 and 31 of 63. In that discussion I highlight problems in the design of WG's proposed RNA mechanism. The third part of this discussion presents a summary of AOBA's recommendations regarding this repeated effort by the Company to gain approval of an RNA mechanism.

[16] Formal Case No. 1137, Exhibit WG (3M), the Rebuttal Testimony of WG Witness Wagner, page 5, lines 1-3.

1. WG's RNA Concept and Supporting Rationales

Q. WHAT ARE THE RATIONALES THAT WG'S WITNESSES OFFER IN SUPPORT OF THE COMMISSION'S ADOPTION OF ITS PROPOSED RNA MECHANISM?

A. Witness Raab argues that there is a significant mismatch between the manner in which the Company incurs its costs of providing distribution service and the manner in which those costs are recovered through firm service rates, and that mismatch places substantial fixed cost recovery from the Company's firm service customers at risk. To better address that risk, witness Raab submits that a revenue normalization mechanism should be adopted to compensate for differences between WG's authorized revenue requirements and the revenue that the Company actually receives on a monthly basis. Witness Raab asserts that three factors work in concert against the Company's recovery of authorized revenue levels. Those factors are: (1) weather; (2) naturally occurring reductions in use; and (3) financially induced conservation. Moreover, witness Raab argues that the method of calculating normal weather heating degree days adopted by this Commission in Formal Case No. 1093 significantly overstates actual normal weather heating degree day expectations in a manner that "virtually guarantees that the Company will not achieve the level of revenue authorized by the Commission in this case.

Q. WITNESS RAAB ARGUES THAT THE "VERY CONSTRUCTION" OF A REVENUE DECOUPLING MECHANISM ENSURES AN ALIGNMENT OF REVENUES WITH THE COMPANY'S INCURRENCE OF COSTS." DO YOU AGREE?

A. No. The alignment of cost and revenues to which Witness Raab refers is a theoretical construct. Nothing in the Company's proposed RNA ensures that actual changes in revenues will align with WG's actual costs for any future period. This problems has been demonstrated emphatically by Pepco's BSA mechanism. Due to reliance on fixed revenue per customer amounts the migration of customers between Pepco's rate classes has provided Pepco substantial increases in its authorized revenues with little or no associated change in its costs of providing service. As I have recently documented in Formal Case No. 1156, migrations of commercial customers between rate classes enable Pepco to multiply the authorized annual revenues associated with a migrating customer by at least 6.5 times. Moreover, the addition of new or transferred customers to the lower end of the usage range addressed by a rate schedule allows Pepco to add greater authorized revenue than it can expect from the customer or customers added to the class. My point here is not to litigate issues associate with Pepco. Rather, I provide the example discussed above to amplify the fallacy of Witness Raab's argument that revenue decoupling mechanisms, by their very nature, better align utility costs and revenues.

Q. DOES THE "VERY CONSTRUCTION" OF A REVENUE DECOUPLING MECHANISM ENSURE AN ALIGNMENT OF REVENUES WITH THE COMPANY'S INCURRENCE OF COSTS?

A. No. It does not. In response to AOBA Data Request 3-3.c., Witness Raab states: "*Revenue decoupling mechanisms align the collection of revenues with a Company's incurrence of costs by their very construction*." I do not agree. Rather, revenue decoupling mechanisms are constructed to align a company's revenues with its test period costs (either historic or forecasted). That does not ensure an alignment of a company's actual costs with its actual revenues after the revenue decoupling mechanism is implemented.

Q. SHOULD THE COMMISSION ACCEPT THAT IN THE ABSENCE OF A RNA MECHANISM EITHER THE COMPANY OR ITS CUSTOMERS WILL BE DISAVANTAGED BY THE EFFECTS OF DEVIATIONS FROM NORMAL WEATHER?

A. No. WG's shareholders will be advantaged by the adoption of a RNA for the Company's District of Columbia jurisdictional service. As noted in the most recent WGL Holdings, Inc. SEC Form 10-K which was filed on November 19, 2015, the Company used heating degree day ("HDD") weather-related instruments (e.g., insurance or derivatives) for the District of Columbia to manage

the effects of warmer than normal weather on its revenues and earnings.[17] Approval of the Company's proposed RNA will negate the potential need for WG to purchase weather-related instruments to protect shareholders interests. Thus, WG's shareholders will benefit directly from implementation of an RNA mechanism through the avoidance of the potential impacts for warmer than normal weather regardless of the actual degree day variations, if any, that might be experienced. Similar weather-related instruments are not generally available to the Company's gas consumers. Thus, the benefits derived from adoption of a RNA mechanism are not the same for WG's customers and WG's shareholders.

Q. ACCORDING TO WITNESS RAAB WHAT ARE "REVENUES AT RISK"?

A. Witness Raab's Direct Testimony defines "*revenues at risk*" as "*those revenues that are needed to recover fixed costs but are actually recovered through volumetric charges*."[18]

Q. DO YOU ACCEPT WITNESS RAAB'S DEFINITION OF REVENUES AT RISK?

A. No, I do not. There is certainly weather-related variability in therm use that can impact the Company's recovery of costs. However, such variation actually affects only a **minority** of annual gas service volumes for each rate class. Witness Raab's suggestion that the Company's costs and rate structures place

[17] WGL Holdings, Inc. SEC 10-K for the period ending 09/30/15, filed November 19, 2015, at page 60 and page 122.
[18] Formal Case No. 1137, Exhibit WG (K) at page 10, lines 10-11.

about $170 million of Commission-approved revenues "at risk"[19] is a **gross overstatement** of the revenue risk actually faced by Washington Gas in its District of Columbia operations. That is preposterous. As shown in his Exhibit WG (G)-7, Witness Raab's assessment improperly and unjustifiably assumes that essentially all of the Company's revenues that are not collected through monthly system (i.e., customer) charges are "at risk." Never has Washington Gas experienced anything close to the level of degree day fluctuation that would be necessary to place all of its annual weather-sensitive service "at risk." In fact, the data presented in Witness Raab's Exhibit WG (G)-4 indicate that from any of the measures of historic average degree days shown, a HDD variation that produced a result two Standard Deviations below the historic average would in no instance impact more than **16.5%** of the Company's annual degree days. That doesn't begin to place $170 million of non-customer charge revenue at risk.

WG has no major class[20] for which there is any significant probability that its annual volumes will fall to zero. Base gas use (i.e., gas use not affected by degree day fluctuations) is not weather sensitive, and although Raab has observed that 60% of therm use is weather-sensitive, much of that usage falls outside the range that would be affected by even extreme fluctuations in heating degree days.

[19] Exhibit WG (G), page 18, lines 22-24.
[20] The term "major class" in this context is used to reference the Residential, Commercial & Industrial, and Group Metered Apartment classes (i.e., the classes for which WG proposes to compute RNA rate adjustments.

Of the $171.7 million that Witness Raab identifies as "at risk" revenues, significant components (i.e., presently about $48 million) reflect "pass-through" charges that do not impact WG's finances. Moreover, another $33 million (at present rates) are collected through monthly Customer Charges and Peak Usage charges that do not vary directly with changes in heating degree days. Witness Lawson's Exhibit WG (H2)-1, Schedule B, page 2 of 5, indicates that the Company's "Total Basic Tariff Revenue" at present rates is only **$111 million**, Customer Charge and Peak Usage Charge[21] revenues account for about $33 million of that total. Thus, only **$78 million** is presently collected through base distribution charges.

Furthermore, of the therms that are billed through Distribution Charges, about 32% constitute non-weather-sensitive "Base Gas." This leaves only about $53 million at present rates that is collected though charges applied to weather-sensitive gas usage. Yet, as I previously explained, even under extreme weather less than 16.5% of the remaining volumes and revenues would potentially be at risk. This suggests that at present rates WG's current weather-related revenue risk in an extreme weather year (i.e., a year in which total HDDs are two Standard Deviations **below** normal) would be less than **$9 million** dollars. Amounts of that magnitude or less should be manageable by the Company.

[21] Although the Company's Peak Usage Charges are billed on measures of therm use, those measures of therm use are ratcheted to prior periods, and thus, revenues billed on the basis of Peak Usage Terms do not fluctuate directly with current period HDDs.

Q. HAS WG PRESENTED ANY EVIDENCE THAT THE ABSENCE OF A RNA MECHANISM HAS IMPOSED SIGNIFICANT FINANCIAL HARM ON THE COMPANY TO DATE?

A. No. WG has operated for decades without a RNA and has remained financially stable prior to its merger with AltaGas achieving a long history of annual increasing shareholder dividends.

Q. DO YOU FIND THAT THE USAGE TRENDS THAT WITNESS RAAB PRESENTS IN EXHIBIT WG (G)-5 SUPPORT THE IMPLEMENTATION OF THE COMPANY'S PROPOSED RNA?

A. No, I do not. Witness Raab's discussion of Exhibit WG (G)-5 focuses almost exclusively on Residential usage trends. With that focus, he overlooks some important features of the non-residential data he presents. For example, Witness Raab fails to observe that the Company's > 3,075 therm heating service subclasses of its C&I and GMA classes (i.e., WG's two largest non-residential classes in therms of annual volumes) have had either increased or stable gas use in recent years. Although the < 3,075 therm C&I Heating class and the < 3,075 therm GMA Heating class have exhibited declines in gas use per customers (based on non-weather normalized data), the combination of the large and small heating categories for the C&I class and for the GMA class shows comparatively stable overall gas use. The Commission should also observe that in 2018 and 2019 there appears to be movement of customers between the <

3,075 therm and > 3,075 therm service classifications within both the C&I and GMA heating classes. Such movement is important because, as we have seen with Pepco's BSA, movement of customers between rate classifications can impact the validity and appropriateness of rate adjustments that are premised on an assumption that average revenue per customer in each class will remain constant despite customer migration between rate classifications.

Q. DO YOU OFFER ANY OBSERVATIONS REGARDING THE REVENUE COMPARISONS THAT WITNESS RAAB SHOWS ON PAGE 2 OF EXHIBIT WG (G)-5?

A. I do. In both of his assessments on that page (i.e., based on Formal Case No. 1093 approved revenues and based on Formal Case No. 1137 approved revenues) the Company's greatest threat of revenue erosion appears to be associated with its service to the Residential Heating class. In the Formal Case No. 1093 scenario, the Company has a favorable revenue outcome for the years 2014-2016 that is driven by the performance of its non-residential classes, while the Residential Heating class under-recovers its authorized revenue by more than $2 million. In Witness Raab's Formal Case No. 1137 analysis, WG's overall results for 2018 and 2019 are strongly negative, driven by an $8.1 million two-year under-recovery for the Residential Heating class. The net under-recovery for WG's combined non-residential firm service classes is only about $0.7 million or less than one-tenth of the total computed revenue under-recovery. Further, the combined C&I Heating classes still produced a net over-recovery of

authorized revenues. Witness Raab's analysis on page 2 of Exhibit WG (G)-5, thus, provides a more compelling case for a Residential RNA than for the application of a RNA to its non-residential firm service classes in the District.

Q. DO YOU HAVE ANY COMMENTS REGARDING WITNESS RAAB'S DISCUSSION OF NON-VOLUMETRIC RATE DESIGNS?

A. Yes, I do. First, many of the ratemaking mechanisms that witness Raab represents as "*non-volumetric rate designs*" actually involve the recovery of significant costs through volumetric charges. This includes the RNA mechanism that WG proposes in this proceeding. Second, witness Raab's discussion of these matters is focused primarily on the Company's cost recovery concerns and fails to adequately develop other relevant ratemaking considerations. The Commission could, for example, assure full recovery of the Company's annual revenue requirement by simply allowing the Company to recover all of its distribution system costs through monthly customer (i.e., system) charges. However, that approach would ignore the influences of a number of factors that can cause the cost responsibilities of customers within each rate class to vary. Historically, commissions have attempted to achieve greater equity in the charges applied to individual customers within each rate class through rate designs that recover portions of each class' revenue requirement on other measures of service (i.e., primarily volumetric measures of gas use). Yet, the number of other measures of service that can be readily obtained and easily

used in billing gas distribution services tends to be limited.[22] Thus, there are sound reasons founded on intra-class rate equity considerations for the Commission not to eliminate, nor reduce, the portion of total revenue recovered through volumetric charges. Gas utilities throughout most of the U.S. have maintained financially sound operations for decades while recovering the majority of their distribution revenues through volumetric charges.

Q. WHAT RATIONALES ARE OFFERED BY WG WITNESS O'BRIEN FOR ADOPTION OF THE COMPANY'S PROPOSED RNA?

A. Witness O'Brien's support for the Company's RNA proposal is limited to two sentences at the end of his Direct Testimony. In that limited testimony he offers three reasons for use of an RNA mechanism. Witness O'Brien argues that an RNA mechanism:

1. Realigns the collection of revenues to the incurrence of costs;
2. Supports energy conservation;
3. Mitigates volatility of revenues and customer bills.

In fact, the approval of an RNA mechanism would provide no assurance that any of those objectives would be accomplished. The RNA mechanism that

[22] This Commission has been somewhat innovative in this regard by developing and implementing demand-related peak usage charges for non-residential customers. However, this is a practice that is still not often applied for large numbers of retail gas service customers in other jurisdictions.

Washington Gas proposes is designed primarily for the benefit of the Company and would not provide any discernible net benefits for District of Columbia ratepayers.

The Company's proposed RNA does not actually realign the collection of revenues to the incurrence of costs. Rather, it simply provides WG a further opportunity to collect fixed distribution costs through **volumetric** charges. In other words, WG's proposal is less concerned with matching cost recovery with cost incurrence than ensuring the Company's recovery of revenues through any available means with little or no consideration of changes in its costs.

Q. WG WITNESS O'BRIEN'S DIRECT TESTIMONY ASSERTS THAT A RNA MECHANISM "*SUPPORTS CUSTOMER ENERGY CONSERVATION*."[23] DO YOU FIND ANY SUPPORT FOR THAT ASSERTION?

A. No. The Company's response to AOBA Data Request 3-4.a. indicates that Washington Gas has performed no assessment of the conservation that its customers in the District have achieved in the absence of a RNA mechanism. Moreover, part b. of the Company's response to the same data request confirms that WG has no estimates of the levels of conservation that District ratepayers could be expected to achieve if its proposed RNA mechanism is approved. Thus, Witness O'Brien's assertion has no substantive merit.

[23] Exhibit WG (A), the Direct Testimony of Witness O'Brien, page 13, lines 5-8.

In fact, energy conservation by commercial office buildings and group metered apartment buildings will be influenced more by SEU programs and by the energy efficiency standards adopted under the dictates of the CleanEnergy DC Act. Moreover, AOBA finds no compelling reason for Washington Gas to become more engaged in programs to deploy energy efficiency. Given the increasing leak rates and safety concerns that confront the Company, Washington Gas should be required to focus its resources on improving its gas distribution system operations before branching out into markets that are already served by numerous competitive entities.

Further, the suggestion that WG's proposed RNA is supportive of energy conservation is totally unfounded. It does not remove "*disincentives*" to promote conservation is of little relevance to WG's District of Columbia operations. In the District of Columbia the promotion of energy efficiency is the responsibility of the SEU, not WG. Thus, WG requires no incentives to promote conservation.

2. RNA Design and Implementation Problems

Q. HOW IS THE COMPANY'S PROPOSED RNA STRUCTURED?

A. The RNA mechanism that WG proposes in this proceeding provides for monthly adjustments to rates to reconcile actual revenues with growth adjusted authorized revenues for each of three broad classifications for firm service customers (i.e., Residential, Commercial and Industrial, and Group Metered

Apartments).[24] Rate adjustments would be computed to compensate for either positive or negative deviations of actual revenue from growth adjusted authorized revenue levels. Monthly rate adjustments would have two components: a "Current Factor" and a "Reconciliation Factor." The Company also proposes a cap of $0.05 per therm on monthly "Current Factor" rate adjustments.

Q. SHOULD THE COMMISSION FIND THE COMPANY'S PROPOSED RNA TARIFF LANGUAGE IN THIS PROCEEDING SATISFACTORY?

A. No. I find several problems in the tariff provisions that Washington Gas has proposed that must be remedied before any such mechanism could be relied upon to yield fair and equitable results for all District ratepayers.

First, as noted above, the RNA tariff provisions presented in Exhibit WG (H)-4 in this proceeding would apply a "cap" of $0.05 per therm on monthly rate adjustments only to the RNA "Current Factor." No limit is placed on either rate adjustments made through the proposed "Reconciliation Factor" or to the combined levels of the Company's computed monthly "Current" and Recon-ciliation" factors.

Second, the proposed tariff provisions for the RNA references the use of *"monthly*" data for: (1) test year **monthly** revenue per customer; (2) test year **monthly** number of customers by rate classification; and (3) forecasted **monthly**

[24] Although the implementation example Witness Lawson presents in Exhibit WG (H)-3 shows the calculation of separate "Billing Factors" for each subclass within the Company's Residential, C&I and GMA classes, nothing in the Company's proposed tariff language directs the Company to compute separate charges for each Heating and each Non-Heating subclass.

therm use by rate classification for future **months**. Yet, no such data has been included in, or specifically identified as part of Witness Lawson's presentation of the Company's proposed RNA.

Third, WG's proposed RNA tariff language attempts to hide the impact of its proposed monthly RNA rate adjustments from customers. As stated in the proposed tariff language, "*The RNA shall be combined with the Distribution Charge … by designated rate schedule and applied to* customer bills."[25] This element of the Company's RNA tariff proposal impedes the ability of individual customers to understand the charges they are billed and the reasons their bills may deviate from their budgeted costs for gas service.

Q. ARE THERE OTHER DEFICIENCIES IN THE COMPANY'S RNA TARIFF PROPOSAL?

A. Yes, there are. WG' application of its proposed RNA to Commercial and Group Metered Apartment rate classes that include separate rate classifications for large (> 3,075 therms) and small (< 3,075 therms) usage categories is not designed to ensure equitable rate treatment for those subclasses when customers move between one category and the other. As we have found with Pepco's BSA mechanism, the movement of a customer from one smaller usage classification (e.g., Heating/Cooling > 3,075 therms) to a larger usage classification (e.g., Heating/Cooling > 3,075 therms) can significantly increase the

[25] Exhibit WG (H)-4, page 61 of 63, General Service Provision 30, Section II.B.

authorized revenues associated with the customer even though the customer's migration between those categories has little or no impact on the Company's costs of providing service. Washington Gas has not proposed to track customer movement between rate classes or to make adjustments to its computed monthly authorized revenue per customer for rate classes affected by such a customer transfer. In the absence of a well-conceived procedure for tracking customer migration and adjusting the authorized revenue per customer for each of the affected rate classes, the Company's proposal could enable substantial non-cost-based increases in WG's authorized revenues.

Q. IS THE COMPANY'S PROPOSED CAP ON THE SIZE OF MONTHLY RATE ADJUSTMENTS APPROPRIATE?

A. No. WG's proposal for $0.05 per therm cap on monthly Current Factor rate adjustments for all rate classes does not limit the total amount of increase a customer may experience as a result of the combined impacts of its "Current Factor" and the "Reconciliation Factor." Also, unlike the Bill Stabilization Adjustment ("BSA") that this Commission approved for Pepco (for which monthly rate caps are limited to +/- 10% of the average test year rate per kWh for each rate class), WG's RNA mechanism would allow for varying percentage impacts across rate classes that could potentially exceed 10% for any given month. This is unwarranted and inappropriate.

Q. IS THE COMPANY'S PROPOSED METHOD FOR ADJUSTING PEAK USAGE CHARGE REVENUE REASONABLE AND APPROPRIATE?

A. No. It is not. It improperly assumes a constant relationship between average therms per customer and measures of peak usage without any analytical support. Such procedures do not address either the diversity in usage patterns among customers in non-residential rate classes; or the differences in the timing of peak usage determinations and actual monthly usage. Under the Company's Firm non-residential rate schedules, "peak usage charges" are re-established each November based on the customer's maximum monthly usage during the **prior** November through April billing periods.[26] Thus, the peak usage therms billed for a customer are a function of usage and weather conditions in the prior winter. Washington Gas has presented no analysis of the manner in which its billed Peak Usage Therms for prior periods have varied relative to the total therm usage by rate class. Nor, has the Company provided any evidence to support its presumption of a fixed relationship between average annual therm use for a class and billed peak therm use for the same period.[27]

Q. DO YOU HAVE ANY COMMENTS REGARDING THE EXAMPLE RNA CALCULATIONS PRESENTED IN WITNESS LAWSON'S EXHIBIT WG (H)-3?

[26] An exception to the use of prior period peak usage measures is when a new customer is added to the system and does not have established usage data for the prior November through April period. Such customers usually only represent a small portion of a given classes total peak usage.
[27] The Company's development of normal weather peak usage therms is discussed further in Section III, C, 3 of this testimony.

A. The details of the procedures used to produce the example RNA application in Witness Lawson's Exhibit WG (H)-3 are not well described in the tariff language the Company proposes to implement its RNA mechanism. Also, nothing in the example calculations that Witness Lawson presents illustrates the manner in which the "Reconciliation Factor" element of the Company's RNA charges will be computed and applied to each rate class. While it is clear that Washington Gas intends the "Current Factor" to be computed separately on a class-by-class basis for each rate class, the lack of any references to the specific measures of usage that would be employed to compute the Reconciliation Factor leaves considerable question regarding the procedures the Company intends to employ to compute and apply the Reconciliation Factor element of his RNA rate adjustments.

Q. SHOULD THE COMMISSION HAVE ANY OTHER CONCERNS REGARDING WG'S INTENDED RNA RATE ADJUSTMENT CALCULATIONS?

A. Yes. The Company's RNA tariff language (General Service Provision 30), as set forth on pages 61 and 62 of Exhibit WG (H)-4, makes several references to monthly data for the test year that will be used in the computation of monthly rate adjustments. However, the specific monthly measures of average use per customer, monthly number of customers, and monthly peak usage that will be used to compute monthly RNA rate adjustments for each rate class are not

specified anywhere in Witness Lawson's presentation. Likewise, the proposed RNA tariff language, Section III.A.7. suggests:

> *The required revenue adjustment determined in III.A.6 above shall be divided by the estimated firm throughput for the second succeeding month to develop a rate per therm adjustment to the Distribution Charge."*

Yet, again, the referenced measures of firm throughput have not been presented for the parties review in this proceeding. Moreover, WG failed to specify either: (1) the data and methods it would use to produce those forecasted measures of therm use for future months; or (2) how and when those forecasted therm use measures would be presented for review by the Commission and the parties.

3. AOBA's RNA Recommendations

Q. DOES AOBA SUPPORT COMMISSION APPROVAL OF THE COMPANY'S PROPOSED RNA MECHANISM?

A. No. The Company's proposal is not substantially different than the proposal Washington Gas presented in Formal Case No. 1137. The Company's support for its proposal in this proceeding does not satisfactorily answer the concerns this Commission raised in Order No. 18712, and Washington Gas has failed to demonstrate the reasonableness and appropriateness of its proposed application of a RNA to its non-residential rate classifications for which the use of a fixed

monthly authorized revenue per customer does not adequately address the diversity of usage that can be found within those classes.

WG's proposed RNA mechanism is primarily a risk mitigation strategy for the Company that provides no benefit to District ratepayers. The only customer benefit Washington Gas attempts to argue is reduced volatility in monthly bills. Yet, that claim is undercut by Witness Raab recognition that the Company's RNA will "*add month-to-month variations to customers bills*."[28] Witness Raab attempts to portray such variation as **theoretical**. Anyone familiar with Pepco's BSA mechanism is quite aware that monthly rate adjustments under such a mechanism are very real and different charges must be expected every month.

Washington Gas' efforts to hide RNA adjustments from District ratepayers by combining RNA adjustments with the Distribution Charge on customers' bills only serves to increase customer confusion and complicate customer efforts to understand their monthly charges and budget for future periods. Moreover, given the two-month lag in the proposed two month lag, there can be no assurance that a lagged adjustment will not serve to amplify, rather than dampen, fluctuations in customers' monthly bills. If the Company were truly as concerned about impacts on customers' bills as it is about its own revenue certainty, there are other approaches that would better address those problems from a customer perspective. Although not discussed by Witness Raab or any other witness for the Company, there are gas utilities that use annual distribution rate adjustment

[28] Exhibit WG (G), page 24, lines 20-24.

mechanisms that apply uniform dollars per therm rate adjustments, re-computed once each year, to the bills of customers in each firm service rate class.

Alternatively, as addressed herein, WG's proposed RNA mechanism could be applied only to classes with comparatively uniform usage characteristic and not subject to a Peak Usage Charge. Furthermore, another alternative for improving the predictability of revenues collected by Washington Gas from non-residential customers could be to gradually increase to the percentage of revenues recovered from those classes through Peak Usage Charges.

Q. WOULD AN EFFORT BY THE COMPANY IN REBUTTAL TESTIMONY TO CLEAN-UP IS PROPOSED RNA TARIFF LANGUAGE AND RECONCILE ITS TARIFF PROPOSAL WITH WITNESS LAWSON'S EXAMPLE OF THE COMPANY'S PROPOSED RNA MECHANICS SUFFICIENTLY REMEDY AOBA'S CONCERNS REGARDING THE MERITS OF THAT PROPOSAL?

A. No. It would not. This testimony has identified a number of fundamental shortcomings in WG's RNA proposal that simply "cleaning up" the language of the Company's current proposal cannot adequately address. .

C. <u>WG's NORMAL WEATHER STUDY</u>

Q. HAVE YOU REVIEWED THE DETAILS OF THE COMPANY'S NORMAL WEATHER STUDY IN THIS PROCEEDING?

A. Yes. I have examined the full detail of the electronic spreadsheet files from which Witness Gibson's Normal Weather Study exhibit (Exhibit WG (2E)-1 was generated. I have also reviewed a number of responses to data requests relating to the Company's weather normalization of therms and revenues that Washington Gas has provided in response to data requests.

Q. SHOULD THE COMMISSION HAVE CONCERNS REGARDING THE COMPANY'S NORMAL WEATHER STUDY IN THIS PROCEEDING?

A. Yes. I encourage the Commission to question three elements of the Company's Normal Weather study. The first relates to the change in the manner in which Washington Gas estimates normal weather Heating Degree Days. The second relates to the data that Washington Gas arbitrarily elects to leave out of its regression analyses when estimating normal weather usage for certain rate classes. The third addresses the Company's estimates of Peak Usage Therms.

1. Change in Normal HDDs

Q. DOES THE COMPANY'S NORMAL WEATHER STUDY IN THIS PROCEEDING INCORPORATE ANY SUBSTANTIVE CHANGES IN THE MANNER IN WHICH IT ESTIMATES NORMAL WEATHER GAS USE?

A. Yes. Washington Gas has noticeably lowered its estimate of "normal" heating degree days based on the testimony of WG Witness Raab. Witness Raab

testifies that the 30-year average measure of normal HDDs, previously accepted by this Commission, yields 3,892.8 HDDs for a "normal" weather determination. Witness Raab's recommendation would set the "normal" level of HDDs at 3,687.1.

Q. SHOULD THE COMMISSION ACCEPT THAT THERE HAS BEEN A TREND TOWARD REDUCED NUMBERS OF ANNUAL HEATING DEGREE DAYS IN RECENT YEARS?

A. Yes. However, I do not support the Commission's acceptance of Witness Raab's recommendation regarding the number of heating degree days ("HDDs") that should be used to weather normalize gas use for the test period in this proceeding. As Witness Raab's presentation amply demonstrates, there are a number of approaches for estimating "normal" heating degree days and determinations regarding an appropriate measure of Normal Weather HDDs, is at best, a subjective determination. Despite Witness Raab's preference, there are other reasonable and broadly accepted methods that arguably produce reasonable results while having lesser rate impacts for WG's gas customers in the District.

Q. SHOULD THE COMMISSION ACCEPT WITNESS RAAB'S RECOMMENDATION OF THE NUMBER OF HEATING DEGREE DAYS THAT SHOULD BE USED TO REPRESENT NORMAL WEATHER?

A. No. This Commission has often adopted gradual approaches to the adjustment of rates, not just in the determination of class revenue requirements or the adjustment of charges within rate schedules, but also in such activities as the adjustment of authorized rates of return. I submit that, even recognizing a downward trend in HDDs in recent years, there is sufficient uncertainty in terms of what now constitutes "normal" weather that the Commission should proceed in the direction advocated by Witness Raab, but it should do so with a more measured and gradual approach.

The adjustment that Witness Raab proposes to the estimated number of "normal" heating degree days represents one of the factors contributing to the size of the Company's revenue increase request in this case after the roll-in of Project Pipes costs and the Company's requested increase in its authorized ROE.

Q. WHAT IS YOUR RECOMMENDATION FOR HOW THE COMMISSION SHOULD ADDRESS THE ESTIMATION OF "NORMAL" HEATING DEGREE DAYS?

A. I recommend that the Commission require Washington Gas to use a rolling **10-year** average of heating degree days to reflect normal weather for this proceeding. That would set "normal" HDD's for this proceeding at **3,778.8 HDDs**, or roughly mid-way between the 30-year average of 3,892.8 HDDs and Witness Raab's recommended 3,687.1 HDDs. Future updates of this comparatively

short 10-year averaging period will allow also allow for greater recognition of trends in HDDs in future proceeding. Moreover, the 10-year average is a straight-forward, easily understood methodology, not dependent of more complex and often assumption driven model activities. Reliance on often assumption driven simulations does not necessarily yield for accurate or reliable assessments of normal weather HDDs. Rather, more complex modeling simply introduces greater opportunities for the introduction of human error and analyst bias.

Q. HOW WOULD THE USE OF A HISTORIC TEN-YEAR AVERAGE FOR ANNUAL HEATING DEGREE DAYS ALTER THE COMPANY'S ESTIMATE OF NORMAL WEATHER GAS VOLUMES?

A. Exhibit WG (2E)-1, Schedule 1A, provides the Company's estimate of normal weather gas sales and throughput volumes for the test year. As shown in that exhibit, WG estimates total normal weather gas sales and throughput volumes for all classes for the test year at 297,666,755 therms. Alternatively, **Exhibit AOBA (A)-1** shows test year normal weather sales and throughput volumes estimated using a 10-year average HDD measure. As shown in that exhibit, WG's annual normal weather therms using 10-year average HDDs would be 301,932,463 therms or 4,265,708 therms more than the Company has computed using Witness Raab's recommended annual HDD measure.

Q. DOES THE USE OF A 10-YEAR AVERAGE HDD MEASURE IMPACT THE COMPANY'S ESTIMATED NORMAL WEATHER TEST YEAR REVENUES?

A. Yes. The nearly 4.3 million therm increase in annual Normal Weather throughput yields a **$2.4 million** increase in the Company's annual revenues at present rates and accordingly lowers the Company's need for additional base rate revenue in this proceeding. See AOBA Exhibit (A)-2.

Q. WOULD THE CHANGE IN NORMAL WEATHER HDD'S ALSO IMPACT THE COMPANY'S ESTMATES OF PEAK USAGE THERMS?

A. No. The Company's estimate of Peak Usage Therms is premised on Design Day Weather conditions which assume a 60 HDD day. That assumption would not change. However, as discussed in part 3 of this section of my testimony, I have found substantial reasons to question the estimates of Peak Usage Therms that the Company derives from its Normal Weather Study.

Q. PLEASE EXPLAIN YOUR CONCERNS REGARDING WG'S ESIMATION OF THE "BASE GAS" COMPONENT OF NORMAL WEATHER THERMS BY RATE CLASS?

A. The Company's weather normalization exhibits also identify several instances in which reported monthly therms for a rate class were viewed as anomalous and

simply disregarded.[29] Among the data excluded from the statistical analyses used to estimate "Variation per DDD" and "Base Gas Factors" were:

1. Data for the months of February 2017 and April 2017 for the Residential Non-Heating - Other class;

2. Data for the months of January 2017, March 2017, December 2017, and December 2019 for C&I Heating/Cooling Service > 3,075 therms;

3. Data for the months of July 2018 and August 2019 for C&I Non-Heating service;

4. Data for the months of February 2018 and September 2018 for GMA Heating/ Cooling Service < 3,075 therms.

Witness Gibson's assessment of "anomalous" observations appears biased by the limited number of data points he examines for usage that often displays large monthly and seasonal fluctuations. With the use of a greater number of years of data, the frequency of such apparent anomalies can be

[29] As indicated in the footnotes at the bottom of each page of Exhibit WG (2E)-1, Schedule 3, monthly information on lines marked with an "*" have been excluded from the statistical calculations used to produce the Company's linear regression results.

reduced. The notion that monthly and seasonal variations in usage can reasonably be assessed using a simple linear regression applied to less than three full years of monthly observations is at best naïve.

Sound analytics would require investigation of the factors contributing to identified data anomalies, as well as efforts to determine how the usage reported for the affected months should have been distributed either among other months for the same class or to other classes to ensure that relationships between HDDs and usage are properly represented. Simply excluding anomalous data is not generally considered a best practice.

The Commission should particularly question the Company's exclusion of multiple winter months from a 36-month time series for the C&I Heating < 3,075 therm class. In an analysis that includes only three years of monthly data (i.e., 36 months of non-homogeneous, seasonally-varying monthly data), WG's exclusion of data for four winter months (i.e., December 2019, December 2017, March 2017, and January 2017) from its regression model inputs for that class significantly changes the weighting of winter and summer HDD measures in the determination of the regression results for the C&I Heating < 3,075 therm class. Moreover, WG's exclusion of data for those allegedly anomalous observations is premised on the assumption that variations in usage should be normally distributed around a mean monthly value. Where large variations in degree days exist across months and years within the period examined, WG's presumption that residuals will be normally distributed is unfounded.

I find that expanding the number of years of data examined from three to either five or six has a noticeable impact on the assessment of gas use relationship for WG's C&I Heating < 3,075 therm class in the District.

Table 1

Alternative Estimates of Gas Use Relationships
For the C&I Heating < 3,075 Therm Class

Period Examined	Therms Per HDD	Base Gas Therms/Bill
Jan 2017 – Dec 2019[30]	.2986	28.83
Jan 2015 – Dec 2019	.3251	30.16
Jan 2014 – Dec 2019	.3531	33.19

AOBA encourages the Commission to retain an unbiased statistical expert with experience in the analysis of weather sensitive energy usage data to evaluate and opine regarding the reasonableness of the statistical analyses that WG has used in its estimation of: (1) the sensitivity of usage per degree day for each rate class; and (2) base gas use for each rate class.

[30] The estimates shown reflect WG's elimination of observations for December 2019, December 2017, March 2017, and January 2017.

2. *Errors in Base Gas Estimates*

Q. ARE THERE OTHER REASONS TO QUESTION THE RELIABILITY OF THE COMPANY'S ESTIMATES OF "BASE GAS USE" IN THIS PROCEEDING?

A. Yes. The Normal Weather Regression on which Witness Gibson relies employ only three years (i.e., 36 months) of data to estimate relationships between HDDs and gas use by rate class. However, before computing his final regression results, he eliminates observations from that data set for individual classes if he assesses that the differences between actual average use per bill and his estimated average use per bill are too large based on his analysis of "residuals." This biased selection of input data cannot be relied upon to produce estimates of "Variation per DDD" and "Base Gas Factors" that are compatible with the measures Witness Raab develops to estimate "normal weather" conditions. The limited data numbers of observations used by Witness Gibson to compute his simple regressions contrasts with the work of WG Witness Raab who offers assessments of normal HDDs based on a number of different time periods and estimation methods, all of which use data for periods of greater than three years to assess normal HDD expectations.

Q. DIDN'T WASHINGTON GAS DEMONSTRATE A HIGH LEVEL OF PRECISION OF ITS NORMAL WEATHER THERM USE ESTIMATES IN FORMAL CASE NO. 1137?

A. In Formal Case No. 1137 Washington Gas Witness Gibson presented Exhibit WG (2E)-2 as part of his Rebuttal Testimony in which he provided calculations that suggested the Company's Normal Weather Regressions predicted actual therm use for the twelve months ended September 2015 with 97.44% accuracy. However, that assessment only examined **total** Predicted Therm Sales for **all rate classes** including Interruptible and Special Contract customers. Upon further examination of the detail of Witness Gibson's Rebuttal exhibit in Formal Case No. 1137, I found that although the Company's overall projection of therm use achieved the represented level of accuracy when compared to test year actual therm use data for that case, the precision of the Company's estimates ro certain rate classes had much larger errors.

Exhibit AOBA (A)-3, page 1 of 2, adds two columns to Witness Gibson's analysis in Formal Case No. 1137 that calculate estimation **errors by rate class**. Those added columns demonstrate that for two classes the errors in the Company's estimates of annual normal therms were much larger than Witness Gibson computed on a total basis for all DC rate classes. For the **C&I Heating <3,075 class**, the Company's model **over-estimated** actual therms by more than **23%**. For the **GMA Heating <3,075 class** the Predicted Therms using the Company's Normal Weather Regressions **under-estimated** Actual Therm use by nearly **28%**.

For ratemaking purposes this Commission should express as much or greater concern regarding the precision of class-by-class estimates as the

precision of the overall number of therms delivered by the Company. Both the Company's costs allocations and rate designs by rate class are directly impacted by errors in WG's estimates of Normal Weather usage by class. Not coincidentally, the C&I Heating <3,075 class for which Actual Therm use was significantly over-stated was found in the Company's Class Cost of Service Study in Formal Case No. 1137 to have lowest ROR of any non-residential firm service rate class. On the other hand, the Company's CCOSS in that case found the GMA Heating <3,075 class to have a substantially above system average rate of return. The Company may not have concerns regarding the accuracy of class by class therm estimates but the customers in the classes do.

Q. HAS THE PRECISION OF WG'S ESTIMATES OF NORMAL WEATHER THERM USE BY RATE CLASS IMPROVED IN THIS PROCEEDING?

A. In Exhibit AOBA (A)-3, page 2 of 2, I present a similar analysis based on the the Company's test year data for this proceeding. That analysis shows a very close match between actual therms and total estimated therms for the test year (i.e., TME December 2019) and the overall results from the Company's Normal Weather Regressions. However, it also once again shows comparatively large estimation errors for two rate classes (i.e., Residential Non-Heating – IMA class and the GMA Heating < 3,075 therm class). In addition, the analysis presented in Exhibit AOBA (A)-3, page 2 of 2, suggests that the lack of precision in the estimates of Predicted total annual therm use for those classes is strongly

influenced by errors in the Company's estimates of "Base Gas" volumes. For the GMA Heating < 3,075 therm class, the regression model Washington Gas has used in this proceeding overstates the classes actual base use requirements by more than **51.5%**. For the Residential Non-Heating – IMA class, Base Gas use is overstated by **26.2%**.

3. Errors in WG's Peak Usage Charge Billing Units

Q. WHAT PROBLEMS HAVE YOU DISCOVERED WITH RESPECT TO THE ESTIMATES OF PEAK USAGE THERMS THAT WG USES IN THIS PROCEEDING?

A. I find that the estimates of Peak Usage Therms that WG uses in its rate design and cost allocations in this proceeding differ significantly from the Company's actual Peak Usage billing units for the test year. .

Q. WHAT IS THE BASIS FOR YOUR FINDING REGARDING THE COMPANY'S ESTIMATES OF PEAK USAGE THERMS?

A. AOBA Data Request 6-19c asked Washington Gas to provide "*billed **Peak Usage therms** by month for each non-residential firm service rate class*." The data provided in that response differs significantly from the data used by Witness Lawson for Peak Usage Therms in Exhibit (2H)-1, Schedule B, page 2. For the GMA Heating and Non-Heating subclasses, the Peak Usage Charge therms

used by Witness Lawson substantially understate every measure of historical Billed Peak Usage Therms examined for calendar years 2016 through 2019. As shown in Exhibit AOBA (A)-4, the "*maximum month*" therm use measures relied upon by Witness Lawson for both GMA Heating and Non-Heating customers are **50% to 85% above** historical measures of billed Peak Usage Therms.[31] By contrast, the Peak Usage Therms used by Witness Lawson for the Company's C&I Heating and Non-Heating classes track fairly closely with the Company's reported 2019 Billed Peak Usage therms, but understate other historic measures of Billed Peak Usage therms. These observations may be attributable, at least in part, to the fact that recent measures of annual billed Peak Usage therms have shown strong downward trends for the C&I Heating and C&I Non-Heating classes, while the recent trends for WG's GMA Heating and GMA Non-Heating classes has generally been upward.

D. OTHER ISSUES

Q. WHAT ISSUES DO YOU ADDRESS IN THIS SECTION?

A. I address two issues. Those are:

1) WG's use of Firm ratepayers to subsidize its service to Special Contract Customers;

[31] As set forth in the Company's tariff, maximum month demand is determined on the basis of the month with the highest average daily demand. For the months included in the test year, the month of highest average daily use for the GMA classes is December, while the month of highest average daily demand for the C&I classes occurs in February.

2) WG's inappropriately high Lost and Unaccounted for Gas percentage.

1. *WG's Treatment of Special Contract Customers*

Q. HAVE YOU IDENTIFIED CONCERNS REGARDING THE COMPANY'S TREATMENT OF SPECIAL CONTRACT CUSTOMERS IN THE DEVELOPMENT OF ITS REVENUE INCREASE REQUEST FOR THIS PROCEEDING?

A. Yes. My concerns are twofold.

First, the Company's revenue requirement in this case is developed on its total DC jurisdictional costs with a portion of those costs subsequently allocated to Special Contract customers in its Class Costs of Service Study ("CCOSS"). While the Company's CCOSS indicates that its service to Special Contract customers has a negative rate of return, Washington Gas' rate proposals only seek a comparatively minor increase in the monthly System Charges for its Special Contract customers. As a result, significant subsidies to the Company's Special Contract customers are effectively shifted to customers billed under WG's DC Firm Service rate schedules.

Second, in the Company's calculation of its uncollectible accounts expense for this proceeding Washington Gas has inappropriately included revenue from Special Contract customers. This leads to an overstatement of the Company's claimed Uncollectible accounts expense. Whether or to what extent Washington Gas incurs uncollectible accounts expenses in its provision of

service to Special Contract customers should have no bearing on its revenue requirements for tariff service customers.

Q. WHAT IS THE AMOUNT OF THE SUBSIDY THAT FIRM SERVICE CUSTOMERS IN THE DISTRICT WOULD BE REQUIRED TO PROVIDE TO SPECIAL CONTRACT CUSTOMERS UNDER WG'S PROPOSALS IN THIS PROCEEING?

A. The revenue requirement associated with the Company's Special Contract service in the District should presume that the Company derives at least its system average rate of return from that service. The Company's CCOSS shows an allocated rate base for Special Contract Service of $21,626,583 and a test period return on that rate base investment of -0.61%. At the Company's requested 7.56% Overall Rate of Return, its Special Contract service should generate a Net Operating Income of $1,634,970. But as shown in WG's CCOSS, the Company's test year Net Operating Income from Special Contracts is **negative $132,885**. Thus, to Operating Income Deficiency for WG's Special Contract service in the District is $1,767,855 before consideration of income taxes. Exhibit AOBA (A)-5 computes that, after grossing-up the net operating income deficiency Grossed-up for income taxes and subtracting WG's proposed revenue increase for its Special Contract customers, the Net Revenue Deficiency for WG's Special Contract Service in the District of Columbia is **$2,403,377**.

Q. HOW SHOULD THE COMMISSION ACCOUNT FOR THE REVENUE DEFICIENCY FROM WG'S SPECIAL CONTRACT SERVICE TO AVOID FURTHER SUBSIDIZATION OF SPECIAL CONTRACT SERVICE BY WG'S FIRM SERVICE CUSTOMERS IN THE DISTRICT?

A. The **$2,403,377** revenue deficiency for Special Contract service should be subtracted from the Company requested overall revenue increase in this proceeding. This adjustment alone would lower the Company's request overall revenue increase from $39,014,426 as shown in Exhibit WG (2D)-1 to $36,611,049.

2. WG's Unaccounted for Gas Percentage

Q. ARE THE RATES AND CHARGES PAID BY WG'S DISTRICT OF COLUMBIA RATEPAYERS INFLUENCED BY THE LEVEL OF UNACCOUNTED FOR GAS EXPERIENCED BY THE COMPANY?

A. Yes. Unaccounted for Gas has been essentially a pass-through cost for the Company. Essentially all of the Company's gas sales and delivery service customers are required to compensate Washington Gas for lost and unaccounted for gas volumes.

Q. DO UNACCOUNTED FOR GAS VOLUMES INFLUENCE THE COMPANY'S REVENUE REQUIREMENT DETERMINATIONS IN THIS PROCEEDING?

A. Yes. Exhibit WG (2D)-5, Adjustment #1, page 28 of 33, shows the Company's calculation of its "Going Level Accrual Rate – Lost and Unaccounted for Gas Amounts." We also observe an application of that rate in the Company's adjustment for Unaccounted-for Gas on page 11 of 33, for Adjustment #1 in Exhibit WG (2D)-5. Furthermore, each of the Firm and Interruptible Delivery Service rates included in the Company's tariff incorporates a section for "Lost and Unaccounted-for Gas under which the tariff states:

> *The volumes of gas the customer has caused to be transported to the Company shall be* ***adjusted to reflect lost and unaccounted-for volumes*** *in the operation of the Company's distribution system in computing deliveries to the customer. The amount of gas retained by the Company shall be a percentage equal to the percentage of lost and unaccounted-for gas experienced in the Company's sales services during the billing month.* (Emphasis Added.)

Similar language is also found in the Company's Developmental Natural Gas Vehicle Service (Rate Schedule No. 4), the Balancing provisions in its Firm Delivery Gas Supplier Agreement (Rate Schedule No. 5), the Balancing and Interruption provisions of Rate Schedule No. 6 (Interruptible Delivery Service), and Rate Schedule No. 7 for Combined Heat and Power/Distributed Generation. Essentially, all of the Company's customers are required to compensate Washington Gas for its Lost and Unaccounted-for Gas volumes.

Q. SHOULD THE COMMISSION CONTINUE TO ALLOW WASHINGTON GAS AN ALLOWANCE FOR RECOVERY OF ITS FULL UNACCOUNTED FOR GAS EXPENSE?

A. No. Although I do not have a problem with providing Washington Gas compensation in terms of dollars or volume adjustments for a reasonable level of Unaccounted for Gas, the Company's reported Unaccounted for Gas percentages have risen far beyond the industry average. Washington Gas' annual report to the Pipeline and Hazardous Materials Safety Administration ("PHMSA") for 2019 for its District of Columbia distribution system was 4.30%.[32] Moreover, the Company's workpapers cited above show the computation of a three-year average Unaccounted-for Gas percentage where the data for the most recent twelve month period shown (i.e., TME August 2019) reflect a **4.42%** annual unaccounted-for gas rate.

Q. HOW DOES WG'S UNACCOUNTED FOR GAS PERCENTAGE FOR 2019 COMPARE WITH SIMILAR MEASURES FOR PRIOR YEARS?

A. The Company's Unaccounted Gas percentage for 2019 was its highest in the last ten years. Table 1, below, shows that since 2016 the reported Unaccounted Gas percentage for WG has increased steadily:

[32] Washington Gas only computes its Unaccounted or Gas percentage for PHMSA on a system-wide basis, and it reports the same percentage for DC, MD, and VA.

Table 2

Washington Gas Unaccounted-for Gas Percentage
As Reported to PHMSA (2016 – 2019)

Year	Unaccounted Gas Percentage
2016	3.38%
2017	3.69%
2018	4.16%
2019	4.30%

Q. HOW DOES WG'S UNACCOUNTED FOR GAS PERCENTAGE COMPARE WITH THOSE FOR OTHER LARGE GAS DISTRIBUTION SYSTEMS?

A. For 2019 Washington Gas' Unaccounted for Gas percentage is in the worst decile for all large gas distribution systems that submitted annual reports to PHMSA. The average Unaccounted Gas percentage for 198 gas distribution systems having over 500 miles of mains and greater than 25,000 services was 1.03%. In other words, WG's Unaccounted Gas percentage was more than **four times** the industry average for large gas distribution systems.

Q. DO CUSTOMERS BENEFIT FROM INCREASES IN THE COMPANY'S UNACCOUNTED FOR GAS PERCENTAGE?

A. No, they do not. It simply adds to their costs of gas service.

Q. DO CUSTOMERS HAVE SUBSTANTIAL INFLUENCE OR CONTROL OVER THE LEVEL OF UNACCOUNTED FOR GAS THAT WG EXPERIENCES?

A. Generally, no. The losses of gas included in the Company's Unaccounted Gas percentage only include gas volumes lost between the point that gas is received by the Company and when it passes through the customer's meter. Losses of gas on the customer's side of the meter are not included. Gas losses are primarily related to system leaks, errors in metering, changes in the heating value of gas delivered to the Company's system, data quality issues, and theft of service. With exceptions for third party damage and theft of service, the Company generally has substantial influence or control over the levels of unaccounted gas reported. Gas losses due to leaks in the Company's mains and services are not typically losses over which customers have any direct influence or derive any direct benefit.

In aging gas system, such as that operated by Washington Gas in the District of Columbia, increased leaks due to the aging and deterioration of mains, services and other distribution equipment can contribute significantly to the system's unaccounted for gas volumes. The information included in Washington Gas' Annual Reports to PHMSA indicate that the increases in leaks on the Company's District of Columbia distribution system in recent years have been primarily attributable to increases in leaks due to corrosion and leaks attributable to material, weld, or joint failures. Moreover, Table 3 demonstrates that leaks resulting from excavation damage (often attributable to third-party activities) have

been relatively constant. Thus, there is considerable evidence that losses of gas due to increased leaks are related to factors over which the Company exercises considerable influence or control.

Table 3

Washington Gas DC Distribution System
Leaks Due to Excavation Damage and Total Leaks
By Year 2010 - 2019

	Excavation Leaks		Total Leaks	
Year	Mains	Services	Mains	Services
2010	29	121	504	506
2011	40	151	508	506
2012	40	133	532	487
2013	37	99	515	457
2014	22	123	772	674
2015	38	150	741	676
2016	39	156	728	616
2017	24	119	590	627
2018	34	108	884	774
2019	36	115	984	842

Q. IS THE CONTINUATION OF ALLOWANCES FOR THE PASS THROUGH OF INCREASES IN UNACCOUNTED-FOR GAS VOLUMES CONSISTENT WITH THE DISTRICT'S ENVIRONMENTAL OBJECTIVES?

A. No, it is not. When the Company can simply adjust its rates or billed gas volumes to offset increasing amounts of unaccounted gas, it has little incentive to focus on stemming growth in those volumes.

Q. HOW SHOULD THE COMMISSION ADDRESS GROWTH IN WASHINGTON GAS' UNACCOUNTED-FOR GAS VOLUMES IN THIS PROCEEDING?

A. The Commission should set a limit on the percentage of lost and unaccounted for gas for which the Company is compensated. As shown in Table 4 below, over the six-year period from 2012 to 2017 the Company's unaccounted-for gas percentage, although not low, was relatively stable, averaging 3.64%. However, since the Company's merger with AltaGas, its unaccounted gas percentage has risen noticeably to 4.17% in 2018 and 4.30% in 2019.

Table 4

Washington Gas Light Company
Calculation of Average Unaccounted-for Gas Percentage
2012 – 2017

Year	Unaccounted Gas Percentage
2012	3.65%
2013	3.63%
2014	3.67%
2015	3.80%
2016	3.38%
2017	3.69%
Average 2012 - 2017	3.64%
2018	4.16%
2019	4.30%

As an initial step, I would encourage the Commission to set a limit on the amount of lost and unaccounted for gas for which WG may be compensated at

not more than 3.64%. Lost and/or unaccounted gas volumes in excess of the established limit should be considered a shareholder expense. I also recommend that the Commission ratchet that percentage gradually ratchet the limit on acceptable lost and unaccounted for gas downward to encourage further movement toward the industry average. After two or three years at the recommended 3.64% limit, the Commission could begin lowering that limit 10-12 basis points per year. Moreover, the Commission could provide Washington Gas further incentive to lower its unaccounted gas percentage by offering an incentive to the Company if it achieves an unaccounted gas percentage more than 10 basis points below the established limit for any given year. The incentive could be provided by allowing the Company to bill gas volumes in the subsequent year on the basis of the established limit rather than the Company's actual unaccounted gas percentage.

F. WG'S DEPRECIATION STUDY

Q. IN YOUR REVIEW OF THE COMPANY'S DEPRECIATION STUDY DID YOU IDENTIFY ANY CONCERNS REGARDING ITS CONTENT?

A. Yes, I did. I find the plant life and remaining life expectations for distribution mains that are presented in the Company's Depreciation Study to be incongruent with WG's plans for main replacements under its proposed Project Pipes 2 Plan.

Q. WHAT IS THE AVERAGE AGE OF THE COMPANY'S CAST IRON MAINS IN THE DISTRICT OF COLUMBIA?

A. The average age of Washington Gas' Cast Iron mains in the District is over 100 years. In 2012 Washington Gas provided a detailed listing of the Cast Iron mains on its District of Columbia distribution system by year of installation In Formal Case No. 1093. Based on that listing I computed an average age for WG's Cast Iron mains at that time of 94.58 years. Adding eight years for the passage of time since 2012 and conservatively assuming that Washington Gas replaced its oldest Cast Iron mains first (which it did not do), the average age for WG's Cast Iron mains in the District today would be no less than **100.5 years**.

Q. WHAT IS THE AVERAGE PROJECTED LIFE FOR CAST IRON MAINS IN THE DISTRICT OF COLUMBIA THAT IS SHOWN IN THE COMPANY'S DEPRECIATION STUDY IN THIS CASE?

A. Eighty (80) years.[33]

Q. WHAT DOES THE COMPANY'S DEPRECIATION STUDY INDICATE IS THE AVERAGE SERVICE LIFE FOR ITS CAST IRON MAINS?

A. The Company's Depreciation Study provides two assessments of the average service life for Cast Iron mains. Using its Current Parameters the Average

[33] Exhibit WG (F)-1, Statement E.

Service Life ("VG ASL") is 83.43 years. However, the Company proposed Average Service Life for Cast Iron mains based on SFAS 143 is 84.98 years.

Q. ACCORDING TO THE DEPRECIATION STUDY WASHINGTON GAS HAS PRESENTED IN THIS PROCEEDING WHAT IS THE AVERAGE REMAINING LIFE FOR ITS CAST IRON DISTRIBUTION MAINS IN THE DISTRICT?

A. Statement E in the Company's Depreciation Study in this proceeding shows an Average Remaining Life for Cast Iron distribution mains in DC of 15.19 years using the Company's Current Parameters and 14.16 years using the Company's claimed SFAS 143 Parameters. Using either the Company's current parameters or is SFAS 143 parameters, the current average age for WG's Cast Iron mains in the District exceeds the sum of the projected average service life and the estimated remaining life for those mains.

Q. WHAT IS WG'S CURRENT PLAN FOR REPLACEMENT OF THE CAST IRON MAINS ON ITS DISTRICT OF COLUMBIA DISTRIBUTION SYSTEM?

A. As set forth in WG's Pipes 2 Plan, Washington Gas would replace its existing Cast Iron mains over the next **35 years**. But most of its planned Cast Iron main replacement would occur in the last 30 years of that period.

Q. ARE YOU TRYING TO LITIGATE THE PIPES 2 PLAN ISSUES IN THIS PROCEEDING?

A. No. I am simply demonstrating a marked inconsistency between the assumptions underlying the Company's Depreciation Study in this proceeding and the plans Washington Gas has set forth for its pipe replacement activities. It is not appropriate to structure WG's depreciation allowance for Cast Iron mains base on a 14 or 15 year remaining life or expected average service lives in the range of 84 to 85 years when the Company plans to maintain substantial amounts of Cast Iron distribution main on its District of Columbia distribution system well beyond periods represented by those Depreciation Study assumptions.

Q. WHAT IS YOUR RECOMMENDATION ON THIS MATTER?

A. This Commission must not allow the Company ratemaking determinations, of which its Depreciation Study is an important element, to depart from its planning assumptions. If the Commission accepts that the Company's replacement of Cast Iron mains in the District will extend well beyond the average service life and remaining life assumptions in Washington Gas' filed Depreciation Study in this proceeding, then its Depreciation Study and the resulting depreciation allowances must be revised. The average service life expectation used in the Company's Depreciation Study must conform with the Company's actual plans for those facilities.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

IN THE MATTER OF	)	
	)	
The Application of Washington Gas Light	)	
Company for Authority to Increase	)	**Formal Case No. 1162**
Existing Rates and Charges	)	
For Gas Service	)	

DECLARATION OF BRUCE R. OLIVER

I, Bruce R. Oliver, do hereby declare under the penalty of perjury that I am authorized to make this Declaration on behalf of the Apartment and Office Building Association of Metropolitan Washington; that the foregoing testimony and exhibits were prepared by me or under my direction and supervision; and that the contents therein are true and correct to the best of my knowledge, information and belief.

/s/ Bruce R. Oliver
Bruce R. Oliver

Dated: August 14, 2020

Washington Gas Light Company
District of Columbia Jurisdiction

Summary of Therm Sales Statistics Total

Based on 12 Months Ending December 2019
Revised to Reflect 10-Year Average HDDs

Line No.	Class Of Service	Actual Therms a/	<----------Weather Gas----------> Actual b/	Normal c/	Weather Adjustment	<----------Base Gas---------> Actual	Normal d/	Total Normal Weather Therm Sales	<-------Peak Day----------> Weather Gas e/	Base Gas f/	Total
	A	B	C	D	E=D-C	F=B-C	G	H=D+G	I	J	K=I+J
1	Residential										
2	Heating and Cooling	90,110,468	72,438,653	77,834,921	5,396,268	17,671,815	18,662,344	96,497,265	1,235,755	49,435	1,285,190
3	Non Heating and Non Cooling - IMA's	685,423	347,373	373,057	25,684	338,050	426,745	799,802	5,939	1,134	7,073
4	Non Heating and Non Cooling	1,750,988	1,250,434	1,342,285	91,851	500,554	449,198	1,791,483	21,435	1,198	22,633
5	Total - Residential	92,546,879	74,036,460	79,550,263	5,513,803	18,510,419	19,538,287	99,088,550	1,263,129	51,767	1,314,896
6											
7	Commercial and Industrial										
8	Heating and Cooling										
9	Less than 3075	5,575,033	4,349,465	4,671,966	322,501	1,225,568	1,435,551	6,107,517	74,306	3,802	78,108
10	More than 3075	61,667,855	34,851,648	37,478,350	2,626,702	26,816,207	25,911,941	63,390,291	592,600	68,280	660,880
11	Non Heating and Non Cooling	11,131,208	2,767,363	2,968,443	201,080	8,363,845	8,545,842	11,514,285	47,666	22,992	70,658
12	Total - Commercial and Industrial	78,374,096	41,968,476	45,118,759	3,150,283	36,405,620	35,893,334	81,012,093	714,572	95,074	809,646
13											
14	Group Metered Apartments										
15	Heating and Cooling										
16	Less than 3075	608,112	415,068	447,485	32,417	193,044	292,478	739,963	7,022	766	7,788
17	More than 3075	27,336,970	18,702,710	20,103,342	1,400,632	8,634,260	9,258,416	29,361,758	318,795	24,462	343,257
18	Non Heating and Non Cooling	4,088,300	1,381,397	1,482,976	101,579	2,706,903	2,667,057	4,150,033	23,604	7,068	30,672
19	Total - Group Metered Apartments	32,033,382	20,499,175	22,033,803	1,534,628	11,534,207	12,217,951	34,251,754	349,421	32,296	381,717
20											
21	Total Firm	202,954,357	136,504,111	146,702,825	10,198,714	66,450,246	67,649,572	214,352,397	2,327,122	179,137	2,506,259
22	Interruptible	47,573,225	18,141,707	19,459,006	1,317,299	29,431,518	30,149,287	49,608,293	312,632	80,961	393,593
23	Special Contracts	39,149,549	10,805,335	11,612,814	807,479	28,344,214	26,358,959	37,971,773	184,392	69,856	254,248
24	Total Throughput	289,677,131	165,451,153	177,774,645	12,323,492	124,225,978	124,157,818	**301,932,463**	2,824,146	329,954	3,154,100

Washington Gas Light Company

DC PSC Formal Case No. 1162

Impact of 10-Year Average HDDs on WG Test Year Distribution Revenue

Twelve Months Ended December 31, 2019

Ln No	Class Of Service	WG NW Therms	Distribution Charge	Dist Chrg Revenue	WG NW Therms	Distribution Charge	Dist Chrg Revenue	Change in Dist Chrg Rev
		Therms	*$/Therm*	*$*	*Therms*	*$/Therm*	*$*	*$*
1	**Residential**							
2	Heating and Cooling	94,624,278	$ 0.3678	$ 34,802,809	96,497,265	$ 0.3678	$ 35,491,694	$ 688,885
3	Non Htg - IMAs	791,050	$ 0.3663	$ 289,762	799,802	$ 0.3663	$ 292,968	$ 3,206
4	Non-Htg - Other	1,760,840	$ 0.3663	$ 644,996	1,791,483	$ 0.3663	$ 656,220	$ 11,225
5	Total - Residential	97,176,168		$ 35,737,567	99,088,550		$ 36,440,882	$ 703,315
6								
7	**Commerical and Industrial**							
8	Heating and Cooling							
9	Less than 3075	5,995,527	$ 0.3459	$ 2,073,853	6,107,517	$ 0.3459	$ 2,112,590	$ 38,737
10	More than 3075	62,459,998	$ 0.3511	$ 21,929,705	63,390,291	$ 0.3511	$ 22,256,331	$ 326,626
11	Non-Heating	11,448,987	$ 0.3498	$ 4,004,856	11,514,285	$ 0.3498	$ 4,027,697	$ 22,841
12	Total - C&I	79,904,512		$ 28,008,414	81,012,093		$ 28,396,618	$ 388,204
13								
14	**Group Metered Apartments**							
15	Heating and Cooling							
16	Less than 3075	727,405	$ 0.3517	$ 255,828	739,963	$ 0.3517	$ 260,245	$ 4,417
17	More than 3075	28,871,740	$ 0.3558	$ 10,272,565	29,361,758	$ 0.3558	$ 10,446,914	$ 174,348
18	Non-Heating	4,116,240	$ 0.3528	$ 1,452,209	4,150,033	$ 0.3528	$ 1,464,132	$ 11,922
19	Total - GMA	33,715,385		$ 11,980,603	34,251,754		$ 12,171,290	$ 190,687
20								
21	**Total Firm**	210,796,065		$ 75,726,583	214,352,397		$ 77,008,790	**$ 1,282,207**

Washington Gas Light Company
District of Columbia
Summary of Therm Sales Statistics (Using Actual HDD's to Calculate)
Based on 12 Months Ending September 2015

Line No.	Class Of Service	Actual Therms	----------Weather Gas---------- Actual	Predicted	<----------Base Gas---------> Actual	Predicted	Predicted Therm Sales	Estimation Error Error in Base Gas Est Therms	Error in Base Gas Est %	% of Total Therms
	A	B	C	D	F=B-C	G	I=D+G			
1	**Residential**									
2	Heating and Cooling	106,936,431	85,644,628	85,644,628	21,291,803	19,062,842	104,707,470	(2,228,961)	-10.47%	-2.08%
3	Non Htg - IMAs	775,042	304,976	304,976	470,066	445,909	750,885	(24,157)	-5.14%	-3.12%
4	Non-Htg - Other	1,859,340	1,220,560	1,220,560	638,780	498,024	1,718,584	(140,756)	**-22.04%**	-7.57%
5	Total - Residential	109,570,813	87,170,164	87,170,164	22,400,649	20,006,775	107,176,939	(2,393,874)	-10.69%	-2.18%
6										
7	**Commerical and Industrial**									
8	Heating and Cooling									
9	Less than 3075	7,719,989	6,481,745	6,481,745	1,238,244	3,038,740	9,520,485	1,800,496	**145.41%**	**23.32%**
10	More than 3075	61,090,967	38,143,162	38,143,162	22,947,805	20,058,879	58,202,041	(2,888,926)	-12.59%	-4.73%
11	Non-Heating	15,036,028	3,039,547	3,039,547	11,996,481	10,341,884	13,381,431	(1,654,597)	-13.79%	-11.00%
12	Total - C&I	83,846,984	47,664,454	47,664,454	36,182,530	33,439,503	81,103,957	(2,743,027)	-7.58%	-3.27%
13										
14	**Group Metered Apartments**									
15	Heating and Cooling									
16	Less than 3075	1,905,897	956,027	956,027	949,870	416,693	1,372,720	(533,177)	**-56.13%**	**-27.98%**
17	More than 3075	27,062,039	18,485,662	18,485,662	8,576,377	8,267,737	26,753,399	(308,640)	-3.60%	-1.14%
18	Non-Heating	4,279,486	1,561,327	1,561,327	2,718,159	2,771,499	4,332,826	53,340	1.96%	1.25%
19	Total - GMA	33,247,422	21,003,016	21,003,016	12,244,406	11,455,929	32,458,945	(788,477)	-6.44%	-2.37%
20										
21	**Total Firm**	226,665,218	155,837,634	155,837,634	70,827,584	64,902,206	220,739,840	(5,925,378)	-8.37%	-2.61%
22	**Interruptible**	90,011,016	28,815,262	28,815,262	61,195,754	59,018,629	87,833,891	(2,177,124)	-3.56%	-2.42%
23	**Total Throughput**	316,676,234	184,652,896	184,652,896	132,023,338	123,920,836	308,573,732	(8,102,502)	-6.14%	**-2.56%**
24										
25	**a/ Precision of Normal Weather Regressions (Total Predicted Therm Sales / Total Actual Therms):**						**97.44%**			

Washington Gas Light Company
District of Columbia
Summary of Therm Sales Statistics (Using Actual HDD's to Calculate)
Based on 12 Months Ending December 2019

Ln No	Class Of Service	Actual Therms	----------Weather Gas---------- Actual	Predicted	<----------Base Gas---------> Actual	Predicted	Predicted Therm Sales	Estimation Error Error in Base Gas Est Therms	%	% of Total Therms
	A	B	C	D	E=B-C	F	H=D+G			
1	**Residential**									
2	Heating and Cooling	90,110,468	72,438,653	72,438,653	17,671,815	18,662,344	91,100,997	990,529	5.61%	1.10%
3	Non Htg - IMAs	685,423	347,373	347,373	338,050	426,745	774,118	88,695	26.24%	12.94%
4	Non-Htg - Other	1,750,988	1,250,434	1,250,434	500,554	449,198	1,699,632	(51,356)	-10.26%	-2.93%
5	Total - Residential	92,546,879	74,036,460	74,036,460	18,510,419	19,538,287	93,574,747	1,027,868	5.55%	1.11%
6										
7	**Commerical and Industrial**									
8	Heating and Cooling									
9	Less than 3075	5,575,033	4,349,465	4,349,465	1,225,568	1,435,551	5,785,016	209,983	17.13%	3.77%
10	More than 3075	61,667,855	34,851,648	34,851,648	26,816,207	25,911,941	60,763,589	(904,267)	-3.37%	-1.47%
11	Non-Heating	11,131,208	2,767,363	2,767,363	8,363,845	8,545,842	11,313,205	181,998	2.18%	1.64%
12	Total - C&I	78,374,096	41,968,476	41,968,476	36,405,620	35,893,334	77,861,810	(512,286)	-1.41%	-0.65%
13										
14	**Group Metered Apartments**									
15	Heating and Cooling									
16	Less than 3075	608,112	415,068	415,068	193,044	292,478	707,546	99,434	51.51%	16.35%
17	More than 3075	27,336,970	18,702,710	18,702,710	8,634,260	9,258,416	27,961,126	624,156	7.23%	2.28%
18	Non-Heating	4,088,300	1,381,397	1,381,397	2,706,903	2,667,057	4,048,454	(39,846)	-1.47%	-0.97%
19	Total - GMA	32,033,382	20,499,175	20,499,175	11,534,207	12,217,951	32,717,126	683,744	5.93%	2.13%
20										
21	**Total Firm**	202,954,357	136,504,111	136,504,111	66,450,246	67,649,572	204,153,683	1,199,326	1.80%	0.59%
22	**Interruptible**	47,573,225	18,141,707	18,141,707	29,431,518	30,149,287	48,290,994	717,769	2.44%	1.51%
23	**Special Contracts**	39,149,549	10,805,335	10,805,335	28,344,214	26,358,959	37,164,294	(1,985,255)	-7.00%	-5.07%
24										
25	**Total Throughput**	289,677,131	165,451,153	165,451,153	124,225,978	124,157,818	289,608,971	(68,160)	-0.05%	-0.02%
26										
27	**a/ Precision of Normal Weather Regressions (Total Predicted Therm Sales / Total Actual Therms):**						**99.98%**			

Washington Gas Light Company

DC PSC Formal Case No. 1162

Analysis of WG's Test Year and Historical Billed Peak Usage Therms

Historical Billed Peak Usage Therms from WG Response to AOBA Data Request 6-19 - Electronic Attachment

Ln No.	Description		Commercial & Industrial		Group Metered Apartments	
			Heating/Cooling	Non-Htg/Clg	Heating/Cooling	Non-Htg/Clg
	Historical Billed Peak Usage Therms	1/				
1	CY 2016		78,967,795	11,725,111	31,722,426	3,705,836
2	CY 2017		72,380,648	10,156,784	30,519,748	3,333,332
3	CY 2018		73,044,257	9,526,575	32,691,836	3,453,505
4	CY 2019		65,607,021	7,884,554	36,993,011	4,048,158
5	Average		72,499,930	9,823,256	32,981,755	3,635,208
	Most Recent Nov - Apr Periods					
6	Nov 2018 - Apr 2019		75,576,563	9,265,655	31,326,310	3,455,119
7	Nov 2017 - Apr 2018		72,435,993	9,711,798	33,073,288	3,369,227
	Test Year Peak Usage Therms	2/				
7	Maximum Month		10,990,247	1,422,734	9,654,366	1,047,179
8	Number of Months Billed		6	6	6	6
9	Annual Billed Peak Usage Therms		65,941,482	8,536,404	57,926,196	6,283,074
	Ratios: Rate Design Peak Usage to:					
10	2019 Billed Peak Usage		**1.005**	**1.083**	**1.566**	**1.552**
11	Nov 2018 - Apr 2019 Peak Usage		**0.873**	**0.921**	**1.849**	**1.818**
12	Nov 2017 - Apr 2018 Peak Usage		**0.910**	**0.879**	**1.751**	**1.865**
13	Highest Prior Year Billed Peak Usage		**0.835**	**0.728**	**1.826**	**1.695**

1/ The Historical Billed Peak Usage Therm data in WG's response to AOBA Data Request 6-19c does not identify Peak Usage separately for the C&I and GMA < 3,075 therm and > 3,075 therm Heating/Cooling subclasses.

2/ From Exhibit WG (2H)-1, Schedule B, page 2 of 5.

Washington Gas Light Company

DC PSC Formal Case No. 1162

Calculated Subsidy to Special Contract Service

Ln No	Decription	Reference	Amount
	Special Contract Service		
1	Allocated Net Rate Base	CCOSS Summary: Line 23, Col R	$ 21,626,583
2	Net Operating Income - Adjusted	CCOSS Summary: Line 22, Col R	$ (132,885)
3	Return Earned - TME 12/31/2019	CCOSS Summary: Line 24, Col R	**-0.61%**
4	WG's Requested Overall ROR	Exh WG (2D)-1, page 1 of 4, Line 21, Col. I	7.56%
5	Required Special Contract Oper Income		$ 1,634,970
6	Special Contract Oper Income Deficiency	Line 5 + Line 2	**$ 1,767,855**
7	Complement of Composite Tax Rate	Exh WG (2D)-1, page 3 of 4, footnote c/	72.48%
8	Revenue Deficiency for Spec Contracts	Line 6 / Line 7	$ 2,438,992
9	WG Prop Incr in Special Conract Revenues	Exh WG (2H)-1, Sch B, p. 4 of 5, Ln 29, Col N	$ 35,615
10	Net Subsidy to Special Contract Service	Line 6 - Line 7	**$ 2,403,377**

Attachment A
Resume for Bruce R. Oliver
Formal Case No. 1162

BRUCE R. OLIVER

Revilo Hill Associates, Inc.
7103 Laketree Drive
Fairfax Station, Virginia 22039
(703) 569-6480

EXPERIENCE

Over 40 years of experience specializing in the areas of utility rates, energy, and regulatory policy. Offers unusual depth and breadth in his understanding of energy and utility industries which leads to creative and effective resolution of rate issues. Has presented expert testimony in regulatory proceedings in more than 300 proceedings before regulatory commissions in 24 jurisdictions, and has served a diverse group of clients on issues encompassing a wide range of energy and utility-related activities. Assists clients in the assessment of competitive energy markets for retail services and in the negotiation of contracts for the purchase of such services. Clients have included commercial and industrial energy users, hospitals and universities, state regulatory commissions, utilities, consumer advocates, municipal governments, federal agencies, and suppliers of equipment and services to utility markets.

1985-Present — Revilo Hill Associates, Inc.
President and CEO

Directs the firm's consulting practice, with specialization in the areas of industrial economics, energy, utilities and regulatory policy. Provides expert testimony in regulatory proceedings. Assists individual commercial and institutional customers in the competitive procurement of energy services and resolution of utility service and billing issues. Regulatory work includes participation in electric, gas, water and sewer utility rate and policy matters, with particular specialization in the areas of utility costs of service, rate structure, rate of return, utility planning, and forecasting. Examples of recent projects include:

- Development and presentation of positions regarding the merits of various forms of alternative ratemaking including, but not limited to: multi-year rate plans; performance-based ratemaking concepts; and the merits of proposals for Performance Incentive Mechanisms.

- Assessment of a gas distribution utility's plans for accelerated replacement of aging and leak prone distribution mains by an LDC, as well as the impacts of rising leak rates the utility's gas system safety and rates distribution services.

- Negotiation of settlements to reflect the impacts of the Tax Cut and Jobs Act of 2017 in rates for certain electric and gas distribution utilities.

- Investigation of utility merger issues including ring-fencing, costs to achieve, estimated merger benefits, and allocation of merger benefits among customers for electric and gas utility mergers.

- Investigation of gas distribution utility system expansion proposals, tariff changes, and proposed ratemaking treatment of costs for gas expansion activities.

- Examination of utility proposals undergrounding overhead electric distribution facilities and the recovery of costs for undergrounding activities.

- Evaluation of utility proposals for the deployment of Advanced Metering Infrastructure (AMI) and the development of dynamic pricing rates to be implemented using AMI equipment.

- Detailed evaluation of a gas distribution utility's long-range gas supply planning, its evaluation of gas supply alternatives, and the prudence of gas its procurement decisions.

- Investigation of cost of service, rate design, tariff, forecasting and planning issues for island utilities in the U.S. Virgin Islands and Guam.

- Analysis of utility revenue decoupling proposals including assessment of the cost of service and rate impacts of such proposals and the development of appropriate tariff language for such proposals.

- Investigation of matters relating to a utility's outsourcing of significant components of its Administrative and General and Customer Service activities, including the merits of the proposed outsourcing arrangements and appropriate rate treatment of costs incurred to: select providers of outsourced services; negotiate contracts; and achieve the implementation of outsourcing arrangements.

- Strategic analysis and policy guidance for a major commercial consumer group in the development and presentation of positions before legislative and regulatory bodies regarding electric and gas regulatory issues.

- Development of Asset Management incentive programs for natural gas distribution utilities.

- Investigation and preparation of a report on the causes of large heating oil price increases for the Attorney General of a New England state.

- Participation as a member of a three-person panel hearing a gas marketer complaint of anti-competitive behavior by a local gas distribution utility in its provision of unbundled gas transportation services.

- Preparation of cost allocation studies and rate structure proposals for electric, gas, water and wastewater utility regulatory proceedings;

- Analysis of proposals for restructuring and the unbundling of rates for local gas distribution companies, and negotiated terms, conditions, and pricing for restructured utility services.

2000-Present AOBA Alliance, Inc.
Director and Chief Economist

Key technical advisor to one of the nation's largest and most successful customer-based energy aggregation programs. Assists non-residential customers in the Washington, D.C. area in the procurement of competitive retail energy services, including the evaluation and negotiation of contract terms for competitive electricity, natural gas, energy information services. Monitors energy markets and keeps participants informed regarding energy market developments and pricing trends. Focused primarily on the commercial building industry, the AOBA Alliance, Inc. serves more than 9,000 electric and natural gas accounts in twelve states and the District of Columbia. Those participants use over 3.0 billion kWh per year and over 660 MW of electrical peak load.

1981-85 Resource Dynamics Corporation
Principal and Vice President

Responsible for the firm's activities in the areas of energy pricing, utility rates and regulatory policy. Provided expert testimony before utility regulatory commissions on issues relating to costs of service, rate design, load management, load research, fuel price forecasting, utility costing analyses, and cost allocation methods. Evaluated utility fuel procurement practices, fuel price forecasts, and price forecasting methodologies. Contributed to modeling efforts relating to the estimation of national and regional electric utility load curves and coal market prices. Participated in the development handbooks for cogeneration feasibility assessment.

1980-81 Potomac Electric Power Company
Manager of Rate Research Department

Directed the development of all rate related programs. Supervised the costing, design and analysis of traditional and innovative rates (including time-of-use, load management and cogeneration tariffs). Also was responsible for corporate revenue forecasting activities, as well as the development of marginal and avoided cost studies.

1979-80 Pacific Gas and Electric Company
Rate Experimentation Supervisor

Responsible for design, implementation and analysis of innovative rate programs for both gas and electric service. Developed programs for curtailable service; cogeneration; conservation; residential load cycling; and commercial, industrial, and agricultural time-of- use rates. Directed analyses of time-of-use and lifeline price elasticities and development of marginal and avoided costing methods.

1973-79 ICF Incorporated
Project Manager

Specialized in energy policy and utility regulatory analyses. Performed detailed analysis of U.S. petroleum, natural gas, coal and electric utility industries. Provided expert testimony on utility rate issues. Designed experimental rates for federally funded time-of-use rate and load management programs in North Carolina. Provided technical support to the DOE Regulatory Intervention Program. Contributed to the design and development of the National Coal Model, and prepared forecasts of low sulfur fuel availability for utility markets.

1972-73 U.S. Cost-of-Living Council - Pay Board
Labor Economist

Served in the Office of the Chief Economist. Responsible for macroeconomic analyses of Board decisions, and for the development data systems to support assessments of the impacts of Board decisions and the reporting of aggregate statistics on wage increases granted by the Board.

EDUCATION

1972 M.A., Economics, Virginia Polytechnic Institute and State University

1970 B.A., Economics, Virginia Polytechnic Institute and State University

RATE CASE PARTICIPATION

Alberta, Canada	
Canadian Western Natural Gas	1998 General Rate Application
NOVA Gas Transmission Ltd.	1995 GRA, Phase II
Canadian Western Natural Gas	Core Market Direct Purchase
Northwestern Utilities	Core Market Direct Purchase
TransAlta Utilities Corp.	Load Retention Rate Offering
Alberta Power Ltd.	1993 General Rate Application
Arizona	
Southwest Gas Corporation	Docket No. U-1551-93-272
Sun City Water Company	Docket No. U-1656-91-134
Havasu Water Company	Docket No. U-2013-91-133
Arizona Water Company	Docket No. U-1445-91-227
California	
Pacific Gas & Electric Company	Application No. 58089
Connecticut	
Southern Connecticut Gas Company	Docket No. 89-09-06
Connecticut Light & Power Company	Docket No. 87-07-01
Delaware	
Chesapeake Utilities Corporation	Docket No. 95 - 73
Delmarva Power & Light Company	Docket No. 94 - 141
Delmarva Power & Light Company	Docket No. 94 - 129
Delaware Electric Cooperative	Docket No. 94 - 100
Delmarva Power & Light Company	Docket No. 92 - 85
Delmarva Power & Light Company	Docket No. 92 - 71F
Delaware Electric Cooperative	Docket No. 91 - 37
Delmarva Power & Light Company	Docket No. 91 - 24
Delmarva Power & Light Company	Docket No. 91 - 20
Delmarva Power & Light Company	Docket No. 90 - 31
Delmarva Power & Light Company	Docket No. 90 - 21
Delmarva Power & Light Company	Docket No. 89 - 26
Chesapeake Utilities Corporation	Docket No. 88 - 39F
Delmarva Power & Light Company	Docket No. 88 - 34
Delmarva Power & Light Company	Docket No. 88 - 32, Phase 2
Delmarva Power & Light Company	Docket No. 88 - 32
Delaware Electric Cooperative	Docket No. 87 - 34, Phase 2
Delaware Electric Cooperative	Docket No. 87 - 34
Delmarva Power & Light Company	Docket No. 87 - 9, Phase 5
Delmarva Power & Light Company	Docket No. 87 - 9, Phase 4

Delmarva Power & Light Company	Docket No. 87 - 9, Phase 3
Delmarva Power & Light Company	Docket No. 87 - 9, Phase 2
Delmarva Power & Light Company	Docket No. 87 - 9
Delmarva Power & Light Company	Docket No. 86 - 43
Delmarva Power & Light Company	Docket No. 86 - 24

District of Columbia

Potomac Electric Power Company	Formal Case No. 1156
Potomac Electric Power Company	Formal Case No. 1151
Potomac Electric Power Company	Formal Case No. 1150
Potomac Electric Power Company	Formal Case No. 1145
WGL – AltaGas Merger	Formal Case No. 1142
Potomac Electric Power Company	Formal Case No. 1139
Washington Gas Light Company	Formal Case No. 1137
Potomac Electric Power Company	Formal Case No. 1133
Potomac Electric Power Company	Formal Case No. 1130
Potomac Electric Power Company	Formal Case No. 1121
Exelon – Pepco Merger	Formal Case No. 1119
Potomac Electric Power Company	Formal Case No. 1116
Washington Gas Light Company	Formal Case No. 1115
Potomac Electric Power Company	Formal Case No. 1103
Washington Gas Light Company	Formal Case No. 1093
Potomac Electric Power Company	Formal Case No. 1087
Washington Gas Light Company	Formal Case No. 1079
Potomac Electric Power Company	Formal Case No. 1076
Potomac Electric Power Company	Formal Case No. 1056
Washington Gas Light Company	Formal Case No. 1054
Potomac Electric Power Company	Formal Case No. 1053, Phase II
Potomac Electric Power Company	Formal Case No. 1053
Washington Gas Light Company	Formal Case No. 1016
Potomac Electric Power/Conectiv Merger	Formal Case No. 1002
Washington Gas Light Company	Formal Case No. 989
Potomac Electric Power Company/Baltimore Gas & Electric Company Merger	Formal Case No. 951
Potomac Electric Power Company	Formal Case No. 945
Potomac Electric Power Company	Formal Case No. 939
Washington Gas Light Company	Formal Case No. 934
Washington Gas Light Company	Formal Case No. 922
District of Columbia Natural Gas	Formal Case No. 890
Potomac Electric Power Company	Formal Case No. 889
Potomac Electric Power Company	Formal Case No. 869
District of Columbia Natural Gas	Formal Case No. 845
District of Columbia Natural Gas	Formal Case No. 840
Potomac Electric Power Company	Formal Case No. 834
Potomac Electric Power Company	Formal Case No. 813, Phase II
Potomac Electric Power Company	Formal Case No. 813

Washington Gas Light Company	Formal Case No. 787
Potomac Electric Power Company	Formal Case No. 785
Potomac Electric Power Company	Formal Case No. 759, Phases III
Potomac Electric Power Company	Formal Case No. 759, Phases II
Potomac Electric Power Company	Formal Case No. 759, Phases I
Potomac Electric Power Company	Formal Case No. 758

Guam

Guam Power Authority	Docket No. 11-090, Phase II
Guam Power Authority	Docket No. 11-090
Guam Power Authority	Docket No. 07-010
Guam Power Authority	Docket No. 98-002
Guam Power Authority	Docket No. 96-004
Guam Power Authority	Docket No. 95-001
Guam Power Authority	Docket No. 94-001
Guam Power Authority	Docket No. 92-002
Guam Power Authority	Docket No. 89-002 A,B,C

Illinois

Commonwealth Edison Company	Docket No. 86-0128

Maryland

Washington Gas Light Company	Case No. 9605
Potomac Electric Power Company	Case No. 9602
Washington Gas Light Company	Case No. 9481
WGL – AltaGas Merger	Case No. 9449
Potomac Electric Power Company	Case No. 9443
Washington Gas Light Company	Case No. 9433
Potomac Electric Power Company	Case No. 9418
Exelon – Pepco Merger	Case No. 9361
Potomac Electric Power Company	Case No. 9336
Washington Gas Light Company	Case No. 9335
Washington Gas Light Company	Case No. 9322
Potomac Electric Power Company	Case No. 9311
Potomac Electric Power Company	Case No. 9286
Washington Gas Light Company	Case No. 9267
Potomac Electric Power Company	Case No. 9217
Potomac Electric Power Company	Case No. 9207
Washington Gas Light Company	Case No. 9158
Washington Gas Light Company	Case No. 9104, Phase II
Washington Gas Light Company	Case No. 9104
Potomac Electric Power Company	Case No. 9092, Phase II
Potomac Electric Power Company	Case No. 9092
Standard Offer Service Docket	Case No. 9063
Standard Offer Service Docket	Case No. 9056

Standard Offer Service Docket	Case No. 9037
Potomac Electric Power Company	Case No. 8895
Washington Gas Light Company	Case No. 8991
Washington Gas Light Company	Case No. 8959
Washington Gas Light Company	Case No. 8920, Phase II
Washington Gas Light Company	Case No. 8920
Potomac Electric Power Company	Case No. 8895
Potomac Electric Power Company	Case No. 8890
Potomac Electric Power Company	Case No. 8791
Potomac Electric Power Company	Case No. 8773
Generic Electric Industry Restructuring	Case No. 8738
Potomac Electric Power Company/Baltimore Gas & Electric Company Merger	Case No. 8725
Washington Gas Light Company	Case No. 8545
Potomac Electric Power Company	Case No. 8315
Potomac Electric Power Company	Case No. 8251
Maryland Natural Gas	Case No. 8191
Potomac Electric Power Company	Case No. 8162
Maryland Natural Gas	Case No. 8119
Potomac Electric Power Company	Case No. 8079
Baltimore Gas & Electric Company	Case No. 8070
Maryland Natural Gas	Case No. 8060
Potomac Electric Power Company	Case No. 7972
Potomac Electric Power Company	Case No. 7874
Washington Gas Light Company	Case No. 7649

Massachusetts

Investigation of Rate Structures to Promote Efficient Deployment of Demand Management	Docket No. 07-50

North Carolina

Generic Electric Load Management	Docket No. M100, Sub 78

New Jersey

Public Service Electric and Gas	Docket No. GT93060242
Public Service Electric and Gas	Docket No. ER91111698J
Elizabethtown Gas Company	Docket No. 8812-1231
Elizabethtown Gas Company	Docket No. 8612-1374
Public Service Electric and Gas	Docket No. 8512-1163
Jersey Central Power & Light	Docket No. 8511-1116
New Jersey Natural Gas Company	Docket No. 8510-974
South Jersey Gas Company	Docket No. 850-8858
Public Service Electric and Gas	Docket No. 850-2231
New Jersey Natural Gas Company	Docket No. 850-7732
South Jersey Gas Company	Docket No. 843-184, Phase II
Atlantic Electric Company	Docket No. 8310-883, Phase II

New Jersey Natural Gas Company	Docket No. 831-46
Public Service Electric and Gas	Docket No. 837-620
Public Service Electric and Gas	Docket No. 8210-869

New Mexico

Gas Company of New Mexico	Case No. 2353
Gas Company of New Mexico	Case No. 2340
Gas Company of New Mexico	Case No. 2307
Gas Company of New Mexico	Case No. 2183
Gas Company of New Mexico	Case No. 2147 (Remand)
Gas Company of New Mexico	Case No. 2147
Gas Company of New Mexico	Case No. 2093

New York

Consolidated Edison Company	Docket No. 94-E-0334
Consolidated Edison Company	Docket No. 91-E-0462
Brooklyn Union Gas Company	Docket No. 90-G-0981

Ohio

Toledo Edison Company	Case No. 78-628-EL-FAC

Pennsylvania

PECO Energy Company	Docket No. R-20028394
PG Energy, Inc.	Docket No. R-00061365
Philadelphia Electric Company	Docket No. R-00970258
Mechanicsburg Water Company	Docket No. R-00922502
West Penn Power Company	Docket No. R-00922378
Pennsylvania Electric Company	Docket No. M-920312
North Penn Gas Company	Docket No. R-922276
Metropolitan Edison Company	Docket No. R-922314
York Water Company	Docket No. R-922168
Dauphin Consolidated Water Company	Docket No. R-921000
Pennsylvania Electric Company	Docket No. M-920312
Duquesne Light Company	Docket No. C-913424
Pennsylvania American Water Company	Docket No. R-911909
West Penn Power Company	Docket No. R-901609
Pennsylvania Gas & Water Co. Water Div.	Docket No. R-891209
Pennsylvania Power Company	Docket No. R-881112
Duquesne Light Company	Docket No. R-870651
Pennsylvania Electric Company	Docket No. R-870172
Metropolitan Edison Company	Docket No. R-870171
Western Pennsylvania Water Company	Docket No. R-860397
Duquesne Light Company	Docket No. R-860378
Philadelphia Electric Company	Docket No. R-850290
Pennsylvania Power Company	Docket No. R-850267
Pennsylvania Power & Light Company	Docket No. R-850251

Philadelphia Electric Company	Docket No. R-850152
Western Pennsylvania Water Company	Docket No. R-850096
Pennsylvania Power Company	Docket No. R-842740
Pennsylvania Power & Light Company	Docket No. R-842651
Pennsylvania Electric Company	Docket No. R-832550
Metropolitan Edison Company	Docket No. R-832549
Duquesne Light Company	Docket No. R-842383
UGI Corporation-Gas Utility Division	Docket No. R-832331
Pennsylvania Power & Light Company	Docket No. I-830374
Pennsylvania Electric Company	Docket No. R-822250
Metropolitan Edison Company	Docket No. R-822249
Pennsylvania Power & Light Company	Docket No. R-822169
Pennsylvania Gas & Water Co. - Water Div.	Docket No. R-822102
Columbia Gas Co. of Pennsylvania	Docket No. R-822042
Pennsylvania Gas & Water Co. - Gas Div.	Docket No. R-821961
Philadelphia Electric Company	Docket No. R-811626

Philadelphia, City of

Philadelphia Gas Works	1992 Rate Design Proceeding
Philadelphia Water Department	1992 Rate Increase Request
Philadelphia Gas Works	1990 Rate Increase Request
Philadelphia Water Department	1990 Rate Increase Request
Philadelphia Gas Works	1989 Proceeding
Philadelphia Gas Works	1988 Rate Increase Request
Philadelphia Gas Works	1987-88 Operating Budget
Philadelphia Gas Works	1986 Rate Increase Request
Philadelphia Water Department	1985 Rate Increase Request

Rhode Island – Public Utilities Commission

National Grid – Gas Long-Range Plan	Docket No. 4872
National Grid – Gas GCR	Docket No. 4846
National Grid – Gas DAC	Docket No. 4816
National Grid – Gas Annual ISR Filing	Docket No. 4781
National Grid – Gas Base Rates	Docket No. 4770
National Grid – Gas GCR	Docket No. 4719
National Grid – Gas DAC	Docket No. 4708
National Grid – Gas GCR	Docket No. 4647
National Grid – Gas DAC	Docket No. 4634
National Grid – Gas Long-Range Plan	Docket No. 4608
National Grid – Gas GCR	Docket No. 4576
National Grid – Gas DAC	Docket No. 4573
National Grid – Gas Customer Choice	Docket No. 4523
National Grid – Gas GCR	Docket No. 4520
National Grid – Gas DAC	Docket No. 4514

National Grid – Gas GCR	Docket No. 4436
National Grid – Gas DAC	Docket No. 4431
National Grid – Gas GCR	Docket No. 4346
National Grid – Gas DAC	Docket No. 4339
National Grid – Gas On-System Margins	Docket No. 4333
National Grid – Gas Base Rates	Docket No. 4323
National Grid – Gas GCR	Docket No. 4283
National Grid – Gas DAC	Docket No. 4269
National Grid – Electric Backup Service	Docket No. 4232
National Grid – Elec & Gas Revenue Decoupling	Docket No. 4206
National Grid – Gas GCR	Docket No. 4199
National Grid – Gas DAC	Docket No. 4196
National Grid – Gas GCR	Docket No. 4097
National Grid – Gas DAC	Docket No. 4077
National Grid – Electric	Docket No. 4065
National Grid – Gas Portfolio Management	Docket No. 4038
National Grid – Gas GCR	Docket No. 3982
National Grid – Gas DAC	Docket No. 3977
National Grid – Gas GCR	Docket No. 3961
National Grid – Gas Base Rates	Docket No. 3943
National Grid – Gas GCR	Docket No. 3868
National Grid – Gas DAC	Docket No. 3859
National Grid – Gas Long-Range Plan	Docket No. 3789
National Grid – Gas GCR	Docket No. 3766
National Grid – Gas DAC	Docket No. 3760
New England Gas Company	Docket No. 3696
New England Gas Company	Docket No. 3690
Block Island Power Company	Docket No. 3655
New England Gas Company	Docket No. 3548
New England Gas Company	Docket No. 3459
New England Gas Company	Docket No. 3436
New England Gas Company	Docket No. 3401
Providence Gas Company	Docket No. 3295
Narragansett Electric Company	Docket No. 2930
Providence Gas Company	Docket No. 2902
Providence Gas Company	Docket No. 2581
Providence Gas Company	Docket No. 2552
Providence Gas Company	Docket No. 2374
Providence Gas Company	Docket No. 2286
Valley Gas Company	Docket No. 2276
Valley Gas Company	Docket No. 2138, Phase II
Valley Gas Company	Docket No. 2138, Phase I
Providence Gas Company	Docket No. 2082
Providence Gas Company	Docket No. 2076
Providence Gas Company	Docket No. 2001, Phase II
Valley Gas Company	Docket No. 2038

Providence Gas Company	Docket No. 2001
Block Island Power Company	Docket No. 1998
Providence Gas Company	Docket No. 1971
Generic Gas Transportation	Docket No. 1951
Valley Gas Company	Docket No. 1736
Providence Gas Company	Docket No. 1723
Providence Gas Company	Docket No. 1673

Rhode Island – Division of Public Utilities

National Grid Acquisition of New England Gas Company's Rhode Island Assets	Docket No. D-06-13
Merger of Southern Union, Valley Gas Company And Bristol & Warren Gas Company	Docket No. D-00-02

South Dakota

Northern States Power Company	Docket No. F-3188

Utah

Dominion Energy Utah	Docket No. 19-057-02

Vermont

Department of Public Service	Docket No. 5378
Department of Public Service	Docket No. 5307

Virginia

Washington Gas Light Company	Docket No. PUR 2018-00080
Virginia Electric Power Company	Docket No. PUE 2018-00042
AltaGas – WGL Merger	Docket No. PUR 2017-00049
Virginia Electric Power Company	Docket No. PUE 2016-00021
Virginia Electric Power Company	Docket No. PUE 2016-00001
Virginia Electric Power Company	Docket No. PUE 2015-00027
Virginia Electric Power Company	Docket No. PUE 2011-00027
Washington Gas Light Company	Docket No. PUE 2010-00139
Virginia Electric Power Company	Docket No. PUE 2009-00019
Virginia Electric Power Company	Docket No. PUE 2009-00018
Virginia Electric Power Company	Docket No. PUE 2009-00017
Virginia Electric Power Company	Docket No. PUE 2009-00016
Virginia Electric Power Company	Docket No. PUE 2009-00011
Washington Gas Light Company	Docket No. PUE 2006-00059
Washington Gas Light Company	Docket No. PUE 2005-00010
Washington Gas Light Company	Docket No. PUE 2003-00603
Washington Gas Light Company	Docket No. PUE 2002-00364
Virginia Electric Power Company	Docket No. PUE 000584
Virginia Electric Power Company	Docket No. PUE 980213
Virginia Electric Power Company	Docket No. PUE 980212
Virginia Electric Power Company	Docket No. PUE 960296

Washington Gas Light Company	Docket No. PUE 940031
Virginia Electric Power Company	Docket No. PUE 920041
Virginia Electric Power Company	Docket No. PUE 910047
Northern Virginia Natural Gas	Docket No. PUE 900016
Northern Virginia Natural Gas	Docket No. PUE 880024
Virginia Electric Power Company	Docket No. PUE 830029
Washington Gas Light Company	Docket No. PUE 830008

Virgin Islands

Water and Power Authority – Water Rates	Docket No. 613
Water and Power Authority – Electric Rates	Docket No. 612
Water and Power Authority – Water Rates	Docket No. 576
Water and Power Authority – Electric Rates	Docket No. 575
Water and Power Authority – Electric Rates	Docket No. 533

Wisconsin

Gas Transportation - Generic	Docket No. 05-GI-102

Federal Energy Regulatory Commission

Weaver's Cove Energy, LLC.	Docket No. CP04-36-000
Mill River Pipeline, LLC.	Docket No. CP04-41-000
Columbia Gulf Transmission Co.	Docket No. RP86-167-000
Columbia Gas Transmission Corp.	Docket No. RP86-168-000
Columbia Gulf Transmission Co.	Docket No. TC86-021-000

SELECTED REPORTS, PUBLICATIONS AND PRESENTATIONS

"Will Energy Market Developments Drive Government Policy or Will Government Policy Drive Energy Markets," Presentation to AOBA Utility Committee, June 27, 2013.

"Ratemaking for Recovery of Pipeline Safety Investments," Presentation to the National Association of Regulatory Utility Commissioners, February 6, 2013.

"In Comparatively Stable Energy Markets, Legislative and Regulatory Decisions Make Budgeting for Energy Services A Real Challenge," Presentation to AOBA Utility Committee, October 19, 2011.

"Energy Commodities Show Stability; Charges for Utility Services Rise," Presentation to AOBA Utility Committee, April 20, 2011.

"Budgeting for Utilities In the Face of Constantly Changing Rates," Presentation to AOBA Utility Committee, November 10, 2010.

"Electric Utilities Seek Increased Rates to Fund Large Construction Projects," Presentation to AOBA Utility Committee, October 7, 2009.

"Could You Soon Be Paying $1.00 per kWh for Peak Electricity Supply?" Presentation to AOBA Utility Committee, June 24, 2009.

"Energy Markets in a Tailspin," Presentation to AOBA Utility Committee, March 11, 2009.

"Energy price Outlook for 2009," Presentation to AOBA Utility Committee, December 10, 2008.

"Are You 'Going Green' or Going in the Red," Presentation to AOBA Utility Committee, June 18, 2008.

"Understanding Your Utility Costs and Your Competitive Service Options," Presentation to the Mid-Atlantic Hispanic Chamber of Commerce, July 10, 2006.

"Keeping Your Head Above Water In Volatile Electricity And Natural Gas Markets," Presentation to Legum & Norman Managed Condominiums, February 28, 2006.

"Surviving in Deregulated Energy Markets: *What You Don't Know Will Hurt You*!" Presentation to AOBA Legislative & Regulatory Seminar, May, 18, 2006.

"The Utility Market And Deregulation: *What's In It For You*? Presentation to the Montgomery County, Maryland, Apartment Assistance Program, September 29, 2005.

"Winds of Long-Term Change or Another Short-Term Market Distortion: Post-Katrina and Rita Energy Markets," Keynote Presentation to AOBA Leadership Conference, September 28, 2005.

"These Are Not Your Father's Energy Markets," Presentation to the Institute of Real Estate Management, March 8, 2005.

"Understanding Natural Gas Markets," Prepared for the AOBA Alliance, Inc., August 2004.

"Default Service: Protection or Problem," Prepared for the AOBA Alliance, Inc., April 2004.

Assessment of Winter 2000 Heating Oil Price Increases for Rhode Island, Report Prepared for the Rhode Island Department of Attorney General, September 2001 (with P. Roberti).

"Stranded Costs and Stranded Values," Presentation before the Virginia General Assembly, Joint Subcommittee on Electric Industry Restructuring, Task Force on Stranded and Transition Costs, May, 1998.

"Comments Regarding Restructuring of the Electric Industry in Maryland," Presentation before the Maryland Legislative Task Force on Electric Industry Restructuring, December 1997.

Electric Industry Restructuring And Competition In Virginia, Prepared for the Apartment and Office Building Association of Metropolitan Washington, September 1997.

"Assessment of the Proposed Pepco/BGE Merger," Presentation to the District of Columbia Community Forum on Merger Issues, December 1996.

Assessment of the Agreement Between Delmarva Power & Light Company and the Medical Center of Delaware for the Supply of Electrical Power, Prepared for the Delaware Public Service Commission, Docket No. 94-129, December 1994.

Assessment of the Agreement Between Delmarva Power & Light Company and Ciba-Geigy Corporation for the Supply of Limited Volume Natural Gas, Prepared for the Delaware Public Service Commission, Docket No. 94-141, November 1994.

Assessment of the Natural Gas Service Agreement Between Delmarva Power & Light Company and the Medical Center of Delaware, Prepared for the Delaware Public Service Commission, Docket No. 94-129, November 1994.

Lifeline Rates for Electric Service and Their Potential Application to the Guam Power Authority, Prepared for the Public Utilities Commission of Guam, December 1991.

Review of Additional Information Provided by Delmarva Power & Light Company Regarding the Costs of Gas Supply for Hay Road Combined Cycle Generation; prepared for the Delaware Public Service Commission, Docket No. 87-9, Phase V, June 1991.

Evaluation of Delmarva Power & Light Company's Proposed Near-Term Capacity Additions, prepared for the Delaware Public Service Commission, Docket No. 87-9, Phase V, August, 1990.

Evaluation and Recommendations: Delmarva Power & Light Company's Proposed Commercial and Industrial Indoor Lighting Pilot Program, Prepared for the Delaware Public Service Commission, Docket No. 87-9, Phase V, January, 1990.

Preliminary Evaluation of DP&L's Proposed Long Term Purchase of Capacity and Energy from Duquesne Light Company, Prepared for the Delaware Public Service Commission, Docket No. 87-9, Phase IV, January 1990.

Staff Review and Technical Assessment: Challenge 2000 Supply Side Plan, Prepared for the Delaware Public Service Commission, Docket No. 87-9, Phase II, October 1988 (with N.R. Friedman and J. Byrne).

Review and Preliminary Analysis of Rates for the Bordentown Sewerage Authority, Prepared for the Bordentown Citizens' Committee, August 1988.

Evaluation of the Proposed Load Management Program and Accompanying New Rate Schedule R-LM, Prepared for the Delaware Public Service Commission, Docket No. 87-34, January 1988.

Staff Interim Report to the Hearing Examiner, Prepared for the Delaware Public Service Commission, Docket No. 87-9, January 1988, (with J. Byrne, D. Rich, & Y.D. Wang).

Report for the Attorney General of the State of New Mexico: In the Matter of the Application of Gas Company of New Mexico for a Variance to and a Change in General Order No. 44, February 1987 (with R. LeLash and G. Epler).

Determinants of Capital Costs for Coal-Fired Power Plants, prepared for U.S. Energy Information Administration, March 1985 (with J. P. Price and C. J. Koravik).

Trends in Electric Utility Load Duration Curves, prepared for U.S. Energy Information Administration, December 1984. (with J. P. Price)

"Potential 1984 Strike by United Mine Workers of America," Executive Briefing Paper, prepared for U.S. Energy Information Administration, Sept., 1984.

Coal Market Decision - Making: Description and Modeling Implications, prepared for the U.S. Energy Department Information Administration, May 1984 (with J. P. Price).

Power System Load Management Technologies, Energy Department Paper No. 11, World Bank, November 1983 (with J.P. Price).

"Excess Capacity in U.S. Electric Utilities," Geopolitics of Energy, Volume 5, Issue No. 9, September 1983.

Ohio Cogeneration Handbook, prepared for the Ohio Department of Energy, June 1982 (with N. R. Friedman and J. P. Price).

Cogeneration Engineering Handbook, prepared for the California Energy Commission. January 1982 (with N. R. Friedman and J. P. Price).

Third Annual Report: Time of Use Rates for Very Large Customers, Pacific Gas and Electric Company, March 1980 (with R. Levitan).

Residential Peak Load Reduction Program: Implementation Plan, Pacific Gas and Electric Company, January 1980.

"Marginal Cost Adjustment Mechanisms and Rate Design", paper presented to the California Marginal Cost Pricing Project, August 1979.

Effects of Time-of-Day Pricing Under Alternative Assumptions: Three Case Studies, prepared for the U.S. Department of Energy, 1979. (with R. Spann)

Long Run Incremental Cost Analysis and the Development of Time-of-Day Rates for Blue Ridge Electric Membership Corporation, prepared for the North Carolina Utilities Commission, January 1978.

Report on Federally Financed Time-of-Day Rate Experiments for Residential Electric Utility Customers, prepared for the U.S. General Accounting Office, November 1977.

An Empirical Evaluation of the Predatory Theory of Vertical Integration: The Case of Petroleum, (with E. Erickson and R. Spann) prepared for the American Petroleum Institute, October, 1977.

Electric Utility Coal Consumption and Generation Trends, 1976-1985, prepared for the Office of Coal, Federal Energy Administration, October 1976.

Methodology for Improving the Price Sensitivity of the PIES Oil and Gas Supply Curves, prepared for the Federal Energy Administration, February 1976.

Coal Demand for Electricity Generation 1975-1984, prepared for the Office of Coal, Federal Energy Administration, August 1975.

Tanker Requirements for U.S. Waterborne Oil Imports, prepared for the Federal Maritime Administration, September 1973 (with W. Stitt).

Exhibit AOBA (A) Attachment B:
Referenced Data Request Responses

- FC 1154 AOBA Response to Staff 1-13
- FC 1162 WG Response to AOBA 3-1
- FC 1162 WG Response to AOBA 3-2
- FC 1162 WG Response to AOBA 3-3
- FC 1162 WG Response to AOBA 3-4
- FC 1162 WG Response to AOBA 3-5
- FC 1162 WG Response to AOBA 3-7
- FC 1162 WG Response to AOBA 5-2
- FC 1162 WG Response to AOBA 5-10
- FC 1162 WG Response to AOBA 5-11
- FC 1162 WG Response to AOBA 5-12
- FC 1162 WG Response to AOBA 5-15
- FC 1162 WG Response to AOBA 5-16
- FC 1162 WG Response to AOBA 6-18
- FC 1162 WG Response to AOBA 6-19
- FC 1162 WG Response to AOBA 6-20
- FC 1162 WG Response to AOBA 8-9
- FC 1162 WG Response to OPC 3-45

BEFORE THE
PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA
Formal Case No. 1154

Apartment and Office Building Association
Response to Commission Staff
Data Request No. 1

Commission Staff Request **July 15, 2020**

1-13. Refer to the Direct Testimony of AOBA Witness Bruce R. Oliver at page 62, lines 10-14. Please provide source documentation and workpapers for the average 2.5 miles per year of cast iron main replacement number used by Mr. Oliver.

AOBA Response **July 23, 2020**

As shown on the first line of Table 1 on page 20 of Witness Oliver's Direct Testimony, Washington Gas reported 428 miles of Cast Iron mains in 2010 and reported 405 miles of Cast Iron mains for 2019. That implies 23 miles of mains replaced over a period of nine years or an average of approximately 2.5 miles per year (i.e., 23 miles / 9 years = 2.55 miles per year).

Sponsor: **Bruce R. Oliver**

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 3

QUESTION NO. 3-1

Q. Re: the Direct Testimony of Witness O'Brien, Exhibit WG (A), page 7, lines 5-9, please:

a. Explain how the Company's proposed RNA provides "*incentive to the Company to promote energy efficiency and conservation measures*;"

b. Detail the Company's plans for new or expanded programs for the promotion of energy efficiency and conservation programs **for each rate class** that it would not implement without the implementation of an RNA;

WASHINGTON GAS'S RESPONSE 04/01/2020

A. a. Please see the testimony of Witness Raab for details on the RNA theory.

b. The Company is currently involved in the working group process in the District that provides for utility administered energy efficiency and conservation programs and has not yet develop its specific additional offerings.

SPONSOR: John D. O'Brien
EVP Strategy & Public Affairs

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 3

QUESTION NO. 3-2

Q. Re: the Direct Testimony of Witness O'Brien, Exhibit WG (A), page 7, line 9. With respect to the District of Columbia's climate goals, please:

a. Verify that Washington Gas' unaccounted gas percentage as reported to PHMSA for 2018 was in excess of 4.16% and was among the highest rates for natural gas distribution utilities.

b. Verify that in both 2017 and 2018 Washington Gas' unaccounted gas percentage was among the 10 worst for gas distribution utilities in the U.S.

c. Provide the Company's PHMSA 2019 Distribution Annual Reports for its DC, MD and VA operations.

WASHINGTON GAS'S OBJECTION 03/18/2020

Subpart (c) Washington Gas objects to this request on the grounds that it seeks information outside the jurisdiction of this Commission and beyond the scope of this proceeding. The Company will provide the annual report for its District of Columbia operations.

WASHINGTON GAS'S RESPONSE 04/01/2020

a. The Company's LAUF for 2018 was 4.16%

b. The Company has not engaged in such a study.

c. See Attachments 1, 2 and 3.

SPONSOR: Wayne Jacas
Director, Construction Program Strategy and Management

NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty not to exceed 100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $1,000,000 as provided in 49 USC 60122.			OMB NO: 2137-0629 EXPIRATION DATE: 10/31/2021
U.S Department of Transportation Pipeline and Hazardous Materials Safety Administration	**Initial Date Submitted:**		03/13/2020
	Form Type:		INITIAL
	Date Submitted:		

ANNUAL REPORT FOR CALENDAR YEAR 2019 GAS DISTRIBUTION SYSTEM

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0629. Public reporting for this collection of information is estimated to be approximately 16 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

Important: *Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at http://www.phmsa.dot.gov/pipeline/library/forms.*

PART A - OPERATOR INFORMATION	**(DOT use only)**		**20201238-40536**

1. Name of Operator	WASHINGTON GAS LIGHT CO
2. LOCATION OF OFFICE (WHERE ADDITIONAL INFORMATION MAY BE OBTAINED)	
2a. Street Address	6801 INDUSTRIAL RD
2b. City and County	SPRINGFIELD FAIRFAX
2c. State	VA
2d. Zip Code	22151
3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER	22182
4. HEADQUARTERS NAME & ADDRESS	
4a. Street Address	1000 MAINE AVENUE, SW
4b. City and County	WASHINGTON
4c. State	DC
4d. Zip Code	20024
5. STATE IN WHICH SYSTEM OPERATES	DC
6. **THIS REPORT PERTAINS TO THE FOLLOWING COMMODITY GROUP** *(Select Commodity Group based on the predominant gas carried and complete the report for that Commodity Group. File a separate report for each Commodity Group included in this OPID.)*	
Natural Gas	
7. **THIS REPORT PERTAINS TO THE FOLLOWING TYPE OF OPERATOR** *(Select Type of Operator based on the structure of the company included in this OPID for which this report is being submitted.)***:**	
Privately Owned	

PART B - SYSTEM DESCRIPTION

1.GENERAL

	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	RECONDITIONED CAST IRON	SYSTEM TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN	22.51	55.66	0	319.30	415.59	404.92	0	0	0	5.26	1223.24
NO. OF SERVICES	6208	10490	0	3728	94022	0	0	9825	1014	0	125287

2.MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	SYSTEM TOTALS
STEEL	0	84.10	70.86	170.08	40.42	32.00	397.46
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	0	0	0	0	0	0
CAST/WROUGHT IRON	0	1.31	142.43	204.79	33.78	22.61	404.92
PLASTIC PVC	0	0	0	0	0	0	0
PLASTIC PE	0	233.07	102.82	61.50	16.32	1.88	415.59
PLASTIC ABS	0	0	0	0	0	0	0
PLASTIC OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
RECONDITIONED CAST IRON	0	0	0	0	0.93	4.33	5.26
TOTAL	0	318.48	316.11	436.37	91.45	60.82	1223.23

Describe Other Material:

3.NUMBER OF SERVICES IN SYSTEM AT END OF YEAR — **AVERAGE SERVICE LENGTH: 47.57**

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	SYSTEM TOTALS
STEEL	173	4004	15460	729	57	3	20426
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	7710	2115	0	0	0	9825
CAST/WROUGHT IRON	0	0	0	0	0	0	0
PLASTIC PVC	0	0	0	0	0	0	0
PLASTIC PE	2072	54765	36032	1098	55	0	94022
PLASTIC ABS	0	0	0	0	0	0	0
PLASTIC OTHER	0	0	0	0	0	0	0
OTHER	987	5	22	0	0	0	1014
RECONDITIONED CAST IRON	0	0	0	0	0	0	0
TOTAL	3232	66484	53629	1827	112	3	125287

Describe Other Material: UNKNOWN

4.MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UNKNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL

MILES OF MAIN	4.27	390.46	48.13	132.60	121.85	90.79	109.93	153.57	93.49	78.14	1223.23
NUMBER OF SERVICES	1303	3738	1193	10011	12557	30820	19192	15524	14653	16296	125287

PART C - TOTAL LEAKS AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING THE YEAR

CAUSE OF LEAK	MAINS		SERVICES	
	TOTAL	HAZARDOUS	TOTAL	HAZARDOUS
CORROSION FAILURE	159	84	366	257
NATURAL FORCE DAMAGE	202	167	25	19
EXCAVATION DAMAGE	36	35	115	114
OTHER OUTSIDE FORCE DAMAGE	1	1	27	26
PIPE, WELD OR JOINT FAILURE	572	215	286	195
EQUIPMENT FAILURE	3	2	5	4
INCORRECT OPERATIONS	11	7	18	14
OTHER CAUSE	0	0	0	0

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR : **149**

PART D - EXCAVATION DAMAGE

1. TOTAL NUMBER OF EXCAVATION DAMAGES BY APPARENT ROOT CAUSE: 151

a. One-Call Notification Practices Not Sufficient: 71

b. Locating Practices Not Sufficient: 28

c. Excavation Practices Not Sufficient: 52

d. Other: 0

2. NUMBER OF EXCAVATION TICKETS : 76643

PART E - EXCESS FLOW VALUE (EFV) AND SERVICE VALVE DATA

Total Number Of Services with EFV Installed During Year: 158

Estimated Number Of Services with EFV In the System At End Of Year: 18965

* Total Number of Manual Service Line Shut-off Valves Installed During Year: 124

* Estimated Number of Services with Manual Service Line Shut-off Valves Installed in the System at End of Year: 23902

**These questions only pertain to reporting years 2017 & beyond.*

PART F - LEAKS ON FEDERAL LAND

TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED TO REPAIR: 0

PART G-PERCENT OF UNACCOUNTED FOR GAS

UNACCOUNTED FOR GAS AS A PERCENT OF TOTAL CONSUMPTION FOR THE 12 MONTHS ENDING JUNE 30 OF THE REPORTING YEAR.

[(PURCHASED GAS + PRODUCED GAS) MINUS (CUSTOMER USE + COMPANY USE + APPROPRIATE ADJUSTMENTS)] DIVIDED BY (CUSTOMER USE + COMPANY USE + APPROPRIATE ADJUSTMENTS) TIMES 100 EQUALS PERCENT UNACCOUNTED FOR.

FOR YEAR ENDING 6/30: 4.3%

PART H - ADDITIONAL INFORMATION

PART I - PREPARER	
Archie Johnson,PIPELINE SAFETY SUPERVISOR (Preparer's Name and Title)	(703) 750-5957 (Area Code and Telephone Number)
ajohnson@washgas.com (Preparer's email address)	(Area Code and Facsimile Number)

NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty not to exceed 100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $1,000,000 as provided in 49 USC 60122.			OMB NO: 2137-0629 EXPIRATION DATE: 10/31/2021
U.S Department of Transportation Pipeline and Hazardous Materials Safety Administration	**Initial Date Submitted:**		03/13/2020
	Form Type:		INITIAL
	Date Submitted:		

ANNUAL REPORT FOR CALENDAR YEAR 2019 GAS DISTRIBUTION SYSTEM

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2137-0629. Public reporting for this collection of information is estimated to be approximately 16 hours per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, PHMSA, Office of Pipeline Safety (PHP-30) 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

Important: *Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the PHMSA Pipeline Safety Community Web Page at http://www.phmsa.dot.gov/pipeline/library/forms.*

PART A - OPERATOR INFORMATION	**(DOT use only)**		**20201241-40539**

1. Name of Operator	WASHINGTON GAS LIGHT CO
2. LOCATION OF OFFICE (WHERE ADDITIONAL INFORMATION MAY BE OBTAINED)	
2a. Street Address	6801 INDUSTRIAL RD
2b. City and County	SPRINGFIELD FAIRFAX
2c. State	VA
2d. Zip Code	22151
3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER	22182
4. HEADQUARTERS NAME & ADDRESS	
4a. Street Address	1000 MAINE AVENUE, SW
4b. City and County	WASHINGTON
4c. State	DC
4d. Zip Code	20024
5. STATE IN WHICH SYSTEM OPERATES	MD
6. **THIS REPORT PERTAINS TO THE FOLLOWING COMMODITY GROUP** *(Select Commodity Group based on the predominant gas carried and complete the report for that Commodity Group. File a separate report for each Commodity Group included in this OPID.)*	
Natural Gas	
7. **THIS REPORT PERTAINS TO THE FOLLOWING TYPE OF OPERATOR** *(Select Type of Operator based on the structure of the company included in this OPID for which this report is being submitted.)***:**	
Privately Owned	

PART B - SYSTEM DESCRIPTION

1.GENERAL

	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	RECONDITIONED CAST IRON	SYSTEM TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN	95.31	65.78	0	2278.35	3822.3	43.79	0.18	0	0	0	6305.71
NO. OF SERVICES	4797	5906	0	47808	364278	0	0	22025	394	0	445208

2.MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	SYSTEM TOTALS
STEEL	0	968.60	385.62	803.13	226.64	55.44	2439.43
DUCTILE IRON	0	0	0	0	0.18	0	0.18
COPPER	0	0	0	0	0	0	0
CAST/WROUGHT IRON	0	0.07	9.09	27.85	5.07	1.71	43.79
PLASTIC PVC	0	0	0	0	0	0	0
PLASTIC PE	0	2482.90	771.99	531.32	36.09	0	3822.3
PLASTIC ABS	0	0	0	0	0	0	0
PLASTIC OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
RECONDITIONED CAST IRON	0	0	0	0	0	0	0
TOTAL	0	3451.57	1166.7	1362.3	267.98	57.15	6305.7

Describe Other Material:	

3.NUMBER OF SERVICES IN SYSTEM AT END OF YEAR | **AVERAGE SERVICE LENGTH: 72.68**

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	SYSTEM TOTALS
STEEL	155	54651	3400	267	38	0	58511
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	21801	224	0	0	0	22025
CAST/WROUGHT IRON	0	0	0	0	0	0	0
PLASTIC PVC	0	0	0	0	0	0	0
PLASTIC PE	2717	344098	16612	789	61	1	364278
PLASTIC ABS	0	0	0	0	0	0	0
PLASTIC OTHER	0	0	0	0	0	0	0
OTHER	381	3	7	1	2	0	394
RECONDITIONED CAST IRON	0	0	0	0	0	0	0
TOTAL	3253	420553	20243	1057	101	1	445208

Describe Other Material:	UNKNOWN

4.MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UNKNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL

MILES OF MAIN	9.02	60.69	82.05	608.48	1161.95	537.69	681.24	1383.96	1159.35	621.32	6305.75
NUMBER OF SERVICES	1021	473	581	29587	59740	44644	50201	87424	95097	76440	445208

PART C - TOTAL LEAKS AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING THE YEAR

CAUSE OF LEAK	MAINS		SERVICES	
	TOTAL	HAZARDOUS	TOTAL	HAZARDOUS
CORROSION FAILURE	347	166	497	316
NATURAL FORCE DAMAGE	23	14	118	67
EXCAVATION DAMAGE	69	69	287	287
OTHER OUTSIDE FORCE DAMAGE	2	2	24	24
PIPE, WELD OR JOINT FAILURE	1103	541	1558	1011
EQUIPMENT FAILURE	13	5	24	13
INCORRECT OPERATIONS	7	4	39	30
OTHER CAUSE	0	0	0	0

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR : **426**

PART D - EXCAVATION DAMAGE

1. TOTAL NUMBER OF EXCAVATION DAMAGES BY APPARENT ROOT CAUSE: 361

a. One-Call Notification Practices Not Sufficient: 127

b. Locating Practices Not Sufficient: 119

c. Excavation Practices Not Sufficient: 115

d. Other: 0

2. NUMBER OF EXCAVATION TICKETS : 324183

PART E - EXCESS FLOW VALUE (EFV) AND SERVICE VALVE DATA

Total Number Of Services with EFV Installed During Year: 7839

Estimated Number Of Services with EFV In the System At End Of Year: 139930

* Total Number of Manual Service Line Shut-off Valves Installed During Year: 178

* Estimated Number of Services with Manual Service Line Shut-off Valves Installed in the System at End of Year: 89594

**These questions only pertain to reporting years 2017 & beyond.*

PART F - LEAKS ON FEDERAL LAND

TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED TO REPAIR: 0

PART G-PERCENT OF UNACCOUNTED FOR GAS

UNACCOUNTED FOR GAS AS A PERCENT OF TOTAL CONSUMPTION FOR THE 12 MONTHS ENDING JUNE 30 OF THE REPORTING YEAR.

[(PURCHASED GAS + PRODUCED GAS) MINUS (CUSTOMER USE + COMPANY USE + APPROPRIATE ADJUSTMENTS)] DIVIDED BY (CUSTOMER USE + COMPANY USE + APPROPRIATE ADJUSTMENTS) TIMES 100 EQUALS PERCENT UNACCOUNTED FOR.

FOR YEAR ENDING 6/30: 4.30%

PART H - ADDITIONAL INFORMATION

PART I - PREPARER	
Archie Johnson,PIPELINE SAFETY SUPERVISOR (Preparer's Name and Title)	(703) 750-5957 (Area Code and Telephone Number)
ajohnson@washgas.com (Preparer's email address)	(Area Code and Facsimile Number)

NOTICE: This report is required by 49 CFR Part 191. Failure to report can result in a civil penalty not to exceed 100,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $1,000,000 as provided in 49 USC 60122.			OMB NO: 2137-0629 EXPIRATION DATE: 10/31/2021
U.S Department of Transportation Pipeline and Hazardous Materials Safety Administration	**Initial Date Submitted:**		03/13/2020
	Form Type:		INITIAL
	Date Submitted:		

ANNUAL REPORT FOR CALENDAR YEAR 2019 GAS DISTRIBUTION SYSTEM

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PART A - OPERATOR INFORMATION	**(DOT use only)**		**20201243-40541**

1. Name of Operator	WASHINGTON GAS LIGHT CO
2. LOCATION OF OFFICE (WHERE ADDITIONAL INFORMATION MAY BE OBTAINED)	
2a. Street Address	6801 INDUSTRIAL RD
2b. City and County	SPRINGFIELD FAIRFAX
2c. State	VA
2d. Zip Code	22151
3. OPERATOR'S 5 DIGIT IDENTIFICATION NUMBER	22182
4. HEADQUARTERS NAME & ADDRESS	
4a. Street Address	1000 MAINE AVENUE, SW
4b. City and County	WASHINGTON
4c. State	DC
4d. Zip Code	20024
5. STATE IN WHICH SYSTEM OPERATES	VA
6. **THIS REPORT PERTAINS TO THE FOLLOWING COMMODITY GROUP** *(Select Commodity Group based on the predominant gas carried and complete the report for that Commodity Group. File a separate report for each Commodity Group included in this OPID.)*	
Natural Gas	
7. **THIS REPORT PERTAINS TO THE FOLLOWING TYPE OF OPERATOR** *(Select Type of Operator based on the structure of the company included in this OPID for which this report is being submitted.)***:**	
Privately Owned	

PART B - SYSTEM DESCRIPTION

1.GENERAL

	STEEL				PLASTIC	CAST/ WROUGHT IRON	DUCTILE IRON	COPPER	OTHER	RECONDITIONED CAST IRON	SYSTEM TOTAL
	UNPROTECTED		CATHODICALLY PROTECTED								
	BARE	COATED	BARE	COATED							
MILES OF MAIN	20.65	153.24	0	1861.33	4390.16	14.22	0	0	0	0	6439.6
NO. OF SERVICES	5078	2348	0	37825	405844	0	0	19324	324	0	470743

2.MILES OF MAINS IN SYSTEM AT END OF YEAR

MATERIAL	UNKNOWN	2" OR LESS	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8" THRU 12"	OVER 12"	SYSTEM TOTALS
STEEL	0	919.38	346.88	477.22	231.96	59.78	2035.22
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	0	0	0	0	0	0	0
CAST/WROUGHT IRON	0	0	5.83	4.71	2.69	0.99	14.22
PLASTIC PVC	0	0	0	0	0	0	0
PLASTIC PE	0.01	2834.70	895.24	588.69	71.52	0	4390.16
PLASTIC ABS	0	0	0	0	0	0	0
PLASTIC OTHER	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0
RECONDITIONED CAST IRON	0	0	0	0	0	0	0
TOTAL	0.01	3754.08	1247.95	1070.62	306.17	60.77	6439.6

Describe Other Material:

3.NUMBER OF SERVICES IN SYSTEM AT END OF YEAR | **AVERAGE SERVICE LENGTH: 72.14**

MATERIAL	UNKNOWN	1" OR LESS	OVER 1" THRU 2"	OVER 2" THRU 4"	OVER 4" THRU 8"	OVER 8"	SYSTEM TOTALS
STEEL	104	42911	2039	173	22	2	45251
DUCTILE IRON	0	0	0	0	0	0	0
COPPER	2	19281	40	1	0	0	19324
CAST/WROUGHT IRON	0	0	0	0	0	0	0
PLASTIC PVC	0	0	0	0	0	0	0
PLASTIC PE	1013	391209	12874	706	42	0	405844
PLASTIC ABS	0	0	0	0	0	0	0
PLASTIC OTHER	0	0	0	0	0	0	0
OTHER	321	3	0	0	0	0	324
RECONDITIONED CAST IRON	0	0	0	0	0	0	0
TOTAL	1440	453404	14953	880	64	2	470743

Describe Other Material: UNKNOWN

4.MILES OF MAIN AND NUMBER OF SERVICES BY DECADE OF INSTALLATION

	UNKNOWN	PRE-1940	1940-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009	2010-2019	TOTAL

MILES OF MAIN	0.14	17.18	50.96	591.76	914.62	441.10	848.03	1641.42	1326.44	607.95	6439.6
NUMBER OF SERVICES	718	254	184	22249	45721	37335	59249	113723	109135	82175	470743

PART C - TOTAL LEAKS AND HAZARDOUS LEAKS ELIMINATED/REPAIRED DURING THE YEAR

CAUSE OF LEAK	MAINS		SERVICES	
	TOTAL	HAZARDOUS	TOTAL	HAZARDOUS
CORROSION FAILURE	178	74	374	267
NATURAL FORCE DAMAGE	31	18	131	81
EXCAVATION DAMAGE	53	53	257	257
OTHER OUTSIDE FORCE DAMAGE	4	2	13	13
PIPE, WELD OR JOINT FAILURE	752	370	1217	831
EQUIPMENT FAILURE	35	8	56	29
INCORRECT OPERATIONS	8	4	22	13
OTHER CAUSE	0	0	0	0

NUMBER OF KNOWN SYSTEM LEAKS AT END OF YEAR SCHEDULED FOR REPAIR : **379**

PART D - EXCAVATION DAMAGE

1. TOTAL NUMBER OF EXCAVATION DAMAGES BY APPARENT ROOT CAUSE: 310

a. One-Call Notification Practices Not Sufficient: 100

b. Locating Practices Not Sufficient: 110

c. Excavation Practices Not Sufficient: 100

d. Other: 0

2. NUMBER OF EXCAVATION TICKETS : 354087

PART E - EXCESS FLOW VALUE (EFV) AND SERVICE VALVE DATA

Total Number Of Services with EFV Installed During Year: 6917

Estimated Number Of Services with EFV In the System At End Of Year: 152559

* Total Number of Manual Service Line Shut-off Valves Installed During Year: 350

* Estimated Number of Services with Manual Service Line Shut-off Valves Installed in the System at End of Year: 66185

**These questions only pertain to reporting years 2017 & beyond.*

PART F - LEAKS ON FEDERAL LAND

TOTAL NUMBER OF LEAKS ON FEDERAL LAND REPAIRED OR SCHEDULED TO REPAIR: 0

PART G-PERCENT OF UNACCOUNTED FOR GAS

UNACCOUNTED FOR GAS AS A PERCENT OF TOTAL CONSUMPTION FOR THE 12 MONTHS ENDING JUNE 30 OF THE REPORTING YEAR.

[(PURCHASED GAS + PRODUCED GAS) MINUS (CUSTOMER USE + COMPANY USE + APPROPRIATE ADJUSTMENTS)] DIVIDED BY (CUSTOMER USE + COMPANY USE + APPROPRIATE ADJUSTMENTS) TIMES 100 EQUALS PERCENT UNACCOUNTED FOR.

FOR YEAR ENDING 6/30: 4.30%

PART H - ADDITIONAL INFORMATION

PART I - PREPARER	
Archie Johnson,PIPELINE SAFETY SUPERVISOR (Preparer's Name and Title)	(703) 750-5957 (Area Code and Telephone Number)
ajohnson@washgas.com (Preparer's email address)	(Area Code and Facsimile Number)

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 3

QUESTION NO. 3-3

Q. Re: the Direct Testimony of Witness O'Brien, Exhibit WG (A), page 13, lines 5-8, please provide the workpapers, data, analyses, and studies that the witness relies upon to assert that a RNA mechanism **"realigns the collection of revenues with the Company's incurrence of costs**," and as part of the response to this request:

a. Explain the period of time over which the asserted alignment of revenue collections and costs is achieved (e.g., monthly, quarterly, seasonally, annually);

b. Document the costs and the specific patterns of cost incurrence with which the Company is seeking to align its cost recovery;

c. Provide evidence from other utilities that similar mechanisms have, in fact, aligned the collection of revenues with the Company's incurrence of costs.

WASHINGTON GAS'S RESPONSE 04/01/2020

A. a. Because rates are set based on an annual revenue requirement, alignment of revenue collections and costs is achieved on an annual basis.

b. Please see the Company's Class Cost of Service Study filed in this docket.

c. Revenue decoupling mechanisms align the collection of revenues with a Company's incurrence of costs by their very construction. Therefore, any utility that has adopted a revenue decoupling mechanism will have aligned the collection of its revenues with its incurrence of costs. 

SPONSOR: Paul H Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 3

QUESTION NO. 3-4

Q. Re: the Direct Testimony of Witness O'Brien, Exhibit WG (A), page 13, lines 5-8, please provide the workpapers, data, analyses, and studies that the witness relies upon to assert that a RNA mechanism "**supports customer energy conservation**," and as part of the Company response to this request:

a. Document the levels of conservation that Washington Gas customers in each District of Columbia rate class have achieved in each of the last three years without the existence of a RNA mechanism;

b. Provide the Company's estimates of the manner in which the implementation of a RNA mechanism will alter the levels of conservation that its customers in each rate class will be expected to achieve, and document and explain the methods and assumptions used by Washington Gas to estimate changes in its customers' conservation efforts that would be attributable to the implementation of a RNA.

WASHINGTON GAS'S RESPONSE 04/01/2020

A. Please see the response to OPC Data Request No. 3, Question No. 45.

a. The Company has completed no such study.

b. The Company has completed no such study.

SPONSOR: Paul H Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
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APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 3

QUESTION NO. 3-5

Q. Re: the Direct Testimony of Witness O'Brien, Exhibit WG (A), page 13, lines 5-8, please explain and document with supporting workpapers, data, and assumptions the manner in which the Company has considered the requirements of Title III of the CleanEnergy DC Omnibus Amendment Act of 2018 in:

a. The Company's development of its RNA proposal for this proceeding;

b. In the Company's assessment of the impacts of a RNA on conservation by rate class.

WASHINGTON GAS'S RESPONSE 04/01/2020

A. a. When making any rate proposal, it is the Company's primary goal to send a correct price signal to customers. In the Company's view, the RNA proposal sends a more correct price signal to customers than its existing rate structure without the corresponding adjustment for fixed cost recovery because the revenues received from each customer are not dependent on the vagaries of weather and other factors beyond the control of management that do not affect the utility's costs. This is fully consistent with the requirements of Title III of the CleanEnergy DC Omnibus Amendment Act of 2018.

b. When making any rate proposal, it is the Company's primary goal to send a correct price signal to customers. In the Company's view, the RNA proposal sends a more correct price signal to customers than its existing rate structure without the corresponding adjustment for fixed cost recovery because the revenues received from each customer are not dependent on the vagaries of weather and other factors beyond the control of management that do not affect the utility's costs. This is fully consistent with the promotion of conservation by rate class.

SPONSOR: Paul H Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 3

QUESTION NO. 3-7

Q. Re: the Direct Testimony of Witness O'Brien, Exhibit WG (A), page 13, lines 5-8, please verify that the intent of the Company's demand charges for commercial customers is to **mitigate volatility in the Company's revenue collections.**

WASHINGTON GAS'S RESPONSE 04/01/2020

A. It is not the intent of the Company's demand charges for commercial customers to mitigate volatility in the Company's revenue collections. It is the intent of the Company's demand charges for commercial customers to send a better price signal.

SPONSOR: Paul H Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-2

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 6, lines 12-13, please:

a. Identify each utility that currently uses the "ARCH/GARCH model" and the purpose for which each utility uses that model;

b. Identify each regulatory commission that has explicitly approved or adopted the ARCH/GARCH model and cite the order(s) in which that approval was set forth by commission, as well as the date of each referenced order.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. a. Mr. Raab has not performed a survey and therefore cannot say exactly which utilities currently use the "ARCH/GARCH model" or the purpose for which each utility uses that model. The referenced testimony indicates that the ARCH/GARCH approach has been developed and applied by Mr. Raab. Consistent with that statement, Mr. Raab has applied this model to a variety of Washington Gas planning issues in all the jurisdictions that it serves (DC, MD and VA).

b. The regulatory authorities in the District of Columbia, Maryland and Virginia routinely monitor and evaluate the Company's planning practices and results. For example, the District of Columbia Public Service Commission recently conducted a complete review of the Company's gas planning policies and practices and the methods and analytical tools that the Company uses to support its daily and monthly forecasting and supply design activities (of which the ARCH/GARCH model is a part) in Formal Case No. 1129. In its Order No. 19740 in Formal Case No. 1129, the Commission accepted Silver Point Consulting's ("Silverpoint") Management Audit Report of the Natural Gas Purchasing Processes and Policies of Washington Gas Light Company. This report found

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

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APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-10

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 24, line 24, through page 25, line 3, please provide the data, analysis, assumptions, workpapers, studies and other documents upon which Witness Raab has relied to assess the extent to which volatility in customers' month-to-month bills has been experienced by customers in **each Maryland rate class** under the Company's RNA mechanism in Maryland.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. Witness Raab has made no such assessment for two reasons. First, the Company's primary objective in introducing an RNA is not necessarily to reduce volatility in customers' month-to-month bills. Rather, the objective is to collect the cost it incurs to serve customers on an annual basis which will in turn reduce volatility in customers' year-to-year bills. Second, it was not necessary to assess the volatility in customers' annual bills in each Maryland rate class under the Company's RNA mechanism in Maryland because Mr. Raab assesses the volatility in customers' annual bills in each District of Columbia rate class under the Company's proposed RNA mechanism in the District of Columbia. This assessment is documented in Mr. Raab's Exhibit WG (G)-6.

SPONSOR: Paul H. Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
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APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-11

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 25, lines 21-22, please:

a. Identify the criteria upon which Witness Raab relies to identify "*the **correct** price signal*" for each Washington Gas rate class in the District of Columbia;

b. Provide the data, analyses, assumptions, workpapers, studies, and other documents upon which Witness Raab relies to determine "*the **correct** price signal*" for each Washington Gas rate class in the District of Columbia;

c. Explain how monthly varying rate adjustments under the Company's proposed RNA mechanism would foster customer's understanding of the price signals the Company is trying to convey to its customers in the District of Columbia.

d. Explain how unpredictable monthly changes in RNA rate adjustments facilitate customers' efforts to make informed and economically efficient gas consumption decisions.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. a. The criterion upon which Witness Raab relies to identify "the correct price signal" for each Washington Gas rate class in the District of Columbia is "the widely accepted canon of fair pricing, the principle of service at cost." (see Bonbright, James C., Danielson, Albert L., & Kamerschen, David R., Principles of Public Utility Rates. Arlington, VA: Public Utilities Reports, Inc. (1988) at 397.)

b. Please see the Company's Class Cost of Service Study filed in this proceeding.

c. The monthly varying rate adjustments under the Company's proposed RNA mechanism correct the widely recognized cost incurrence/cost recovery problem for natural gas LDCs that rely on volumetric charges to collect fixed costs by adjusting lower than anticipated usage upward and higher than anticipated usage downward. When considered over an annual period, these adjustments indicate to customers that Washington Gas's costs to deliver natural gas to that customer do not vary by usage. The Company's proposed RNA is designed to foster that understanding among customers in the District of Columbia, just as it does in Maryland and Virginia. It seems appropriate to make these adjustments monthly so that significant cost and revenue imbalances do not build up over the year and require the imputation of carrying charges to appropriately reflect the "fixed" nature of the costs.

d. Customers make long term investments in natural gas using appliances and it is the investments in those appliances that directly lead to the usage of natural gas and a reliance on the Washington Gas distribution system to deliver the natural gas to power those appliances. A consumer decision to invest in natural gas using appliances is driven, among other things, by the anticipated long-term price of delivered natural gas. By reducing the short-term volatility in annual bills, which the RNA clearly does, customers' efforts to make informed and economically efficient gas consumption decisions are facilitated.

SPONSOR: Paul H. Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-12

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 26, lines 17-20, please explain how the Company's proposed RNA, which would apply rate adjustments on a volumetric basis, would qualify as a "*non-volumetric rate*."

WASHINGTON GAS'S RESPONSE 04/22/2020

A. The Company's proposed RNA, which would apply rate adjustments on a volumetric basis, qualifies as a "non-volumetric rate" because the Commission-authorized revenues upon which the rate adjustments are based are not dependent on volumes. Applying those rate adjustments to individual customers on a volumetric basis is simply an equitable way to allocate class revenue deficiencies or excesses to individual customers.

SPONSOR: Paul H. Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-13

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 27, lines 3-10, please:

a. Indicate whether Witness Raab would characterize the Company's proposed RNA mechanism as a "Rate Stabilization Tariff;"

b. Explain how the Company's proposed RNA would constitute a form of performance based ratemaking, and if so, identify the measures of utility performance it is intended to impact.

WASHINGTON GAS'S RESPONSE 04/22/2020

A.

a. No, Witness Raab would not characterize the Company's proposed RNA mechanism as a "Rate Stabilization Tariff."

b. The Company does not consider its proposed RNA mechanism to be a form of performance-based ratemaking.

SPONSOR: Paul H. Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-15

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 29, line 11-20, please verify that if a warmer than normal December is followed by a colder than normal February, the RNA rate adjustment applicable to February usage would increase charges for customers during a period in which their usage would also be greater than average due to colder than normal weather.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. Mathematically, this is true. However, it is not the Company's primary intent to stabilize monthly bills, but annual bills.

SPONSOR: Paul H. Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 5

QUESTION NO. 5-16

Q. Re: the Direct Testimony of Witness Raab, Exhibit WG (G), at page 29, lines 21, through page 30, line 2, please:

a. Provide the workpapers, data, assumptions, studies and other documents upon which Witness Raab has relied to assess the reasonableness and appropriateness of the level of the rate cap that the Company proposes to use to limit monthly rate adjustments under its proposed RNA mechanism;

b. Provide citations to other utilities of which Witness Raab is aware that use a single fixed cents per therm amount to limit monthly RNA rate adjustments for all firm service rate classifications, and specify the rate caps that each cited utility employs.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. a. Witness Raab relied on no workpapers, data, studies or other documents to assess the reasonableness and appropriateness of the level of the $.05/therm rate cap that the Company proposes to use to limit monthly rate adjustments under its proposed RNA mechanism. The cap level selected is simply a judgment that attempts to fairly balance the Company's need to collect its costs to serve customers with a desire to limit monthly volatility in customer bills. In this regard, the $.05/therm rate cap seems a reasonable compromise, as it appears to reasonably accomplish these competing goals as a part of the Maryland RNA.

b. Witness Raab did not survey other utilities that use a single fixed cents per therm amount to limit monthly RNA rate adjustments, because Mr. Raab does not believe that the experience of other utilities in this regard is particularly relevant to Washington Gas customers. Far more relevant to Washington Gas is the experience of its own customers with an RNA cap and this information is

available from Maryland, a contiguous service territory also served by Washington Gas.

SPONSOR: Paul H. Raab
Consultant

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 6

QUESTION NO. 6-18

Q. Re: the Direct Testimony of Witness Lawson, Exhibit WG (H), page 13, lines 6-21, please:

a. Verify that the methodology proposed for RNA credit/charge determinations presumes that customers added to the system in each rate class will have usage characteristics that are reasonably represented by the average monthly usage of existing customers in that class;

b. Provide the data, analyses, workpapers, studies and other documents upon which the Company has relied to assess the extent to which new customers added to a rate class have usage consistent with the average usage of existing customers within the same rate class.

c. For each firm service rate classification to which the proposed RNA mechanism would be applicable, provide:

1. The mean therm use for each month of the test year;

2. The standard deviation for therm use for customers in each rate class for each month of the test year.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. a. Yes

b. See the response to AOBA Data Request 5-8.

c. 1. The data necessary to perform this calculation is available to AOBA in Exhibit WG (E)-1.

2. The Company did not perform this calculation.

SPONSOR: Andrew Lawson
Regulatory Affairs Manager

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 6

QUESTION NO. 6-19

Q. 6-19. Re: the Direct Testimony of Witness Lawson, Exhibit WG (H), page 13, lines 6-21, please:

a. Provide the actual **number of customers** billed for each rate classification for each month of the test year and for each month of the three immediately preceding calendar years.

b. Provide the billed **Distribution Charge therms** for each rate classification for each month of the test year and for each month of the three immediately preceding calendar years.

c. Provide the billed **Peak Usage therms** by month for each non-residential firm service rate class for each month of the test year and for each month of the three immediately preceding calendar years.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. a. Please refer to OPC Data Request No. 3-6 for monthly number of customers by class.

b. Please refer to OPC Data Request No. 3-7 for monthly therms by class.

c. Please see attached.

SPONSOR: Andrew Lawson
Regulatory Affairs Manager

Nov-16

Sum of PEAK THERMS		Column Labels		
Row Labels	RATE DESCRIPTION	1	2	Grand Total
3	Commercial and Industrial Non-Cooling/Heating	750,667.7		750,667.7
4	Commercial and Industrial Cooling/Heating	3,392.4	11,851.7	15,244.1
5	Commercial and Industrial Heating	837,375.3	3,812,204.6	4,649,579.9
6	Group Metered Apartments Heating	172,063.0	1,367,109.4	1,539,172.4
7	Group Metered Apartments Non-Cooling/Heating	226,260.2		226,260.2
32	Group Metered Apartments Cooling/Heating	364.4		364.4
33	Commercial and Industrial Non-Cooling/Heating Delivery Service	926,903.3		926,903.3
34	Commercial and Industrial Cooling/Heating Delivery Service	633.6	21,115.8	21,749.4
35	Commercial and Industrial Heating Delivery Service	312,220.4	6,700,280.1	7,012,500.5
36	Group Metered Apartments Heating Delivery Service	51,961.6	3,114,838.1	3,166,799.7
37	Group Metered Apartments Non-Cooling/Heating Delivery Service	333,898.6		333,898.6
Grand Total		3,615,740.5	15,027,399.7	18,643,140.2

Nov-17

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	2,936.6	18,817.5		21,754.1
GDC02CG	GMA - Heating/Cooling	271.7	472.4		744.1
GDC02H	C&I - Heating/Cooling	767,533.4	4,089,174.2		4,856,707.6
GDC02HG	GMA - Heating/Cooling	123,861.2	1,600,530.5		1,724,391.7
GDC02N	C&I - Non-H/C	177,864.8	543,932.5	-	721,797.3
GDC02NG	GMA - Non-H/C	54,026.9	173,873.9		227,900.8
GDC2AC	C&I - Heating/Cooling	1,262.2	26,287.4		27,549.6
GDC2AH	C&I - Heating/Cooling	287,612.4	6,134,986.7		6,422,599.1
GDC2AHG	GMA - Heating/Cooling	39,550.1	3,365,362.3		3,404,912.4
GDC2AN	C&I - Non-H/C	63,442.1	794,074.5		857,516.6
GDC2ANG	GMA - Non-H/C	23,490.1	281,844.3		305,334.4
Grand Total		1,541,851.5	17,029,356.2	-	18,571,207.7

Nov-18

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	3,825.7	18,665.7		22,491.4
GDC02CG	GMA - Heating/Cooling	425.7	511.0		936.7
GDC02H	C&I - Heating/Cooling	826,041.0	5,156,417.1		5,982,458.1
GDC02HG	GMA - Heating/Cooling	103,007.6	1,902,594.7		2,005,602.3
GDC02N	C&I - Non-H/C	201,531.4	539,614.2	10,287.4	751,433.0
GDC02NG	GMA - Non-H/C	76,735.1	198,075.8		274,810.9
GDC2AH	C&I - Heating/Cooling	232,337.9	6,395,843.0		6,628,180.9
GDC2AHG	GMA - Heating/Cooling	40,245.3	3,050,236.7		3,090,482.0
GDC2AN	C&I - Non-H/C	61,250.6	733,369.9		794,620.5
GDC2ANG	GMA - Non-H/C	25,752.6	294,929.7		320,682.3
S_AOTC_F	(blank)			700,401.6	700,401.6
GDC2AC	C&I - Heating/Cooling	1,375.7	25,908.5		27,284.2
Grand Total		1,572,528.6	18,316,166.3	710,689.0	20,599,383.9

Nov-18

Nov-19

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	6,885.5	36,732.5		43,618.0
GDC02CG	GMA - Heating/Cooling	555.4	449.3		1,004.7
GDC02H	C&I - Heating/Cooling	706,683.1	4,341,700.4	912.7	5,049,296.2
GDC02HG	GMA - Heating/Cooling	177,471.5	3,474,021.9	9,388.6	3,660,882.0
GDC02N	C&I - Non-H/C	253,448.0	395,246.3	4,373.3	653,067.6
GDC02NG	GMA - Non-H/C	121,924.1	323,458.2	1,592.3	446,974.6
GDC2AC	C&I - Heating/Cooling	1,983.2	29,577.2		31,560.4
GDC2AH	C&I - Heating/Cooling	179,336.5	6,262,170.2		6,441,506.7
GDC2AHG	GMA - Heating/Cooling	72,624.5	5,978,645.4	10,864.1	6,062,134.0
GDC2AN	C&I - Non-H/C	73,226.5	721,396.4		794,622.9
GDC2ANG	GMA - Non-H/C	53,296.5	548,546.0	901.7	602,744.2
S_AOTC_F	(blank)			632,620.8	632,620.8
Grand Total		1,647,434.8	22,111,943.8	660,653.5	24,420,032.1

Dec-16

Sum of PEAK THERMS		Column Labels	
Row Labels	RATE DESCRIPTION	1	2
3	Commercial and Industrial Non-Cooling/Heating	910,615.9	
4	Commercial and Industrial Cooling/Heating	4,854.8	12,362.9
5	Commercial and Industrial Heating	918,670.1	4,037,646.5
6	Group Metered Apartments Heating	206,496.1	1,383,734.3
7	Group Metered Apartments Non-Cooling/Heating	226,878.0	
32	Group Metered Apartments Cooling/Heating	364.4	
33	Commercial and Industrial Non-Cooling/Heating Delivery Service	851,954.9	
34	Commercial and Industrial Cooling/Heating Delivery Service	633.6	21,115.8
35	Commercial and Industrial Heating Delivery Service	290,993.6	6,466,056.2
36	Group Metered Apartments Heating Delivery Service	71,053.2	3,183,899.9
37	Group Metered Apartments Non-Cooling/Heating Delivery Service	304,589.5	
Grand Total		3,787,104.1	15,104,815.6

Grand Total
910,615.9
17,217.7
4,956,316.6
1,590,230.4
226,878.0
364.4
851,954.9
21,749.4
6,757,049.8
3,254,953.1
304,589.5
18,891,919.7

Dec-17

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	3,661.2	20,477.4		24,138.6
GDC02CG	GMA - Heating/Cooling	271.7	472.4		744.1
GDC02H	C&I - Heating/Cooling	820,625.3	4,574,337.8		5,394,963.1
GDC02HG	GMA - Heating/Cooling	131,889.8	1,971,203.8		2,103,093.6
GDC02N	C&I - Non-H/C	196,701.9	569,729.3	-	766,431.2
GDC02NG	GMA - Non-H/C	56,990.4	210,338.9		267,329.3
GDC2AC	C&I - Heating/Cooling	1,262.2	26,287.4		27,549.6
GDC2AH	C&I - Heating/Cooling	302,469.8	7,060,947.4		7,363,417.2
GDC2AHG	GMA - Heating/Cooling	40,385.0	3,589,331.9		3,629,716.9
GDC2AN	C&I - Non-H/C	54,867.7	866,744.9		921,612.6
GDC2ANG	GMA - Non-H/C	26,483.2	282,114.4		308,597.6
Grand Total		1,635,608.2	19,171,985.6	-	20,807,593.8

Dec-18

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	4,876.4	21,671.9		26,548.3
GDC02CG	GMA - Heating/Cooling	577.4	511.0		1,088.4
GDC02H	C&I - Heating/Cooling	854,968.0	5,042,854.0		5,897,822.0
GDC02HG	GMA - Heating/Cooling	103,608.2	1,957,673.3		2,061,281.5
GDC02N	C&I - Non-H/C	223,325.9	525,190.5	2,180.7	750,697.1
GDC02NG	GMA - Non-H/C	76,125.4	190,790.6		266,916.0
GDC2AH	C&I - Heating/Cooling	221,823.4	5,910,289.3		6,132,112.7
GDC2AHG	GMA - Heating/Cooling	40,001.1	3,282,759.0		3,322,760.1
GDC2AN	C&I - Non-H/C	60,332.5	725,051.7		785,384.2
GDC2ANG	GMA - Non-H/C	26,519.7	304,511.3		331,031.0
S_AOTC_F	(blank)			700,401.6	700,401.6
GDC2AC	C&I - Heating/Cooling	1,375.7	28,669.3		30,045.0
Grand Total		1,613,533.7	17,989,971.9	702,582.3	20,306,087.9

Dec-19

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	17,358.3	42,879.8	10,245.0	70,483.1
GDC02CG	GMA - Heating/Cooling	555.4	1,347.9		1,903.3
GDC02H	C&I - Heating/Cooling	917,789.4	5,586,404.2	2,671.7	6,506,865.3
GDC02HG	GMA - Heating/Cooling	209,181.0	3,992,272.0	9,388.6	4,210,841.6
GDC02N	C&I - Non-H/C	308,832.5	447,042.2	4,588.1	760,462.8
GDC02NG	GMA - Non-H/C	157,073.6	384,207.6		541,281.2
GDC2AC	C&I - Heating/Cooling	2,241.7	29,577.2		31,818.9
GDC2AH	C&I - Heating/Cooling	220,518.3	7,572,628.1	230.9	7,793,377.3
GDC2AHG	GMA - Heating/Cooling	87,375.8	6,685,086.3	10,864.1	6,783,326.2
GDC2AN	C&I - Non-H/C	79,796.8	792,902.9		872,699.7
GDC2ANG	GMA - Non-H/C	76,290.4	613,356.4	901.7	690,548.5
S_AOTC_F	(blank)			632,620.8	632,620.8
Grand Total		2,077,013.2	26,147,704.6	671,510.9	28,896,228.7

Jan-16

Sum of PEAK THERMS		Column Labels		
Row Labels	RATE DESCRIPTION	1	2	Grand Total
3	Commercial and Industrial Non-Cooling/Heating	1,128,290.3		1,128,290.3
4	Commercial and Industrial Cooling/Heating		12,446.6	12,446.6
5	Commercial and Industrial Heating	961,886.1	4,494,102.0	5,455,988.1
6	Group Metered Apartments Heating	133,243.0	1,794,953.7	1,928,196.7
7	Group Metered Apartments Non-Cooling/Heating	278,131.5		278,131.5
32	Group Metered Apartments Cooling/Heating	506.2		506.2
33	Commercial and Industrial Non-Cooling/Heating Delivery Service	964,694.2		964,694.2
34	Commercial and Industrial Cooling/Heating Delivery Service	664.0	12,304.8	12,968.8
35	Commercial and Industrial Heating Delivery Service	419,130.0	6,908,757.0	7,327,887.0
36	Group Metered Apartments Heating Delivery Service	181,027.8	3,073,028.6	3,254,056.4
37	Group Metered Apartments Non-Cooling/Heating Delivery Service	332,255.9		332,255.9
Grand Total		4,399,829.0	16,295,592.7	20,695,421.7

Jan-17

Sum of THERMS		Column Labels		
Row Labels	RATE CATEGORY DESCRIPTION	1	2	Grand Total
GDC02C	C&I - Heating/Cooling	2,629.7	15,761.1	18,390.8
GDC02CG	GMA - Heating/Cooling	364.4	529.7	894.1
GDC02H	C&I - Heating/Cooling	722,083.3	4,029,486.5	4,751,569.8
GDC02HG	GMA - Heating/Cooling	149,330.6	1,467,694.7	1,617,025.3
GDC02N	C&I - Non-H/C	176,232.1	679,596.5	855,828.6
GDC02NG	GMA - Non-H/C	52,824.1	160,381.2	213,205.3
GDC2AC	C&I - Heating/Cooling	1,304.1	20,445.3	21,749.4
GDC2AH	C&I - Heating/Cooling	351,035.9	6,393,879.1	6,744,915.0
GDC2AHG	GMA - Heating/Cooling	44,725.9	3,211,084.2	3,255,810.1
GDC2AN	C&I - Non-H/C	50,854.6	818,022.1	868,876.7
GDC2ANG	GMA - Non-H/C	25,019.5	288,685.9	313,705.4
Grand Total		1,576,404.2	17,085,566.3	18,661,970.5

Jan-18

Peak Usage Therms Billed		Column Labels		
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)
GDC02C	C&I - Heating/Cooling	5,274.3	19,922.8	
GDC02CG	GMA - Heating/Cooling	271.7	472.4	
GDC02H	C&I - Heating/Cooling	869,559.7	4,684,347.0	
GDC02HG	GMA - Heating/Cooling	126,334.9	1,992,660.1	
GDC02N	C&I - Non-H/C	195,411.3	568,435.5	10,165.3
GDC02NG	GMA - Non-H/C	57,844.6	210,721.7	
GDC2AC	C&I - Heating/Cooling	1,262.2	27,715.7	
GDC2AH	C&I - Heating/Cooling	298,421.7	6,977,146.4	
GDC2AHG	GMA - Heating/Cooling	43,268.7	3,604,412.2	
GDC2AN	C&I - Non-H/C	69,636.2	839,044.9	
GDC2ANG	GMA - Non-H/C	25,784.0	286,671.4	
Grand Total		1,693,069.3	19,211,550.1	10,165.3

Grand Total
25,197.1
744.1
5,553,906.7
2,118,995.0
774,012.1
268,566.3
28,977.9
7,275,568.1
3,647,680.9
908,681.1
312,455.4
20,914,784.7

Jan-19

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	5,736.6	38,844.1		44,580.7
GDC02CG	GMA - Heating/Cooling	277.7	511.0		788.7
GDC02H	C&I - Heating/Cooling	878,425.5	5,089,834.8		5,968,260.3
GDC02HG	GMA - Heating/Cooling	102,302.3	1,940,978.7		2,043,281.0
GDC02N	C&I - Non-H/C	229,639.4	531,640.9	12,330.8	773,611.1
GDC02NG	GMA - Non-H/C	76,044.7	189,592.6		265,637.3
GDC2AC	C&I - Heating/Cooling	1,375.7	28,496.3		29,872.0
GDC2AH	C&I - Heating/Cooling	242,289.1	6,785,463.2		7,027,752.3
GDC2AHG	GMA - Heating/Cooling	39,967.6	3,297,269.8		3,337,237.4
GDC2AN	C&I - Non-H/C	64,421.9	767,251.6		831,673.5
GDC2ANG	GMA - Non-H/C	27,462.4	302,215.5		329,677.9
S_AOTC_F	(blank)			700,401.6	700,401.6
Grand Total		1,667,942.9	18,972,098.5	712,732.4	21,352,773.8

Feb-16

Sum of PEAK THERMS		Column Labels		
Row Labels	RATE DESCRIPTION	1	2	Grand Total
3	Commercial and Industrial Non-Cooling/Heating	1,214,834.7		1,214,834.7
4	Commercial and Industrial Cooling/Heating	126.2	12,491.0	12,617.2
5	Commercial and Industrial Heating	1,107,009.2	4,840,205.7	5,947,214.9
6	Group Metered Apartments Heating	156,312.4	1,845,513.0	2,001,825.4
7	Group Metered Apartments Non-Cooling/Heating	323,257.6		323,257.6
32	Group Metered Apartments Cooling/Heating	506.2		506.2
33	Commercial and Industrial Non-Cooling/Heating Delivery Service	1,087,136.2		1,087,136.2
34	Commercial and Industrial Cooling/Heating Delivery Service	664.0	41,146.0	41,810.0
35	Commercial and Industrial Heating Delivery Service	474,021.1	8,768,477.0	9,242,498.1
36	Group Metered Apartments Heating Delivery Service	191,923.9	3,914,873.8	4,106,797.7
37	Group Metered Apartments Non-Cooling/Heating Delivery Service	352,233.4		352,233.4
Grand Total		4,908,024.9	19,422,706.5	24,330,731.4

Feb-17

Sum of THERMS		Column Labels		
Row Labels	RATE CATEGORY DESCRIPTION	1	2	Grand Total
GDC02C	C&I - Heating/Cooling	2,678.7	17,121.8	19,800.5
GDC02CG	GMA - Heating/Cooling	364.4	529.7	894.1
GDC02H	C&I - Heating/Cooling	901,586.4	4,473,565.8	5,375,152.2
GDC02HG	GMA - Heating/Cooling	149,835.9	1,519,343.5	1,669,179.4
GDC02N	C&I - Non-H/C	211,146.5	697,484.8	908,631.3
GDC02NG	GMA - Non-H/C	53,866.1	187,814.6	241,680.7
GDC2AC	C&I - Heating/Cooling	1,304.1	20,445.3	21,749.4
GDC2AH	C&I - Heating/Cooling	346,175.6	7,153,947.8	7,500,123.4
GDC2AHG	GMA - Heating/Cooling	48,724.8	3,259,353.3	3,308,078.1
GDC2AN	C&I - Non-H/C	50,760.9	848,194.6	898,955.5
GDC2ANG	GMA - Non-H/C	25,658.7	303,779.2	329,437.9
Grand Total		1,792,102.1	18,481,580.4	20,273,682.5

Feb-18

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	5,116.3	19,698.3		24,814.6
GDC02CG	GMA - Heating/Cooling	271.7	472.4		744.1
GDC02H	C&I - Heating/Cooling	889,124.9	4,680,729.3		5,569,854.2
GDC02HG	GMA - Heating/Cooling	129,557.5	2,023,137.3		2,152,694.8
GDC02N	C&I - Non-H/C	202,813.9	562,212.8	9,753.5	774,780.2
GDC02NG	GMA - Non-H/C	60,821.7	201,104.9		261,926.6
GDC2AC	C&I - Heating/Cooling	1,262.2	27,728.7		28,990.9
GDC2AH	C&I - Heating/Cooling	292,993.0	6,900,313.7		7,193,306.7
GDC2AHG	GMA - Heating/Cooling	42,502.8	3,573,404.3		3,615,907.1
GDC2AN	C&I - Non-H/C	70,265.7	834,074.2		904,339.9
GDC2ANG	GMA - Non-H/C	26,091.2	287,846.7		313,937.9
Grand Total		1,720,820.9	19,110,722.6	9,753.5	20,841,297.0

Feb-19

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	6,878.3	40,506.9		47,385.2
GDC02CG	GMA - Heating/Cooling	292.1	511.0		803.1
GDC02H	C&I - Heating/Cooling	903,762.1	5,367,333.7		6,271,095.8
GDC02HG	GMA - Heating/Cooling	101,952.4	2,109,036.0		2,210,988.4
GDC02N	C&I - Non-H/C	238,250.3	547,788.0	12,542.6	798,580.9
GDC02NG	GMA - Non-H/C	76,554.2	196,870.9		273,425.1
GDC2AC	C&I - Heating/Cooling	1,317.1	29,513.7		30,830.8
GDC2AH	C&I - Heating/Cooling	192,837.1	6,701,815.4		6,894,652.5
GDC2AHG	GMA - Heating/Cooling	30,194.9	3,214,244.0		3,244,438.9
GDC2AN	C&I - Non-H/C	66,126.6	739,114.0		805,240.6
GDC2ANG	GMA - Non-H/C	26,829.5	287,058.7		313,888.2
S_AOTC_F	(blank)			700,401.6	700,401.6
Grand Total		1,644,994.6	19,233,792.3	712,944.2	21,591,731.1

Mar-16

Sum of PEAK THERMS		Column Labels		
Row Labels	RATE DESCRIPTION	1	2	Grand Total
3	Commercial and Industrial Non-Cooling/Heating	808,650.8		808,650.8
4	Commercial and Industrial Cooling/Heating	126.2	14,318.4	14,444.6
5	Commercial and Industrial Heating	1,001,801.0	4,401,327.0	5,403,128.0
6	Group Metered Apartments Heating	189,848.1	1,494,649.4	1,684,497.5
7	Group Metered Apartments Non-Cooling/Heating	255,542.6		255,542.6
32	Group Metered Apartments Cooling/Heating	506.2		506.2
33	Commercial and Industrial Non-Cooling/Heating Delivery Service	879,611.0		879,611.0
34	Commercial and Industrial Cooling/Heating Delivery Service	664.0	18,005.1	18,669.1
35	Commercial and Industrial Heating Delivery Service	447,833.6	7,220,281.9	7,668,115.5
36	Group Metered Apartments Heating Delivery Service	153,615.7	3,261,704.3	3,415,320.0
37	Group Metered Apartments Non-Cooling/Heating Delivery Service	275,264.8		275,264.8
Grand Total		4,013,464.0	16,410,286.1	20,423,750.1

Mar-17

Sum of THERMS		Column Labels		
Row Labels	RATE CATEGORY DESCRIPTION	1	2	Grand Total
GDC02C	C&I - Heating/Cooling	2,856.3	18,397.6	21,253.9
GDC02CG	GMA - Heating/Cooling	364.4	472.4	836.8
GDC02H	C&I - Heating/Cooling	901,206.3	4,600,634.0	5,501,840.3
GDC02HG	GMA - Heating/Cooling	160,900.4	1,705,617.0	1,866,517.4
GDC02N	C&I - Non-H/C	207,454.3	712,894.1	920,348.4
GDC02NG	GMA - Non-H/C	54,301.2	208,518.6	262,819.8
GDC2AC	C&I - Heating/Cooling	1,304.1	20,445.3	21,749.4
GDC2AH	C&I - Heating/Cooling	387,325.1	7,351,079.3	7,738,404.4
GDC2AHG	GMA - Heating/Cooling	54,134.4	3,282,190.6	3,336,325.0
GDC2AN	C&I - Non-H/C	52,434.4	871,710.4	924,144.8
GDC2ANG	GMA - Non-H/C	27,298.9	318,470.1	345,769.0
Grand Total		1,849,579.8	19,090,429.4	20,940,009.2

Mar-18

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	4,555.1	18,490.3		23,045.4
GDC02CG	GMA - Heating/Cooling	271.7	472.4		744.1
GDC02H	C&I - Heating/Cooling	850,767.0	4,489,107.8		5,339,874.8
GDC02HG	GMA - Heating/Cooling	126,263.0	1,954,638.2		2,080,901.2
GDC02N	C&I - Non-H/C	192,741.2	544,829.2	10,286.2	747,856.6
GDC02NG	GMA - Non-H/C	57,400.8	191,351.2		248,752.0
GDC2AC	C&I - Heating/Cooling	1,262.2	27,763.2		29,025.4
GDC2AH	C&I - Heating/Cooling	262,073.8	6,312,032.9		6,574,106.7
GDC2AHG	GMA - Heating/Cooling	41,642.8	3,477,549.9		3,519,192.7
GDC2AN	C&I - Non-H/C	68,599.0	749,612.6		818,211.6
GDC2ANG	GMA - Non-H/C	24,578.5	283,391.6		307,970.1
Grand Total		1,630,155.1	18,049,239.3	10,286.2	19,689,680.6

Mar-19

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	6,353.4	41,735.4		48,088.8
GDC02CG	GMA - Heating/Cooling	277.7	511.0		788.7
GDC02H	C&I - Heating/Cooling	935,551.9	5,304,537.7		6,240,089.6
GDC02HG	GMA - Heating/Cooling	101,026.2	2,079,296.8		2,180,323.0
GDC02N	C&I - Non-H/C	241,079.6	528,166.4	2,376.1	771,622.1
GDC02NG	GMA - Non-H/C	76,761.7	189,477.1		266,238.8
GDC2AC	C&I - Heating/Cooling	1,317.1	29,513.7		30,830.8
GDC2AH	C&I - Heating/Cooling	196,670.7	6,808,385.2		7,005,055.9
GDC2AHG	GMA - Heating/Cooling	30,443.1	3,223,827.1		3,254,270.2
GDC2AN	C&I - Non-H/C	66,903.6	756,069.2		822,972.8
GDC2ANG	GMA - Non-H/C	27,322.9	290,419.4		317,742.3
S_AOTC_F	(blank)			700,401.6	700,401.6
Grand Total		1,683,707.9	19,251,939.0	702,777.7	21,638,424.6

Apr-16

Sum of PEAK THERMS		Column Labels		
Row Labels	RATE DESCRIPTION	1	2	Grand Total
3	Commercial and Industrial Non-Cooling/Heating	1,172,492.8		1,172,492.8
4	Commercial and Industrial Cooling/Heating	503.0	12,446.6	12,949.6
5	Commercial and Industrial Heating	1,164,829.9	4,814,422.7	5,979,252.6
6	Group Metered Apartments Heating	170,057.3	1,740,601.0	1,910,658.3
7	Group Metered Apartments Non-Cooling/Heating	284,289.6		284,289.6
32	Group Metered Apartments Cooling/Heating	506.2		506.2
33	Commercial and Industrial Non-Cooling/Heating Delivery Service	1,029,259.2		1,029,259.2
34	Commercial and Industrial Cooling/Heating Delivery Service	664.0	26,725.4	27,389.4
35	Commercial and Industrial Heating Delivery Service	602,471.8	7,736,536.0	8,339,007.8
36	Group Metered Apartments Heating Delivery Service	217,665.3	3,649,499.5	3,867,164.8
37	Group Metered Apartments Non-Cooling/Heating Delivery Service	513,234.1		513,234.1
Grand Total		5,155,973.2	17,980,231.2	23,136,204.4

Apr-17

Peak Usage Therms Billed		Column Labels		
Row Labels	RATE CATEGORY DESCRIPTION	1	2	Grand Total
GDC02C	C&I - Heating/Cooling	2,299.5	16,407.2	18,706.7
GDC02CG	GMA - Heating/Cooling	364.4	472.4	836.8
GDC02H	C&I - Heating/Cooling	783,374.6	3,543,634.5	4,327,009.1
GDC02HG	GMA - Heating/Cooling	146,785.6	1,475,251.2	1,622,036.8
GDC02N	C&I - Non-H/C	166,102.4	526,907.7	693,010.1
GDC02NG	GMA - Non-H/C	46,670.3	159,623.0	206,293.3
GDC2AC	C&I - Heating/Cooling	1,304.1	20,445.3	21,749.4
GDC2AH	C&I - Heating/Cooling	312,706.3	5,825,099.5	6,137,805.8
GDC2AHG	GMA - Heating/Cooling	41,552.9	2,936,158.3	2,977,711.2
GDC2AN	C&I - Non-H/C	47,437.0	772,193.9	819,630.9
GDC2ANG	GMA - Non-H/C	24,019.4	287,238.7	311,258.1
Grand Total		1,572,616.5	15,563,431.7	17,136,048.2

Apr-18

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	4,110.3	17,430.1		21,540.4
GDC02CG	GMA - Heating/Cooling	271.7	472.4		744.1
GDC02H	C&I - Heating/Cooling	826,327.6	4,004,947.2		4,831,274.8
GDC02HG	GMA - Heating/Cooling	121,383.2	1,791,493.2		1,912,876.4
GDC02N	C&I - Non-H/C	184,637.4	480,752.4	10,286.2	675,676.0
GDC02NG	GMA - Non-H/C	59,577.3	195,366.1		254,943.4
GDC2AC	C&I - Heating/Cooling	1,262.2	27,745.5		29,007.7
GDC2AH	C&I - Heating/Cooling	257,583.1	5,491,240.0		5,748,823.1
GDC2AHG	GMA - Heating/Cooling	41,343.1	3,117,117.7		3,158,460.8
GDC2AN	C&I - Non-H/C	64,834.3	776,048.6		840,882.9
GDC2ANG	GMA - Non-H/C	24,250.1	267,263.0		291,513.1
Grand Total		1,585,580.3	16,169,876.2	10,286.2	17,765,742.7

Apr-19

Peak Usage Therms Billed		Column Labels			
Row Labels	RATE CATEGORY DESCRIPTION	1	2	(blank)	Grand Total
GDC02C	C&I - Heating/Cooling	5,769.5	20,670.8		26,440.3
GDC02CG	GMA - Heating/Cooling	277.7			277.7
GDC02H	C&I - Heating/Cooling	789,608.2	4,266,522.5		5,056,130.7
GDC02HG	GMA - Heating/Cooling	85,257.5	1,603,836.3		1,689,093.8
GDC02N	C&I - Non-H/C	191,394.7	422,533.0	2,380.8	616,308.5
GDC02NG	GMA - Non-H/C	54,511.2	159,035.2		213,546.4
GDC2AC	C&I - Heating/Cooling	1,317.1	29,440.4		30,757.5
GDC2AH	C&I - Heating/Cooling	171,046.0	5,906,751.2		6,077,797.2
GDC2AHG	GMA - Heating/Cooling	21,331.4	2,860,537.1		2,881,868.5
GDC2AN	C&I - Non-H/C	60,398.3	703,112.6		763,510.9
GDC2ANG	GMA - Non-H/C	20,005.8	261,517.0		281,522.8
Grand Total		1,400,917.4	16,233,956.1	2,380.8	17,637,254.3

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 6

QUESTION NO. 6-20

Q. 6-20. Re: the Direct Testimony of Witness Lawson, Exhibit WG (H), page 13, lines 6-21, please provide actual billed **revenue** by rate class **by type of charge** (i.e., customer charge, distribution charge, peak usage charge) for each month of the test year and for each month of the three immediately preceding calendar years.

WASHINGTON GAS'S RESPONSE 04/22/2020

A. Please see attached.

SPONSOR: Andrew Lawson
Regulatory Affairs Manager

DC Distribution Charge

Level	Total System Level	Total System Level	Total System Level	1	2	Total System Level	1	2	Total System Level
Class	DC Res Htg / HC (NWS)	DC Res Non Htg - IMA (NWS)	DC Res Non Htg - OTH (NWS)	DC C&I Htg / HC < 3075	DC C&I Htg / HC > 3075	DC C&I Non Htg	DC GMA Htg / HC < 3075	DC GMA Htg / HC > 3075	DC GMA Non Htg (NWS)
Dec-2019	4,853,364	33,812	93,225	236,239	2,868,399	439,821	38,118	1,363,761	157,874
Nov-2019	2,547,368	21,917	52,671	82,410	1,706,568	356,818	20,257	823,781	128,210
Oct-2019	672,089	(14,037)	15,896	59,214	809,731	238,897	8,907	248,437	80,227
Sep-2019	606,171	5,366	14,629	21,232	784,893	208,307	9,543	245,805	72,238
Aug-2019	573,135	14,689	12,656	64,870	802,073	230,791	16,847	220,499	73,493
Jul-2019	590,273	14,686	13,572	50,006	728,172	181,438	8,430	243,775	73,359
Jun-2019	852,899	10,251	19,265	49,509	757,307	296,436	16,419	311,711	97,058
May-2019	1,277,355	19,628	26,178	118,419	1,383,406	277,595	21,476	493,172	107,209
Apr-2019	3,452,999	35,195	61,892	253,956	1,846,245	340,805	57,716	1,002,049	129,683
Mar-2019	5,337,411	35,718	100,471	460,280	3,345,272	441,381	48,462	1,411,733	159,680
Feb-2019	7,131,807	47,771	132,593	396,611	3,744,909	493,864	62,790	1,770,439	200,655
Jan-2019	5,537,376	38,602	102,937	377,432	3,555,054	458,454	41,490	1,500,575	163,781
Dec-2018	5,389,772	39,708	101,106	239,568	2,748,740	427,845	39,126	1,422,335	162,356
Nov-2018	2,869,794	22,929	57,383	85,823	1,725,291	346,639	21,305	872,480	124,369
Oct-2018	824,355	16,413	19,673	38,472	1,040,792	262,846	8,680	309,614	86,530
Sep-2018	612,746	14,381	14,792	35,117	588,727	239,652	7,484	279,236	72,484
Aug-2018	643,165	14,907	14,353	44,362	1,006,716	289,191	7,822	265,133	74,351
Jul-2018	674,949	16,080	17,228	73,786	815,096	(95,706)	14,639	281,724	75,476
Jun-2018	859,972	20,626	22,560	95,809	1,572,837	489,122	(8,271)	339,327	99,581
May-2018	1,994,183	35,183	42,629	159,205	1,477,784	322,970	15,297	647,682	115,770
Apr-2018	4,778,355	37,608	90,546	271,049	2,752,568	435,764	42,598	1,236,553	153,956
Mar-2018	5,499,245	40,520	111,649	305,022	2,806,213	461,136	92,503	1,499,960	174,038
Feb-2018	7,053,335	48,702	133,479	410,250	3,403,547	682,291	84,643	1,681,438	184,476
Jan-2018	8,408,214	54,376	173,757	451,513	3,912,234	585,944	62,346	1,942,854	221,059
Dec-2017	5,100,938	38,436	104,360	226,346	3,119,064	413,038	17,578	1,400,159	170,170
Nov-2017	2,551,189	23,518	56,600	103,819	1,692,987	384,738	18,260	757,216	118,399
Oct-2017	820,991	13,373	21,115	(3,931)	792,275	309,363	8,858	270,043	77,990
Sep-2017	698,305	16,876	19,693	27,342	813,693	286,050	19,081	289,192	91,755
Aug-2017	708,764	20,570	16,248	38,193	930,623	309,775	3,784	249,846	72,087
Jul-2017	720,137	18,104	18,881	211,796	1,167,932	388,272	27,264	364,087	98,913
Jun-2017	1,091,077	20,522	26,295	134,932	1,534,396	351,156	107,061	351,987	108,036
May-2017	1,336,658	16,313	31,018	114,460	785,277	271,851	57,028	402,981	93,992
Apr-2017	3,249,663	31,132	62,081	150,250	1,852,388	348,562	61,487	876,014	106,484
Mar-2017	5,082,175	46,644	103,846	432,867	2,547,731	487,358	132,252	1,115,973	165,546
Feb-2017	5,711,877	44,932	109,248	414,979	3,006,244	471,960	168,441	1,491,667	190,215
Jan-2017	8,034,348	49,121	156,665	491,096	3,238,294	585,228	105,179	1,796,702	203,331
Dec-2016	4,565,503	33,793	92,550	267,391	2,373,859	423,871	71,157	1,146,213	148,343
Nov-2016	1,765,266	21,586	40,487	104,714	1,196,813	347,780	40,633	534,936	111,248
Oct-2016	776,253	15,941	20,892	58,026	770,466	289,897	18,820	253,747	84,252
Sep-2016	626,312	14,838	16,403	42,298	649,889	280,243	13,410	204,271	72,772
Aug-2016	612,659	14,504	16,261	83,171	590,512	274,601	17,276	200,352	70,726
Jul-2016	702,954	15,456	18,342	87,627	680,036	306,754	23,605	277,404	78,941
Jun-2016	1,171,134	18,755	28,584	104,151	913,703	318,739	39,840	306,131	99,250
May-2016	1,934,226	21,176	42,086	137,245	1,220,467	378,383	35,085	542,886	148,524
Apr-2016	2,983,574	27,029	61,174	227,618	1,816,790	468,199	67,909	871,922	95,126
Mar-2016	5,564,222	38,394	104,270	396,611	3,078,184	515,489	78,924	1,338,415	166,165
Feb-2016	7,818,727	49,305	147,315	502,778	3,886,448	635,522	100,341	1,759,330	205,957
Jan-2016	5,439,463	37,384	106,152	307,640	2,566,718	517,066	71,014	1,225,371	167,627

DC System Charge

Level	Total System Level	Total System Level	Total System Level	1	2	Total System Level	1	2	Total System Level
Class	DC Res Htg / HC (NWS)	DC Res Non Htg - IMA (NWS)	DC Res Non Htg - OTH (NWS)	DC C&I Htg / HC < 3075	DC C&I Htg / HC > 3075	DC C&I Non Htg	DC GMA Htg / HC < 3075	DC GMA Htg / HC > 3075	DC GMA Non Htg (NWS)
Dec-2019	1,743,707	118,214	39,947	94,578	191,811	49,801	13,609	90,778	18,147
Nov-2019	1,745,512	118,415	39,932	91,011	178,825	48,081	11,310	89,121	16,173
Oct-2019	1,755,066	118,176	40,158	95,098	187,156	49,232	12,857	90,054	18,488
Sep-2019	1,771,938	119,211	40,435	95,677	191,051	48,730	13,624	94,992	18,981
Aug-2019	1,778,201	120,595	40,532	96,966	195,808	49,954	13,393	91,296	18,803
Jul-2019	1,774,663	120,786	40,647	95,685	191,106	50,537	12,482	92,286	19,289
Jun-2019	1,772,607	120,554	40,649	97,317	191,658	50,640	13,423	91,921	20,876
May-2019	1,772,902	120,267	40,388	95,184	183,416	47,624	11,901	92,791	20,846
Apr-2019	1,776,292	120,783	40,767	93,220	181,950	50,213	12,889	89,541	19,039
Mar-2019	1,732,349	119,099	40,482	103,082	190,494	50,652	12,225	90,067	18,992
Feb-2019	1,753,499	120,136	40,701	90,934	184,018	50,348	12,554	89,321	18,977
Jan-2019	1,761,691	120,318	40,738	95,455	200,940	52,938	12,284	92,299	18,912
Dec-2018	1,754,219	120,360	40,314	90,546	187,934	50,861	13,845	90,350	19,359
Nov-2018	1,747,664	119,494	40,700	91,202	176,639	50,678	12,303	89,665	19,254
Oct-2018	1,748,120	120,084	41,094	94,388	188,794	52,202	12,301	91,915	19,314
Sep-2018	1,747,780	119,796	40,617	91,622	186,406	51,608	12,121	91,063	19,180
Aug-2018	1,750,155	119,853	40,890	92,585	189,894	53,721	11,610	92,309	19,194
Jul-2018	1,753,567	120,041	40,872	92,060	189,640	51,620	11,687	92,156	19,182
Jun-2018	1,752,628	120,254	40,919	90,964	194,027	52,409	11,191	92,502	19,620
May-2018	1,756,536	119,855	41,170	91,770	190,379	51,777	11,879	90,563	19,235
Apr-2018	1,780,407	118,838	40,764	91,455	188,515	53,068	11,485	91,970	19,132
Mar-2018	1,737,483	119,266	41,085	92,736	191,597	52,292	11,469	92,276	19,516
Feb-2018	1,799,624	118,944	41,294	91,776	171,251	52,674	11,490	92,313	19,010
Jan-2018	1,701,167	119,634	41,249	93,595	196,180	50,857	11,694	94,336	19,490
Dec-2017	1,721,783	117,660	41,074	88,933	190,056	50,708	11,414	93,132	18,863
Nov-2017	1,741,154	118,470	41,536	90,226	192,663	53,191	11,724	92,561	19,715
Oct-2017	1,730,289	119,386	41,321	91,160	192,688	54,062	11,299	93,142	19,108
Sep-2017	1,725,862	116,536	41,104	88,798	189,752	52,415	11,443	91,488	19,636
Aug-2017	1,742,903	117,172	41,422	103,202	179,968	54,849	13,938	89,803	18,951
Jul-2017	1,745,305	117,501	41,623	97,285	187,000	54,537	13,448	91,957	19,553
Jun-2017	1,742,873	116,493	41,553	99,447	188,675	55,201	13,663	88,158	19,570
May-2017	1,706,758	114,155	41,228	91,476	172,241	51,426	12,271	82,838	18,394
Apr-2017	1,580,414	106,290	36,209	85,375	121,680	46,153	11,194	71,057	15,901
Mar-2017	1,308,139	65,390	24,962	71,522	104,905	33,385	9,709	51,280	11,852
Feb-2017	1,278,269	60,180	24,122	69,925	101,056	32,453	9,564	51,566	11,785
Jan-2017	1,457,967	76,690	27,644	80,960	116,686	38,421	10,549	57,772	13,375
Dec-2016	1,289,226	62,692	24,278	70,779	103,875	33,304	9,765	52,245	11,882
Nov-2016	1,281,877	62,445	24,397	70,524	103,406	33,234	9,431	51,072	11,751
Oct-2016	1,280,384	62,724	24,315	70,047	105,070	33,130	9,601	52,576	11,664
Sep-2016	1,281,922	62,899	24,380	69,819	103,988	33,092	8,722	52,240	11,910
Aug-2016	1,280,517	62,715	24,394	69,180	107,668	33,306	8,880	53,001	11,536
Jul-2016	1,287,023	62,646	24,414	69,355	106,998	33,178	9,021	60,111	11,454
Jun-2016	1,288,692	63,011	24,415	69,248	107,638	33,173	9,207	45,415	11,861
May-2016	1,289,339	63,145	24,452	69,127	107,202	33,200	8,813	52,635	11,781
Apr-2016	1,293,640	63,132	24,347	69,806	108,560	33,154	9,036	52,855	11,844
Mar-2016	1,297,753	63,064	24,479	70,315	107,761	33,120	9,068	53,238	11,674
Feb-2016	1,297,133	62,863	24,549	69,809	109,829	33,362	8,979	54,352	11,686
Jan-2016	1,291,563	62,958	24,563	69,967	104,735	32,698	9,122	51,283	11,775

DC Peak Usage Charge

Level	Total System Level	Total System Level	Total System Level	1	2	Total System Level	1	2	Total System Level
Class	DC Res Htg / HC (NWS)	DC Res Non Htg - IMA (NWS)	DC Res Non Htg - OTH (NWS)	DC C&I Htg / HC < 3075	DC C&I Htg / HC > 3075	DC C&I Non Htg	DC GMA Htg / HC < 3075	DC GMA Htg / HC > 3075	DC GMA Non Htg (NWS)
Dec-2019	-	-	-	29,492	348,543	47,599	4,390	155,773	17,650
Nov-2019	-	-	-	26,403	316,474	43,497	3,501	148,689	17,137
Oct-2019	-	-	-	3	6	1,708	0	(236)	507
Sep-2019	-	-	-	(123)	206	(984)	116	681	(1)
Aug-2019	-	-	-	37	1,179	(1,958)	18	(165)	641
Jul-2019	-	-	-	402	(1,019)	(246)	(68)	(32)	1,524
Jun-2019	-	-	-	(239)	653	31	363	854	604
May-2019	-	-	-	9,368	45,238	240	570	4,591	644
Apr-2019	-	-	-	42,558	316,090	47,772	5,991	159,398	17,701
Mar-2019	-	-	-	44,378	412,920	50,683	6,053	164,031	17,748
Feb-2019	-	-	-	36,528	358,549	47,974	5,730	159,402	17,703
Jan-2019	-	-	-	41,955	379,351	50,222	4,671	163,800	18,244
Dec-2018	-	-	-	32,135	346,330	49,370	4,466	158,468	17,983
Nov-2018	-	-	-	27,576	301,092	45,783	3,837	149,973	17,804
Oct-2018	-	-	-	106	3,367	(506)	8	410	1
Sep-2018	-	-	-	(323)	(24,237)	3	(0)	2,210	(93)
Aug-2018	-	-	-	747	33,818	6,852	-	58	-
Jul-2018	-	-	-	133	(2,765)	(10,135)	27	2,590	-
Jun-2018	-	-	-	(71)	33,513	11,405	(5,957)	2,355	116
May-2018	-	-	-	1,390	6,326	(1,014)	1,766	1,339	386
Apr-2018	-	-	-	37,077	343,519	50,359	5,406	165,317	17,712
Mar-2018	-	-	-	36,519	325,219	48,130	6,612	175,408	17,692
Feb-2018	-	-	-	36,302	342,226	50,839	7,689	171,850	17,136
Jan-2018	-	-	-	32,171	359,957	52,188	4,875	174,627	18,128
Dec-2017	-	-	-	28,657	362,609	49,581	2,265	170,940	17,821
Nov-2017	-	-	-	25,851	310,653	49,633	3,132	149,173	16,484
Oct-2017	-	-	-	42	(133)	208	-	275	0
Sep-2017	-	-	-	(375)	6,656	475	759	1,796	821
Aug-2017	-	-	-	1,078	22,010	2,486	13	3,400	17
Jul-2017	-	-	-	10,520	50,702	9,341	32	7,821	1,412
Jun-2017	-	-	-	2,027	86,831	4,419	6,591	4,839	212
May-2017	-	-	-	3,553	21,777	1,991	1,883	4,750	1,109
Apr-2017	-	-	-	28,566	253,969	38,462	7,329	118,865	13,267
Mar-2017	-	-	-	41,096	278,597	47,486	11,152	119,692	15,226
Feb-2017	-	-	-	39,561	273,513	47,323	12,375	123,719	17,402
Jan-2017	-	-	-	35,095	227,498	43,884	6,069	117,966	14,033
Dec-2016	-	-	-	31,677	283,578	47,651	7,499	122,978	14,387
Nov-2016	-	-	-	29,563	285,013	44,455	5,232	118,505	15,120
Oct-2016	-	-	-	19	35	(143)	(11)	719	(1)
Sep-2016	-	-	-	-	(751)	(99)	(160)	(1,827)	-
Aug-2016	-	-	-	(80)	198	(2)	(44)	(243)	(1)
Jul-2016	-	-	-	(57)	(459)	(40)	(671)	335	(336)
Jun-2016	-	-	-	(137)	1,683	(189)	65	(10,158)	-
May-2016	-	-	-	19	(7,254)	29	(259)	(1,048)	3,429
Apr-2016	-	-	-	42,463	333,010	59,292	8,904	142,199	13,050
Mar-2016	-	-	-	42,918	342,216	58,766	9,806	145,301	17,209
Feb-2016	-	-	-	40,899	343,633	60,666	9,045	(16,111)	18,090
Jan-2016	-	-	-	37,169	306,159	56,171	8,237	129,117	16,174

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
APARTMENT AND OFFICE BUILDING ASSOCIATION

AOBA DATA REQUEST NO. 8

QUESTION NO. 8-9

Q. Re: the Company's response to OPC Data Request 4-18 in this proceeding. With respect to the Headcount data provided in the attachment to OPC Data Request 4-18, pages 1 of 4 and 2 of 3, please:

a. Define the acronyms "FOAG" and "FOBG;"

b. Define the acronym "CLDP;"

c. Provide a breakdown of the "headcount" between Washington Gas personnel, Contractor personnel, and mutual assistance personnel by month for each month of calendar years 2017, 2018 and 2019. If Contractor and/or Mutual Assistance personnel are not included in the referenced Headcount data, provide the Contractor and Mutual Assistance personnel utilized by month by position for each month of calendar years 2017, 2018 and 2019.

WASHINGTON GAS'S RESPONSE 06/19/2020

A. a. "FOAG" refers to Field Operations Above Ground. These employees respond to odor calls. "FOBG" refers to Field Operations Below Ground. These employees repair leaks on distribution pipe.

b. "CLDP" refers to Crew Leader Development Program. Before an employee can become a Crew Leader at Washington Gas, they must complete a fifteen-month training program administered by Washington Gas' training staff.

c. Please refer to Attachment "AOBA 8-9(c)_Headcount". There are two tabs on this spreadsheet. The first shows the field personnel and their supervisors along with the contractor support, by month, for each month of calendar years 2017, 2018 and 2019. The second tab shows

the assistance of Mutual Aid crews, by week, during calendar years 2017, 2018 and 2019.

SPONSOR: Stephen J. Price
Assistant Vice President, Safety, Quality and System Protection

		2017										
Group	Job Title	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Field Operations Above Ground	Construction Technician	4	4	4	5	5	5	5	5	5	5	5
Field Operations Above Ground	Service Assistant	28	17	18	17	30	30	30	30	19	19	19
Field Operations Above Ground	Leak Qualified	73	83	82	81	81	81	81	83	82	82	82
Field Operations Above Ground	Sup Field Operations	8	7	7	7	8	9	9	9	10	10	10
Field Operations Above Ground	Contractors	8	8	9	3	3	5	7	8	8	8	9
Field Operations Below Ground	Helper Mechanic	11	20	19	18	18	18	18	19	10	10	10
Field Operations Below Ground	Crew Assistant	67	66	64	72	60	60	59	66	71	71	71
Field Operations Below Ground	Crew Mechanic	24	25	26	27	31	30	31	31	28	28	21
Field Operations Below Ground	Crew Leader Development Program (CLDP)	6	6	6	5	5	5	4	4	4	4	11
Field Operations Below Ground	WG Crew Leaders	48	47	47	45	44	43	44	45	44	44	44
Field Operations Below Ground	Sup Field Operations	24	24	23	24	23	23	23	23	18	18	18
Field Operations Below Ground	Contractor Crews	6	6	6	6	6	6	6	6	6	6	6

	2018												2019											
Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	7	9	9	9	9	9	9	8
19	19	12	31	32	29	29	16	26	40	40	40	40	39	37	24	24	32	32	29	29	16	30	30	28
93	92	91	91	90	89	89	89	89	88	90	93	90	90	99	98	98	95	95	95	95	95	106	106	105
10	10	10	9	9	9	8	7	7	9	10	11	11	12	12	12	12	11	10	10	10	11	11	11	13
9	14	17	17	14	14	10	12	9	17	17	16	18	16	15	14	9	12	12	10	9	12	13	17	16
9	10	8	17	29	28	35	37	37	38	36	28	26	29	27	24	24	21	31	30	38	31	36	29	20
71	77	78	60	54	54	54	61	51	53	63	67	59	64	67	76	76	70	65	74	74	81	73	79	85
21	19	19	18	23	23	22	21	22	21	16	17	24	24	23	23	24	25	24	24	25	15	13	14	16
11	11	11	11	11	10	11	12	10	11	12	12	12	12	12	12	12	6	6	6	6	15	17	17	20
43	41	40	40	40	37	37	36	37	36	40	40	39	39	39	39	39	45	45	45	45	44	44	44	44
18	18	18	18	18	23	23	22	20	20	22	22	21	22	22	21	23	25	24	23	23	25	27	26	25
6	8	15	15	15	15	15	15	15	15	20	18	18	21	21	21	21	26	26	26	25	20	20	20	21

	Week Beginning										
Mutual Aid Assistance	1/1/2018	1/9/2018	1/17/2018	1/25/2018	2/2/2018	2/10/2018	2/18/2018	2/26/2018	3/6/2018	3/14/2018	3/22/2018
New Jersey Natural Gas	0	0	0	0	5	7	6	3	0	0	0
SEMCO Energy	0	0	0	0	10	10	9	12	0	0	0

	Week Beginning												
Mutual Aid Assistance	12/31/2018	1/7/2019	1/14/2019	1/21/2019	1/28/2019	2/4/2019	2/11/2019	2/18/2019	2/25/2019	3/4/2019	3/11/2019	3/18/2019	3/25/2019
New Jersey Natural Gas Crews	0	0	0	0	0	0	0	5	5	5	6	5	5
Piedmont Natural Gas Crews	0	0	0	0	0	0	0	0	6	6	6	7	0

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
THE OFFICE OF PEOPLE'S COUNSEL

OPC DATA REQUEST NO. 3

QUESTION NO. 3-45

Q. **Energy Efficiency.** Please provide all empirical studies that estimate, calculate, or otherwise demonstrate that the promotion of energy efficiency and conservation programs, without decoupling, will compromise a regulated utility's (including the Company's) ability to earn a just and reasonable rate of return or compromise the ability to provide reliable service.

WASHINGTON GAS'S RESPONSE **04/01/2020**

A. It would be virtually impossible to provide all empirical studies that address this topic, as it has been recognized as a significant problem for decades and has been the subject of significant study. If OPC is interested in educating itself about this issue, the Company would suggest as a starting point the document "Aligning Utility Incentives with Investment in Energy Efficiency," published in 2007 by the National Action Plan for Energy Efficiency and available at https://www.epa.gov/sites/production/files/2015-08/documents/incentives.pdf. In its forward, that document states:

This report on Aligning Utility Incentives with Investment in Energy Efficiency is provided to assist gas and electric utilities, utility regulators, and others in the implementation of the recommendations of the National Action Plan for Energy Efficiency (Action Plan) and the pursuit of its longer-term goals.

The Report describes the financial effects on a utility of its spending on energy efficiency programs, how those effects could constitute barriers to more aggressive and sustained utility investment in energy efficiency, and how adoption of various policy mechanisms can reduce or eliminate these barriers.

Many other organizations, including, but not limited to, the National Association of Regulatory Utility Commissioners ("NARUC"), the National Resources Defense Counsel and the American Gas Association, have also addressed this issue. NARUC studied this issue and documented the results in a Briefing Paper by

Ken Costello of the National Regulatory Research Institute entitled "Revenue Decoupling for Natural Gas Utilities." That comprehensive evaluation notes the following positive features of revenue decoupling ("RD") mechanisms for natural gas utilities:

1. A small reduction in gas sales can affect significantly a utility's earnings.
2. Under standard ratemaking, energy efficiency initiatives harm utility shareholders between rate cases. The accumulation of earnings losses over the period between rate cases can be significant.
3. It is unfair to have a utility promote energy efficiency when it harms its shareholders, as the utility has a fiduciary responsibility to its shareholders in maximizing returns.
4. Rate cases, which impose significant costs on utilities and commissions, would become less frequent over time.
5. Standard ratemaking steers a utility away from initiating energy efficiency actions, some of which may be cost-effective; or, when forced to promote energy efficiency activities, utilities will do so lackadaisically. RD is therefore critical to assure that utilities effectively carry out energy efficiency initiatives.
6. A utility is entitled to a reasonable opportunity to recover fully its previously authorized fixed costs between rate filings, even when energy efficiency initiatives and other factors adversely affect revenues over this period.
7. Unless state commissions recognize the trend of falling gas use per customer in base rates, earnings will inevitably fall below authorized levels. Even if the utility is able to lower its costs between rate filings, it may not have a reasonable opportunity to earn its allowed rate of return.
8. Unless state commissions are willing to remove fixed costs from the volumetric charge, RD is the only viable alternative in protecting shareholders' interest from fluctuating sales.
9. RD can actually reduce risks to consumers by suppressing gas bill volatility.
10. RD eliminates a major controversial issue in rate cases, namely, the calculation of test-year sales.
11. As an alternative to RD, lost revenue adjustment (LRA) from energy efficiency initiatives would require evaluation and verification of savings from utility-initiated energy conservation programs. Under LRA, an incentive problem arises where a utility would have an incentive to maximize measured or reported savings but to achieve minimal actual savings from energy efficiency initiatives.
12. By stimulating energy efficiency initiatives, RD can benefit both gas consumers and society in the long run (for example, lower consumer gas bills from the pursuit of these initiatives).
13. The ability of a utility to recover its fixed costs should not hinge on its actual sales, over which the utility has little control.
14. Full recovery of fixed costs in the customer charge would reduce the incentive of customers to conserve since, at the margin, customers would save less money from curtailing their gas usage.

15. RD could reduce overall gas demand, thereby placing downward pressure on wholesale gas prices.
16. RD is easy for state commissions to monitor.
17. RD improves a utility's financial situation and lowers its risk from the perspective of the financial community.
18. RD is critical in transforming a utility from a seller of least-cost gas service to a provider of least cost energy services.
19. RD does not affect a utility's incentive to minimize costs and pursue operating efficiencies. "Revenue Decoupling for Natural Gas Utilities," pages 14, 15, endnotes omitted.

In July 2004, the American Gas Association and the Natural Resources Defense Counsel issued a joint statement to the National Association of Regulatory Commissioners that was intended to identify "ways to promote both economic and environmental progress by removing barriers to natural gas distribution companies' investments in urgently needed and cost-effective resources and infrastructure," and encourage regulators to consider "innovative programs that encourage increased total energy efficiency and conservation in ways that will align the interests of state regulators, natural gas utility company customers, utility shareholders, and other stakeholders." The primary problem that the Joint Statement identifies is what it refers to as the "Energy Efficiency Problem," under which utilities are "penalized" for aggressively promoting energy efficiency. According to the Statement, the penalty results from the mismatch of (fixed) costs and (volumetric) rates that is documented for Washington Gas in the Direct Testimony of Paul H. Raab in this docket:

The vast majority of the non-commodity costs of running a gas distribution utility are fixed and do not vary significantly from month to month. However, traditional utility rates do not reflect this reality. Traditional utility rates are designed to capture most of approved revenue requirements for fixed costs through volumetric retail sales of natural gas, so that a utility can recover these costs fully only if its customers consume a minimum amount of natural gas (these amounts are normally calculated in rate cases and generally are based on what consumers consumed in the past). Thus, many states' rate structures offer - quite unintentionally - a significant financial disincentive for natural gas utilities to aggressively encourage their customers to use less natural gas, such as by providing financial incentives and education to promote energy-efficiency and conservation techniques.

When customers use less natural gas, utility profitability almost always suffers, because recovery of fixed costs is reduced in proportion to the reduction in sales. Thus, conservation may prevent the utility from recovering its authorized fixed costs and earning its state-allowed rate of return.

This statement enjoyed broad support and was also endorsed by the Alliance to Save Energy and the American Council for an Energy Efficient Economy

("ACEEE"). The ACEEE has an extensive library of studies that address this topic on their website. For example, please see "Balancing Interests: A Review of Lost Revenue Adjustment Mechanisms for Utility Energy Efficiency Programs" and "Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives."

Finally, many states have enacted legislation to directly address this specific problem and many state regulatory authorities have implemented some form of revenue decoupling for utilities as a result (see the Direct Testimony of Paul H. Raab in this docket for these states).

SPONSOR: Paul H. Raab
Consultant

AOBA (B)

Before the

PUBLIC SERVICE COMMISSION
OF THE
DISTRICT OF COLUMBIA

IN THE MATTER OF	)	
	)	
The Application of Washington Gas Light	)	
Company for Authority to Increase Existing	)	**Formal Case No. 1162**
Rates and Charges for Gas Service	)	

VOLUME II OF II: DIRECT TESTIMONY OF AOBA WITNESS TIMOTHY B. OLIVER

August 14, 2020

Apartment and Office Building Association
of Metropolitan Washington
1025 Connecticut Ave, NW, Suite 1005
Washington, D.C. 20036
(202) 296-3390

FRANN G. FRANCIS
EXCETRAL K. CALDWELL
NICOLA Y. WHITEMAN
Counsel for the Apartment and
Office Building Association of
Metropolitan Washington
1025 Connecticut Ave., NW, Suite 1005
Washington, D.C. 20036
(202) 296-3390

DIRECT TESTIMONY OF TIMOTHY B. OLIVER
DC PSC Formal Case No. 1162

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DIRECT TESTIMONY OF TIMOTHY B. OLIVER
DC PSC Formal Case No. 1162

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is Timothy B. Oliver. My business address is 7103 Laketree Drive Fairfax Station, Virginia, 22039.

Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

A. I am employed by Revilo Hill Associates, Inc., I serve as Vice President and Senior Rate Analyst for the firm.

Q. ON WHOSE BEHALF DO YOU APPEAR IN THIS PROCEEDING?

A. I am appearing on behalf of the Apartment and Office Building Association of Metropolitan Washington (AOBA).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. My testimony in this proceeding addresses issues relating to the Washington Gas Light Company's ("Washington Gas", "WG", "the Utility", or "the Company") Application for authority to increase its existing rates and charges for gas service. This testimony responds to portions of the pre-filed direct testimony and supplemental direct testimony, schedules, and responses to data requests that

witnesses Bonawitz, Hevert, Gibson, and Borden sponsor on behalf of the Company in this proceeding.

Q. PLEASE SUMMARIZE YOUR EXPERIENCE AND QUALIFICATIONS.

A. I have been employed by Revilo Hill Associates, Inc. since 2002. In 2005, I began working with Revilo Hill Associates on a full-time basis. During my employment I have assisted in the preparation of a wide range of energy and utility analyses addressing such topics as: estimation of utility ROE requirements, utility class cost of service allocations, rate design analyses, fuel oil pricing, assessment of issues associated with the sighting of proposed LNG facilities, investigation of metering and billing disputes for large building owners, examination of the economics of competitive energy supply alternatives, energy efficiency opportunities, and renewable energy for commercial, governmental, and institutional customers. I have also prepared, or assisted in the preparation of, utility rate case analyses for more than sixty utility electric, gas, and water proceedings in the following regulatory jurisdictions: The District of Columbia, Maryland, Virginia, Massachusetts, Rhode Island, Guam, and the Virgin Islands.

I also have a Master of Science degree in the field of Global Energy Management from the University of Colorado Denver Business School. That program included courses in Regulatory Accounting, Corporate Finance, Energy Economics, Energy Law and Policy, Asset Management, and Strategic Planning. I also have a Bachelor of Science degree in Chemistry from the College of William and Mary. Additionally, I have taken the Certified Energy Manager

("CEM") course offered by the Association of Energy Engineers and passed the exam for that certification.

Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THIS COMMISSION?

A. Yes, I have. I appeared before this Commission in Formal Case Nos. 1103, 1137, 1139,1142, and 1156.

Q. HAVE YOU TESTIFIED BEFORE ANY OTHER UTILITY REGULATORY COMMISSIONS?

A. Yes, I have previously submitted testimony before the Virginia State Corporation Commission, the Maryland Public Service Commission, and the Rhode Island Public Utilities Commission.

Q. WAS THIS TESTIMONY PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION AND CONTROL?

A. Yes, it was.

II. SUMMARY OF FINDINGS AND RECOMMENDATIONS

Q. PLEASE SUMMARIZE THE KEY FINDINGS OF YOUR TESTIMONY REGARDING THE RETURN ON EQUITY REQUIRED BY WASHINGTON GAS?

A. The following are key findings that have been derived from my review and analyses of the Direct Testimony of WG Witness Hevert in this proceeding as well as from my own assessment of the Company's equity return requirements:

- Witness Hevert's ROE recommendation for WG is a highly judgmental determination derived from an extremely wide range of ROE estimates. Yet, history shows that Witness Hevert's ROE judgments have been significantly different than those of regulators.

- Witness Hevert has a long-established history of presenting ROE recommendations that significantly overstate regulators' assessments of required equity return requirements for utilities.

- Witness Hevert's use of Value Line estimates of earnings growth for his proxy group companies introduces a significant upward bias in his DCF estimates.

- Witness Hevert's proxy group which comprises utility holding companies with investment portfolios that incorporate more risky non-regulated business activities reflects greater risk and higher return requirements than WG's gas distribution utility operations.

- Contrary to Witness Hevert's representations, his Expected Earnings Analysis does not provide confirmation or validation of the ROE range that he recommends in this proceeding.

- The capital structure as presented by Washington Gas in the Direct Testimony of Witness Bonawitz, is reasonable for ratemaking purposes.

- It is widely understood that gas distribution utilities are generally less risky than their more diversified holding company parents, and therefore, gas distribution utilities should have lesser equity return requirements than their parent companies, but WG Witness Hevert fails to recognize this fundamental relationship.

- When interest rates declined sharply following the economic recession in 2008 and 2009, utilities authorized rates of return were adjusted more gradually and never reflected the full interest rate decline. It is, therefore, unnecessary and inappropriate to adjust

utility rates of return upward in proportion to recent interest rate increases.

- The Company's ROE request substantially overstates an appropriately determined equity return requirement for its gas distribution utility operations in District of Columbia.

- The adjustment to WG's ROE presented in this testimony would eliminate **$5.5 million** of WG's $35.2 million revenue increase request in this proceeding without any consideration of other revenue requirements issues.

- The Company's proposed distribution of the requested revenue is arbitrary and lacks transparency.

- The Company's proposed distribution of the requested revenue increase does not provide any final class rate of return results upon which the Commission can evaluate the post increase impacts on class rates of return or movement towards parity.

- The Company's proposed customer charge increases of 25% are greater than recently approved Customer Charge increases in recent Washington Gas Base Rate proceedings.

Q. WHAT RECOMMENDATIONS DO YOU OFFER WITH RESPECT TO WG'S REQUIRED RETURN ON EQUITY IN THIS PROCEEDING?

A. The following presents a summary of recommendations that I offer for the Commission's consideration in this proceeding. These recommendations are based on the findings discussed above and the discussion of issues and supporting analyses contained in the remainder of this testimony, as well as the accompanying schedules.

1. The Commission should reject Washington Gas's request for a 10.60% ROE and approve a cost of equity for Washington Gas of not more than 9.00%.

2. The Commission can accept the Company's proposed capital structure in its Supplemental Direct Testimony for ratemaking purposes.

3. The Commission should approve an overall rate of return for Washington Gas for the rate effective period of not greater than 6.82%.

4. The Company's proposed distribution of its revenue increase should be rejected.

5. Rate classes with relative rates of return more than twice the system average should be exempted from a revenue increase.

6. The proposed revenue increase distribution methodology in this testimony is reasonable and transparent and should be accepted in this proceeding.

7. The Commission should limit the customer charge increase to 5%, or no more than the system average increase.

8. The Commission should reject the Company's proposed Rate Schedule No. 8, the Interruptible Delivery Service Gas Supplier Agreement.

III. DISCUSSION OF ISSUES

Q. HOW IS YOUR DISCUSSION OF ISSUES IN THIS TESTIMONY ORGANIZED?

A. The testimony addresses two elements of the Company's Application. Part A presents AOBA's assessment of the Company's requested overall cost of capital with focus on the Company's requested return on equity. Part A is comprised of three subparts: (1) Capital Structure; (2) Cost of Equity; and (3) Overall Costs of Capital. Part B contains AOBA's proposed Rate Design and has two subparts: (1) Revenue Increase Distribution; and (2) Non-Residential Rate Design.

A. CAPITAL STRUCTURE AND RATE OF RETURN

Q. WHAT IS THE OVERALL COST OF CAPITAL THAT WASHINGTON GAS ASKS THE COMMISSION TO APPROVE IN THIS PROCEEDING?

A. Washington Gas's Application indicates that the Company seeks Commission approval of an overall rate of return of **7.54%**. That requested overall rate of return is premised on a requested **10.40% Return on Equity** ("ROE") and a capital structure that includes **52.10% Common Equity**.

Q. IS WG'S REQUESTED OVERALL RATE OF RETURN REASONABLE?

A. No, it is not. WG's proposed 10.40% ROE is unreasonably and inappropriately high. Further, the Company's computed cost of debt overstates the costs of debt that Washington Gas should expect to incur during the rate effective period, and its assumed Common Equity percentage is inappropriately high.

Q. WHAT IS THE BASIS FOR YOUR ASSESSMENT THAT THE COMPANY'S REQUESTED RETURN ON EQUITY IS UNREASONABLY AND INAPPROPRIATELY HIGH?

A. The cost of equity analyses that Washington Gas Witness Hevert presents are not developed in a manner that reflects the costs of equity for Washington Gas's distribution utility operations.

Q. AT WHAT LEVEL SHOULD THE COMPANY'S AUTHORIZED ROE BE SET IN THIS PROCEEDING?

A. The Commission should set the authorized ROE for Washington Gas at not greater than 9.00%.

1. Capital Structure

Q. WHAT FACTORS SHOULD THE COMMISSION CONSIDER WHEN ASSESSING THE APPROPRIATE CAPITAL STRUCTURE FOR RATEMAKING PURPOSES IN THIS PROCEEDING?

A. Any determination regarding the appropriateness of a proposed equity component for WG's capital structure for ratemaking purposes must reflect a balancing of at least four considerations. Those considerations include:

- ✓ Does the proposal reflect a reasonable attempt to minimize the overall costs to ratepayers of financing the Company's utility operations?
- ✓ Does the proposal support the financial stability and health of the Company's utility operations?
- ✓ Does the proposal inappropriately foster subsidization of the activities of non-regulated affiliates?
- ✓ Does the proposal provide the Company substantial opportunities to improve its profitability by utilizing an actual capital structure that differs from the capital structure approved for ratemaking purposes?

Q. WHAT CAPITAL STRUCTURE DOES WG PROPOSE TO USE FOR RATE-MAKING PURPOSES IN THIS PROCEEDING?

A. The pre-filed direct testimony of WG witness Bonawitz at page 2, presents the Company's recommended capital structure. That Capital Structure includes the following components:

Common Equity	$1,592,113	52.10%
Preferred Stock	0	0.00%
Long-Term Debt	1,320,405	43.21%
Short-Term Debt	143,218	4.69%
Total Debt	$1,463,623	47.90%
TOTAL	$3,055,736	100.00%

Q. WHAT RATES OF RETURN DOES WG REQUEST IN THIS CASE?

A. WG seeks authorization of an overall rate of return of 7.56% and a return on common equity ("ROE") of 10.40%. The Company also seeks a 4.63% cost rate for Long-Term Debt, a 2.26% cost rate for Short-Term Debt, and no return on the Preferred Stock that was retired on December 20, 2019.

Q. HAS WG ADEQUATELY EXPLAINED OR JUSTIFIED ITS PROPOSED CAPITAL STRUCTURE?

A. No, it has not. The Direct Testimony of witness Bonawitz asserts that WG's financial strategy has been developed to enable the Company to **"***meet its capital requirements at a* ***reasonable cost*** *and to maintain flexibility in accessing finan-*

cial markets."[1] (Emphasis Added). However, the witness offers no quantitative basis for assessing the **reasonableness** of the costs that result from the Company's financing strategy. Nor does witness Bonawitz offer any sensitivity analysis to demonstrate the manner in which the Company's financing costs and/or its access to financial markets would change with changes in planning assumptions or changes in market conditions.

Q. IS THE CAPITAL STRUCTURE THAT WG PROPOSES IN THIS PROCEEDING REASONABLE AND APPROPRIATE FOR RATEMAKING PURPOSES?

A. The capital structure proposed in the Company's Direct Testimony filed on January 13, 2020 is reasonable as presented at that time. Washington Gas' proposed capital structure addresses each of the four considerations that the Commission must balance in determination of a capital structure for ratemaking purposes. However, the Company's lack of quantitative evidence of efforts to minimize ratepayer costs is a concern in the Rate Effective Period.

Since Formal Case No. 1142 Washington Gas and its new parent AltaGas have experienced material changes in their financial profiles. Shortly after the closing of the merger on July 6, 2018 both WGL Holdings and Washington Gas had their credit ratings downgraded by all three-major credit rating agencies.[2] Then, on December 19, 2018 S&P Global again downgraded the ratings of both WGL Holdings and Washington Gas. WGL Holdings was downgraded to "BBB-"

[1] Exhibit WG (D), page 4.
[2] MD PSC Case No. 9481, September 13, 2018, Supplemental Testimony of Witness Bonawitz at page 2.

and Washington Gas Light Co. to "BBB+".[3] However, given the Company's overall capital spending plans for the three jurisdictions in which it provides retail distribution service, further issuances of debt by Washington Gas prior to or during the rate effective period appear unavoidable. Thus, any consideration of an upward adjustment to the equity percentage in the Company's initially proposed capital structure in this proceeding should be balanced by consideration of additional debt that Washington Gas will need to issue to fully fund its plans for significant capital spending in each of the jurisdictions in which it provides service.

Q. WHAT IS THE OVERALL COST OF CAPITAL THAT RESULTS FROM YOUR ROE AND CAPITAL STRUCTURE RECOMMENDATIONS?

A. The combined impact of the ROE and capital structure recommendations that I present would lower WG's overall rate of return ("ROR") to 6.82%. That result is shown in AOBA Exhibit (B)-4.

2. Cost of Equity

Q. DO YOU HAVE ANY GENERAL OBSERVATIONS REGARDING THE ROE ANALYSES THAT WASHINGTON GAS HAS SUBMITTED IN THIS PROCEEDING IN SUPPORT OF ITS REVENUE INCREASE?

[3] Attachment B, "FC 1142 Merger Commitment No. 35, Washington Gas Light Company's Notice of Credit Rating Downgrade."

A. I do. With respect to the Company's ROE, Washington Gas asks for the Commission's approval of a 10.40% return on equity. That is a whopping **115 basis points** above the 9.25% ROE level that this Commission approved for Washington Gas in Formal Case No. 1137 and reflects no consideration of gradualism in the adjustment of authorized ROEs. It is also 120 basis points above the 9.20% authorized ROE established for Washington Gas in the Company's most recent base rate case in Virginia that was decided on December 20, 2019.[4] Moreover, considering that interest rates have fallen and the risk free cost of debt (as suggested by the yields on 30-Year U.S. Treasury bonds) have fallen to near zero, the dramatic increase in WG's authorized ROE that the Company requests in this proceeding would be unconscionable, even without consideration of Covid-19 impacts. When the consideration is given to effects of the Covid-19 pandemic on the District's economy and the Company's failure to stem the rapid growth in hazardous leaks on its DC distribution system, an increase in the equity return for WG's sole shareholder, AltaGas, cannot be justified.

A presumption throughout the ROE analyses that WG Witness Hevert presents is that the Company's risk profile is comparable to that of the risk profile of the proxy group companies that Witness Hevert employs in those analyses. However, that presumption is inaccurate. Witness Hevert's proxy group comprises utility holding companies with investment portfolios that often include significant non-utility and non-price regulated business activities. Represen-

[4] Virginia State Corporation Commission, Case No. PUR-2018-00080, FINAL ORDER, dated December 20, 2019, page 25.

tations that the risks associated with those holding companies are comparable to the risks faced by WG's gas distribution operations in the District of Columbia are inappropriate and unjustified.

In addition, this testimony documents Witness Hevert's established history of presenting ROE recommendations in state utility regulatory proceedings that are well above the ROE levels that regulators have ultimately found to be reasonable in the gas distribution utility cases in which he has offered specific ROE recommendations. Witness Hevert's analyses and recommendations are to a large extent a product of his judgmental determinations, and in that context, the manner in which his judgments have differed from those of the regulators who have evaluated his ROE recommendations provides important perspective for the Commission.

Q. WHAT RATE OF RETURN ON COMMON EQUITY ("ROE") DOES WG WITNESS HEVERT RECOMMEND IN THIS PROCEEDING?

A. Witness Hevert's Direct Testimony recommends that the Commission approve a ROE of **10.40%.**[5] His recommendation is based on his assessment that the Company's ROE should fall within a range of 10.00% to 10.75%.[6]

Q. IS WITNESS HEVERT'S RECOMMENDED ROE FOR WG IN THIS PROCEEDING REASONABLE?

[5] Exhibit WG (2C), page 1.
[6] Ibid.

A. No. His recommended ROE significantly overstates the ROE required of investments with risk comparable to the risk of WG's gas distribution utility operations in District of Columbia.

Q. IS IT UNUSUAL FOR WITNESS HEVERT'S ROE RECOMMENDATIONS TO BE NOTICEABLY ABOVE THE ROE LEVELS THAT COMMISSIONS FIND TO BE APPROPRIATE?

A. No. I demonstrate that Witness Hevert's recommended ROEs in gas utility rate proceedings have overstated the ROEs ultimately authorized by the utility regulatory commission to which he presented those recommendations by an average of 78 basis points. That substantial upward bias reflects the differences between Witness Hevert's recommended ROEs and regulatory commission determinations in decided cases in which Witness Hevert has testified over the last three years. **AOBA Exhibit (B)-2** shows that over the past three years Witness Hevert's recommendations in gas utility proceedings have on average been **78 basis points above** the levels that regulators ultimately found reasonable in the cases in which he has presented a specific ROE recommendation.[7]

[7] This does not include the recent determination in a Washington Gas Light Company proceeding in Virginia (i.e., Case No. PUR-2018-00080 in which an associate of Witness Hevert at Scott Madden recommended a 10.30% ROE and the proposed Hearing Examiner's Order in that case concludes that a 9.20% ROE is reasonable. It should also be noted that Witness Hevert's ROE recommendations in electric utility regulatory proceedings have incorporated a similar upward bias.

Q. IS YOUR COMPUTATION OF A REGULATORS' ADJUSTMENT FACTOR INTENDED TO SUGGEST THAT REGULATORS SHOULD MAKE ROE DETERMINATIONS BY SIMPLY APPLYING A DOWNWARD ADJUSTMENT TO WITNESS HEVERT'S ROE RECOMMENDATIONS?

A. No. Witness Hevert presents ROE estimates that display a wide range of ROE results. He then applies substantial judgment to those results to arrive at his ROE recommendation. My presentation of the Regulators' Adjustment Factor is intended to illustrate the extent to which Witness Hevert's judgments regarding the selection of appropriate ROEs for gas utilities have differed from regulators' evaluations of appropriate ROEs in the proceedings in which he has presented ROE recommendations. Nothing in my presentation is intended to suggest that any commission has relied, or should rely, solely on differences between Witness Hevert's recommendations in past proceedings and regulatory commissions' ultimate ROE determinations in past proceedings as the basis for assessing an appropriate ROE for any utility.

Q. WHAT SUPPORT DOES WITNESS HEVERT OFFER FOR THE COMPANY'S REQUESTED 10.40% COST OF EQUITY?

A. Witness Hevert presents cost of equity analyses that are developed using four equity cost estimation methods. Those methods include: (1) a constant growth discounted cash-flow ("DCF") model; (2) a traditional Capital Asset Pricing Model ("CAPM"); (3) an ECAPM variant on the CAPM methodology ("ECAPM"); and (4)

a Bond Yield Risk Premium Model ("RPM").[8] After his presentation of the results of those models, Witness Hevert also discusses an Expected Earnings Analysis which he portrays as corroboration of his recommended ROE range of 10.00% to 10.75%.

Q. WHAT IS THE RANGE OF ROE ESTIMATES THAT WITNESS HEVERT PRESENTS?

A. The ROE estimates that Witness Hevert computes range from a low of 7.47% to a high of 14.54%.[9] That is an extremely wide range which provides little insight regarding WG's actual required return on equity.

Q. DOES WITNESS HEVERT CONSISTENTLY APPLY THE STANDARDS ESTABLISHED FOR ROE DETERMINATIONS IN *HOPE* AND *BLUEFIELD*?

A. No. Although he asserts that his analyses and recommendations consider "*the Company's business risk relative to the proxy group…*" the continuation of that sentence states that the proxy group is comprised of "*comparable companies*." Yet, that is not accurate. The differences in risk between the utility holding companies that comprise his selected proxy group and the risk of WG's regulated utility operations are significant and must not be ignored. However, Witness

[8] Witness Hevert refers to his CAPM, ECAPM, and Bond Yield Plus Risk Premium analyses collectively as "Risk Premium Results." See Witness Hevert's Direct Testimony, Table 7, at page 24 of his Direct Testimony.

[9] Witness Hevert computes Mean Low, Mean, and Mean High constant growth DCF estimates for his selected proxy group that range from 7.47% to 13.44%. His CAPM and ECAPM results range from 9.78% to 14.54%, and his Bond Yield Plus Risk Premium analyses yield ROE estimates that range from 9.92% to 10.41%. He also presents an Expected Earnings Analysis that yields median and average ROE estimates of 9.53% and 9.54% respectively.

Hevert's cost of equity analyses are premised on an assumption that WG's distribution utility risk is comparable to the risk for the holding companies included in his selected proxy group.

Witness Hevert also does not consider the impacts of changes in industry structure and regulatory policies over time on gas distribution utility risk and ROE requirements. For this reason, the Commission should be cautioned that when reading Witness Hevert's "*Summary of Issues Surrounding Cost of Equity Estimation in Regulatory Proceeding*,"[10] his use of the phrase "*the firm*" in that discussion is misleading. Witness Hevert states "*investors will only provide funds to a firm if the return they expect is equal to, or greater than, the return they require to accept the risk of providing funds to the firm*."[11] However, there is now only one investor in Washington Gas. That is AltaGas, whose investors base their investment decisions on the risks and returns offered more broadly by AltaGas, not WG's gas distribution utility operations. In fact, there are numerous examples of the financial community's recognition of greater business and financial risk in utility holding companies than in their distribution utility subsidiaries. Thus, assessments of equity return requirements must not be premised on either proxy groups comprised primarily, if not exclusively, of holding companies and/or broad measures of industry equity return requirements that do not differentiate the requirements of distribution utilities and those of their parent companies. The Commission must further recognize that the comparable risk standards set forth in the *Hope* and *Bluefield* decisions are not satisfied

[10] Exhibit WG (C), page 9, starting at line 9.
[11] Ibid., lines 10-12.

when differences in risk between utility holding companies and their distribution utility subsidiaries are not explicitly addressed in regulatory cost of equity determinations for distribution utilities.

Q. DOES THE FINANCIAL COMMUNITY RECOGNIZE ANY OTHER DIFFERENCES IN THE RISKS FACED BY DISTRIBUTION UTILITIES, SUCH AS WG, AND THE RISKS ASSOCIATED WITH THE HOLDING COMPANIES THAT NOW OWN THOSE DISTRIBUTION UTILITY OPERATIONS?

A. Yes. There are a number of rating agency reports and regulatory commission decisions that have explicitly addressed those differences and concluded that regulated distribution utility operations are less risky than those of their parent companies. For example, those differences in risk are the basis for numerous recent efforts to ring-fence acquired distribution utilities from the finances of their holding company parents and/or the effects of bankruptcies in other subsidiaries of the parent company.[12]

Q. CAN THE EFFECTS OF DIFFERENCES IN RISK BETWEEN DISTRIBUTION UTILITIES AND THEIR HOLDING COMPANY PARENTS BE EASILY QUANTIFIED?

A. Unfortunately, with most gas distribution utilities now owned by holding companies, there is little, if any, current market data on which to assess gas distribution utility equity investment risk and costs of equity. Moreover, there are no

[12] Unlike their distribution utility subsidiaries, utility holding companies and their non-utility business ventures have no on-going public service obligations.

models that have been developed to date that reliably quantify differences in equity risk for distribution utilities and their holding company parents. However, as discussed above, we can make observations that demonstrate the existence of such differences.

i. DCF Analyses

Q. ARE WITNESS HEVERT'S CONSTANT GROWTH DCF ANALYSES REASONABLE?

A. Only in part. An examination of the detail of Witness Hevert's DCF analysis in Exhibit WG (2C)-1 finds that in each scenario (i.e., 30-day, 90-day and 180-day average stock prices) the Value Line Earnings Growth estimates that he shows (in Column [7] for each scenario) reflect significantly different projections of earnings than the earnings growth projections offered by Zacks and First Call. This is particularly true for Northwest Natural Holding Company ("NWN"). For NWN, Witness Hevert shows an earnings growth estimate from Value Line of **22.50%**. Neither Zacks nor First Call estimates earnings growth for any of Witness Hevert's proxy group companies at a rate greater than **10.29%**. Moreover, for all of the proxy group companies, the Value Line estimates of earnings growth that Witness Hevert uses differ significantly from the earnings estimates for the same companies from Zacks and First Call. As shown in Exhibit WG (2C)-1, page 3, the mean earnings growth for Witness Hevert's proxy group companies based on Zacks earnings growth estimates is 6.62%. The

mean earnings growth for Witness Hevert's proxy group companies based on First Call earnings growth estimates is 6.47%. By comparison, the Value Line mean earnings growth for Witness Hevert's proxy group companies is 8.86%. The significantly higher mean earnings growth estimate from Value Line directly impacts both Witness Hevert's Mean ROE and Mean High ROE results.[13]

Q. OTHER THAN THE FACT THAT THE VALUE LINE ESTIMATES OF EARNINGS GROWTH DIFFER FROM THOSE FROM OTHER SOURCES, WHY SHOULD THE VALUE LINE EARNINGS GROWTH ESTIMATES BE DISREGARDED?

A. There are two elements of my considerations relating to the Value Line earnings growth estimates on which Witness Hevert has relied.

First, it appears that Value Line's earnings growth estimates have not been computed in a manner that eliminates consideration of abnormal or one-time adjustments for earnings. For example, for Northwest Natural Gas ("NWN"), Value Line's earnings growth is distorted by a significant one-time loss on non-utility gas storage operations. In 2017, Northwest Natural Gas recorded a $192 million loss on its gas storage operations. Although NWN's regulated utility operations represent the largest component of the holding company's overall business activities, its utilities have generated annual earnings over the last

[13] When presenting a summary of his findings, Witness Hevert essentially discards the "mean low" ROE estimates from his DCF analyses claiming that those results are below any authorized ROE for a natural gas utility since at least 1980 and more than 150 basis points below WG's currently authorized ROE. I offer a different perspective on those results. The "mean low" ROE results from Witness Hevert's analyses are driven to an extremely low level by the questionable measures of earnings growth that he derives from Value Line.

several years in the range of $50 million to $60 million per year. In other words, NWN's loss on its gas storage operations equated to the equivalent of more than **three years** of utility earnings. In our assessment, Value Line's **22.50%** earnings growth estimate primarily reflects a return of the holding company's earnings to more normalized earnings levels.[14] Such a one-time adjustment to earnings for non-utility operations should have no role in ROE determinations for WG in this proceeding.

Second, in Rebuttal Testimony in WG's last gas distribution utility rate case in Maryland, Witness Hevert provided the following data as demonstration that analysts growth rates for his proxy companies "*are within, even toward the lower end or below, the long-term growth ranges provided by the companies' management teams*."[15] As all four of the companies included in Witness Hevert's comparison of earnings growth estimates are also included in his selected proxy group in this proceeding, his rebuttal comparison from the referenced Maryland proceeding is also relevant to this case.

[14] Although Northwest Natural has also undergone the transition to a holding company structure within the last few years, it does not appear that its transition to a holding company structure has had a significant impact on its projected earnings growth. Moreover, even if that transition to a holding company has impacted its earnings growth, there is no evidence that the transition to a holding company structure has impacted or is anticipated to significantly impact its expected growth in earnings from regulated utility operations.

[15] Maryland Public Service Commission, Case No. 9605, Rebuttal Testimony of Witness Robert Hevert for Washington Gas Light Company, August 8, 2019, pages 26-27.

Table 1
Analysts' Earnings Growth Projections
Relative to Management Presentations[16]

Company	Ticker	Zacks Earnings Growth	First Call Earnings Growth	Investor Presentation Earnings Growth Range
New Jersey Resources	NJR	7.00%	6.00%	6.00% - 8.00%
Northwest Natural Holdings	NWN	4.50%	4.00%	3.00% - 5.00%
ONE Gas	OGS	5.90%	5.00%	6.00% - 8.00%
South Jersey Industries	SJI	7.20%	5.50%	6.00% - 8.00%

Table 2 repeats the information presented in Table 1 but adds the Value Line earnings growth estimates that Witness Hevert has used in this proceeding. As shown in Table 2, none of the Value Line earnings growth estimates that Witness Hevert has used in his DCF analyses for this proceeding fall within the range of the earnings growth estimates the listed companies have offered in their investor presentations. For three of the four companies (i.e., NWN, OGS, and SJI) listed, the Value Line earnings growth estimates are above the upper end of the range each company has presented to investors. On the other hand, the Value Line earnings growth estimate for NJR is less than half the value for the low end of the range the NJR has presented to investors.

[16] Ibid., page 27.

Table 2
Analysts' Earnings Growth Projections
Relative to Management Presentations
And Value Line Earnings Growth Estimates

Company	Ticker	Zacks Earnings Growth	First Call Earnings Growth	Investor Presentation Earnings Growth Range	Value Line Earnings Growth[17]
New Jersey Resources	NJR	7.00%	6.00%	6.00% - 8.00%	2.50%
Northwest Natural Holdings	NWN	4.50%	4.00%	3.00% - 5.00%	22.50%
ONE Gas	OGS	5.90%	5.00%	6.00% - 8.00%	7.00%
South Jersey Industries	SJI	7.20%	5.50%	6.00% - 8.00%	9.50%

Q. WOULD THE EXCLUSION OF VALUE LINE EARNINGS GROWTH ESTIMATES FROM WITNESS HEVERT'S DCF ANALYSIS SIGNIFICANTLY ALTER HIS DCF RESULTS?

A. Yes. As shown in Table 3 below, Witness Hevert's use of earnings growth estimates from Value Line data leads to a substantial inflation of his DCF-based ROE estimates for his proxy group companies. With consideration of Value Line-derived earnings growth estimates Witness Hevert assesses the proxy group ROE to be between 7.47% and 13.55%. With the more extreme Value Line earnings growth estimates excluded, the range of mean ROE estimates for Witness Hevert's proxy group is narrowed substantially and depicts a range from **7.91% to 8.62**%. Thus, when the impact of Witness Hevert's Value Line earnings growth estimates is quantified, the significance of the bias that the Value Line estimates introduce is readily observed. The "without Value Line"

[17] Exhibit WG (2C)-1, Column [7], page 1 of 3 through 3 of 3.

ROE estimates[18] presented in Table 3 show noticeably lower "Mean" ROE estimates and dramatically lower "High" ROE estimates under all scenarios. The "without Value Line" ROE estimates also yield higher "Low" ROE estimates for each scenario, and thereby, reduce the differential between Witness Hevert's "Low" ROE and "High" ROE estimates.

Table 3
Comparison of Hevert Constant Growth ROE Determinations
with and without Consideration of
Value Line Earnings Growth Estimates

	With Value Line			Without Value Line		
	Low ROE	**Mean ROE**	**High ROE**	**Low ROE**	**Mean ROE**	**High ROE**
30-Day Avg Stock Price	8.46%	10.72%	13.44%	**9.52%**	**9.75%**	**9.98%**
90-Day Avg Stock Price	8.15%	10.41%	13.13%	**9.21%**	**9.44%**	**9.67%**
180-Day Avg Stock Price	8.03%	10.29%	13.01%	**9.09%**	**9.32%**	**9.55%**

Without the influence of comparatively extreme Value Line-derived earnings growth estimates, both the upper end and the lower end of Witness Hevert's Constant Growth DCF estimates would be more reasonable. A corrected version of Witness Hevert's DCF analyses that excludes Value Line earnings growth estimates, as well as Witness Hevert's retention growth estimates that are developed from the same Value Line data, is presented in Exhibit AOBA (B)-3.

[18] Note [1] to Exhibit WG (2C)-2 indicates that Witness Hevert's "Retention Growth Estimates" are also developed from Value Line earnings growth projections. For that reason, the "without Value Line" results presented in Table 3 also exclude without consideration of Witness Hevert's "Retention Growth Estimates."

Q. WHAT IS YOUR ASSESSMENT OF WITNESS HEVERT'S DISCUSSION OF HIS "MEAN LOW" DCF RESULTS?

A. As demonstrated in Exhibit AOBA (B)-3, the extreme low levels of those results are a function of his own approach to presenting DCF results, and the data inputs on which he has chosen to rely.[19] However, given the format of his presentation, I would discount the value of both his "mean low" and "mean high" DCF results. Moreover, the Commission should also question why Witness Hevert offers such an assessment of his "mean low" DCF results without presenting a similar assessment of his "mean high" DCF results. His "mean high" results are all above 13.00%, and those results are more than **375 basis points** above WG's currently authorized ROE. They also exceed approximately all ROE's authorized for any gas distribution utility in the United States in the last decade.

Q. DO YOU HAVE ANY COMMENTS REGARDING THE AVERAGE STOCK PRICE DATA THAT WITNESS HEVERT EMPLOYS IN HIS DCF ANALYSES?

A. I do. The Commission should understand that the 30-day, 90-day, and 180-day stock price averages that Witness Hevert employs do **NOT** reflect standard calendar month periods. Rather, those averages refer to the numbers of "trading days" for which prices are averaged. His 30-day stock price average actually averages stock price data over roughly a six-week period. His 90-day average

[19] The calculation of "mean low" and "mean high" DCF results is not a common practice of cost of equity witnesses other than Witness Hevert. Most analysts use proxy group analyses to identify the central tendencies of the group rather than to bring focus to extreme low or extreme high results. Witness Hevert's use of Value Line earnings growth estimates was not dictated by any outside force. That was his analytic choice. If his choice of data inputs yields extreme "mean low" and "mean high" results, he should change the format of his presentation and/or choose different sources for the earnings growth estimates on which he relies.

uses stock price data for trading days covering a period of about four and a half months. His 180-day period averages stock prices over roughly nine months. These are not broadly used measures of average stock prices.

More commonly, average stock prices are computed by averaging the highest and lowest reported closing prices for a stock over a twelve-month period. Data for the high and low stock prices over the last year (i.e., 52-week high and 52-week low prices or 52-week range) are readily available to investors on a number of financial websites (e.g., Yahoo Finance, MSN Money, Google Finance), as well as numerous on-line stock trading platforms. This discussion is not intended to suggest that Witness Hevert's 30-day, 90-day, and 180-day stock price averages are incorrectly computed. Rather, those stock price measures are simply not commonly used by investors. Moreover, his use of three different stock price measures adds little of value to his ROE presentation except, perhaps, the appearance of additional analytic effort.

ii. Risk Premium Analyses

Q. HOW SHOULD THE COMMISSION ASSESS THE RISK PREMIUM ANALYSES THAT WITNESS HEVERT PRESENTS ON BEHALF OF WG?

A. Witness Hevert offers a number of scenarios for the CAPM, Empirical CAPM ("ECAPM"), and Bond Yield Plus Risk Premium analyses that are all premised on three estimates for 30-year U.S. Treasury Bond yields: the current rate, near term projected, and long term projected. The long term projected 30-year

Treasury is overstated and is based on a pre-Covid-19 long-term projection and should be disregarded by this Commission. Both Witness Hevert's current and near term projected 30-year Treasury both reflect current risk-free yield requirements. Witness Hevert uses a current 30-year U.S. Treasury Bond yield of 1.31%, a near term projected rate of 1.55%, and a long-term projected rate of 3.45%.

Q. WHAT WEIGHT SHOULD BE GIVEN TO WITNESS HEVERT'S USE OF LONG-TERM PROJECTED 30-YEAR U.S. TREASURY BOND YIELDS IN HIS BOND YIELD PLUS RISK PREMIUM ANALYSES?

A. None. The long-term projections of 30-year U.S. Treasury Bond yields on which Witness Hevert relies are premised on projections for periods as long as 10 years into the future. The likelihood that the rates approved by the Commission in this proceeding will remain in effect through even half of that projected time period is extremely low. Therefore, the Commission's examination of risk premium analyses should focus on current and near-term project yields. When even the near-term "consensus" forecasts have been subject to significant downward adjustments within the last several months, the value of using long-term projections of U.S. 30-year Treasury bond yields must be questioned.

Q. ARE THERE OTHER PROBLEMS ASSOCIATED WITH WITNESS HEVERT'S CAPM AND ECAPM ANALYSES?

A. Yes. There are two problems with the Beta coefficients that Witness Hevert uses. First, Witness Hevert's presentation fails to openly discuss differences in measures of Beta that he employs. Second, the Beta coefficients used in his CAPM and ECAPM analyses are not designed to reflect the risk and return requirements of a gas distribution utility. Rather, they are only intended to adjust Witness Hevert's estimate of a market risk premium to reflect the risk associated with the holding company entities for which stock price information can be observed. Nothing in either the CAPM and ECAPM models or the Beta coefficients used accounts for differences in risk and return requirements between utility holding companies and their gas distribution utility subsidiaries. Although, as discussed previously herein, there is substantial evidence of differences between distribution utility risk and the risk of their holding company parents, those differences are ignored.

Furthermore, the Commission should recognize that Beta coefficients have been developed as measures of the volatility of a company's stock price relative to the volatility of the broader market. However, that focus on relative stock price volatility only addresses one element of a company's risk. Other forms of financial risk, operating risk, and market risk that a company may face in the production and marketing of its products and services are not addressed. This is important since regulated distribution utilities often are provided mechanisms (e.g., revenue and/or cost adjustment mechanisms) to insulate them from various forms of risk for which competitive enterprises have no protection.

The Commission is also asked to appreciate that Beta coefficients are key inputs to CAPM and ECAPM analyses. Yet, there are numerous alternative methods for computing Beta coefficients, and some of those alternatives can noticeably alter the ROE estimates that are derived from CAPM and ECAPM models. It is, therefore, imperative to understand differences in: (1) Beta computation methods; (2) the time periods over which different measures are computed.

Q. WHAT IS YOUR ASSESSMENT OF WITNESS HEVERT'S BOND YIELD PLUS RISK PREMIUM ANALYSIS?

A. Witness Hevert's Bond Yield Plus Risk Premium analysis engenders a number of concerns from both conceptual and practical perspectives. His efforts to estimate a regression relationship are based on data for rate case ROE determinations and measures of 30-year Treasury yields from January 1980 through May 2019 (i.e. roughly a 40-year period). Over that period there have been substantial, and in some respects dramatic, changes in the utility industry, regulatory policies, financial market conditions, and the ownership of distribution utilities. Natural gas has been fully deregulated at the wellhead, gas transportation markets have been opened to competition, gas service offerings are increasingly unbundled, and the availability of natural gas production in the U.S. is achieving new all-time record levels. There has also been a dramatic consolidation of utility ownership through numerous mergers and acquisitions that has resulted in gas distribution utilities becoming subsidiaries of larger, and generally

more diversified, holding company parents. Regulatory practices have also changed to allow increased numbers of rate adjustment mechanisms and cost deferrals. Also, in many jurisdictions, utility revenues have been either fully or partially decoupled in a manner that provides increased assurance of revenue recovery. In addition, the Federal Reserve has become more active as a manager of the economy through its monetary policies. As a result of such changes the risks faced by gas distribution utilities today differ substantially from those faced by companies providing the same utility services in prior decades. Yet, Witness Hevert offers no assessment of the impacts of those changes on his analysis and the proper interpretation and application of the results of his analysis.

The Bond Yield Plus Risk Premium methodology employed by Witness Hevert is premised on the notion that changes in utility equity return requirements over time are related to changes in the costs of risk-free investments. However, nowhere in that model is there an ability to account for changes in risk profiles of the utilities for which ROE determinations are rendered. Instead, users of the Bond Yield method must implicitly assume that either: (1) there have been no changes in utility risk profiles over time; or (2) the risks faced by all utilities have generally affected all utilities in a uniform manner over time. Neither of those assumptions is reasonable. Again, it is inappropriate for Witness Hevert to assert that he has considered the comparable risk standards of the *Hope* and *Bluefield* decisions when he does not account for changes in risk profiles of companies within the industry over time.

In terms of more practical considerations, Witness Hevert provides no indication of how the measure of the risk-free rate (i.e., the 30-year U.S. Treasury Bond Yield), that he associates with individual rate case decisions, were determined. U.S. Treasury Bond yields measured as of the date of issuance of orders would not be a measure of yields that regulators could have considered in reaching their ROE determinations. If the measures of bond yields for individual rate case ROE determinations that Witness Hevert uses in his regression equation were not actually considered by regulators when making their ROE determinations, then the relationship estimated by Witness Hevert may represent little more than coincidence (e.g., a correlation between stock market performance and the length of hemlines on women's dresses). The identification of a statistical correlation does not necessarily imply a causal relationship, nor does it necessarily imply that the identified relationship will continue to hold as we move forward in time. In other words, correlations developed from past relationships may not be reliable predictors of future outcomes.

For these reasons, regression-based Bond Yield Plus Risk Premium analyses must be well understood before reliance is placed on such models.

iii. Expected Earnings Analysis

Q. WHAT WEIGHT SHOULD THE COMMISSION GIVE TO WITNESS HEVERT'S EXPECTED EARNINGS ANALYSIS?

A. None. The Expected Earnings Analysis that Witness Hevert includes in his ROE testimony does not depict the earnings required of WG's gas distribution utility operations. As shown in Exhibit WG(2C)-7, his Expected Earnings Analysis only examines earnings expectations for utility holding companies. Moreover, the Value Line estimates for Expected Earnings and Shares Outstanding that Witness Hevert uses in his Expected Earnings Analysis only provide average earnings expectations for those holding companies for the 2023-2025 period.

Q. DOES WITNESS HEVERT'S "EXPECTED EARNINGS ANALYSIS" OFFER A REASONABLE AND UNBIASED BASIS FOR EVALUATING THE ROE ESTIMATES HE HAS PRODUCED?

A. No. Witness Hevert indicates that he has used an Expected Earnings Analysis to assess the reasonableness of the results of his DCF, CAPM, and Bond Yield Plus Risk Premium analyses. However, an examination of Exhibit WG(2C)-7 finds that his Expected Earnings Analysis is also developed from Value Line earnings estimates. Accepting *arguendo*, the structure of Witness Hevert's Expected Earnings Analysis, comparable results computed using the generally lower earnings growth rate estimates that Witness Hevert derives from Zacks or First Call would yield noticeably lower Expected Earnings ROE results. Moreover, the Commission must recognize that the Adjusted ROEs Witness Hevert computes in Exhibit WG(2C)-7 are for holding companies, not distribution utilities, and Witness Hevert makes no adjustment for differences in risk between holding companies and their distribution utility subsidiaries.

In Witness Hevert's discussion of his Expected Earnings Analysis, he states, "*By taking historical returns on book equity and comparing those to authorized ROEs, investors are able to directly compare returns from investments of similar risk*." Yet, Witness Hevert provides no demonstration that the risks faced by his proxy group companies are comparable to those faced by AltaGas or WG. Witness Hevert also fails to demonstrate that the risks faced by WG's distribution utility operations in District of Columbia are comparable to those for the more diversified holdings of AltaGas, a significant portion of which are not subject to price regulation.

iv. AOBA Cost of Equity Analyses for WG

Q. PLEASE DESCRIBE THE COST OF EQUITY ANALYSES THAT YOU HAVE DEVELOPED FOR THIS PROCEEDING?

A. In addition to my review of Witness Hevert's cost of equity presentation, my efforts to estimate a ROE for WG in this proceeding include the computation of DCF and CAPM analyses. Those analyses are presented in the pages of Exhibit AOBA (B)-1, pages 1 though 4. For my analyses I have used the same proxy group chosen by Witness Hevert, noting the inherent upward bias in ROE estimates that a proxy group dominated by utility holding companies can be expected to yield for a gas distribution utility such as WG.[20]

[20] As a result of recent mergers and acquisitions, few alternatives remain for the construction of gas utility proxy groups.

Q. HOW ARE YOUR DCF ANALYSES PRESENTED?

A. The detail of my DCF analysis is presented on page 2 of Exhibit AOBA (B)-1. That analysis employs annual high and low stock price data and earnings growth projections from Zacks, CNN, and Yahoo in a traditional Constant Growth DCF model. Overall proxy group DCF results are summarized for each source of earnings growth estimates on page 1, lines 1-4, of Exhibit AOBA (B)-1.

Q. WHAT BETA COEFFICENTS DID YOU UTILIZE IN THE DEVELOPMENT OF YOUR CAPM ANALYSES?

A. I utilized three different estimates of beta coefficients in my analyses: Zacks, Value Line, and Bloomberg.

Q. WHAT IS AN APPROPRIATE RISK-FREE RATE FOR USE IN ROE DETERMINATIONS FOR THIS PROCEEDING?

A. The risk-free rate used to estimate the required ROE for Washington Gas' Distribution Utility operations should be based on recent actual 30-year treasury rates. Due to the current environment of extremely low 30-Year Treasury rates I have elected to utilize both the 2020 peak rate and the average rate for the month of June 2020. The peak 2020 30-year Treasury rate, as of June 29, 2020 is 2.38%. The average 30-year Treasury for the month of June 2020 is 1.50%.

Q. WHAT IS THE BASIS FOR THE 9.65% ROE THAT YOU RECOMMEND?

A. My presentation of AOBA's ROE recommendation for WG is supported by the analyses presented in the Exhibit AOBA (B)-1. Exhibit AOBA (B)-1, page 1 summarizes those analyses and presents AOBA's ROE recommendation. Exhibit AOBA (B)-1, pages 2 through 4 presents AOBA's ROE analyses utilizing the same proxy group as the Company. The average of AOBA's DCF results is 9.10%. The average of AOBA's CAPM results is 6.73%. The results of AOBA's cost of equity analyses combined is 7.91%.

Even when the Company's currently authorized ROE is included in the results of my analyses, the average of the above ROE determinations produces a rounded result of 8.60% as shown in Exhibit AOBA (B)-1, page 1. This clearly supports a downward adjustment to the Company's currently authorized 9.25% ROE.

While a 65 basis point downward adjustment is quantitatively supported by my analyses, I recommend the application of gradualism in the adjustment of Washington Gas' ROE. Recently in MD PSC Case No. 9443 the Maryland Commission stated:

> *As we said in Case No. 9418, relative stability in rates is an important ratemaking goal – for ratepayers and utilities alike. Gradualism prescribes that sudden and dramatic shifts in rate design should be avoided. We look to authorize ROEs that change gradually, instead of attempting to respond immediately to inter-mediate market changes. A five-basis point downward adjustment from Pepco's currently approved ROE comports with the principle of gradualism. This slight movement in one year's time maintains an environment that does not surprise investors with changes that impact them adversely.*[21]

[21] Order No. 88432, page 101.

The MD PSC determined that an adjustment of five-basis points per year is both gradual and reasonable. Washington Gas filed its initial application in Formal Case No. 1137 on February 26, 2016, nearly five years from the expected rate effective date in this proceeding. Applying the Maryland Commission's five basis points per year methodology results in a downward 25 basis point adjustment and is appropriate based on the record in this proceeding. This results in my recommended ROE of 9.00%.

3. Overall Cost of Capital

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING THE APPROPRIATE COST OF EQUITY AND CAPITAL STRUCTURE FOR WG?

A. My analyses suggests the Company's ROE should be no more 8.60%.However, just as commissions are encouraged to reflect gradualism in their adjustment for rates for utility customers, it would be reasonable for this Commission to reflect a measure of gradualism in its adjustment of WG's ROE. Thus, even though a larger downward adjustment to WG's ROE can be justified, my recommended ROE for the Company in this proceeding is 9.00%. That represents elimination of 25 basis points from WG's currently authorized ROE (i.e., 9.25% in Formal Case No. 1137). Although a larger downward adjustment to WG's ROE could be justified by current market conditions, the more gradual adjustment proposed provides for greater continuity in regulatory determinations and avoids a large one-time change.

Adjustment of the Company's requested ROE to a level that more reasonably reflects current market conditions and WG's risk profile, apart from any change in capital structure, results in approximately a $5.5 million reduction to WG's requested revenue increase in this proceeding.

B. RATE DESIGN

Q. WHAT ARE THE PRIMARY OBJECTIVES OF UTILITY REVENUE INCREASE DISTRIBUTION AND RATE DESIGN DETERMINATIONS?

A. The development of rates for a gas utility typically has four primary objectives. Those are: (a) the recovery of a specified level of revenue (i.e., the authorized revenue requirement); (b) distribution of rate burdens among classes and customers within rate classes in a fair and equitable manner; (c) avoidance of rate shock through applications of the principles of gradualism and continuity in ratemaking policy; and (d) the provision of price signals to customers to encourage certain behavioral responses (e.g., more efficient utilization of resources). These four considerations must be balanced. At times putting less emphasis on one objective and more on another to achieve a more equitable overall result is a core function of the Commission.

Q. WHAT HAVE YOU RELIED ON IN THE DEVELOPMENT OF THE REVENUE DISTRIBUTION, RATE DESIGN, AND ASSOCIATED COMPARISONS?

A. I have relied upon Washington Gas Witness Lawson's Direct and Supplemental Direct Testimony, exhibits, data responses and workpapers.

1. Revenue Increase Distribution

Q. HOW DOES WG PROPOSE TO DISTRIBUTE ITS REQUESTED REVENUE INCREASE AMONG RATE CLASSES?

A. WG's proposed distribution of its revenue increase among rate classes is shown in Exhibit WG (2H)-1, Schedule C, page 2 of 2, lines 5 and 12.

It should be noted that the percentage increases that Witness Lawson shows in in Exhibit WG (2H)-1, Schedule C, page 1 of 2, Column H, represent increases that include several additional revenue items that are not included in the "Base Rate Revenue at Current Rates" that he uses as the basis for his revenue distribution on page 2 of the same schedule. The revenue increase amounts by class are also different on pages 1 and 2 of Schedule C. Inconsistencies such as this plague the schedules presented by Witness Lawson undermining the Company's presentation. Furthermore, the allocations for all classes shown in Schedule C are incorrect and collect roughly $1.3 million more in base rates than the Company's proposed revenue increase. This is due to the dramatic understatement of interruptible revenue. Accordingly, the Commission should temper the confidence it places in the Company's proposed revenue allocation and rate designs.

Q. WHAT IS YOUR ASSESSMENT OF THE COMPANY'S PROPOSED REVENUE INCREASE DISTRIBUTION?

A. Witness Lawson's proposed revenue increase distribution is misleading and does not reflect the actual increases that all customers will experience. This is largely due to the direct assignment of Interruptible revenue that is not reflected in Exhibit WG (2H)-1, Schedule C.

Q. WHAT IS WITNESS LAWSON'S APPROACH TO A TWO-STEP REVENUE DISTRIBUTION?

A. In this proceeding, Witness Lawson does utilize a first step to continue a movement to parity of interclass rates of return.[22] Incorporated within the first step, Witness Lawson utilizes a mathematically obscure "analysis" to issue revenue increases to Residential Heating, Residential Non-Heating Other, and the Small C&I Heating rate classes. Then in the second step, Witness Lawson allocates the remaining requested revenue increase based upon the results of the first step, instead of allocating the remaining portion of the increase among all classes.

Q. WHAT IS YOUR RECOMMENDATION FOR HOW THE DISTRIBUTION OF REVENUE REQUIREMENTS AMONG RATE CLASSES SHOULD BE PERFORMED IN THIS CASE?

[22] Direct Testimony of Witness Lawson, page 4, lines 3-5.

A. Initially classes with rates of return approaching twice the system average have been exempted from my revenue increase distribution. The Residential Non-Heating-IMA, C&I Non-Heating, and Small Group Metered Apartment classes have unitized rates of return ("UROR") of 2.40, 2.45, and 2.60 respectively.

In the first step of the two-step method, 15% of the revenue increase is applied to classes with rates of return below the system average on the relative proportion of current distribution revenue. The Residential Heating, Residential Non-Heating-Other, and the Small C&I Heating classes meet this criterion and are included in this first step. In the second step of the two-step, method 85% of the revenue increase is applied to all classes that are not exempted in the first step based on the relative proportion of current distribution revenue.

Applying this methodology to the Company's full requested revenue increase produces results that are reasonable, make greater progress towards interclass parity of rates of return, and is supported by recent Commission precedent. The results of this revenue distribution methodology are presented in Exhibit AOBA (B)-5, page 1.

Q. WHAT IS AOBA'S ADJUSTED REVENUE INCREASE FOR WG IN THIS PROCEEDING?

A. AOBA's adjusted revenue increase is comprised to two separate adjustments. The first adjustment is the impact of AOBA's proposed return on equity which reduces WG's request by approximately $5.5 million. The second adjustment is the elimination of the special contract subsidy and is discussed in AOBA Witness

Bruce Oliver's Direct Testimony and further reduces WG's request by roughly $2.4 million. These two adjustments, if subtracted from the Company's initial rate increase request with no other adjustments, would yield a revenue increase for WG of no more than $26.5 million.[23] I have prepared a revenue increase distribution using my recommended revenue increase distribution methodology that produces an overall increase of 22.3%.

Q. WHAT IS AOBA'S PROPOSED DISTRIBUTION OF AOBA'S RECOMMENDED OVERALL REVENUE INCREASE FOR WG?

A. AOBA's proposed revenue distribution is explained above and detailed in Exhibit AOBA (B)-5, page 2.

2. Non-Residential Rate Design

Q. HAVE YOU REVIEWED THE RATE DESIGN AND TARIFF CHANGE PROPOSALS THAT WITNESS LAWSON PRESENTS?

A. Yes. I have examined those proposed rate designs, as well as the Company's responses to a number of data requests relating to those proposals.

Q. DO YOU SUPPORT THE CHANGES THE COMPANY PROPOSES IN THE CUSTOMER CHARGE COMPONENT?

[23] See Exhibit AOBA (B)-5. AOBA reserves the right to argue a smaller revenue increase based on analyses and recommendations that may be presented by OPC and other parties.

A. No. The Company's proposed 25% increase to the customer charge for all classes is not reasonable because it is neither cost based nor gradual. The Maryland Public Service Commission in the last two WG base rate cases (Case Nos. 9605 and 9481) limited the customer charge component increase to roughly 5%. AOBA recommends a similar more gradual approach to the adjustment of the customer charge component.

Q. ARE THE COMPANY'S PROPOSED TARRIF CHANGES APPROPRIATE AND REASONALBE FOR ACCEPTENCE BY THIS COMMISSION?

A. No. AOBA Witness Bruce Oliver discusses the infirmities of the Company's proposed RNA and the associated tariff. Witness Lawson's proposed Interruptible Delivery Service Gas Supplier Agreement, Rate Schedule No. 8, also is inappropriate for adoption. Rate Schedule No. 8 as proposed by the Company contains provisions regarding how a customer will be billed which should not be in a Supplier Agreement and would effectively allow the Company to terminate a contractual arrangement between a supplier and a customer. Furthermore, the Company has not provided WG costs and revenues associated with the activities addressed by Rate Schedule No. 8. The Company's proposed Rate Schedule No. 8 should be rejected for those reasons alone.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

IN THE MATTER OF	)	
	)	
The Application of Washington Gas Light	)	
Company for Authority to Increase	)	**Formal Case No. 1162**
Existing Rates and Charges	)	
For Gas Service	)	

DECLARATION OF TIMOTHY B. OLIVER

I, Timothy B. Oliver, do hereby declare under the penalty of perjury that I am authorized to make this Declaration on behalf of the Apartment and Office Building Association of Metropolitan Washington; that the foregoing testimony and exhibits were prepared by me or under my direction and supervision; and that the contents therein are true and correct to the best of my knowledge, information and belief.

/s/ _____
Timothy B. Oliver

Dated: August 14, 2020

Washington Gas Light Company

DC PSC FC 1162

Cost of Equity Analysis

Ln No	Analytic Model	Average Dividend Yield	Dividend Growth Component	Adjusted Dividend Yield	Earnings Growth Rate	Indicated Rate of Return
	DCF Cost of Equity					
1	Zacks	3.02%	0.08%	3.11%	5.34%	8.45%
2	CNN	3.02%	0.09%	3.12%	6.28%	9.40%
3	Yahoo	3.02%	0.10%	3.12%	6.33%	9.45%
4	**Average of DCF Results**					**9.10%**
				Based on 2020 Peak Treasury Rate	**June 2020 Average Treasury Rate**	**Average**
	CAPM Analysis *(Zacks Betas)*					
5	@ 7.00% Adjusted Risk Premium			5.10%	4.22%	4.66%
6	@ 8.00% Adjusted Risk Premium			5.49%	4.61%	5.05%
	CAPM Analysis *(Value Line Betas)*					
7	@ 7.00% Adjusted Risk Premium			6.78%	5.90%	6.34%
8	@ 8.00% Adjusted Risk Premium			7.41%	6.53%	6.97%
	CAPM Analysis *(Bloomberg Betas)*					
9	@ 7.00% Adjusted Risk Premium			8.66%	7.78%	8.22%
10	@ 8.00% Adjusted Risk Premium			9.56%	8.68%	9.12%
11	**Average of CAPM Results**					**6.73%**
12	**Average of DCF and CAPM**					**7.91%**
13	**Current Authorized WGL ROE**					**9.25%**
11	**Average of Results and Current ROE**					**8.58%**
13	**AOBA Analytical Recommendation**					**8.60%**
14	**AOBA Gradualism Recommendation**					**9.00%**

Washington Gas Light Company

DC PSC FC 1162

Dividend Yields & Earnings Growth Data for Proxy Group Companies

Ln No	Proxy Group Company	Ticker Symbol	Market Price Per Share 1/ High	Low	Average	Indicated Dividend Per Share 1/	Dividend Yield	Projected 5-Year Earnings Growth Zacks 2/	CNN 3/	Yahoo 4/	Zacks Beta 5/
1	Atmos Energy Corp.	**ATO**	$ 121.08	$ 77.92	$ 99.50	$ 2.30	2.31%	7.20%	7.41%	7.15%	0.32
2	New Jersey Rescources Corp	**NJR**	$ 50.62	$ 21.14	$ 35.88	$ 1.25	3.48%	6.00%	6.50%	6.00%	0.42
3	Northwest Natural Gas Co.	**NWN**	$ 77.26	$ 50.50	$ 63.88	$ 1.91	2.99%	3.12%	3.12%	3.10%	0.43
4	ONE Gas, Inc.	**OGS**	$ 96.97	$ 63.67	$ 80.32	$ 2.16	2.69%	5.50%	6.00%	5.00%	0.29
5	South Jersey Industires, Inc.	**SJI**	$ 34.48	$ 19.62	$ 27.05	$ 1.18	4.36%	10.20%	10.20%	10.20%	0.79
6	Southwest Gas Corp.	**SWX**	$ 92.94	$ 45.68	$ 69.31	$ 2.28	3.29%	6.00%	6.00%	8.20%	0.28
7	Spire Inc.	**SR**	$ 88.00	$ 57.37	$ 72.69	$ 2.49	3.43%	4.73%	4.73%	4.67%	0.19
8	**Mean**		**$ 80.19**	**$ 47.99**	**$ 64.09**	**$ 1.94**	**3.02%**	**5.34%**	**6.28%**	**6.33%**	**0.39**

1/ From www.Zacks.com 6-30-2020
2/ From www.Zacks.com 6-30-2020
3/ From money.cnn.com 6-30-2020
4/ From www.finance.yahoo.com 6-30-2020
5/ From www.Zacks.com 6-30-2020

Washington Gas Light Company
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Capital Asset Pricing Model (CAPM) Cost of Equity Estimates
2020 Peak Risk-Free Rate

Ln No	Proxy Group Company	Ticker Symbol	Zacks Betas 1/	Risk Premium 7.00%	Risk-Free Rate 2/ 2.38%	Zacks Betas 1/	Risk Premium 8.00%	Risk-Free Rate 2/ 2.38%
1	Atmos Energy Corp.	**ATO**	0.32	2.24%	4.62%	0.32	2.56%	4.94%
2	New Jersey Rescources Corp	**NJR**	0.42	2.94%	5.32%	0.42	3.36%	5.74%
3	Northwest Natural Gas Co.	**NWN**	0.43	3.01%	5.39%	0.43	3.44%	5.82%
4	ONE Gas, Inc.	**OGS**	0.29	2.03%	4.41%	0.29	2.32%	4.70%
5	South Jersey Industires, Inc.	**SJI**	0.79	5.53%	7.91%	0.79	6.32%	8.70%
6	Southwest Gas Corp.	**SWX**	0.28	1.96%	4.34%	0.28	2.24%	4.62%
7	Spire Inc.	**SR**	0.19	1.33%	3.71%	0.19	1.52%	3.90%
8	**Mean**		0.389	2.72%	**5.10%**	0.389	3.11%	**5.49%**

Ln No	Proxy Group Company	Ticker Symbol	Value Line Betas 3/	Risk Premium 7.00%	Risk-Free Rate 2/ 2.38%	Value Line Betas 3/	Risk Premium 8.00%	Risk-Free Rate 2/ 2.38%
9	Atmos Energy Corp.	**ATO**	0.55	3.85%	6.23%	0.55	4.40%	6.78%
10	New Jersey Rescources Corp	**NJR**	0.65	4.55%	6.93%	0.65	5.20%	7.58%
11	Northwest Natural Gas Co.	**NWN**	0.55	3.85%	6.23%	0.55	4.40%	6.78%
12	ONE Gas, Inc.	**OGS**	0.60	4.20%	6.58%	0.60	4.80%	7.18%
13	South Jersey Industires, Inc.	**SJI**	0.80	5.60%	7.98%	0.80	6.40%	8.78%
14	Southwest Gas Corp.	**SWX**	0.65	4.55%	6.93%	0.65	5.20%	7.58%
15	Spire Inc.	**SR**	0.60	4.20%	6.58%	0.60	4.80%	7.18%
16	**Mean**		0.629	4.40%	**6.78%**	0.629	5.03%	**7.41%**

Ln No	Proxy Group Company	Ticker Symbol	Bloomberg Betas 3/	Risk Premium 7.00%	Risk-Free Rate 2/ 2.38%	Bloomberg Betas 3/	Risk Premium 8.00%	Risk-Free Rate 2/ 2.38%
17	Atmos Energy Corp.	**ATO**	0.87	6.06%	8.44%	0.87	6.92%	9.30%
18	New Jersey Rescources Corp	**NJR**	0.86	6.00%	8.38%	0.86	6.86%	9.24%
19	Northwest Natural Gas Co.	**NWN**	0.80	5.57%	7.95%	0.80	6.36%	8.74%
20	ONE Gas, Inc.	**OGS**	0.92	6.45%	8.83%	0.92	7.38%	9.76%
21	South Jersey Industires, Inc.	**SJI**	0.94	6.55%	8.93%	0.94	7.48%	9.86%
22	Southwest Gas Corp.	**SWX**	1.03	7.18%	9.56%	1.03	8.20%	10.58%
23	Spire Inc.	**SR**	0.88	6.17%	8.55%	0.88	7.06%	9.44%
24	**Mean**		0.897	6.28%	**8.66%**	0.897	7.18%	**9.56%**

1/ From www.Zacks.com 6-30-2020
2/ From www.treasury.gov 6-30-2020
3/ Exhibit WG (2C)-4, page 1 of 1

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Capital Asset Pricing Model (CAPM) Cost of Equity Estimates
With Zacks Betas and June 2020 Average Risk-Free Rate

Ln No	Proxy Group Company	Ticker Symbol	Zacks Betas 1/	Risk Premium 7.00%	Risk-Free Rate 2/ 1.50%	Zacks Betas 1/	Risk Premium 8.00%	Risk-Free Rate 2/ 1.50%
1	Atmos Energy Corp.	**ATO**	0.32	2.24%	3.74%	0.32	2.56%	4.06%
2	New Jersey Rescources Corp	**NJR**	0.42	2.94%	4.44%	0.42	3.36%	4.86%
3	Northwest Natural Gas Co.	**NWN**	0.43	3.01%	4.51%	0.43	3.44%	4.94%
4	ONE Gas, Inc.	**OGS**	0.29	2.03%	3.53%	0.29	2.32%	3.82%
5	South Jersey Industires, Inc.	**SJI**	0.79	5.53%	7.03%	0.79	6.32%	7.82%
6	Southwest Gas Corp.	**SWX**	0.28	1.96%	3.46%	0.28	2.24%	3.74%
7	Spire Inc.	**SR**	0.19	1.33%	2.83%	0.19	1.52%	3.02%
8	**Mean**		0.39	2.72%	**4.22%**	0.39	3.11%	**4.61%**

Ln No	Proxy Group Company	Ticker Symbol	Value Line Betas 3/	Risk Premium 7.00%	Risk-Free Rate 2/ 1.50%	Value Line Betas 3/	Risk Premium 8.00%	Risk-Free Rate 2/ 1.50%
9	Atmos Energy Corp.	**ATO**	0.55	3.85%	5.35%	0.55	4.40%	5.90%
10	New Jersey Rescources Corp	**NJR**	0.65	4.55%	6.05%	0.65	5.20%	6.70%
11	Northwest Natural Gas Co.	**NWN**	0.55	3.85%	5.35%	0.55	4.40%	5.90%
12	ONE Gas, Inc.	**OGS**	0.60	4.20%	5.70%	0.60	4.80%	6.30%
13	South Jersey Industires, Inc.	**SJI**	0.80	5.60%	7.10%	0.80	6.40%	7.90%
14	Southwest Gas Corp.	**SWX**	0.65	4.55%	6.05%	0.65	5.20%	6.70%
15	Spire Inc.	**SR**	0.60	4.20%	5.70%	0.60	4.80%	6.30%
16	**Mean**		0.629	4.40%	**5.90%**	0.629	5.03%	**6.53%**

Ln No	Proxy Group Company	Ticker Symbol	Bloomberg Betas 3/	Risk Premium 7.00%	Risk-Free Rate 2/ 1.50%	Bloomberg Betas 3/	Risk Premium 8.00%	Risk-Free Rate 2/ 1.50%
17	Atmos Energy Corp.	**ATO**	0.87	6.06%	7.56%	0.87	6.92%	8.42%
18	New Jersey Rescources Corp	**NJR**	0.86	6.00%	7.50%	0.86	6.86%	8.36%
19	Northwest Natural Gas Co.	**NWN**	0.80	5.57%	7.07%	0.80	6.36%	7.86%
20	ONE Gas, Inc.	**OGS**	0.92	6.45%	7.95%	0.92	7.38%	8.88%
21	South Jersey Industires, Inc.	**SJI**	0.94	6.55%	8.05%	0.94	7.48%	8.98%
22	Southwest Gas Corp.	**SWX**	1.03	7.18%	8.68%	1.03	8.20%	9.70%
23	Spire Inc.	**SR**	0.88	6.17%	7.67%	0.88	7.06%	8.56%
24	**Mean**		0.897	6.28%	**7.78%**	0.897	7.18%	**8.68%**

1/ From www.Zacks.com 6-30-2020
2/ From www.treasury.gov 6-30-2020
3/ Exhibit WG (2C)-4, page 1 of 1

Washington Gas Light Company

DC PSC FC 1162

Development of Regulators' Adjustment Factor - Gas Utility Rate Cases

Ln No	Jurisdiction	Utility	Gas/Electric	Docket No.	Date	Proposed ROE	Approved ROE	Difference
1	Arizona	Southwest Gas Corp	Gas	G-01551A- 16-0107	May-16	10.25%	9.40%	0.85%
2	Arkansas	Oklahoma Gas & Electric Co	Gas & Electric	16-052-U	Sep-16	10.25%	9.50%	0.75%
3	Colorado	Atmos Energy Corp	Gas	17AL-0429G	Jun-17	10.50%	9.45%	1.05%
4	Delaware	Delmarva	Gas	17-0978	Aug-17	10.10%	9.70%	0.40%
5	Delaware	Delmarva	Gas	16-650	May-16	10.60%	9.70%	0.90%
6	Dist of Columbia	Washington Gas Light Company	Gas	FC 1137	Feb-16	10.25%	9.25%	1.00%
7	Illinois	Ameren Illinois Co.	Gas	18-0463	Jan-18	10.30%	9.87%	0.43%
8	Kansas	Kansas City Power & Light	Gas & Electric	15-KCPE-116-RTS	Jan-15	10.30%	9.30%	1.00%
9	Maine	Nothern Utilites	Gas	2017-00065	May-17	10.30%	9.50%	0.80%
10	Maryland	Washington Gas Light Company	Gas	Case No. 9605	Apr-19	10.40%	9.70%	0.70%
11	Maryland	Washington Gas Light Company	Gas	Case No. 9481	May-18	10.30%	9.70%	0.60%
12	Massachusetts	Boston Gas, Colonial Gas	Gas	DPU 17-170	Nov-17	10.50%	9.50%	1.00%
13	Nevada	Southwestern Gas Corp	Gas	18-05031	May-18	10.30%	9.25%	1.05%
14	New Hampshire	Northern Utilites	Gas	DG 17-070	Jun-17	10.30%	9.50%	0.80%
15	New Hampshire	EnergyNorth Natural Gas	Gas	DG 17-048	Apr-17	10.30%	9.30%	1.00%
16	New Jersey	Elizabethtown Gas	Gas	GR16090826	Aug-16	10.25%	9.60%	0.65%
17	North Carolina	Piedmont Natural Gas Co, Inc.	Gas	G-9, Sub 743	Apr-19	10.60%	9.70%	0.90%
18	North Carolina	Public Service Company of NC	Gas1/	G-5, Sub 565	Mar-16	10.60%	9.70%	0.90%
19	Oklahoma	CenterPoint Energy - Oklahoma Gas	Gas	PUD201600094	Mar-16	10.30%	10.00%	0.30%
20	Rhode Island	National Grid	Gas2/	4770	Nov-17	10.10%	9.25%	0.85%
21	Texas	CenterPoint Energy Texas Gas	Gas	GUD 10669	Nov-17	10.30%	9.80%	0.50%
22	Texas	CenterPoint Energy Texas Gas	Gas	GUD 10567	Dec-16	10.25%	9.60%	0.65%
23	Virginia	Virginia Natural Gas, Inc.	Gas	PUE-2016-00143	Mar-17	10.25%	9.50%	0.75%
24	Virginia	Washington Gas Light Company	Gas	PUE-2016-00001	Jun-16	Settled - ROE Not Specified		
25	**Average**					**10.33%**	**9.52%**	**0.78%**

1/ **ROE determined through pending settlement.**

2/ Case involved both gas and electric service, however a separate ROE was established by settlement for National Grid's gas service.

Washington Gas Light Company

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Correction of Hevert DCF Analysis (Excludes Value Line Estimates)

Constant Growth Discounted Cash Flow Model
30 Day Average Stock Price

		[1]	[2]	[3]	[4]	[5]	[6]	[9]	[10]	[11]	[12]
Company	Ticker	Annualized Dividend	Average Stock Price	Dividend Yield	Expected Dividend Yield	Zacks Earnings Growth	First Call Earnings Growth	Average Earnings Growth	Low ROE	Mean ROE	High ROE
Atmos Energy Corporation	ATO	$2.30	$100.01	2.30%	2.38%	7.20%	7.50%	7.35%	9.58%	9.73%	9.89%
New Jersey Resources Corporation	NJR	$1.25	$32.45	3.85%	3.97%	6.00%	6.00%	6.00%	9.97%	9.97%	9.97%
Northwest Natural Holding Company	NWN	$1.91	$61.67	3.10%	3.16%	NA	3.75%	3.75%	6.91%	6.91%	6.91%
ONE Gas, Inc.	OGS	$2.16	$82.01	2.63%	2.70%	5.50%	5.00%	5.25%	7.70%	7.95%	8.21%
South Jersey Industries, Inc.	SJI	$1.18	$25.51	4.63%	4.86%	10.20%	10.20%	10.20%	15.06%	15.06%	15.06%
Spire Inc.	SR	$2.28	$71.67	3.18%	3.29%	6.00%	8.20%	7.10%	9.28%	10.39%	11.51%
Southwest Gas Corporation	SWX	$2.49	$72.85	3.42%	3.50%	4.80%	4.65%	4.73%	8.15%	8.22%	8.30%
Proxy Group Mean				3.30%	3.41%	6.62%	6.47%	6.34%	9.52%	9.75%	9.98%
Proxy Group Median				3.18%	3.29%	6.00%	6.00%	6.00%	9.28%	9.73%	9.89%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of April 30, 2020.
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Exhibit WG (2C)-2, Value Line
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Washington Gas Light Company

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Correction of Hevert DCF Analysis (Excludes Value Line Estimates)

Constant Growth Discounted Cash Flow Model
90 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[9] Average Earnings Growth	[10] Low ROE	[11] Mean ROE	[12] High ROE
Atmos Energy Corporation	ATO	$2.30	$108.39	2.12%	2.20%	7.20%	7.50%	7.35%	9.40%	9.55%	9.70%
New Jersey Resources Corporation	NJR	$1.25	$38.04	3.29%	3.38%	6.00%	6.00%	6.00%	9.38%	9.38%	9.38%
Northwest Natural Holding Company	NWN	$1.91	$68.35	2.79%	2.85%	NA	3.75%	3.75%	6.60%	6.60%	6.60%
ONE Gas, Inc.	OGS	$2.16	$87.94	2.46%	2.52%	5.50%	5.00%	5.25%	7.52%	7.77%	8.02%
South Jersey Industries, Inc.	SJI	$1.18	$28.93	4.08%	4.29%	10.20%	10.20%	10.20%	14.49%	14.49%	14.49%
Spire Inc.	SR	$2.28	$73.00	3.12%	3.23%	6.00%	8.20%	7.10%	9.22%	10.33%	11.45%
Southwest Gas Corporation	SWX	$2.49	$78.97	3.15%	3.23%	4.80%	4.65%	4.73%	7.88%	7.95%	8.03%
Proxy Group Mean				3.00%	3.10%	6.62%	6.47%	6.34%	9.21%	9.44%	9.67%
Proxy Group Median				3.12%	3.23%	6.00%	6.00%	6.00%	9.22%	9.38%	9.38%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of April 30, 2020.
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Exhibit WG (2C)-2, Value Line
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Washington Gas Light Company

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Correction of Hevert DCF Analysis (Excludes Value Line Estimates)

Constant Growth Discounted Cash Flow Model
180 Day Average Stock Price

Company	Ticker	[1] Annualized Dividend	[2] Average Stock Price	[3] Dividend Yield	[4] Expected Dividend Yield	[5] Zacks Earnings Growth	[6] First Call Earnings Growth	[9] Average Earnings Growth	[10] Low ROE	[11] Mean ROE	[12] High ROE
Atmos Energy Corporation	ATO	$2.30	$109.18	2.11%	2.18%	7.20%	7.50%	7.35%	9.38%	9.53%	9.69%
New Jersey Resources Corporation	NJR	$1.25	$40.90	3.06%	3.15%	6.00%	6.00%	6.00%	9.15%	9.15%	9.15%
Northwest Natural Gas Company	NWN	$1.91	$68.94	2.77%	2.82%	NA	3.75%	3.75%	6.57%	6.57%	6.57%
ONE Gas, Inc.	OGS	$2.16	$89.72	2.41%	2.47%	5.50%	5.00%	5.25%	7.47%	7.72%	7.97%
South Jersey Industries, Inc.	SJI	$1.18	$30.32	3.89%	4.09%	10.20%	10.20%	10.20%	14.29%	14.29%	14.29%
Spire Inc.	SR	$2.28	$79.00	2.89%	2.99%	6.00%	8.20%	7.10%	8.97%	10.09%	11.20%
Southwest Gas Corporation	SWX	$2.49	$80.90	3.08%	3.15%	4.80%	4.65%	4.73%	7.80%	7.88%	7.95%
Proxy Group Mean				2.89%	2.98%	6.62%	6.47%	6.34%	9.09%	9.32%	9.55%
Proxy Group Median				2.89%	2.99%	6.00%	6.00%	6.00%	8.97%	9.15%	9.15%

Notes:
[1] Source: Bloomberg Professional
[2] Source: Bloomberg Professional, equals indicated number of trading day average as of April 30, 2020.
[3] Equals [1] / [2]
[4] Equals [3] x (1 + 0.5 x [9])
[5] Source: Zacks
[6] Source: Yahoo! Finance
[7] Source: Value Line
[8] Source: Exhibit WG (2C)-2, Value Line
[9] Equals Average([5], [6], [7], [8])
[10] Equals [3] x (1 + 0.5 x Minimum([5], [6], [7], [8])) + Minimum([5], [6], [7], [8])
[11] Equals [4] + [9]
[12] Equals [3] x (1 + 0.5 x Maximum([5], [6], [7], [8])) + Maximum([5], [6], [7], [8])

Washington Gas Light Company

DC PSC FC 1162

AOBA Recommended Overall Cost of Capital

Based on WGL's Requested Capital Structure and AOBA Recommended Cost of Equity

		Capitalization 1/	Ratio	Cost	Required Return	Revenue Impact Calculation
Long-Term Debt		1320405	43.21%	4.69% 1/	2.03%	
Short-Term Debt		143218	4.69%	2.26%	0.11%	
Total-Debt	$	1,463,623	47.90%			
Common Equity	$	1,592,113	52.10%	**9.00%** 2/	4.69%	
Total	$	3,055,736	100.00%		**6.82%**	
WGL Requested ROR					7.56%	
AOBA Recommended Reduction in WGL ROR					-0.74%	
DC Unadjusted Rate Base						$ 537,164.00 3/
Change in Required Return						$ (3,966)
Tax Gross-Up Factor						72.4825% 4/
Change in Revenue Requirement						**$ (5,471)**

1/ Exhibit WG (2b)-1, page 1 of 1.
2/ Exhibit AOBA (B)-1, page 1, line 14.
3/ Exhibit WG (2D)-2, page 3 of 3.
4/ Exhibit WG (2D)-2, page 3 of 3.
Note: dollars in thousands

Washington Gas Light Company

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Illustration of AOBA's Revenue Distribution Methodology

At Washington Gas' Requested Revenue Requirement

		Total DC		Residential			Commercial & Industrial			Group Metered Apartments				Special
	Cost of Service Study Results			Htg/Clg	Non-htg IMA	Non-htg Other	H/C<3,075	H/C>3,075	Non-htg/Non-clg	H/C<3,075	H/C>3,075	Non-htg/Non-clg	Interruptible	Contract
1	WG's Requested Revenue Requirement	$ 34,324,946												
2	Distribution Revenue Increase percentage	29.0%												
3	Composite Tax Rate	27.52%												
4	Incremental Net Income	$ 24,879,407												
5	Net Operating Income	$ 20,301,987		$ 7,969,126	$ 291,299	$ (48,753)	$ 395,665	$ 5,042,080	$ 1,760,345	$ 161,826	$ 2,795,315	$ 438,339	$ 1,629,630	$ (132,885)
6	Net Rate Base	$ 543,186,299		$ 264,692,526	$ 3,245,644	$ 6,722,056	$ 16,212,365	$ 114,869,517	$ 19,204,615	$ 1,666,909	$ 57,290,725	$ 6,963,026	$ 30,692,334	$ 21,626,583
7	ROR	3.74%		3.01%	8.98%	-0.73%	2.44%	4.39%	9.17%	9.71%	4.88%	6.30%	5.31%	-0.61%
8	Unitized ROR	1.00		0.81	2.40	-0.19	0.65	1.17	2.45	2.60	1.31	1.68	1.42	-0.16
9	Base Rate Revenue from Current Rates	$ 118,530,508		$ 55,881,338	$ 1,706,972	$ 1,127,299	$ 3,374,261	$ 26,043,912	$ 4,861,836	$ 456,618	$ 13,163,799	$ 1,878,085	$ 7,611,148	$ 2,425,240
	Distribution of the Requested Revenue Requirement													
10	Step 1 **Fifteen** Percent of Revenue Requirement	$ 5,148,742	0.15	$ 4,764,902		$ 96,123	$ 287,717							
11	Step 2 **Eighty-Five** Percent of Revenue Requirement	$ 27,818,982	0.85	$ 15,320,607		$ 309,064	$ 925,098	$ 7,140,282			$ 3,609,029	$ 514,902	$ 1,357,222	
12	Revenue Requirement	$ 34,324,946		$ 20,085,509	$ -	$ 405,187	$ 1,212,815	$ 7,140,282	$ -	$ -	$ 3,609,029	$ 514,902	$ 1,357,222	$ -
13	Current Rate Base Revenue	$ 118,530,508		$ 55,881,338	$ 1,706,972	$ 1,127,299	$ 3,374,261	$ 26,043,912	$ 4,861,836	$ 456,618	$ 13,163,799	$ 1,878,085	$ 7,611,148	$ 2,425,240
14	Revenue Change ($)	$ 34,324,946		$ 20,085,509	$ -	$ 405,187	$ 1,212,815	$ 7,140,282	$ -	$ -	$ 3,609,029	$ 514,902	$ 1,357,222	$ -
15	Proposed Revenue	$ 152,855,454		$ 75,966,847	$ 1,706,972	$ 1,532,486	$ 4,587,076	$ 33,184,194	$ 4,861,836	$ 456,618	$ 16,772,828	$ 2,392,987	$ 8,968,370	$ 2,425,240
16	Revenue Increase (%)	29.0%		35.94%	0.00%	35.94%	35.94%	27.42%	0.00%	0.00%	27.42%	27.42%	17.83%	0.00%
17	Unitized Revenue Increase	1.00		1.24	-	1.24	1.24	0.95	-	-	0.95	0.95	0.62	-

Washington Gas Light Company

DC PSC FC 1162

Illustration of AOBA's Revenue Distribution Methodology

At AOBA's Adjusted Revenue Requirement

		Total DC		Residential			Commercial & Industrial			Group Metered Apartments				Special
	Cost of Service Study Results			Htg/Clg	Non-htg IMA	Non-htg Other	H/C<3,075	H/C>3,075	Non-htg/Non-clg	H/C<3,075	H/C>3,075	Non-htg/Non-clg	Interruptible	Contract
1	WG's Requested Revenue Requirement	$ 34,324,946												
2	Impact of AOBA's ROE	$ (5,471,321)												
3	Elimination of Special Contract Subsidy	$ (2,403,377)												
4	AOBA's Adjusted Revenue Requirement	$ 26,450,248												
5	Distribution Revenue Increase percentage	22.3%												
6	Composite Tax Rate	27.52%												
7	Incremental Net Income	$ 24,879,407												
8	Net Operating Income	$ 20,301,987		$ 7,969,126	$ 291,299	$ (48,753)	$ 395,665	$ 5,042,080	$ 1,760,345	$ 161,826	$ 2,795,315	$ 438,339	$ 1,629,630	$ (132,885)
9	Net Rate Base	$ 543,186,299		$ 264,692,526	$ 3,245,644	$ 6,722,056	$ 16,212,365	$ 114,869,517	$ 19,204,615	$ 1,666,909	$ 57,290,725	$ 6,963,026	$ 30,692,334	$ 21,626,583
10	ROR	3.74%		3.01%	8.98%	-0.73%	2.44%	4.39%	9.17%	9.71%	4.88%	6.30%	5.31%	-0.61%
11	Unitized ROR	1.00		0.81	2.40	-0.19	0.65	1.17	2.45	2.60	1.31	1.68	1.42	-0.16
12	Base Rate Revenue from Current Rates	$ 118,530,508		$ 55,881,338	$ 1,706,972	$ 1,127,299	$ 3,374,261	$ 26,043,912	$ 4,861,836	$ 456,618	$ 13,163,799	$ 1,878,085	$ 7,611,148	$ 2,425,240
	Distribution of the Requested Revenue Requirement													
13	Step 1 **Fifteen** Percent of Revenue Requirement	$ 3,967,537	0.15	$ 3,671,756		$ 74,071	$ 221,710							
14	Step 2 **Eighty-Five** Percent of Revenue Requirement	$ 21,125,489	0.85	$ 11,634,333		$ 234,700	$ 702,511	$ 5,422,267			$ 2,740,665	$ 391,012	$ 1,357,222	
15	Revenue Requirement	$ 26,450,248		$ 15,306,089	$ -	$ 308,771	$ 924,222	$ 5,422,267	$ -	$ -	$ 2,740,665	$ 391,012	$ 1,357,222	$ -
16	Current Rate Base Revenue	$ 118,530,508		$ 55,881,338	$ 1,706,972	$ 1,127,299	$ 3,374,261	$ 26,043,912	$ 4,861,836	$ 456,618	$ 13,163,799	$ 1,878,085	$ 7,611,148	$ 2,425,240
17	Revenue Change ($)	$ 26,450,248		$ 15,306,089	$ -	$ 308,771	$ 924,222	$ 5,422,267	$ -	$ -	$ 2,740,665	$ 391,012	$ 1,357,222	$ -
18	Proposed Revenue	$ 144,980,756		$ 71,187,427	$ 1,706,972	$ 1,436,070	$ 4,298,483	$ 31,466,179	$ 4,861,836	$ 456,618	$ 15,904,464	$ 2,269,097	$ 8,968,370	$ 2,425,240
19	Revenue Increase (%)	22.3%		27.39%	0.00%	27.39%	27.39%	20.82%	0.00%	0.00%	20.82%	20.82%	17.83%	0.00%
20	Unitized Revenue Increase	1.00		1.23	-	1.23	1.23	0.93	-	-	0.93	0.93	0.80	-

Attachment A
Resume for Timothy B. Oliver
Formal Case No. 1162

TIMOTHY B. OLIVER

Revilo Hill Associates, Inc.
7103 Laketree Dr.
Fairfax Station, VA 22039
(757) 810-9609
e-mail: ***timoliver@revilohill.com***

PROFESSIONAL EMPLOYMENT

01/12 - Current **Senior Rate Analyst and Project Manager**, Revilo Hill Associates, Inc.

- Provides testimony on rate design and cost of service issues, rate of return, class cost of service, and rate design analyses in support of expert testimony for electric, natural gas and water utility regulatory proceedings.
- Engaged in the critical review, analyses, and development of merger settlement positions, and evaluation of alternative negotiation strategies for a highly complex proposed merger between two large utility holding companies; including the impacts on the economies of two different jurisdictions and its influences on regulatory practices and policies and the effects of that merger on consumers.

01/08 - 01/12 **Project Manager**, Revilo Hill Associates, Inc.

- Conducted a series of case studies that evaluated energy the efficiency of multi-family apartment buildings of varying age and design on behalf of the Apartment and Office Building Association of Metropolitan Washington (DC).
- Reviews and analyzes annual Distribution Adjustment Charge and Gas Cost Recovery filings submitted by a natural gas distribution utility.
- Evaluated LED Street Lighting issues for two island electric utilities.
- Developed issues associated with proposals for the implementation of revenue decoupling issues for gas and electric utility operations.
- Assessed Net Metering Pilot Program and evaluated proposals for Net Metering tariff changes.
- Supported the creation of an Energy Managers' Roundtable to provide building energy managers a forum in which to share their experience with respect to energy-efficiency technologies, vendor performance, and best practices.
- Participated in an analysis of the impacts of a proposed Liquefied Natural Gas (LNG) terminal facility on energy markets in New England.

- Assisted in an evaluation of the merits of a utility-proposal for system wide deployment of Advanced Metering Infrastructure (AMI).
- Planned and conducted a focus group comprised of Energy Managers to assess (1) their understandings of energy efficiency issues, (2) needs for information and assistance in the identification of energy efficiency opportunities, and (3) other obstacles to their employment of more energy efficient systems and technologies.
- Designed a program to encourage improved energy efficiency in commercial office buildings and multi-family rental housing in the Washington, DC metropolitan area.

05/06 - 01/08 **Research Associate**, Revilo Hill Associates, Inc.
Assisted in the evaluation of energy pricing alternatives for commercial and institutional electricity and natural gas customers; created a data base to support the marketing of competitive energy services for a major broker/ aggregator; provided analytic support for expert testimony in natural gas and electric utility regulatory proceedings in seven different jurisdictions.

10/06- 4/07 **Market Research Team**, Vail Resorts, Vail, CO
Conducted on-mountain and in-town market research for customer satisfaction, brand marketing, and demographics for analysis.

06/03 - 05/06 **Research Analyst**, Revilo Hill Associates, Inc.
Developed a large-scale electronic spreadsheet model of competitive electricity supply costs for one of the nations largest commercial customer based energy aggregations; and assisted in an investigation fuel oil price increases through the analysis of detailed monthly supply, demand, and pricing data for major oil terminal operators within a New England state.

05/02- 8/03 **Research Assistant**, College of William and Mary, Chemistry Department
Preformed extensive mathematical and computer modeling analysis of experimental data to determine the proton affinities of non-protein amino acids and their derivatives; maintained and repaired laboratory equipment including a quadrapole ion trap mass spectrometer.

EDUCATION

2018 MS program, Global Energy Management, University of Colorado at Denver
2009 Building for the Future: Sustainable Home Design, Solar Energy International, Carbondale, CO
2008 Certified Energy Manager, Association of Energy Engineers
2005 BS in Chemistry, College of William and Mary, Williamsburg, VA

RATE CASE PARTICIPATION:

SUBMITTED DIRECT TESTIMONY:

2019	VA	Washington Gas – Base Rates	Docket No. PUE-2018-0001
2019	MD	Washington Gas – Base Rates	Case No. 9605
2019	MD	Potomac Electric – Base Rates	Case No. 9602
2018	MD	Washington Gas – Base Rates	Case No. 9481
2017	DC	AltaGas – WGL Merger	Formal Case No. 1142
2017	MD	AltaGas – WGL Merger	Case No. 9449
2017	MD	Potomac Electric – Base Rates	Case No. 9443
2017	VA	Washington Gas – Base Rates	Docket No. PUE-2016-0001
2016	DC	Potomac Electric – Base Rates	Formal Case No. 1139
2016	DC	Washington Gas – Base Rates	Formal Case No. 1137
2016	RI	National Grid – GCR	Docket No. 4643
2016	MD	Potomac Electric - Base Rates	Case No. 9418
2014	MD	Potomac Electric – Base Rates	Case No. 9336
2014	MD	Washington Gas - Base Rate	Case No. 9335
2013	DC	Potomac Electric Power Company	Formal Case No. 1103

OTHER RATE CASE PARTICIPATION:

District of Columbia

Potomac Electric Power Company	Formal Case No. 1150
AltaGas – WGL Merger	Formal Case No. 1142
Potomac Electric Power Company	Formal Case No. 1139
Washington Gas Light Company	Formal Case No. 1137
Potomac Electric Power Company	Formal Case No. 1130
Exelon-PHI Merger	Formal Case No. 1119
Potomac Electric Power Company	Formal Case No. 1116
Washington Gas Light Company	Formal Case No. 1115
Washington Gas Light Company	Formal Case No. 1093
Potomac Electric Power Company	Formal Case No. 1087
Washington Gas Light Company	Formal Case No. 1079
Potomac Electric Power Company	Formal Case No. 1076

Guam

Guam Power Authority	Docket No. 11-090, Ph II
Guam Power Authority	Docket No. 11-090
Guam Power Authority	Docket No. 07-010

Maryland

AltaGas – WGL Merger	Case No. 9449
Potomac Electric Power Company	Case No. 9443
Washington Gas Light Company	Case No. 9433
Exelon-PHI Merger	Case No. 9361
Washington Gas Light Company	Case No. 9322

Potomac Electric Power Company	Case No. 9311
Potomac Electric Power Company	Case No. 9286
Washington Gas Light Company	Case No. 9267
Potomac Electric Power Company	Case No. 9217

Massachusetts

Investigation of Rate Structures to Promote Efficient Deployment of Demand Management	Docket No. 07-50

Rhode Island – Public Utilities Commission

National Grid – Gas GCR	Docket No. 4719
National Grid – Gas DAC	Docket No. 4708
National Grid – Gas GCR	Docket No. 4647
National Grid – Gas Long-Range Plan	Docket No. 4608
National Grid – Gas GCR	Docket No. 4576
National Grid – Gas DAC	Docket No. 4573
National Grid – Gas GCR	Docket No. 4520
National Grid – Gas DAC	Docket No. 4514
National Grid – Gas GCR	Docket No. 4346
National Grid – Gas DAC	Docket No. 4339
National Grid – Gas On-System Margins	Docket No. 4333
National Grid – Gas Base Rates	Docket No. 4323
National Grid – Gas GCR	Docket No. 4283
National Grid – Gas DAC	Docket No. 4269
National Grid – Electric Backup Service	Docket No. 4232
National Grid – Elec & Gas Revenue Decoupling	Docket No. 4206
National Grid – Gas GCR	Docket No. 4199
National Grid – Gas DAC	Docket No. 4196
National Grid – Gas GCR	Docket No. 4097
National Grid – Gas DAC	Docket No. 4077
National Grid – Electric	Docket No. 4065
National Grid – Gas Portfolio Mgmt	Docket No. 4038
National Grid – Gas GCR	Docket No. 3982
National Grid – Gas DAC	Docket No. 3977
National Grid – Gas GCR	Docket No. 3961

Utah

Dominion Energy Utah-Base Rates	Docket No. PUE 2015-00027

Virgin Islands

Water and Power Authority – Water Rates	Docket No. 613
Water and Power Authority – Electric Rates	Docket No. 612
Water and Power Authority – Water Rates	Docket No. 576
Water and Power Authority – Electric Rates	Docket No. 575

Virginia

Virginia Electric Power Company	Docket No. PUE 2015-00027
Virginia Electric Power Company	Docket No. PUE 2011-00027
Washington Gas Light Company	Docket No. PUE 2010-00139

Attachment B
Merger Commitment No. 35 Notice - Formal Case 1142
Formal Case No. 1162

Washington Gas
A WGL Company

1000 Maine Avenue, SW
Suite 700
Washington, DC 20024
www.washingtongas.com

Direct Dial (202) 624-6105
cthurston-seignious@washgas.com

December 20, 2018

VIA ELECTRONIC FILING

Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1325 "G" Street, N.W., 8th Floor
Washington, D.C. 20005

Re: FC 1142 – Merger Commitment No. 35 - Washington Gas Light Company's Notice of Credit Rating Downgrade

Dear Ms. Westbrook-Sedgwick:

Pursuant to Commitment No. 35 of the Unanimous Agreement of Stipulation and Full Settlement approved by the Public Service Commission of the District of Columbia by Order No. 19396, issued June 29, 2018 in the above-referenced proceeding, Washington Gas Light Company ("Washington Gas") hereby gives notice of the credit rating downgrades for Washington Gas and WGL Holdings, Inc., recently issued by S&P. A copy of the S&P credit rating report is attached.

If you have any questions regarding this matter, please feel free to contact me.

Sincerely,

Cathy Thurston-Seignious
Supervisor, Administrative and
Associate General Counsel

pc: Per Certificate of Service

S&P Global
Ratings

Research

Research Update:

WGL Holdings Inc. And Washington Gas Light Co. Ratings Lowered On Parent Downgrade; Outlook Negative

Primary Credit Analyst:
William Hernandez, New York + 1 (212) 438 9132; william.hernandez@spglobal.com

Secondary Contacts:
Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@spglobal.com
Mayur Deval, Toronto (1) 416-507-3271; mayur.deval@spglobal.com

Table Of Contents

Research Update:

WGL Holdings Inc. And Washington Gas Light Co. Ratings Lowered On Parent Downgrade; Outlook Negative

Rating Action Overview

- WGL Holdings Inc.'s (WGLH) parent company AltaGas Ltd. (AltaGas) was downgraded one notch to 'BBB-' from 'BBB', reflecting our view that, notwithstanding asset sales and a dividend cut to fund its capital program, AltaGas' financial metrics remain pressured.
- On Dec. 19, 2018, S&P Global Ratings lowered its issuer credit rating one notch on WGLH to 'BBB-' from 'BBB' to align with AltaGas. We downgraded the short-term rating on WGLH to 'A-3' from 'A-2' based on the issuer credit rating. We also lowered our issuer credit rating on WGLH subsidiary Washington Gas Light Co. (WGL) one notch to 'BBB+' from 'A-'. The short-term rating on WGL is unchanged at 'A-2'.
- The outlooks on both entities are negative.
- The negative outlooks reflect our negative outlook on parent AltaGas, which in turn reflects the uncertainty associated with the timing and pricing for AltaGas' proposed asset sales to meet its cash needs for the next two years. We expect that AltaGas will reduce debt, and that its adjusted funds from operations (FFO) to debt will stay above 10% on a sustained basis by 2020, with regulated utility EBITDA representing approximately 50% of AltaGas' consolidated EBITDA.

Rating Action Rationale

S&P Global Ratings lowered its ratings on WGLH and WGL one notch due to the downgrade of ultimate parent AltaGas as a result of its weakening financial risk profile. We assess WGLH and WGL as highly strategic subsidiaries of parent AltaGas because we view them as highly unlikely to be sold, because they operate in lines of business that are integral to the overall group strategy and have a strong long-term commitment from AltaGas' senior management.

We lowered our stand-alone credit profile of WGLH to 'bbb+' from 'a' and WGL to 'a+' from 'aa'. These lower assessments reflect weaker financial measures and our downward reassessment of AltaGas' management and governance (M&G) score.

Our assessment of WGLH's business risk incorporates the company's lower-risk, regulated utility operations of WGL, and WGLH's higher-risk, non-utility

operations that include a midstream energy business and other non-regulated businesses. We expect WGLH's non-utility operations to grow to about 20% of EBITDA over the next few years from just shy of 15% today. These businesses weaken credit quality because they operate in more competitive environments than a utility and without the regulatory protections. In addition, these businesses expose WGLH to commodity risk, volumetric risk, and counter credit party risk.

Our assessment of WGLH's consolidated financial risk profile incorporates ongoing capital spending and steady cost recovery through base rates and various rate mechanisms. With the growth of its non-utility midstream business, our base-case forecast reflects our expectations that WGLH will have substantial negative discretionary cash flow after capital spending and dividends, resulting in sizable external funding needs.

We assess WGLH's stand-alone financial measures under our medial volatility financial benchmarks, which incorporate WGLH's mostly low-risk regulated utilities partially offset by its higher risk non-utility businesses. WGLH's stand-alone financial measures have been weakening. FFO to debt for 2017 was 17.8% and year-end 2018 dropped to 13.2%. We expect only a modest improvement with FFO to debt between 15%-16% through 2021. Consistent with our longer-term expectations for weaker financial measures, we revised our comparable ratings analysis modifier to neutral from positive.

We base our assessment of WGL's stand-alone business risk profile on the very low risk nature of the regulated utility industry that provides essential services that are strategically important to economies, has material barriers to entry, and essentially operates as a monopoly insulated from market challenges in the U.S. WGL's business risk profile also reflects generally supportive regulatory mechanisms and moderate regulatory and market diversification. WGL is an average size utility delivering natural gas to about 1.1 million customers in the economically robust service area of the District of Columbia and the Maryland and Virginia suburbs. Regulatory mechanisms provide for timely cost recovery of accelerated pipeline replacement spending, decoupling, purchased-gas adjustment mechanisms, weather-normalization clauses, and bad-debt recovery.

We assess WGL's stand-alone financial measures under our low volatility financial benchmarks, which incorporate the utility's lower-risk regulated businesses and its effective management of regulatory risk. We expect a moderate weakening in WGL's financial measures, reflecting higher capital spending, the effects of federal tax reform, and growing annual dividends. Year-end 2017 FFO to debt was about 24%, and we anticipate FFO to debt to weaken to about 21%-22% through 2021. To account for these modestly weaker financial measures, we revised WGL's stand-alone financial risk profile to intermediate from modest. We also revised the comparable analysis modifier to positive from neutral, in line with our expectations that WGL's stand-alone financial measures will consistently reflect the higher end of the range for its financial risk profile category.

Our assessment of WGLH and WGL's M&G score as fair is consistent with our view of parent AltaGas' M&G score. Our reassessment of AltaGas' M&G score incorporates the recent departures in its senior management at a time when AltaGas is undergoing a shift in strategy, which weakens AltaGas' M&G score.

Outlook

The negative outlook on subsidiaries WGLH and WGL is consistent with our negative outlook on parent AltaGas, reflecting the uncertainty associated with the timing and pricing for AltaGas' proposed asset sales to meet its cash needs for the next two years. We expect that AltaGas will reduce debt, and that its adjusted FFO to debt will stay above 10% on a sustained basis by 2020, with regulated utility EBITDA representing approximately 50% of consolidated EBITDA.

Downside scenario

We could lower the ratings if AltaGas is not able to sell the planned assets or receives lower-than-expected proceeds, or acquires debt that results in forecasted adjusted FFO to debt below 10%. We also expect the company to maintain its business mix, which is highly weighted toward more stable utility cash flows. A material increase in the proportion of more volatile cash flows, such as from riskier midstream or unregulated power, without a corresponding improvement in financial metrics, could also lead to a downgrade.

Upside scenario

We could revise the outlook to stable if AltaGas completes the sale as expected, maintains adjusted FFO to debt in the 10%-12% range, and is able to successfully integrate WGL Holdings Inc. and its subsidiaries.

Liquidity

We assess WGLH's liquidity as adequate because we believe its liquidity sources are likely to cover uses by more than 1.1x over the next 12 months and meet cash outflows even with a 10% decline in EBITDA. The assessment also reflects the company's generally prudent risk management, sound relationships with banks, and a generally satisfactory standing in the credit markets.

Principal liquidity sources:

- Cash and liquid investments of about $60 million;
- Credit facility availability of $1 billion; and
- Adjusted cash FFO of about $450 million.

Principal liquidity uses:

- Debt maturities, including outstanding commercial paper, of about $770

million;

- Capital spending of at least $435 million;
- Dividends of about $115 million; and
- Working capital outflows of about $35 million.

Ratings Score Snapshot

WGL Holdings Inc.
Issuer Credit Rating: BBB-/Negative/A-3

Business risk: Excellent
- Country risk: Very low
- Industry risk: Very low
- Competitive position: Strong

Financial risk: Significant
- Cash flow/Leverage: Significant

Anchor: a-

Modifiers
- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Fair (-1 notch)
- Comparable rating analysis: Neutral (no impact)

Stand-alone credit profile: bbb+
- Group credit profile: bbb-
- Entity status within group: Highly Strategic (-2 notches from SACP)

Washington Gas Light Co.
Issuer Credit Rating: BBB+/Negative/A-2

Business risk: Excellent
- Country risk: Very low
- Industry risk: Very low
- Competitive position: Excellent

Financial risk: Intermediate
- Cash flow/Leverage: Intermediate

Anchor: a+

Modifiers
- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Financial policy: Neutral (no impact)
- Liquidity: Adequate (no impact)
- Management and governance: Fair (-1 notch)
- Comparable rating analysis: Positive (+1 notch)

Stand-alone credit profile: a+
- Group credit profile: bbb-

Entity status within group: Highly Strategic (-3 notches from SACP)

Issue Ratings

- We base the 'A-3' short-term rating on WGLH and the 'A-2' short-term rating on WGL on our issuer credit ratings on the companies.
- We rate the preferred stock of WGL two notches below the issuer credit rating to reflect the discretionary nature of the dividend and the deeply subordinated claim in the event of a bankruptcy.

Issue Rating—Subordination Risk Analysis

Capital structure

WGLH's capital structure consists of about $2.6 billion of consolidated debt, which includes about $1.3 billion of unsecured debt at the utility subsidiary level.

Analytical conclusions

We rate the unsecured debt at WGLH one notch below the issuer credit rating because there is a significant amount of priority debt at the subsidiary level.

We rate WGL's senior unsecured debt the same as the issuer credit rating because it is debt of a qualifying investment-grade utility.

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings , April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - Industrials: Key Credit Factors For The Midstream Energy Industry, Dec. 19, 2013
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Insurance - General: Hybrid Capital Handbook: September 2008 Edition, Sept. 15, 2008

Ratings List

Ratings Downgraded

	To	From
WGL Holdings Inc.		
Issuer Credit Rating	BBB-/Negative/A-3	BBB/Negative/A-2
Washington Gas Light Co.		
Issuer Credit Rating	BBB+/Negative/A-2	A-/Negative/A-2
WGL Holdings Inc.		
Senior Unsecured	BB+	BBB-
Commercial Paper	A-3	A-2
Washington Gas Light Co.		

Senior Unsecured	BBB+	A-
Preferred Stock	BBB-	BBB

Ratings Affirmed

Washington Gas Light Co.

Commercial Paper	A-2

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

S&P Global
Ratings

Research

WGL Holdings Inc. And Washington Gas Light Co. Ratings Lowered On Parent Downgrade; Outlook Negative

Primary Credit Analyst:
William Hernandez, New York + 1 (212) 438 9132; william.hernandez@spglobal.com

Secondary Contacts:
Gerrit W Jepsen, CFA, New York (1) 212-438-2529; gerrit.jepsen@spglobal.com
Mayur Deval, Toronto (1) 416-507-3271; mayur.deval@spglobal.com

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NEW YORK (S&P Global Ratings) Dec. 19, 2018-- S&P Global Ratings today took the rating actions listed above. S&P Global Ratings lowered its ratings on WGLH and WGL one notch due to the downgrade of ultimate parent AltaGas as a result of its weakening financial risk profile. We assess WGLH and WGL as

highly strategic subsidiaries of parent AltaGas because we view them as highly unlikely to be sold, because they operate in lines of business that are integral to the overall group strategy and have a strong long-term commitment from AltaGas' senior management.

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We could lower the ratings if AltaGas is not able to sell the planned assets or receives lower-than-expected proceeds, or acquires debt that results in forecasted adjusted FFO to debt below 10%. We also expect the company to maintain its business mix, which is highly weighted toward more stable utility cash flows. A material increase in the proportion of more volatile cash flows, such as from riskier midstream or unregulated power, without a corresponding improvement in financial metrics, could also lead to a downgrade.

We could revise the outlook to stable if AltaGas completes the sale as expected, maintains adjusted FFO to debt in the 10%-12% range, and is able to successfully integrate WGL Holdings Inc. and its subsidiaries.

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- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Criteria - Insurance - General: Hybrid Capital Handbook: September 2008

WGL Holdings Inc. And Washington Gas Light Co. Ratings Lowered On Parent Downgrade; Outlook Negative

Edition, Sept. 15, 2008

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

 2146450

CERTIFICATE OF SERVICE

I, the undersigned counsel, hereby certify that on this 20th day of December 2018, I caused copies of the foregoing to be hand-delivered, mailed, postage-prepaid, or electronically delivered to the following:

Christopher Lipscombe, Esq.
Lara Walt, Esq.
Office of General Counsel
Public Service Commission
1325 G St. NW, Suite 800
Washington, DC 20005
clipscombe@psc.dc.gov
lwalt@psc.dc.gov

Frann G. Francis, Esq.
Apartment and Office Building Association
1025 Connecticut Ave, N.W., Suite 1005
Washington, DC 20036
ffrancis@aoba-metro.org
Counsel for the Apartment and Office Building Association

Anjali G. Patel, Esq.
Office of People's Counsel
1133 15th St. NW, Suite 500
Washington, DC 20005
apatel@opc-dc.gov
Counsel for the Office of People's Counsel

Bruce R. Oliver
Revilo Hill Associates, Inc.
7103 Laketree Drive
Fairfax Station, VA 22039
revilohill@verizon.net

Mark J. Murphey, Esq.
Mooney, Green, Saindon, Murphy & Welch, PC
1920 L St. NW, Suite 400
Washington, DC 20036
mmurphy@mooneygreen.com
Counsel for the International Brotherhood of Teamsters Local 96

Brian Caldwell, Esq.
Office of the Attorney General for the District of Columbia
441 4th St., NW
Washington, DC 20001
brian.caldwell@dc.gov
Counsel for the District of Columbia Government

Andrew G. Pizor, Esq.
National Consumer Law Center
1001 Connecticut Ave, NW
Suite 510
Washington, DC 20036
apizor@nclc.org
Counsel for the National Consumer Law Center

Alan Barak, Esq.
Hussain Karim, Esq.
Department of Energy and Environment
1200 1st St., NE, 5th Floor
Washington, DC 20002
Alan.barak@dc.gov
Hussain.karim@dc.gov
Counsel for the District of Columbia Government

Emily W. Medlyn, Esq.
U.S. Army Legal Services
Agency Regulatory Law Office
9275 Gunston Rd.
Fort Belvoir, VA 22060
emily.w.medlyn.civ@mail.mil
Counsel for the Department of Defense and all other Federal Executive Agencies

Scott H. Strauss, Esq.
Spiegel & McDiarmid LLP
1875 I St., NW
Suite 700
Washington, DC 20006
scott.strauss@spiegelmcd.com
Counsel for the District of Columbia Government

James F. Wallington, Esq.
Baptiste & Wilder, P.C.
1150 Connecticut Ave., NW
Suite 315
Washington, DC 20036
jwallington@bapwild.com
Counsel for OPEIU Local 2, AFL-CIO

Kim Hassan, Esq.
Andrea H. Harper, Esq.
Dennis Jamouneau, Esq.
Potomac Electric Power Company
701 9th St. NW, Suite 1100
Washington, DC 20068
djamouneau@pepcoholdings.com
Counsel for Potomac Electric Power Company

Dan Dyer
President, OPEIU Local 2, AFL-CIO
8555 16th St., NW, Suite 550
Silver Spring, MD 20190
ddyer@opeiu-local2.org

Brian Petruska, Esq.
General Counsel, LiUNA Mid-Atlantic Region
11951 Freedom Dr., Suite 310
Reston, VA 20190
bpetruska@maliuna.org
Counsel for the Baltimore Washington Construction & Public Employees Laborers' District Council

May Va Lor
Corporate Affairs Department, LiUNA
905 16th St., NW
Washington, DC 20006
mlor@liuna.org

CATHY THURSTON-SEIGNIOUS

CERTIFICATE OF SERVICE
Formal Case No. 1162

I hereby certify on this 14th day of August 2020, that the attached **Direct Testimony of Bruce R. Oliver and Timothy B. Oliver** were filed electronically on behalf of the Apartment and Office Building Association of Metropolitan Washington and copies were sent via electronic mail to the service list below:

Brinda Westbrook-Sedgwick
Commission Secretary
D.C. Public Service Commission
1325 G Street, N.W., Suite 800
Washington, D.C. 20005

Cathy Thurston-Seignious, Esquire
Washington Gas Light Company
1000 Maine Avenue, S.W., Suite 700
Washington, D.C. 20024

Christopher Lipscombe, Esquire
Office of the General Counsel
D.C. Public Service Commission
1325 G Street, N.W., Suite 800
Washington, D.C. 20005

Timothy R. Oberleiton, Esquire
Tamika L. Taylor, Esquire
Office of the People's Counsel
1133 15th Street, N.W., Suite 500
Washington, D.C. 20005

Brian R. Caldwell, Esquire
Office of the Attorney General
Social Justice Section
441 4th Street, N.W., Suite 600-S
Washington, D.C. 20001

Edward Yim
Hussain Karim, Esquire
Department of Energy and Environment
1200 First Street, N.E., 5th Floor
Washington, D.C. 20002

Kristi Singleton, Esquire
U.S. General Services Administration
1800 F Street, N.W., Room 2016
Washington, D.C. 20405

Michael Converse, Esquire
U.S. General Services Administration
1800 F Street, N.W., Room 2012
Washington, D.C. 20405

Susan Stevens Miller, Esquire
Staff Attorney, Clean Energy Program
Earthjustice
1001 G Street., N.W., Suite 1000
Washington, D.C. 20001

Lariza Sepulveda
Economist
Public Utility Rates and Regulations
Energy Division, U.S. GSA
1800 F Street, N.W., Room 5122
Washington, D.C. 20405

Erin Murphy, Esquire
Natalie Karas, Esquire
Environmental Defense Fund
1875 Connecticut Ave., N.W., Suite 600
Washington, D.C. 20009

Brian J. Petruska
General Counsel
LIUNA Mid-Atlantic Region
11951 Freedom Drive, Suite 310
Reston, VA 20190

Dennis Goins
Potomac Management Group
302255801 Westchester Street
Alexandria, VA 22310

May Va Lor
LIUNA
4101 Cathedral Avenue, Apt. 1206
Washington, D.C. 20016

Frann G. Francis

Frann G. Francis, Esquire