BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

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

DIRECT TESTIMONY AND SUPPORTING EXHIBITS OF ELIZABETH A. STANTON, PHD

Exhibit OPC (F)

On Behalf of the
Office of the People's Counsel
for the District of Columbia

August 14, 2020

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I. INTRODUCTION

Q. PLEASE STATE YOUR FULL NAME, ADDRESS, AND OCCUPATION.

A. My name is Elizabeth A. Stanton, Ph.D. I am the Director and Senior Economist for the Applied Economics Clinic. My business address is 1012 Massachusetts Avenue, Arlington, MA 02476.

Q. FOR WHOM ARE YOU APPEARING?

A. I am testifying on behalf of the Office of the People's Counsel for the District of Columbia ("OPC" or "Office") in response to Washington Gas Light Company's ("WGL", "Washington Gas", or "Company") *Application* to the Public Service Commission of the District of Columbia ("Commission" or "PSC") for authority to increase existing rates and charges for gas service in this proceeding.[1]

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE.

A. I am the founder and Director of the Applied Economics Clinic, a non-profit consulting group. The Applied Economics Clinic ("the Clinic") provides expert testimony, analysis, modeling, policy briefs, and reports for municipalities and other public interest groups on the topics of energy, the environment, consumer protection, and equity. The Clinic also provides training to the next generation of expert technical witnesses and analysts through

[1] *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* ("*Formal Case No. 1162*"), filed January 13, 2020 ("*Application*"). As a general matter, for the remainder of my testimony, any references to WGL's "*Application*" include WGL's Supplemental Direct Testimony and Supporting Exhibits and Updated Supplemental Information. *Formal Case No. 1162*, Washington Gas's Updated Supplemental Information Filing Related to Application for Authority to Increase Existing Rates and Charges for Gas Service, filed May 15, 2020 ("Supplemental Filing").

applied, on-the-job experience for graduate students in related fields and works proactively to support diversity among both student workers and professional staff.

I am a researcher and analyst with more than 19 years of professional experience as a political and environmental economist. I have authored more than 140 reports, policy studies, white papers, journal articles, and book chapters as well as more than 40 expert comments and oral and written testimonies in public proceedings on topics related to energy, the economy, the environment, and equity. My articles have been published in *Ecological Economics, Climatic Change, Environmental and Resource Economics, Environmental Science & Technology*, and other journals. I have also published books, including *Climate Change and Global Equity* (Anthem Press, 2014) and *Climate Economics: The State of the Art* (Routledge, 2013), which I co-wrote with Frank Ackerman. In addition, I am the co-author of *Environment for the People* (Political Economy Research Institute, 2005, with James K. Boyce) and co-editor of *Reclaiming Nature: Worldwide Strategies for Building Natural Assets* (Anthem Press, 2007, with Boyce and Sunita Narain).

My recent work includes performing integrated resource plan and demand-side management planning review, providing analysis and testimony regarding state climate laws as they relate to proposed capacity additions, and working on other issues related to consumer and environmental protection in the electric and gas sectors.

In my previous position as a Principal Economist with Synapse Energy Economics, I provided expert testimony in electric and gas sector dockets and led studies examining environmental regulation, cost-benefit analyses, and the economics of energy efficiency

and renewable energy. Prior to joining Synapse, I was a Senior Economist with the Stockholm Environment Institute's ("SEI") Climate Economics Group, where I was responsible for leading the organization's work on the Consumption-Based Emissions Inventory ("CBEI") model, water issues, and climate change in the western United States. While at SEI, I led domestic and international studies commissioned by the United Nations Development Programme, Friends of the Earth-U.K., and Environmental Defense Fund, among others.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL EXPERIENCE.

A. I earned my Ph.D. in economics from the University of Massachusetts-Amherst and have taught economics at Tufts University, the University of Massachusetts-Amherst, and the College of New Rochelle, among other colleges and universities. My curriculum vitae is attached to this testimony as Exhibit OPC (F)-1.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN ANY FORMAL HEARING BEFORE REGULATORY BODIES?

A. Yes. I have submitted expert testimony and comments in dockets in Florida, Illinois, Indiana, Louisiana, Massachusetts, Minnesota, New Hampshire, New York, and Vermont, as well as several federal dockets. In the District of Columbia , I was retained by OPC to assist in the drafting of written comments submitted by the Office in Commission docket GD-2019-04-M,[2] and I also drafted an affidavit on behalf of the Office in which OPC

[2] *See Case No. GD2019-04-M*, *In the Matter of the Implementation of the 2019 Clean Energy DC Omnibus Act Compliance Requirements*, Notice of Inquiry, D.C. Pub. Serv. Comm'n, rel. September 26, 2019. The Commission's Notice of Inquiry ("NOI") pertains to the analytical approach that the Commission should take when considering the effects of a utility's proposal on global climate and the District's public

appended to the written comments[3] it filed with the Commission in Formal Case No. 1142 regarding AltaGas Ltd.'s[4] Climate Business Plan[5] and Renewable Natural Gas Study. [6]

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

A. Yes.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF EACH OF YOUR EXHIBITS, INCLUDING THE SOURCE MATERIALS.

A. The following exhibits have been attached to my testimony:

- OPC (F)-1 is my curriculum vitae, which describes my educational background, professional experience, and publications.
- OPC (F)-2 is my workpapers, including the calculations on gas leakage rates in the District as well as the figures and tables that are included in this testimony. All data sources are provided within the Exhibit.

policy commitments, including whether specific greenhouse gas emissions reporting requirements, metrics for greenhouse gas emissions reduction, and carbon footprint metrics should be used. *Id.* ¶ 2.

[3] *Formal Case No. 1142, In the Matter of the Merger of AltaGas Ltd. and WGL Holdings, Inc.* ("*Formal Case No. 1142*"), Office of the People's Counsel for the District of Columbia's Initial Comments on AltaGas LTD.'s Filing Regarding Merger Terms Nos. 6 and 79, filed June 26, 2020.

[4] AltaGas Ltd. ("AltaGas") is the parent entity of, among others, WGL Holdings, Inc., and Washington Gas. *See Formal Case No. 1142*, Order No. 19396, rel. June 29, 2018 (approving, with conditions, a Settlement Agreement pertaining to AltaGas and WGL's merger ("Merger Settlement Agreement")). The merger closed on July 6, 2018.

[5] *Formal Case No. 1142*, AltaGas Ltd's Climate Business Plan for Washington, D.C., filed March 16, 2020 ("Climate Business Plan").

[6] Appendix D of the Climate Business Plan includes the Renewable Natural Gas Study prepared by ICF Resources, LLC and performed in compliance with Term No. 6 of the Merger Settlement Agreement.

- OPC (F)-3 to 10 are WGL's Responses to Data Requests that I reference in this testimony pertaining to climate-related issues.

II. SCOPE OF TESTIMONY

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

A. I have been retained by the Office to provide an expert opinion to the Commission on whether WGL's *Application* and rate proposals in this proceeding are consistent with the CleanEnergy DC Omnibus Amendment Act of 2018[7] and other relevant climate and clean energy policies, plans, programs, and directives (generally referred to herein as "climate goals"). The scope of my testimony is guided by the Commission's orders in this proceeding, including Order No. 20314,[8] in which the Commission indicated that it would review climate change issues relating to WGL's *Application* in this proceeding.[9] Specifically, in Order No. 20314, the Commission stated that it is mandated by the CleanEnergy Act to review WGL's entire *Application* "to 'consider the public safety, the economy of the District, the conservation of natural resources, and the preservation of environmental quality, including effects on global climate change and the District's public climate commitments.'"[10] As further stated in that Order, that this review would include

[7] D.C. Law 22-257, effective March 22, 2019, codified at D.C. Code § 34-808.02 (2019) ("CleanEnergy Act").

[8] *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 ("Formal Case No. 1162")*, Order No. 20314, rel. March 26, 2020.

[9] *Id.* ¶ 13.

[10] *Id.* ¶ 13 & nn.30-31 (citing the CleanEnergy Act).

WGL's gas leak repair expenses during the test year.[11] In Order No. 20355,[12] the Commission clarified that "the entire Application, not merely parts of the Application, will be evaluated according to the [CleanEnergy Act] standard."[13] However, the Commission stated that it would not address AltaGas' Climate Business Plan in this proceeding because it is a prospective plan filed after the test year in WGL's *Application* and will be addressed in other proceedings.[14] In addition, in Order No. 20338,[15] the Commission stated that "as a general proposition, climate change issues that are implicated in this Application should be addressed in Supplemental Direct Testimony to the extent they are not already included in Direct Testimony."[16] Accordingly, the scope of my testimony focuses on evaluating climate change issues that are raised in the *Application* to assess whether the proposals, costs, and expenditures it contains reflect a commitment towards the District's climate goals in a safe, affordable, and equitable manner.

III. SUMMARY OF TESTIMONY

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. My review of WGL's rate *Application* and discovery responses revealed a failure by the Company to meaningfully address or support the Company's greenhouse gas emission reduction obligations with respect to the 2019 test year. The District's emission reduction

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11 *Id.* ¶ 13.

12 *Formal Case No. 1162*, Order No. 20355, rel. May 27, 2020.

13 *Id.* ¶ 18.

14 *Formal Case No. 1162*, Order No. 20314 ¶ 12; *Formal Case No. 1162*, Order No. 20355 ¶ 14.

15 *Formal Case No. 1162,* Order No. 20338, rel. April 29, 2020.

16 *Id.* ¶ 20.

targets (carbon neutrality by 2050, and an intermediate goal of a 50 percent reduction from 2006 emission levels by 2032), the CleanEnergy Act, the Commission's Modernizing the Energy Delivery System for Increased Sustainability ("MEDSIS") (n/k/a "PowerPath DC") Vision and Guiding Principles, the District of Columbia Department of Energy and Environment's ("DOEE") *Clean Energy DC: Climate and Energy Action Plan* ("DC Action Plan"), and Merger Commitment Nos. 76 and 77 all obligate WGL (or reflect WGL's obligation) to act to reduce emissions. While there was not a specific target applicable to the 2019 test year, these climate goals were all in effect and my testimony discusses whether WGL's *Application* reflects actions consistent with these climate goals. WGL provides scant evidence of any actions that reveal progress towards meeting the District's climate goals. My testimony describes the District's climate laws, policies, and programs, as they relate to its greenhouse gas emission reduction goals and demonstrates that the Company's *Application* and data responses do not sufficiently address or support these climate-related goals. As I discuss below, according to WGL, its main effort towards decarbonization has been pipe replacement. As OPC Witness Rod Walker explains, the Company's pipe replacement efforts, however, appear to be failing: ratepayer money is spent but leak rates—by WGL's own admission—are rising.[17] While some leaks have, no doubt, been repaired, activities undertaken during the test year cannot be said to have advanced the District's climate goals.

[17] *See generally* Exhibit OPC(D)Walker; *See* Exhibit WG (N) (Price) at 5:11-12, 17-19 (admitting that "[l]eak instances have continued to rise throughout the Washington Gas franchise area…[d]espite [WGL's] leak mitigating work").

I also address two proposals made in the *Application* within the context of relevant climate goals, including guiding principles, and refer to the testimony of other OPC Witnesses who provide their opinion on these proposals based on their respective areas of expertise. Specifically, OPC Witness David Dismukes' testimony explains how WGL's proposed Revenue Neutralization Adjustment ("RNA") would serve to shift the regulatory and performance-related risks associated with the Company's future energy-efficiency activities entirely to ratepayers.[18] My review of the climate goals provides support for Mr. Dismukes' finding in this regard. WGL Witness Hevert's proposed upward adjustment to the Company's return on equity ("ROE") because of "decarbonization risks" also raises the concern that the Company is referencing the District's climate goals as a rationale for proposals that provide the Company financial benefits without advancing the District's climate goals. OPC Witness O'Donnell explains why an upward adjustment to the ROE is not warranted based on this claimed risk.[19] Not only would the Company's RNA and ROE proposals fail to advance climate goals, they would come at a disproportionate cost to consumers, particularly those that can least afford it.

My testimony also discusses the sustainability metric in the Company's Scorecard, which rewards the Company for meeting its own spending expectations on pipe replacement and ignores both WGL's dismal performance in avoiding leaks and the larger issue of emissions derived from gas usage.

[18] Exhibit OPC(E)(Dismukes) at 31:6 – 36:4.

[19] Exhibit OPC(B)(O'Donnell) at 21:2 – 22:9.

In Merger Commitment Nos. 76 and 77, the Company and its affiliates recognized the Company's obligations and commitment to meet the District's climate related goals, including emission reductions.[20] This responsibility had already begun in 2019. WGL's *Application*, however, does not reflect evidence of progress in meeting this obligation in its test year in an equitable and cost-effective manner.

IV. WGL'S RATE CASE FROM A CLIMATE PERSPECTIVE

A. Overview of the District's Climate Goals and Regulations

Q. IN SUMMARY, WHAT IS THE DISTRICT'S CURRENT REGULATORY LANDSCAPE WITH RESPECT TO THE CLIMATE AND GREENHOUSE GAS EMISSIONS?

A. The District has set a goal to achieve carbon neutrality by 2050, with an intermediary goal of a 50% percent reduction in carbon emissions by 2032 from 2006 levels. Because building energy use accounts for over 70% of District-wide emissions, the District recognized the importance of transitioning its energy delivery system away from fossil fuels in order to reach its emission reduction targets. The MEDSIS Guiding Principles inform the decision-making process with regards to transitioning the District towards a more sustainable, well-planned, safe, reliable, secure, affordable, interactive, and non-discriminatory energy delivery system.[21]

[20] *Formal Case No. 1142*, Order No. 19396, Appendix A, ¶¶ 76-77 ("Order No. 19396").

[21] *Formal Case No. 1130, In the Matter of the Investigation into Modernizing the Energy Delivery System for Increased Sustainability*, ("*Formal Case No. 1130*"), Order No. 19275, Attachment A 2, rel. February 14, 2018 ("Order No. 19275").

Q. WHAT IS THE BASIS OF THE DISTRICT'S GREENHOUSE GAS EMISSION TARGETS?

A. In 2017, Mayor Bowser committed the District to achieve carbon neutrality by 2050, with an intermediary goal of a 50% reduction in 2006 carbon emission levels by 2032.[22] In March 2019, Mayor Bowser signed into law the CleanEnergy Act. The CleanEnergy Act includes measures requiring renewable electric generation, funding climate research and analysis, electrifying the transportation sector, and authorizing the District's participation in regional climate initiatives.

Q. PLEASE DEFINE WHAT IT MEANS TO ACHEIVE CARBON NEUTRALITY.

A. Municipalities, states, and countries seeking to achieve carbon neutrality or "net zero" emissions reduce emissions from human activities to zero through a combination of energy efficiency, electrification, and clean-energy initiatives. Any remaining recalcitrant (i.e., hard to reduce) emissions are "offset" by investments in additional (i.e., would not occur otherwise) emission reduction projects. To offset remaining emissions, an equal amount of emissions would be removed through tree planting, out-of-jurisdiction energy conservation efforts and renewable energy projects, or other activities that would not otherwise occur without specific investment.

[22] DC Office of the Mayor, *Mayor Bowser Commits to Make Washington, DC Carbon-Neutral and Climate Resilient by 2050*, December 4, 2017, *available at* https://mayor.dc.gov/release/mayor-bowser-commits-make-washington-dc-carbon-neutral-and-climate-resilient-2050.

By 2050, the District must have net zero emissions. Any remaining D.C. emissions must be "offset" by additional emission reductions purchased from sources outside of the District.

Q. DO ANY OTHER PROGRAMS OR POLICIES SET PLANS OR TARGETS FOR THE DISTRICT'S GREENHOUSE GAS EMISSION REDUCTIONS?

A. Yes. In 2018, the DOEE developed the DC Action Plan as a roadmap for how the District plans to achieve its climate and clean energy goals.[23] The DC Action Plan identifies a total of 57 actions that need to happen prior to 2032 for the District to meet its ambitious greenhouse gas reduction goals.

Also in 2018, the Commission adopted the MEDSIS Vision and Guiding Principles to help inform the decision-making process in regards to making the District's energy delivery system more sustainable, well-planned, safe and reliable, secure, affordable, interactive, and non-discriminatory energy delivery system.[24] MEDSIS Guiding Principles include affordability and social equity (see Table 1).

[23] *The District of Columbia Climate and Energy Action Plan*, rel. August 2018, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/page_content/attachments/Clean%20Energy%20DC%20-%20Full%20Report_0.pdf ("DC Action Plan").

[24] *Formal Case No. 1130,* Order No. 19275.

Table 1. MEDSIS Guiding Principles

Principle	Description
Sustainable	Meet energy needs of present without compromising ability of future generations to meet their own needs
	Protect natural resources; reduce emissions and energy consumption
	Promote economic growth and innovation
	Promote social equity: Recognize impact of energy usage on daily life, strengthen community involvement, and provide equal access
Well-Planned	Poles and wires able to withstand high-impact event; optimal use of distributed energy resources; include stakeholder input
Safe & Reliable	Utility and distributed generation safe and reliable; data collection and sharing to update interconnection rules and and service options
Secure	Best-practice physical and cybersecurity protections and risk management
Affordable	**Distribution is just and reasonable and balances desires of customers and utilities**
Interactive	Interactive and flexible energy delivery system
Non-Discriminatory	Energy system open to competition, provides customer choice, and utilizes customer data to better serve customers; reduce or eliminate barriers to DERs

Source: *Formal Case No. 1130*, Order No. 19275, Attachment A.

The next phases of the Commission's grid modernization efforts are now known as "PowerPath DC", which adopts the Guiding Principles developed during the MEDSIS process. The Commission's staff proposed opinion and order filed on August 2, 2019 announced the launch of the PowerPath DC initiative and emphasized its important connection to the District's climate and clean energy goals:

> PowerPath DC reflects our vision for grid modernization and will replace MEDSIS. The goals of PowerPath DC include ensuring that our energy delivery system remains safe, reliable, and affordable while also becoming more sustainable, interactive, and secure. These goals are linked to the District of Columbia's energy and climate action policies as articulated in the Clean Energy DC Plan. Indeed, the District is positioned as a national leader in sustainability and environmental conservation, with the most aggressive renewable energy standards in the country, and has leadership dedicated to combating the effects of global climate change and realizing a clean energy future.

Formal Case No. 1130, Order No. 19984, at p. i.

Q. DOES THE DC ACTION PLAN INCLUDE ELECTRIFICATION OF FOSSIL FUEL HEATING?

A. Yes, the DC Action Plan calls for electrification to displace fossil fuel combustion: "[t]he share of end-use energy coming directly from electricity or fuels produced from electricity must increase from less than 20% in 2010 to over 50% in 2050, displacing fossil fuel combustion."[25]

Building energy use accounts for over 70% of District-wide emissions.[26] The DC Action Plan recognizes the importance of transitioning its energy system off of fossil fuels in order to reach its emission reduction targets and calls for the District to "shift away from fossil fuels for buildings (natural gas and fuel oil) and transportation (gasoline and diesel) while simultaneously decarbonizing its electricity supply" to achieve its ambitious greenhouse gas reduction goals.[27] The DC Action Plan points out that as the sole utilities in the District for their respective energy sources, "the electric utility Pepco and the natural gas provider Washington Gas are important stakeholders in a strategy that successfully achieves the District's long-term climate and energy targets."[28] The CleanEnergy Act codifies this Plan and calls for initiatives across the buildings, energy, and transportation sectors to achieve the District's greenhouse gas emission goals of a 50% reduction in District-wide emissions (compared to 2006 levels) by 2032 and carbon neutrality by 2050.

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[25] DC Action Plan 5.

[26] Department of Energy & Environment, *Greenhouse Gas Inventory*, *available at* https://doee.dc.gov/service/greenhouse-gas-inventories.

[27] DC Action Plan 24.

[28] *Id.* at 19.

The DC Action Plan includes electric heat pumps among the characteristics of high-performance buildings and recommends that the District update building codes to make heat pumps more feasible, promote conversion to electric heat pumps for deep retrofits, and support related training and certification for HVAC technicians.[29] The Plan specifically notes that "[n]atural gas and other carbon-intensive heating furnaces can be switched to a low-carbon energy source such as a high-efficiency electricity-based heat pump."[30]

The DC Action Plan also proposes several actions to improve energy efficiency across the District. The Plan notes that the District could significantly increase the effectiveness of its energy-efficiency programs "by targeting those buildings with the greatest potential for energy efficiency improvements."[31]

Q. PLEASE DEFINE GAS ENERGY EFFICIENCY.

A. The U.S. Energy Information Administration defines energy efficiency as "using technology that requires less energy to perform the same function."[32] Energy efficiency can also refer to energy conservation initiatives that reduce the overall demand for energy through behavioral changes. Thus, gas energy efficiency refers to measures or initiatives that result in less gas use to provide services—such as, space and water heating, cooking, or clothes drying.

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[29] *Id.* at 62, 67-68, 80, 116.

[30] *Id.* at 80.

[31] *Id.* at 81.

[32] U.S. Energy Information Administration, *Use of Energy Explained*, *available at* https://www.eia.gov/energyexplained/use-of-energy/efficiency-and-conservation.php.

Q. HAS THE DISTRICT SET ITS OWN GAS ENERGY-EFFICIENCY TARGETS?

A. Yes. At present, the District's gas energy-efficiency programs are administered by the DC Sustainable Energy Utility ("DCSEU"). In accordance with the CleanEnergy Act, the Commission formed a working group to develop metrics for electric and gas company energy-efficiency- and demand-response ("EEDR") programs, with the goal of establishing utility-led EEDR programs that are not duplicative of those now offered by the DCSEU.[33]

Prior to the CleanEnergy Act, DOEE established performance benchmarks for the DCSEU for the five-year period between FY2017-FY2021 (see Table 2). In FY2017, the DCSEU exceeded the Year-1 maximum target of 0.5%, achieving 0.6% savings. In FY2018, the DCSEU exceeded the cumulative Year-2 maximum target of 1.0%, achieving 1.2% savings. For FY2021, the DCSEU's cumulative gas energy-efficiency target is 2.5 to 3%.[34,35] (For reference, continuing the DCSEU's minimum pace of 0.5% annual incremental gas savings would add up to 8% in 2032 and 17% in 2050 before accounting for gradual retirement of measures over time.)

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[33] *Formal Case No. 1160, In the Matter of the Development of Metrics for Electric Company and Gas Company Energy Efficiency and Demand Response Programs Pursuant to Section 201(b) of the Clean Energy DC Omnibus Amendment Act of 2018*, ("*Formal Case No. 1160*"), filed October 3, 2019.

[34] D.C. Office of the Deputy Mayor for Planning and Economic Development, *Contract DOEE-2016-C-0002*. Awarded to Vermont Energy Investment Corporation, April 5, 2017, *available at* http://app.ocp.dc.gov/Award_attachments/CW51134_VermontEnergyInvestmentCorporationContractNoDOEE-2016-C-0002executedApril52017.pdf.

[35] NMR Group et. al., *Performance Benchmark Assessment of FY2018 DC Sustainable Energy Utility Programs*, submitted to the District of Columbia Department of Energy and Environment, June 25, 2019, *available at* https://doee.dc.gov/sites/default/files/dc/sites/ddoe/publication/attachments/DCSEU%20FY2018%20Performance%20Benchmarks%20Report%20-%20FINAL%20DRAFT.pdf.

Table 2. Performance Benchmarks for Reductions in Natural Gas Consumption FY2017-2021

	YEAR 1: Benchmark	YEAR 2: Cumulative Benchmark	YEAR 3: Cumulative Benchmark	YEAR 4: Cumulative Benchmark	YEAR 5: Cumulative Benchmark
Minimum Goal as percentage of 2014 weather-normalized consumption in the District	*0.25%*	*0.66%*	*1.2%*	*1.7%*	*2.5%*
Minimum Goal (therms)	852,565	2,250,770	4,092,310	5,797,438	8,525,645
Maximum Goal as percentage of 2014 weather-normalized consumption in the District	*0.5%*	*1%*	*2%*	*2%*	*3%*
Maximum Goal (therms)	1,705,129	3,410,258	5,115,387	6,820,516	10,230,774

Source: Reproduced from D.C. Office of the Deputy Mayor for Planning and Economic Development, *Contract DOEE-2016-C-0002* [Table C.3] at 41. Awarded to Vermont Energy Investment Corporation, April 5, 2017, *available at* http://app.ocp.dc.gov/Award_attachments/CW51134_VermontEnergyInvestmentCorporationContractNoDOEE-2016-C-0002executedApril52017.pdf.

It should also be noted that in its DC Action Plan, the District has set out to achieve a long-term energy savings target of a 50% reduction in District-wide energy use by 2032 (compared to 2012 levels).[36]

Q. DOES THE DISTRICT MAINTAIN A GREENHOUSE GAS EMISSIONS INVENTORY TO TRACK ITS PROGRESS TOWARDS THESE GOALS?

A. Yes. The DOEE maintains a greenhouse gas inventory that tracks the District's progress towards achieving its greenhouse gas emission goals.[37]

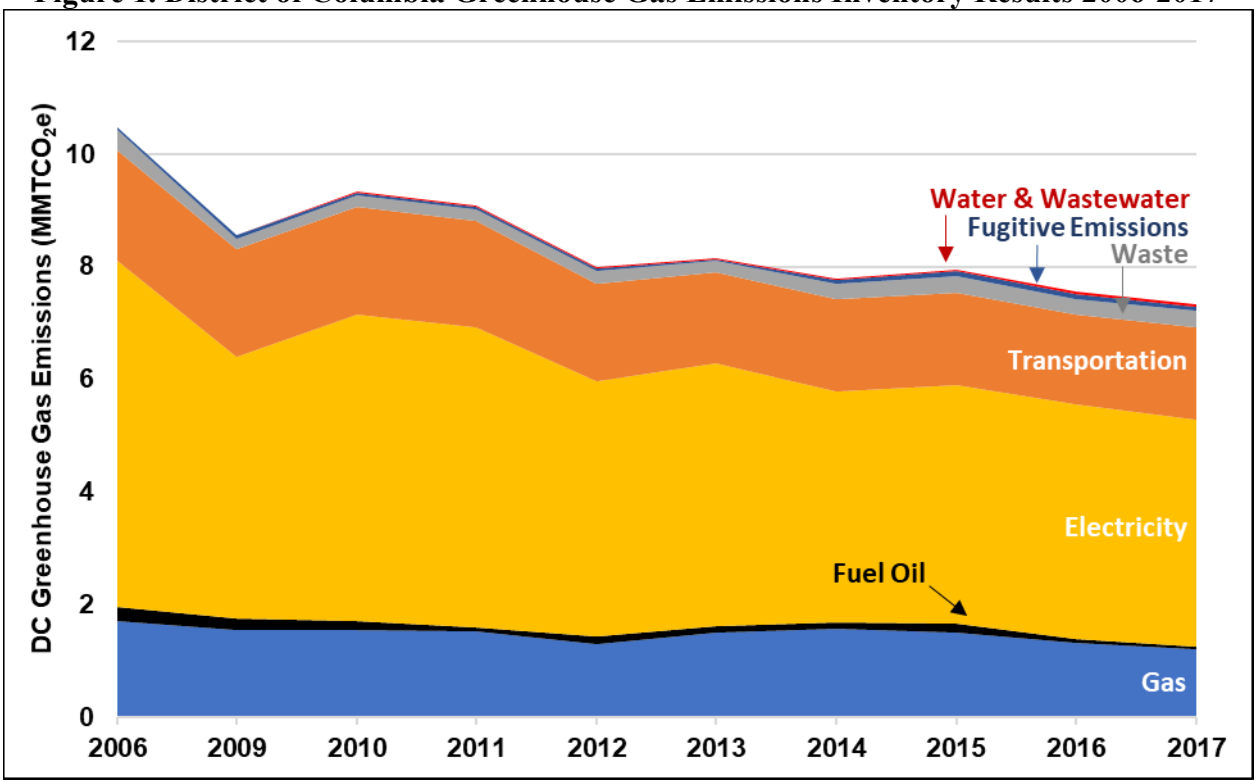
[36] *Formal Case No. 1160*, Energy Efficiency And Demand Response ("EEDR") Metrics Working Group Report ¶ 16, filed January 30, 2020.

[37] *See generally* Department of Energy & Environment, *Greenhouse Gas Inventories*, *available at* https://doee.dc.gov/service/greenhouse-gas-inventories (describing the DOEE's greenhouse gas inventories).

Q. HOW HAVE THE DISTRICT'S GREENHOUSE GAS EMISSIONS CHANGED SINCE ITS BASELINE YEAR OF 2006?

A. The District's greenhouse gas emissions have fallen from 10.5 million metric tons ("MMT") of carbon dioxide equivalents ("CO_2e") in 2006 down to 7.3 MMT in 2017, the last year for which emissions inventory data are available. This represents a 30% reduction (see Figure 1).[38] Two-thirds of this decline was accomplished by lowering emissions from the District's electric supply.

Figure 1. District of Columbia Greenhouse Gas Emissions Inventory Results 2006-2017



Data source: DOEE, 2016-2017 *Greenhouse Gas Inventory [Excel File]*, October 2019, *available at* https://doee.dc.gov/service/greenhouse-gas-inventories.

[38] DOEE, *2006-2017 Greenhouse Gas Inventory [Excel File]* ("*District of Columbia Greenhouse Gas Inventory*"), October 2019, *available at* https://doee.dc.gov/service/greenhouse-gas-inventories. *See* Exhibit OPC (F)-2 for calculations.

Q. WHAT PORTION OF THE DISTRICT'S GREENHOUSE GAS EMISSIONS IS ATTRIBUTABLE TO ITS GAS DISTRIBUTION SYSTEM?

A. WGL is the only gas distribution company operating in the District and as such is responsible for the entirety of D.C.'s gas system emissions. In 2006, the District's gas distribution system accounted for 16.3% (1.7 MMT) of District-wide greenhouse gas emissions.[39] By 2017, these emissions had been reduced to 1.2 MMT (a reduction of 0.5 MMT or 29%) and accounted for 16.5% of District-wide emissions.[40] The total MMT fell but the gas sector's share of total emissions rose: this is because the emissions of other sectors fell more quickly.[41]

Q. IS THE DISTRICT'S GAS DISTRIBUTION SECTOR RESPONSIBLE FOR ANY OTHER EMISSIONS?

A. Yes. In addition to the emissions attributed to gas use in the District's buildings, the gas distribution sector is also responsible for fugitive emissions that result from gas leaks, including: (1) leaks in the local distribution system (which are reported in the District's Greenhouse Gas Inventory) and (2) upstream leaks in gas extraction, storage, and transmission (which are not reported in the Inventory). In 2017 (the most recent year for which a D.C. Greenhouse Gas Emissions Inventory exists), fugitive emissions from leaks

[39] *District of Columbia Greenhouse Gas Inventory* (Citywide by Sector tab). *See* Exhibit OPC (F)-2 for calculations.

[40] *Id.*

[41] *Id.*

in the local distribution system accounted for 1.2% (0.1 MMT) of total District-wide emissions.[42]

Q. WHAT GAS LEAKAGE RATES WERE USED TO CALCULATE FUGITIVE EMISSIONS IN THE GREENHOUSE GAS INVENTORY?

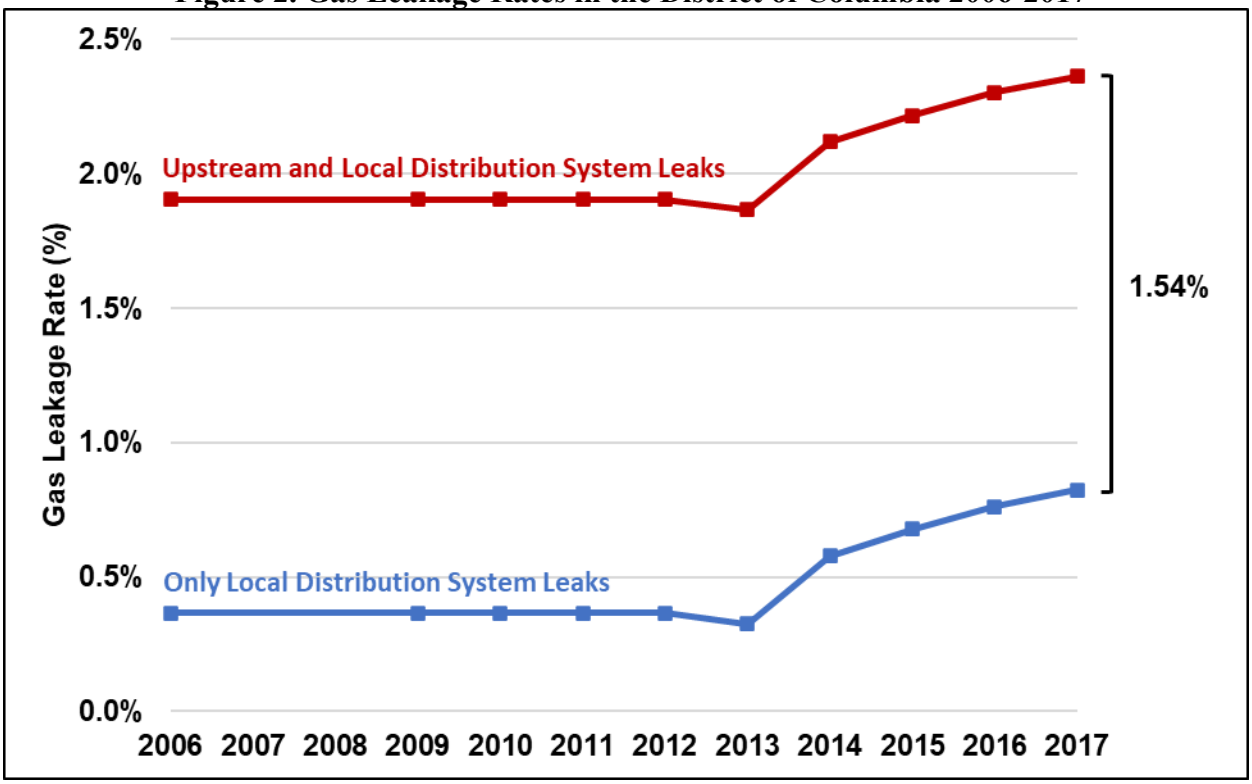
Prior to 2014, District-specific leakage rates were not available, which led DOEE to use the national default leakage rate of 0.3% in its Greenhouse Gas Inventory to include fugitive emissions from the local distribution system. As of 2014, WGL has provided (and, according to the District's Greenhouse Gas Inventory, plans to continue to provide), the District with local gas leakage data representing a local leak rate of 0.82% in 2017 (see Figure 2).[43] When added to the national average upstream methane leak rate of 1.54%,[44] total leaks of WGL gas on its way to customers amount to 2.4%.

[42] *See* "Citywide by Sector" in *District of Columbia Greenhouse Gas Inventory*, *supra* note 38.

[43] I assume that all reported fugitive emissions are methane emissions. Using the EPA's 100-year global warming potential ("GWP") of 25 for methane, I convert the amount of fugitive emissions in metric tons of CO_2e to metric tons of CH_4, and the amount of methane emissions to MMBtu (and therms) using the EPA's methane emission factor for gas. The leakage rate calculation takes the amount of fugitive gas (in MMBtu) and divides it by the sum of District-wide gas usage and fugitive gas. Source: U.S. EPA Center for Corporate Climate Leadership, *Emission Factors for Greenhouse Gas Inventories* (March 26, 2020), *available at* https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf.

[44] Bradbury, J., et al., *Clearing The Air: Reducing Upstream Greenhouse Gas Emissions From U.S. Natural Gas Systems* at 8(April 2013), *available at* http://pdf.wri.org/clearing_the_air_full.pdf.

Figure 2. Gas Leakage Rates in the District of Columbia 2006-2017



See Exhibit OPC (F)-2 for calculations.

Q. IS THE DISTRICT ENGAGED IN ANY OTHER REGULATORY OR ADMINISTRATIVE PROCESSES AIMED AT PLANNING A TRANSITION AWAY FROM FOSSIL FUELS AND TOWARDS CARBON NEUTRALITY?

The AltaGas/WGL Merger Settlement Agreement includes several commitments related to emission reductions. Climate-related merger commitments that are relevant in the 2019 test year for this rate case include:[45]

- Merger Commitment No. 76 – Climate Change Acknowledgement
- Merger Commitment No. 77 – DC Laws and Regulations on Climate Change

[45] *See Formal Case No. 1142*, Order No. 19396, Appendix A (Merger Commitments 3, 5, 6, 9, 61, 76, 77, 79, and 80).

Q. WHAT, SPECIFICALLY, DOES ALTAGAS COMMIT TO IN MERGER COMMITMENT NO. 76

A. In Merger Commitment No. 76, AltaGas acknowledges that climate change is a real and pressing issue that requires immediate action to avoid long-term climate impacts:

> AltaGas recognizes the scientific consensus that human activity – primarily GHG emissions and the conversion of land for agriculture and development – is contributing to changes in the global climate including changing weather patterns, rising sea levels and more extreme weather events. AltaGas believes that actions must be taken now to stabilize and reduce emissions in line with the international goal of preventing temperatures from rising more than two degrees Celsius by the end of this century. Climate change presents risks to AltaGas and its operations, but also provides it with an opportunity to be part of the solution. These factors underlie AltaGas's commitment to continued change and improvement in its operations, and provide an evolving portfolio of clean and renewable products and services to communities AltaGas serves.

Id. ¶ 76.

Q. WHAT, SPECIFICALLY, DOES ALTAGAS COMMIT TO IN MERGER COMMITMENT NO. 77

A. In Merger Commitment No. 77, AltaGas and WGL acknowledge the District's right to enact laws and regulations pertaining to the production and distribution of gas to address its climate-related goals:

> [AltaGas and WGL] recognize that the District of Columbia and the Government of the United States retain the full right to enact bona fide laws and regulations in relation to the production and distribution of natural gas and other carbon-based energy sources. Nothing in this Settlement Agreement or the Commission's orders restrict or alter these rights, or creates or implies any limitation on the District of Columbia or its agencies, or on the Government of the United States

> and its agencies, with respect to future measures in this regard. This includes measures to address climate change and other public interest issues such as air quality, and including the District's Sustainable DC Plan and Clean Energy Plan.

Id. ¶ 77.

Q. WHAT GUIDANCE HAS THE COMMISSION PROVIDED WITH REGARD TO CONSIDERING CLIMATE ISSUES IN THIS PROCEEDING?

A. The Commission has stated that it is mandated by the CleanEnergy Act to consider issues related to climate change in its proceedings, including this base rate case. Specifically, the Commission stated it is required by the CleanEnergy Act to review WGL's entire *Application* "to 'consider the public safety, the economy of the District, the conservation of natural resources, and the preservation of environmental quality, including effects on global climate change and the District's public climate commitments' in its proceedings, including the rate case."[46] In Order No. 20355, the Commission clarified that "the entire Application, not merely parts of the Application, will be evaluated according to the [CleanEnergy Act] standard."[47]

B. Context of WGL's Rate Case from a Climate Perspective

Q. HOW DO THE DISTRICT'S CLIMATE AND GREENHOUSE GAS EMISSION REQUIREMENTS APPLY TO WGL'S APPLICATION?

A. The District's climate and greenhouse gas emission regulations require a 50% decrease in District-wide emissions by 2032 (as well as carbon neutrality by 2050) and contemplate

[46] *Formal Case No. 1162*, Order No. 20314 ¶ 13 & n.30 (citing the CleanEnergy Act).

[47] *Formal Case No. 1162*, Order No. 20355 ¶ 18.

that the electrification of heating has an important role to play in this transition. The Mayor's emission reduction targets, the CleanEnergy Act, MEDSIS, the DC Action Plan, and AltaGas' Climate Acknowledgement commitment (Commitment Nos. 76 and 77) were all in effect in 2019, the test year for this rate case. Investments towards meeting these standards, actions towards emission reduction, plans for how to pay for these investments and actions, and proposals made by the Company associated with emission reductions in its *Application* should therefore be reviewed in relation to these District climate goals. As discussed below, the measures it claims to have undertaken have not been successfully implemented from a climate goal, safety, affordability, and equitability perspective. Pertinent questions addressed include whether ongoing, extensive pipe replacement programs have been demonstrated to have reduced leaks (and therefore methane emissions), whether the expenditures included in WGL's *Application* reflect a transition to low-greenhouse-gas emission heating options and efficiency measures to reduce the gas supply needed, and whether the RNA would advance energy-efficiency goals in a cost-effective and equitable manner (given the administration of the District's energy-efficiency programs by the SEU).

Q. HOW DO THE DISTRICT'S MEDSIS VISION AND GUIDING PRINCIPLES APPLY TO WGL'S APPLICATION?

A. The District's MEDSIS Guiding Principles on affordability and social equity referenced in Table 1 above, state that rates for distribution service must be just and reasonable and balance the desires of customers and utilities. As such, the MEDSIS Guiding Principles

apply directly to the WGL rate case in its impacts on all ratepayers, and, in particular, on low- and moderate-income customers. Specifically:

- **Affordability:** Gas heating bills are an important part of household budgets. Low- and moderate-income households are disproportionately affected by the cost of gas heating bills and often have to choose between heating their homes and putting food on the table.
- **Social Equity:** Unequal access to low-cost heating technologies and the credit needed to purchase this equipment are a greater burden for low- and moderate-income households.

Q. DO CHOICES MADE IN THIS RATE CASE IMPACT THE DISTRICT'S ABILITY TO MEET ITS CLIMATE GOALS AND IF SO HOW?

A. Yes, choices made in WGL's rate case do impact the District's ability to meet its climate goals. Under the CleanEnergy DC Act, the Commission should only approve an *Application* that supports the District's goals through significant actions to reduce emissions. Moreover, the Company acknowledged and expressed its agreement to further these goals by assenting to Merger Commitment Nos. 76 and 77.

As shown in the next section, if WGL is taking seriously its part in the District's transition to carbon neutrality it has failed to demonstrate this in its *Application*. Critical considerations for this and every future District rate case include the effectiveness of the actions and equitable allocation across customer classes and other stakeholders (such as utility shareholders and taxpayers) of costs associated with the transition to carbon neutrality. Any proposals made by the Company related to climate issues should thus be

reviewed through a lens of affordability, especially for low-income households and businesses.

C. Assessment of WGL's Application from a Climate Perspective

Q. DOES WGL'S *APPLICATION* DISCUSS HOW THE COMPANY IS ADDRESSING THE DISTRICT'S CLIMATE GOALS THAT ARE IMPACTED BY THIS PROCEEDING?

A. WGL's Direct Testimony did not contain any information on the Company's efforts during the test year to address climate goals. The most pertinent reference in the Direct Testimony on promoting the climate goals was within the context of the RNA proposal, which the Company claimed would "incentivize the Company to promote energy efficiency and conservation measures that support the [District's] climate goals."[48]

Upon the Commission's directive in Order No. 20338 for the Company to address climate change issues that are implicated in this *Application* in Supplemental Direct Testimony,[49] the Company provided limited information on its efforts to address the District's climate goals. Specifically, WGL's discussion of its actions to address the

[48] Exhibit WG (A)(O'Brien) at 7:5-9. The only other references in the Direct Testimony to the District's climate goals are in WGL Witness Hevert's Direct Testimony, where he references the impact of the CleanEnergy Act on WGL's ROE (Exhibit WG (C) (Hevert) at 3:22-4:4; 6:20-21; 26:16-17; 31:3-32:14; 45:22-46:1) and where he claims in support of the RNA that the declining sales volumes are brought on by energy efficiency (*Id.* at 27:6-11). In his Supplemental Direct Testimony, Mr. Hevert states that since a large number of entities in his proxy group have decoupling mechanisms, WGL is riskier than other companies. *Formal Case No. 1162*, Exhibit WG (2C) (Hevert) at 23:19-24:2. WGL Witness Tuoriniemi's Direct Testimony also mentions the increase in the rate per therm per the CleanEnergy Act. *Formal Case No. 1162*, Exhibit WG (D) (Tuoriniemi) at 47:25 n.38. In addition, in Exhibit WG (G)-8 at 18-20 (WGL Witness Raab provides a chart listing the current status of natural gas energy efficiency programs throughout the country and utilities with natural gas energy efficiency programs).

[49] *Formal Case No. 1162,* Order No. 20338 ¶ 20.

District's climate goals is limited to Witness Melissa Adams' statement that Washington Gas' "rate case Application directly addresses public safety and the District's public climate commitments through the Company's activity to address methane leaks in the District."[50] When asked what other ways its *Application* addresses the District's climate goals, Ms. Adams referenced the Company's "leak repair activities" and claimed that "the Company's rate case Application will help ensure the safe and dependable energy delivery that approximately 163,000 residents and businesses in the District depend upon."[51]

OPC also asked WGL to describe the "activity to address methane leaks" and leak repair activities in OPC Data Request No. 16-1(a). In its response, WGL stated that the Company's efforts were focused on the replacement of pipe and odor response, as described in the testimony of WGL Witness Price.[52] WGL Witness Price's Supplemental Direct Testimony provided very little in the way of details of its activities in this regard.[53]

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[50] Exhibit WG (L)(Adams) at 3:22-4:1. Ms. Adams' notes that WGL Witness Tuoriniemi identifies the test year leak repair expenses included in the cost of service in his Supplemental Direct Testimony. *Id.* at 4:3-5.

[51] *Id.* at 4:6-20.

[52] *See* WGL Response to OPC Data Request No. 16-1(a) (Exhibit OPC (F)-3) (stating "[t]he Company seeks to address methane leaks through the replacement of aging pipe and repairs and supporting work relating to odor response, leak identification, assessment and monitoring as described in the testimony of Witness Price.").

[53] *See* Exhibit WG (N) (Price) at 5:14-17 (noting WGL addresses leaks through its leak management activities associated with its on-going Operations and Maintenance activities as well as replacement work); 6:1-12 (noting that WGL responds to odor calls and states WGL has "included and proposed the further acceleration of a number of proactive programs for the replacement of the pipe material categories which have the highest leak rates," as described in the Company's PROJECT*pipes* 2 filing). WGL Witness Tuoriniemi also discussed Merger Commitment Term No. 3 (energy efficiency initiative costs in operating expense in the test year, but noted that WGL had not "**incurred** or included" any energy efficiency initiative costs in operating expense in the test year). *Formal Case No. 1162*, Exhibit WG (2D) (Tuoriniemi) at 29:9-30:11 (emphasis added). Mr. Tuoriniemi also discussed Merger Commitment Term Nos. 5 (grid energy storage or tier one renewable resources, which relates to activities "independent of Washington Gas") and

Q. HAS WGL ENGAGED IN ACTIVITIES OTHER THAN PIPE REPLACEMENT TO FURTHER THE DISTRICT'S CLIMATE GOALS?

A. Apparently not. In OPC Data Request No. 16-1(b), the Office asked WGL to elaborate on activities, other than leak repair and pipe replacement, that the Company is undertaking to address the District's climate commitments. WGL replied:

> No specific activities have been pursued due to the District's climate commitments. However, the Company has engaged in activities since 2008 to support its commitment to sustainability and the reduction of greenhouse gas emissions. Examples of such activities that reflect costs that are part of the overall cost of service in this case include:
>
> a. Goal setting, tracking, and reporting to support Washington Gas's sustainability targets.
>
> b. Voluntary participation in EPA's Natural Gas STAR and Methane Challenge programs.
>
> c. Participation in conferences, webinars, local climate committees and associations to learn about and advance strategies for emissions reductions, energy efficient equipment, supply decarbonization, and sustainable operating practices.
>
> d. Participation in our internal, "Emissions Commission" which considers technology, tactics, and equipment relating to emissions reduction.
>
> e. Use of drawdown compressors to capture methane prior to pipe repair or replacement and return it to the system upon completion of the job

WGL Response to OPC Data Request No. 16-1(b) (Exhibit OPC (F)-3). Essentially, WGL's list of activities related to decarbonization appear to amount to: (a) tracking the

6 (AltaGas payment of costs for study of development of renewable bio gas facilities), which efforts were not undertaken by WGL. *Id.* at 31:9-33:9.

Scorecard metrics discussed above in the testimony; (b) reporting any decarbonization efforts to EPA; (c) attending external meetings/conferences; (d) attending internal meetings; and (e) capturing methane in relation to pipe repairs. As such, by its own account, WGL's decarbonization efforts in addition to PROJECT*pipes* are tracking, reporting, and meeting.

Moreover, as WGL Witness Price stated in his Supplemental Direct Testimony, gas leaks "have continued to rise" as a result of the system's aging infrastructure, and this trend "has yet to be reversed by the Company's proactive replacement activities."[54] OPC Witness Walker describes in his Direct Testimony the concerns with WGL's performance in relation to leaks and leak rates that are not in line with current industry performance standards.[55] OPC Witnesses Walker and Bion Ostrander also detail the numerous issues identified by Liberty Consulting with respect to WGL's management of the PROJECT*pipes* replacement program.[56]

[54] Exhibit WG (N)(Price) at 5:11, 18-19. While WGL's June 12, 2020 response to OPC Data Request No. 16-2(b) references another activity undertaken by WGL to reduce the number of leaks, i.e., "gas conditioning through hexane injection," it appears from Mr. Price's testimony that this activity has not stopped the overall rise of gas leaks. WGL Response to OPC Data Request No. 16-2(b) (Exhibit OPC (F)-4).

[55] Exhibit OPC(D)(Walker) at 44:10–45:5.

[56] *See generally* Exhibit OPC(D)(Walker); *See also* Exhibit(A)(Ostrander) at 19:29-38 & 22:11–26:12.

Q. DOES WGL'S CORPORATE SCORECARD ADDRESS EMISSIONS REDUCTIONS, THE ADOPTION OF CLEAN ENERGY TECHNOLOGIES, OR THE DISTRIBUTION OF COSTS ASSOCIATED WITH A CLIMATE TRANSITION AS THEY APPLY TO THE QUALITY OF SERVICES PROVIDED BY THE COMPANY?

A. No. WGL Scorecards for 2015 to 2019 include only a category for "Sustainability" but do not mention any criteria specifically related to climate.[57] In OPC's Follow-Up Data Request No. 16-1(b) to the Company, the Office asked for more detailed descriptions and background materials regarding WGL's climate-related activities, including, among other things, in subpart (1) a detailed description of the activities and in subpart (2) copies of the associated plans or programs to which such activities were undertaken.[58] To these requests, WGL replied:

> 1) Our approach is to foster climate awareness and sustainable business practices throughout the Company. We have not conducted a study of every event/committee/webinar in which staff has participated.
>
> 2) During 2019, GHG emissions reduction activities were conducted to support the Sustainability Metric on our Corporate Scorecard for which all employees were collectively accountable. This metric is further discussed in Company Witness O'Brien's testimony and measures activities in four areas that affect greenhouse gas emissions; each weighted at 25 percent. These include:

[57] WGL Response to OPC Data Request 4-24(a), Attachment (Exhibit OPC (F)-5); WGL Supplemental Response to OPC Data Request 21-17, Attachment 1 (Exhibit OPC (F)-6).

[58] WGL Response to OPC Follow-up Data Request No. 16-1 (Exhibit OPC (F)-7).

- Installing energy efficiency measures at our facilities;
- Managing emissions from our vehicle fleet;
- Reducing fugitive GHG emissions through our pipeline replacement programs; and
- Tracking progress on recycling to waste ratios and telework avoided miles.[59]

In OPC's Follow-Up Data Request No. 21-15(a) to WGL, the Office asked WGL to "[p]lease explain if WGL measures its performance on activities intended to address the District of Columbia's climate goals, including compliance with the CleanEnergy Act, and if so please provide all supporting documentation."[60] WGL responded to this request by referring to the Testimony of Witness Melissa Adams, which does not address the question of performance metrics, and the response to subpart (c), which, in turn, referenced WGL's supplemental response to OPC Data Request No. 21-17, which, again, does not provide any supporting documentation for these metrics.[61]

OPC's Follow-Up Data Request No. 21-15 to WGL also asked the Company to "[p]lease state whether any of the Corporate Goals listed in the Scorecards account for and/or include measures intended to address the District of Columbia's climate goals, including, but not limited to, leak reduction (and provide information on both an Enterprise and Utility-Only basis for 2019)."[62] WGL responded:

> The Sustainability Metric for the Utility is a four (4) component metric which includes three elements that relate to our GHG emission reduction efforts; Pipeline Replacement, Facilities Projects, and Fleet Emissions. The fourth item is Culture, and it is

59 *Id.*

60 WGL Response to OPC Follow-up Data Request No. 21-15(a) (Exhibit OPC (F)-8).

61 *Id.* at (a) & (c).

62 *Id.* at (b).

> based on our Recycling rate and miles avoided through our Telework program.

Id. OPC Data Request No. 24-1 then asked a series of questions regarding the Scorecard's sustainability metric and the "Four GHG Areas" that WGL mentioned in its follow-up response to OPC Data Request 16-1(b).[63] WGL responded:

> The attached spreadsheet identifies each metric, the data utilized, and the calculation of results for the 2019 Sustainability metric used in the Corporate Scorecard. The metric pertains to Washington Gas and covers all jurisdictions served primarily because it is both meant to drive company-wide behavior and because some of the underlying metrics (e.g., fleet emissions and telework road miles avoided) do not lend themselves to jurisdictional reporting. Please see the attachment for the requested information for all subparts above.

WGL Response to OPC Data Request No. 24-1 (Exhibit OPC (F)-9). The spreadsheet provided by WGL explains the sustainability score designed by WGL, which combines together four scores of equal weight: pipeline emissions, buildings/facilities, fleet emissions, and culture (telework and recycling).

Of these four scores, only one measure (25% of the total sustainability score value) relates directly to actions taken towards reducing the District's greenhouse gas emissions. Some of the metrics counted under buildings/facilities, fleet emissions, telework, and recycling values may have some impact on WGL's own internal use of fossil fuels and therefore consequently a small impact on the District's emissions. WGL's internal culture of sustainability, however, is far from the main thrust of obligations on WGL to facilitate the reduction of gas distribution emissions throughout the District. Similarly, while

[63] WGL Response to OPC Data Request No. 24-1 (Exhibit OPC (F)-9).

WGL's first measure, money spent on pipeline replacement, is at least directly connected to efforts to reduce the District's gas distribution emissions, WGL's sustainability Scorecard measures place no value whatsoever on a reduction in its customers' gas use, an essential element in meeting the District's climate goals.

It is also worth noting that WGL awards itself a score of 97.2 percent on sustainability: perfect scores for pipeline emissions, buildings/facilities, fleet emissions, and telework, and around an 80% score for recycling. It is difficult to understand how WGL's Scorecard is useful as a tool to encourage and measure improvement in the Company's service over time when, by the standards of the flawed Scorecard metrics that the Company itself designed, WGL is already perfect (barring a need to recycle a little bit more).

WGL's pipeline emissions metric bases its perfect score on the Company having spent a minimum $149 million on pipeline replacement in 2019. While WGL has succeeded in spending ratepayers' money on pipe replacement, OPC Witness Walker explains that ratepayers are not receiving a benefit commensurate with the Company's capital expenditures.[64] In Mr. Walker's expert opinion, five-years of spending on pipe replacement should show results in the form of lower leak rates.[65] Leak rates on WGL's gas distribution system, however, have not declined. Fewer leaks should be the expected result of spending tens of millions of dollars each year replacing old pipes with new ones.

[64] Exhibit OPC(D)(Walker) at 6:10-7:18.

[65] Exhibit OPC(D)(Walker) at 44:17-18.

However, as Mr. Walker describes, leak rates declined in gas distribution systems around the United States while WGL's rate continues to grow.[66]

Q. HAVE YOU REVIEWED AND ANALYZED OTHER CORPORATE SCORECARDS?

A. Yes, I have reviewed and provided professional analysis of corporate scorecards and other similar metrics for dozens of energy companies around the United States.

Q. IN YOUR PROFESSIONAL OPINION, DO WGL'S PIPELINE EMISSIONS EFFORTS WARRANT A PERFECT SCORE?

A. No. In my opinion, WGL's pipeline emissions efforts do not warrant a perfect score. Based on OPC Witness Walker's thorough review of WGL's pipeline repair and replacement activities it would appear that the WGL gas distribution system is deteriorating over time. More generally, the practice of awarding high scores for spending more money less efficiently is, at best, counter-productive and, at worst, creates a perverse incentive to do a worse job—the more you spend the higher your score. WGL's sustainability metric for pipeline emissions does not appear to capture the Company's lack of progress in reducing pipeline emissions. A more accurate scoring system would compare WGL's success in reducing emissions to its own past leak rates (a requirement of lower leak rates each year) or to those of other similar companies. Using either of these proposed metrics, WGL's score would be very low indeed.

WGL Witness Price seems to recognize this failing:

> Despite this leak mitigating work, the system's aging and the resultant increased trend in leak occurrences has yet to be

[66] Exhibit OPC(D)(Walker) at 12:9 – 13:7.

> reversed by the Company's proactive replacement activities. The Company's ongoing accelerated replacement activities have no doubt avoided a significant number of leaks and associated greenhouse gas emissions, but more work remains to be accomplished.

Formal Case No. 1162, Exhibit WG (N) (Price) at 5:17-22.

The Commission should consider these deficiencies with the Company's Scorecard and direct WGL to improve upon its metrics so that they provide a more accurate reflection of the Company's progress in meeting the District's climate goals.

Q. IN ITS APPLICATION, DOES WASHINGTON GAS DESCRIBE THE DECARBONIZATION RISKS THAT THE COMPANY WILL FACE AS THE DISTRICT ACHIEVES ITS CLIMATE GOALS?

A. Yes. In his Direct Testimony, WGL Witness Robert Hevert discusses the risk of reduced customer demand that the Company faces as the District decarbonizes, specifically pointing out the elevated risk posed by the CleanEnergy Act.[67] Mr. Hevert notes that the gas utility sector will face reduced demand and be at risk for holding stranded assets as jurisdictions utilize electrification in an effort to reduce greenhouse gas emissions:

> [A]s states and local municipalities contemplate "deep decarbonization" of their economies as the electric grid becomes less carbon-intensive, policy-makers and environmental advocates are considering electrification as an option for further reducing greenhouse gas emissions. If successful, these policies could affect the natural gas utility sector by drastically reducing demand for natural gas, leaving natural gas utilities at risk of holding stranded assets.

[67] Exhibit WG (C) (Hevert) at 31-32.

Id. at 32:7-9. Mr. Hevert further claims that "the movement toward electrification raises the risk profile of natural gas distribution utilities since it not only limits future growth potential, but suggests a loss of existing natural gas load as well."[68]

Q. DO YOU AGREE WITH MR. HEVERT'S PROPOSAL TO TAKE INTO ACCOUNT DECARBONIZATION RISKS THAT THE COMPANY WILL FACE AS THE DISTRICT ACHIEVES ITS CLIMATE GOALS IN DETERMINING THE APPROPRIATE PLACEMENT OF THE RETURN ON INVESTMENT?

A. No. Mr. Hevert claims that the gas utility sector faces reduced demand and risk for holding stranded assets as jurisdictions utilize electrification in an effort to reduce greenhouse gas emissions. It is, however, incumbent upon the utility to plan adequately to meet the climate change goals. Consistent with the MEDSIS Guiding Principles of affordability and social equity, ratepayers should not have to pay WGL a premium to comply with the District's climate goals. Moreover, as OPC Witness O'Donnell notes in his testimony in this case, the decarbonization risks that Mr. Hevert describes in his testimony are not unique to WGL and, in fact, shared amongst all other gas utilities operating in jurisdictions with decarbonatization mandates.[69] These shared risks do not warrant an adjustment in the allowed return on equity.

[68] *Id.* at 32:7-9.

[69] Exhibit(B)(O'Donnell) at 21:2 – 22:9.

Q. DOES WGL'S APPLICATION CALL FOR A NEED FOR BENEFITS TO THE COMPANY TO COMPENSATE FOR THEIR CLAIMED DECARBONIZATION EFFORTS?

A. Yes. OPC Witness O'Donnell testified that WGL's requested ROE was excessive given the current condition of the financial market, and that the models and inputs used by the Company were biased, leading to an inflation of the ROE results. Mr. O'Donnell also points out several discrepancies between Mr. Hevert's opinions regarding the RNA and decarbonization.[70] In the case of the RNA, Mr. Hevert believes that without one, the Company's risks will be higher. In the case of decarbonization, Mr. Hevert cites a study from the American Gas Association, purporting to demonstrate that the entirety of the gas sector could be at risk from lower customer demand. Mr. O'Donnell points out that Mr. Hevert's statements would seemingly suggest that if WGL is facing a similar risk as to the whole industry, there is no difference in WGL's risks compared to those of another gas utility.[71] If WGL bears the same level of risk as other similar companies, there is no need to raise the ROE.

According to WGL, the RNA is needed in order to meet the District's climate goals and provide incentives for energy efficiency.[72] However, as WGL notes in response to OPC Data Request No. 16-5, WGL "has conducted no formal studies to determine the impact of the Company's proposed RNA on the District's climate goals and policies."[73]

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70 Exhibit OPC(B)(O'Donnell) at 21:2 to 22:9.

71 *Id.*

72 Exhibit WG (A)(O'Brien) at 3:16-18 and 7:5-9.

73 WGL Response to OPC Data Request No. 16-5 (Exhibit OPC (F)-10).

OPC Witness Dismukes' testimony discusses the Company's efforts to address emission reductions through the RNA with the intention of resolving a mismatch between fixed costs and revenues.[74] Dr. Dismukes' finds that the Company's proposed RNA suffers from several shortcomings that are clear obstacles to the RNA achieving its claimed benefits—including, a lack of any energy-efficiency benefits; a failure to demonstrate that current energy-efficiency efforts have had a negative financial impact; design problems; and a shift of risks without compensation.[75] As such, the RNA would not be consistent with the Guiding Principles discussed above.

V. CONCLUSION

Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

A. Based upon my review of WGL's *Application*, I conclude and recommend the following:

- In Merger Commitment Nos. 76 and 77, WGL agrees to meet the District's climate-related goals, including emission reductions, in an equitable and cost-effective manner, a responsibility that had already begun in 2019.
- The materials submitted by WGL do not sufficiently address or support the District's climate-related goals.
- WGL explains that its main effort towards decarbonization has been leak mitigation (primarily pipe replacement). The other climate-related actions described by WGL are tracking, reporting, and going to meetings. From this I conclude that WGL's only

[74] Exhibit OPC(E)(Dismukes) at 16:7 – 17:2.

[75] *See generally* Exhibit OPC(E)(Dismukes).

substantive actions towards greenhouse gas emissions reductions are pipe-replacement efforts.

- The Company's pipe-replacement efforts, however, appear to be failing. WGL is spending ratepayer money, but (unlike other jurisdictions around the United States) its leak rate is rising. These funds do not appear to be well spent.
- WGL rates its own performance on climate and other environmental standards using a sustainability metric that forms part of its Corporate Scorecard. At present, the Company gives itself high marks using a sustainability measure based on meeting the Company's own spending expectations on pipe-replacement spending, while ignoring both WGL's rising leak rates and the larger issue of emissions from gas usage. The Commission should direct WGL to improve its Scorecard metrics so as to more accurately reflect progress towards meeting the District's climate goals by including reductions in emissions from customers use of gas (including leak-related emissions, or emissions from the Company's own operational use of gas).
- WGL's *Application* does not provide evidence of progress in meeting the Company's greenhouse gas emissions reductions in furtherance of the District's Climate Goals in its test year, let alone in an equitable and cost-effective manner.

Q. DOES THIS COMPLETE YOUR PREFILED DIRECT TESTIMONY?

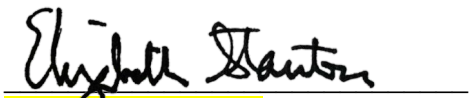
A. Yes, it does.

BEFORE THE
PUBLIC SERVICE COMMISSION
OF THE DISTRICT OF COLUMBIA

In the Matter of	§	
	§	
THE APPLICATION OF	§	
WASHINGTON GAS LIGHT	§	
COMPANY FOR AUTHORITY	§	**Formal Case No. 1162**
TO INCREASE EXISTING RATES	§	
AND CHARGES FOR GAS	§	
SERVICE		

AFFIDAVIT

I declare under penalty of perjury that the foregoing testimony was prepared by me or under my direction and is true and correct to the best of my knowledge, information, and belief.



[PRINTED NAME]

Date: August 13, 2020

Exhibit OPC (F)-1
Formal Case No. 1162
Witness: Stanton

Applied Economics Clinic
Economic and Policy Analysis of Energy, Environment and Equity

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PROFESSIONAL EXPERIENCE

Applied Economics Clinic, Arlington, MA. *Director and Senior Economist*, February 2017 – Present.

The Applied Economics Clinic provides technical expertise to public service organizations working on topics related to the environment, consumer rights, the energy sector, and community equity. Dr. Stanton is the Founder and Director of the Clinic (www.aeclinic.org).

Liz Stanton Consulting, Arlington, MA. *Independent Consultant*, August 2016 – January 2017.

Providing consulting services on the economics of energy, environment and equity.

Synapse Energy Economics Inc., Cambridge, MA. *Principal Economist*, 2012 – 2016.

Consulted on issues of energy economics, environmental impacts, climate change policy, and environmental externalities valuation.

Stockholm Environment Institute - U.S. Center, Somerville, MA. *Senior Economist*, 2010 – 2012; *Economist*, 2008 – 2009.

Wrote extensively for academic, policy, and general audiences, and directed studies for a wide range of government agencies, international organizations, and nonprofit groups.

Global Development and Environment Institute, Tufts University, Medford, MA. *Researcher*, 2006 – 2007.

Political Economy Research Institute, University of Massachusetts-Amherst, Amherst, MA. *Editor and Researcher – Natural Assets Project*, 2002 – 2005.

Center for Popular Economics, **University of Massachusetts-Amherst**, Amherst, MA. *Program Director*, 2001 – 2003.

EDUCATION

University of Massachusetts-Amherst, Amherst, MA

Doctor of Philosophy in Economics, 2007

New Mexico State University, Las Cruces, NM

Master of Arts in Economics, 2000

School for International Training, Brattleboro, VT

Bachelor of International Studies, 1994

AFFILIATIONS

Global Development and Environment Institute, Tufts University, Medford, MA.

Senior Fellow, Visiting Scholar, 2007 – Present

PAPERS AND REPORTS

Castigliego, J. and E.A. Stanton. 2020. *Planning for the Future: Massachusetts Cleans Up Its Heating.* Applied Economics Clinic. Prepared for Gas Leak Allies. [Online]

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Stanton, E.A. 2019. *Update to Pennsylvania Long-Term Renewables Contracts Benefits and Costs*. Applied Economics Clinic. Prepared for Mid-Atlantic Renewable Energy Coalition (MAREC). [Online]

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E.A. Stanton, S. Jackson, B. Biewald, M. Chang, J. Daniels, S. Fields, P. Knight, A. Napoleon, and K. Takahashi. 2014. *Internal briefing on Clean Power Plan implementation Illinois.* Prepared by Synapse Energy Economics for Sierra Club.

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Luckow, P., E.A. Stanton, B. Biewald, J. Fisher, F. Ackerman, and E. Hausman. 2013. *2013 Carbon Dioxide Price Forecast.* Synapse Energy Economics White Paper. [Online]

Stanton, E. A., S. Jackson, G. Keith, E. Malone, D. White, and T. Woolf. 2013. *A Clean Energy Standard for Massachusetts.* Prepared by Synapse Energy Economics for the Massachusetts Clean Energy Center and the Massachusetts Departments of Energy Resources, Environmental Protection, and Public Utilities. [Online]

Knight, P., E.A. Stanton, J. Fisher, and B. Biewald. 2013. *Forecasting Coal Unit Competitiveness: Coal Retirement Assessment Using Synapse's Coal Asset Valuation Tool (CAVT).* Prepared by Synapse Energy Economics for Energy Foundation. [Online]

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Exhibit OPC (F)-2
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Witness: Stanton

Exhibit OPC (F)-2

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Applied Economics Clinic
Economic and Policy Analysis of Energy, Environment and Equity

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Emissions & Leakage Rates	D.C. Greenhouse Gas Emissions Inventory and Leakage Rate Calculations 2006-2017
Library	Data and Assumptions Library
D.C. Greenhouse Gas Inventory	District of Columbia Greenhouse Gas Inventory 2016-2017: Citywide by Sector

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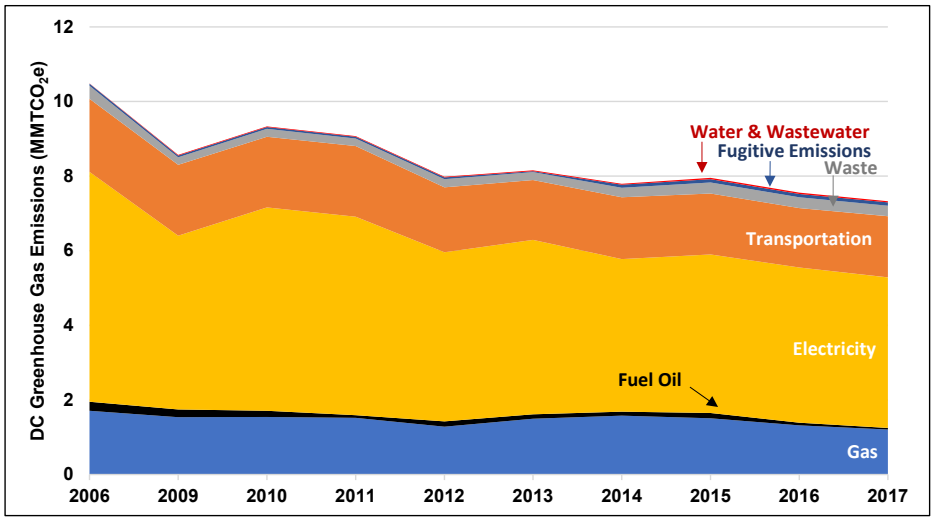
District of Columbia Greenhouse Gas Emissions Inventory Results 2006-2017



Greenhouse Gas Emissions ($MMTCO_2e$)	2006	2009	2010	2011	2012	2013	2014	2015	2016	2017	Emission Reduction from 2006 to 2017	Percent Reduction from 2006 to 2017	2006 Composition	2017 Composition
Buildings & Energy	8.1	6.4	7.2	6.9	6.0	6.3	5.8	5.9	5.6	5.3	2.83	35%		
Gas	1.7	1.5	1.5	1.5	1.3	1.5	1.6	1.5	1.3	1.2	0.50	29%	16.3%	16.5%
Electricity	6.2	4.7	5.4	5.3	4.5	4.7	4.1	4.2	4.2	4.0	2.13	35%	58.8%	55.1%
Fuel Oil	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.20	82%	2.3%	0.6%
Transportation	2.0	1.9	1.9	1.9	1.7	1.6	1.7	1.6	1.6	1.6	0.32	16%	18.7%	22.4%
Waste	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.07	20%	3.3%	3.8%
Fugitive Emissions	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	-0.03	-60%	0.5%	1.2%
Water & Wastewater	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.02	-305%	0.1%	0.5%
Total	**10.5**	**8.6**	**9.3**	**9.1**	**8.0**	**8.2**	**7.8**	**8.0**	**7.6**	**7.3**	**3.16**	**30%**		

Exhibit OPC (F)-2
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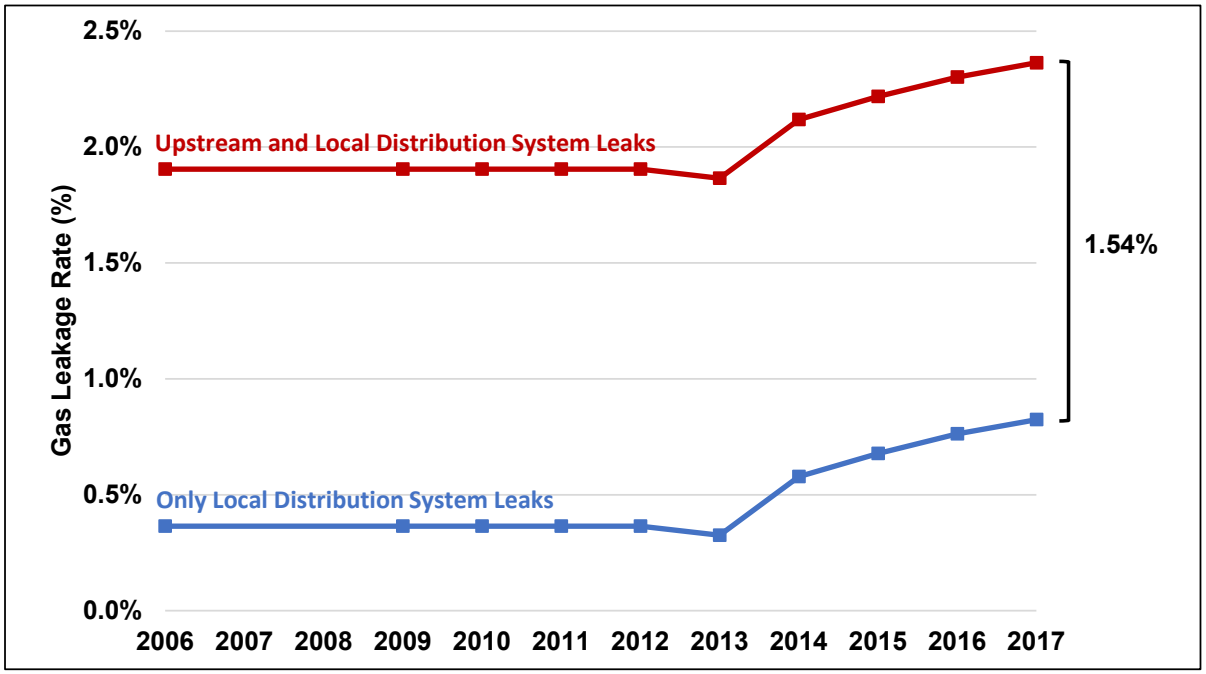
Gas Leakage Rates in the District of Columbia 2006-2017



MEDSIS Guiding Principles

Principle	Description
Sustainable	Meet energy needs of present without comprising ability of future generations to meet their own needs
	Protect natural resources; reduce emissions and energy consumption
	Promote economic growth and innovation
	Promote social equity: Recognize impact of energy usage on daily life, strengthen community involvement, and provide equal access
Well-Planned	Poles and wires able to withstand high impact event; optimal use of distributed energy resources; include stakeholder input
Safe & Reliable	Utility and distributed generation safe and reliable; data collection and sharing to update interconnection rules and and service options
Secure	Best-practice physical and cybersecurity protections and risk management
Affordable	**Distribution is just and reasonable and balances desires of customers and utilities**
Interactive	Interactive and flexible energy delivery system
Non-Discriminatory	Energy system open to competition, provides customer choice, and utilizes customer data to better serve customers; reduce or eliminate barriers to DERs

Source: Formal Case No. 1130, Order No. 19275, Attachment A.

Exhibit OPC (F)-2
Formal Case No. 1162
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Performance Benchmarks for Reductions in Natural Gas Consumption FY2017-2021

	YEAR 1: Benchmark	YEAR 2: Cumulative Benchmark	YEAR 3: Cumulative Benchmark	YEAR 4: Cumulative Benchmark	YEAR 5: Cumulative Benchmark
Minimum Goal as percentage of 2014 weather-normalized consumption in the District	*0.25%*	*0.66%*	*1.2%*	*1.7%*	*2.5%*
Minimum Goal (therms)	852,565	2,250,770	4,092,310	5,797,438	8,525,645
Maximum Goal as percentage of 2014 weather-normalized consumption in the District	*0.5%*	*1%*	*2%*	*2%*	*3%*
Maximum Goal (therms)	1,705,129	3,410,258	5,115,387	6,820,516	10,230,774

Source: Reproduced from D.C. Office of the Deputy Mayor for Planning and Economic Development, Contract DOEE-2016-C 0002 [Table C.3] at 41. Awarded to Vermont Energy Investment Corporation, April 5, 2017, available at: http://app.ocp.dc.gov/Award_attachments/CW51134_VermontEnergyInvestmentCorporationContractNoDOEE-2016-C-0002executedApril52017.pdf.

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District of Columbia Greenhouse Gas Emissions Inventory Results and Leakage Rate Calculations 2006-2017

Sector	Fuel	Category	Units	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Residential	Gas	Consumption	Therms	117,083,476			129,427,185	129,597,931	127,964,888	104,670,680	152,241,343	139,661,508	131,850,947	111,379,666	134,390,455
Residential	Gas	Consumption	MMBtu	11,708,348			12,942,719	12,959,793	12,796,489	10,467,068	15,224,134	13,966,151	13,185,095	11,137,967	13,439,046
Residential	Gas	GHG Emissions	MT CO_2	621,245			686,741	687,647	678,982	555,383	807,793	741,044	699,601	590,981	713,076
Residential	Gas	GHG Emissions	MT CH_4	12			13	13	13	10	15	14	13	11	13
Residential	Gas	GHG Emissions	MT N_2O	1			1	1	1	1	2	1	1	1	1
Residential	Gas	GHG Emissions	MTCO_2e	621,887			687,450	688,357	679,683	555,956	808,627	741,809	700,324	591,591	713,812
Non-Residential	Gas	Consumption	Therms	174,276,795			155,964,441	126,865,193	126,251,704	111,697,940	128,961,354	132,055,699	124,063,282	110,484,087	68,112,631
Non-Residential	Gas	Consumption	MMBtu	17,427,680			15,596,444	12,686,519	12,625,170	11,169,794	12,896,135	13,205,570	12,406,328	11,048,409	6,811,263
Non-Residential	Gas	GHG Emissions	MT CO_2	924,713			827,547	673,147	669,892	592,669	684,269	700,688	658,280	586,229	361,406
Non-Residential	Gas	GHG Emissions	MT CH_4	17			16	13	13	11	13	13	12	11	7
Non-Residential	Gas	GHG Emissions	MT N_2O	2			2	1	1	1	1	1	1	1	1
Non-Residential	Gas	GHG Emissions	MTCO_2e	925,668			828,402	673,842	670,583	593,281	684,976	701,411	658,960	586,834	361,779
GSA Federal Buildings	Gas	Consumption	Therms	29,928,048			3,498,616	33,760,846	31,321,848	24,999,981	0	25,030,199	27,889,945	25,792,667	24,420,193
GSA Federal Buildings	Gas	Consumption	MMBtu	2,992,805			349,862	3,376,085	3,132,185	2,499,998	0	2,503,020	2,788,995	2,579,267	2,442,019
GSA Federal Buildings	Gas	GHG Emissions	MT CO_2	158,798			18,564	179,135	166,194	132,650	0	132,810	147,984	136,856	129,574
GSA Federal Buildings	Gas	GHG Emissions	MT CH_4	3			0	3	3	2	0	3	3	3	2
GSA Federal Buildings	Gas	GHG Emissions	MT N_2O	0			0	0	0	0	0	0	0	0	0
GSA Federal Buildings	Gas	GHG Emissions	MTCO_2e	158,962			18,583	179,320	166,365	132,787	0	132,947	148,137	136,997	129,707
Buildings Sub-Total	Gas	Consumption	Therms	321,288,319			288,890,242	290,223,970	285,538,440	241,368,601	281,202,697	296,747,406	283,804,174	247,656,419	226,923,279
Buildings Sub-Total	Gas	Consumption	MMBtu	32,128,832			28,889,024	29,022,397	28,553,844	24,136,860	28,120,270	29,674,741	28,380,417	24,765,642	22,692,328
Buildings Sub-Total	Gas	GHG Emissions	MT CO_2	1,704,756			1,532,852	1,539,928	1,515,067	1,280,702	1,492,062	1,574,542	1,505,865	1,314,065	1,204,055
Buildings Sub-Total	Gas	GHG Emissions	MT CH_4	32			29	29	29	24	28	30	28	25	23
Buildings Sub-Total	Gas	GHG Emissions	MT N_2O	3			3	3	3	2	3	3	3	2	2
Buildings Sub-Total	Gas	GHG Emissions	MTCO_2e	1,706,516			1,534,435	1,541,519	1,516,632	1,282,024	1,493,603	1,576,168	1,507,420	1,315,422	1,205,298
Natural Gas Distribution	Gas	Fugitive Gas	Therms	1,174,591			1,056,148	1,061,024	1,043,894	882,414	917,936	1,727,047	1,936,562	1,902,336	1,884,822
Natural Gas Distribution	Gas	Fugitive Gas	MMBtu	117,459			105,615	106,102	104,389	88,241	91,794	172,705	193,656	190,234	188,482
Natural Gas Distribution	Gas	GHG Emissions	MT CO_2												
Natural Gas Distribution	Gas	GHG Emissions	MT CH_4	2,230			2,005	2,014	1,982	1,675	1,742	3,278	3,676	3,611	3,578
Natural Gas Distribution	Gas	GHG Emissions	MT N_2O												
Natural Gas Distribution	Gas	GHG Emissions	MTCO_2e	55,742			50,121	50,352	49,540	41,876	43,562	81,960	91,902	90,278	89,447
Natural Gas Distribution	Gas	Upstream Leakag	%	1.90%			1.90%	1.90%	1.90%	1.90%	1.87%	2.12%	2.22%	2.30%	2.36%
Natural Gas Distribution	Gas	Leakage Rate	%	0.36%			0.36%	0.36%	0.36%	0.36%	0.33%	0.58%	0.68%	0.76%	0.82%
Total	Gas	Volume	Therms	322,462,910			289,946,390	291,284,994	286,582,334	242,251,015	282,120,633	298,474,453	285,740,736	249,558,756	228,808,101
Total	Gas	Volume	MMBtu	32,246,291			28,994,639	29,128,499	28,658,233	24,225,102	28,212,063	29,847,445	28,574,074	24,955,876	22,880,810
Total	Gas	GHG Emissions	MT CO_2	1,704,756			1,532,852	1,539,928	1,515,067	1,280,702	1,492,062	1,574,542	1,505,865	1,314,065	1,204,055
Total	Gas	GHG Emissions	MT CH_4	2,262			2,034	2,043	2,010	1,699	1,771	3,308	3,704	3,636	3,601
Total	Gas	GHG Emissions	MT N_2O	3			3	3	3	2	3	3	3	2	2
Total	Gas	GHG Emissions	MTCO_2e	1,762,258			1,584,556	1,591,871	1,566,171	1,323,901	1,537,165	1,658,127	1,599,323	1,405,700	1,294,745

Reference Table 1: Energy Unit Conversions

Cubic Feet to Btu	1,036	Source: EIA. June 12, 2019. "Energy Conversion Calculators." Available at: https://www.eia.gov/energyexplained/units-and-calculators/energy-conversion-calculators.php
Therms to MMBtu	0.10	Source: https://www.eia.gov/tools/faqs/faq.php?id=45&t=8
Metric tons (tonnes) CH4	5.27E+07	Source: https://www.epa.gov/cmop/units-converter

Reference Table 2: Gas 100-Year GWP

Source: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4), 2007. See the source note to Table 11 for further explanation.

Gas	GWP
CH_4	25
N_2O	298

Reference Table 3: Emission Factors for GHG Inventories

Source: U.S. EPA. Center for Corporate Climate Leadership. 26 March, 2020. "Emission Factors for Greenhouse Gas Inventories." Available at: https://www.epa.gov/sites/production/files/2020-04/documents/ghg-emission-factors-hub.pdf

Fuel	mmBtu per scf	kg CO2 per mmBtu	g CH4 per mmBtu	g N2O per mmBtu	kg CO2 per scf	g CH4 per scf	g N2O per scf
Natural Gas	0.001026	53.06	1	0.1	0.05444	0.00103	0.0001

Reference Table 4: Total annual upstream leakage rate estimates for U.S. natural gas systems in 2010

Source: Bradbury, J., et al. April 2013. *Clearing the air: reducing upstream greenhouse gas emissions from U.S. natural gas systems* . World Resources Institute. p.8. Available at: http://pdf.wri.org/clearing_the_air_full.pdf

Upstream Leakage Rate	1.54%

Exhibit OPC (F)-2
Formal Case No. 1162
Witness: Stanton

Year		2006	2006	2009	2009	2010	2010	2011	2011	2012	2012	2013	2013	2014	2014	2015	2015
Sector	**Units**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**	**Consumption**	**MTCO2e**
Buildings & Energy																	
Residential																	
Gas	Therms	117,083,476	622,726	129,427,185	688,378	129,597,931	689,286	127,964,888	680,600	104,670,680	556,707	152,241,343	809,718	139,661,508	742,811	131,850,947	701,269
Electricity	KWh	1,836,662,611	953,793	2,275,888,699	982,916	1,891,782,070	863,711	1,844,708,642	842,219	1,799,281,788	703,796	1,830,231,894	715,902	1,830,231,894	692,733	2,251,246,581	852,085
Fuel Oil	Gallons	7,453,000	76,579	7,174,000	73,713	8,501,000	87,348	1,430,000	14,693	6,997,000	78,634	5,927,000	60,900	5,744,000	59,019	7,776,000	79,898
Residential Subtotal			**1,653,098**		**1,745,006**		**1,640,345**		**1,537,513**		**1,339,137**		**1,586,520**		**1,494,564**		**1,633,252**
Non-Residential																	
Gas	Therms	174,276,795	926,917	155,964,441	829,520	126,865,193	674,752	126,251,704	671,489	111,697,940	594,082	128,961,354	685,900	132,055,699	702,358	124,063,282	659,849
Electricity	KWh	8,868,544,055	4,605,501	7,474,300,868	3,228,017	8,962,725,502	4,092,018	8,788,054,820	4,012,271	8,429,127,614	3,297,084	8,763,938,273	3,583,942	8,052,405,370	3,058,921	8,074,979,252	3,056,338
Fuel Oil	Gallons	15,913,000	163,506	13,267,000	136,318	7,694,000	79,056	5,607,000	57,612	6,243,000	64,147	5,319,000	55,426	4,868,969	50,029	5,391,910	55,402
Kerosene	Gallons	115,000	1,175	5,000	379	4,000	41	15,000	153	-	-	1,000	10	3,000	31	-	-
Non-Residential Subtotal			**5,697,100**		**4,194,233**		**4,845,867**		**4,741,525**		**3,955,313**		**4,325,278**		**3,811,338**		**3,771,588**
GSA																	
Gas	Therms	29,928,048	159,177	3,498,616	18,608	33,760,846	179,562	31,321,848	166,590	24,999,981	132,966	-	-	25,030,199	133,127	27,889,945	148,337
Electricity	KWh	444,682,100	230,927	439,379,152	189,760	425,280,934	194,166	378,698,514	172,898	391,652,242	153,196	-	-	394,684,330	149,386	386,132,443	146,149
Fuel Oil	Gallons	-	-	-	-	-	-	-	-	-	-	-	-	17,031	175	597,090	6,135
GSA Subtotal			**390,104**		**208,368**		**373,728**		**339,488**		**286,162**	**-**	**-**		**282,688**		**300,621**
Grid Loss																	
Total Residential Electricity Used	kWh	-	61,720	-	57,206	-	50,268	-	49,017	-	64,538	-	65,648	-	34,429	-	42,349
Total Non-Residential Electricity Use	kWh	-	312,965	-	198,915	-	249,456	-	243,577	-	316,391	-	314,352	-	151,502		151,900
Buildings & Energy Subtotal			**8,114,986**		**6,403,728**		**7,159,664**		**6,911,120**		**5,961,541**		**6,291,798**		**5,774,521**		**5,899,710**
Transportation																	
Transit (Electricity)	KWh	252,649,007	176,819	267,719,913	115,622	258,833,928	117,606	259,743,799	118,587	258,379,063	101,065	276,503,272	108,154	316,848,573	119,946	318,592,316	120,584
Grid loss from transit (WMATA)	MT	-	8,490	-	6,729	-	6,878	-	6,902	-	9,268	-	9,918	53,745	5,961	54,041	5,993
Gasoline	VMT	3,211,586,924	1,359,636	3,196,707,983	1,399,208	3,182,152,499	1,397,470	3,161,774,820	1,395,080	3,454,548,362	1,534,911	3,465,239,274	1,389,025	3,559,816,308	1,426,989	3,527,723,898	1,393,536
Diesel	VMT	204,631,483	412,364	203,683,447	375,234	202,756,020	375,641	201,457,623	373,255	93,155,380	93,528	93,443,671	93,797	88,911,691	103,569	96,639,095	114,422
Transportation Subtotal			**1,957,309**		**1,896,793**		**1,897,594**		**1,893,824**		**1,738,772**		**1,600,894**		**1,656,465**		**1,634,535**
Waste																	
Landfill	Tons	800,000	350,482	545,974	126,266	563,011	130,206	538,523	124,542	636,513	147,204	613,920	141,979	609,134	188,346	652,841	226,083
Incineration	Tons	-	-	217,626	75,431	224,417	77,785	226,732	78,588	212,171	73,541	206,521	71,582	193,999	67,242	195,865	67,889
Compost	Tons	-	-	-	-	-	-	-	-	-	-	-	-	5,276	367	5,283	368
Waste Subtotal			**350,482**		**201,697**		**207,991**		**203,130**		**220,745**		**213,561**		**255,955**		**294,340**
Fugitive Emissions																	
Natural Gas Distribution	Therms	321,288,319	55,742	288,890,242	50,121	290,223,970	50,352	285,538,440	49,540	241,368,601	41,876	281,202,697	43,562	296,747,406	81,960	283,804,174	91,902
Fugitive Emissions Subtotal			**55,742**		**50,121**		**50,352**		**49,540**		**41,876**		**24,525**	**-**	**81,960**		**91,902**
Water & Wastewater																	
Process Emissions			8,165		15,356		18,075		17,417		21,462		21,925		23,091		30,427
Water & Wastewater Subtotal			**8,165**		**15,356**		**18,075**		**17,417**		**21,462**		**21,925**		**23,091**		**30,427**
TOTAL			**10,486,684**		**8,567,695**		**9,333,677**		**9,075,031**		**7,984,396**		**8,152,703**		**7,791,992**		**7,950,915**

Exhibit OPC (F)-3
Formal Case No. 1162
Witness: Stanton

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. 16

QUESTION NO. 16-1

Q. **Activities to Support the District's Climate Commitments.** Please refer to Ms. Adams' Supplemental Direct Testimony (Exhibit WG (L) at page 3, line 11 to 4, line 5, which in response to the question on how the Company's rate case application addresses the District's climate commitments, states that the Company does so "through the Company's activity to address methane leaks in the District." Please also refer to Ms. Adams' Supplemental Direct Testimony, at page 4, lines 6-20, which in response to the question on what other way does WGL's rate case application address the District's climate commitments, states in pertinent part that the Company's rate case application "supports leak identification and remediation, through its leak repair activities, and allows the Company to help the District meet its climate commitments."

a. Please describe the "activity to address methane leaks" and the "leak repair activities" referenced in the quoted text above.

b. Other than the activities described in (a), are there are any other activities that WGL is undertaking to address the District's climate commitments that are pertinent to this rate case application?

WASHINGTON GAS'S RESPONSE 06/12/2020

A.

a. The Company seeks to address methane leaks through the replacement of aging pipe and repairs and supporting work relating to odor response, leak identification, assessment and monitoring as described in the testimony of Witness Price.

b. No specific activities have been pursued due to the District's climate commitments. However, the Company has engaged in activities since 2008 to support its commitment to sustainability and the reduction of greenhouse gas emissions. Examples of such activities that reflect costs that are part of the overall cost of service in this case include:

a. Goal setting, tracking, and reporting to support Washington Gas's sustainability targets.
b. Voluntary participation in EPA's Natural Gas STAR and Methane Challenge programs.
c. Participation in conferences, webinars, local climate committees and associations to learn about and advance strategies for emissions reductions, energy efficient equipment, supply decarbonization, and sustainable operating practices.
d. Participation in our internal, "Emissions Commission" which considers technology, tactics, and equipment relating to emissions reduction.
e. Use of drawdown compressors to capture methane prior to pipe repair or replacement and return it to the system upon completion of the job.

SPONSOR: Melissa Adams
Chief Corporate Social Responsibility Officer

Exhibit OPC (F)-4
Formal Case No. 1162
Witness: Stanton

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. 16

QUESTION NO. 16-2

Q. Climate Impacts of Gas Leak Repair. Please refer to WGL Witness Mr. Price's Supplemental Direct Testimony (Exhibit WG (N)) at page 5, lines 11-23, which provides: "Leak instances have continued to rise . . . . These leaks represent the aggregate resultant behavior of a number of different piping materials in service, which continue to age . . . . Despite this leak mitigation work, the system's aging and the resultant increased trend in leak occurrences has yet to be reversed by the Company's proactive replacement activities. The Company's ongoing accelerated replacement activities have no doubt avoided a significant number of leaks and associated greenhouse gas emissions, but more work remains to be accomplished. This has been detailed in the Company's PROJECT*pipes* 2 filing made in Formal Case No. 1154."

a. Please describe the "ongoing accelerated replacement activities" to which Mr. Price is referring.

b. Other than replacement, did WGL consider alternative activities that would reduce the number of leaks being experienced? If so, please describe the alternatives considered.

c. Do the expected emission reductions from leak repair depend on the choice of scenario action plans in AltaGas' Climate Business Plan?

d. Has AltaGas or WGL investigated the costs associated with any necessary upgrades to accommodate renewable natural gas or hydrogen in the District's gas supply? If yes, please provide all associated materials.

WASHINGTON GAS'S PARTIAL OBJECTION 05/29/2020

Washington Gas objects to subparts (c) and (d) of this request on the grounds that they seek information that is irrelevant to this proceeding. Matters pertaining to the Climate Business Plan are outside the scope of this case.

WASHINGTON GAS'S RESPONSE 06/12/2020

A. a. Accelerated replacement pursuant to PROJECT*pipes*.

b. Washington Gas undertakes gas conditioning through hexane injection, which mitigates the effect of dry gas on coupled pipe.

c. See the objection above.

d. See the objection above.

SPONSOR: Stephen J. Price
AVP – Safety, Quality and Systems Protection

Exhibit OPC (F)-5
Formal Case No. 1162
Witness: Stanton

Exhibit OPC (F)-5
Formal Case No. 1162
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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. 4

QUESTION NO. 4-24

Q. Corporate Scorecard. Witness O'Brien Exhibit WG (A)-1 shows the 2018 Corporate Scorecard. Please provide the following:

a. Provide the Corporate Scorecards (including targets and actual results) for the periods 2015 to 2019. The "actual" results for 2019 do not appear to have been provided in Exhibit WG (A)-1), so these actual results should be provided, or explain when 2019 actual results will be available (and provide these results when available).
b. Explain how these Scorecards for each year impact the amount of employee-based and financial-based performance measures/goals that are reflected in the STI and LTI expenses from year-to-year.
c. Identify which Corporate Goals are "financial-based" and which are "employee-based" for each period 2015 to 2019, and explain the rationale for these conclusions, and explain if 'Merger Commitments" and "Supply chain Savings" are considered to be "financial-based" or "employee-based" (and explain why).
d. Provide the 2020 Corporate Scorecard Targets for each Corporate Goal (although it is understand that 2020 actual results are not yet available), or explain when the 2020 Corporate Scorecard Targets will become available (and provide these targets when available).
e. Explain why the FY19 Target is for 15 months, and explain if this is to take into consideration the change from a September fiscal year-end to a December fiscal year-end for 2019 and going-forward.
f. Explain why the 2019 Target at Exhibit WG (A)-1 is split between "Enterprise" and "Utility Only", and explain if 2019 is the first year for splitting the target and results. Also, provide supporting documentation which explain which entities make-up "Enterprise" versus "Utility Only" targets and results, and explain how these targets are determined for "Enterprise" versus "Utility Only."
g. Explain the reasons for the changes in the "Target" amounts and percentages for each Corporate Goal from year-to-year, and provide Company documents which explain and authorize these changes.

h. Explain and show how the Corporate Scorecard "Target" amounts and percentages for each Corporate Goal compare to the "market" for similarly sized and situated utility companies, or otherwise explain if the Targets are influenced in any manner by the market (and explain why or why not).

WASHINGTON GAS'S RESPONSE 04/06/2020

A. a. Please see the Attachment "OPC 4-24(a) 2015 to 2018 Scorecards". Currently, the Scorecard for CY2019 has not been finalized for publication.

b. The Corporate Scorecard results, based on both metric weighting and results, are used to calculate the corporate factor used for STI expenses.

c. Financial based goals consist of Utility ROE and Non-Utility EDITDA. All others are employee-based.

d. The 2020 Corporate Scorecard Targets are not available at this time.

e. Yes, the change from a September fiscal year-end to a December fiscal year-end for 2019 was the reason for the change.

f. 2019 was the first year for spitting the goals based on the pending acquisition by AltaGas. Utility only includes only the Washington Gas Utility while Enterprise includes Utility and Non-Utility.

g. Target amounts and percentages are reviewed and adjusted every year based on current information and anticipated changes by internal / external factors.

h. The Company has not conducted such a study.

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

Corporate Scorecard: FY15 results

Corporate Goal	FY2015 Target*	FY2015 Actual	FY15 Weights
Safe Delivery			
Employee Work Safety	≤ 1.30 DART rate	0.57	10.0%
System Safety/ Pipeline Integrity	≥ 100%	107.8%	10.0%
Performance Improvement			
O&M/Customer	$275	$281	5.0%
Construction Unit Cost	≤ 100%	67.8%	5.0%
Customer Value			
New Meter Additions	≥ 14,500	12,099	5.0%
Customer Engagement	≥ 80%	100%	5.0%
Customer Information System	≥ 90%	101%	5.0%
Customer Satisfaction	≥ 89%	89.3%	10.0%
Supplier Diversity			
Supplier Diversity	≥ 20%	26.3%	5.0%
Employer of Choice			
Employee Engagement	At or above Towers Watson national norm	88%	5.0%
Community Involvement	≥ 10,500 volunteer hours	12,866 hours	5.0%
Reliable Supply			
System Reliability	≤ 60 outages/ 100,000 meters	62.4 outages/ 100,000 meters	5.0%
Sustainability			
Sustainability	95%	95.6%	5.0%
Financial Performance			
Utility ROE	≥ 9.57%	10.5%	10.0%
Non-Utility Adjusted EBIT	≥ 100%	143.5%	10.0%

** For disclosure purposes, established targets should not be construed as financial guidance and do not necessarily represent the most recent financial guidance that may have been provided to the public.*

Corporate Scorecard: FY16 results, FY17 targets

Corporate Goal	FY2016 Target*	FY2016 Actual	FY2017 Target*	FY17 Weights
Safe Delivery				
Employee Work Safety	≤ 1.00 DART rate	0.85	≤ 0.90 DART rate	10.0%
System Safety/ Pipeline Integrity	≥ 100%	106.4%	≥ 100%	10.0%
Performance Improvement				
O&M/Customer	$273	$283	$287 Maintain O&M at or below budget.	6.25%
Customer Value				
Customer Satisfaction	≥ 87.5%	79.8	≥ 84.0%	10.0%
Utility Customer Revenue Growth	≥ $8.9 million	$9.3 million	≥ $10.0 million	6.25%
Customer Information System	≥ 90.0%	96.0%	N/A This metric is being removed as the project goes live in FY17.	N/A
Service Level Achievement (SLA) of Key Contracts	N/A	N/A	≥ 90.0%	6.25%
Supplier Diversity				
Supplier Diversity	≥ 23%	29.3%	≥ 25%	6.25%
Sustainability				
Sustainability	≥ 95%	99.7%	≥ 90%	6.25%
Employee Engagement	≥ 96.0%	100.0%	At or above CEB national norm	6.25%
Community Involvement	≥ 11,250 volunteer hours	12,283 hours	≥ 11,500 volunteer hours	6.25%
Reliable Supply				
System Reliability	≥ 99.7%	99.85%	≥ 99.7%	6.25%
Financial Performance				
Utility ROE	≥ 9.57%	9.92%	≥ 9.60%	10.0%
Non-Utility Adjusted EBIT	≥ 100%	115.0%	≥ 100%	10.0%

** For disclosure purposes, established targets should not be construed as financial guidance and do not necessarily represent the most recent financial guidance that may have been provided to the public.*

Exhibit OPC (F)-5
Formal Case No. 1162
Witness: Stanton

FY17 Corporate Scorecard: Year End

Corporate Goal	FY2017 Target*	FY2017 Actual	FY2018 Target*	FY18 Weights
Safe Delivery				
Employee Work Safety	≤ 0.90 DART rate	1.30	≤ 0.90 DART rate	10.0%
System Safety/ Pipeline Integrity	≥ 100%	107.2%	≥ 100%	10.0%
Performance Improvement				
O&M/Customer	≤ $287	$285	≤ $285 Maintain O&M at or below budget.	6.25%
Customer Value				
Customer Satisfaction	≥ 84.0%	85.3%	≥ 85.0%	10.0%
Utility Customer Revenue Growth	≥ $10.0 million	$10.01 million	N/A	N/A
New Meter Additions	N/A	N/A	≥ 12,500	6.25%
Service Level Achievement (SLA) of Key Contracts	≥ 90.0%	94.1%	≥ 90.0%	6.25%
Supplier Diversity				
Supplier Diversity	≥ 25.0%	25.7%	≥ 26%	6.25%
Sustainability				
Sustainability	≥ 90.0%	96.3%	≥ 95.0%	6.25%
Employee Engagement	At or above Gartner national norm of 72%	82.0%	≥ 96.0%	6.25%
Community Involvement	≥ 11,500 volunteer hours	12,552 hours	≥ 12,000 volunteer hours	6.25%
Reliable Supply				
System Reliability	≥ 99.7%	99.71%	≥ 99.7%	6.25%
Financial Performance				
Utility ROE	≥ 9.46%	9.48%	≥ 9.46%	10.0%
Non-Utility Adjusted EBIT	≥ 100%	92.0%	≥ 100%	10.0%

** For disclosure purposes, established targets should not be construed as financial guidance and do not necessarily represent the most recent financial guidance that may have been provided to the public.*

Exhibit OPC (F)-5
Formal Case No. 1162
Witness: Stanton

FY18 Corporate Scorecard: Year End

Corporate Goal	FY18 Target*	FY18 Actual	FY19 (15 Month) Target* (Enterprise)	FY19 (15 Month) Target* (Utility Only)	FY19 Weights
Safe Delivery					
Employee Work Safety	≤ 0.90 DART rate	1.71	≤ 1.50	≤ 1.50	10.0%
System Safety/ Pipeline Integrity	≥ 100%	110.0%	≥ 100%	≥ 100%	10.0%
Performance Improvement					
O&M/Customer (non-GAAP)	≤ $285	$292	TBD	TBD	5.0%
Merger Commitments	NA	NA	≥ 95%	≥ 95%	5.0%
Supply Chain Savings	NA	NA	≥ 75% of savings determined as realized	≥ 75% of savings determined as realized	5.0%
Customer Value					
Customer Satisfaction	≥ 85.0%	87.4%	≥ 86.8%	≥ 86.8%	10.0%
New Meter Additions	≥ 12,500	12,581	≥ 16,000	≥ 16,000	5.0%
Service Level Achievement (SLA) of Key Contracts	≥ 90.0%	92.7%	≥ 92.0%	≥ 92.0%	5.0%
Supplier Diversity					
Supplier Diversity	≥ 26%	26.1%	≥ 26%	≥ 26%	5.0%
Sustainability					
Sustainability	≥ 95%	98.3%	≥ 95%	≥ 95%	5.0%
Employee Engagement	≥ 96%	100%	At or above national norm	At or above national norm	5.0%
Community Involvement	≥ 12,000 volunteer hours	14,005 hours	≥ 15,920	≥ 15,055	5.0%
Reliable Supply					
System Reliability	≥ 99.7%	99.91%	≥ 99.61%	≥ 99.61%	5.0%
Financial Performance					
Utility ROE	≥ 9.46%	9.56%	≥ 9.54%	≥ 9.54%	10.0%
Non-Utility Adjusted EBIT	≥ 100%	79%	≥ 100%	NA	10.0%

** For disclosure purposes, established targets should not be construed as financial guidance and do not necessarily represent the most recent financial guidance that may have been provided to the public.*

Exhibit OPC (F)-6
Formal Case No. 1162
Witness: Stanton

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. 21

QUESTION NO. 21-17

Q. **2019 and 2020 Scorecard.** Address the following regarding the 2019 and 2020 Corporate Scorecards.

a. Provide the 2019 Scorecard results, or explain when these results will be available.

b. Provide the 2020 Scorecard targets, or explain when these will be available.

c. For 2015 to 2019, provide Scorecard results by jurisdiction and for each corporate entity/affiliate, along with underlying calculations and documentation.

WASHINGTON GAS'S PARTIAL OBJECTION **06/05/2020**

Washington Gas objects to subpart (c) of this request to the extent it seeks information pertaining to the Company's affiliates, as such information is beyond the scope of this Commisson's jurisdication and, therefore, irrelevant to this proceeding. The Company will provide its Scorecard results for the years requested.

WASHINGTON GAS'S RESPONSE 06/19/2020

A. (a) The Scorecard for CY2019 has not been finalized for publication. The CY2019 Scorecard will be provided when it is available.

(b) The 2020 Corporate Scorecard Targets are not available at this time.

(c) Scorecards are not prepared on a jurisdictional basis. See the response to OPC DR 4-24 for Washington Gas's available Scorecards for the requested years.

SPONSOR: John D. O'Brien
Executive Vice President, Strategy and Public Policy

WASHINGTON GAS'S SUPPLEMENTAL RESPONSE 07/06/2020

A. (a) See Attachment 1.

(c) See **CONFIDENTIAL** Attachments 2 through 6.

SPONSOR: John D. O'Brien
Executive Vice President, Strategy and Public Policy

FY19 Corporate Scorecard: Year End (15 months)

Corporate Goal	CY19 (15 Month) Target* (Enterprise)	CY19 (15 Month) Actual* (Enterprise)	CY19 (15 Month) Target* Utility Only)	CY19 (15 Month) Actual* (Utility Only)	FY19 Weights
Safe Delivery					
Employee Work Safety	≤ 1.50	1.34	≤ 1.50	1.43	10.0%
System Safety/ Pipeline Integrity	≥ 100%	110.3%	≥ 100%	110.3%	10.0%
Performance Improvement					
O&M/Customer (non-GAAP)	≤$390	$403.71	≤$390	$403.71	5.0%
Merger Commitments	≥ 95%	100%	≥ 95%	100%	5.0%
Supply Chain Savings	≥ 75% of savings	84%	≥ 75% of savings determined as realized	84%	5.0%
Customer Value					
Customer Satisfaction	≥ 86.8%	89.3%	≥ 86.8%	≥ 89.3%	10.0 %
New Meter Additions	≥ 16,000	15,114	≥ 16,000	15,114	5.0%
Service Level Achievement (SLA) of Key Contracts	≥ 92.0%	93.0%	≥ 92.0%	92.0%	5.0%
Supplier Diversity					
Supplier Diversity	≥ 26%	26.1%	≥ 26%	26.1%	5.0%
Sustainability					
Sustainability Employee Engagement	≥ 95%	97.2%	≥ 95%	97.2%	5.0%
	At or above national norm of 65%	72%	At or above national norm of 65%	72%	5.0%
Community Involvement	≥ 15,920 hours	16,114.5 hours	≥ 15,055 hours	15,839.5 hours	5.0%
Reliable Supply					
System Reliability	≥ 99.61%	99.69%	≥ 99.61%	99.69%	5.0%
Financial Performance					
Utility ROE	≥ 9.41%	6.48%	≥ 9.41%	6.48%	10.0%
Non-Utility Adjusted EBIT	≥ 100%	58%	NA	NA	10.0%

** For disclosure purposes, established targets should not be construed as financial guidance and do not necessarily represent the most recent financial guidance that may have been provided to the public.*

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

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WASHINGTON GAS'S RESPONSE
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OPC DATA REQUEST NO. 16

QUESTION NO. 16-1

Q. **Activities to Support the District's Climate Commitments.** Please refer to Ms. Adams' Supplemental Direct Testimony (Exhibit WG (L) at page 3, line 11 to 4, line 5, which in response to the question on how the Company's rate case application addresses the District's climate commitments, states that the Company does so "through the Company's activity to address methane leaks in the District." Please also refer to Ms. Adams' Supplemental Direct Testimony, at page 4, lines 6-20, which in response to the question on what other way does WGL's rate case application address the District's climate commitments, states in pertinent part that the Company's rate case application "supports leak identification and remediation, through its leak repair activities, and allows the Company to help the District meet its climate commitments."

a. Please describe the "activity to address methane leaks" and the "leak repair activities" referenced in the quoted text above.

b. Other than the activities described in (a), are there are any other activities that WGL is undertaking to address the District's climate commitments that are pertinent to this rate case application?

WASHINGTON GAS'S RESPONSE 06/12/2020

A.

a. The Company seeks to address methane leaks through the replacement of aging pipe and repairs and supporting work relating to odor response, leak identification, assessment and monitoring as described in the testimony of Witness Price.

b. No specific activities have been pursued due to the District's climate commitments. However, the Company has engaged in activities since 2008 to support its commitment to sustainability and the reduction of greenhouse gas emissions. Examples of such activities that reflect costs that are part of the overall cost of service in this case include:

a. Goal setting, tracking, and reporting to support Washington Gas's sustainability targets.
b. Voluntary participation in EPA's Natural Gas STAR and Methane Challenge programs.
c. Participation in conferences, webinars, local climate committees and associations to learn about and advance strategies for emissions reductions, energy efficient equipment, supply decarbonization, and sustainable operating practices.
d. Participation in our internal, "Emissions Commission" which considers technology, tactics, and equipment relating to emissions reduction.
e. Use of drawdown compressors to capture methane prior to pipe repair or replacement and return it to the system upon completion of the job.

SPONSOR: Melissa Adams
Chief Corporate Social Responsibility Officer

OPC FOLLOW-UP DATA REQUEST 06/19/2020

Q. With respect to WGL's response to OPC Data Request No. 16-1(b), and specifically with respect to all the activities WGL asserts it has undertaken since 2008 to support its commitment to sustainability and the reduction of greenhouse gas emissions in part a-e of the response, please provide: (1) a detailed description of the activities; (2) copies of the associated plans or programs pursuant to which such activities were undertaken; (3) an explanation, associated calculations, and other supporting documentation of the specific costs included in this case related to each of the activities; (4) any documents associated with any analysis conducted by or on behalf of WGL to determine if and the extent to which any of the activities described were projected to support sustainability and/or the reduction of greenhouse gas emissions; and (5) any documents associated with any analysis conducted by or on behalf of WGL to determine if,Cand the extent to which, the noted activities were found to have supported sustainability and/or the reduction of greenhouse gas emissions.

WASHINGTON GAS'S FOLLOW-UP RESPONSE 06/26/2020

A. With Respect to OPC DR 16-1(b) we offer the following responses:

1) Our approach is to foster climate awareness and sustainable business practices throughout the Company. We have not conducted a study of every event/committee/webinar in which staff has participated.

2) During 2019, GHG emissions reduction activities were conducted to support the Sustainability Metric on our Corporate Scorecard for which all employees were collectively accountable. This metric is further discussed in Company Witness O'Brien's testimony and measures activities in four areas that affect greenhouse gas emissions; each weighted at 25 percent. These include:

    - Installing energy efficiency measures at our facilities;
    - Managing emissions from our vehicle fleet;
    - Reducing fugitive GHG emissions through our pipeline replacement programs; and
    - Tracking progress on recycling to waste ratios and telework avoided miles

3) Please see item 1) above.

4) As indicated in item 1) above, we have not identified and studied all of the Company's activities that support the District's climate commitments. We are finalizing our 2019 GHG emissions inventory that addresses Scope 1 and Scope 2 emissions and will share it with the Commission and parties later this summer, following its completion and third-party verification.

5) Our progress on greenhouse gas emissions reductions are identified as part of our response to item 4) above.

SPONSOR: Melissa Adams
Chief, Corporate Social Responsibility Officer

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

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WASHINGTON GAS'S RESPONSE
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OPC DATA REQUEST NO. 21

QUESTION NO. 21-15

Q. **Leak Remediation.** Witness Price's Supplemental Direct Testimony addresses leak remediation related issues, and page 5 (lines 17-19) states that despite leak mitigation work, "the system's aging and increased trend in leak occurrences has yet to be reversed by the Company's proactive replacement activities." Address the following:

a. For each of the years 2015 to 2019, provide WGL's internal reports that show the projected number of repaired leaks anticipated to be addressed in each year, and compare this to the actual number of repair leaks, and explain the reasons for the differences (for example, explain if personnel limitations have prevented WGL from meeting projected leak repair counts).

b. For 2018 and 2019, provide the number of Grade 1 and Grade 2 leak repairs by month.

c. For 2020, provide the projected number of leak repairs and explain why this projection has decreased or increased from 2019 to 2020.

d. Explain why WGL cannot make any reasonable estimates when leak occurrences and the number of repairs will begin to decline, and if such projections are available then provide supporting documentation.

e. Explain if WGL knows with certainty that the number of total leaks and leak repairs will increase in 2020 compared to 2018 and 2019, and provide supporting documentation for this position.

WASHINGTON GAS'S RESPONSE 06/19/2020

A.

a. Washington Gas did not project a number of repaired leaks during this time.

b. Leak Repairs in the District of Columbia, by month:

	2017	2018	2019
Jan	103	204	211
Feb	109	123	180
Mar	129	114	177
Apr	114	102	151
May	92	137	126
Jun	90	114	90
Jul	67	140	110
Aug	95	162	153
Sep	109	138	172
Oct	97	171	163
Nov	109	121	127
Dec	103	132	166
Total	1,217	1,658	1,826

c. Washington Gas estimates that we will repair 8,300 leaks system-wide in 2020. This count is lower than 2019 repaired leaks, because the estimate is comprised of 2020 actuals through April which reflect our operator experience of having a warmer winter.

d. Although the leak rate (excluding leaks from third-party excavation damages) for pipe replaced will decrease over the course of the total 40-year replacement plan, and although there may be year-over-year fluctuations of leak occurrences, it is difficult to estimate when a sustained decrease in leak occurrences will commence. It is critical to note that the remaining pipe will continue to age and the leak rate on the remaining targeted pipe can be expected to increase until replaced. Put simply, the Company's distribution system continues to age, and the Company expects the leak rate for both targeted and non-targeted pipe that has not been replaced with modern plastic pipe to increase as a result.

e. Washington Gas does not know with certainty what the number of total leaks and leak repairs will be in 2020. See the response to (c) above.

SPONSOR: Stephen J. Price
AVP – Safety, Quality and Systems Protection

OPC FOLLOW-UP DATA REQUEST **JUNE 26, 2020**

Q. With respect to WGL's response to sub-parts (a) and (d) of OPC Data Request No. 21-15, and in light of: (1) WGL's response to OPC Data Request No. 21-16(b), which requested that WGL "[e]xplain if WGL has compared itself to its peers regarding any other statistics related to "leaks, leak repairs, and similar statistics, and explain how WGL ranks compared to its peers and provide related supporting reports and documentation," and to which WGL responded that "[b]eyond compliance with regulatory standards required of all gas distribution companies, Washington Gas does not benchmark metrics in these categories;" and (2) WGL's response to 21-17(c), which referenced OPC DR 4-24 for Washington Gas's available Scorecards for the requested years, but did not provide the underlying calculations and documentation associated with those scorecards as requested in OPC DR 21-17(c), and provide the following information for calendar years 2015 to 2019 (if information is only available on a fiscal year basis for prior years 2015 to 2018, then information can be provided on that basis):

a. Please explain if WGL measures its performance on activities intended to address the District of Columbia's climate goals, including compliance with the CleanEnergy Act, and if so please provide all supporting documentation.

b. Please state whether any of the Corporate Goals listed in the Scorecards account for and/or include measures intended to address the District of Columbia's climate goals, including, but not limited to, leak reduction (and provide information on both an Enterprise and Utility-Only basis for 2019).

c. For all of the Corporate Goals (including information on both an Enterprise and Utility-Only basis for 2019) identified in response to subpart (b) to this follow-up data request, provide: (1) a detailed definition, including all supporting documentation, of the Corporate Goal; (2) a description, including all supporting documentation, of the associated targets and actual results; (3) a detailed description, including all supporting documentation, on the measures and calculation methodology used for calculating the targets (or scores) and actual results (or scores) associated with the Corporate Goal; (4) all supporting data and documents addressing how the climate target/goal was accounted for in the Corporate Goal and the results of the Corporate Goal assessments; (5) explain the reasons for the changes in the Corporate Goal targets from year to year (such as why the changes in the targets from year-to-year were made more lenient or more strict) and include all supporting documentation and calculations; and (6) whether any regulatory body has required any specific measures or performance targets that are accounted for in the Scorecard.

d. If not provided in the response to subpart (b) and (c) to this follow-up data request, provide the information requested in subparts (b) and (c) of this follow-up data request for the remaining Corporate Goals, including but not limited to: (1) Safe Delivery; (2) Performance Improvement; (3) Customer Value; (4) Supplier Diversity; (5) Sustainability; (6) Reliable Supply; and (7) Financial Performance.

e. Regarding information requested in subpart (b) and (c), explain if each of the Corporate Goal actual results are collected or initially determined on a disaggregated or aggregated format (disaggregated means the information is collected by separate jurisdictions for D.C., Maryland, and Virginia for the Utility-Only basis or on a company-by-company basis under the Enterprise format) and then assembled in an aggregated format for the final issued Corporate Scorecard, or otherwise explain the format for collecting and determining actual results for the Utility-Only and Enterprise basis.

WASHINGTON GAS'S FOLLOW-UP RESPONSE 07/06/2020

A. (a) Please refer to the Testimony of Witness Melissa Adams and subpart (c) below.

(b) The Sustainability Metric for the Utility is a four (4) component metric which includes three elements that relate to our GHG emission reduction efforts; Pipeline Replacement, Facilities Projects, and Fleet Emissions. The fourth item is Culture, and it is based on our Recycling rate and miles avoided through our Telework program.

(c) See the supplemental response to OPC Data Request No. 21-17.

(d) See the response to subpart (c) above.

(e) Corporate Scorecard results are viewed on an aggregate basis. Please see the attachment for any disaggregated metric that rolls up into the aggregated Scorecard result.

SPONSOR: Melissa Adams – parts (a) and (b)
Chief Corporate Social Responsibility Officer

John D. O'Brien – parts (c), (d) and (e)
EVP Strategy & Public Affairs

Scorecard Metrics for FY19

Measurement	Results are determined as an Aggregate	Jurisdication is identified within the supporting data file (Disaggregated)
Allowed Utility ROE	Yes	No
Community Involvement	Yes	No
Customer Satisfaction	Yes	No
Employee Engagement	Yes	No
Employee Work Safety	Yes	No
Merger Commitments	Yes	No
New Meter Additions	Yes	Yes
Non-Utility Adjusted EBIT	Yes	No
O&M/Customer	Yes	No
SLAs for Key Contracts	Yes	No
Supplier Diversity	Yes	No
Supply Chain Savings	Yes	No
Sustainability - Enterprise	Yes	No
Sustainability - Utility Only	Yes	No
System Reliability	Yes	Yes
System Safety / Pipeline Integrity	Yes	Yes

Exhibit OPC (F)-9
Formal Case No. 1162
Witness: Stanton

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FORMAL CASE NO. 1162

WASHINGTON GAS'S RESPONSE
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OPC DATA REQUEST NO. 24

QUESTION NO. 24-1

Q. Sustainability Metric on Corporate Scorecard. Please reference WGL's June 26, 2020 Response to Follow-Up Data Request No. 16-1(b), which asserts that the Company's Sustainability Metric measures activities in four areas that affect greenhouse gas emissions (namely (1) installing energy efficiency measures at facilities; (2) managing emissions from vehicle fleet; (3) reducing fugitive GHG emissions through pipeline replacement programs; and (4) tracking progress on recycling to waste ratios and telework avoided miles) ("Four GHG Areas")).

WGL claims that the Four GHG Areas are each weighted at 25 percent. Neither the response nor Mr. O'Brien's testimony cited in the response provides any details or supporting data or calculations on the Four GHG Areas. Per the Commission's Order No. 20369, extending the discovery deadline on certain issues, including scope of climate-related issues to be considered in this proceeding as clarified in Order No. 20355, OPC requests that WGL provide the following:

a. a detailed description and all supporting documentation, of the Sustainability Metric for 2019, including any other activities beyond the Four GHG Areas that are encompassed in the metric (to the extent not provided in Response to Follow-Up Data Request No. 21-15);

b. a detailed description and all supporting documentation and calculations (with formulae intact) of the weighting of all activities in the Sustainability Metric, including the percentage of weight afforded to the Four GHG Areas as compared to each other activity that is encompassed in the Sustainability Metric

c. a detailed description and all supporting documentation on the measures and calculation methodology used for calculating the targets (or scores) associated with the Four GHG Areas and all other activities that are encompassed in the Sustainability Metric for 2019;

d. all supporting documents describing, and calculations (with formulae intact) of, the results (or scores) of actual performance associated with the Four GHG Areas for 2019;

e. all supporting documents describing, and calculations (with formulae intact) of, the results (or scores) of actual performance associated with the other activities that are encompassed in the Sustainability Metric for 2019;

f. an explanation of whether the results (or scores) of actual performance associated with the Four GHG Areas and all other activities that are encompassed in the Sustainability Metric for 2019 is combined for WGL and its affiliates; and

g. an explanation of whether WGL maintained D.C. specific results or scores for the Sustainability Metric for 2019 and if so, provide all associated documentation and calculations; and if not, explain why WGL did not maintain, and whether WGL is able to provide, jurisdictional-specific data for D.C.

WASHINGTON GAS'S RESPONSE 07/22/2020

A. The attached spreadsheet identifies each metric, the data utilized, and the calculation of results for the 2019 Sustainability metric used in the Corporate Scorecard. The metric pertains to Washington Gas and covers all jurisdictions served primarily because it is both meant to drive company-wide behavior and because some of the underlying metrics (e.g., fleet emissions and telework road miles avoided) do not lend themselves to jurisdictional reporting. Please see the attachment for the requested information for all subparts above.

SPONSOR: Melissa Adams
Chief Corporate Social Responsibility Officer

2019 Sustainability Scorecard Metric

Target Score: > 95%

FY19 Total							
	Metric	Description	Annual Goal	Actual	% Toward Annual Goal	Weight	Weighted Score
Pipeline Emissions	Amount spent on pipeline replacement	Because pipeline replacement has benefit of reducing emissions due to new, modern materials, we track replacement spend as proxy toward our 2025 goal of 38% reduction in emissions intensity per delivered therm. Goal is to achieve >90% of budgeted spend for pipeline replacement	$149,384,601	$157,440,196	100%	25%	25%
Building/Facilities	Project(s) with a material environmenta impact reduction completed/Relevant milestones hit	Measured based on completion or progress made on booked project(s) for the given quarter. Supports our goal of having fleet and facilities be carbon neutral by 2025.	1	1	100%	25%	25%
Fleet Emissions	mtCO2e (Gas/Diesel/NG)	Goal is to not exceed 9200 mtCO2e emitted from our fleet vehicles, supports our goal of having our fleet and facilities be carbon neutral by 2025.	9,200	8,585	100%	25%	25%
Culture	Recycling/Teleworking	Goal is instill a culture of sustainability in our employees through two programs; recycling/waste diverted to landfill and our Reduce the Commute telework program. Goal is to be 100%	100%	89%	89%	25%	22%
Annual Score							**97.2%**

P1 FY19							
	Metric	Description	P1 Target	P1 Actual	% Toward Quarterly Goal	Weight	Q1 Weighted Score
Pipeline Emissions	Amount spent on pipeline replacement	Goal is to achieve >90% of budgeted spend for pipeline replacement	$23,665,797	$29,624,389	100%	25%	25%
Building/Facilities	Project(s) with a material environmenta impact reduction completed/Relevant milestones hit	Measured based on completion or progress made on booked project(s) for the given quarter	1	1	100%	25%	25%
Fleet Emissions	mtCO2e (Gas/Diesel/NG)	Goal is to not exceed 9200 mtCO2e emitted	1,800	1,652	100%	25%	25%
Culture	Recycling/Teleworking	Goal is to be 100%	100%	93.5%	94%	25%	23%
Period 1 Overall Score							**98.4%**

P2 FY19							
	Metric	Description	P2 Target	P2 Actual	% Toward Quarterly Goal	Weight	Q2 Weighted Score
Pipeline Emissions	Amount spent on pipeline replacement	Goal is to achieve >90% of budgeted spend for pipeline replacement	$51,928,777	$58,060,215	100%	25%	25%
Building/Facilities	Project(s) with a material environmenta impact reduction completed/Relevant milestones hit	Measured based on completion or progress made on booked project(s) for the given quarter	1	1	100%	25%	25%
Fleet Emissions	mtCO2e (Gas/Diesel/NG)	Goal is to not exceed 9200 mtCO2e emitted	2,000	1,915	100%	25%	25%
Culture	Recycling/Teleworking/Events/Activities	Goal is to be 100%	100%	100.0%	100%	25%	25%
Period 2 Overall Score							**100.0%**

P3 FY19							
	Metric	Description	P3 Target	P3 Actual	% Toward Quarterly Goal	Weight	Q3 Weighted Score
Pipeline Emissions	Amount spent on pipeline replacement	Goal is to achieve >90% of budgeted spend for pipeline replacement	$99,910,375	$103,667,196	100%	25%	25%
Building/Facilities	Project(s) with a material environmenta impact reduction completed/Relevant milestones hit	Measured based on completion or progress made on booked project(s) for the given quarter	1	1	100%	25%	25%
Fleet Emissions	mtCO2e (Gas/Diesel/NG)	Goal is to not exceed 9200 mtCO2e emitted	1,800	1,618	100%	25%	25%
Culture	Recycling/Teleworking/Events/Activities	Goal is to be 100%	100%	74.9%	75%	25%	19%
Period 3 Overall Score							**93.7%**

P4 FY19							
	Metric	Description	P4 Target	P4 Actual	% Toward Quarterly Goal	Weight	Q4 Weighted Score
Pipeline Emissions	Amount spent on pipeline replacement	Goal is to achieve >90% of budgeted spend for pipeline replacement	$149,384,601	$157,440,196	100%	25%	25%
Building/Facilities	Project(s) with a material environmenta impact reduction completed/Relevant milestones hit	Measured based on completion or progress made on booked project(s) for the given quarter	1	1	100%	25%	25%
Fleet Emissions	mtCO2e (Gas/Diesel/NG)	Goal is to not exceed 9200 mtCO2e emitted	1,800	1,680	100%	25%	25%
Culture	Recycling/Teleworking/Events/Activities	Goal is to be 100%	100%	86%	86%	25%	21%
Period 4 Overall Score							**96.4%**

P5 FY19							
	Metric	Description	P5 Target	P5 Actual	% Toward Quarterly Goal	Weight	Q4 Weighted Score
Pipeline Emissions	Amount spent on pipeline replacement	Goal is to achieve >90% of budgeted spend for pipeline replacement	$177,313,426	$200,351,350	100%	25%	25%
Building/Facilities	Project(s) with a material environmenta impact reduction completed/Relevant milestones hit	Measured based on completion or progress made on booked project(s) for the given quarter	1	1	100%	25%	25%
Fleet Emissions	mtCO2e (Gas/Diesel/NG)	Goal is to not exceed 9200 mtCO2e emitted	1,800	1,720	100%	25%	25%
Culture	Recycling/Teleworking/Events/Activities	Goal is to be 100%	100%	90%	90%	25%	23%
Period 5 Overall Score							**97.6%**

Pipeline Emissions

	FYTD	FYTD	FYTD	FYTD	FYTD	Goal is >90%
DIRECT COST BUDGETS - ACCELERATED REPLACEMENT						
	FY 19 P1 (Oct-Dec)	**FY 19 P2 (Jan-Mar)**	**FY 19 P3 (Apr-Jun)**	**FY 19 P4 (Jul-Sept)**	**FY 19 P5 (Oct-Dec)**	
DC	$5,161,162	$10,982,970	$19,648,602	$28,314,234	$33,982,989	
MD	$5,943,956	$16,678,730	$32,537,141	$50,435,322	$61,170,096	
VA	$11,315,487	$24,587,245	$44,108,610	$70,732,418	$85,106,097	
Other (see cell comments)	$3,874,725	$5,449,696	$14,717,175	$16,500,915	$16,755,735	
Grand Tot	$26,295,330	$57,698,641	$111,011,528	$165,982,890	$197,014,918	

Goal: 90%	**FY 19 P1 (Oct-Dec)**	**FY 19 P2 (Jan-Mar)**	**FY 19 P3 (Apr-Jun)**	**FY 19 P4 (Jul-Sept)**	**FY 19 P5 (Oct-Dec)**
Grand Tot	$23,665,797.00	$51,928,776.90	$99,910,375.12	$149,384,600.97	$177,313,425.88

Actual	**FY 19 P1 (Oct-Dec)**	**FY 19 P2 (Jan-Mar)**	**FY 19 P3 (Apr-Jun)**	**FY 19 P4 (Jul-Sept)**	**FY 19 P5 (Oct-Dec)**
DC	$2,189,694	$6,373,214	$14,019,374	25,772,318	32,901,585
MD	$6,664,219	$12,716,345	$26,574,273	41,490,468	57,718,635
VA	$16,990,810	$33,684,415	$55,148,350	81,226,562	100,182,355
Other (see cell comments)	$3,779,666	$5,286,241	$7,925,200	8,950,848	$9,548,774
Grand Tot	$29,624,389	$58,060,215	$103,667,196	$157,440,196	$200,351,350
Percent	100%	100%	100%	100%	100%

Fleet Emissions **Note: Emission factors sourced, per the WRI Trasportation Tool v2.6, from the US EPA Climate Leaders Program.**

Goal	FY 19 P1 (Oct-Dec)	FY 19 P2 (Jan-Mar)	FY 19 P3 (Apr-Jun)	FY 19 P4 (Jul-Sept)	FY 19 P5 (Oct-Dec)	Total
Total	1,800	2,000	1,800	1,800	1,800	9200.000

Actual	FY 19 P1 (Oct-Dec)	FY 19 P2 (Jan-Mar)	FY 19 P3 (Apr-Jun)	FY 19 P4 (Jul-Sept)	FY 19 P5 (Oct-Dec)	Total
CNG	291.296	328.522	334.364	256.690	295.894	1506.77
Gasoline	875.594	997.712	903.923	1006.504	988.456	4772.19
Diesel	485.138	588.519	379.996	416.333	436.030	2306.02
Total	1,652.03	1,914.75	1,618.28	1,679.53	1,720.38	8,584.97
Percent	100%	100%	100%	100%	100%	100%

	UNL - GAL	DSL - GAL	CNG - CCF	CNG - CF
P1	99,726.00	47,516.00	53,507.66	5,350,766.29
P2	113634.582	57641.418	60,345.71	6,034,571.31
P3	102952.516	37218.064	61,418.78	6,141,877.98
P4	114635.938	40777.015	47,151.06	4,715,106.00
P5	112580.375	42706.171	54,352.25	5,435,225.13
FY 19 total	543,529.41	225,858.67	276,775.47	27,677,546.71

Fleet Emissions - carbon emissions ($MTCO_2e$) calculated from fleet fuel usage using consumption of Gas, Diesel and CNG multiplied by the WRI emissions factors for each fuel type.

Gas – (543,529) gallons x (8.78 kg CO_2e/gal) = 4,772.19 $MTCO_2e$

Diesel – (225,859) gallons x (10.21 kg CO_2e/gal) = 2,306.02 $MTCO_2e$

CNG - (27,677,547) scf x (0.05444 kg CO_2e/scf) = 1,506.77 $MTCO_2e$

Total emissions (8,584.98 $MTCO_2e$) were significantly below our target (9,200 $MTCO_2e$) reflecting the optimization of CNG in our bifuel vehicles.

Facilities Projects

	FY 2019				
	FY 19 P1 (Oct-Dec)	FY 19 P2 (Jan-Mar)	FY 19 P3 (Apr-Jun)	FY 19 P4 (Jul-Sept)	FY 19 P5 (Oct-Dec)
Facilities projects that materially reduce our environmental impact	LED lighting upgrade at Chillum	In P2 FY 2019 the focus was, successfully, on hitting progress milestones in the retrofit of our Dranesville location	In P3 FY 2019 the focus remained, successfully, on hitting progress milestones in the retrofit of our Dranesville location.	In P4 so, we continued to successfully hit progress milestones in the retrofit of our Dranesville location.	In P5, we successfully completed the LEED Certification of our Drainsville facility.
Metric	Was upgrade completed?	Were relevant milestones hit?	Were relevant milestones hit?	Were relevant milestones hit?	Was LEED Certification obtained?
Measurement	1 = yes; 0 = no	1 = yes; 0 = no	1 = yes; 0 = no	1 = yes; 0 = no	1 = yes; 0 = no
Results	1	1	1	1	1

Culture

Recycling ***Goal: 52.5%***

	FY 19 P1 (Oct-Dec)	FY 19 P2 (Jan-Mar	FY 19 P3 (Apr-Jun)	FY 19 P4 (Jul-Sept)	FY 19 P5 (Oct-Dec)	FY Avg	FY Total
Goal	52.5%	52.5%	52.5%	52.5%	52.5%		
Composted	0.44						
Diverted From Landfill	115.13	420.40	40.34	72.6088	76.38		725
Waste	137.28	152.11	113.70	121.08	104.28		1354
Actual	45.71%	73.43%	26.19%	37.49%	42.28%	45.02%	53.58%
Percent of Goal	87.06%	100.00%	49.88%	71.41%	80.53%		

Telework Total ***Goal: 100%***

	FY 19 P1 (Oct-Dec)	FY 19 P2 (Jan-Mar	FY 19 P3 (Apr-Jun)	FY 19 P4 (Jul-Sept)	FY 19 P5 (Oct-Dec)	Total	
Goal	55,000	65,000	70,000	60,000	55,000	305,000	miles
Actual	75,890	78,954	80,115	79,984	73,456	388,399	miles
Percent of Goal	100%	100%	100%	100%	100%		

Culture ***Goal: 100%***

	FY 19 P1 (Oct-Dec)	FY 19 P2 (Jan-Mar	FY 19 P3 (Apr-Jun)	FY 19 P4 (Jul-Sept)	FY 19 P5 (Oct-Dec)
Recycling	43.5%	50.0%	24.9%	35.7%	40.3%
Telework	50%	50%	50%	50%	50%
	93.5%	100.0%	74.9%	85.7%	90.3%

Exhibit OPC (F)-10
Formal Case No. 1162
Witness: Stanton

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. 16

QUESTION NO. 16-5

Q. **Revenue Normalization Adjustment ("RNA") Correlation to District's Climate Policies.** Has WGL conducted any studies to determine the impact of the Company's proposed RNA on the District's climate goals and policies, including as set forth in the CleanEnergy Act? If so, please provide a copy of all such studies.

WASHINGTON GAS'S RESPONSE 06/12/2020

A. Washington Gas has conducted no formal studies to determine the impact of the Company's proposed RNA on the District's climate goals and policies, although the Company's RNA proposal in this case fully supports and advances the goals of that Act. This latter conclusion is obvious because the Company's proposal decouples revenues from natural gas sales.

SPONSOR: Paul H. Raab
Consultant