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September 24, 2025

VIA ELECTRONIC FILING

Brinda Westbrook-Sedgwick
Commission Secretary
Public Service Commission
of the District of Columbia
1325 "G" Street, NW, 8th Floor
Washington, D.C. 20005

**Re: Formal Case Nos. 1179
[Washington Gas Rebuttal Testimony]**

Dear Ms. Westbrook-Sedgwick:

Pursuant to Order No. 22716, transmitted for filing herewith please find Washington Gas Light Company's Rebuttal Testimony of Kevin M. Murphy (Exhibit WG (3I)), in the above-captioned proceeding.

Please do not hesitate to contact me if you have questions regarding this matter.

Sincerely,

John C. Dodge
Associate General Counsel and
Director, Regulatory Matters

cc: Per Certificate of Service

BEFORE THE
PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

FORMAL CASE No. 1179

IN THE MATTER OF THE INVESTIGATION INTO WASHINGTON GAS LIGHT COMPANY'S
STRATEGICALLY TARGETED PIPE REPLACEMENT PLAN

VOLUME 1 OF 1

REBUTTAL TESTIMONY
WG (3I)

(WITNESS MURPHY)

SUPPORTING EXHIBITS
WG (3I)-1

JOHN C. DODGE

ATTORNEY FOR

WASHINGTON GAS LIGHT COMPANY
1000 MAINE AVENUE, SW, SUITE 700
WASHINGTON, DC 20024

BY SPECIAL APPEARANCE

GARRETT LENT
ALICE WADE

POST AND SCHELL, P.C.

DATED: SEPTEMBER 24, 2025

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BEFORE THE
PUBLIC SERVICE COMMISSION OF THE
DISTRICT OF COLUMBIA

IN THE MATTER OF)
)
THE INVESTIGATION INTO WASHINGTON)
GAS LIGHT COMPANY’S STRATEGICALLY)
TARGETED PIPE REPLACEMENT PLAN)

FORMAL CASE NO.1179

WASHINGTON GAS LIGHT COMPANY
District of Columbia

REBUTTAL TESTIMONY OF KEVIN M. MURPHY
Exhibit WG (3I)
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WASHINGTON GAS LIGHT COMPANY

DISTRICT OF COLUMBIA

REBUTTAL TESTIMONY OF KEVIN M. MURPHY

I. INTRODUCTION

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

A. My name is Kevin M. Murphy. I am Vice President, Asset Management, Engineering & Supply for Washington Gas Light Company (“Washington Gas” or the “Company”). My business address is 6801 Industrial Road, Springfield, VA 22151.

Q. DID YOU PREVIOUSLY SUBMIT TESTIMONY IN THIS PROCEEDING ON BEHALF OF WASHINGTON GAS?

A. Yes, I submitted testimony, Exhibit WG (I), responding to comments by the District Department of Transportation (“DDOT”) on April 11, 2025. I also submitted Surrebuttal Testimony, Exhibit WG (2I) on May 27, 2025, responding to certain portions of the supplemental testimony submitted by the Office of the People’s Counsel for the District of Columbia (“OPC”), Exhibit OPC (2A), the supplemental testimony of Colin Fitzhenry.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal testimony responds to the August 11, 2025 Affidavit filed by District of Columbia Government (“DCG”) Witness Hopkins, *i.e.*, the “Hopkins Affidavit.” Specifically, I respond to Witness Hopkins’s assertions that the Company has not identified and prioritized replacement projects with the highest assessed risk reduced per dollar invested.

1 **Q. DO YOU HAVE ANY EXHIBITS WITH YOUR TESTIMONY?**

2 A. Yes. I sponsor one exhibit. Exhibit WG (3I) – 1 is the Company’s response
3 to Formal Case No. 1179 DCG Follow Up Data Request No. 2 – 1.
4

5 **II. RESPONSE TO TESTIMONY OF DCG WITNESS HOPKINS**

6 **Q. PLEASE SUMMARIZE WITNESS HOPKINS’ TESTIMONY.**

7 A. Witness Hopkins uses data from the Company’s Geographic Information
8 System (“GIS”) database to create replacement projects that he claims are more
9 cost-effective replacement candidates than those selected by the Company and
10 approved by the Commission.¹

11 **Q. DO YOU AGREE WITH WITNESS HOPKINS’ APPROACH AND**
12 **CONCLUSIONS?**

13 A. No, I do not, for several reasons. First, Witness Hopkins relies on early-
14 stage costs which are less robust and thus less reliable than the Class 3 cost
15 estimates the Commission requires for eligible replacement projects. Second, Dr.
16 Hopkins wholly ignores the breadth and depth of the integrated, sequential
17 process to select, design, develop cost for, and finalize a replacement project.
18 Third, Witness Hopkins either is unaware of or ignores Commission-approved
19 Program 10, Work Compelled by Others, which results in certain projects with
20 lower Risk Reduced per Dollar spent rankings appearing on Commission-
21 approved project lists. Fourth, Dr. Hopkins errs when he claims that Washington
22 Gas is pursuing higher priority risk reduction pipe replacement outside of
23 PROJECT*pipes*. Fifth, Witness Hopkins proposes to nominate certain pipes for

¹ Hopkins Affidavit, ¶¶ 8-18.

1 abandonment without regard to the customers they serve.

2 **Q. PLEASE REMIND THE COMMISSION OF THE COMPANY'S METHODOLOGY**
3 **FOR GENERATING PROJECT LISTS.**

4 A. The Company's method has been described at length in the record of this
5 and related proceedings.² The summary below describes the approach:

- 6 1. The Company develops risk scores for each distribution piping element
7 represented in the Company's GIS.
- 8 2. The Company runs an algorithm on its asset database to initially group assets
9 into "bundles." "Bundles" are early-stage asset groups used by the Company
10 to ballpark cost efficiency of the assets in the "bundle," prior to evaluation of
11 the asset group by its engineers.
- 12 3. Indicative costs based on historic costs are developed for replacement of
13 each bundle.
- 14 4. Risk scores for assets within a bundle are summed and divided by the
15 indicative cost, resulting in a metric used as an indicator of the cost efficiency
16 of a replacement project scoped to address the risk in a specific bundle (i.e.,
17 the Risk Reduced per Dollar spent metric, or "RR/\$").
- 18 5. Bundles are ranked for consideration by the Company's replacement
19 planning engineers. The replacement planning engineers evaluate JANA
20 prioritized output and create project designs and Class 3 cost estimates. The

² See, e.g., Exhibit WG (C) at 15-6, 20; Exhibit WG (2C) at 6-9, 10-11, 12-13, 15-17, 21-22, 34-35, 42-42; Exhibit WG (D) at 8-10; Exhibit WG (2D) at 5-6, 15; Exhibit WG (2E) at 10-16, 17-20. See also *Formal Case No. 1027, In the Matter of the Emergency Petition of the Office of People's Counsel for an Expedited Investigation of the Distribution System of Washington Gas Light Company*, Washington Gas Optimize Report (filed Aug. 30, 2013). See also *Formal Case No. 1027, Washington Gas Reply Comments* (filed Oct. 15, 2023). See also *Formal Case No. 1115, In the Matter of Washington Gas Light Company's Request for approval of a Revised Accelerated Pipeline Replacement Plan*, Confidential June 20, 2014 Optimize Demonstration slide presentation (filed Aug. 4, 2014).

1 results are “candidate projects,” associated with an updated RR/\$.

2 6. “Candidate projects” are re-ranked according to RR/\$ and final projects
3 are selected from the top down in accordance with the Commission-
4 approved budget.

5 **Q. DOES WITNESS HOPKINS USE THE SAME PROCESS AS THE COMPANY**
6 **TO DEVELOP AND RANK HIS ALTERNATIVE PROJECTS AS A PART OF**
7 **THE HOPKINS AFFIDAVIT?**

8 A. No. he does not.

9 **Q. HOW DOES WITNESS HOPKINS DEVELOP AND RANK HIS ALTERNATIVE**
10 **PROJECTS?**

11 A. To start, it is important to note that DCG Witness Hopkins fails to provide
12 any detail or explanation as to the basis for his methodology. Without this
13 information, neither the Company nor the Commission can fully assess the
14 credibility of his proposal and recommendations.

15 Based on Witness Hopkins’ limited description, it appears (but cannot be
16 confirmed) that he sorted assets according to risk score or RR/\$ then made
17 reference to the GIS in order to manually delineate a project in the vicinity of
18 highly-risky assets or assets with a high RR/\$ metric. It appears he then compared
19 the RR/\$ for his manually derived “bundles“ to the candidate projects’ RR/\$
20 included in the Company’s Updated Project List, to argue the Company did not
21 select the highest available RR/\$ projects.

22 **Q. DOES WITNESS HOPKINS’S PROCESS YIELD BETTER RESULTS IN**
23 **SELECTING PROJECTS THAN THE COMPANY’S EXISTING COMMISSION-**
24 **APPROVED METHODOLOGY?**

25 A. No. The first and fatal flaw in his shortcut methodology is that Witness

1 Hopkins's RR/\$ relies on *unrefined bundle costs* and not *project-specific Class 3*
2 *estimates* for candidate projects as required by the Commission. Since 2017 the
3 Commission has directed Washington Gas to include American Association of
4 Cost Engineering International ("AAACE") Class 3 estimates when compiling a
5 project list.³ Class 3 AAACE cost estimates are more accurate and thus more
6 reliable than the initial costs assigned to bundles. Bundles and their associated
7 initial cost estimates are used as a guide and starting point for engineers to refine
8 and further develop bundles into optimized projects. Class 3 cost estimates reflect
9 that refinement based on real-world, site-specific considerations, and include the
10 appropriate risks and contingencies recognized by the Commission.

11 In sum, Dr. Hopkins' bundle-based analysis is superficial and is
12 superseded by the better information developed in the project-specific Class 3
13 cost estimation process mandated by the Commission. Witness Hopkins' analysis
14 wrongly suggests the Company should rely on less accurate information to rank
15 and select projects for inclusion in the annual project lists than is used today, in
16 direct contravention of a Commission mandate.

17 **Q. PLEASE EXPLAIN THE ROLE OF BUNDLE RISK IN PROJECT SELECTION.**

18 A. Washington Gas prioritizes development of designs as candidates for
19 annual project lists based on risk, consistent with Pipeline and Hazardous
20 Materials Safety Administration ("PHMSA") requirements.⁴ But, in conformity with
21 Commission requirements and in contrast to Witness Hopkins's alternative
22 analysis, the Company does not stop its risk reduced per dollar spent assessment
23 at the bundle risk or bundle cost stage of analysis. Rather, as required by the

³ Formal Case No. 1115, *In the Matter of Washington Gas Light Company's Request for Approval of a Revised Accelerated Pipeline Replacement Plan*, Order No. 18815, para. 1 (rel. June 23, 2017).

⁴ Formal Case No. 1154, Order No. 22687 at 4-5, noting WGL Response.

1 Commission, the Company proceeds with design activities and develops a Class
2 3 cost estimate for each potential project to ensure further specificity and
3 reliability.

4 It is not appropriate to compare incipient bundles to candidate projects,
5 from either a risk or cost basis. Ranking of bundles is an interim step in the
6 Company's end-to-end project selection process, not the end stage of project
7 development when consideration for inclusion on a project list is merited.

8 **Q. DOES WITNESS HOPKINS MAKE ANY OTHER STATEMENT PERTAINING**
9 **TO PRIORITIZATION THAT WARRANTS CORRECTION OR RESPONSE?**

10 A. Yes. Witness Hopkins asserts that Washington Gas "proposes to spend
11 millions of dollars on projects that fall far down the priority list based on that
12 metric", referring to RR/\$.⁵

13 **Q. WHAT IS YOUR RESPONSE?**

14 A. It appears that Witness Hopkins made two significant errors in relation to
15 this observation. First, Witness Hopkins fails to account for the full breadth of the
16 prioritization and design process performed by the Company's replacement
17 planning engineers, including Class 3 cost estimation. While reviewing the base
18 JANA extract provides a starting point for the Company's analysis, there are
19 multiple additional steps required to evolve a JANA bundle into a candidate
20 project, as noted above. This first error is evident by Witness Hopkins'
21 interpretation of the risk ranking of the seven (7) projects referenced with a "risk
22 reduction per \$10,000 spent of 542.49, 541.62, 363.93, 438.38, 867.44, 849.53,
23 and 621.06."⁶ These seven RR/\$ correlate to seven (7) projects on the Updated

⁵ Hopkins Affidavit, ¶ 8.

⁶ Hopkins Affidavit, ¶ 14.

1 PIPES 2 Project List submitted March 6, 2025, two of which are carryover projects
2 submitted on a previous list.⁷ (By virtue of Order No. 22697, the Commission
3 approved the Company's Updated Annual Project List on August 5, 2025.)

4 During the prioritization and design process, an initial JANA bundle may be
5 adjusted (i.e., to eliminate low pressure mains or realize construction efficiencies)
6 and undergo a final design and Class 3 estimate. The Company proposes a final
7 project list prioritizing the highest RR/\$ projects based on the information available
8 at the time of filing. It is possible that once a project has a finalized Class 3
9 estimate, the RR/\$ is recalculated and may fall out of the projects in consideration
10 for a project list during its creation. A project may also rise in RR/\$ if the Class 3
11 estimate is lower. Unfortunately, Witness Hopkins does not extend his analysis of
12 the seven referenced projects outside of the raw JANA extract—meaning he once
13 again relied on initial cost estimates not Class 3 cost estimates—and therefore,
14 his claim that he identified six additional potential mains + services projects that
15 have higher RR/\$ than five of the Company's projects is wrong. This error is
16 confirmed in Dr. Hopkins' Affidavit, in which he cites to the Company's response
17 to DCG Follow-Up DR 2-1(A)(c), ("JANA Run 20230820 DC *Risk by Bundles –*
18 *BCA values*") (emphasis added). JANA ranks pipe segments using *initial,*
19 *estimated bundle costs*, not Class 3 estimates. Consequently, Dr. Hopkins' six
20 projects do not have fully developed RR/\$ and cannot be compared to the
21 candidate projects on the Update Project List, all of which have fully developed
22 RR/\$.

23 Second, Witness Hopkins is either unaware of or overlooks the fact that

⁷ BCA Nos. 309641, 309640, 309634, 307146, 309624, 309617, 309629.

1 the Commission approved Program 10—Work Compelled by Others—which
2 accounts for approximately \$16.3 million of work on the PROJECT *pipes* 2
3 Extension List from March 1, 2024 through December 31, 2025.⁸ This work is
4 comprised of leak prone assets and has an associated RR/\$ valuation. This work
5 appears on the project list not because it is highly ranked but because these
6 eligible, leak-prone assets must be replaced according to the needs of other
7 parties. Because the timing of Work Compelled by Others is driven externally and
8 not by JANA prioritization, such work often has a lower RR/\$. The Office of
9 People’s Counsel raised the same risk prioritization argument with respect to
10 Program 10 in 2020, and the Commission rejected that argument.⁹ The
11 Commission’s prior Program 10 authorization should govern here.

12 **Q. HOW DOES WITNESS HOPKINS CHARACTERIZE COST RECOVERY FOR**
13 **THE SERVICE-ONLY CATEGORY OF WORK?**

14 A. Witness Hopkins asserts “WGL is spending on higher priority risk reduction
15 pipe replacement outside of the surcharge-funded Project Pipes program but
16 receiving only “normal” cost recovery for it after the next base rate case.”¹⁰ He
17 points to this erroneous conclusion as evidence that the use of a surcharge to
18 enable accelerated pipe replacement is not needed. Witness Hopkins also asserts
19 that he has identified services that should be preferentially planned for
20 replacement based on RR/\$ in areas where scattered replacements are planned¹¹
21 and in areas where the main is “relatively low risk.”¹²

⁸ Approved by the Commission in Order No. 22697.

⁹ Formal Case No. 1154, Order No. 20671 at 31-32 (rel. Dec. 11, 2020).

¹⁰ Hopkins Affidavit, ¶ 10.

¹¹ Hopkins Affidavit, ¶¶ 11-12, 18.

¹² Hopkins Affidavit, ¶¶ 13-17.

1 **Q. IS WITNESS HOPKINS' FIRST ASSERTION CORRECT?**

2 A. No. Witness Hopkins' statement that the Company fails to adhere to a
3 prioritization process was previously explored in his request for information in
4 DCG Follow Up Data Request 2-1. A copy of this response is attached hereto as
5 Exhibit WG (3I)-2. In responding to this data request, the Company explained the
6 reason behind JANA bundles which the Company did **not** include in its revised
7 22-month extension project list. The Company provided explanations of 25
8 instances where a review of its project list would suggest to the untrained eye that
9 higher RR/\$ "bundles" (as opposed to candidate projects) were deferred or
10 skipped and excluded from the list. Witness Hopkins misinterprets this response
11 to conclude that because the service-only work is not being managed under a
12 Business Case Authorization ("BCA"),¹³ it is not included on the project list.

13 The work Witness Hopkins refers to has been designed at an individual
14 work order level, as opposed to a BCA level, and the work was included on the
15 updated project list as scattered service replacements under Programs 1, 3, and
16 5, and will serve to replace approximately 209 services. The cost of replacement
17 will be reported and recovered under the PROJECT *pipes* 2 surcharge.

18 **Q. WHAT ABOUT WITNESS HOPKINS' CLAIMS THAT HE IDENTIFIED**
19 **SERVICE-ONLY WORK THAT SHOULD BE PRIORITIZED OVER COMPANY-**
20 **SELECTED PROJECTS?**

21 A. Witness Hopkins has not provided sufficient detail to validate his assertion
22 regarding additional scattered replacement opportunities in the vicinity of planned
23 work,¹⁴ however there are at least three possible explanations as to why his

¹³ A BCA connotes the entirety of a construction project, from selection through close. Each BCA is assigned a unique numerical identifier.

¹⁴ Hopkins Affidavit, ¶ 12.

1 assertions are not well grounded. First, the services he identifies may be ineligible
2 under defined programs. Second, the services may have been considered for
3 replacement and disqualified as ineligible based on records research or other site-
4 specific assessments. Third, the services may be attached to eligible main. This
5 last scenario pertains to the other scattered service replacement opportunities
6 Witness Hopkins would preferentially select over the Company's choices.¹⁵

7 It is also important to recognize that selective replacement of eligible
8 services while excluding associated eligible main as proposed by Witness
9 Hopkins will drive up overall construction cost, increase required restoration, and
10 subject customers to avoidable outages. If only services are replaced and mains
11 are not, then streets will be paved twice (once for the service replacement and
12 once for the main replacement). If only services are replaced and mains are not,
13 then service will be interrupted twice (once when the service replacement occurs
14 and again when the main is replaced). Furthermore, there will be additional future
15 costs incurred for transferring the previously replaced service to the new main
16 when it is replaced, adding to the overall lifecycle cost. The Company's approach,
17 on the other hand, ensures that when a neighborhood is subject to disruption
18 associated with a replacement program, all the necessary work can and is
19 performed in a single effort to minimize such disruptions.

20 **Q. HOW DOES WITNESS HOPKINS DESCRIBE HIS ANALYSIS OF CAST IRON**
21 **ONE-WAY FEEDS?**

22 A. Witness Hopkins indicates that he used the Company's GIS to identify 314
23 segments of cast iron main that are "dead ends," meaning they are connected to

¹⁵ Hopkins Affidavit, ¶ 18.

1 only one other segment of main, presumably acting as the source of supply to the
2 “dead-end.”¹⁶ He determined that these segments are connected to 1,199
3 customer service lines.¹⁷ Next, Witness Hopkins analyzes the costs to replace
4 these segments based on summation of risks and costs, presumably treating the
5 segments as bundles. Without any engineering evaluation or Class 3 cost
6 estimates, and without regard for the ongoing energy needs of the attached
7 customers, Witness Hopkins concludes it would be more cost effective to
8 abandon these assets than replace them.¹⁸

9 **Q. WHAT IS YOUR REACTION TO WITNESS HOPKINS’ CAST IRON**
10 **ASSESSMENT?**

11 A. First and foremost, Witness Hopkins ignores the Company’s Federal and
12 District obligations to maintain service to its customers. Abandonment is not an
13 option if customers require continued service. Second, Witness Hopkins ignores
14 the Company’s proposal for a Choice Program that would alert impacted
15 customers to replacement plans and could provide a rational basis for the
16 Commission to approve abandoning these segments, after engaging the
17 customer and allowing the customer to determine whether they want to continue
18 to obtain natural gas service from the Company. Third, any RR/\$ comparisons
19 made before engineering design and Class 3 cost estimates are developed
20 cannot be used for project selection, for the same reasons I describe above.
21 Finally, Witness Hopkins makes no reference to the Company’s current practice
22 of prioritizing the assessment and inclusion of abandonment opportunities,
23 undertaken within the end-to-end process described above. The Company has

¹⁶ Hopkins Affidavit, ¶¶ 21-22.

¹⁷ Hopkins Affidavit, ¶ 23.

¹⁸ Hopkins Affidavit, ¶ 23.

1 proposed abandonment of approximately seven (7) miles on the current
2 Commission-approved project list while ensuring all customers continue to
3 receive uninterrupted natural gas service.

4 **Q. HOW DOES WITNESS HOPKINS PROPOSE TO USE RISK DATA TO**
5 **IDENTIFY CUSTOMERS TO BE TARGETED FOR ELECTRIFICATION?**

6 A. Witness Hopkins uses service risk bundles to identify the services most
7 likely to be a replacement priority after the completion of the Company's proposed
8 three-year District SAFE plan.¹⁹ Witness Hopkins argues that these customers
9 should be engaged with to determine their willingness to electrify before their
10 services are replaced.²⁰

11 **Q. HOW DOES THAT COMPARE TO THE COMPANY'S PROPOSAL FOR A**
12 **CHOICE PROGRAM?**

13 A. Witness Hopkins's proposal is consistent with the Company's Choice
14 Program, but his approach looks further into the future to target prospective
15 customers for electrification. I see nothing new in Witness Hopkins's Affidavit on
16 this issue. He has simply applied risk data to identify specific customers to target
17 for electrification. Like all customers, however, customers identified by Witness
18 Hopkins are free to make energy choices at any time. The Company will adapt its
19 replacement planning to those choices.

20 **Q. DO YOU HAVE ANY CONCLUDING COMMENTS REGARDING WITNESS**
21 **HOPKINS'S AFFIDAVIT AND THE DISTRICT SAFE PLAN?**

22 A. Yes. Nothing in Witness Hopkins's Affidavit changes the need for the
23 District SAFE plan to be approved by the Commission at spending levels that

¹⁹ Hopkins Affidavit, ¶¶ 24-25.

²⁰ Hopkins Affidavit, ¶ 25.

1 allow the Company to continue to replace vintage mains and services to reduce
2 risk on the system. The PHMSA Call to Action stands as a compelling policy and
3 District SAFE is the right program to allow the Company to continue to replace
4 riskier assets as efficiently as possible. Dr. Hopkins' latest round of analysis and
5 conclusions contravenes Commission directives and sidesteps the engineering
6 processes that ensure a robust and transparent consideration of replacement
7 projects.

8 **Q. DOES THE APPROACH WASHINGTON GAS UTILIZES TO PRIORITIZE**
9 **REPLACEMENT PROJECTS FOCUS THE ACTIVITY ON RISK REDUCED PER**
10 **DOLLAR SPENT?**

11 A. Yes. Washington Gas' project selection process remains focused on
12 identifying, developing, and constructing the optimal projects to meet program
13 objectives. The prioritization process focuses on risk-reduced per dollar spent as
14 the key measure for monitoring this.

15 **Q. DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

16 A. Yes, it does.
17

PUBLIC SERVICE COMMISSION OF THE DISTRICT OF COLUMBIA

WASHINGTON GAS LIGHT COMPANY

FC 1179

WASHINGTON GAS'S RESPONSE
AND/OR NOTICE OF OBJECTION/UNAVAILABILITY TO
THE GOVERNMENT OF THE DISTRICT OF COLUMBIA

DC GOVERNMENT DATA REQUEST NO. 2

QUESTION NO. 2-1

Q. Regarding JANA risk scores:

- A. Provide an electronically readable map (i.e., in GIS format as a shapefile or equivalent) showing the location of each segment analyzed by the JANA tool.
- B. Provide a detailed description of how the JANA risk scores account for the value of property or buildings in proximity to each segment.

WASHINGTON GAS'S PARTIAL OBJECTION

11/8/2024

Subpart (A)

Washington Gas objects to subpart (A) of this request on grounds that it seeks Critical Energy Infrastructure Information.

WASHINGTON GAS'S RESPONSE

12/04/2024

A.

- B. The WGL system was broken down into seven location categories based on an assessment of population density (employees and residents) based on census survey data. The pipeline assets were assigned a location category based on GIS (Geospatial Information System) processing. The typical average value for each structure type was used across all location categories to account for the value of property or buildings.

SPONSOR: Ken E. Oliphant

JANA - Executive Vice President and Chief Innovation Officer

FOLLOW-UP DATA REQUEST

7/28/2025

DCG DATA REQUEST NO. 2-1:

DCG 2-1. Regarding JANA risk scores:

- A. Provide an electronically readable map (i.e., in GIS format as a shapefile or equivalent) showing the location of each segment analyzed by the JANA tool.

WGL RESPONSE:

Review of GIS database was conducted by DCG's consultants on July 24, 2025, at the office of Synapse Energy Economics, Inc., in Cambridge, MA.

SPONSOR: Ken E. Oliphant

JANA - Executive Vice President and Chief Innovation Officer
2025

JULY 24,

DCG FOLLOW UP DATA REQUEST NO. 2-1 (A):

- A. Regarding the GIS data that Synapse was able to examine last week, in the context of WGL's testimony in this proceeding regarding project prioritization based on risk mitigation per unit cost and WGL's Attachment 1 to its response to DCG DR 2-8 in Formal Case No. 1154 (FC 1154):
 1. Confirm that the "Rank" provided for each project listed in WGL's response to DCG DR 2-8, Attachment 1 in FC 1154, is WGL's rank based on mitigable risk per unit cost.
 2. If denied, provide a definition of Rank and a description of how it was assigned for each project.
- B. Regarding the testimony of Witness Stuber, "[t]he results for both main and service and service-only projects are compared and then are prioritized based on the risk-reduced- per-dollar-spent metric," and per the District SAFE plan application that "[a]s part of District DAFE, Washington Gas is proposing one primary program, encompassing all of the previously approved sub-programs, and will identify annual project lists on a risk reduced per dollar spent basis to maximize the reduction of risk, and, therefore, improve safety on the distribution system. The Company will use its currently implemented risk model (e.g., JANA Lighthouse) to prioritize and establish the annual project list that can be accomplished within the annual program budget identified in Table 4":

1. Confirm that “Rank” as defined here is the metric that WGL proposes to use to select projects for the proposed District SAFE program.
 2. If WGL plans to use other metrics instead of, or in addition to Rank, identify those metrics and describe in detail how WGL proposes to use the combination of Rank and these other metrics to select projects.
- C. Reference FC 1154, WGL’s response to DCG DR 2-8. Attachment 1 to this response contains projects with Ranks 1-20, 22-23, 25-26, etc., leaving gaps where projects were not selected (such as Rank 21 and Rank 24). Provide the list of **all** projects to which Ranks have been assigned, with the project BCA, its name/location, the project origination, the JANA total mitigable risk, and WGL’s estimated project cost.
- D. For each of the 25 projects with a Rank of less than or equal to 75, which WGL did **not** include in its revised 22-month extension project list (FC1154, WGL Response to DCG DR 2-8, Attachment 1), provide a short description of why the project was not selected for inclusion on the project list.

WASHINGTON GAS’S FOLLOW-UP RESPONSE

07/31/2025

A.

- (A1). Yes, the rank is based on mitigatable risk per \$10k.
- (A2). See response to subpart A1 above.
- (B1). The Company will select projects on a risk reduced per dollar spent metric using JANA risk model results as well as factors discussed in Section VII (Structure and Objectives of District SAFE Plan) of the Direct Testimony of Company Witness Jacas in Formal Case No. 1179.
- (B2). See response to subpart B1 above.

- (C) The Company is providing all ranked projects that have an assigned BCA that were not previously provided on the project list in attachment “FC 1179 DCG DR 2-1 Follow Up Attachment 01.” “FC 1179 DCG DR 2-1 Follow-Up Attachment 01” includes the project BCA, its name/location, the project origination, the JANA total mitigable risk, and WGL’s estimated project cost used for ranking purposes.

- (D) The Company is providing the requested information in “FC 1179 Attachment DCG DR 2-1 Follow Up Attachment 02.”

SPONSOR: Aaron C. Stuber, PE
Sr. Director – Asset Management

SPONSOR: Wayne A. Jacas, PMP
Director - Construction Program Strategy and Management

BCA ID	BCA Name	BCA Status	Project Origination	Bundle ID	JANA Total Mitigatable Risk	Estimated JANA Project Cost
309192	DC APRP 1 - SVC ONLY - Akron PL SE - 2025 - G005SE - JANA 102338	Not Authorized	N/A Project is not on a project list	102338	56599.1	\$ 323,014
309190	DC APRP1 - SVC ONLY - 12TH ST NE - QUAD MAP C009NE4 - JANA BUNDLE 108289	Canceled	N/A Project is not on a project list	108289	34122.4	\$ 308,636
300176	DC APRP 3 - Eastern Ave - A012NE - Ward 4	Closed	N/A Project is not on a project list	BCA - 300176	4703.28	\$ 42,956
309199	DC APRP 3 - GIRARD ST NE - C006NE - WARD 5	Canceled	N/A Project is not on a project list	108609	29643.8	\$ 292,225
309201	DC APRP 3 - INDEPENDENCE AVE SE - C001SE1 - WARD 6	Canceled	N/A Project is not on a project list	108628	15615.9	\$ 171,413
309196	DC APRP 1 - SVC ONLY - Nebraska AVE NW - 2025 - M005NW - JANA 106701	Not Authorized	N/A Project is not on a project list	106701	44754.4	\$ 508,930
309208	DC APRP 1 - SVC ONLY - Branch AVE SE - 2025 - H004SE - Ward 8 - JANA 100469	Canceled	N/A Project is not on a project list	100469	48165.7	\$ 559,251
309200	DC APRP 1 - SVC ONLY - 51st St SE - 2025 - L001SE - JANA 105804	Not Authorized	N/A Project is not on a project list	105804	22356.5	\$ 264,162
306254	DC APRP 1 - CONDON TER SE - B009SE - Ward 8	Not Authorized	N/A Project is not on a project list	104447	51072.3	\$ 606,570
309210	DC APRP 1 - SVC ONLY - HAYES St NE - 2025 - Ward 7 - L002NE - JANA Bundle 107510	Not Authorized	N/A Project is not on a project list	107510	25645.7	\$ 312,982
309531	DC APRP 1 - CATHEDRAL AVE NW - N006NW - WARD 3	Not Authorized	N/A Project is not on a project list	102462	29017.1	\$ 357,455
309223	DC APRP3 - SVC ONLY - GEORGIA AVE NW - QUAD MAP B004NW1 - JANA BUNDLE 101871	Not Authorized	N/A Project is not on a project list	101871	16954.5	\$ 214,369
300159	DC APRP 3 - Division Ave NE - L001NE - Ward 7	Closed	N/A Project is not on a project list	BCA - 300159	2035.68	\$ 25,815
309597	DC APRP 1 - SVC ONLY - Independence AVE SE - JANA 101447 - D001SE2 - Ward 6	Not Authorized	N/A Project is not on a project list	101447	25409.8	\$ 322,344
309202	DC APRP 1 - SCV ONY - Spring Rd NW - 2025 - D007NW1 - JANA 108156	Not Authorized	N/A Project is not on a project list	108156	37761.7	\$ 488,197
309228	DC APRP1 - SVC ONLY - UPSHUR ST NW - QUAD MAP B008NW1 - JANA BUNDLE 102587	Canceled	N/A Project is not on a project list	102587	21383.3	\$ 278,540
309533	DC APRP 1 - G ST SE - J002SE - WARD 7	Not Authorized	N/A Project is not on a project list	101573	50482.1	\$ 670,437
306192	DC APRP 1 - CONSTITUTION AVE NE - B001NE3 - Ward 6	Not Authorized	N/A Project is not on a project list	101460	37524.9	\$ 513,117
306277	DC APRP 1 - MARTIN LUTHER KING JR AVE SE - B005SE4	Not Authorized	N/A Project is not on a project list	100598	26738.5	\$ 376,179
309203	DC APRP 1 - SCV ONY - 31st PL SE - 2025 - G004SE - JANA 104306	Not Authorized	N/A Project is not on a project list	104306	77926.6	\$ 1,144,930
309535	DC APRP 1 - 9TH ST NW - C014NW - WARD 4	Canceled	N/A Project is not on a project list	107853	20655.7	\$ 307,807
309204	DC APRP 1 - SVC ONLY - Good Hope Ct SE - 2025 - F005SE - JANA 100462	Not Authorized	N/A Project is not on a project list	100462	33467.9	\$ 498,898
309209	DC APRP 3 - SVC ONLY - Varnum St NW - 2025 - Ward 4 - B008NW1 - JANA 101318	Not Authorized	N/A Project is not on a project list	101318	41051.9	\$ 625,760
301204	DC APRP 5 - 8TH ST NW - C012NW4 - Ward 4	Closed	N/A Project is not on a project list	BCA - 301204	2047.5	\$ 31,426
309639	DC APRP 4 - 5TH ST NW - B008NW4 - WARD 4 - JANA 53425	Not Authorized	N/A Project is not on a project list	53425	72021.9	\$ 1,176,840
309633	DC APRP 4 - 5TH ST NW - B008NW2+4 - WARD 4 - JANA BUNDLE 53417	Canceled	N/A Project is not on a project list	53417	60844.5	\$ 1,027,500
306221	DC APRP 1 - I ST NE - E002NE2 - Ward 5	Not Authorized	N/A Project is not on a project list	103976	18754.1	\$ 317,998
309536	DC APRP 1 - PERRY PL NE - C007NE - WARD 5	Canceled	N/A Project is not on a project list	104734	21463	\$ 367,647
309253	DC APRP1 - SVC ONLY - 5TH ST SE - QUAD MAP B001SE3 - JANA BUNDLE 101940	Not Authorized	N/A Project is not on a project list	101940	29096.7	\$ 499,728
309378, 309506, 309507	DC ARPP 5 - SVC ONLY - DIX ST NE - 2025 - WARD 7 - I001NE - JANA 107134 DC ARPP 5 - SVC ONLY - Blaine St NE - 2025 - WARD 7 - I001NE - JANA 107134 DC ARPP 5 - SVC ONLY - Ames St NE - 2025 - WARD 7 - I001NE - JANA 107134	Not Authorized	N/A Project is not on a project list	107134	404917	\$ 7,006,730
309537	DC APRP 1 - BRUCE PL SE - E006SE - WARD 8	Canceled	N/A Project is not on a project list	104473	28206.9	\$ 489,696
309538	DC APRP 1 - MACOMB ST NW - H007NW - WARD 3	Not Authorized	N/A Project is not on a project list	104315	26690.3	\$ 469,314
307265	DC APRP 4 - Donaldson PL NW - J010NW - Ward 3	Not Authorized	N/A Project is not on a project list	BCA - 307265	59364.9	\$ 1,044,360
309635	DC APRP 4 - 20TH ST NW - F004NW2 - WARD 2 - JANA BUNDLE 52190	Canceled	N/A Project is not on a project list	52190	37072.7	\$ 666,240
309380	DC APRP 4 - SVC ONLY - SCOTT RD NW - 2025 - WARD 5 - A008NW - JANA 108647	Canceled	N/A Project is not on a project list	108647	32623.2	\$ 591,405
309539	DC APRP 1 - RANDOLPH ST NE - D008NE - WARD 5	Not Authorized	N/A Project is not on a project list	104743	29068.5	\$ 529,154
309206	DC APRP 1 - SCV ONY - Minnesota AVE SE - 2025 - G003SE - JANA 105588	Canceled	N/A Project is not on a project list	105588	33303.3	\$ 606,410
307310	DC APRP 4 - ABBEY PL NE - JANA 24373 - CY 24	Not Authorized	N/A Project is not on a project list	BCA - 307310	182988	\$ 3,388,850
307402	DC APRP 4 - 10th St SE - C001SE1 - Ward 6	Not Authorized	N/A Project is not on a project list	BCA - 307402	158969	\$ 3,014,610
307309	DC APRP 4 - WEBSTER ST NW - A008NW - Ward 4	Not Authorized	N/A Project is not on a project list	BCA - 307309	328766	\$ 6,663,810
307314	DC APRP 4 - 9th ST SE - C002SE1- JANA 23670	Not Authorized	N/A Project is not on a project list	BCA - 307314	151798	\$ 3,080,860
307131	DC APRP 2 - 8th St NW - C013NW - JANA 20057	Not Authorized	N/A Project is not on a project list	BCA - 307131	30936.5	\$ 630,845
310554	DC APRP 3 - Kearney St NE - Ward 5	Not Authorized	N/A Project is not on a project list	107987	4087.74	\$ 25,815
310562	DC APRP 1 - M St SE - Ward 7	Not Authorized	N/A Project is not on a project list	108272	23071.2	\$ 239,752

BCA ID	BCA Name	BCA Status	Project Origination	Bundle ID	JANA Total Mitigatable Risk	Estimated JANA Project Cost
307244	DC APRP 4 - Highland PL NW - H007NWH - JANA BCA - 274100-PARTIAL	Not Authorized	N/A Project is not on a project list	BCA - 307244	71689.3	\$ 1,524,500
310560	DC APRP 3 - Ridgecrest Ct SE - Ward 8	Not Authorized	N/A Project is not on a project list	104820	10228.7	\$ 25,815
307295	DC APRP 4 - UPTON ST NW - JANA 16894 - CY 24	Not Authorized	N/A Project is not on a project list	BCA - 307295	84344	\$ 1,898,920
310546	DC APRP 1 - Beech St NW - Ward 4	Not Authorized	N/A Project is not on a project list	105859	16854.8	\$ 244,768
307239	DC APRP 4 - Tindall St NW - K008NW - Ward 3	Not Authorized	N/A Project is not on a project list	BCA - 307239	45643.7	\$ 1,046,200
307299	DC APRP 4 - Q ST NW - E004NW3 - JANA 23726	Not Authorized	N/A Project is not on a project list	BCA - 307299	68526.2	\$ 1,725,930
310556	DC APRP 1 - Irvington ST SW - Ward 8	Not Authorized	N/A Project is not on a project list	105930	8235.67	\$ 29,426
310558	DC APRP 3 - Oglethorpe St NE - Ward 4	Not Authorized	N/A Project is not on a project list	108140	6600.03	\$ 25,815
310540	DC APRP 1 - Greenvale St NW - Ward 4	Not Authorized	N/A Project is not on a project list	107688	47011.1	\$ 88,277
310550	DC APRP 1 - Allison St NE - Ward 5	Not Authorized	N/A Project is not on a project list	105019	8117.93	\$ 29,426
310543	DC APRP 3 - 41 St NW - Ward 3	Not Authorized	N/A Project is not on a project list	108604	7574.66	\$ 42,956
304056	APRP 1 - NEW HAMPSHIRE AVE NW - B009NW4 - Ward 4	Closed	N/A Project is not on a project list	BCA - 304056	5299.58	\$ 422,324
301193	DC APRP 3 - 3RD ST SE - A001SE - Ward 6	Closed	N/A Project is not on a project list	BCA - 301193	217.2	\$ 53,724

JANA Rank	Bundle ID	BCA ID	Justification
21	108603		Services are being replaced under individual work orders, not a BCA.
24	102338	309192	Some services were found to be previously replaced, revised cost analysis dropped project to Rank No. 133
27	104697		Services are being replaced under individual work orders, not a BCA.
28	101533		Services are being replaced under individual work orders, not a BCA.
31	102345		Services are being replaced under individual work orders, not a BCA.
37	102836		Services are being replaced under individual work orders, not a BCA.
39	104257		Found to be previously replaced.
40	BCA - 303976	303976	Carryover BCA included on CY 2025 Project List.
42	101850		Services found to be attached to an eligible main and is not a service only replacement project.
43	BCA - 301192	301192	Carryover BCA included on CY 2025 Project List.
45	BCA - 304004	304004	Carryover BCA included on CY 2025 Project List.
46	107627	306253	Carryover BCA included on CY 2025 Project List.
48	105977		Found to be previously replaced.
49	108289	309190	Services found to be attached to an eligible main and is not a service only replacement project.
50	BCA - 300176	300176	BCA has been completed.
52	108012		Services are being replaced under individual work orders, not a BCA.
57	106753	306220	Carryover BCA included on CY 2025 Project List.
59	108609	309199	Services are being replaced under individual work orders, not a BCA.
62	BCA - 304043	304043	Carryover BCA included on CY 2025 Project List.
64	108646		Services found to be attached to an eligible main and is not a service only replacement project.
66	BCA - 301165	301165	Carryover BCA included on CY 2025 Project List.
69	106769		Services are being replaced under individual work orders, not a BCA.
70	108628	309201	Services were found to be previously replaced.
72	106701	309196	After completion of the Class 3 estimate, the risk reduced per \$10k dropped to a rank of 923.
75	100469	309208	Some services were found to be previously replaced, revised cost analysis dropped project to Rank No. 133

ATTESTATION

I, KEVIN MURPHY, whose Testimony accompanies this Attestation, state that such testimony was prepared by me or under my supervision; that I am familiar with the contents thereof; that the facts set forth therein are true and correct to the best of my knowledge, information and belief; and that I adopt the same as true and correct.



KEVIN MURPHY

September 23, 2025

DATE

CERTIFICATE OF SERVICE

I, the undersigned counsel, hereby certify that on this 24th day of September 2025, I caused copies of the foregoing document to be hand-delivered, mailed, postage-prepaid, or electronically delivered to the following:

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