

FILED
May 15, 2024
INDIANA UTILITY
REGULATORY COMMISSION

STATE OF INDIANA

INDIANA UTILITY REGULATORY COMMISSION

**JOINT PETITION OF OHIO VALLEY GAS)
CORPORATION AND OHIO VALLEY GAS, INC.)
FOR (1) AUTHORITY TO INCREASE ITS RATES)
AND CHARGES FOR GAS UTILITY SERVICE, (2))
APPROVAL OF NEW SCHEDULES OF RATES)
AND CHARGES, (3) APPROVAL OF DECOUPLING)
THROUGH A NEW SALES RECONCILIATION)
COMPONENT RIDER, AND (4) APPROVAL OF)
NECESSARY AND APPROPRIATE ACCOUNTING)
RELIEF AND OTHER REQUESTS.)**

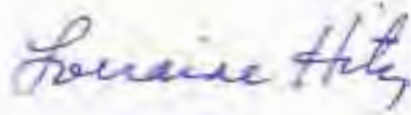
CAUSE NO. 46011

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR'S

**PUBLIC'S EXHIBIT NO. 7 – PUBLIC REDACTED TESTIMONY OF
OUCC WITNESS BRIEN R. KRIEGER**

May 15, 2024

Respectfully submitted,



Lorraine Hitz
Attorney No. 18006-29
Deputy Consumer Counselor

**PUBLIC (REDACTED) TESTIMONY OF
OUCC WITNESS BRIEN R. KRIEGER
CAUSE NO. 46011
OHIO VALLEY GAS CORPORATION AND OHIO VALLEY GAS, INC.**

NOTE: [REDACTED] **INDICATES CONFIDENTIAL INFORMATION**

I. INTRODUCTION

1 **Q: Please state your name and business address.**

2 A: My name is Brien R. Krieger, and my business address is 115 West Washington Street,
3 Suite 1500 South, Indianapolis, Indiana 46204.

4 **Q: By whom are you employed and in what capacity?**

5 A: I am employed by the Indiana Office of Utility Consumer Counselor (“OUCC”) as a Utility
6 Analyst. For a summary of my educational and professional experience and general
7 preparation for this case, please see Appendix BRK-1 attached to my testimony.

8 **Q: What is the purpose of your testimony?**

9 A: The purpose of my testimony is to discuss my review and analysis of Ohio Valley Gas
10 Corporation’s and Ohio Valley Gas, Inc.’s (“OVG” or “Joint Petitioners”) cost of service
11 study (“COSS”). My testimony addresses rate class cost allocation, cost allocation of
12 transmission mains contained within FERC account 367, and COSS effects on OVG’s
13 proposed single tariff rates. Additionally, I discuss Joint Petitioners’ proposed interclass
14 subsidies and the discontinuation of two special contract rates, which OVG recommends
15 be moved to a tariffed rate – Rate 9T Pipeline Direct Buy.

1 **Q: What are your recommendations?**

2 A: I recommend OVG's COSS be updated in the Step 1 compliance filing to account for actual
3 Rate 9T information, as discussed below. My analysis indicates OVG has not calculated
4 Design Day Demand for transitioning these two customers to Rate 9T.

5 I recommend the following allocation changes for OVG's COSS:

- 6 1. Reject the use of Number of Customers for allocating transmission mains.
7 2. Approve the use of Annual Throughput for allocation of 50% of transmission mains.
8 3. Approve the use of Design Day Demand for allocation of 50% of transmission mains.

9 I recommend OVG use a different Zero-Intercept Mains Study ("ZIS") by eliminating
10 transmission mains and keeping distribution mains in the ZIS.

11 **Q: To the extent you do not address a specific topic, issue, or item in your testimony,**
12 **should it be construed to mean you agree with OVG's proposal?**

13 A: No. My silence regarding any topics, issues, or items OVG proposes does not indicate my
14 approval of those topics, issues, or items. Rather, the scope of my testimony is limited to
15 the specific items addressed herein.

16 **Q: Are you sponsoring any attachments in this proceeding?**

17 A: Yes. I have five attachments: Attachments BRK-1, BRK-2, BRK-3, BRK-4, and BRK-5.
18 These attachments include OVG's responses to OUCC Data Requests ("DR"), confidential
19 consumption data, and portions of the Gas Distribution Rate Design Manual prepared by
20 the NARUC Staff Subcommittee on Gas, June 1989.

II. OVERVIEW OF COSS ANALYSIS

1 **Q: Please summarize Joint Petitioners' customers and characteristics in Joint**
2 **Petitioners' COSS.**

3 A: Joint Petitioners serve approximately 29,000 customers located in three geographical
4 locations within 16 Indiana counties. Joint Petitioners' last rate case (Cause No. 44891,
5 Order approved October 17, 2017) continued to move OVG toward single tariff pricing.
6 While residential and small volume customers are 99% of the total customers, those
7 customer classes represent approximately 28% of the annual throughput.

8 OVG proposes to eliminate locational cost elements and implement single tariff
9 pricing for each rate class. OVG assigns all plant-in-service and operation and maintenance
10 ("O&M") into one "bucket" before allocating and assigning cost causation per rate class.
11 Within each rate class, OVG customers will pay the same volumetric rate and the same
12 monthly facilities charge with one exception – Town of Grandview ("Grandview").

13 OVG's proposed rates are based upon its proposed COSS. Grandview allocators
14 were included in Rate 1S Small Volume Sales Service in Joint Petitioners' COSS, and Rate
15 1S tariff language applies to Grandview. OVG designed a new rate (Rate 9T Pipeline Direct
16 Buy) that will be available to OVG's two special contract customers and to other customers
17 that meet the tariff requirements. These two special contract customers dominate the annual
18 throughput for OVG and represent approximately <Confidential [REDACTED] Confidential> of the
19 total annual volumes of all OVG rate classes.

20 **Q: What is the focus of your COSS analysis?**

21 A: My analysis centers on whether the COSS allocators represent the cost causation of each
22 rate class. I am focusing on allocation factors for transmission and distribution mains.

1 These two plant-in-service FERC accounts (transmission FERC 367 and distribution FERC
2 376) make up a large portion of OVG's rate base. The total allocated transmission or
3 distribution costs are also used for allocating other FERC accounts in OVG's COSS model.
4 I looked for direct assignment of any assets and the associated costs to ensure direct
5 assignment to a rate class. In addition, I reviewed how Grandview was included in the
6 COSS.

III. NEW RATE 9T DESIGN DAY DEMAND IN COSS

7 **Q: Do you agree with the Design Day Demand OVG used for Rate 9T?**

8 A: No. I found no calculations to support Allocator No. 4 Design Day Demand for Rate 9T.
9 OVG responded to OUCC DR 9.21 that it used the same design day calculation as that
10 used for Rate 5T, Large Volume Transportation Service. (Attachment BRK-1; OVG
11 Response to OUCC 9.21.) Rate 5T characteristic allocators (Number of Customers and
12 Annual Throughput) are not representative of the two special contract customers or Rate
13 9T. Therefore, I investigated Design Day Demand. The two customers under Rate 9T are
14 both ethanol plants with high load factors, while Rate 5T is a mix of customer types and
15 production types with large consumption requirements.

16 OVG's COSS Rate 5T represents approximately 16% of the total annual throughput
17 and 9% of the Design Day Demand - approximately 57,000 therms/day. (Joint Petitioners'
18 Exhibit No. 6, Attachment GMV-2 Schedule of Allocation Factors.)

19 **Q: What Design Day Demand for Rate 9T was used by OVG in its COSS?**

20 A: OVG set Design Day Demand and did not use the available data for Rate 9T, instead using
21 the same allocator as for Rate 5T (an average of 57,075 therms/day). (Joint Petitioners'

1 Exhibit No. 6, Attachment GMV-2 Schedule of Allocation Factors.) Setting Rate 9T
2 Design Day Demand equal to Rate 5T without any OVG analysis of Rate 9T peak demand
3 is inaccurate and does not properly allocate the costs attributable to the 9T customers.

4 **Q: Were you able to calculate a load factor to analyze the Design Day Demand for Rate**
5 **9T?**

6 A: Yes. I calculated an approximate load factor and the Design Day Demand during the
7 average winter months for the two special contract customers using one of OVG's rate case
8 documents – Joint Petitioners' Workpaper EMH-WP5 2024-2025 Revenue Model-
9 Transport HIGHLY CONFIDENTIAL.

10 I calculated a load factor for each special contract customer to be approximately
11 <Confidential [REDACTED] Confidential>, derived from the actual monthly consumption data for
12 October 2022 through September 2023. (Confidential Attachment BRK-2; Joint
13 Petitioners' Workpaper EMH-WP5 Confidential.) The consumption load profile for these
14 two customers is relatively constant for the entire year and does not fluctuate much during
15 winter months as compared to other months.

16 **Q: Were you able to calculate Design Day Demand for Rate 9T?**

17 A: Yes. I calculated each special contract Design Day Demand from average *actual* winter
18 months from OVG's 2022 confidential data. My calculation used the total actual
19 consumption for December 2022, January 2023, and February 2023 divided by the number
20 of days for those three months (90 days).

21 I calculated each of the two Rate 9T customers' Design Day Demand and then
22 added the two to get the total rate class peak day demand occurring during a winter month.
23 My calculations show the Rate 9T Design Day Demand is approximately <Confidential

1 [REDACTED] Confidential> terms for these two special contract customers. This is
2 approximately <Confidential [REDACTED] Confidential> more than the Design Day Demand
3 OVG used for Rate 9T, which was set equal to Rate 5T in its proposed COSS.

4 Because Design Day Demand is used directly for transmission mains (FERC 367)
5 allocation and indirectly for other FERC accounts, OVG should have used actual Design
6 Day Demand information for Rate 9T. Using Rate 5T information is inappropriate because
7 it is much lower peak day volume than Rate 9T.

IV. TRANSMISSION MAIN ALLOCATORS

8 **Q: What allocators do you consider to best represent cost causation for transmission**
9 **mains?**

10 **A:** I recommend two allocators for transmission: Allocator No. 1 Annual Throughput and
11 Allocator No. 4 Design Day Demand. Each allocator represents 50% of consumption
12 characteristics driven by normal annual consumption. Annual consumption is defined by
13 production for industrial high load factor customers and by non-weather dependent loads
14 for non-industrial customers.

15 Peak demands – Design Day Demand is also considered a consumption attribute.
16 Design Day Demand for industrial customers is driven by production, while peak demands
17 for non-industrial customers are primarily driven by weather - Design Day Demand.

18 Choosing these two allocators with equal weighting represents the physical design
19 of transmission main usage to accommodate peak demand and annual throughput: 1) peak
20 demand - the additional pipe cost for larger pipe diameter and 2) throughput - all remaining

1 costs associated with installing a pipe length, easements, annual maintenance, design, and
2 restoration after installation, which are not a function of pipe diameter.

3 Larger pipe diameter and thicker pipe walls allow for more peak demand capacity
4 (larger volume and higher pressure), while the pipe length allows for 365 days per year of
5 throughput capacity. High volume capabilities of transmission mains allow transport
6 customers to purchase transportation gas from interstate pipelines.

7 **Q: How did OVG derive the percent of transmission assigned to each of the three**
8 **allocators of transmission plant-in-service?**

9 A: OVG used the results of its Zero-Intercept Mains Study (discussed further below) to
10 determine the magnitude of the three transmission allocators (Nos. 11, 1, and 4). OVG's
11 ZIS uses the pipeline cost of transmission *and* distribution mains (FERC 367 and FERC
12 376, respectively) to determine the smallest theoretical pipe needed to serve all customers,
13 whether served from transmission or distribution. This theoretical and small pipe cost is
14 used to determine Number of Customers (Allocator No. 11) by comparing the cost of the
15 theoretical "service" pipe to all mains cost – transmission and distribution.

16 The calculated theoretical pipe, minimum system diameter/zero intercept, is used
17 to determine the percentage of total pipe cost that *may* be allocated based on Number of
18 Customers per rate class. When Number of Customers is used as an allocator, the remaining
19 pipeline costs are typically split 50/50 between two other allocators - Annual Throughput
20 and demand - Design Day Demand.

1 **Q: Please describe why Number of Customers does not represent cost causation for**
2 **transmission but is reasonable for distribution mains.**

3 A: Typically, very large volume customers are limited in number and located on transmission
4 mains. This is juxtaposed with transmission, where build-out of transmission mains for any
5 reason is rarely done. This is because transmission mains are planned and built for the long
6 term. Transmission mains have few large volume services, and the transmission mains can
7 be thought of as a trunk line or large volume "header" sized to meet the entire volume of
8 the system. The function of transmission mains is not the same as distribution mains.

9 Residential customers are located on distribution pipes, excluding farm taps, and
10 distribution mains are typically a "spaghetti" of networked mains with many small services.
11 Distribution design includes various mains, regulators, and valves to reliably serve many
12 small services. Some distribution systems are designed with distribution mains on both
13 sides of a street to avoid underground services traversing below roads. Other distribution
14 mains are placed in dense residential populations with many individual service lines. These
15 factors indicate using customer count as one allocator for distribution mains is appropriate
16 but is not appropriate for transmission mains.

17 The distribution plant is designed for many smaller users and is appropriately
18 allocated by Number of Customers, Throughput, and Demand per customer class.
19 Assigning both transmission mains and distribution mains based on Number of Customers
20 over-allocates costs to small volume users based on Number of Customers, and results in
21 reduced transmission costs to high volume consumers.

1 **Q: What is your analysis of using the Number of Customers allocator as part of the**
2 **transmission mains allocation within the COSS?**

3 A: OVG uses three allocators for assigning the cost of transmission mains (transmission plant-
4 in-service (FERC 367)), one of which is Number of Customers. I am concerned about the
5 use of the Number of Customers for all rate classes, particularly regarding Rate 9T, which
6 has two customers responsible for approximately <Confidential [REDACTED] Confidential> of
7 OVG's annual throughput. (Joint Petitioners' Exhibit No. 6, Confidential Attachment
8 GMV-2 Schedule of Allocation Factors.) High Annual Throughput and Design Day
9 Demand are not correlated to the Number of Customers to determine cost causation. Two
10 customers use <Confidential [REDACTED] Confidential> of the annual volume while 29,681
11 customers use the rest.

12 The Number of Customers is not appropriate for transmission allocation because
13 two rate classes (Rate 9T and Rate 5T) have less than 1% of the Number of Customers and
14 are responsible for more than <Confidential [REDACTED] Confidential> of the total annual volume.
15 (Joint Petitioners' Exhibit No. 6, Confidential Attachment GMV-2 Schedule of Allocation
16 Factors.) Including the Number of Customers as one of three transmission allocators
17 inappropriately shifts large volume pipe costs (transmission mains) from a few dominant
18 large volume users to smaller volume customers.

19 The two primary cost causation allocators for transmission are Annual Throughput
20 and Design Day Demand and using only these two allocators is appropriate because these
21 allocators accurately represent natural transmission costs for costs caused by annual
22 consumption and peak day consumption.

1 **Q: How does including the Number of Customers distort cost causation for**
2 **transmission?**

3 A: Including the Number of Customers shifts approximately 25% of transmission cost to low
4 volume annual users, who are residential and small commercial customers. Transmission
5 system cost causation for the largest volume users, Rate 9T and Rate 5T Large Volume
6 Transport Service, is reduced by almost 25% because these two rate classes represent less
7 than 1% of the customers and use more than half of OVG's system volume.

8 The Annual Throughput and Design Day Demand allocators should remain as
9 transmission allocators because they represent annual consumption and peak demand.
10 These two allocators represent the cost of installing the transmission pipe and the cost of
11 large diameter pipe to meet peak day requirements. I recommend Annual Throughput and
12 Design Day Demand be equally weighted at 50% for the entirety of transmission mains.

13 **Q: Why does allocating transmission mains equally between Annual Throughput and**
14 **Design Day Demand represent transmission cost causation?**

15 A: Each rate class's consumption allocators are driven by normal annual consumption.
16 Normal annual consumption is defined by production for industrial customers or by non-
17 weather dependent loads for non-industrial customers. Peak demands are also considered
18 a consumption attribute. Peak demands for industrial customers are driven by production,
19 while peak demands for non-industrial customers are primarily driven by weather.
20 Therefore, equal weighting, a 50%/50% split between annual consumption and peak
21 demand is appropriate. Transmission installed costs represent one additional parameter –
22 growth. This growth can be with few or many customers, so Number of Customers is not
23 relevant while initial sizing, easements, installation, and ongoing maintenance are
24 represented by consumption.

1 **Q: How would the cost allocation to the various rate classes be affected by your**
2 **recommendation to eliminate Number of Customers for transmission cost allocation?**

3 A: My allocation for transmission will cause margin cost increases to the large volume users
4 of Rate 9T Pipeline Direct Buy and Rate 5T Large Volume Transportation Service. OVG
5 proposes these two rate classes have margin increases of approximately 36% and 16.4%.
6 (Joint Petitioners' Exhibit No. 6, Attachment GMV-5 Comparison of Gas Sales Revenues
7 at Present and Proposed Rates.) My recommendations would decrease the margin increase
8 for rate classes: 1S – Small Volume Sales Service, 2S – Firm Medium Volume Sales
9 Service, and Rate 6T Medium Volume Transport Service, but this will only be confirmed
10 by rerunning the COSS.

11 If OVG designs rates with the recommended COSS transmission changes, the
12 newly designed rates will result in less subsidization. OVG's use of the Rate 5T Design
13 Day Allocator is out of proportion to the actual Design Day Demand of the Rate 9T
14 customers. I expect margin costs for the lesser volume customers to decrease slightly (Rate
15 1S) and annual high volume user costs to increase (Rate 9T). These changes based upon
16 cost causation will provide a clearer picture of potential subsidy exchanges between rate
17 classes.

18 **Q: Did you ask OVG to rerun the COSS with any of your prescribed changes?**

19 A: Yes. I did ask, but OVG chose not to do so. (Attachment BRK-3; OVG Response to OUCC
20 DR 11.6.)

21 **Q: Why did you not rerun the COSS?**

22 A: In Attachment BRK-3, OVG offered to help the OUCC run the model. In my experience,
23 it is better not to operate others' COSS models because there may be updates from external

1 files, potential errors introduced by operating another's model, and unforeseen
2 complications by not being intimately involved with development of the model. A model's
3 individual cells must be checked for input links and output computation links for the
4 calculations contained within each cell, the calculations that reference different cells, and
5 equation results carried to other tabs in the excel model.

6 **Q: Do you consider your request to OVG to rerun the COSS model with one changed**
7 **allocator burdensome?**

8 A: No. OVG offered to help the OUCC run the model but declined to run its model with the
9 one changed allocator.

10 **Q: How do you recommend transmission mains (FERC 367) be allocated?**

11 A: I recommend 50% of transmission mains be allocated based on rate class Design Day
12 Demand, and 50% be allocated based on Annual Throughput of each customer class.
13 Including Number of Customers dramatically reduces the responsibility of the dominant
14 annual throughput users.

V. ANALYSIS OF ZERO-INTERCEPT MAINS STUDY ("ZIS")

15 **Q: What is a Zero-Intercept mains study for allocating mains?**

16 A: A Zero-Intercept mains study is a theoretical study that determines a theoretical small pipe
17 diameter, as a function of OVG's distribution mains, to determine an imaginary pipe size
18 to connect the customer regardless of the customer's actual quantity of natural gas flow.
19 This cost represents the cost to be connected to OVG's main but not all other associated
20 costs of plant, maintenance, and operations.

21 Once the theoretical pipe size is determined, the analyst decides if this theoretical
22 cost can be attributed as a minimum cost to connect a customer and may allocate these

1 using Number of Customers. The remaining distribution mains plant-in-service are
2 typically split between Design Day Demand and Annual Throughput. OVG conducted a
3 ZIS using mains cost of transmission plant-in-service and distribution plant-in-service.
4 (Confidential Attachment BRK-4; Joint Petitioners' Revised Workpaper GMV-2
5 Confidential COSS Workpapers 2-26-2024 - Workpaper GMV-WP6 – Zero Intercept
6 Mains.)

7 **Q: Do you have issues with OVG's ZIS allocation of transmission mains and distribution**
8 **mains with the same allocators and the same percentages?**

9 A: Yes. OVG COSS witness Gary M. Verdouw uses both transmission mains and distribution
10 mains in his ZIS. I disagree with OVG's ZIS including transmission mains because the
11 annual volumes are dominated by a few customers, and it does not follow National
12 Association of Regulatory Utility Commissioners ("NARUC") rules. OVG's ZIS uses
13 transmission mains cost and the Number of Customers for transmission assets. NARUC
14 points out the Zero-Intercept or minimum system methodology using the Number of
15 Customers as part of the allocation *could* represent the minimum service connection cost,
16 if distribution mains are the only mains included in the study.

17 A portion of the costs associated with the distribution system may be
18 included as customer costs. However, the inclusion of such costs can be
19 controversial. One argument for inclusion of distribution related items in
20 the customer cost classification is the 'zero or minimum size main
21 theory.' This theory assumes that there is a zero or minimum size main
22 necessary to connect the customer to the system and thus affords the
23 customer an opportunity to take service if he so desires.

24 (Attachment BRK-5; NARUC, pages 20-22, Item 1, Functionalization of
25 Cost.)

26 NARUC states costs in a COSS should be separated according to how the asset or
27 expense is used or its function. There should not be a mixing of functionally discrete

1 distribution and transmission assets such as OVG has done. Transmission carries bulk
2 volumes including dominant annual consumption rate classes (Rate 9T), whereas
3 Distribution carries discrete volumes for localized natural gas consumption (Non-
4 Transport Customers). NARUC's guidelines state "[f]unctionalization is the arrangement
5 of costs according to major functions, such as production, storage, transmission or
6 distribution." (Attachment BRK-5; NARUC, pages 20-22, Item 1, Functionalization of
7 Cost.)

8 NARUC does not include transmission assets in a ZIS, and states assigning
9 *distribution* costs, not transmission costs, as customer costs can be controversial. OVG
10 derived its proposed customer cost from its ZIS that included transmission mains and
11 distribution mains. (Confidential Attachment BRK-4; Joint Petitioners' Revised
12 Workpaper GMV-2 Confidential COSS Workpapers 2-26-2024 - Workpaper GMV-WP6
13 - Zero Intercept Mains.)

14 **Q: What are your conclusions concerning OVG's ZIS transmission and distribution**
15 **methodology?**

16 A: OVG's ZIS used pipe sizes from 0.75-inch diameter through 10-inch diameter, which
17 includes distribution mains and transmission mains. (Confidential Attachment BRK-4,
18 Joint Petitioners' Revised Workpaper GMV-2 Confidential COSS Workpapers 2-26-2024
19 - Workpaper GMV-WP6 - Zero Intercept Mains.)

20 My conclusion is OVG should not include transmission plant-in-service cost in the
21 ZIS methodology for three reasons: 1) NARUC does not include transmission cost in a
22 Zero-Intercept mains calculation, 2) two industrial classes (12 customers out of a total of

1 29,683 customers) dominate the annual throughput, and 3) inclusion of Number of
2 Customers shifts some transmission cost to low volume users from high volume users.

VI. INTERCLASS SUBSIDIES

3 **Q: Are OVG's rates designed with interclass subsidies?**

4 A: Yes. OVG proposes to structure its rates in such a way that interclass subsidies are reduced
5 but not eliminated. OVG's proposed rates have all rate classes paying a higher amount than
6 they currently pay.

7 **Q: Do you recommend modifications to OVG's subsidy levels in OVG's proposed rate**
8 **design?**

9 A: No. OVG's proposed rate design decreases subsidy exchanges between rate classes.
10 However, the proposed rates with subsidies do not show accurate class cost causation;
11 moving the special contract customers to a tariffed rate does not reflect accurate cost
12 causation. My subsidy analysis of proposed rates with an embedded subsidy change is
13 further complicated by the fact that OVG uses an inaccurate Design Day allocator for Rate
14 9T.

15 **Q: Will modifications to OVG's subsidy levels be necessary if a new COSS is run with**
16 **your recommended allocator changes?**

17 A: Yes. My allocation recommendations represent cost causation, and the final rate design
18 should move all rate classes closer to paying their fully allocated costs while avoiding rate
19 shock.

VII. PROPOSED TARIFF CHANGES

1 **Q: Does OVG's proposed rate design continue to move toward single tariff pricing?**

2 A: Yes. OVG finalized its removal of the three distinct geographical pipeline service areas
3 (OVGC-ANR, OVGC-Texas Gas, and OVGI-Texas Gas), and proposed single tariff
4 pricing where the same rate schedule applies to all customers within the same rate class
5 regardless of geographical location. However, one area continues to be outside the single
6 tariff rates of Rate 1S, and that is Grandview. For additional information, see OUCC
7 witness Jared Hoff's testimony regarding rate design, tariff language, and monthly
8 customer charges.

VIII. RECOMMENDATIONS

9 **Q: Please summarize your recommendations.**

10 A: I recommend OVG's COSS be updated in the Step 1 compliance filing to account for actual
11 Rate 9T information. My review indicates OVG has not calculated Design Day Demand
12 for transitioning these two customers to Rate 9T.

13 I recommend the following allocation changes for OVG's COSS:

- 14 1. Reject the use of Number of Customers for allocating transmission mains.
- 15 2. Approve the use of Annual Throughput for allocation of 50% of transmission mains.
- 16 3. Approve the use of Design Day Demand for allocation of 50% of transmission mains.

17 I recommend OVG use a different ZIS by eliminating transmission mains and keeping
18 distribution mains in the ZIS.

19 **Q: Does this conclude your written testimony?**

20 A: Yes.

APPENDIX BRK-1 TO THE TESTIMONY OF
OUCC WITNESS BRIEN R. KRIEGER

I. PROFESSIONAL EXPERIENCE

1 **Q: Please describe your educational background and experience.**

2 A: I graduated from Purdue University in West Lafayette, Indiana with a Bachelor of Science
3 Degree in Mechanical Engineering in May 1986, and a Master of Science Degree in
4 Mechanical Engineering in August 2001 from Purdue University at the IUPUI campus.

5 From 1986 through mid-1997, I worked for PSI Energy and Cinergy progressing to
6 a Senior Engineer. After the initial four years as a field engineer and industrial
7 representative in Terre Haute, Indiana, I accepted a transfer to corporate offices in
8 Plainfield, Indiana where my focus changed to industrial energy efficiency implementation
9 and power quality. Early Demand Side Management (“DSM”) projects included ice storage
10 for Indiana State University, Time of Use rates for industrials, and DSM Verification and
11 Validation reporting to the IURC. I was an Electric Power Research Institute committee
12 member on forums concerning electric vehicle batteries/charging, municipal
13 water/wastewater, and adjustable speed drives. I left Cinergy and worked approximately
14 two years for the energy consultant, ESG, and then worked for the OUCC from mid-1999
15 to mid-2001.

16 I completed my Master’s in Engineering in 2001, with a focus on power generation,
17 including aerospace turbines, and left the OUCC to gain experience and practice in
18 turbines. I was employed by Rolls-Royce (2001-2008) in Indianapolis working in an
19 engineering capacity for military engines. This work included: fuel-flight regime

1 performance, component failure mode analysis, and military program control account
2 management.

3 From 2008 to 2016 my employment included substitute teaching in the Plainfield,
4 Indiana school district, grades 3 through 12. I passed the math Praxis exam requirement for
5 teaching secondary school. During this period, I also performed contract engineering work
6 for Duke Energy and Air Analysis. I started working again with the OUCC in 2016.

7 Over my career I have attended various continuing education workshops at the
8 University of Wisconsin and written technical papers. While previously employed at the
9 OUCC, I completed Week 1 of NARUC's Utility Rate School hosted by the Institute of
10 Public Utilities at Michigan State University. In 2016, I attended two cost-of-service/rate-
11 making courses: Ratemaking Workshop (ISBA Utility Law Section) and Financial
12 Management: Cost of Service Ratemaking (AWWA).

13 In 2017, I attended the AGA Rate School sponsored by the Center for Business and
14 Regulation in the College of Business & Management at the University of Illinois
15 Springfield and attended Camp NARUC Week 2, Intermediate Course held at Michigan
16 State University. I completed the Fundamentals of Gas Distribution on-line course
17 developed and administered by Gas Technology Institute in 2018. In October 2019, I
18 attended Camp NARUC Week 3, Advanced Regulatory Studies Program held at Michigan
19 State University by the Institute of Public Utilities.

20 My current responsibilities include reviewing and analyzing Cost of Service
21 Studies ("COSS") relating to cases filed with the Commission by natural gas, electric and
22 water utilities. Additionally, I have taken on engineering responsibilities within the

1 OUCC's Natural Gas Division, including participation in "Call Before You Dig-811"
2 incident review, commenting on proposed IAC rules for natural gas gathering lines and
3 UPPAC/811 issues, along with attending natural gas emergency response training. I
4 regularly attend UPPAC "811" monthly penalty assignment advisory meetings.

5 **Q: Have you previously filed testimony with the Commission?**

6 A: Yes. I have provided written testimony concerning COSS in more than thirteen base rate
7 cases filed with the Indiana Utility Regulatory Commission. Additionally, I have provided
8 written testimony for Targeted Economic Development ("TED") projects and various
9 Federal Mandate Cost Adjustment ("FMCA") and Transmission, Distribution, and Storage
10 System Improvement Charges ("TDSIC") petitions. I filed testimony or provided analysis
11 in over thirteen FMCA or TDSIC 7-Year Plan or Tracker petitions in Indiana.

12 While previously employed by the OUCC, I wrote testimony concerning the
13 Commission's investigation into merchant power plants, power quality, Midwest
14 Independent System Operator and other procedures. Additionally, I prepared testimony and
15 position papers supporting the OUCC's position on various electric and water rate cases
16 during those same years.

II. BACKGROUND OF TESTIMONY ANALYSIS

17 **Q: Please describe the review you conducted to prepare this testimony.**

18 A: I reviewed OVG's Joint Petition, Testimony, Attachments, and Confidential Attachments
19 for this Cause. I reviewed Joint Petitioners' prior base rate case, Cause No. 44891, and the
20 Commission's Order for Cause No. 44891. I focused my review on Joint Petitioners' COSS
21 model including the testimony of Joint Petitioners' COSS witness' testimony (Gary M.

1 Verdouw, Joint Petitioners' Exhibit No. 6), attachments, and COSS model. I participated
2 in OUCC case team meetings concerning Joint Petitioners' case. I was engaged in a tech-
3 to-tech discussion with Joint Petitioners on March 19, 2024 concerning Joint Petitioners'
4 COSS model and the allocation of costs as Joint Petitioners finalize their move to single
5 price tariff removing zonal pricing across Joint Petitioners' non-contiguous service
6 territories within Indiana.

OUCG DR 9-21

DATA INFORMATION REQUEST
Ohio Valley Gas Corporation and Ohio Valley Gas, Inc.

Cause No. 46011

Information Requested:

Please explain why Allocator No. 4 Design Day (Attachment GMV-2, Schedule of Allocation Factors, page 1 of 4) is equal for the following two rate classes: Rate 9T Pipeline Direct Buy and Rate 5T Large Volume Transportation Service.

Information Provided:

Since there currently is not a Rate 9T, Pipeline Direct Buy, the data for Rate 5T, Large Volume Transportation Service was used for this allocator.

Note: Attachment BRK-2, Page 1 is Confidential.

OUCG DR 11-6

DATA INFORMATION REQUEST
Ohio Valley Gas Corporation and Ohio Valley Gas, Inc.

Cause No. 46011

Information Requested:

Please rerun and provide the entire COSS model with results similar in format to the original COSS model (CN46011_Workpaper GMV-1 HC 1 GMV-2 -GMV-5, GMV-7 - GMV-12) for the following changes to the Total Transmission Plant – Mains:

- a. Eliminate the use of Allocator No. 11 Number of Customers, and
- b. Change the percent allocation of transmission mains to 50% for Allocator No. 1 Annual Throughput (therms) and 50% for Allocator No. 4 Design Day Demand.

Objection:

Ohio Valley Gas Corporation and Ohio Valley Gas, Inc. (collectively “OVG”) object to the Request on the grounds and to the extent the request seeks a compilation, analysis or study that OVG has not performed and to which OVG objects to performing.

Information Provided:

Subject to and without waiver of the foregoing general and specific objections, OVG responds as follows:

OVG has provided the OUCG with a working COSS model, the OUCG should have the capability to perform this analysis if it chooses. If the OUCG needs assistance in using the model OVG is willing to have a technical meeting.

Note: Attachment BRK-4, Page 1 is Confidential.

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B. Historic or Embedded Cost of Service

Historic or embedded cost of service studies attempt to apportion total costs to the various customer classes in a manner consistent with the incurrence of those costs. This apportionment must be based on the fashion in which the utility's system, facilities and personnel operate to provide the service. Basic load and operating data are needed, in addition to the costs, to conduct a cost allocation study.

Embedded cost of service studies are generally conducted in the following steps: (1) functionalization of costs as either production, storage, transmission or distribution; (2) classification of costs into three basic categories -- customer, energy or commodity, and demand or capacity costs; and (3) the allocation of these costs to customer classes or to types of load. All items that can be directly attributed to a particular service (such as revenues from a specific service or the cost of a high pressure main constructed for a particular customer or group of customers) should be segregated and directly assigned to the appropriate customers. There is no scientifically correct method of making necessary allocations. A certain amount of judgment must be used in any cost of service study. Consequently, cost allocation studies should only be utilized as a general guide or as a starting point for rate design.

1. Functionalization of Costs

Functionalization is the arrangement of costs according to major functions, such as production, storage, transmission or distribution. This functional categorization of costs helps to facilitate a determination as to which customer groups are jointly responsible for such costs. Some costs, such as those associated with the general or common plant and administrative and general expenses,

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generally are not directly assigned to the established functional groups. These costs did not appear to have any direct relationship to the service characteristics employed for purposes of functionalization.

The primary operating functions to which costs can be broadly categorized are described as follows:

Production costs are the costs relating to producing, purchasing or manufacturing gas. Included are purchases of pipeline or producer gas and all costs associated with producing owned or peaking gas; i.e. the gas itself, feedstocks, capital costs, operations and maintenance expense.

Storage costs are the costs associated with storing gas normally during off-peak for use in times of cold weather. Also included are related operation and maintenance expenses.

Transmission costs are the costs incurred in transporting gas from interstate pipelines to the distribution system. Included are the capital costs of transmission mains, as well as city gas metering station costs and related operation and maintenance.

Distribution system costs are those costs incurred to deliver the gas to the customers. Included are capital and operating costs for distribution mains, compressors, customer services, meters, and regulators.

Other costs include those costs that do not fit the above functions, such as the cost associated with common plant and working capital, general and administrative costs, customer accounting, and advertising costs.

The functionalization of costs is generally the easiest step in a cost of service study, since utility investment and expense records are maintained in

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accordance with prescribed uniform accounting systems. These systems, such as the Uniform System of Accounts, classify costs according to primary operating functions. Thus, the functionalization of costs is already done for the cost of service analyst.

2. Classification of Costs

The functionalization of costs is of limited use in the allocation of costs. Therefore, it is necessary to further classify costs into customer, energy or commodity, and demand or capacity costs.

a. Customer Costs

Customer costs are those operating capital costs found to vary directly with the number of customers served rather than with the amount of utility service supplied. They include the expenses of metering, reading, billing, collecting, and accounting, as well as those costs associated with the capital investment in metering equipment and in customers' service connections.

A portion of the costs associated with the distribution system may be included as customer costs. However, the inclusion of such costs can be controversial. One argument for inclusion of distribution related items in the customer cost classification is the "zero or minimum size main theory." This theory assumes that there is a zero or minimum size main necessary to connect the customer to the system and thus affords the customer an opportunity to take service if he so desires.

Under the minimum size main theory, all distribution mains are priced out at the historic unit cost of the smallest main installed in the system, and assigned as customer costs. The remaining book cost of distribution mains is assigned to demand. The zero-inch main method would allocate the cost of a

AFFIRMATION

I affirm, under the penalties for perjury, that the foregoing representations are true.

Brien R. Krieger

Brien R. Krieger
Utility Analyst
Indiana Office of
Utility Consumer Counselor
Cause No. 46011
Ohio Valley Gas Corp., Inc.

05-15-2024


Date

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing has been served upon the following parties of record in the captioned proceeding by electronic service on May 15, 2024.

Nicholas K. Kile
Hillary J. Close
Lauren M. Box
Lauren Aguilar
Barnes & Thornburg LLP
Email: Nicholas.kile@btlaw.com
hillary.close@btlaw.com
lauren.box@btlaw.com
lauren.aguilar@btlaw.com

Clayton C. Miller,
CLAYTON MILLER LAW, P.C.
Email: clay@claytonmillerlaw.com



Lorraine Hitz
Attorney No. 18006-29
Deputy Consumer Counselor

INDIANA OFFICE OF UTILITY CONSUMER COUNSELOR

115 West Washington Street
Suite 1500 South
Indianapolis, IN 46204
infomgt@oucc.in.gov
317/232-2494 – Telephone
317/232-5923 – Facsimile