**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO**

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IN THE MATTER OF ADVICE NO. 1029-GAS OF PUBLIC SERVICE COMPANY OF COLORADO TO REVISE ITS COLORADO PUC NO. 6-GAS TARIFF TO INCREASE JURISDICTIONAL BASE RATE REVENUES, IMPLEMENT NEW BASE RATES FOR ALL GAS RATE SCHEDULES, AND MAKE OTHER PROPOSED TARIFF CHANGES EFFECTIVE FEBRUARY 29, 2024	**) PROCEEDING NO. 24AL-______G**

<u>DIRECT TESTIMONY AND ATTACHMENTS OF RONALD J. AMEN</u>

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

January 29, 2024

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DIRECT TESTIMONY AND ATTACHMENTS OF RONALD J. AMEN

I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND RECOMMENDATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Ronald J. Amen. My business address is 10 Hospital Center Commons, Suite 400, Hilton Head, SC 29926.

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

A. I am a Managing Partner with Atrium Economics, LLC ("Atrium"). Atrium is a management consulting and financial advisory firm focused on the North American energy industry.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?

A. I am testifying on behalf of Public Service Company of Colorado ("Public Service" or the "Company").

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND QUALIFICATIONS.

A. A description of my qualifications, duties, and responsibilities is set forth in Attachment RJA-1 - Statement of Qualifications.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my Direct Testimony is to present and support the Company's proposed Revenue Stability Mechanism ("RSM"). The RSM is a total revenue decoupling mechanism intended to separate the Company's revenue from the volume of gas it sells to help support Colorado's state decarbonization goals.

Q. ARE YOU SPONSORING ANY ATTACHMENTS AS PART OF YOUR DIRECT TESTIMONY?

A. Yes, I am sponsoring the following Attachments RJA-1 through RJA-3:

- Attachment RJA-1: Statement of Qualifications
- Attachment RJA-2: Variable Costs in Base Rates
- Attachment RJA-3: Decoupling Bill Impact Analysis

Q. WHAT RECOMMENDATIONS ARE YOU MAKING IN YOUR DIRECT TESTIMONY?

A. I recommend that the Colorado Public Utilities Commission ("Commission") approve the proposed RSM discussed in my Direct Testimony and the associated RSM tariff sheets discussed in and attached to the Direct Testimony of Company witness Mr. Jason J. Peuquet.

II. GENERAL OVERVIEW OF DECOUPLING

Q. WHAT IS DECOUPLING?

A. Decoupling refers to a rate adjustment mechanism designed to separate, or "decouple," a utility's revenue from the volume of energy it sells. Typically, decoupling mechanisms accomplish this objective through an adjustment (either a credit or a surcharge) that trues up a utility's revenues to a pre-determined level, which can be the authorized test year revenue requirement set by a regulatory commission in a rate case, a set amount per customer, or some modification thereof. Decoupling is frequently used as a mechanism to better align the utility's interests with certain public policy goals (such as promoting energy efficiency, conservation, and decarbonization goals), thus making it easier to achieve those goals. It can also ensure the utility is neither rewarded nor penalized for factors that affect energy consumption outside its control, such as abnormal weather.

Q. HOW IS A UTILITY'S FINANCIAL PERFORMANCE LINKED TO ITS SALES?

A. A utility's financial performance is traditionally tied to its sales because revenue is generated based on the volume of energy it sells to consumers. Most regulated gas utilities recover a portion of their fixed costs through volumetric charges. To recover those fixed costs, utilities are incentivized to increase sales volumes, commonly referred to as a "throughput incentive." On the other hand, the link between the recovery of fixed costs and sales also means that gas utilities can have a financial disincentive to promote energy efficiency, conservation, and decarbonization since reduced sales mean that the utility may not recover its fixed costs and could potentially experience financial strain.

Q. DO THE COMPANY'S RATES INCLUDE A THROUGHPUT INCENTIVE?

A. In effect, yes. Specifically, the Residential (Schedule RG) and Small Commercial (Schedule CSG) rate structures collect significant fixed costs through volumetric rates. Public Service's natural gas base rates have very few variable costs. Examples of variable system costs that would decrease as customers decrease their natural gas consumption are fuel for compression equipment, and production and gathering activities. However, most of Public Service's costs, such as the cost of transmission and distribution pipelines, are fixed and are not reduced as consumption decreases. In the Company's existing Schedule RG and Schedule CSG volumetric rates, over 99 percent of the charges are related to fixed costs, as shown in Attachment RJA-2 Variable Costs in Base Rates.

Q. CAN DECOUPLING ASSIST IN REMOVING THE DISINCENTIVE TO PROMOTE ENERGY-SAVING OR EMISSIONS-REDUCING PUBLIC POLICY INITIATIVES FOR GAS UTILITIES?

A. Yes. Decoupling helps address this disincentive by separating the utility's financial health from the amount of gas it sells. Decoupling adjusts rates to ensure the utility can recover its fixed costs while promoting energy efficiency, conservation, and decarbonization goals. This enables utilities to support energy-saving public policy initiatives without negatively impacting their financial stability. Furthermore, House Bill 21-1238 ("HB 21-1238") identified decoupling as a tool directed at removing this disincentive to promote energy-saving public policy initiatives:[1]

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[1] *See* HB 21-1238, § 4 (the quoted decoupling provision is codified at § 40-3.2-103(5)(b)(I), C.R.S.).

> Upon petition by a regulated gas utility, the commission shall remove disincentives to the implementation of effective gas DSM programs through the adoption of a rate adjustment mechanism that ensures that the revenue per customer approved by the commission in a general rate case proceeding is recovered by the gas utility without regard to the quantity of natural gas actually sold by the gas utility after the date the rate took effect. The commission shall separately calculate, for the rate class or classes to which a rate adjustment mechanism applies, the regulatory disincentives removed through that mechanism and collected or refunded by the gas utility through a tariff rider.

Q. HAS THE COMPANY PROPOSED OR IMPLEMENTED ANY DECOUPLING MECHANISMS IN THE PAST?

A. Yes. Public Service previously had a Revenue Decoupling Adjustment ("RDA") pilot program for its electric operations. The RDA addressed Lost Fixed Cost Recovery from the residential and small commercial rate schedules subject to a +/- 3 percent symmetrical soft cap on the forecasted base rate revenues. This pilot program was terminated on August 31, 2023.

Most recently, Public Service proposed a revenue decoupling program for its gas operations in Proceeding No. 22AL-0046G. The proposed gas revenue decoupling adjustment ("Gas RDA") was based on a Revenue Per Customer model to recover the average margin per customer for each applicable rate class. This proposed Gas RDA would have been applicable to the residential and commercial rate schedules and proposed a +/- 3 percent symmetrical cap like the electric pilot RDA.

Q. WAS THE PREVIOUSLY PROPOSED GAS RDA APPROVED?

A. Not as proposed by the Company. In that case, the Commission approved a revenue decoupling adjustment for Public Service's gas operations, but the approved mechanism deviated significantly from the Company's Gas RDA proposal. For example, some of these differences included a provision that the revenue per customer and revenue decoupling amounts were to be applied only to the current year's number of customers participating in the Company's DSM programs. In addition, the Commission adopted a cap for the RDA, which was to be applied asymmetrically; that is, it limited surcharges on customer bills but did not limit refunds to customers.[2]

Public Service believes that the Commission misapplied the applicable state statute[3] to limit the proposed gas decoupling mechanism to DSM participants. Overall, the changes made to the proposal did not address the throughput incentive or provide financial stability for the Company in the implementation of state energy-saving initiatives or other efforts to meet state energy policy objectives.

Q. WAS THE COMMISSION-APPROVED GAS RDA IMPLEMENTED?

A. No. In Decision No. C22-0804 in Proceeding No. 22AL-0046G, the Commission granted the Company's request to retain the use of a preexisting mechanism, the demand side management acknowledgement of lost revenues ("DSM-ALR"), conditioned on the withdrawal of the gas RDA tariff sheets via a compliance filing.[4]

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[2] Proceeding No. 22A-0309EG, Decision No. C23-0413.
[3] HB 21-1238, § 4 (the entire decoupling provision is codified at § 40-3.2-103(5)(b), C.R.S..
[4] Decision No. C22-0804 at ¶¶ 67-68.

However, as noted by the Commission at the time of the Decision, continued implementation of the DSM-ALR was under review in Proceeding No. 22A-0309EG ("Strategic Issues Proceeding"). As the Commission's Decision in the Strategic Issues Proceeding (Decision No. C23-0413) retained the DSM-ALR,[5] the Company recently withdrew its RDA tariff sheets through a compliance filing, as required.[6]

Q. IS THE COMPANY REQUESTING THAT THE COMMISSION AUTHORIZE A NEW DECOUPLING MECHANISM IN THIS PROCEEDING?

A. Yes, the Company requests that the Commission authorize the RSM as part of this proceeding. The Direct Testimony of Company witness Mr. Peuquet includes a copy of the proposed RSM tariff.

Q. WHY IS THE COMPANY RECOMMENDING THE COMMISSION AUTHORIZE THE RSM IN THIS PROCEEDING?

A. Senate Bill 21-264 directed gas utilities to submit "Clean Heat Plans" to reduce carbon dioxide and methane emissions toward Clean Heat targets in specific years. Potential emissions reduction measures include energy efficiency, bio-methane, hydrogen, recovered methane, beneficial electrification of customer end users, and leak detection, among others. Clean Heat Plans should target projected reductions in methane and carbon dioxide emissions at a 4 percent reduction in

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[5] Proceeding No. 22A-0309EG, Decision No. C23-0413 at ¶268 ("With respect to Acknowledgement of Lost Revenues, or ALR, the Company has requested continuation of this mechanism to recover fixed costs associated with provision of gas service. No party objected to the Company's request. The Commission approves continuation of ALR for savings attributable to gas energy efficiency savings"). The Commission's final decision in that proceeding, addressing Applications for Rehearing, Reargument, or Reconsideration of Decision No. C23-0413 was mailed on August 8, 2023, and thereafter became a final decision on August 29, 2023. *See* Decision No. C23-0523.
[6] Proceeding No. 24AL-0030G.

2025 and a 22 percent reduction in 2030, based on a 2015 baseline at the lowest reasonable cost. Figure RJA-D-1 reflects the annual projected gas throughput associated with the Company's Amended Preferred Portfolio filed in Proceeding No. 23A-0392EG on November 6, 2023. The Amended Preferred Portfolio forecasts an 18 percent decline in natural gas throughput by 2030.[7]

Figure RJA-D-1
Gas Throughput at Year End (DTh/Year)[8]

Year	Recovered Methane	Hydrogen	Natural Gas (Amended)	Electrification	Additional DSM
2024	512,512	-	143,765,072	953,398	793,610
2025	2,192,289	-	141,229,572	2,560,518	1,580,705
2026	2,821,289	-	138,600,339	4,821,358	2,385,751
2027	2,821,289	669,890	134,681,232	7,722,923	3,202,626
2028	2,821,289	1,725,658	129,761,333	11,275,095	4,024,134
2029	2,821,289	2,874,623	123,039,990	15,475,724	4,843,069
2030	2,794,161	3,711,888	117,192,000	20,143,816	5,517,510
% Change	**445%**	**N/M***	**-18%**	**2,013%**	**595%**

* Not meaningful or incalculable

As described previously, the utility's fixed costs are currently and have traditionally been recovered through volumetric rates to ensure continued financial stability for the Company. No changes to the current rate design are being proposed in this Phase I proceeding, as discussed by Mr. Steven P. Berman. Accordingly, now is the appropriate time to align the Company's ratemaking structures with the public policy directive for reduced emissions by implementing a decoupling mechanism in the form of the RSM.

[7] Attachment DRA-7 - Amended Preferred Portfolio Workpaper Filed in Proceeding No. 23A-0392EG
[8] Clean Heat Plan, Amended Preferred Portfolio filed Proceeding No. 23A-0392E

Q. IS THE COMPANY MAKING A SIMILAR RSM PROPOSAL FOR ITS ELECTRIC OPERATIONS?

A. Not at this time. As previously discussed, the RSM is being proposed for the Company's gas operations to align ratemaking structures with the state policy directive for reduced emissions. As discussed in Company witness Mr. Berman's testimony, the Company's electric business is operated separately and has many different considerations compared to its gas operations.

Q. COULD A CHANGE IN RATE DESIGN SIMILARLY ADDRESS PUBLIC POLICY DIRECTIVES?

A. Potentially; however, as discussed by Mr. Berman the Company is proposing to file a Phase II rate case and to evaluate rate design after resolution of the Clean Heat Plan and a follow-on depreciation study. Implementing the RSM now will facilitate more rapid action on this key public policy directive by addressing a potential disincentive and the alignment of revenue with costs as volumes change in the interim. Moreover, the RSM can and should be revisited to determine how it is impacted by future changes in rate design or overall ratemaking structure, if and when those changes occur.

A. <u>Proposed RSM</u>

Q. WHAT IS FULL DECOUPLING?

A. "Full" decoupling involves completely disconnecting a utility's margin revenue from its sales volumes, including the effect of weather on sales and revenues. This contrasts with "partial" decoupling, which excludes the effect of particular drivers on usage (such as weather) and therefore, revenues, before calculating the decoupling adjustment. There are several options for calculating the revenue adjustment, or true-up. While the results are approximately the same, the different options help companies meet unique regulatory preferences and circumstances. The use-per-customer basis makes a rate adjustment that is based on changes in average use per customer and then applies that adjustment factor against unit margins by customer class. The margin-per-customer rate adjustment is based on the change in baseline margin per customer compared to the actual margin per customer. The total margin revenue adjustment is based on a comparison of total baseline margin revenues to actual margin revenues.

Q. PLEASE EXPLAIN MORE SPECIFICALLY WHAT YOU MEAN BY "MARGIN REVENUES."

A. "Margin revenues" consist of a utility's total cost of service, exclusive of purchased gas expenses and any other expenses that are treated as "flow-through" items in rates (e.g., revenue taxes). A utility generates margin revenues through base rates for delivering gas to its customers. A utility's margin revenues reflect its overall costs of operations (exclusive of flow-through items), with most of it fixed, including a fair and reasonable return on its utility assets. A portion of margin revenues are typically recovered through fixed charges such as a monthly customer charge, leaving the remaining portion of margin revenues to be recovered through volumetric distribution charges.

Q. IS THE PROPOSED RSM A FULL DECOUPLING MECHANISM?

A. Yes, the proposed RSM is a full decoupling mechanism. Full decoupling is easier to administer, as there is no need to weather-normalize actual results. It also avoids controversy around how that normalization adjustment is applied. Additionally, in the "full" decoupling scenario, the utility is guaranteed a specific level of revenue regardless of the actual amount of energy sold. This model ensures that the utility can cover its fixed costs and maintain financial stability even if there is a decrease in energy usage, aligning its incentives with Colorado's Clean Heat goals, encouraging sustainable practices, and reducing environmental impact. A full decoupling mechanism based on a total revenues approach also closely mirrors the decoupling pilot for the Company's electric business that ended on August 31, 2023.

Q. PLEASE PROVIDE A HIGH-LEVEL DESCRIPTION OF THE PROPOSED RSM.

A. The proposed RSM is a total margin revenue decoupling mechanism in which the Company is authorized to collect a predetermined revenue amount for the RG and CSG rate classes, irrespective of the actual energy consumption by customers. The predetermined revenue amount is based on the total non-gas revenue requirement for the RG and CSG customer classes as determined in this rate case. Periodic quarterly true-up adjustments can be made to rates for the applicable customer classes to ensure the Company neither over- nor under-collects the approved revenue target.

Q. WHY IS THE COMPANY INCLUDING RATE SCHEDULES RG AND CSG IN THE RSM?

A. As discussed previously, these two rate schedules currently collect the largest percentage of fixed costs through volumetric rates, meaning they have the largest throughput incentive for the Company. Thus, including them in the RSM removes the largest disincentives to promoting energy efficiency, conservation, and decarbonization programs.

Q. WHY IS THE COMPANY PROPOSING TO USE TOTAL MARGIN REVENUE TO CALCULATE THE ANNUAL DECOUPLING AMOUNTS?

A. Company witnesses Mr. Berman and Mr. Peuquet address the interplay between HB 21-1238 and the total revenue based RSM in more detail in their respective testimonies. At a high-level, however, HB 21-1238 expressly authorizes decoupling, and the total revenue decoupling methodology is more directly aimed at removing the throughput incentive and encouraging the Company to pursue greater levels of energy efficiency, conservation, and carbon reduction goals.

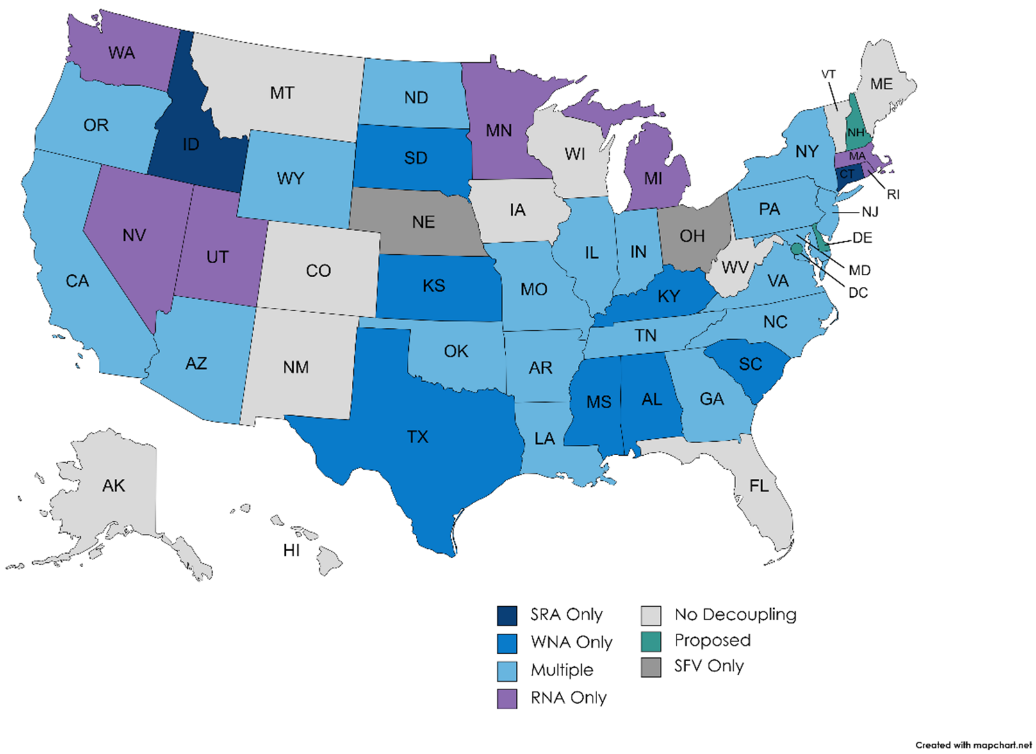
Additionally, I discuss later in my testimony that other utility commissions in states pursuing aggressive decarbonization goals and managing gas system growth are directing gas utilities to adopt total revenue decoupling models, as opposed to revenue per customer models similar to what Public Service previously proposed as a gas decoupling mechanism. Total revenue decoupling more thoroughly removes the Company's incentive to increase throughput and add new customers to the gas system. With a baseline established for fixed cost recovery in between rate cases that does not change depending on the weather, the amount of natural gas that customers demand, or the number of customers that the Company serves, there is no longer a financial incentive to pursue higher gas sales, whether it be through customer growth or increases in use per customer. In contrast, decoupling mechanisms based on use or margin per customer approaches can indirectly still preserve incentives to increase sales, either through new customers and/or general demand growth. This total revenue decoupling model proposed by the Company recognizes the unique need for gas utilities to maintain financial stability amid aggressive decarbonization and electrification initiatives.

B. Support for the RSM

Q. ARE REVENUE STABILITY MECHANISMS, LIKE THE ONE PUBLIC SERVICE IS PROPOSING, COMMON ACROSS THE NATURAL GAS INDUSTRY?

A. Yes, revenue decoupling mechanisms, like the proposed RSM, are common ratemaking tools throughout the natural gas industry. Atrium Economics conducted a survey in December 2023 showing that many gas utilities have implemented decoupling mechanisms. Figure RJA-D-2 below summarizes various approved and proposed decoupling mechanisms across 41 U.S. states and the District of Columbia. The examples of decoupling mechanisms shown are straight fixed variable ("SFV"), weather normalization adjustment ("WNA"), sales reconciliation adjustment ("SRA"), revenue normalization adjustment ("RNA"), or some other combination of decoupling mechanisms.

Figure RJA-D-2
Map of U.S. States with Gas Decoupling Mechanisms



Q. DO OTHER STATES USE TOTAL REVENUE DECOUPLING MODELS?

A. Yes. In New York, consistent with the state's decarbonization laws and a desire to limit new extensions of gas infrastructure, the New York Public Service Commission ("New York Commission") has concluded that a total revenue decoupling model appropriately supports those goals. Therefore, the New York Commission has approved total revenue decoupling models for the state's gas utilities, which decouple revenues from energy sales while providing high assurance of the revenues needed to operate the system.[9] Additionally, Massachusetts is on the

[9] Consolidated Edison Company of New York, Inc., Schedule For Gas Service, PSC NO:9 Gas, Leaf 181.1 - 181.2, Initial Effective Date: 08/01/2023. Niagara Mohawk Power Corporation, Statement of Revenue Decoupling, PSC NO: 219 Gas, Statement No: 22, Initial Effective Date: 10/01/2023.

same path. In 2008, all investor-owned electric and gas utilities in the state were ordered to begin phasing in full revenue decoupling mechanisms. Full revenue decoupling mechanisms exist for all the state's electric and gas utilities and are predominately revenue per customer models. Notably, however, on December 6, 2023, Order 20-80-B was issued in the "Investigation by the Department of Public Utilities on its own Motion into the role of gas local distribution companies as the Commonwealth achieves its target 2050 climate goals," which states:

> The Department seeks to dissuade gas customer expansion and to align rate design with the Commonwealth's climate objectives. To achieve this, the Department instructs gas utilities to revise their per-customer revenue decoupling mechanism to a decoupling approach based on total revenues. Removing the incentive to add new customers aligns the LDCs' rate design with climate objectives and GHG emissions reductions targets.[10]

Thus, the next decoupling filings the Massachusetts utilities submit are to include a total revenue decoupling approach, similar to that proposed here by Public Service.

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[10] Order No. 20-80-B, at 5, MA DPU (Dec. 6, 2023).

Q. WHY HAVE THESE STATES MOVED TO TOTAL REVENUE DECOUPLING MODELS?

A. As discussed previously, the New York Commission11 and Massachusetts Department of Public Utilities 12 have similar public policy objectives as Colorado in seeking to discourage gas system expansion and alignment of gas utility rate design with their state's decarbonization goals. Total revenue decoupling models disconnect utility revenues from energy sales while providing high assurance of the revenues and financial stability needed to continue operating the gas system—without encouraging new customer growth. In short, these Commissions have arrived at the same conclusion regarding total revenue decoupling mechanisms supporting decarbonization goals as what Public Service is proposing in this case.

Moreover, policy organizations have reached similar conclusions. Decoupling has been identified by the Regulatory Assistance Project ("RAP") as a key policy during the gas transition and RAP recommends that states adopt decoupling using an overall revenue target.[13]

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[11] New York has a 100% carbon reduction goal by 2040 per renewable and state energy standards. Lowrey, Dan. "Michigan sets 100% clean energy standard, puts climate onus on resource plans" Regulatory Research Associates Focus Notes, State Jurisdiction News. December 4, 2023. p. 8 www.spglobal.com/marketintelligence.

[12] Massachusetts currently has in place a Clean Energy Standard and a separate Renewable Portfolio Standard. The 40% renewables by 2030 standard does not have a stated expiration date; the standard is to increase by 1% each year and will reach 100% renewable energy by 2090. The clean energy standard requires 80% clean energy by 2050. Lowrey, Dan. "Michigan sets 100% clean energy standard, puts climate onus on resource plans" Regulatory Research Associates Focus Notes, State Jurisdiction News. December 4, 2023. p. 8 www.spglobal.com/marketintelligence.

[13] RAP Paper_Under-Pressure-Gas-Utility-Regulation-Time-Transition-05_2021.pdf - Google Drive.

Q. DO THESE STATES HAVE OTHER REGULATORY FRAMEWORKS THAT ALSO PROMOTE CLEAN ENERGY POLICIES?

A. Yes, according to a recent report by the U.S. Environmental Protection Agency ("EPA"),14 in states leading in electrification, there is a transition from the traditional cost-of-service ratemaking frameworks to new regulatory mechanisms and financial incentives. This transition away from backward-looking ratemaking mechanisms can include combinations of decoupling, performance-based ratemaking ("PBR"), and multi-year rate plans as "tools to overcome the limitations of the COSR [Cost of Service Regulation] framework and support solutions to electricity sector challenges such as decarbonization, energy efficiency, electrification, energy equity, rapid growth in DERs [Distributed Energy Resources], and grid resilience" (p. 5). In short, decoupling mechanisms are a piece of the overall rate design solution available to gas utilities in states with aggressive decarbonization goals. This continuum is also seen in early mover states such as New York and Massachusetts.15 In addition to the preference for total revenue decoupling models, these states also have multi-year rate plans with forecasted test years.

Additionally, the State of Washington[16] has a 100% carbon reduction goal by 2030,[17] which is the most aggressive in the United States. Most of the state's

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[14] https://www.epa.gov/system/files/documents/2022-08/Electric%20Utility%20Regulatory%20Frameworks%20and%20Financial%20Incentives_508_1.pdf\.
[15] CIQ Pro: Massachusetts Department of Public Utilities (spglobal.com).
[16] CIQ Pro: Washington Utilities and Transportation Commission.
[17] Lowrey, Dan. "Michigan sets 100% clean energy standard, puts climate onus on resource plans" Regulatory Research Associates Focus Notes, State Jurisdiction News. December 4, 2023. p. 8 www.spglobal.com/marketintelligence.

utilities currently have decoupling mechanisms, and utilities are required to file multi-year rate plans from 2-4 years in length, with performance-based ratemaking encouraged.[18]

C. Proposed RSM Calculations

Q. PLEASE DESCRIBE HOW THE RSM WILL BE CALCULATED.

A. The target margin revenues will consist of the Commission authorized margin per customer class determined in this general rate case for the Residential and Small Commercial (RG and CSG) customer classes. Each quarter, the Company will file a worksheet comparing the targeted margin for each customer class with the actual margin billed to each customer class and calculate the over- or under-collection that resulted for each of the RG and CSG rate classes, which will then be combined into an overall over- or under-collection. The Company will also include the revenues associated with the DSM-ALR that are recovered through the Demand Side Management Cost Adjustment for each of the rate classes. In the case of an over-collection, this amount will be credited to the customers in those classes through a negative RSM Rate. Alternatively, a surcharge will be assessed through a positive RSM Rate in the case of an under-collection. The RSM Rate will be billed over a 12-month period, with a true-up occurring in the next Quarterly RSM Rate after the 12-month period ends. The aim of either is to match the actual margin collected from each eligible customer class with the authorized margin for each eligible customer class, as established in this rate proceeding.

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[18] CIQ Pro: Washington Utilities and Transportation Commission.

Mechanically, the RSM Adjustment is determined through the following series of calculations:

1. Targeted Normalized Margin for Month_n and Rate Class_i **–** Actual Margin for Month_n and Rate Class_i **–** Variable Operating Costs for Month_n and Rate Class_i **–** DSM-ALR Adjustment for Month_n and Rate Class_i **=** Difference for Month_n and Rate Class_i.

2. Total Over or Under Collection for Period **=** Sum of Over or Under Collection for each of the RG and CSG Rate Classes for Three Months of the Period.

3. Current Period RSM Adjustment **=** Total Over or Under Collection for Period **/** Projected Sales Volume Over Next 12 Months for each of the RSG and CSG Rate Classes.

4. RSM True-Up **=** Difference between Projected RSM Collection and Actual RSM Collection for Past 12 Months / Projected Sales Volume Over 12 Months for each of the RG and CSG Rate Classes.

5. DSM-ALR True-Up **=** Difference between DSM-ALR forecast and the actual DSM-ALR for the Calendar Year.

6. Total RSM Amount **=** Current Period RSM Adjustment **+** Last Three Periods RSM Adjustment **+** RSM True-Up + DSM-ALR True-Up, if applicable.

7. RSM Rate **=** Total RSM Amount ÷ Forecasted Volume for Recovery Period.

Q. WHEN DOES THE COMPANY PROPOSE TO START THE RSM?

A. The RSM will become effective during the same month that the rates from this rate case take effect. The Company is requesting that the Commission’s decision in this proceeding set a rate effective date of November 1, 2024, for the RSM, as addressed in more detail in the Direct Testimony of Steven P. Berman and the Direct Testimony of Jason J. Peuquet, respectively. The Company is also proposing a Revenue Deferral Surcharge ("RDS"), which these two witnesses and others address in the Direct Case.

Q. IS THE START OF THE RSM IMPACTED BY THE COMPANY'S PROPOSED RDS?

A. No. As described in more detail by Mr. Berman, the Company's proposed RDS would defer recovery of the revenue increase authorized in this case until after the Extraordinary Gas Cost Recovery Rider is no longer on customer bills. If the Commission approves that proposal, however, the Company would still make a compliance advice letter filing to make the rates effective, despite deferring recovery until a later date. This effective date would also apply to the RSM.

Q. PLEASE DESCRIBE THE RSM QUARTERLY TRUE-UP TIMELINE.

A. As discussed in the Direct Testimony of Company witness Mr. Peuquet, assuming that the Commission's decision in this proceeding directs that the RSM will become effective November 1, 2024, the first quarter of the RSM will be November 1, 2024, through the end of January 2025. This first quarter adjustment will then flow into the Company's proposed Revenue Deferral Surcharge that will be effective February 15, 2025, and the true-up would occur through this mechanism.[19] Subsequent quarters will be included in the Quarterly RSM rate, along with the reconciliation of prior quarters, and the Quarterly RSM rate will be recovered over a 12-month period. An annual true-up will occur once the 12-month period has ended and will be billed over the subsequent Quarterly RSM rate. The RSM

[19] If the Commission does not approve the Company's proposed rate deferral mechanism, the first quarterly RSM adjustment would be included in the Quarterly RSM rate, similar to subsequent quarters.

Quarterly time periods will be November – January, February – April, May – July, and August – October.

Q. WHAT IS A KEY BENEFIT OF THE QUARTERLY TRUE-UP FROM YOUR PERSPECTIVE?

A. All else being equal, one benefit of a quarterly true-up is that in a colder-than-normal winter, the quarterly true-up of the RSM will return any over-collections to customers sooner and help offset higher natural gas prices that often occur in these scenarios.

D. Benefits of and Analytics for the Proposed RSM

Q. PLEASE SUMMARIZE HOW PUBLIC SERVICE'S AND ITS CUSTOMERS' INTERESTS ARE SERVED BY IMPLEMENTING THE COMPANY'S RSM PROPOSAL.

A. There are significant benefits to both Public Service and its customers from implementing the Company's proposed RSM, including:

1. The RSM will break the link between the gas consumption of the Company's customers and its margin recovery and result in a better alignment of the interests of Public Service and its customers.
2. Under the RSM, Public Service will be more fully able to continue promoting and expanding its programs to achieve the decarbonization goals established in its approved Clean Heat Plan portfolio, without the continual real margin losses due to the resulting declines in gas sales.
3. With the implementation of the RSM, customers will pay approximately the same amount each year for gas delivery service as if the Company had experienced normal weather, which is the same basis upon which the Commission establishes Public Service's base rates. Ultimately, the RSM will result in a customer's annual bill more accurately reflecting the margin recovery amounts approved by the Commission in this rate case, while still recognizing the results of their energy conservation efforts in the amount they pay for the gas commodity.

4. In the event of a colder-than-normal winter, the quarterly true-up of the RSM will return any over-collections to customers sooner and help offset higher natural gas prices that often occur in these scenarios.
5. The RSM will address factors beyond the Company's control that contribute to under-recovery of costs and the inability to achieve the level of returns that have been authorized by the Commission.

Q. ARE THERE ADDITIONAL BENEFITS OF THE PROPOSED RSM?

A. Yes. The RSM brings several general and administrative benefits, including:

1. In its proposed form, the RSM is compatible with Public Service's billing and customer information systems;
2. It allows for full margin revenue recovery, based on the results from the last general rate case;
3. In the Company's view, its extensive and varied communications capabilities should provide its customers and other stakeholders an appropriate understanding of the RSM, leading to consumer acceptance; and
4. As a quarterly adjustment to base rates, it should be relatively easy for the Company to administer and reviewable by the Commission Staff and other stakeholders.

Q. WHAT IS THE POTENTIAL BILL IMPACT TO CUSTOMERS RELATED TO THE PROPOSED RSM?

A. As shown in Attachment RJA-3 Decoupling Bill Impact Analysis[20], four scenarios were modeled to illustrate the potential bill impact of total revenue decoupling on

[20] Attachment RJA-3 Decoupling Bill Analysis includes a monthly adjustment for the DSM-ALR revenue already collected from customers thus reducing the RSM rate each month. This interaction is further explained in the Direct Testimony of Jason J. Peuquet.

the RG and CSG rate schedules using weather-normalized billing determinants from 2023:

- ***Scenario 1.*** The first scenario assumes a 10 percent increase in normal billing determinants during the winter quarter of the RSM (November-January), with a -1.86 percent impact (decrease) on residential rate class bills and a -1.52 percent impact (decrease) on small commercial rate class bills when billed in April.

- ***Scenario 2.*** The second scenario assumes a 10 percent decrease in normal billing determinants during the winter quarter of the RSM (November-January), with a 1.43 percent impact (increase) on residential rate class bills and a 1.3 percent impact (increase) on small commercial rate class bills when billed in April.

- ***Scenario 3.*** The third scenario assumes a 10 percent increase in normal billing determinants during the winter quarter of the RSM (November-January), and a 10 percent decrease in normal billing determinants during the next quarter of the RSM (February-April) with a -.19 percent impact (net decrease) on residential rate class bills and a -.07 percent impact (net decrease) on small commercial bills when billed in July.

- ***Scenario 4.*** The fourth scenario assumes a 10 percent decrease in normal billing determinants during the winter quarter of the RSM (November-January), and a 10 percent increase in normal billing determinants during the next quarter of the RSM (February-April) with a -.08 percent impact (net decrease) on residential rate class bills and -.08 percent impact (net decrease) on small commercial bills when billed in July.

Q. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A. I recommend the Commission approve the proposed Revenue Stability Mechanism (RSM) discussed in my Direct Testimony and the associated RSM tariff discussed in the Direct Testimony of Jason J. Peuquet.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

* * * * *

IN THE MATTER OF ADVICE LETTER NO. 1029-GAS OF PUBLIC SERVICE COMPANY OF COLORADO TO REVISE ITS COLORADO PUC NO. 8-ELECTRIC TARIFF TO REVISE JURISDICTIONAL BASE RATE REVENUES, IMPLEMENT NEW BASE RATES FOR ALL ELECTRIC RATE SCHEDULES, AND MAKE OTHER PROPOSED TARIFF CHANGES EFFECTIVE FEBRUARY 29, 2024	))))))))))	PROCEEDING NO. 24 _____G

AFFIDAVIT OF RONALD J. AMEN
ON BEHALF OF
PUBLIC SERVICE COMPANY OF COLORADO

I, Ronald J. Amen, being duly sworn, state that the Direct Testimony and attachments were prepared by me or under my supervision, control, and direction; that the Direct Testimony and attachments are true and correct to the best of my information, knowledge and belief; and that I would give the same testimony orally and would present the same attachments if asked under oath.

Dated at Redmond, Washington, this 24th day of January, 2024.

Ronald J. Amen
Ronald J. Amen
Managing Partner with Atrium Economics, Inc.

Subscribed and sworn to before me this 24th day of January, 2024.

J. Palmer
Notary Public

JILLIAN PALMER
Notary Public
State of Washington
Commission Number 22019875
My Commission Expires
July 2, 2026

My Commission
expires 07-02-2026

RJA-1 Statement of Qualifications

Ronald J. Amen, Managing Partner

Mr. Amen has over 40 years of combined experience in utility management and consulting in the areas of regulatory support, resource planning, organizational development, distribution operations and customer service, marketing, and systems administration.

He has advised gas, electric and water utility clients in the following areas: regulatory policy, strategy, and analysis; cost of service studies (embedded and marginal cost analyses); rate design and pricing issues including time- of-use rates, revenue decoupling, weather normalization and other cost tracking mechanisms; resource strategy, planning and financial analysis; and business process design, evaluation, and organizational structures. Mr. Amen has provided expert testimony in numerous state and provincial regulatory agencies, and the Federal Energy Regulatory Commission. Prior to establishing Atrium Economics in 2020, Mr. Amen's consulting experience included Director Advisory & Planning at Black & Veatch Management Consulting, LLC, Vice President of Concentric Energy Advisors, Inc. and Director with Navigant Consulting, Inc. His prior utility experience includes leadership of State and Federal Regulatory Affairs at two electric and gas utilities, and management positions in Regulatory Affairs, Information Systems and Distribution Operations.

EDUCATION

University of Nebraska, Bachelor of Science with Distinction, Business Administration, Finance and Economics

YEARS EXPERIENCE

44

PROFESSIONAL ASSOCIATIONS

American Gas Association
Southern Gas Association

RELEVANT EXPERTISE

Financial Analysis; Litigation Support; Regulatory Support; Strategy; Utility Operations

REPRESENTATIVE PROJECT EXPERIENCE

Regulatory Policy, Strategy and Analysis

Western Export Group (2019)

In a Nova Gas Transmission, LTD. (NGTL) Rate Design and Service Application before the Canada Energy Regulator (CER), Mr. Amen led a consulting team supporting the interests of the Western Export Group, a group of nine utility companies located in the Western U.S. and British Columbia who are export shippers on the NGTL system. The case resulted in a settlement with all parties.

Regulatory Commission of Alaska (2019 – 2020)

Part of a multi-functional team that assisted the Regulatory Commission of Alaska (RCA) in its evaluation of the Chugach Electric Association, Inc's acquisition of the Municipal of Anchorage d/b/a Municipal Light & Power Department. Assisted the RCA with its evaluation of the long-term benefits of the transaction to ML&P and Chugach customers, the implication of terms and assumptions in various agreements, and the careful balance of the fiscal and regulatory implications for the customers of the combined entity.

CPS Energy (2017 – 2018)
Provided an overall review of the client's Strategic Roadmap to prioritize its multi-year regulatory initiatives. (e.g., changes in product and service offerings, restructuring of current rate classes, introduction of new rate structures, rate levels, and tariff provisions). Current pricing processes and platforms assessed to identify recommended enhancements to enable the development and implementation of dynamic pricing concepts. Assisted client with preparation of next rate case (e.g., costing and pricing analyses, load forecasting, internal communications, and stakeholder engagement).

FortisBC Energy, Inc. (2016 – 2018, 2021)
Performed an overall review of the client's Transportation Service Model. Analyzed the client's various midstream transportation and storage capacity resources used in providing balancing of transportation customers' loads. Review included the physical diversity, functionality and flexibility provided by the various capacity resources, and the cost impact caused by transportation customers' imbalance levels. Conducted an industry-wide benchmarking study of current industry-wide best practices, by regulatory jurisdiction, related to transportation balancing tariff provisions. Participated in stakeholder workshops and testified before the BCUC. Retained in 2021 to update quantitative analysis of the operation of the transportation balancing rules for reporting requirements of the BCUC in 2022.

McDowell Rackner & Gibson Law Firm (2015 – 2016)
Provided due diligence services to the law firm in connection with a state utility commission investigation into the law firm client's gas storage and optimization activities. Provided an independent opinion as to the likely outcome of the Commission's ongoing investigation.

Gulfport Energy Corporation (2016)
Provided regulatory analysis and support to Gulfport Energy Corporation in the ANR Pipeline Company Natural Gas Act §4 rate proceeding before the Federal Energy Regulatory Commission (FERC). Analyzed as-filed cost of service and rate design to identify key cost of service, cost allocation, rate design and service related/tariff issues. Developed an integrated cost of service and rate design model to prepare studies on client issues. Prepared best/worst case litigation outcomes, discovery, and evaluations of discovery of other parties. Analyzed FERC staff top sheets and settlement offers; and assisted in the preparation of settlement positions.

Confidential Financial / Energy Partners (2015)
Provided regulatory due diligence support for client related to a proposed merger with a multijurisdictional gas/electric company including an evaluation of the regulatory landscape in the various applicable state jurisdictions, recent regulatory decisions, and current regulatory issues.

Confidential International Energy Company (2014)

Provided regulatory due diligence support for client related to a proposed merger with a multijurisdictional gas company including an evaluation of the regulatory landscape in the various applicable state jurisdictions, recent regulatory decisions, and current regulatory issues.

Pacific Gas & Electric Company (2014)

Developed an extensive industrywide benchmarking study to determine the cost allocation and ratemaking treatment utilized by Local Distribution Companies (LDCs) in the United States for recovery of gas transmission costs. Benchmarked cost allocation and rate design utilized by Interstate/Intrastate Pipelines. Benchmarked how Industrial & Electric Generation customers are served with natural gas.

Public Service Company of New Mexico (2009-2010)

Provided case management, revenue requirement, cost of service and rate design support for general rate cases in the utility's two state regulatory jurisdictions. Issue management and policy development included an electric fuel and purchased power cost mechanism, recovery of environmental remediation costs for a coal fired power plant, and the valuation of renewable energy credits related to a wind power facility.

Confidential International Energy Company (2009)

Provided due diligence on behalf of client related to the purchase of a gas/electric utility, including a review of the regulatory and market-related assumptions underlying the client's valuation model, resulting in the validation of the model and identification of key business risks and opportunities.

Resource Planning, Strategy and Financial Analysis

Confidential Multi-Jurisdiction Gas Utility (2021-2022)

Retained by the multi-jurisdiction interstate transmission pipeline and local distribution utility ("client") to assist it in identifying and supporting a natural gas supply solution to satisfy additional deliverability requirements with the goals of minimizing costs, enhancing system resiliency, and introducing renewable fuels into its system. Reviewed the process and analyses that had been conducted to-date (including all underlying assumptions) and provided insight on the best path forward. The goal of the effort was to help prepare client for internal approval of the process and recommended path forward, and ultimately the development and approval of the necessary regulatory filings at the federal, state, and local levels. Atrium evaluated a broad spectrum of regulatory, economic, market-related, and logistical considerations in order to advise the client on the best path forward in utilizing LNG to meet its future deliverability requirements. Specific components of Atrium's analysis included regulatory approvability, rate design and cost recovery risk, site location (including siting LNG in multiple locations in multiple states), ownership structure, and ability to incorporate RNG and hydrogen into Utility's system to decarbonize the pipeline system.

Great Plains Natural Gas (2021-2022)

Retained to review the gas supply procurement practices and objectives of Great Plains, the interstate pipeline, storage and supply contracts, and other information available to Great Plains leading up to and throughout the severe weather event that occurred from February 13-17, 2021, and the actions by Great Plains personnel in response to the weather event, as part of a state-wide investigation by the Minnesota Public Utilities Commission. Expert testimony filed on behalf of Great Plains.

Fortis BC Energy, Inc. (2011, 2021)

Retained to help develop a gas supply incentive mechanism in cooperation with the British Columbia Utilities Commission staff and the company's other stakeholders. Provided an independent analysis of the utility's management of pipeline and storage capacity and supply. Part of this work entailed a review of the major markets in which the utility transacted, reviewing the size of trading activity at the major market hubs and reviewing the price indices for these markets. In 2021, retained to refresh all quantitative analysis of the operation of the GSMIP for reporting requirements of the BCUC in 2022.

Black Hills Colorado Electric Utility (2009)

Engaged as a member of a consultant team that served as the independent evaluator in a competitive solicitation for non-intermittent generation resources. Jointly recommended by the utility client, the staff of the utility commission and the state attorney general, the consulting team acted as an agent of the public utility commission monitoring and overseeing the solicitation, which included reviewing the request for proposals and solicitation process, including provisions of the power purchase agreement, preliminary review (economic and contractual) of bids received from the request for proposals, initial modeling of bids for screening, selection of bidders with whom to conduct negotiations and oversight of the negotiation process, and the ultimate selection of the winning bid. Provided due diligence review of all input data, preliminary and final model output, and output summaries. The team produced biweekly confidential reports to the commission regarding the process and its results.

NW Natural (2007-2008)

Assisted with the development of its long-term Integrated Resource Plan (IRP) for its Oregon and Washington service territories. The IRP included the evaluation of incremental inter- and intra-state pipeline capacity, underground storage, and two proposed LNG plants under development in the region.

Puget Sound Energy (2007)

Engaged to assist the client with the development of a natural gas resource efficiency and direct end-use strategy, an interdepartmental initiative focused on preparing a natural gas resource efficiency plan that optimizes customers' end-use energy consumption while furthering corporate customer, financial, environmental, and social responsibilities.

Puget Sound Energy (2002 – 2003)

Provided resource planning strategy and analysis for the company's Least Cost Plan, including a review of the company's underlying 20-year electric and gas demand forecasts. As a member of a consulting team, served as the client's financial advisor for the acquisition of new electric power supply resources. Conducted a multitrack solicitation process for evaluation of generation assets and purchase power agreements. Provided regulatory support for the acquisition.

Cost Allocation, Pricing Issues and Rate Design

Philadelphia Gas Works PGW (2023)

Mr. Amen led an Atrium team engaged by PGW to review the mechanics, input data, billing controls, and weather trends surrounding PGW's Weather Normalization Adjustment ("WNA") formula to understand the factors that contributed to the abnormally high WNA charges in June 2022. Atrium's review identified structural factors inherent in PGW's WNA mechanism that may have contributed to the anomalous WNA amounts billed to customers in June 2022. Mr. Amen filed testimony with Atrium's findings and recommendation in the pending general rate case before the Pennsylvania Public Utility Commission.

Potomac Electric Power Company (PEPCO) (2022-2023)

Mr. Amen led an Atrium team engaged by PEPCO on behalf of services requested by the Public Service Commission of the District of Columbia ("DC Commission"), for comprehensive evaluation of the processes, procedures, mechanics, and internal controls surrounding PEPCO's Bill Stabilization Adjustment ("BSA"). Atrium provided independent audit services sought by the DC Commission, including a) independently evaluate the timing, impact and magnitude of the billing determinant error that was identified during Formal Case No. 1156; b) independently confirm that current BSA processes and procedures are properly and timely executed as designed; c) independently confirm that current Pepco BSA internal controls are properly and timely executed; d) independently identify any recommended process and procedural improvements, as well as any recommended changes in existing internal controls or new internal controls; and e) independently conduct a comprehensive review of Pepco's BSA deferral balances by customer class, with an overall determination of the breakdown of BSA deferral balances by key drivers for each customer class. Our audit report and recommendations were filed with the DC Commission in July 2023.

Summit Natural Gas of Maine, Inc. (2022 - 2023)

Mr. Amen provided revenue requirement, allocated cost of service, class revenue apportionment, rate design, and expert witness testimony support for the utility's gas general rate case and multi-year rate plan before the Maine Public Utilities Commission. Responsibilities included determination of an optimal normal weather period for purposes of normalizing test year billing determinants, followed by the weather normalization process of determining a representative level of gas throughput for the Company's test year. The case resulted in an all-party settlement before the Maine PUC.

Black Hills Energy Arkansas (2021-2022)

Mr. Amen provided allocated cost of service, class revenue apportionment, rate design for natural gas infrastructure mechanisms, and expert witness support for the utility's gas general rate case before the Arkansas Public Service Commission. The case resulted in a settlement before the Arkansas PSC.

Until Electric System and Northern Utilities, Inc. (2021 - 2022)

Mr. Amen provided allocated cost of service, marginal cost of service, class revenue apportionment, rate design, and expert witness support for the utility's separate electric and gas general rate cases before the New Hampshire Public Utilities Commission, including expert witness testimony. The cases resulted in settlements before the NHPUC.

Manitoba Hydro – Centra Gas Manitoba (2021-2022)

Retained to provide an independent review of the cost of service methodologies employed for Centra Gas Manitoba Inc.'s natural gas operations. Atrium prepared a report filed with the Manitoba Public Utility Board documenting and supporting our assessment of Centra's existing COSS methods in conformance with the regulatory requirements of the MPUB. Focusing on the trends of Canadian gas distribution utilities, the COSS method utilized in the current COSS was reviewed against the: (1) cost causative factors identified for each plant and expense element of Centra's total cost of service; and (2) the current range of regulatory practices observed in the North American gas utility market. Centra's 2022 rate application based on the recommendations in our report was approved by the MPUB.

Montana-Dakota Utilities and Great Plains Natural Gas (2020 – 2021, 2022 - 2023)

Mr. Amen provided cost of service, class revenue apportionment, rate design, and expert witness support for the gas utilities' general rate cases before the Montana Public Service Commission (MPSC) and North Dakota Public Service Commission (NDPSC). Testimony included theoretical principals and practical application of cost allocation, and rate design principles or objectives that have broad acceptance in utility regulatory and policy literature. Supported the Straight Fixed-Variable Rate Design (SFV) in North Dakota with analysis showing low-income residential customers would experience lower annual bills under the SFV rate design than a volumetric weighted rate design. Provided a presentation at a public input hearing and oral testimony at Commission hearings in both jurisdictions. SFV rate design was approved by the North Dakota PSC. The cases resulted in settlements approved by the respective Commissions.

Mr. Amen also represented the client's interests (as well as those of neighboring utility clients NW Natural and Puget Sound Energy) in a Washington generic rulemaking proceeding on the subject of electric and gas cost of service methodologies and minimum filing requirements.

Mr. Amen supported electric general rate case filings in Montana and North Dakota, including a marginal cost study in Montana, and allocated cost studies, revenue apportionment and rate design in both jurisdictions.

Mr. Amen recently supported a gas general rate case filing in MDU's Idaho affiliate, Intermountain Gas. Support included a class level, design day load study across the utility's seven temperature zones, using a combination of AMI (60% penetration) and monthly billing data, class allocated cost of service study, class revenue apportionment, and rate design.

Mr. Amen is currently supporting gas and electric general rate case filings in MDU's South Dakota service territory, including gas and electric allocated cost studies, revenue apportionment and rate design (filed August 2023).

Chesapeake Utilities Corporation (2020 – 2021)
Reviewed and evaluated Chesapeake's Swing Service Rider (SSR), which recovers intrastate pipeline capacity costs directly from all transportation customers, and the application of the current cost allocation methodology underlying the service for its Florida gas utilities, Central Florida Gas and Florida Public Utilities. Supported Chesapeake through three primary tasks; (1) Assessment of the factors influencing the current cost allocation method, its impact on various customer groups, and data collection, (2) Assessment of the appropriateness of alternative cost allocation methods and model the application to and impact on the SSR charges, and (3) Provided a report of the evaluation, modelling results and recommendations in a report and conducted a review session with Chesapeake management personnel.

Kansas City, KS Board of Public Utilities (2019 – 2020)
Provided expert witness testimony supporting the basis for a Green Energy Program, its objectives, and overall benefits. Provide an assessment of how the program is aligned with best practices in design of Green Energy tariff programs nationally. Testimony also provided an assessment of how the program mitigates potential risks the to the Board of Public Utilities and protects against subsidization of other rate classes.

NW Natural (2018 – 2019)
Provided cost of service, class revenue apportionment, rate design, and expert witness support for the gas utility's general rate case before the Washington Utility and Transportation Commission (WUTC), filed in December 2018. Testimony included theoretical principals and practical application of cost allocation, and rate design principles or objectives that have broad acceptance in utility regulatory and policy literature.

Chesapeake Utilities Corporation (2018 – 2019)
Developed a Weather Normalization Adjustment (WNA) mechanism applicable to the monthly billings of Chesapeake's residential and general service customers. Sponsored the WNA mechanism through expert testimony filed with the Delaware Public Service Commission in January 2019. The testimony included a description of the WNA calculations; back-casting performance analyses, with bill impacts; a WNA tariff; and conceptual and evidentiary support for this ratemaking mechanism.

Louisville Gas & Electric Company and Kentucky Utilities Company (2018)
Engaged by LG&E and KU to a conduct a study in support of a joint utility and stakeholder collaborative concerning economical deployment of electric bus infrastructure by the transit authorities in the Louisville and Lexington KY areas, as well as possible cost-based rate structures related to charging stations and other infrastructure needed for electric buses.

Summit Utilities – Colorado Natural Gas, Inc. (2018)

Engaged by Summit Utilities to develop and support with expert testimony an appropriate normal weather period for the client's five Colorado temperature zones, resulting normalized billing determinants, and a Weather Normalization Adjustment ("WNA") proposal in conjunction with the filing of a general rate case for its Colorado Natural Gas , Inc. subsidiary.

Westar Energy (2018)

Provided cost of service and expert witness support for the electric utility's general rate case filing before the Kansas Corporation Commission (KCC). The cost of service study determined the cost components for a new Residential Distributed Generation (DG) customer class that provided the basis for recommendations for establishing components of a sound, modern three-part rate design for this new Residential DG (roof-top solar) service, which was approved by the KCC.

Florida Public Utilities (Chesapeake Utilities) (2017 – 2018)

Provided a rate stratification study of the utility's commercial and industrial customer classes to facilitate the reconfiguration of the classes by size of service facilities, annual volume, and load factor. Reviewed the cost allocation bases and recommended alternatives for recovery of capital investments related to the utility's Gas Reliability Investment Program (GRIP).

Tacoma Power (2016 – 2018, 2023)

Provided cost of service and rate design support for the electric utility's general rate case filings, including support for recovery of fixed costs through fixed charges and impacts on low income customers. Provided recommendations as to specifications in the client's cost of service analysis (COSA) model for deriving Open Access Transmission Tariff rates, using FERC approved standards to guide the evaluation. Conducted an electric utility costing and pricing workshop for the PUB in October 2017; and participated with Tacoma Utilities staff in a comprehensive electric and water Rates and Financial Planning workshop in February 2018. Engagement was extended for the 2019 – 2020 rate filing, which incorporated the Black & Veatch municipal COSA model for costing and ratemaking purposes. Currently providing cost of service and rate design for the 2023 – 2024 rate filing. Future project work involves innovative rate programs.

Tacoma Power (2017)

Engaged to review and assess current rates for 3rd Party Pole Attachments (PA), and more specifically, to determine and recommend if any rate adjustments were needed. Performed several tasks:

- Performed a market survey of rates charged by comparable utilities.
- Reviewed current regulations on rate setting and practice for 3rd Party Pole Attachments as set forth by the Federal Communications Commission (FCC) and the State of Washington (WA), and the interpretation of such regulations in court decisions.
- Reviewed industry best practices under the FCC, WA, and the American Public Power Association (APPA)

- Collected and reviewed data for cost-based fees including:
    - Application Fees
    - Non-Compliance Fees
- Reviewed cost data supplied by the City of Tacoma as relates to determining pole costs, and
- Performed modeling of rates under the FCC Model, the APPA model, and the State of Washington shared model (50 % FCC Rate/ 50% APPA Rate).

BC Hydro (2016)
Provided research and analysis of the line extension policies of a select group of peer utilities in Canada with similar regulatory regimes as well as U.S. utilities based on their geographic relationship to the client. Conducted interviews with peer utilities to gather comparative information regarding their line extension policies and related internal procedures. Performed a comparative analysis of the various line extension policies from the selected peer group.

Cascade Natural Gas Corporation (2015 – 2019)
Provided cost of service and rate design support for several of the company's general rate case filings in its two state jurisdictions, 3 in Oregon and 2 in Washington. Conducted Long-run Incremental Cost Studies in the Oregon jurisdiction and embedded class allocated cost of service studies in the Washington jurisdiction. Performed benchmark analyses to compare each of the client's administrative and general (A&G) and operations and management (O&M) expenses, on a per-customer basis, to various peer groups. Analyses were performed for natural gas utilities and combination utilities with both electric and gas operations. Various iterations of the analyses were prepared to make the peer group of utilities more comparable to the characteristics of the client's utility operations. Represented the client's interests in a Washington generic rulemaking proceeding on the subject of electric and gas cost of service methodologies and minimum filing requirements.

Chesapeake Utilities (2015 – 2016)
For its Delaware jurisdiction, provided cost of service and rate design support in the client's general rate case proceeding, including expert witness testimony in support of the utility's proposed gas revenue decoupling mechanism.

Homer Electric Association / Alaska Electric and Energy Cooperatives (2015)
Represented clients in an ENSTAR gas general rate proceeding. Testimony discussed accepted industry principles of revenue allocation and rate design, including the applicability to and alignment with ENSTAR's revenue allocation and rate design proposals for large power and industrial customers. Provided a critique of certain methodological aspects of ENSTAR's Cost of Service study, proposed revenue allocation, and rate design relating to the various large power and industrial customers.

Arkansas Oklahoma Gas Corporation (2002, 2003, 2004, 2007, 2012, 2013)
Provided cost of service and rate design support for several of the company's general rate case filings in its two state jurisdictions and in support of Section 311 transportation filings (2007,

2010) before the Federal Energy Regulatory Commission. Provided related research, design, and expert witness testimony in support of a Revenue Decoupling mechanism in one jurisdiction and a Weather Normalization Adjustment mechanism in the other jurisdiction, along with a significant increase in fixed charges and the introduction of demand charges for the company's largest customer classes. Conducted a pre-filing "decoupling" workshop for the utility commission staff.

Northern Indiana Public Service Company (NiSource) (2009 – 2010, 2013, 2017, 2021)
Conducted class allocated cost of service studies for the client's natural gas (including two other affiliate gas utilities) and electric operations. Work included reconfiguring the Company's commercial and industrial customer classes according to size of load and customer-related facilities. Rate design was modernized to recover a greater portion of fixed costs via fixed monthly customer and demand-based charges, a transition to a "Straight-Fixed Variable" form of rate design. Industry research was provided on alternative rate designs for the electric service, including Time-of-Use rates and Critical Peak Pricing. Served as an expert witness on behalf of the client in five general rate cases before the Indiana Utility Regulatory Commission. The 2021 rate case is currently pending before the IURC.

Southwestern Public Service Company (Xcel) (2012)
Retained to conduct a study to estimate the conservation effect of replacing its existing electric residential rate design with an alternative rate design such as an inverted block rate design. Reviewed inclining block rate structures that have actively been employed in other jurisdictions and also reviewed technical and academic literature to assess the elasticity of electricity demand for residential customers in the southwestern U.S. Analyzed 2009-2011 residential data to determine what sort of conservation effect the company may expect by implementing an inclining block rate structure. Provided an overview of alternative rate structures which may also promote conservation effects, such as seasonal rates, three-part rates, and time-of-use (TOU) rates, and considered the competing incentives of promoting conservation and cost recovery, without specific rate mechanisms to address this conflict.

Atlantic Wallboard LP and Flakeboard Company Limited (JD Irving) (2012)
Represented clients in an Enbridge Gas New Brunswick Limited Partnership ("EGNB") general rate proceeding. Testimony responded to the 2012 allocated cost of service study and rate design that was submitted to the New Brunswick Energy and Utilities Board by EGNB. Testimony also provided benchmark information regarding EGNB's distribution pipeline infrastructure in New Brunswick. CA.

Western Massachusetts Electric Company (Northeast Utilities) (2010 – 2011)
Supported utility in its decoupling proposal for the company's general rate case. Work included: 1) research on the financial implications of decoupling; 2) identification of decoupling mechanism details to address company and regulatory requirements and objectives; 3) identification of rate adjustment mechanisms that would work together with the company's proposed decoupling mechanism; and 4) preparing pre-filed testimony and testifying at hearings in support of the company's decoupling and rate adjustment proposals. The proposed rate

adjustment mechanisms included an inflation adjustment mechanism based on a statistical analysis, and a capital spending mechanism to recover the costs associated with capital plant investment targeted to improving service reliability.

Interstate Power & Light (Alliant Energy) (2010 – 2011)
Conducted class allocated cost of service studies for a Midwestern electric utility's Minnesota electric system. Work included reconfiguring the company's customer classes for cost of service purposes to collapse end-use based classes with the classes to which they would be eligible. Cost of service studies were performed on a before-and-after basis for the existing and proposed classes. The cost of service studies included a fixed/variable study for production costs, and a primary/secondary study for poles, transformers, and conductors. Performed a TOU analysis to determine the appropriate rate differentials for its peak and off-peak rates. Served as an expert witness on behalf of the client in a general rate case before the Minnesota Public Service Commission.

National Grid (2010)
Conducted class allocated cost of service studies for the client's Massachusetts natural gas operations. This task included combined gas cost of service studies for the consolidation of four gas service territories into two gas utility subsidiaries. During interrogatories, performed four separate allocated cost of service studies for each gas service territory. Work included reconfiguring the company's commercial and industrial customer classes according to size of load and customer-related facilities. Served as an expert witness on behalf of the client in consolidated general rate cases before the Massachusetts Department of Public Utilities.

Puget Sound Energy (2001 – 2002, 2006 – 2007, 2019 – 2020)
In three Washington general rate proceedings, provided cost of service and rate design support, including expert witness testimony in support of the utility's proposed revenue decoupling mechanism. Conducted research on accelerated cost recovery mechanisms for infrastructure replacement, and electric power cost adjustment mechanisms. In the latest general rate case, Mr. Amen sponsored expert testimony on a proposed revenue attrition adjustment to the client's revenue requirement in the 2020 general rate case.

Utility System Operations and Organizational Development

Philadelphia Gas Works (2017, 2020)
Engaged to provide an independent consulting engineer's report to be included as an appendix to the official statement prepared in connection with the issuance of the City of Philadelphia, Pennsylvania Gas Works Revenue Bonds. The evaluation of the PGW system included a discussion of organization, management, and staffing; system service area; supply facilities; distribution facilities; and the utility's Capital Improvement Plan (CIP). Our report also contained: (a) financial feasibility information, including analyses of gas rates and rate methodology; (b) projection of future operation and maintenance expenses; (c) CIP financing plans; (d) projection of revenue requirements as a determinant of future revenues; (e) an assessment of PGW's ability to satisfy the covenants in the General Gas Works Revenue Bond

Ordinance of 1998 authorizing the issuance of the Bonds; and (f) information regarding potential liquefied natural gas ("LNG") expansion opportunities.

Puget Sound Energy (2013 – 2014)
Engaged to perform a review of its project management and capital spending authorization processes (CSA). The overall project objectives were to educate project management (PM) staff as to the importance and relevance of regulatory prudence standards, evaluate existing PM processes along with newly introduced corporate CSA processes, and propose PM and corporate process and documentation efficiencies. This task was accomplished through 1) a situational assessment and risk review; 2) analysis of project management practices; and 3) development of common documentation for the CSA and PM processes.

Puget Sound Energy (2012 – 2013)
Engaged to perform a review of how the company compares to similarly situated utilities in the areas of the underlying capitalized costs related to new customer additions ("new business investment") and the management policies and practices that influence the new business capital investment. Examined the interrelationships of our client's management policies and practices in the functional areas related to new business investment and developed an understanding of the nature of the costs captured by the new business investment process. Benchmarked those costs relative to peers' cost factors and management capital expenditure practices and performed targeted peer group interviews on our client's behalf. The review identified certain trends and/or interrelationships between management policies and practices, as well as other exogenous factors, and the resulting impact on new business investment.

Puget Sound Energy (2011 – 2012)
Engaged to perform a review of its electric transmission planning and project prioritization process. The emphasis of the review was to determine if the process implemented by the client could be expected to meet the regulatory standard of prudence, as adopted by the state regulatory commission. Reviewed the prudence standard adopted by the commission in several recent regulatory proceedings, supplemented by our knowledge of the prudence standard adopted at a national level and in other states. The engagement included two phases: 1) an initial situation assessment of the existing process employed by the client, and 2) a review of the historic implementation of that process by reviewing a sampling of transmission projects. Compiled and provided examples of capital planning documents and procedures, viewed as "best practices," from other electric utilities and other relevant transmission entities.

Alliant Energy (2011 – 2012)
Provided audit support for one of the company's gas and electric utilities, Interstate Power & Light, during a management audit ordered by one of its two regulatory jurisdictions. Conducted a pre-audit of distribution operations and resource planning processes to provide the client with potential audit issues. Assisted the client throughout the audit process in responding to information requests, preparing company executives and management personnel for audit interviews, and management of preliminary audit issues and findings by the independent audit firm.

Ameren Illinois Utilities (2009 – 2010)

Performed a number of benchmark analyses to compare each of the client's A&G and O&M expenses, on a per-customer basis, to various peer groups conducted for the client's natural gas and electric operations. Analyses were performed for natural gas, electric and combination utilities with both electric and gas operations. Various iterations of the analyses were prepared to make the peer group of utilities more comparable to the characteristics of the client's utility operations. Served as an expert witness on behalf of the client in a consolidated general rate case proceeding of its three utility subsidiaries before the Illinois Commerce Commission.

EXPERT WITNESS TESTIMONY PRESENTATION

- Alaska Regulatory Commission
- Arkansas Public Service Commission
- British Columbia Utility Commission (Canada)
- Colorado Public Utility Commission
- Connecticut Department of Public Utility Control
- Delaware Public Service Commission
- Illinois Commerce Commission
- Indiana Utility Regulatory Commission
- Kansas Corporation Commission
- Maine Public Utilities Commission
- Manitoba Public Utilities Board (Canada)
- Massachusetts Department of Utilities
- Minnesota Public Utilities Commission
- Missouri Public Service Commission
- Montana Public Service Commission
- New Brunswick Energy and Utilities Board (Canada)
- New Hampshire Public Utilities Commission
- North Dakota Public Service Commission
- Oklahoma Corporation Commission
- Oregon Public Utility Commission
- Pennsylvania Public Utility Commission
- South Dakota Public Utilities Commission
- Washington Utilities and Transportation Commission
- Federal Energy Regulatory Commission

SELECTED PUBLICATIONS / PRESENTATIONS

"Enhancing the Profitability of Growth," American Gas Association, Rate and Regulatory Issues Seminar, April 4 - 7, 2004

"Regulatory Treatment of New Generation Resource Acquisition: Key Aspects of Resource Policy, Procurement and New Resource Acquisition," Law Seminars International, Managing the Modern Utility Rate Case, February 17 - 18, 2005

"Managing Regulatory Risk – The Risk Associated with Uncertain Regulatory Outcomes," Western Energy Institute, Spring Energy Management Meeting, May 18 - 20, 2005

"Capital Asset Optimization – An Integrated Approach to Optimizing Utilization and Return on Utility Assets," Southern Gas Association, July 18 - 20, 2005

"Resource Planning as a Cost Recovery Tool," Law Seminars International, Utility Rate Case Issues & Strategies, February 22 - 23, 2007

"Natural Gas Infrastructure Development and Regulatory Challenges," Southeastern Association of Regulatory Utility Commissioners, Annual Conference, June 4 – 6, 2007

"Resource Planning in a Changing Regulatory Environment," Law Seminars International, Utility Rate Cases – Current Issues & Strategies, February 7 - 8, 2008

"Natural Gas Distribution Infrastructure Replacement," American Gas Association, Rate Committee Meeting and Regulatory Issues Seminar, April 11 – 13, 2010

"Building a T&D Investment Program to Satisfy Customers, Regulators and Shareholders," SNL Webinar, March 27, 2014

"Utility Infrastructure Replacement; Trends in Aging Infrastructure, Replacement Programs and Rate Treatment," Large Public Power Council, Rates Committee Meeting, August 14, 2014

"Natural Gas in the Decarbonization Era, Gas Resource Planning for Electric Generation," EUCI, January 22-23, 2020

Attachment RJA-2 - Revenue Decoupling
Variable Costs in Base Rates

Line No.	FERC Account	Description	Residential	Small General
1				
2	755	Field Compressor Station Fuel & Power	$100,133	$44,038
3	819	Storage Compressor Station Fuel & Power	$83,843	$36,873
4	854	Gas for Compressor Station Fuel	$609,695	$268,139
5	873	Distribution Compressor Station Fuel & Power	0	0
6		Total Variable Costs	$793,672	$349,050
7		Sales (Dth)	102,759,362	45,192,740
8		Variable Rate (L6/(L7*10))	$0.00077/therm	$0.00077/therm
9		Total Expense Allocation	$486,905,379	$172,147,008
10		% Fixed Costs (1-(L6/L9))	99.84%	99.80%

Note: Data from 22AL-0046G, Technical Conference NMH-7_CCOSS

RJA-3 Decoupling Bill Impact Analysis

SCENARIO 1 - 10% GREATER Q1 USAGE
Summary of Estimated Bill Impacts - April 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	70 Therms	$72.18	$70.84	($1.34)	-1.86%
Small Commercial (CSG)	343 Therms	$308.67	$303.98	($4.69)	-1.52%

SCENARIO 1 - 10% GREATER Q1 USAGE
Summary of Estimated Bill Impacts - July 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	17 Therms	$26.50	$26.18	($0.32)	-1.21%
Small Commercial (CSG)	95 Therms	$122.24	$120.94	($1.30)	-1.06%

SCENARIO 2 - 10% LOWER Q1 USAGE

Summary of Estimated Bill Impacts - April 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	70 Therms	$72.18	$73.21	$1.03	1.43%
Small Commercial (CSG)	343 Therms	$308.67	$312.68	$4.01	1.30%

SCENARIO 2 - 10% LOWER Q1 USAGE

Summary of Estimated Bill Impacts - July 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	17 Therms	$26.50	$26.74	$0.24	0.91%
Small Commercial (CSG)	95 Therms	$122.24	$123.35	$1.11	0.91%

SCENARIO 3 - 10% GREATER Q1 USAGE; 10% LOWER Q2 USAGE

Summary of Estimated Bill Impacts - April 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	70 Therms	$69.16	$67.82	($1.34)	-1.94%
Small Commercial (CSG)	343 Therms	$297.30	$292.61	($4.69)	-1.58%

SCENARIO 3 -10% GREATER Q1 USAGE; 10% LOWER Q2 USAGE

Summary of Estimated Bill Impacts - July 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	17 Therms	$26.50	$26.45	($0.05)	-0.19%
Small Commercial (CSG)	95 Therms	$122.24	$122.15	($0.09)	-0.07%

SCENARIO 4 - 10% LOWER Q1 USAGE; 10% GREATER Q2 USAGE
Summary of Estimated Bill Impacts - April 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	70 Therms	$75.18	$76.21	$1.03	1.37%
Small Commercial (CSG)	343 Therms	$320.05	$324.06	$4.01	1.25%

SCENARIO 4 - 10% LOWER Q1 USAGE; 10% GREATER Q2 USAGE
Summary of Estimated Bill Impacts - July 2025

	Expected Therms	Bill With Proposed GRSA Without RSM	Bill With Proposed GRSA With RSM	Dollar Delta	Percent Delta
Residential (RG)	17 Therms	$26.50	$26.48	($0.02)	-0.08%
Small Commercial (CSG)	95 Therms	$122.24	$122.14	($0.10)	-0.08%