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**

DIRECT TESTIMONY OF STEPHEN G. MARTZ

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

January 29, 2024

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DIRECT TESTIMONY OF STEPHEN G. MARTZ

I. INTRODUCTION, QUALIFICATIONS, AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Stephen G. Martz. My business address is 1800 Larimer Street, Denver, Colorado 80202.

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

A. I am employed by Xcel Energy Services Inc. (“XES”), as Vice-President, Integrated Planning. XES is a wholly-owned subsidiary of Xcel Energy Inc. (“Xcel Energy”) and provides an array of support services to Public Service Company of Colorado (“Public Service” or the “Company”) and the other operating subsidiaries of Xcel Energy on a coordinated basis. My responsibilities include long-term system planning and strategy of the electric distribution, transmission, generation, and natural gas businesses across the entire Xcel Energy footprint. My team is specifically designed to help integrate multiple business lines for Xcel Energy, as well as the long term needs of both our electric and gas customers holistically in pursuit of the State of Colorado's and the Company's clean energy goals. A statement of my education and relevant experience is provided at the end of my Direct Testimony.

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

A. I am testifying on behalf of Public Service.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to provide perspective on this case amidst other ongoing efforts by the Company to meet State of Colorado energy policy objectives and requirements of recent Commission Rules. This includes development of Gas Infrastructure Plans ("GIP"),[1] which provide first-of-its kind additional transparency into gas planning processes, larger investments, and evaluated alternatives, as well as the filing of Clean Heat Plans ("CHP"), with our inaugural CHP currently pending before the Commission.[2] Those filings are by their nature forward-looking, whereas here the Company is filing a rate case with a cost of service largely based on historical costs. Because my Direct Testimony is providing perspective on actions the Company is taking under relevant Commission

[1] The Company's initial GIP, filed in Proceeding No. 23M-0234G, was not litigated. The Company's first litigated GIP will be filed in 2025.
[2] Proceeding No. 23A-0392EG.

frameworks, I do not testify in support of any specific Company requests in this case, and leave that to other Company witnesses.

I serve in a leadership capacity with the Integrated System Planning ("ISP") organization inside Xcel Energy, which has a specific function of better integrating our electric and gas planning functions. I want to start off by reinforcing that, in no uncertain terms, we fully embrace the clean energy and emissions reduction objectives of the State of Colorado. We are developing and presenting CHP portfolios, looking at our gas investment plans to reorient them towards achieving emissions reduction objectives, focusing on electric distribution system planning ("DSP"), and are not in a purely responsive posture. In fact, our Net-Zero Vision ("NZV"), the first of its kind in the nation, predates Colorado's CHP legislation, which requires reduced emissions from our gas system.[3] At the same time, managing gas system integrity and safety is not an academic exercise; further, we need to avoid the trap and risk of operator/regulatory failure to preserve the technical consciousness required to maintain system integrity and safe operations, even in a period of substantial change.

Nevertheless, we are leading the way in moving towards an increasingly lower emissions future. I am not aware of another utility—anywhere in the country—that is far ahead of where we are in this process. While the envisioned changes will not happen overnight, we are undertaking a multi-faceted approach, which we believe is the key to success. This case, when viewed holistically with

[3] Colorado Senate Bill 21-264.

our overall planning efforts, shows that approach. We must balance our efforts with the need to make investments to ensure the safe and reliable delivery of gas to our customers that request it, use it, and need it.

Q. WHY IS YOUR DIRECT TESTIMONY DIFFERENT THAN OTHER TESTIMONIES IN THIS DIRECT CASE?

A. Many of the other Company witnesses in this case focus on capital investments during the last few years, and increased expenses, leading to the need for this rate case, all of which is necessary and appropriate to fully support our rate case. In my role, I am looking to the future and explaining how we are changing the way we plan our system. We have heard the Commission express concern in deliberations and regulatory dialogues that we are proceeding in a "business as usual" fashion. The thrust of my testimony is to assure the Commission that we are not. We are actively and aggressively reorienting our planning process, and, as noted above, we share the same objectives as the State, the Commission, and many stakeholders. We want to advance towards energy policy goals as expeditiously as possible. It may not seem fast enough for some, but we are working deliberately and are being thoughtful in our approach. We are at the forefront of the gas planning evolution regionally and nationally, and we look forward to continuing to work with the Commission, stakeholders, and customers in this work. Therefore, my testimony, unlike other testimonies in this case, aims to give a sense of where we are in evolving our planning and where we are going, all of which in my view is an important but different backdrop to this case.

II. INTEGRATED SYSTEM PLANNING AND THE REGULATORY FRAMEWORK

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?

A. The purpose of this section of my testimony is to provide background on the ISP organization and how the work we are undertaking interrelates with the regulatory framework around the future of gas that is currently underway in Colorado.

Q. WHAT IS THE ISP FUNCTION WITHIN XCEL ENERGY?

A. The ISP organization is charged with holistically and strategically developing long-term, interrelated plans for our electric and gas systems, while seamlessly serving our customers. This includes coordinating long-term plans and strategies to stay ahead of a fast-changing, and increasingly complex, business environment that is being driven by the accelerating clean energy transition and Xcel Energy's own first of a kind commitment to be a net-zero energy provider.

Our ISP organization is at the intersection of utility generation, transmission, and distribution – electric and gas – across our service areas. With a more holistic ability to innovate during this clean energy transition, we expect increasingly to synthesize our electric and gas capital and technology investments, developing an improved vision for serving our customers well into the future and whereby our approach to planning our system supports their individual choices related to energy use. The ISP organization is one of the first of its kind in the utility industry and will help keep Xcel Energy at the forefront of the nation's clean energy transition, achieving greenhouse gas ("GHG") emissions reductions sustainably, reliably, and affordably.

Q. PLEASE EXPLAIN THE INTERRELATIONSHIP OF THE ISP FUNCTION WITH GIP, CHP, DEMAND SIDE MANAGEMENT/BENEFICIAL ELECTRIFICATION PLANS ("DSM/BE PLANS"), AND GENERAL GAS SYSTEM EVOLUTION EFFORTS.

A. In ISP, we are planning for both our electric and gas systems and collaborating with our operating companies, like Public Service, on filings related to the future of those systems. GIPs, CHPs, and DSM/BE Plans and Strategic Issues are those types of filings. With ISP, we have an organization that can tackle planning and issues that affect both our electric and gas businesses, and here in Colorado, as a combination Company with meaningful customer overlap, that role is particularly important.[4]

We have a solid framework for review of planning here in Colorado developed by the Commission in collaboration with stakeholders. That is a positive first step, though we recognize that this framework will need to evolve and change over time. Further, as we continue our own planning process evolution, we hope to defeat cultural bias towards historical solutions in solving for the future of our gas system while serving the energy needs of our customers.

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[4] The Company's customer base is comprised of approximately 1.1 million combination gas and electric customers, with approximately 480,000 electric only customers, and approximately 425,000 gas only customers. This equates to approximately 72 percent of our total gas customers being combination gas and electric customers.

Q. WHAT DO YOU MEAN WHEN YOU SAY THERE IS A SOLID PLANNING FRAMEWORK IN COLORADO?

A. Nearly 20 years ago, the State and utilities, like the Company, were facing a substantial transition for the electric generation portion of the provision of service. We started with small investments into renewable energy to meet initial renewable portfolio standards; over time, as renewable resource costs came down and opportunities for coal generation arose, we brought forward a series of plans to reduce emissions through the retirement of coal generation and replacement with cleaner portfolios of resources. It has taken time, technology advancement, resource planning changes, and operational changes in an incremental fashion, and remains in motion as we speak. Today, we collectively are tackling the early phase of that conversation for the LDC gas business[5] and the associated GHG emissions. As we have learned on the electric side, affordability, reliability, a positive customer experience, and technological innovation will be key to achieving a successful outcome.

The General Assembly recognized this in their enactment of the legislation that is leading to the development of CHPs in the State under the oversight and guidance of the Commission. Informed, deliberate, and measured steps forward will need to be taken to achieve successful GHG emissions reductions as well as balance affordability with speed and the foundation of a reliable system for all. This

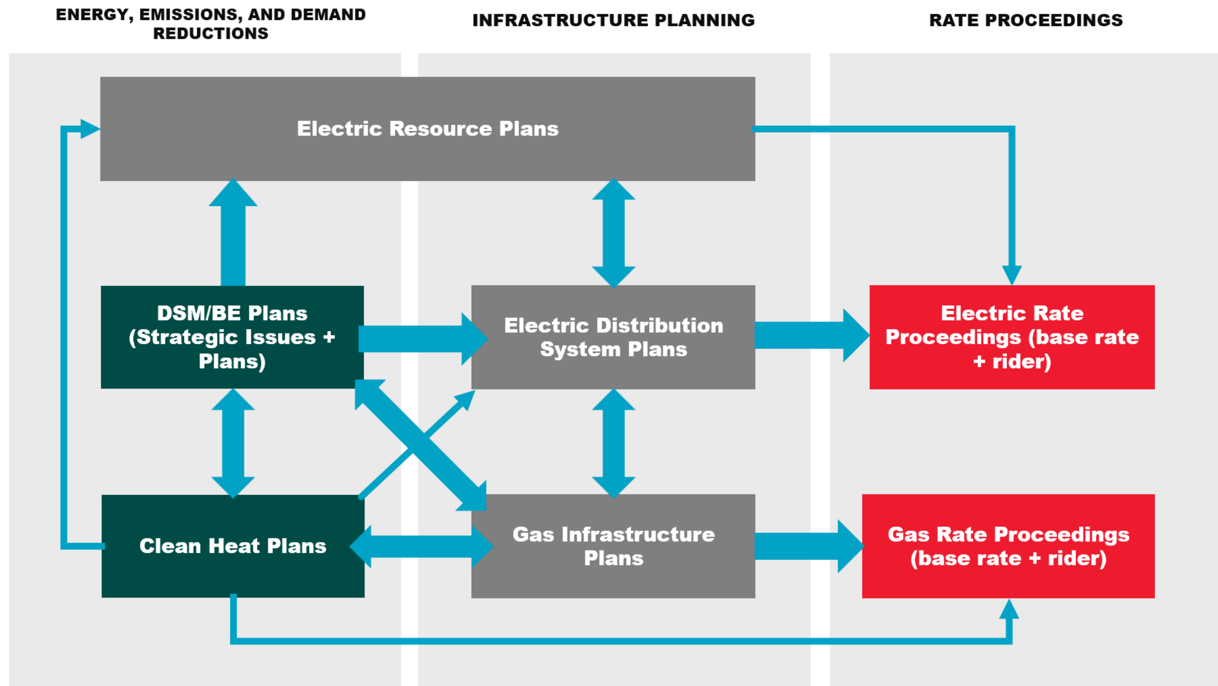
[5] "LDC" refers to Local Distribution Company.

path, which the Company supports, is constructive, and provides a framework to evolve the LDC business over time.

Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE PLANNING FRAMEWORK UNDER COMMISSION RULES.

A. The Commission has overhauled the regulatory framework for LDCs by adopting a new suite of gas rules ("New Gas Rules"), addressing not only CHPs and DSM/BE Plans as required, but also enacting new requirements associated with certificates of public convenience and necessity, GIPs, and line extensions, among other topics. The New Gas Rules shift and broaden the focus of the rules to include not only regulation of jurisdictional gas utilities and their services, but also their actions to reduce GHG emissions from the use of gas by their customers and from leaks in their LDC infrastructure. The figure below displays the envisioned interaction of these key gas planning regulatory processes and rate recovery, and it shows the electric side as well to address the holistic interaction of these functions across planning functions.

FIGURE SGM-D-1: KEY REGULATORY PLANNING PROCESSES



Q. GIVEN THESE COMPLEX INTERRELATIONSHIPS, WHERE DO YOU SEE THE PLANNING PROCESS GOING FROM HERE?

A. It starts with the notion underlying the function of the ISP organization, which is bringing integrated planning principles and structure to overlay our electric and gas businesses across the entirety of the Xcel Energy footprint, in concert with regulatory-required processes and outcomes. GIPs, CHPs, and DSM/BE Plans and Strategic Issues determinations, in turn, serve as microcosms for why that is needed. For example, as the Colorado process matures, CHP targets will affect gas planning, Company investments, and what is presented in future GIPs, and GIPs will similarly impact follow-on CHPs. DSM/BE Plans and Strategic Issues determinations will support and be impacted by both CHP and GIPs. We will have to determine the interaction of these and other processes with ratemaking processes like this one as we evaluate how to provide regulatory support for our modernized planning efforts. We will not solve all of these issues here, and as discussed, we are not waiting to reorient our planning processes; we are doing that now in coordination with the Commission and stakeholders.

Q. IS THE ENVISIONED PROCESS FULLY FUNCTIONING TODAY?

A. No. We are on the front end of this process implementation, with plans filed under the New Gas Rules (GIP, CHP, and DSM/BE) at different procedural stages as of the filing of this Direct Case. We have filed an initial GIP consistent with the New Gas Rules, and we will incorporate feedback and adjust that process as we move into the adjudicated GIP processes in the future in preparation for the filing of our first litigated GIP in 2025. The Company's most recent DSM/BE Strategic Issues case concluded in 2023, and our follow-on DSM/BE Plan for 2024-2026 is pending in Proceeding No. 23A-0589EG. Similarly, our first CHP is pending in Proceeding No. 23A-0392EG, and that proceeding will result in approval and implementation of our first CHP portfolio, which will influence the development of future GIPs as well as DSM/BE Plans and Strategic Issues, to name a few. Moreover, the lessons learned through implementation of our first CHP portfolio can inform future portfolio development in subsequent CHPs and DSM/BE Plans, and electrification load growth will need to be planned for in the electric DSP and Electric Resource Plan processes on the electric side of our business. In turn, the effect of implementation of our first CHP portfolio and subsequent CHP portfolios can be used to inform our planning reorientation and evolution.

As we do all of this and grow into, mesh, and evolve these respective processes, the ratemaking process needs to evolve, and meaningful regulatory support is necessary to enable this transition and the implementation of actions from them. That will happen neither immediately nor organically, and it will take partnership from the Commission to explore and fully implement. In this case, as explained more fully by Company witness Steven P. Berman, we are conservatively proposing a 2023 Test Year based largely on historical data in recognition that the Company and the State are currently in the midst of a paradigm shift, but this cannot be the ongoing expectation. In that vein, we are requesting incremental changes in the right direction, through, for example, our Revenue Stability Mechanism ("RSM") proposal discussed by Company witnesses Mr. Berman, Mr. Ron Amen, and Mr. Jason Peuquet.

Q. IS THE COMPANY WAITING FOR THE PROCESSES IDENTIFIED ABOVE TO FULLY UNFOLD WHILE PROCEEDING IN A "BUSINESS AS USUAL" FASHION FROM A PLANNING PERSPECTIVE?

A. We are not. The framework above is a solid start, reflective of substantial work and engagement from the Commission and stakeholders to develop a process that works for Colorado and that the rest of the country can look to, as it is tackling the same gas system challenges we are navigating here. In fact, recent case studies have identified the success of this framework, even in its first iteration, with a

December 2023 report by Strategen Consulting, Inc. ("Strategen") (prepared for Advanced Energy United) finding:

> Even in its first iteration, Colorado's new gas planning process appears to produce significant benefits for customers. The GIP and Clean Heat Plan together created a direct link between utility investments and gas system emissions reduction goals. The GIP process also resulted in the implementation of two NPAs that relied primarily on electrification measures.[6]

As these Commission processes move along, we are already reorienting our planning for a future that includes more non-pipeline alternatives ("NPAs") and features increasing levels of electrification. This Strategen report, in combination with our ongoing and evolving actions, reflects the class-leading efforts we are undertaking.

Q. HOW, IN YOUR VIEW, DO THE COMMISSION'S VERY RECENT DELIBERATIONS ON THE GIP FURTHER GUIDE THE COMPANY?

A. In The Commission recently-concluded deliberations on the Company's GIP, during which the Commissioners opined that the Company will need to change its thinking and modernize planning. While the aforementioned concepts are essential to the anticipated transition, we are actively evolving our fundamental planning processes themselves, regardless of the capital investment category. But we will need to grow into this process in order to change decades of process and practices (which have successfully protected customer safety and the reliability of

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[6] Strategen (prepared for Advanced Energy United), *A Regulator's Blueprint for 21st Century Gas Planning*, at 50 (December 2023), *available at* https://advancedenergyunited.org/hubfs/2023%20Reports/A%20Regulator%E2%80%99s%20Blueprint%20for%2021st%20Century%20Gas%20Utility%20Planning.pdf.

gas service), taking a measured approach so that we are able to maintain the safe, reliable, and affordable gas service upon which our customers rely. To that end, in the GIP, the Company agreed to consider appropriate adjustments to our Design Day methodology, but only after careful and thorough Company analyses. The Commission also indicated it would like to examine forecasting in the context of planning and alternatives to investment, among other things, and we look forward to participating in a collaborative discussion on these topics with the Commission and interested stakeholders. We will not stand still in the meantime, however, and will continue to explore reasonable and prudent modernization of our planning processes.

Q. EVEN AS REGULATORY PROCESSES EVOLVE AND THE COMPANY DEPLOYS TOOLS TO MEET ENERGY POLICY OBJECTIVES, IS THERE A SINGULAR CLEAR PATH FORWARD?

A. Yes and no. While there is clearly a shared goal, there may be multiple ways to get there, and each requires thoughtful examination. Even as we collaborate with our peers to learn and develop best practices, in the context of gas system planning there is no clear leader that we can look to and develop strategies for significant GHG emissions reductions on the gas system. Rather, we are at the tip of the spear on this both regionally and even nationally. Within that context, I testified earlier about defeating historical bias, and that simply having the tools and beginning to use them is just one step. A second, and equally important, step is driving a shift in not only the underlying planning methodology based on an uncertain future, but also in the planning culture itself where, for certain sets of investments, a planning engineer identifies a system issue and in order of priority maximizes the efficient use of available tools (*e.g.*, DSM, BE, etc.) before proposing gas infrastructure.[7] We are doing just that.

Q. HOW IS THE COMPANY REORIENTING ITS PLANNING?

A. I will address this in more detail in the next section of my testimony, but as a general matter we are reorienting our planning process in several key ways. First, we have analyzed NPA opportunities on the system, as detailed in our GIP filed in Proceeding No. 23M-0234G. That does not mean, however, we are done; in fact we are just starting and already in the process of scouting opportunities for the next generation of NPAs.[8] Second, we are advancing programs to address targeted demand areas ("TDAs") in the interest of avoiding or deferring capacity investments on the gas system through our DSM/BE plans. Third, we are implementing a virtual pipeline infrastructure solution through mobile liquified natural gas ("LNG") and compressed natural gas units that can be deployed as an interim measure to support weak points on the system while we develop, refine, and advance potential NPAs. Finally, we are focused on improving electric DSP to accommodate electrification, particularly given the potential levels of projected electrification shown in our various CHP portfolios. We are also actively looking at

[7] There is also a rate and bill impact aspect that we must consider in pursuing these tools, and required regulatory support as I mentioned earlier.

[8] These forward-looking efforts are beyond the scope of this proceeding, but the testimony is designed to make clear that the Company has not stopped looking at NPAs given the initial GIP has reached its conclusion. This is an ongoing, iterative, and active process.

certified natural gas or differentiated gas purchases through our CHP in an effort to procure fuel supply with lower emissions.

All of these efforts are indicative of expanding the toolbox of planning solutions, i.e., our planning reorientation in action. Each one represents a different strategy to directly (or indirectly in the case of DSP) avoid or defer larger capacity investments—and ensure our electric system can accommodate additional demand as our customers adopt electrification. Our reoriented planning approach is a combination of seizing strategic opportunities (*e.g.*, NPA development, targeted demand area identification, use of virtual pipeline infrastructure solutions in the form of interim portable supplemental supply at pressure points) *and* preparing the system for the migration of customers to all-electric or increasingly electric service (*e.g.*, advancing DSP). I discuss these efforts in more detail in the next section of my Direct Testimony.

III. PUBLIC SERVICE'S PLANNING EVOLUTION AND THIS CASE

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A. The purpose of this section of my testimony is to provide more insight into our ISP-driven planning evolution, including efforts through GIP, CHP, and DSM/BE Plans, and the relief sought through this proceeding in the form of a base rate change to reflect historical investment. Here, I will focus on what are doing in real-time—taking action—and what we need to do to be successful going forward.

A. New Gas Rules and Our Planning Evolution

Q. EARLIER YOU TESTIFIED THAT THE COMPANY IS ALREADY EVOLVING ITS PLANNING PROCESSES IN SEVERAL WAYS. PLEASE ELABORATE.

A. At this time, and as outlined below, the Company is taking several steps to advance and modernize its gas planning process, moving away from a "business as usual" approach and the historical default position of implementing gas infrastructure-based solutions to system challenges. Examples include the following:

- ***Implementing a robust NPA framework to address system issues.*** We are examining and developing NPAs, looking for quality and not quantity, with the recently proposed Pearl Street Mall project and F-3 Reinforcement project as examples,[9] and the larger Mountain Energy Project that is under evaluation for NPAs.

- ***Using TDAs to get ahead of future challenges.*** We are advancing efforts to identify TDAs to avoid or defer capacity investments, looking further into the future and trying to get ahead of issues that may require NPAs or gas infrastructure-based solutions.

- ***Deploying virtual pipeline infrastructure solutions.*** We are implementing virtual pipeline infrastructure solutions in the form of interim portable supplemental supply uses at system pressure points. This

[9] Advanced in the GIP, but also included in the Company's CHP as Market Transformation Initiatives for approval and cost recovery support.

approach complements the NPA framework, serving as a risk mitigation measure while NPAs are developed and deployed and with the potential for other uses as well.

- ***Preparing the electric grid to absorb migrating load.*** We are focused on improving and synthesizing the interplay of migrating gas load to the electric system.

All of these actions are reflective of an evolving and proactive planning approach, and I will expand on each of them briefly over the remainder of this section of my Direct Testimony.

1. The NPA Framework

Q. PLEASE DESCRIBE THE COMPANY'S EFFORTS TO EXAMINE AND DEVELOP NPAS.

A. Since the last gas rate case, the Company has been focusing on developing a robust alternatives analysis framework that considers NPA portfolios as a means to avoid, reduce, or delay the need for certain types of gas capital investment, namely for capacity expansion and new business projects, as required by the GIP rules. For example, in its initial GIP filing, the Company presented an NPA analysis for five capacity expansion projects, of which two projects were determined to be suitable for NPA implementation, representing approximately $10.6 million in avoided gas infrastructure investment. The alternatives analysis was required to include the technologies and/or measures proposed and evaluated, the technical feasibility of the alternative measures assuming full adoption, the strategy to facilitate the alternatives, and an explanation of the methodology used to select the projects presented with an alternatives analysis.

Since the filing of its initial GIP, the Company has continued to evolve its own NPA measures, implementing a number of enhancements based on Commission and participant feedback, and we have been developing a gas Cost Benefit Analysis ("CBA") handbook that incorporates, among other things, lessons learned through the electric DSP process. As we have advised the Commission, we are committed to pursuing opportunities to enhance the NPA program and associated CBA methodology, and we look forward to further collaboration on these topics and the CBA handbook within the framework contemplated by the Commission during its GIP deliberations. Our objective is to adhere to a nation leading NPA framework where we can bring quality, cost-effective, and reliable NPAs to fruition.

Q. ASIDE FROM THE GIP PROCEEDING SPECIFICALLY, HAS THE COMPANY ENGAGED WITH THIRD PARTIES REGARDING ITS NPA ANALYSIS FRAMEWORK AND OVERALL PROGRAM?

A. Yes. For example, prior to commencement of the GIP in Proceeding No. 23M-0234G, the Research and Emerging Issues section of the Commission ("REI Staff") initiated research in coordination with Lawrence Berkeley National Laboratory and its consultant, Strategen, regarding the preparation of a report on non-pipeline alternatives analysis.[10] At the request of REI Staff, the Company provided representatives of REI Staff and Strategen with access to workpapers and related information supporting the Company's GIP. The Company's NPA

[10] See July 24, 2023 Disclosure filed by the Commission in Proceeding No. 23M-0234G.

framework was discussed as a case study in Strategen's report (prepared for Lawrence Berkeley National Laboratory) entitled "Non-Pipeline Alternatives: A Regulatory Framework and a Case Study of Colorado."[11] In a subsequent report, Strategen validated the fundamental framework of the Company's existing NPA analysis framework, as I noted earlier in my testimony.[12] Additionally, as discussed below, the Company has proactively engaged with stakeholders during the Mountain Energy Project NPA assessment the Company is conducting.

Q. PLEASE ELABORATE ON THE MOUNTAIN ENERGY PROJECT NPA ASSESSMENT EXAMPLE.

A. The Mountain Energy Project is a good, ongoing example of the NPA framework in action. As noted in the original GIP filing in May 2023, this particular project was not in planned project status at the time. However, in that filing, we advised the Commission of the capacity constraint, and the alternatives analyses being undertaken.[13] As explained below, we have been intensively reviewing alternatives to gas infrastructure solutions for nearly a year, and currently anticipate pursuing NPAs cost-effectively, subject to Commission approval and cost recovery support. While costs related to this project are not included in the Test Year and, thus, are not at issue, this is the type of assessment we believe is

[11] *Non-Pipeline Alternatives: A Regulatory Framework and a Case Study of Colorado* (prepared by Strategen), non-pipeline_alternatives_to_natural_gas_utility_infrastructure_2_final.pdf (lbl.gov).
[12] Strategen (prepared for Advanced Energy United), *A Regulator's Blueprint for 21st Century Gas Planning*, at 50 (December 2023) ("Even in its first iteration, Colorado's new gas planning process appears to produce significant benefits for customers. The GIP and Clean Heat Plan together created a direct link between utility investments and gas system emissions reduction goals. The GIP process also resulted in the implementation of two NPAs that relied primarily on electrification measures.")
[13] GIP Report, at numbered pp. 76-77.

expected by the Commission, and demonstrative of our dedication to solve complex capacity constraints in a non-traditional manner. This project is also an example of the fundamental fact that planning horizons are quite long for infrastructure projects, especially larger and more complex projects incorporating fairly new planning paradigms.

Q. PLEASE PROVIDE ADDITIONAL INFORMATION ON THE APPROACH UNDERTAKEN BY THE COMPANY REGARDING THE MOUNTAIN ENERGY PROJECT.

A. The Company's existing Mountain System provides natural gas service to approximately 65,000 customers and the three LDCs in the area. This part of the system (specifically Summit, Grand, Eagle, and Lake counties) has experienced accelerated growth rates as compared to the overall Public Service gas territory. As a result of this growth, the Company identified an existing and forecasted capacity shortfall in several of the Company's load centers within the affected counties. The Company has been dedicated to identifying a capacity solution through integrated planning processes in order to meet the needs of its affected customers for safe, clean, affordable, and reliable energy.

Q. IS THE COMPANY TAKING A NEW APPROACH TO IDENTIFYING AN APPROPRIATE SOLUTION WITH THE MOUNTAIN ENERGY PROJECT?

A. Yes. The Company partnered with third-party consultants to perform an extensive NPA analysis to consider NPA portfolios as potential options for long-term solutions and to engage in primary research. These consultants were selected to provide valuable industry insights and technical assistance in developing and evaluating a variety of portfolios as defined by the Company. The purpose of this collaboration, the first of its kind for the Company, was to consider different approaches *and* the potential for customer adoption. Moreover, the consultants reviewed the Company's existing NPA process to evaluate opportunities to continue to advance and expand the development of NPA portfolios. As a result, the Company has been expanding the NPA measures/technologies included in NPA portfolios, as well as advancements in the CBA tool.

Q. DID THE COMPANY TAKE OTHER STEPS IN ADDITION TO COLLABORATING WITH THIRD-PARTY CONSULTANTS?

A. Yes. The Company hosted several stakeholder workshops to provide educational opportunities about the NPA process and to obtain stakeholder feedback along the way. To date, the stakeholder workshops have included information on the approach to modeling of NPA measures/technologies and the use of the CBA tool. Specific feedback was requested on the list of NPA measures and technologies included in the analysis, the primary research surveys deployed by the Company, and the inputs into the CBA tool. The Company intends to host two additional stakeholder workshops in the first half of 2024.

Q. IS THE NPA ANALYSIS FINALIZED AT THIS TIME?

A. No, but our NPA analysis to date is already exceeding other NPA efforts to date in scope, depth of analysis, and collaboration. Due to the complex nature of the issues presented, significant time and effort have been required. We are pleased to report, however, that as a result of this integrated planning process, in the near term the Company anticipates proposing a long-term solution to these capacity constraints that includes *no* traditional pipeline reinforcements and instead heavily focuses on deployment of an NPA portfolio to its affected Mountain System customers. This case study represents our planning reorientation, evolution, and removal of gas infrastructure bias in action.

Q. DO YOU HAVE ANY OTHER COMMENTS ON THE MOUNTAIN ENERGY PROJECT?

A. Yes. We heard the Commission's January 10, 2024, deliberations on several GIP topics, and we intend to continue to work with the Commission in a constructive way going forward. In particular, we heard the frustration with regard to the Mountain Energy Project and the fact that it was not presented in the GIP. As our processes evolve and improve, we hope to avoid situations like this in the future. Nevertheless, we are proud of the work of we have done to date, and we look forward to presenting our proposed solution to the Commission.

2. Identification of Targeted Demand Areas

Q. PLEASE PROVIDE A BRIEF BACKGROUND ON TDAS.

A. The Company first proposed the concept of TDAs in the 2022 DSM/BE Strategic Issues filing (Proceeding No. 22A-0309EG). TDAs refer to areas on the gas distribution system where the forecasted peak hour natural gas demand is approaching the capacity of the local system. Multiple parties showed support and shared input to enhance the concept in that proceeding. In Decision No. C23-0413 in Proceeding No. 22A-0309EG, the Commission did not find the presented TDA methodology appealing; however, it recognized the value of the concept and showed significant interest in adapting the methodology to target demand reductions to areas with capacity constraints. The Company updated the concept and filed a TDA proposal in the 2024-2026 DSM/BE plan (Proceeding No. 23A-0589EG).

Q. PLEASE EXPLAIN WHAT THE COMPANY WOULD DO WITHIN IDENTIFIED TDAS.

A. Under our proposed approach, in the identified TDAs the Company would aggressively promote customer adoption of efficiency and electrification measures that will reduce peak hour gas demand. These measures include building shell upgrades, full electrification of space heating, natural gas demand response, and other measures that will have a significant and measurable impact on the peak hour gas demand in the TDA.

Q. HOW WOULD TDAS BE SELECTED?

A. TDA areas would be selected based on available system capacity with a focus on project areas that may experience a capacity shortfall in the longer term (i.e., six to 10 years), and the measures would be selected based on the peak hour gas demand savings.

Q. HOW DO THESE AREAS COMPARE TO THOSE IDENTIFIED FOR POTENTIAL NPAS?

A. TDAs are intended to address gas capacity constraints that are further in the future than those identified for NPAs. In other words, they are meant to address forecasted capacity issues well before they become acute and can only be resolved by either a pipeline expansion or, potentially, an NPA.

3. Deploying the Virtual Pipeline Infrastructure Solutions

Q. WHAT IS A VIRTUAL PIPELINE INFRASTRUCTURE SOLUTION IN YOUR VIEW?

A. The virtual pipeline infrastructure solution concept uses supplemental supply in the form of LNG or compressed natural gas units. Supplemental supply involves injecting natural gas into the piping system to increase pressures to maintain service reliability. We could use this resource more broadly as a risk mitigation measure as we evaluate and deploy NPAs while still maintaining its interim use nature. Moreover, if the NPA framework is successful in developing NPAs that work, this virtual pipeline infrastructure solution concept could be temporary in nature until the NPA is effective.

Q. PLEASE EXPLAIN HOW THE COMPANY PLANS TO UTILIZE THE VIRTUAL PIPELINE INFRASTRUCTURE SOLUTION CONCEPT GOING FORWARD.

A. The Company is focused on advancing TDAs and expanding the NPA analysis to identify additional opportunities to avoid, reduce, or delay the need for investment in certain types of new gas infrastructure. However, the Company has also identified a need to identify interim mitigation measures to account for the operational risk associated with non-attainment or slower than predicted adoption of NPA technologies and measures. Operational risk is introduced into the system if the Company only relies on an NPA portfolio to address a capacity shortfall because the effectiveness of an NPA portfolio is dependent on outside factors such as customer participation and implementation, among other factors. One of the ways that a gas utility can mitigate this risk is by utilizing a virtual pipeline infrastructure solution concept.

Q. PLEASE EXPLAIN HOW THE LNG DEPLOYMENT IN A VIRTUAL PIPELINE INFRASTRUCTURE SOLUTION WOULD WORK.

A. Mobile LNG trailers would be deployed to a location, and LNG would be injected only if the system pressures fell below site specific threshold values, which may or may not occur during the heating season depending on actual minimum temperatures and customer demand on the system.

Q. WHY IS THE VIRTUAL PIPELINE INFRASTRUCTURE CONCEPT AN ACTION THE COMPANY IS INCORPORATING INTO ITS REORIENTED PLANNING?

A. The virtual pipeline infrastructure solution concept covers a variety of system issues, primarily capacity. While it is a form of gas infrastructure, it is a generally cost-effective way to secure peak capacity for gas. Further, since it can apply to multiple locations, the virtual pipeline infrastructure solution concept brings bigger picture financial benefits, such as a shorter book life, from the perspective of managing long-term cost impacts of investments in our gas system. For these reasons, the Company views this as a core competency to gain and develop more fully. If we can develop strong deployment capabilities here, we can ensure its safety and reliability.

4. Improving Electric Distribution System Planning

Q. WHY IS DISTRIBUTION SYSTEM PLANNING PART OF RE-ORIENTING THE COMPANY'S PLANNING EFFORTS?

A. Integrated planning, and the ISP organization, is focused on synthesizing our electric and gas capital and technology investments. Accordingly, a planning evolution and reorientation must be holistic and consider actions on both sides of the business. This includes improving DSP so that the Company's electric system is positioned to absorb electrification and load migration as it occurs over time.

Q. HOW DOES GAS PLANNING IMPACT ELECTRIC DSP (OR VICE-VERSA)?

A. As we evolve our gas planning process, solutions we identify will, in many instances, drive increased load to the electric system. This dynamic requires planning on the electric side to accommodate increasing load on the electric system. I focus on electric DSP here, but it will likely involve resource planning and transmission planning too as load migration grows and triggers investment needs beyond the distribution side. A key focus at this juncture, however, is improving the electric DSP process.

Q. HOW IS THE COMPANY TRYING TO IMPROVE DSP TO ACCOUNT FOR CHP AND THE MODERNIZATION OF ITS GAS PLANNING PROCESS?

A. Fundamental to the electric DSP is a range of forecasted electric loads. These forecasted scenarios will be built based on a combination of historical loading data, customer growth, and changes in the way customers use electricity. Multiple factors are expected to influence how customers use electricity in the near future. These factors include, but are not limited to, increasing efficiency of building shells and equipment within buildings, electrification of space and water heating for existing and new buildings, and other end uses previously served by natural gas, as well as electrification of transportation. The Company has proposed programs to influence many of these factors to different levels in the CHP portfolios presented through the inaugural CHP in Proceeding No. 23A-0392EG, and in other proceedings. The Company intends to improve the forecasting process used in the DSP by including the impact of programs proposed in the CHP. So in plain terms, we plan to take the Commission-approved CHP and use that to serve as the base case input into our DSP, and we understand there will be other drivers that influence the next DSP as well.[14] The electric DSP process, therefore, will require integrated planning between our businesses in action, and our organization is set up for that purpose.

[14] In Decision No. C24-0014 in Proceeding No. 23V-0609E, the Commission granted the Company's request for a variance from Rule 3528, allowing it to file its next DSP on November 15, 2024. In granting this request, the Commission conveyed its expectation that the Company will be integrating lessons learned and direction from other proceedings into its overall vision of a distribution system that is responsive to evolving customer and climate needs.

5. Tying These Actions Together

Q. DO ALL OF THESE EFFORTS ALLOW THE COMPANY IMMEDIATELY TO CHANGE THE WAY IT PLANS AND INVESTS IN THE GAS SYSTEM?

A. No. The adoption and implementation of a CHP and the other measures discussed in this section are facilitating long-term changes to the Company's systems (both gas and electric), but those changes will take time to implement fully. In the meantime, the Company must continue to invest in the gas system to maintain safe and reliable service. And safety investments must continue in order to support a system that will serve large numbers of customers for years even under the most optimistic electrification scenarios. The Company, intervenors, and the Commission cannot lose sight of that imperative. My caution that gas system planning and investment cannot change overnight should not, however, be read in any way as a sign of complacency with respect to the State's emissions reduction and energy policy goals or the Commission's push for new and improved planning processes.

Q. WHY NOT?

A. The Company led with its NZV, understanding the NZV is not state-sanctioned. The NZV does, however, demonstrate the Company's commitment to doing its part in the evolution of the gas business. And consistent with the NZV, State energy policy, and the New Gas Rules, the Company is providing more transparency into its planning processes, adopting aggressive DSM/BE goals, and proposing forward-looking GHG emissions reduction portfolios in its inaugural CHP. The

Company has worked collaboratively with the General Assembly, the Commission, and stakeholders to develop policy for the future of the LDC and continues to do so. Therefore, while it will take time for our planning and related regulatory constructs to mature, we are all focused on the same outcome. As I will explain next, there are some near-term items that will assist in the planning evolution that we already have underway.

B. Next Steps to Advance Planning Reorientation and Modernization

Q. WHAT ARE SOME EXAMPLES OF KEY ITEMS NEEDED TO FURTHER THE COMPANY'S REORIENTATION AND MODERNIZATION OF ITS PLANNING PROCESS?

A. The Company has identified things that need to occur to assist in the reorientation of the planning process, and these needs fall into two categories. The first is regulatory support, particularly with respect to NPAs. And the second is positive change in customer behavior.

Q. PLEASE DESCRIBE THE NECESSARY REGULATORY SUPPORT.

A. The Company has discussed the need for regulatory support extensively in the development of the New Gas Rules and follow-on proceedings. We need a holistic discussion on how to provide regulatory support that flows from approved GIPs. Understanding that this may not be an immediate item until GIPs are adjudicated, I want to focus on one more pressing near-term item: the need for a cost recovery pathway for NPAs.

Q. WHY IS THIS NEED PRESSING?

A. In the Company's closing comments in the initial GIP proceeding, Proceeding No. 23M-0234G, we emphasized the need for the authorization of a cost recovery mechanism as a prerequisite to pursuing NPA portfolios. The Company stated that, "[s]hould the Commission require the Company to pursue achievable NPA portfolios for the F-3 Reinforcement and Pearl Street Mall projects, both of which are presented as market transformation initiatives in the Company's pending Clean Heat Plan, authorization for a cost recovery mechanism needs to be in place in advance, otherwise the NPA would not be pursued."[15]

We are taking planning steps to incorporate NPAs and build NPA portfolios, as evidenced in the GIP. But we need a current recovery mechanism and pathway prior to embarking on this endeavor in order to fund NPA efforts and work as it occurs. We therefore appreciate the Commission's acknowledgement of this cost recovery need during its GIP deliberations and look forward to implementation of such a mechanism through the CHP or other appropriate proceeding.

Q. WHAT ABOUT THE SECOND CATEGORY ON CUSTOMER BEHAVIOR AND HARD DATA REFLECTIVE OF THAT BEHAVIOR?

A. Unlike NPA cost recovery, customer willingness to adopt electrification measures is not within the direct control of the Commission—or the Company. To be clear, the Company can collect data and can propose incentive structures to facilitate electrification, and it has already started doing so in the CHP and DSM/BE

[15] Closing Comments and Recommendations, at 11, Proceeding No. 23M-0234G.

contexts. The Commission, in turn, can review and approve those structures. However, customers themselves, on an individual-by-individual basis, control the movement to electrification of their homes and businesses, with influence coming from available funding/programming to drive it. Thus, while there are several steps the Company can take to promote electrification, customer behavior and choice is outside of our direct control.

The Company is taking the steps outlined herein, and our CHP and DSM/BE Plans are reflective of that commitment and effort. The ability for these programs to succeed and to see a meaningful migration from combination gas and electric service from the Company to all-electric service depends on customer adoption rates, and we are in the early phases of seeing what those rates will be. This is something we are both facilitating and monitoring, and the pace of the reorientation of our planning process will depend in part on it.

C. Looking to the Future

Q. WITH THIS BACKDROP, WHERE DOES THE REGULATORY DIALOGUE NEED TO GO NEXT?

A. The future will also bring with it a need for continued dialogue on how rate structures and rate design will evolve. The Colorado Public Utilities Law provides some direction on this front, as Senate Bill 21-264 allows for "current recovery for clean heat plan costs through a rate adjustment clause or structure that allows for current recovery …." Moreover, the applicable implementing rule, Rule 4731(g)(I), provides that "[t]he utility may propose a rate adjustment clause or structure that provides for recovery of the utility's clean heat plan costs, or any costs incurred to meet additional emission reduction requirements under § 25-7-105(1)(e)(X.7), C.R.S."[16] This statutory and administrative notion of a "structure" should guide how we think about rate cases like this one in the future, asking ourselves: *what rate structure best facilitates the evolution of the gas business?* This case is not about answering that question; however, additional regulatory dialogue needs to occur in the future if we are going to undertake the significant effort to evolve and, candidly, evaluate the future of the gas business.

Q. WHAT INITIAL STEP IS THE COMPANY PROPOSING HERE IN THIS VEIN?

A. Mr. Berman discusses the Company's proposals in more detail, but this Phase I rate case is not about effectuating forward-looking changes in rate design. The Company has, however, looked to other states and sources in order to develop a decoupling paradigm that works in concert with progress towards achievement of state energy policy objectives. As a result, we are advancing the RSM proposal, which is designed as an initial step to begin the rate structure evolution that supports the transition of the business itself. The RSM proposal is described in more detail by Mr. Amen of Atrium Economics, testifying on behalf of the Company, in his Direct Testimony, along with Company witnesses Messrs. Berman and Peuquet. As discussed by Mr. Berman, taking this step now ensures incentive alignment for the Company to execute on state goals to reduce emissions from the

[16] Rule 4731(g)(I).

gas LDC while leaving open the flexibility to evaluate rate structures as we move closer to the more aggressive future emissions reduction goals.

IV. CONCLUSION

Q. DO YOU HAVE ANY CONCLUDING REMARKS?

A. Yes. We are working as quickly as possible to reorient and modernize our gas planning processes, moving away from a "business as usual" approach and the historical default position of implementing gas infrastructure-based solutions to system challenges. Our NPA framework, TDA identification, and virtual pipeline infrastructure solutions are all emblematic of that change, with electric DSP improvement also a top priority to prepare the electric system for load migration. In addition, with the New Gas Rules, we have a comprehensive and collaboratively developed regulatory framework that can aid in these efforts and provide transparency to them. It is important, however, to remember where we are in this journey. Our planning modernization needs further work and development, and the regulatory framework does, too, as we move forward. But we have a start: we are embracing a common objective, and we are pushing towards a clean energy future as expeditiously as any LDC in the country with the actions we are undertaking, evaluating, and presenting to the Commission and stakeholders.

Our requested approvals here, supported by other Company witnesses, are a necessary part of continuing to do this work and modernize our processes. This would further establish a foundation for change while we drive customer adoption rates for electrification to the extent we can *and* see what those customer adoption rates actually are over time. As explained throughout my Direct Testimony, our planning process evolution will not wait to see what customers do, but what customers do will inform the speed and scope of our reorientation, with the Company pushing hard to move forward in collaboration with the Commission, policymakers, and stakeholders.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

Statement of Qualifications

Stephen G. Martz

I earned a Bachelor of Science degree in Chemical and Materials Engineering from Cal Poly and a Master of Business Administration-Finance. I started in the energy industry with Sempra Energy working in the distribution engineering department where I was responsible for system analysis and modeling and project development throughout the southern California service territory. While at Sempra, I was promoted into successive roles in Transmission Project Management, Storage Field Operations Management, Research & Development Manager, and in my last role at Sempra I oversaw the corporate development and new markets growth office.

In 2015, I transitioned to Xcel Energy as Manager of Gas Capacity Planning with responsibility for system planning and gas strategy. At Xcel Energy, I have held a range of roles including Senior Director of Gas Engineering, Area Vice President of Engineering and Project Management and have worked across all of Xcel Energy's business lines working in all of our jurisdictions. Most recently, I was named the Vice President of Integrated Planning. In this capacity I am responsible for all system planning and strategy for Xcel Energy's business lines over electric distribution, transmission, generation and the natural gas business across our eight-state operating territory. My team develops a range of work products ranging from our Electric and Integrated Resource Plans, Distribution System Plans, Clean Heat Plans, and long term infrastructure planning.

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**

**AFFIDAVIT OF STEPHEN G. MARTZ
ON BEHALF OF
PUBLIC SERVICE COMPANY OF COLORADO**

I, Stephen G. Martz, 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 Denver, Colorado, this 25 day of January, 2024.

____
Stephen G. Martz
Vice President, Integrated Planning

Subscribed and sworn to before me this 25th day of January, 2024.

____
Notary Public

CONNOR ALEXANDER SHANTZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20224024010
MY COMMISSION EXPIRES JUNE 21, 2026

My Commission
expires June 21, 2026