BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF COLORADO

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IN THE MATTER OF ADVICE NO. 993-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 24, 2022	**)**	**PROCEEDING NO. 22AL-____G**

DIRECT TESTIMONY AND ATTACHMENTS OF LUKE A. LITTEKEN

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

January 24, 2022

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF COLORADO

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DIRECT TESTIMONY AND ATTACHMENTS OF LUKE A. LITTEKEN

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BEFORE THE PUBLIC UTILITIES COMMISSION

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DIRECT TESTIMONY AND ATTACHMENTS OF LUKE A. LITTEKEN

I. INTRODUCTION, QUALIFICATIONS, AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Luke A. Litteken. My business address is 1123 West 3rd Avenue, Denver, Colorado 80223.

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

A. I am employed by Xcel Energy Services Inc. ("XES"), as Senior Vice-President, Gas. 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 oversight of the overall gas business, including strategic planning, and public and employee safety in each state in which Xcel Energy operates a gas system. In this position, I am

responsible for, among other things, the design, operation, planning, construction, and maintenance of Public Service's Colorado natural gas pipeline system.

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

A. I am testifying on behalf of Public Service.

Q. PLEASE BRIEFLY OUTLINE YOUR RESPONSIBILITIES FOR PUBLIC SERVICE.

A. I oversee the design, operation, planning, construction, and maintenance of Public Service's gas transmission and distribution pipelines and underground storage facilities. I also direct gas control, gas emergency response and repairs, and gas distribution and gas transmission engineering activities in Colorado, as well as in the other states in which Xcel Energy provides regulated natural gas service. I am also responsible for gas compliance, gas standards, the pipeline safety management system, and integrity management programs across Xcel Energy's operating areas and for the gas transportation business on the Public Service gas system. A statement of my education and relevant experience is provided at the end of my Direct Testimony.

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

A. Yes. I am sponsoring the following attachments:

- Attachment LAL-1: Map of Public Service Gas System with Operational Areas; and
- Attachment LAL-2: PHMSA Advisory Bulletin ABD-2016-05.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. My testimony presents the Company's operational perspective on the current and future state of the Public Service natural gas business and system, particularly as they relate to this gas rate case. I note that the Public Service natural gas system was founded in 1869 and Public Service Company was formed in 1923. After 150 years of service, Public Service's gas business finds itself at a crossroads of sorts. Families and business – in some areas, growing substantially in number – across much of Colorado depend on Public Service to provide safe, reliable, clean, and affordable heat. Regarding affordability, and as discussed by Ms. Trammell in her Direct Testimony, PSCo gas is the 13th largest gas utility in the country and one of the lowest residential cost natural gas providers in the country.

We cannot lose sight of the fact, however, that increasing federal and state mandates and best industry practices continue to govern our obligation to make capital and operations and maintenance ("O&M") investments to ensure the resiliency of our system. As infrastructure ages, is damaged by third-parties, or is subject to potential detrimental effects of severe weather events, investments are needed to ensure resiliency and service continuity. These investments, along with investments in integrity work and traditional normal course of business gas investments, will occur alongside investments in our Clean Heat future – a future of reduced methane and carbon emissions resulting from the distribution of natural gas. Xcel Energy has supported the Clean Heat transition through active engagement in the development of the enabling legislation and has announced an

enterprise-wide Net-Zero Vision for Natural Gas. As we look to 2030 and beyond, just as we have taken aggressive steps to reduce emissions from the electric and transportation sectors, our corporate goal is to reduce carbon emissions from end users of the natural gas system by 2030 and to achieve a net zero carbon business by 2050.

Some stakeholders imply that a Clean Heat future is in tension with current investment in the natural gas system. My testimony illustrates the Company's dedication to each of the needs of the natural gas system and their compatibility with each other. Fundamental investments in our assets and our people to mitigate risk to public safety and the environment, undertake programmatic efforts to keep gas in the pipes, and ensure our system is resilient all enable us to successfully provide service that is clean, safe, reliable, and affordable. These efforts are also critical to preparing Public Service's gas system and infrastructure to support clean energy technologies that may heat customers' homes and businesses in the future.

At the same time, we recognize that achievement of our Net-Zero Vision does not mean adherence to the status quo. The Gas Operations business area recognizes that it is critical to develop new technologies and practices to reach our Net-Zero Vision, and we are actively engaged in pilots and other programs to evaluate and ultimately implement them. Examples of this work include opportunities such as hydrogen blending, low carbon alternatives to traditional gas capacity pipeline reinforcements, certified gas, and renewable natural gas pilots described in my Direct Testimony and the testimony of Mr. Jeff Lyng. Examples

of enhanced practices include an increased focus on leak detection, system integrity work, and our damage prevention program as described by Company witnesses Ms. Lauren Gilliland and Ms. Joni Zich.

I explain how each of these needs – for safe, reliable, clean, and affordable service – is at the core of the Gas Operations capital investments and O&M expenses included in this rate case. But at the same time we face this variety of system needs, our options for cost recovery have become more limited with the expiration of the Pipeline System Integrity Adjustment ("PSIA") rider and the expectation that we will recover more of our costs in the ordinary course of business. All of these factors make this rate case particularly important to the stability, reliability, and resiliency of the natural gas system and business, and to our continuing ability to meet our customers' clean heat needs in the decades to come.

Q. PLEASE INTRODUCE THE REMAINDER OF YOUR TESTIMONY.

A. The remainder of my testimony is dedicated to providing an overview of the Public Service gas business, our guiding principles and vision, and our key Gas Operations investments in this rate case. Specifically, in Section II of my Direct Testimony, I provide an overview of the Company's Gas Operations business area. I also describe the principles, statutes, rules, and goals that drive our Gas Operations work, and explain how these obligations drive investments for which we seek rate recovery. Finally, I offer my perspective on how the Gas business is aligned with Colorado's Clean Heat future and Xcel Energy's own Net-Zero Vision

for Gas.

Finally, in Section III of my Direct Testimony, I describe the multiple ways Public Service must attend to customers' need for safe, reliable, and resilient natural gas service to heat their homes, businesses, and communities. I describe the four fundamental drivers of work and costs on Public Service's gas system – safety, reliability, new customers, and mandated relocations – and introduce some of Gas Operations' key programmatic work to promote system safety and system integrity and reduce GHG emissions. I also explain how this work is fully compatible with the State of Colorado's natural gas policy development.

Q. WHAT ADDITIONAL GAS OPERATIONS TESTIMONY IS PUBLIC SERVICE OFFERING IN THIS PROCEEDING?

A. In addition to my Direct Testimony introducing the work and priorities of the gas business, Public Service offers Gas Operations testimony from three other witnesses:

- Company witness Ms. Joni Zich supports the Company's Gas Operations capital budgets and capital budgeting processes, and describes the Company's investments in Safety (including both PSIA and non-PSIA safety investments), Reliability, New Business, and Mandated Relocations. Ms. Zich also supports certain operational tariff changes that will further clarify our tariffs and support critical capacity planning initiatives.
- Company witness Ms. Lauren Gilliland supports the Company's Gas Operations O&M expenses for the 2022 Current Test Year, which are based

on the actual O&M costs in the 2021 HTY (12 months ended June 30, 2021), with certain known and measurable expense changes associated with Damage Prevention and Integrity Management expense.

- Finally, Company witness Ms. Susan Bailey supports the majority of the Company's requested Gas Operations tariff changes. She identifies various amendments needed for tariff clarification and certain efforts by Public Service to enhance service to customers and effective gas system management. She also discusses the Shipper Stakeholder Process undertaken as a result of the Company's 2019 Phase II Gas Rate Case (Proceeding No. 19AL-0309G).

Q. WHAT IS THE INTERPLAY BETWEEN THESE PIECES OF TESTIMONY AND YOUR DIRECT TESTIMONY?

A. Together, our Gas Operations witnesses seek to provide a clear picture of our natural gas business, including more detailed and robust insight into our services to customers than ever before. Each Gas Operations witness supports a particular aspect of the natural gas business, including overall planning and customer service, capital O&M expense investments on behalf of our customers, quality of service metrics, and tariff management to facilitate clear terms of service to all customers. In turn, these witnesses' testimonies illustrate the regulatory support that is necessary to run a safe, reliable, and affordable gas business – including reasonable recovery of both capital and O&M investments, appropriate service metrics that hold us accountable while also incentivizing and rewarding quality

service, and terms of service that are sustainable for the Company and customers while also being consistent with overall quality system planning. The Gas Operations testimony works together to illustrate, in detail, the teamwork that occurs within the gas business and our clear dedication to providing the safe and low cost service our customers rely on every day. This same dedication to a safe, reliable and low cost gas service also benefits economic development across the State of Colorado.

II. PUBLIC SERVICE'S GAS SYSTEM AND OPERATIONS

A. Overview of Gas Business

Q. PLEASE DESCRIBE PUBLIC SERVICE'S GAS OPERATIONS.

A. Public Service provides gas sales and transportation service to many Front Range communities (e.g., the greater Denver metro area, Fort Collins, and Pueblo), the Western Slope (e.g., Grand Junction, Rifle, Meeker, etc.), and mountain resort communities (e.g., Alamosa, Steamboat Springs, Copper Mountain, Vail, Durango, Pagosa Springs, Crested Butte, and Leadville). We operate facilities in 33 of the 64 counties within the state. A map of our gas service area is provided as Attachment LAL-1 to my Direct Testimony.

The Company provides natural gas supply and delivery service to residential, commercial, and industrial customers, as well as to gas-fired electric generation facilities. Public Service is also the upstream gas transportation service provider for several local gas distribution systems owned and operated by Atmos Energy Corporation ("Atmos"), the Town of Center, Colorado Natural Gas, Inc., and Black Hills Energy. Additionally, the Company transports gas in interstate commerce by delivering gas supplies to interconnected pipeline systems that subsequently transport the gas to out-of-state markets. This interstate service is regulated by the Federal Energy Regulatory Commission ("FERC") and is provided pursuant to a limited-jurisdiction certificate of public convenience and necessity issued by the FERC in 1992. *See Public Service Co. of Colorado*, 61 FERC ¶ 62,012 (1992).

Q. WHAT TYPES OF INFRASTRUCTURE ARE INCLUDED WITHIN PUBLIC SERVICE'S GAS SYSTEM?

A. Public Service and its predecessors have been providing gas service to Colorado customers for over 150 years. We have almost 25,000 miles of high and low pressure pipeline facilities, which helps us move gas safely and reliably to our customers throughout Colorado. We also have direct access to major interstate pipelines and underground storage facilities. Our gas system in Colorado includes over 22,800 miles of distribution mains and over 2,000 miles of transmission pipeline, over 1.2 million services, 19 compressor station locations with over 40 compressors totaling approximately 40,000 horsepower, about 2,300 regulator stations, and other supporting infrastructure.

Q. WHAT IS THE BASIC MISSION OF PUBLIC SERVICE'S GAS BUSINESS?

A. Our mission is to provide safe, reliable, affordable, and environmentally-responsible service to our approximate 1.4 million Colorado customers. We understand that safe, reliable, and resilient natural gas service is critical to the State of Colorado, its citizens, and the robust economic development this state has come to enjoy. When firm customers need natural gas for home heating, critical industrial processes, and other end uses, we must be ready to provide that service on demand. Moreover, we must design and operate our system to ensure the safety of our customers, our employees and contractors, and the public. To do this, the Company follows federal and state codes and regulations and relies on peer benchmarking. The individual

characteristics of infrastructure within Public Service's natural gas system further drive the Company's planning and operation.

In addition, as leaders in clean energy and carbon emissions reductions, Public Service works to reduce natural gas emissions from 1) our upstream producers and interstate pipelines; 2) the operation of our local distribution system; and 3) our customers at their homes and businesses. Mr. Jeff R. Lyng discusses these efforts in more detail, particularly with respect to upstream producers and our customers at their homes and businesses.

Q. WHAT ARE THE MAIN FUNCTIONS PERFORMED BY THE GAS OPERATIONS BUSINESS UNIT?

A. The Natural Gas business unit provides all the major functions to deliver natural gas from upstream interstate pipelines, such as Colorado Interstate Gas Company, to the customer's meter and ensures public safety through compliance with state and federal pipeline safety regulations. These functions include: planning, engineering, design, metering, compliance, responding to gas emergencies, locating underground gas facilities, construction and maintenance on the system, coordinating with communities to relocate our facilities when necessary for municipal projects like water and sewer projects, complying with all state and federal regulations, and operating and maintaining gas peaking facilities, just to name a few.

Q. DOES PUBLIC SERVICE PROVIDE SAFE AND RELIABLE SERVICE TO ITS CUSTOMERS?

A. Yes, through ongoing efforts. There are continually emerging risks that need to be mitigated as the system ages, and we must make ongoing assessments of and investments in our assets, our performance, and our customer service. In fact, like the rest of the gas industry in the United States, Public Service continues to focus on removing operational and safety risks from its system by operating proactively, while maintaining affordability. This includes replacing aging assets, maintaining adequate capacity, and ensuring adequate redundancies so that the system is resilient – even in the face of major events like Winter Storm Uri and the devastating Marshall and Middle Fork Wildfires. However, the growth and expectations for our system and the increasing frequency of weather events have illustrated a significant need to further enhance the resiliency of our system. We are also constantly working to maintain the health of our system, respond to emergencies faster, find and repair leaks, and prevent damage to pipes as a result of underground construction, all while meeting or exceeding system mandates established by the Department of

Transportation's Pipeline Hazardous Materials and Safety Administration ("PHMSA"), as well as state and local requirements.

B. Guiding Principles and Requirements for Gas System

Q. WHAT ARE THE MAJOR SAFETY PRINCIPLES THAT GUIDE PUBLIC SERVICE'S INVESTMENTS IN ITS GAS SYSTEM ON BEHALF OF CUSTOMERS?

A. At a high level, our basic safety principles are to ensure that the natural gas we deliver to customers remains in our transmission and distribution pipelines until the point of use, and that our employees operate and work on the system in a competent and safe manner. These principles protect our customers while also ensuring reliable service and aligning with state environmental goals, as natural gas can emit methane (a greenhouse gas ("GHG")) into the atmosphere through our upstream providers or through leaks on the natural gas distribution system. Thus, it is in all stakeholders' interest to facilitate system safety and reliability, and to minimize methane emissions from the transportation and distribution of natural gas.

Q. WHAT RULES AND STATUTES GOVERN THESE PRINCIPLES?

A. While simple in theory, operational safety and reliability principles are put into practice through a complex set of rules and regulations that govern our work at the federal, state, and local level. At a federal level, PHMSA is the primary federal administration for ensuring that pipelines are safe, reliable, and environmentally sound. PHMSA oversees the development and implementation of regulations

concerning pipeline construction and maintenance and operations. As discussed below, these responsibilities are shared with the State of Colorado. There are several federal regulations that pertain to Public Service's Gas Operations, including:

- Part 191 - requirements of natural gas pipeline operators to report incidents, safety-related conditions, and annual summary data.
- Part 192 – minimum safety requirements for gas pipeline design and operations. The Distribution and Transmission Integrity Management Programs ("DIMP" and "TIMP") rules are contained in this part, while Underground Storage Interim Final Rule ("IFR") (adopting American Petroleum Institute ("API") Recommended Practice ("RP") 1171) also applies.
- Part 196 – regulations for protection of underground pipelines from excavation activity.
- Part 199 – programs for preventing alcohol misuse and to test gas employees for the presence of alcohol and prohibited drugs.

Historically, the state generally adopts the federal regulations outlined above and further regulates one-call excavation rules and ensures consumers receive safe, reliable supply and dependable service at a reasonable price.

Federal, state, and local (e.g., city and county) governments are also responsible for overseeing the construction of new distribution infrastructure, including permitting. In addition, some of these local governments provide the Company with franchise agreements that enable us to install our natural gas infrastructure within road rights-of-way through the communities that we serve.

Q. HOW DO THESE RULES AND REGULATIONS AFFECT PUBLIC SERVICE GAS OPERATIONS?

A. These rules and regulations play a large role in how we do business, particularly with respect to the safety of Public Service's Gas Operations. Additionally, PHMSA and API rules and regulations, as well as other state and local requirements, often drive specific investment needs for our system, for both capital investments and O&M costs. In turn, these requirements drive specific investments the Company is undertaking.

Q. PLEASE PROVIDE AN OVERVIEW OF HOW NEW LEGISLATION AND REGULATIONS ARE DRIVING INVESTMENT NEEDS FOR THE NATURAL GAS BUSINESS.

A. As federal and state statutes and rules continue to evolve for natural gas system operators, they continue to add requirements for system management, records and planning. This evolution has also become more nuanced over time, with federal legislation and rules, and Colorado state statutes and policy becoming increasingly focused on the intersection between providing safe and reliable gas service for customers while also aligning with environmental emission reduction goals. More than ever before, PHMSA and the State of Colorado are specifically discussing that keeping gas in the pipes enhances system safety and reliability while also avoiding or reducing methane emissions. While much is still unknown about how a clean heat future will look, new rules and regulations also acknowledge that working to ensure system integrity and capacity to heat

customers' homes and businesses now can be consistent with future plans to use cleaner gas and alternative sources that will still depend on natural gas system infrastructure. There is no known, viable solution to replace natural gas heating through electrification. Our natural gas system infrastructure is the cornerstone to achieving the State's methane and carbon reduction goals.

Q. PLEASE PROVIDE AN OVERVIEW OF HOW NEW FEDERAL LEGISLATION AND REGULATIONS SINCE THE COMPANY'S LAST GAS RATE CASE ARE DRIVING INVESTMENTS FOR THE NATURAL GAS BUSINESS.

A. Since our 2020 Combined Gas Rate Case, there have been two primary federal legislation drivers of additional integrity investments: The Pipelines and Enhancing Safety (PIPES) Act of 2020, and the rulemakings pertaining to the PHMSA Mega-Rule for transmission lines. As described by Company witness Ms. Gilliland in more detail, PHMSA not only continues to mandate TIMP and DIMP plans for safety and reliability work as a result of this legislation, but also continues to encourage operators to minimize methane emissions in their natural gas systems.

Q. CAN YOU PROVIDE AN UPDATE ON PHMSA'S MEGA-RULE?

A. Yes. At the time of our 2020 rate case, Phase I of the PHMSA Transmission Mega-Rule was passed and significantly impacted programs related to MAOP reconfirmation, material records verification requirements, and establishment of Moderate Consequence Areas for integrity assessments beyond High Consequence

Areas. However, the 2019 HTY from our prior rate case[1] did not fully capture the impacts of Phase I, as Company witness Ms. Gilliland discusses.

Rather, while operators expected PHMSA to move to Phase II of the new gas transmission rule in early 2020 (issuing requirements for anomaly repair criteria, inspection after extreme events, and expanded corrosion control programs), PHMSA actually skipped first to Phase III. Phase III of this new transmission rule was published on November 15, 2021, and expanded safety regulations to certain rural gathering lines typically operated by oil and gas producers and processors. Phase II of the new gas transmission rule is currently expected to be published in the second quarter of 2022. In addition, PHMSA is working on a final rule that addresses the installation of remote-controlled valves and rupture detection on transmission lines. This rulemaking is expected to be issued in February of 2022, and will require installation of these valves on new and replaced transmission lines and implementation of new valve spacing requirements for existing pipelines in high consequence areas.

Other PHMSA rulemaking topics in progress include leak detection, safety of gas distribution pipelines, updates to liquid natural gas (LNG) regulations, and changes to class location requirements. Throughout work on these matters, system operators are expected to show how their work will minimize releases, protect the environment, and reduce or eliminate hazards.

[1] By way of a comprehensive settlement in Public Service's last gas rate case, Proceeding No. 20AL-0049G, the Settling Parties adopted a test year ended September 30, 2019, with limited known and measurable adjustments.

In short, PHMSA continues to implement new rules that serve to protect customers but also add to utilities' obligations to make investments to meet these regulations and requirements. As Ms. Gilliland describes, these requirements are driving new costs for the Public Service gas business.

Q. PLEASE ALSO INTRODUCE THE REQUIREMENTS OF THE PIPES ACT.

A. The PIPES Act,[2] enacted on December 27, 2020, illustrates Congress's and PHMSA's dual focus on public safety and greenhouse gas emission reductions. The PIPES Act focuses on DIMP planning, unlike the Mega-Rule focus on TIMP, and therefore expands natural gas system operator obligations with respect to the distribution portions of the system. Specifically, the PIPES Act requires pressurization risk assessments as part of DIMP plans, adds emergency response plan requirements, and adds record-keeping requirements related to proper pressure controls – all of which are intended to enhance public safety.[3] The PIPES Act also directed PHMSA to issue rulemakings related to these issues – in some instances in one year, and in some instances within two years. As these rulemakings are being issued, they are both increasing safety obligations for system operators and specifically addressing how these requirements will amplify efforts to reduce methane emissions.

[2] Public Law No. 116-260 (December 27, 2020).
[3] Sections 202-206, PIPES Act.

Q. CAN YOU PROVIDE AN EXAMPLE OF HOW PHMSA IS FOCUSING BOTH ON ENVIRONMENTAL EFFORTS AND SAFETY REQUIREMENTS THROUGH THE PIPES ACT REGULATIONS?

A. Yes. As one example, Section 113 of the PIPES Act of 2020 requires programs to identify, locate, and categorize all leaks that are "hazardous to human safety or the environment" or "have the potential to become explosive or otherwise hazardous to human safety."[4] As another example, in June 2021 PHMSA issued an Advisory Bulletin related to the PIPES Act that "underscor[ed] to pipeline and pipeline facility operators requirements to minimize methane emissions."[5] In doing so, PHMSA noted that "this action is only one piece of PHMSA's ongoing efforts to minimize methane emissions."[6] In other words, PHMSA both requires various kinds of work to keep the public safe from natural gas events and recognizes the need to minimize methane emissions, explicitly acknowledging that both types of work are dependent on each other.

C. <u>Alignment with Colorado's Clean Heat Future</u>

Q. CAN YOU EXPLAIN IN MORE DETAIL HOW THE COMPANY'S GOAL OF LEADING THE CLEAN ENERGY TRANSITION ALIGNS WITH PUBLIC SERVICE'S OPERATION OF ITS NATURAL GAS SYSTEM?

A. Yes. Right now and for decades to come, Public Service must continue to maintain safe and reliable natural gas system infrastructure in a responsible way, consistent

[4] Sec. 113, PIPES Act.
[5] https://www.phmsa.dot.gov/news/phmsa-advisory-bulletin-pipeline-industry-must-take-actions-address-methane-leaks-pipelines
[6] *Id.*

with federal code requirements, our customers' reliance on the system, and most recently Xcel Energy's Net-Zero Vision for Natural Gas[7] and Colorado's Clean Heat plan goals.[8] Each of these factors drives our gas business.

For example, we recognize that our customers will continue to depend on natural gas, or in the future, clean molecules, for critical heat during the coldest months of the year. There are no viable alternatives to perform this task. Specifically, Public Service designs and engineers the gas system to meet the requirements for firm customers on a cold winter morning that statistically occurs once every 30 years (Design Day). In the Denver metropolitan area, this peak hour temperature is minus 25 degrees Fahrenheit. This reliance on natural gas makes it all the more important for the natural gas system to be safe, reliable and resilient, and capable of delivering gas to all customers when they need it most. But we recognize as well that successful gas delivery of safe, reliable, and clean heat is dependent on avoiding gas escaping from the pipes, which requires attention to how the pipes are built and maintained. As we look to the future, we are looking at alternative forms of gas, such as hydrogen blends, certified natural gas, and renewable natural gas, to further reduce the effect of today's natural gas on the environment and achieve our Net-Zero Vision. In addition, as discussed by Ms. Zich, Public Service has increased its efforts to consider alternatives –

[7] Net-Zero-Vision-for-Natural-Gas.pdf (xcelenergy.com).
[8] See Colorado Senate Bill 21-264.

including non-pipe alternatives – to new business and capacity planning – to ensure we are taking a multi-faceted approach to meeting our customers' needs.

Q. PLEASE DESCRIBE IN MORE DETAIL HOW PUBLIC SERVICE WORKS TO ADDRESS GHG EMISSIONS FROM ITS OWN FACILITIES.

A. Xcel Energy has been working to reduce natural gas-related GHG emissions from its system, suppliers, and customers for many years. By way of example, we are participating in a variety of voluntary industry leadership programs to continue to advance best management practices and enhance our reporting, including the following three initiatives. EPA's Natural Gas STAR program, the EPA Methane Challenge, and Our Nation's Energy (ONE) Future. Significantly, Public Service's system integrity investments have reduced and avoided methane emissions from the natural gas delivery business, including the distribution and transmission, storage, and processing operations.

Q. CAN YOU ELABORATE ON THE COMPANY'S PARTICIPATION IN THESE THREE INITIATIVES?

A. Yes. First, through the EPA's voluntary Natural Gas STAR[9] program, which we joined in 2008, we have adopted management practices and made equipment upgrades to reduce GHG emissions on our system. These equipment upgrades include removing all known cast iron and nearly all bare and unprotected steel pipe from our distribution system and replacement of high-bleed controllers with low-

[9] https://www.epa.gov/natural-gas-star-program/natural-gas-star-program

bleed or no-bleed controllers where possible. We have also proactively improved our management practices to increase leak survey frequency and reduce gas releases during system maintenance.

Second, we have been participating in the EPA's Methane Challenge[10] as one of its founding members. As part of this effort, we have pledged to reduce by at least 50 percent the venting of pipelines during scheduled natural gas construction projects — a goal we far exceeded by reducing venting of methane up to 95 percent since 2018.

Finally, we joined ONE Future in early 2020 to partner with others in the industry to collectively limit methane emissions across the entire natural gas supply chain to less than one percent. To achieve its overall one percent target, ONE Future sets a specific target for each segment of the supply chain. The distribution segment target is to limit methane intensity below 0.22 percent. As a member of this consortium, we will annually report a comprehensive methane emissions rate to ONE Future, which provides public methane reporting that is more inclusive and goes beyond what most regulations currently require.

Q. WHAT ELSE IS THE COMPANY DOING TO PARTNER WITH STAKEHOLDERS ON A CLEAN HEAT FUTURE?

A. As noted earlier in my Direct Testimony, Xcel Energy's Net-Zero Vision is consistent with our efforts to reduce GHG emissions across the natural gas supply

[10] https://www.epa.gov/natural-gas-star-program/methane-challenge-program

chain, including through net-zero methane emissions from the LDC itself and a commitment to source only certified low methane emissions natural gas for gas distribution. We are also currently engaged in planning for a Clean Heat future, consistent with Colorado Senate Bill 21-264 directing stakeholders to determine how to transition natural gas to a low carbon future with equitable cost protections for customers. Mr. Lyng discusses the Company's Net-Zero Vision in more detail in his Direct Testimony.

Q. FROM AN OPERATIONAL PERSPECTIVE, HOW IS THE COMPANY PLANNING FOR THIS FUTURE RIGHT NOW?

A. Everything we do is focused on clean, safe, and reliable energy – from specific pilots, to system capacity planning, to safety and integrity programs that reduce emissions, to basic acts like managing methane venting during routine maintenance. This commitment is further demonstrated by the core areas of investment and programs I discuss later in my Direct Testimony.

As I previously noted, we also recognize that it is critical to develop new technologies and practices to reach our Net-Zero Vision, and the Gas Utility is playing a leading role in this effort. Specific examples of our demonstrated commitment include our low carbon peak-shaving study, and our hydrogen blending study – in addition to the other efforts described by Mr. Lyng.

Q. WHAT IS THE LOW CARBON PEAK-SHAVING STUDY?

A. This study evaluates where there is a low carbon alternative to traditional gas capacity pipeline reinforcements. Specifically, Public Service will evaluate several

alternative, low-carbon technologies that will help address peak needs, reducing "bottlenecks" at key gas supply sources in high demand areas. We are hiring an industry leading consultant (Black & Veatch) to evaluate several alternatives, with the direction to ultimately report on the technology maturity, feedstock requirements, costs, and carbon inputs. Overall, this study is to be conducted starting in 2022 and will further support GHG emission reduction goals.

Q. WHAT IS THE HYDROGEN DEMO PROJECT?

A. This pilot project is intended to demonstrate the safe blending of hydrogen into the Public Service distribution system, beginning in 2023. The study requires evaluation of safety considerations, infrastructure needs, regulatory processes, procurement options, and potential customer use impacts. Public Service therefore plans to conduct engineering to determine system infrastructure needs as well as testing during and after the project, and otherwise implement internal operations, regulatory, procurement, safety, and environmental protocols for this work. This is consistent with industry-wide efforts to explore and adopt hydrogen as a potential low carbon fuel.

Q. PLEASE SUMMARIZE YOUR PERSPECTIVE ON THESE MATTERS.

A. Overall, Public Service works hard to provide safe and reliable service to our customers, who request and rely on natural gas service from the Company, keep gas in the pipes for the good of all, and continue to lead the clean energy transition through prudent management and development of the natural gas business. While a great deal is still unknown about how the Commission will guide the development

of Clean Heat Plans and what they will look like, as well as any additional federal regulations that may be issued, the Company's investment in the gas system infrastructure is ultimately compatible with the direction of the State of Colorado and PHMSA to protect customers' safety and need for heat while also achieving environmental goals. We look forward to continuing that partnership as the technology and regulatory structures continue to evolve.

III. NEED FOR GAS SYSTEM INVESTMENTS

Q. WHAT IS THE RELATIONSHIP BETWEEN SAFE, RELIABLE, AND CLEAN NATURAL GAS SERVICE AND INVESTMENTS IN THIS RATE CASE?

A. The focus of the investments in Public Service's natural gas system has been and remains our mission to provide safe, reliable, and environmentally-sound service to our customers – by both connecting and serving new customers and ensuring continued safety and reliability to our existing customers, utilizing proven industry practices and standards. These efforts require compliance with federal and state pipeline safety standards and industry practices, as well as investments to move existing gas infrastructure to relocate facilities that are in direct conflict with street expansions within public rights-of-way and safety-related work required by the governing authority. Each of these investments and programs are informed by Xcel Energy's and the State of Colorado's policy goals and requirements, as I describe below.

Q. WHAT ARE THE CORE AREAS OF FOCUS FOR PUBLIC SERVICE GAS SYSTEM INVESTMENTS?

A. As previously noted, **safety** and **reliability** are the key areas of focus for Public Service's gas business. In addition, **new business** resulting from new customers and customer growth, along with infrastructure **relocations** mandated by city, state, or federal authorities, require investments on the gas system.

Q. CAN YOU PROVIDE ADDITIONAL INTRODUCTION OF THE COMPANY'S SAFETY WORK?

A. Yes. **Safety** rules and regulations require the Company to establish and maintain TIMP and DIMP plans. At a high level, TIMP and DIMP rules require operators to (1) know their assets; (2) identify risks and threats to those assets; and (3) proactively mitigate those risks/threats. "Risks and threats" include the risk of infrastructure breach or failure, which if not mitigated risks harm to public safety and the environment.

For Public Service, our Safety work has been an area of particular focus for many years, due to both the need to protect the public and the increasing costs to comply with TIMP and DIMP regulations. The costs of certain capital integrity programs were historically recovered through either base rates or the PSIA; however, O&M expenses have not been recovered through the PSIA for several years, and the PSIA was closed to further investment on December 31, 2021, with a follow-on deferral for 2022 PSIA capital investment only. Both Company witnesses Ms. Zich and Ms. Gilliland discuss our safety and integrity management work in more detail.

For public safety, the Company is also required by law to perform locate services for its underground facilities when requested, free of charge to the requesting customer. These locate efforts, through our "Damage Prevention" program, are again designed to avoid damage to natural gas infrastructure, thereby again protecting public safety and the environment. To meet this

requirement, the Company participates in Colorado 811, and seeks to regularly improve the response times and accuracy of its responses to locate requests. Almost 87 percent of Public Service's locate costs are incurred on behalf of others, and only about 13 percent are related to Public Service's own construction projects. Ms. Gilliland discusses our Damage Prevention efforts.

We also are required to conduct leak surveys of our system, and to repair those leaks. Additionally, every gas operator within the United States is obligated to respond to customer calls when they think they smell natural gas or have any gas emergency. Here, we strive to continually improve response times to avert any incidents and reduce GHG emissions arising from the escape of natural gas. This requires investments in labor, trucks, excavation equipment and tools.

Q. PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S RELIABILITY WORK.

A. It perhaps goes without saying that our customers need **reliable** service. Customers depend upon natural gas to heat their homes and water, cook their meals, dry their clothes, manufacture and process, and support broad economic development within the state. Consistent with our tariff, Public Service must stand ready to provide our customers with safe and reliable natural gas service. In order to do so, Public Service must adequately maintain, renew, and operate its compressor stations, regulator stations, meters, and every other aspect of the system. When our assets are no longer adequate to meet the customer's safety and reliability needs, the Company must replace, reinforce, or rebuild those parts

of our system. Additionally, when safety and service reliability demands exceed the capacity of the human resources needed to operate the system, we must adjust our staffing models accordingly. Finally, service cannot be reliable if it is disrupted by incidents or loss of infrastructure integrity. Accordingly, our efforts to protect system integrity and increase the resiliency of our gas system likewise protect reliable customer service.

Q. WHAT DO YOU MEAN BY "RESILIENCY" IN THIS CONTEXT?

A. In the context of natural gas operations, I use "resilience" to generally mean the system's preparedness for and ability to avoid, withstand, or minimize potential disruptions to gas service such as natural disasters, weather events, cyber security threats, other damage to the system, or unexpected system demands. Resiliency depends on several factors, including (but not necessarily limited to) sufficient supply redundancy in the event of system constraints or damage. As a result, investments in resilience are necessary to provide safe and reliable natural gas service to our customers.

Q. PLEASE INTRODUCE THE WORK THE COMPANY DOES ON BEHALF OF NEW CUSTOMERS.

A. The Company must serve any **new customer** that requests gas service within its service territory under the rules of its tariff. This includes not only laying the service line and setting the meter to a customer's facility, but also the gas main to which the service line connects. And it does not stop there. Public Service operates an integrated system of both distribution and transmission assets. Customer growth

on the distribution system can cause a capacity shortage on upstream distribution and transmission pipelines and regulating facilities. In order to ensure firm gas service to that customer during a cold peak hour or design day, we must operate the business and maintain adequate capacity and resiliency across the entire integrated system.

Q. FINALLY, PLEASE PROVIDE AN OVERVIEW OF THE COMPANY'S MANDATORY RELOCATION WORK.

A. Public Service is also required by state, county, and local government bodies to **relocate** our gas infrastructure that resides in road rights-of-way when that entity's work conflicts with our facilities. Public Service's franchise agreements with the communities it serves require the Company to move or relocate our infrastructure when requested by the government body. This includes, but is not limited to, infrastructure work on water, sewer, transportation, or other major infrastructure.

Q. DOES MEETING THESE NEEDS REQUIRE BOTH CAPITAL INVESTMENTS AND OPERATIONS AND MAINTENANCE EXPENSE?

A. Yes. In general, we must invest in the gas system assets in order to meet federal and state mandates and support our customers' needs for a safe and reliable natural gas system for their homes, businesses, and communities. We also incur operations and maintenance expense, primarily in the form of internal and contractor labor and materials costs, to operate and maintain our system, conduct system management efforts required by PHMSA statutes and rules, and respond to customers' service needs (both emergency and non-emergency). Our work

includes both larger discrete and capital projects and a significant quantity of routine capital work, as well as long-term programmatic work with respect to both capital and O&M – including, but not limited to, work to locate underground infrastructure for customers, conduct emergency response, meter management, and leak survey programs, overall system maintenance and record-keeping, and the like. Over time, our customers' needs have increased and the costs that we incur have continued to rise, driving the need for sufficient revenues for the gas business to function effectively.

Q. EARLIER YOU MENTIONED ADDITIONAL COST RECOVERY PRESSURES ON THE UTILITY ARISING FROM EXPIRATION OF THE PSIA RIDER IN 2021 AND DEFERRAL IN 2022. PLEASE EXPLAIN.

A. The PSIA Rider has been a critical mechanism for supporting the Company's capital investments in system safety and integrity. It has facilitated many of the TIMP and DIMP investments mandated by PHMSA, including investments in in-line pipeline assessments, maximum allowable operating pressure work, valve replacements, and replacement of old, high risk pipeline materials in our distribution and transmission system. And by providing current cost recovery for capital work, the PSIA supported dedicated funding for system integrity actions for nearly a decade.

Q. WERE ALL SYSTEM INTEGRITY COSTS CAPTURED BY THE PSIA RIDER OR DEFERRAL?

A. No. The PSIA covered only certain system integrity projects, and within those projects only sub-projects that had a high (or previously moderate) risk ranking under our approved risk ranking mechanism. Further, PSIA eligibility ended for certain projects that were previously approved for PSIA recovery even earlier than 2021. Finally, O&M costs associated with system integrity projects have not been eligible for rider recovery for several years.

However, cost recovery under the PSIA accounted for approximately 34 percent of the Company's total Gas capital investments in 2019 and 38 percent in 2020. It is expected to account for 36 percent of capital in 2021, and 32 percent of capital under the PSIA Deferral in 2022. PHMSA requirements have not declined in the interim – they have only increased, as described earlier in my testimony and in Ms. Gilliland's Direct Testimony. With the wind-down of the PSIA, and absent some new mechanism in the future, system integrity costs will necessarily be recovered solely through the ordinary course of business.

Q. WHAT DOES THIS MEAN FOR FUTURE COST RECOVERY AND RATE CASES?

A. As the PSIA winds down, Public Service will no longer have a separate mechanism supporting concurrent cost recovery for system integrity projects. This means that the Company will need to assess which projects to undertake in a given year along with all other work necessary to support the gas system and Public Service

customers, and to meet legal mandates arising from PHMSA, the State of Colorado, local governments, and the Company's overall obligation to serve.

At the same time, Public Service's costs of ensuring safe and reliable service are not declining. The increasing mandates, combined with increasing demands on the system in certain areas – such as due to localized growth, calls for Damage Prevention locate assistance, accelerated leak surveys to reduce methane emissions, continuing aging infrastructure needs, emergency response and other leak reduction efforts – all combine to increase the demands on limited resources. And as Mr. Berman further describes in his Direct Testimony, the Company welcomes partnership with Public Service's stakeholders and regulators to find constructive means of meeting these demands even as mechanisms like the PSIA are no longer available.

Q. OVERALL, IS THERE AN OPTION FOR THE COMPANY TO CHOOSE NOT TO INVEST IN THE GAS SYSTEM IN THE NEXT THREE YEARS, BASED ON ASSUMPTIONS REGARDING CLEAN HEAT PLANNING OR THE FUTURE OF THE GAS SYSTEM?

A. No, for several reasons. First, federal requirements outlined in 49 CFR Part 192 remain in place for pipes that are in service, regardless of throughput or prevailing state policy. PHMSA Advisory Bulletin ABD-2016-05 (included as Attachment LAL-2 to my Direct Testimony) reinforces that operators must comply with all

applicable safety requirements and regulations for active pipeline segments.[11] PHMSA regulations do not recognize an "idle," "inactive," or "decommissioned" status for gas pipelines. The regulations consider pipelines to be either active and fully subject to all parts of the safety regulations or abandoned.[12] Furthermore, the reticulated nature of our system means there are many interdependent segments that operate together to ensure the provision of gas service to customers. Therefore, our distribution and transmission systems must comply with all applicable state and federal safety requirements.

Additionally, emissions reductions efforts do not wholly direct our customers' capacity needs or system work to ensure reliability and adequate capacity. While the Company's Peak Hour forecast is informed by the Company's gas sales forecast (throughput), it is the peak demand methodology that is used for system capacity planning. The Company plans its system to serve firm customers on a Design Day because delivering energy on the coldest hours and months is the upmost importance for public safety and system reliability. Even if there are factors (such as emissions reduction efforts) that lead to less gas throughput, the Company still needs to maintain the infrastructure to deliver service to firm customers on a Design Day. For good reason, this is the industry standard for gas demand forecasting and system planning.

[11] Attachment LAL-2 is also available at https://www.govinfo.gov/content/pkg/FR-2016-08-16/pdf/2016-19494.pdf.

[12] See Attachment LAL-2. 49 CFR 192.3 defines "Abandoned" as "permanently removed from service," and 49 CFR 192.727(b) provides that "[e]ach pipeline abandoned in place must be disconnected from all sources and supplies of gas; purged of gas; in the case of offshore pipelines, filled with water or inert materials; and sealed at the ends."

Moreover, in some parts of the Public Service natural gas system, localized growth combined with aging infrastructure are driving the need for additional system investment. While many areas of the system consist of pipes interconnected at multiple locations allowing gas to flow in multiple directions, not all older portions of the system were designed for some of the extensive growth pockets we are now seeing in some areas. We are continually evaluating the needs of customers and communities across the Public Service territory, and need to improve the system to meet the challenges of customer growth, maintain resiliency of the system, and risk from third party excavators.

Finally, the Company does not have the option to decline to connect new customers or to relocate facilities when required by local government entities. Even as we encourage conservation and beneficial electrification, natural gas remains the preferred choice and critical to serve new homes, developments, and businesses. Existing infrastructure must be managed in accordance with local rules and requirements. We continue to have an obligation to provide customers with safe and reliable natural gas service.

Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING HOW THE LIVES OF GAS INFRASTRUCTURE ASSETS SHOULD BE CONSIDERED IN LIGHT OF CLEAN HEAT PLANNING AND CURRENT OBLIGATIONS?

A. Yes, albeit in my capacity leading the Gas business rather than as an accounting expert. From this perspective, I would like to briefly address the following

Commission requirement in our recent PSIA proceeding that in this gas rate case we must:

> evaluate 'useful life,' and associated depreciation schedules, for various plant investment, which may differ significantly from material engineering life. The evaluation should include consideration of SB 21-264 and other recently-enacted state environmental laws, and the impact they may have on the Company's ability to recover its investment in gas distribution and transmission infrastructure over time.[13]

Q. WHAT IS YOUR PERSPECTIVE ON THIS USEFUL LIFE INQUIRY?

A. While Company witnesses Ms. Wold and Mr. Berman provide more detailed capital asset accounting and regulatory perspectives, from my operational perspective one should not assume any particular change to the useful lives of natural gas system assets is appropriate. We are at the very beginning of this transition to Clean Heat/Net-Zero, and we anticipate that the natural gas system infrastructure will be needed, even as we achieve net-zero emissions in the decades to come. Not only is continued use of the natural gas system essential to maintaining reliability and affordability, the Company's natural gas system infrastructure will continue to play a vital role, providing increasingly less GHG-intensive service and helping to facilitate the transition to net-zero, as discussed in more detail by Mr. Lyng in his Direct Testimony. And there will continue to be a role for the Company's natural gas system once the transition to net-zero is complete.

Additionally, separating the "useful lives" from engineering estimates does not change the need for the work to maintain a safe and reliable gas system.

[13] Decision No. C21-0715, at p. 12.

Finally, it is my understanding that assuming shorter useful lives for these assets would increase annual costs to customers. Based on my operational perspective, now is not the time to make definitive decisions that certain natural gas infrastructure will no longer be needed or will be retired within a specified shortened timeline.

Q. WHAT DO YOU CONCLUDE REGARDING THE CURRENT MISSION AND OPERATIONS OF THE COMPANY'S GAS BUSINESS?

A. Public Service's Gas Operations team is rising to and meeting the challenges associated with increasing pressures on the Gas Operations business to serve customers with clean, reliable, and safe natural gas service. This work is consistent with Xcel Energy's work to lead the clean energy transition, and overall is a driver of the gas capital and O&M investments the Company makes in any given year. Additionally, Public Service is continually working proactively to find new solutions to meet the needs of our customers, all while keep natural gas rates low as described by Ms. Trammell and Mr. Berman, and as evidenced by the most recent AGA survey of 2020 average residential rates.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Statement of Qualifications

Luke A. Litteken

I received a Bachelor of Arts in Business Administration and a Master of Business Administration from Augsburg College. I have an Associate of Technology in Heating, Cooling and Refrigeration from Ranken Technical Institute in St. Louis, Missouri. I also hold the following professional licenses: Master Gasfitter license, Master Refrigeration license, and Master Warm Air license.

I was hired by CenterPoint Energy ("CNP") as a Service Technician in the Field Operations Department in 1989 and was promoted to Supervisor, Field Operations in 1995. I was responsible for a team of emergency responders and service technicians for a geographic territory in Minnesota.

In 2000, I became Manager of Subcontractor Services & Sales Administration for CNP. In this position, I developed the Company's quality program, credit policy, credit administration, records retention, and sales administration to support the retail sales business. I also developed and implemented the processes to rollout the SAP business platform for CNP's Home Service Plus retail sales business.

From 2005 to 2009, I was promoted to Manager of Field Operations in Minnesota for CNP. In this position, in addition to managing CNP's Field Operations, I negotiated non-union and union subcontractor agreements, led the team that worked on reducing bad debts, and co-led the Minnesota CNP Emergency Response team that focused on improving the promptness and efficiencies of CNP's emergency response program.

From 2009 until the time that I joined XES in 2014, I served as Director of CNP's South District and North District. In this position, in addition to overseeing the provision of safe and reliable service to approximately 400,000 customers, my responsibilities included safety, emergency response, community relations, franchise negotiations, new customer growth and the development of district budgets. I also acted as incident commander for several significant CNP gas events. I led the efforts that improved emergency response times for CNP's second responders. Further, I led the team that developed common processes and identified best practices across CNP's jurisdictions.

In 2014, I joined XES as Area Vice President, Gas Operations. In this position, I had oversight of the operations and maintenance of the gas distribution and HP systems in the seven states in which Xcel Energy operates, including gas control center operations. My responsibilities included system reliability, emergency response, damage prevention and compliance with federal and state rules and regulations. I also provide leadership over Xcel Energy's Gas operations including bargaining and non-bargaining employees, contractors and other outside vendors. I was promoted in 2018 to my current position of Senior Vice President, Gas for XES. In this capacity, I am responsible for all of Xcel Energy's regulated natural gas utilities including Public Service Company of Colorado, Northern States Power Company, a Minnesota company, and Northern States Power Company, a Wisconsin company.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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IN THE MATTER OF ADVICE NO. 993-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 24, 2022	**PROCEEDING NO. 22AL-_____G**

AFFIDAVIT OF LUKE A. LITTEKEN
ON BEHALF OF
PUBLIC SERVICE COMPANY OF COLORADO

I, Luke A. Litteken, 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 ___20___ day of January, 2022.

Luke A. Litteken
Senior Vice President Gas

Subscribed and sworn to before me this 20th day of January, 2022.

AMANDA CLARK
Notary Public
State of Colorado
Notary ID # 20164004880
My Commission Expires 03-25-2024

Notary Public

My Commission expires 3/25/2024