Before the North Dakota Public Service Commission State of North Dakota

In the Matter of the Application of Northern States Power Company for Authority to Increase Rates for Natural Gas Service in North Dakota

> Case No. PU-23-___ Exhibit___(AEB-1)

> > **Gas Operations**

December 29, 2023

Table of Contents

I.	Intro	oduction and Qualifications	1
II.	Gas	3	
	A.	North Dakota Gas Operations	3
	В.	The NSP Gas System	6
	C.	Overview of Capital Investments	12
III.	Majo	or Investments	15
IV.	Gas	Operations O&M Expenditures	27
	A.	Types of Gas Operations O&M Expenses	27
	В.	Gas Operations O&M 2022-2024	28
V.	Prop	posed Tariff Revisions	30
VI.	Con	clusion	32

Schedule

Statement of Qualifications Schedule 1

I. INTRODUCTION AND QUALIFICATIONS

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- 3 Q. PLEASE STATE YOUR NAME AND OCCUPATION.
- 4 A. My name is Alicia E. Berger. I am the Regional Vice President of Gas
- 5 Operations for Xcel Energy Services Inc. (XES), the service company affiliate
- of Northern States Power Company (Xcel Energy, NSP, or the Company), a
- 7 Minnesota corporation and an operating company subsidiary of Xcel Energy
- 8 Inc. that provides natural gas service in North Dakota.

- 10 Q. Please summarize your qualifications and experience.
- 11 A. I have a Bachelor of Science degree in Business Management from St. Catherine
- 12 University, St. Paul, Minnesota. I have been employed by XES since 2007.
- 13 Throughout my career, I held positions of increasing responsibility in the areas
- of damage prevention, operations planning and operational performance
- management, and have led key projects and served as a liaison to represent the
- organization with key business partners. I was promoted to the position of
- 17 Director of Gas Operations within the Gas department in January 2020 and
- subsequently Regional Vice President, Gas Operations in August 2023. In my
- 19 current role, I direct the development and implementation of short- and long-
- 20 term business plans that support achievement of objectives and lead the
- 21 development and implementation of labor strategies that help ensure flexible
- and effective utilization of resources. I am also responsible for the operation
- and maintenance of regional gas distribution, which includes gas emergency
- response, as well as for the development, execution, and oversight of the gas
- safety plan and the safety performance of the organization. A description of my
- qualifications, duties, and responsibilities is provided as Exhibit___(AEB-1),
- Schedule 1.

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l	()	WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

2	Α.	The purpose of my Direct Testimony is to support the revenue requirement
3		attributable to the Gas Operations and other gas system investments that are
4		significant drivers for this rate case.1 I introduce the Gas Operations functions,
5		describe how our integrated gas system serves our North Dakota customers,
6		and describe the major investments that, when coupled with inflation, are
7		driving the need for this rate case. I also present the operations and maintenance
8		costs (O&M) for Gas Operations, which except for inflation have remained
9		basically flat since the last natural gas rate case (Case No. PU-21-381 using a
10		2022 test year) (2022 Rate Case). Finally, I explain certain proposed revisions to
11		the Company's tariff sheets that relate to the Gas Operations system.

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- Q. WHAT ARE THE MAJOR GAS SYSTEM INVESTMENTS DRIVING THE NEED FOR THIS RATE CASE?
- 15 A. The Company has made substantial capital investments in its natural gas system
 16 since the 2022 Rate Case. The major investments include projects necessary to
 17 serve new business within our growing North Dakota service territory,
 18 improvements to the Company's Peaking Plants, investments in the reliability
 19 and safety of our system, and mandatory relocation projects. Specific major
 20 investments, all of which I discuss in my testimony, include:
 - new business projects in Grand Forks and West Fargo;
- fire safety and other improvements to the Company's Peaking Plants;
- the Meter Module Replacement Program;
- reliability projects in the Fargo area;
- replacement of problematic pipe; and

¹ Company witness Allison M. Johnson discusses other capital additions included in the revenue requirement.

1		• a relocation project arising out of the Fargo-Moorhead flood diversion
2		project.
3		
4	Q.	How have you organized your testimony?
5	Α.	My testimony is organized into the following sections:
6		• Section I – Introduction
7		• Section II – Gas Utility Overview
8		• Section III – Major Investments
9		 Section IV – Gas Operations O&M Expenses
10		 Section V – Proposed Tariff Revisions
11		• Section VI – Conclusion
12		
13		II. GAS UTILITY OVERVIEW
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15		A. North Dakota Gas Operations
16	Q.	Please provide an overview of NSP's gas operations in North
17		DAKOTA.
18	Α.	NSP provides natural gas sales and transportation service to approximately
19		63,000 residential, commercial, and industrial customers in North Dakota in the
20		cities of Fargo, West Fargo, Grand Forks, and several surrounding
21		communities. We operate distribution facilities to serve our North Dakota
22		customers in three counties within the state. This includes approximately 1,150
23		miles of distribution mains and over 64,000 meters, as well as regulator stations
24		and other supporting infrastructure, including services. The Company provides
25		natural gas utility services in North Dakota as part of the overall NSP gas
26		system, which is operated as an integrated retail natural gas procurement and

2		North Dakota and Minnesota.
3		
4	Q.	WHAT ARE THE PRIMARY GAS OPERATIONS FUNCTIONS?
5	Α.	Gas Operations provides all major functions necessary to deliver natural gas
6		from upstream interstate pipelines to the customer's meter, and ensures public
7		safety through compliance with state and federal pipeline safety and other
8		applicable regulations. These functions include: planning, engineering, design,
9		locating, construction, operations and maintenance, metering, and emergency
10		response. Gas Operations also coordinates with communities to relocate our
11		facilities when necessary for municipal projects like water and sewer projects.
12		
13	Q.	What are some of the significant changes to the Company's gas
14		SYSTEM AND BUSINESS SINCE THE 2022 RATE CASE?
15	Α.	As the Company articulated in the 2022 Rate Case, and as further discussed in the
16		Direct Testimony of Company witness John M. Goodenough, the Company
17		continues to see customer growth in North Dakota at a rate of approximately 2
18		percent per year. The Company has made sizeable investments related to this
19		growth in Grand Forks and West Fargo.
20		
21		In the time since the Company's last rate case, the Company has also focused
22		capital investments on improving the safety and reliability of its system and
23		made updates necessary to comply with changes in the regulatory landscape.
24		The Company has continued to invest in routine system maintenance. It has
25		also continued initiatives first discussed in the 2022 Rate case focused on
26		enhancing system safety and integrity with capital investments consistent with
27		evolution of the industry and federal and state regulations.

delivery system that serves the Company's gas customers in portions of both

1	Q.	You	MENTIC	NED	REGU	LATIONS	AS	ONE	FACTO	OR I	DRIVING	G CA	PITAL
2		INVES	TMENTS	IN TH	E GAS	SYSTEM.	PLEA	SE DE	SCRIBE	THE	REGUL	ATION	IS TO

WHICH YOU ARE REFERRING.

In the prior rate case, the Company detailed a number of changes in the regulatory landscape that occurred between 2007 and 2022. In summary, the final DIMP (Distribution Integrity Management Program) rule was published by the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) in 2009, and the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011 was signed into law in early 2012. The Company responded to these developments by, among other things, implementing DIMP, establishing a separate gas business unit to increase the focus on public safety for its gas distribution and transmission systems, and beginning in 2022 to make annual, programmatic investments in renewing aging mains and service pipe.

There are also newer and emerging regulations, which will require additional investment in the future. At the federal level, the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2020 (2020 PIPES Act) has initiated several proposed rulemakings that are set to have a large effect on distribution assets. On May 18, 2023, PHMSA released a Notice of Proposed Rulemaking (NPRM) for Gas Pipeline Leak Detection and Repair (LDAR). The purpose of the proposed regulations is to reduce methane emissions from gas distribution and transmission pipelines through more stringent leak survey and patrol requirements, mandatory repair timelines, mitigating blowdown emissions, and increased requirements for investigating failures. Also, on September 7, 2023, PHMSA released another NPRM titled, "Safety of Gas Distribution Pipelines and Other Pipeline Safety Initiatives" to address legislative requirements based

on the 2018 Merrimack Valley low-pressure distribution incident in which explosions and fires occurred at approximately 40 homes when old pipe was depressurized and main pipelines were fed full pressure into a low-pressure gas distribution system. That proposed regulation requires updates to DIMP, construction inspection, distribution records, and additional procedures for emergency response, management of change, and over pressurization.

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8 Q. Does North Dakota play a role in regulating natural gas pipelines?

9 A. Yes. In North Dakota, the Commission oversees pipeline safety and has 10 generally adopted the federal regulations, including those outlined above. In 11 addition, the Commission further oversees and regulates one-call excavation 12 rules, ensuring public safety through the proper marking of underground 13 facilities.

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In sum, rules, regulations, and industry standards governing safety in the industry, at both the federal and state level, are not only driving Company investments but are continuing to evolve. In making the necessary investments, the Company will continue to work to maintain alignment with applicable regulatory requirements and industry best practices while seeking to appropriately manage costs.

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B. The NSP Gas System

- 23 Q. Please describe the NSP gas system that serves North Dakota.
- A. The overall NSP gas system consists of upstream pipelines, storage facilities, and natural gas plants that work together to deliver natural gas to our local distribution systems in both Minnesota and North Dakota. The Company provides natural gas utility services to its customers in portions of North Dakota

1		and Minnesota and makes unified purchasing and transportation decisions for
2		its customers in these states. Where possible, NSP distribution system costs are
3		directly assigned. Other costs related to serving customers in both states are
4		allocated between the states as described by Company witness Benjamin C
5		Halama and reflected in the allocation manual, which is attached to Company
6		witness Halama's Direct Testimony as Exhibit(BCH-1) Schedule 12.
7		
8	Q.	How does NSP procure natural gas to serve its customers in North
9		DAKOTA?
10	Α.	As noted above, the overall gas system allows for unified purchasing and
11		transportation of natural gas for NSP gas customers, including those in North
12		Dakota. This enables efficient natural gas acquisition and delivery functions
13		which lowers costs for all our natural gas retail customers. Natural gas is then
14		transported by interstate pipelines to our NSP distribution systems, including in
15		the Fargo and Grand Forks service areas.
16		
17		Specifically, NSP purchases the natural gas that it provides to customers in
18		North Dakota and Minnesota through a combination of baseload contracts and
19		daily spot market purchases at four different hubs: the Ventura Hub, the
20		Demarcation Hub, the Emerson Hub, and the Chicago Hub. This diversity in
21		purchasing locations provides the Company with flexibility, which helps to keep
22		gas costs low. Natural gas from the Bakken formation is transported through
23		the Northern Border Pipeline Company (Northern Border) system to the
24		Ventura Hub located in Hancock County, Iowa, which is where Xcel Energy
25		purchases most of its natural gas from the Bakken formation. The Demarcation

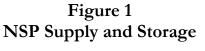
Hub is located north of Clifton, Kansas, and at that location the Company

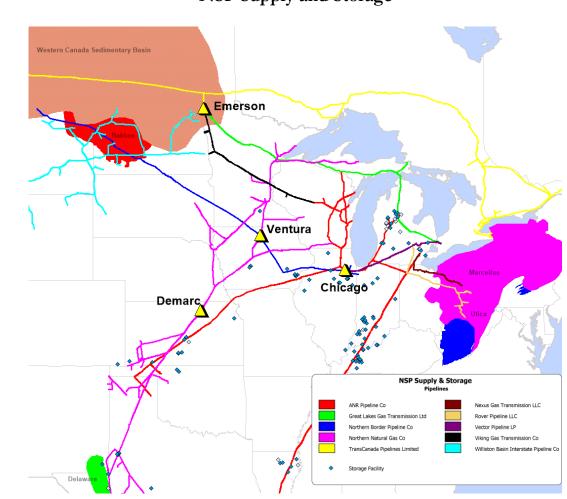
purchases natural gas from the Southwestern United States. Natural gas from

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Canada is available at the hub in Emerson, Manitoba, and the Company also purchases natural gas at the Chicago Hub. Figure 1 below shows the interstate pipelines serving the NSP gas system, as well as the location of the hubs from which the Company purchases natural gas for our customers.





Q. CAN YOU PROVIDE MORE EXPLANATION REGARDING HOW PURCHASED NATURAL GAS IS TRANSPORTED TO THE COMPANY'S NORTH DAKOTA CUSTOMERS?

Yes. The Company's North Dakota natural gas distribution systems are
connected directly to two interstate pipeline systems: Viking Gas Transmission
Company (Viking) and Williston Basin Interstate Pipeline Company (WBI).
Those pipelines are non-affiliated pipelines regulated by the Federal Energy
Regulatory Commission (FERC). Pipeline capacity nationally, and especially in
the region, is constrained, which means any new demand growth will require a
significant build out of pipeline infrastructure. Moreover, any pipeline
expansion to serve the Company's North Dakota demand would be most cost
effective nearest to our service areas.

Α.

The WBI pipeline is not of sufficient size to fully serve the Company's North Dakota customers in its own right. While the Company desires additional direct access to Bakken gas supplies, WBI's pipeline connecting the Bakken to eastern North Dakota telescopes, so that it is a much smaller diameter line when it reaches the Company's customers. The combination of needing a larger downstream pipeline and higher-pressure requirements on the upstream pipeline makes an expansion of the existing line impractical. An entirely new line would need to be constructed to connect the Bakken to Fargo. In our view, given the long distances involved, such a project would be costly and would likely require the participation of multiple off-takers, such as several utilities. While WBI is pursuing a separate expansion for other customers,² that expansion will not serve the Company's customers, nor will it provide additional access to Bakken gas production.

² On October 19, 2023, FERC approved a project to expand WBI's pipeline. According to a press release from WBI's parent company, the expanded pipeline is not expected to be in service until at least late 2024. See MDU Resources Group, Inc., WBI Energy's Eastern North Dakota Natural Gas Pipeline Expansion Project Approved by FERC (October 20, 2023), available at https://investor.mdu.com/news/news-details/2023/WBI-Energys-Eastern-North-Dakota-Natural-Gas-Pipeline-Expansion-Project-Approved-by-FERC/default.aspx

Therefore, the Company's integrated system also utilizes transportation services
on several other interstate pipelines, as shown in Figure 1. For example, the
Company uses upstream transportation and underground storage services on
several interstate gas pipelines that connect to Viking to serve its North Dakota
customers, including those owned by Northern Natural Gas Company, ANR
Pipeline Company, Great Lakes Gas Transportation Limited, and Northern
Border (as discussed above). In general, Viking offers the most economic
transportation options for our North Dakota customers

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- 10 Q. IN ADDITION TO THE INTERSTATE PIPELINES, IS THERE OTHER
 11 INFRASTRUCTURE THAT SUPPORTS OPERATIONS OF THE NSP GAS SYSTEM?
- 12 A. Yes. The Company also incorporates use of underground storage services 13 available on several interstate pipelines, as well as the Company's Peaking 14 Plants, which provide additional capacity for the gas system.

- 16 Q. Please describe the Storage facilities utilized by the Company.
- 17 As shown in Figure 1 above, there are upstream underground natural gas 18 storage facilities for which the Company contracts to provide flexible 19 withdrawal capability to respond to varying system demand. These storage 20 facilities are located in Michigan, Kansas, and Iowa. The Company purchases 21 and stores supply when pricing is optimal (primarily during the low-use summer 22 months), so it can rely on this lower-cost supply when customer demand ramps 23 up during cold weather. This underground storage provides flexibility, allowing 24 the Company to respond to customer demand fluctuations outside of 25 contracted supply purchases without having to rely on spot market purchases 26 where pricing can be more volatile.

- 1 Q. PLEASE DESCRIBE THE COMPANY'S PEAKING PLANTS.
- 2 NSP owns and operates three above-ground peak shaving facilities ("Peaking 3 Plants") located in Minnesota, including the Wescott Liquefied Natural Gas 4 (LNG) plant and the Sibley and Maplewood Propane Air plants. These plants 5 essentially store liquefied natural gas or propane gas that can be vaporized and 6 ultimately injected into the system to help meet firm customer requirements on 7 the coldest winter days. These Peaking Plants are largely a capacity resource, as 8 they are designed to be utilized on a limited basis to meet demand for our firm 9 customers as the Company approaches Design Day conditions.³ The existence 10 of these plants on our integrated system supports service to all customers, 11 including those in North Dakota, by reducing the need for other pipeline 12 capacity and supply purchases. I discuss these Peaking Plants and the associated

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Q. How does operation of the broader NSP gas system benefit the
 Company's North Dakota customers?

recent capital investments further in Section III below.

17 Α. The diversity of market centers, access to multiple supply points and storage 18 facilities, and the Peaking Plants provided by the overall NSP gas system deliver 19 economic and reliability value for our North Dakota customers that would be 20 unavailable if served by a separate, stand-alone gas system. The size and 21 geographic diversity of the NSP system, storage facilities, and market centers 22 for gas purchases provide cost and reliability benefits associated with a 23 diversified supply portfolio. Additionally, the Peaking Plants provide additional 24 capacity resources for the system, and reduced gas supply costs during Design 25 Day conditions, as described in more detail below. Both the size of the NSP gas

³ Design Day temperature is based on the 1-in-30-year low temperature in a given area. It is an industry standard probabilistic modeling approach. Based on historical weather temperature data, there is a 1-in-30 probability of experiencing a Design Day temperature in any given heating season.

1	system, serving approximately 533,000 customers (of which 63,000 are in North
2	Dakota), and the geographic area covered contribute to these benefits.

- 4 Q. PLEASE DISCUSS THE RELIABILITY BENEFITS THE SYSTEM PROVIDES.
- 5 Upstream interstate transportation, contracted underground storage facilities, 6 and Company-owned, above-ground peaking plants across the NSP system 7 provide value with respect to system reliability and safety for our North Dakota 8 customers. As the Company explained in its 2022 Rate Case, the Company's 9 combination of assets helps protect North Dakota customers against harmful 10 gas outages (loss of heat) during periods of below zero temperatures in the event 11 of natural disasters or even emergencies such as the January 25, 2014 12 TransCanada natural gas pipeline explosion and resulting fire in western 13 Canada.

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C. Overview of Capital Investments

- 16 Q. What types of capital investments does the Company make in its gas 17 operations?
- 18 A. Our capital investments generally fall into five categories:

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Safety: Maintaining safety requires a multi-faceted work and capital investment approach that accounts for the complex nature of the system, the multiple risks that face any natural gas system, and the requirements of the PHMSA. This category includes DIMP projects, including the annual and programmatic replacement of aging mains and service pipe and the replacement of problematic pipe types, namely Aldyl-A and vintage steel, which are discussed further below.

1	Reliability: Maintaining a reliable system requires identification of capacity
2	needs to serve firm customers on a peak design hour. The peak design hour
3	reflects temperature extremes of -37°F for Fargo and -40°F for Grand Forks.
4	Reliability investments include programs to add system capacity and the Meter
5	Module Replacement Program, which is necessary to ensure we can continue to
6	meter gas.
7	
8	New Customer Business: The Company must serve new customers who
9	request gas service within its service territory under its tariff rules. When there
10	is no existing connection to the customer's property, the Company must
11	establish or update customer records and make capital investments to install
12	new service lines, meters, and other infrastructure needed to extend service to
13	the residential, commercial, or industrial property.
14	
15	Mandatory Relocations: The Company is required to move existing
16	infrastructure to meet federal, state, and/or local requirements. This includes
17	relocating facilities required by a governing authority or that are in direct conflict
18	with street expansions within public rights-of-way. The Company must invest
19	capital to achieve these relocations and re-establish service via infrastructure at
20	a different location.
21	
22	Peaking Plants: The Company has three gas peaking plants – one LNG plant
23	(Wescott) and two propane plants (Sibley and Maplewood). These plants help
24	ensure that the Company has sufficient gas to serve firm customers during

periods of cold weather or during other operational or market-driven needs.

These plants are discussed in Section II above and in further detail in Section

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III below.

- Q. Please provide an overview of the Gas Operations capital additions
 from 2022 to 2024.
- A. The Company is continuously investing in its system through routine capital additions. Routine investments are those that are, generally, less than \$0.3 million. These routine investments provide a baseline that is generally consistent year to year and is a part of managing a safe and reliable system. Table 1 depicts the Company's routine capital projects.

Table 1
2022-2024 Routine Expenses (Millions)
State of North Dakota

Capital Category	Routine Description	2022 Actuals	2023 Forecast	2024 Test Year
New Business	ND - Gas New Services Routine	\$4.1	\$4.1	\$4.4
New Business	ND - Gas New Mains Routine	\$2.8	\$2.9	\$3.0
New Business	ND - Gas Meter Routine	\$0.7	\$1.4	\$1.7
Reliability	ND - Gas Main Renewal Routine	\$0.4	\$1.4	\$0.6
Reliability	ND - Gas Main Reinforcements Routine	\$1.2	\$0.6	\$0.9
Relocations	ND - Gas Main Relocations Routine	\$0.8	\$0.6	\$0.6
Reliability	ND - Gas Service Renewal Routine	\$0.6	\$0.5	\$0.5

The Company also makes investments in discrete, or major, projects. Because most of the gas projects are put into service the same year they are started, the capital additions are constantly replenished such that substantial changes year over year are generally a result of discrete projects. Table 2 below reflects the Gas Operations capital additions (i.e., infrastructure placed in service) from 2022 to 2023 and the forecasted capital additions for the 2024 test year, including the routine expenses from Table 1 plus discrete capital additions in each of the depicted years. This information is shown in categories for which we can provide comparative data over this extended period.

1	Table 2
2	2022-2024 Gas Capital Additions (Millions)
3	State of North Dakota

ND Gas Additions	2022 Actuals	2023 Forecast	2024 Test Year
New Business	\$7.7	\$13.8	\$9.6
Plants	\$7.7	\$2.3	\$7.6
Reliability	\$2.2	\$7.7	\$5.8
Relocations	\$0.8	\$3.3	\$0.6
Safety	\$3.5	\$4.5	\$3.5
Total	\$21.9	\$31.6	\$27.1

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III. MAJOR INVESTMENTS

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- 13 Q. What were the primary Gas Operations capital additions in 2022?
- 14 A. In 2022, the primary drivers of Gas Operations' capital additions were new 15 business, reliability, safety, a large-scale relocation project, and the Peaking 16 Plants.

- Q. How did the Company's capital additions in 2023 vary relative to its
 2022 capital additions?
- 20 Α. As Table 2 above shows, the Company is forecasting a significant increase in 21 capital additions for 2023 as compared to 2022. The primary driver of this 22 increase is the Company's new business. The Company has made significant 23 investments in system upgrades to serve new load from existing Commercial 24 and Industrial customers in Grand Forks and West Fargo. The Company has 25 also invested in the reliability of the system through the Meter Module 26 Replacement Program and discrete reliability projects in the Fargo area; the 27 safety of its system through DIMP projects including the replacement of

problematic pipe types, namely Aldyl-A and vintage steel; and the relocation of gas distribution infrastructure. Table 3 below shows these 2023 projects and their respective capital allocations. I will address the specific projects in detail later in my testimony.

Table 3
2023 Gas Operations Major Capital Projects (Millions)
State of North Dakota

Capital Category	Project Name	2023 Forecast	
New Business	Grand Forks HP A Reinforcement	\$3.7	
Relocation	Fargo Diversion Channel Relocation	\$2.4	
Reliability	Meter Module Replacement Program	\$2.7	
Safety	Renew Aldyl-A & Steel Main	\$2.3	
Reliability	Fargo HP Distribution Line	\$1.3	
Safety	Fargo 1st Ave NE Main Renewal	\$0.9	

17 Q. How do Gas Operations' capital additions for 2024 compare to historic trends?

A. Capital additions for 2024 are estimated to be \$27.1 million. Although this is a
14.2 percent decrease from the 2023 forecast, it is \$5.3 million more than the
Company's actual capital additions in 2022. The Company anticipates this
decrease in capital additions from 2023 because the large new business and
relocation projects I referenced above are complete. Similarly, reliability and
safety projects from 2023 will require less capital in 2024.

Q. What are the major capital investments in the Company's 2024 test year?

A. The major capital investments planned for 2024 are continued investment in acquiring, installing, and servicing meter modules as a part of the Meter Module Replacement Program; the replacement of aged pipes in Fargo; fire detection and suppression system upgrades at the Maplewood and Wescott peaking plants; and renewal of truck unloading infrastructure at the Sibley peaking plant. These individual projects and the associated capital additions are summarized in Table 4.

Table 4
2024 Gas Operations Major Capital Projects (\$ millions)
State of North Dakota

Capital Category Project Name		2024 Test Year
Plants	Maplewood Fire Detection/Suppression System Upgrades	\$4.1
Reliability	Meter Module Replacement Program	\$2.6
Plants	Wescott Fire Detection/Suppression System Upgrades	\$1.9
Safety	Renew Aldyl-A & Steel Main	\$1.5
Reliability	ND/Fargo HP OPP & CV	\$1.0
Plants	Sibley Truck Unloading	\$0.4

- Q. WILL YOU PLEASE PROVIDE A MORE DETAILED DESCRIPTION OF EACH OF THE DISCRETE CAPITAL ADDITIONS IN 2023 AND 2024?
- A. Yes. In the following section, I describe the major capital projects. I address these projects by category: new business, Peaking Plants, reliability, safety, and mandatory relocations.

- 1. New Business
- 26 Q. Please summarize the Company's New Business Project investments.

1	Α.	New customer business projects include the costs of providing and installing
2		mains, service lines, meters, and other infrastructure necessary to connect a new
3		customer to the Company's natural gas system. Budgeted capital additions
4		include routine work, consisting of new customer additions based on forecasted
5		customer growth, and planned larger, discrete projects that are in excess of \$0.3
6		million. Routine spending on new business generally involves smaller customer
7		connection work and generally the investment is justified by the revenue
8		generated from the new business. From time to time, however, the Company
9		must make larger investments in the system because of new demand in its
10		service territory or a larger commercial customer.

- 12 Q. PLEASE DESCRIBE THE LARGER NEW BUSINESS PROJECTS CONTRIBUTING TO THE NEED FOR THIS RATE CASE.
- A. As Company witness Goodenough provides in his testimony, Commercial and Industrial customers make up the largest growth in sales from 2017 to 2022. Although the Commercial and Industrial sector is anticipated to shrink slightly over the 2022 to 2024 period, according to Company witness Goodenough, Commercial and Industrial customers load growth has required major investments in 2023.

First, the Company made an approximately \$0.5 million investment in West Fargo. The area of Fargo, West Fargo, and Horace has seen significant residential, dense residential (apartments), and commercial growth to our natural gas system. Xcel Energy's forecasted gas modeling identified future system weaknesses in the system that could negatively affect its service to these growing areas. Specifically, the existing infrastructure has a gap in 6 inch PE main servicing this area, which eliminates much of the benefit of the high-

pressure improvements. Therefore, during the high-pressure system reinforcement, Xcel Energy installed a new regulator station to support the distribution systems. To fully utilize the new regulator station, Xcel Energy installed approximately 5,600 feet of 6 inch PE pipe along 32nd Avenue S to reinforce pressure for continued growth. This new business project is related to the reliability work the Company performed in 2023 and has planned in 2024. I discuss these related reliability projects later in my testimony.

In Grand Forks, the Company has invested \$3.7 million to reinforce system assets to serve a substantial new, firm load for a single existing customer. The project does, however, also benefit the system in Grand Forks as a whole, because it maintains current system pressures. The Company installed 2,000 linear feet of 12 inch high pressure steel. Installation of the pipe required the Company to bore under the waterway and secure permits from the Army Corp of Engineers and a railroad permit.

2. Peaking Plants

- 18 Q. HAS THE COMPANY MADE CAPITAL INVESTMENTS IN THESE PLANTS SINCE THE
 19 2022 RATE CASE?
- Α. Yes. The Company has made investments to enhance the reliability and safety of the Peaking Plants and to comply with state and federal laws. Since 2022, the Company has made routine improvements, typically totaling less than \$0.3 million, and begun larger discrete projects, typically larger investments related to equipment refurbishment or replacement, at each of the three plants. Additionally, the Company has completed the vaporization improvements at the Maplewood and Sibley plants that were explained in the 2022 Rate Case. To complete those projects, the Company invested \$4.5 million in 2022 and \$0.2

1		million in 2023. We also spent \$0.5 million in 2023 on the Inlet Meter Building
2		project. The Inlet Meter Building project updates the original plant building
3		materials to bring the building into compliance with current code requirements
4		and to resolve fire hazard risks.
5		
6	Q.	DOES THE COMPANY ANTICIPATE ANY DISCRETE PROJECTS AT THE PEAKING
7		PLANTS FOR THE 2024 TEST YEAR?
8	Α.	Yes. In 2024, the Company plans to place into service fire detection and
9		suppression system upgrades at both the Wescott (\$1.9 million) and Maplewood
10		(\$4.1 million) plants. The fire suppression changes are being made to bring the
11		Peaking Plants into compliance with the United States Department of
12		Transportation Pipeline Safety Regulations, including National Fire Protection
13		Association (NFPA) codes and standards incorporated by reference (IBR),
14		which govern the fire detection and suppression systems at the Peaking Plants,
15		and to ensure the Peaking Plants remain valuable resources on the system for
16		the next 20 years or more.
17		
18		The Company anticipates it will make the same system upgrades at Sibley in
19		future years; however, those upgrades will not be made in 2024 and may,
20		therefore, be addressed in a future rate case.
21		
22	Q	Does the Company expect to make any other significant capital
23		INVESTMENTS IN THE PEAKING PLANTS IN 2024?
24	Α.	Yes, the Company expects to improve the truck unloading facilities at the Sibley
25		plant. This project will cost \$0.4 million and will replace all below grade liquid
26		propane piping with above grade piping and will replace all associated controls
27		and electrical infrastructure for the three truck unloading stations at the plant.

	Renewing truck unloading infrastructure will ensure safe and reliable operation
	of this critical process within the plant and placing it above grade will assist with
	future piping integrity assessments and preventative maintenance activities.
Q	How do these investments in the peaking plants benefit North
	DAKOTA CUSTOMERS?
Α.	The Peaking Plants are important capacity resources that help ensure safe and
	reliable service to North Dakota customers and the entire gas system. Without
	the Peaking Plants, the Company would need to obtain replacement capacity at
	a higher cost.
	In fact, as the Company explained in the 2022 Rate Case, the only reasonable
	alternative to investing in the gas plants is to acquire an additional 246,000 Dth
	of firm capacity on Northern Natural Gas (Northern) pipeline. However,
	Northern would need to construct substantial facilities over a three-year period
	to make the capacity available. The Company estimates that it would have to
	pay an additional \$60 to \$70 million per year in pipeline demand charges for the
	new capacity. Given the extended delay in service and the large costs involved,
	construction is not a reasonable alternative.
	Improvements like those the Company is making to the fire detection and
	suppression system help ensure that the Peaking Plants are safe and compliant
	with state and federal regulations. In turn, they help ensure that the Plants are
	available and functioning when needed, and not obsolete because of a code

- Q. SHOULD NORTH DAKOTA CUSTOMERS BEAR A PORTION OF THE COSTS OF
 MAINTAINING THE PEAKING PLANTS?
- 3 A. Yes. Because North Dakota customers benefit from the capacity that the
- 4 Peaking Plants provide to the system, they should share in the capital
- 5 investments associated with maintaining the operational reliability of the plants
- and compliance with state and federal codes. Company witness Halama
- 7 discusses the allocation of gas system costs in his Direct Testimony.

9

- 3. Reliability
- 10 Q. What reliability work is the Company undertaking?
- 11 A. The reliability category includes the Meter Module Replacement Program and
- the installation of a new regulation station in the Fargo area.

- 14 Q. WHAT IS THE METER MODULE REPLACEMENT PROGRAM?
- 15 A. In 2023, the Company began the Meter Module Replacement Program, through
- which it is replacing nearly all of the meter modules in its service territory. The
- existing modules are equipped with automated meter reading (AMR)
- technology. The work is ongoing and must be complete by December 31, 2025,
- when the Company's agreement with its meter reading provider will expire. The
- 20 Company is replacing the existing equipment with modules that enable drive-
- by meter reading. In some cases, the module and the existing vintage meter will
- 22 need to be replaced, rather than the module only. The new modules are owned
- by the Company. Therefore, once they are installed, the Company will perform
- 24 drive-by meter reading and will phase out meter reading currently performed by
- 25 the AMR provider. The Company has made a \$2.7 million investment in this
- program for 2023, and it has allocated another \$2.6 million to this program for
- 27 2024.

Q.	WHY IS THE COMPANY UNDERTAKING THIS PROGRAM?
Α.	When the Company's existing meter reading contract expires at the end of 2025,
	the current AMR technology will no longer be supported. The current Cellnet
	AMR technology is at its end-of-life and causes challenges for gas meter reading.
Q.	PLEASE DESCRIBE THE DISCRETE CAPITAL INVESTMENTS IN RELIABILITY IN THE
	Fargo Area?
Α.	In 2023, the Company made a \$2.2 million investment to improve the Fargo
	HP (high pressure) Distribution Line. Specifically, the Company has added 150
	feet of 12-inch high pressure steel line, retired about 250 feet of existing high
	pressure steel line, and added a new regulator station to the line. The new
	regulator station helps keep the Company within its gas entitlement for this
	supply point. Without this supply point, the Company could not feed all of the
	firm customers in the Fargo system on a Design Day.
	In 2024, the Company anticipates an additional \$1 million investment in the
	reliability of the Fargo area system. This project will involve installing a new
	over-pressure protection regulator station upstream of an existing regulator
	station (R4314). This will also include the installation of a control valve on the
	over-pressure protection regulator station outlet to ensure the downstream pipe
	remains below 20 percent of the specified minimum yield strength.
	4. Safety
Q.	What additional safety projects are included in 2023 and 2024?
Α.	This category includes DIMP projects in 2023 and 2024. The Company is also
	A. Q. A.

introduced in its 2022 Rate Case and began in 2023.

continuing to implement its Inside Meter Move Out program, which it

26

- Q. WHAT ARE THE COMPANY'S DIMP INVESTMENTS?
- 2 A. DIMP projects address our aging gas infrastructure's structural integrity,
- 3 renewing infrastructure to help ensure a safer gas system that will reduce the
- 4 likelihood of incidents within the community. The Company's DIMP work is
- 5 targeted toward removing identified higher-risk gas infrastructure materials
- 6 (e.g., bare steel or vintage plastic) and replacing them with modern materials. In
- 7 2022, the Company replaced approximately six miles of poor performing main
- 8 and slightly over 200 services, and it plans to continue replacements at this rate
- 9 for the foreseeable future. With that said, each year, the percentage of main
- work compared to service work can fluctuate based on the geographic area
- where the work is performed (i.e., downtown vs. suburb). In 2022 and 2023, the
- 12 Company invested \$7.1 million to update problematic pipes and for related
- services. In 2024, it expects to invest approximately \$2.9 million.

1

- 15 Q. HAVE THERE BEEN ANY LARGE, DISCRETE PROJECTS AS A PART OF THE DIMP
- 16 PROGRAM SINCE THE 2022 RATE CASE?
- 17 A. Yes. The Company has made sizeable capital investments in 2022 and 2023, and
- 18 expects to do so again in 2024, to upgrade pipe made of Aldyl-A and vintage
- 19 steel with modern, updated piping materials that conform with current
- 20 regulatory requirements and industry best practices. In 2022 and 2023, the
- Company invested \$4.9 million replacing these problematic pipes. In 2024, it
- 22 expects to invest approximately \$1.5 million.

- Q. Why has the Company undertaken to replace its Aldyl-A and
- 25 VINTAGE STEEL PIPES?
- 26 A. The Company's replacement of Aldyl-A pipes is consistent with multiple
- Advisory Bulletins issued by PHMSA (Advisory Bulletins ADB-07-01 and

ADB-02-07) and based on data that this material can become brittle over time and is subject to failure. Vintage steel is targeted for replacement because of its susceptibility to corrosion.

4

- 5 Q. WHAT IS THE PROGRAMMATIC SERVICE REPLACEMENT PROGRAM?
- A. The replacement of problematic pipe types has also involved the replacement of services to address the new pipe types. The Company has identified these upgrades as the Programmatic Service Replacement Program. In addition to the \$1.4 million capital investment in 2022 and 2024, the Company has allocated an additional \$1.4 million for 2024.

- 12 Q. WHAT IS THE INSIDE METER MOVE OUT PROGRAM?
- 13 Through the Inside Meter Move Out program, the Company will move most Α. 14 of the gas meters still located inside of customer premises to outside locations 15 and replace the existing facilities with new meters, connections, and regulators. 16 As we described in 2022, this is an important safety innovation as it ensures 17 accessibility to meters as required by federal code and allows the Company to 18 more efficiently perform routine required inspection and maintenance of these 19 meters without having to coordinate access or inconvenience the customer. 20 Additionally, moving the meters to outside locations reduces the risk of gas 21 accumulating in a confined space, where there are more sources of ignition. We 22 have determined that there are over 470 meters located inside customers' 23 premises in the state of North Dakota that can be moved outside. We began 24 this project in 2023 and to date have moved 30 meters to outside locations. The 25 Company anticipates capital expenditure of approximately \$0.4 million in 2023 26 and 2024 and anticipates the project will be completed by 2028. I will also note 27 that the Company's capital investments in 2022 and 2023 and allocation for

- 2 The Inside Meter Move Out Program was delayed as a result of supply chain
- 3 challenges. As a result, the Company anticipates this program could continue to
- 4 be a priority in its next rate case.

- Q. What other investments has the Company made in the safety of its
 Gas Operations?
- A. The Company has made significant investment additions to improve the safety of its three gas Peaking Plants. The Company has or will invest a total of approximately \$6.0 million across the three plants installing state of the art fire suppression systems. As discussed, this will help ensure gas can be delivered safely and reliably across the Company's system, providing important capacity for North Dakota customers.

14

15

5. Relocation

- 16 Q. Please summarize mandatory relocation investments.
- 17 Α. Mandatory relocations are capital projects that require the Company to move 18 existing infrastructure in order to meet federal, state, or local requirements. This 19 includes relocating facilities for safety-related work required by a governing 20 authority or that are in direct conflict with street expansions within public 21 rights-of-way. In 2023, the Company made a sizeable investment of \$2.4 million 22 to relocate gas distribution infrastructure impacted by the Fargo-Moorhead 23 Flood Diversion Project. The Company was required to undertake this project 24 pursuant to a memorandum of understanding with the Metro Flood Diversion 25 Authority.

26

27

Q. PLEASE DESCRIBE THE FARGO-MOORHEAD FLOOD DIVERSION PROJECT.

A. The Fargo-Moorhead Flood Diversion Project is a major flood control project under construction in the Fargo-Moorhead area. It includes a 30-mile diversion channel, an embankment south of the cities, control structures, and improvements to flood control infrastructure within the cities.

5

IV. GAS OPERATIONS O&M EXPENDITURES

7

6

- 8 Q. What do you address in this section of your testimony?
- 9 A. I provide an overview of the types of O&M expenses for Gas Operations. I 10 also present 2022-2024 O&M expenditures for Gas Operations including key 11 drivers and trends.

12

13

A. Types of Gas Operations O&M Expenses

- 14 Q. For what types of activities does Gas Operations incur O&M 15 expenses?
- 16 Gas Operations incurs O&M expenses across various areas that are related to Α. 17 numerous activities to support the gas system. Federal and State codes also 18 require robust inspection and maintenance programs for gas utilities, the 19 majority of which result in O&M expenditures. Further, integrity management 20 programs at times add O&M costs to mitigate system risks. Examples include 21 ongoing health and condition assessments for gas pipelines, as well as 22 accelerated leak surveys for known problematic distribution pipe types under 23 renewal programs. We also must perform emergency response and requested 24 underground locates. Other types of O&M expenses include internal and 25 contract labor, materials, transportation, and other expenses such as facilities 26 costs and licensing fees. These O&M costs are related to the day-to-day

1	operations of our gas distribution system as we continue to provide safe, reliable
2	service to our customers.

- 4 Q. How are Gas Operations O&M expenditures allocated?
- 5 Similar to capital additions, Gas Operations O&M expenses are direct assigned 6 to the North Dakota jurisdiction to the extent they are solely serving that 7 jurisdiction. For example, damage prevention costs are direct assigned to the 8 area where the work is completed. Accordingly, damage prevention costs in 9 Fargo are assigned fully to the North Dakota jurisdiction. That said, certain Gas 10 Operations O&M expenses are incurred on a Company-wide basis – for 11 example, management costs, environmental services, planning, and certain 12 engineering functions. These O&M expenses are allocated to the North Dakota 13 jurisdiction using the allocation methodology discussed by Company witness 14 Halama.

15

16 **B.** Gas Operations O&M 2022-2024

- Q. What has been the Gas Operations' O&M spending since the Company's last North Dakota rate case?
- A. Table 5 below shows the North Dakota Distribution O&M expenses, including actual expenditures through 2022, and the forecasted O&M expenses for 2023 and the 2024 test year.

Table 5 Gas Operations Distribution O&M 2020-2024 (\$ millions) State of North Dakota

2020		2021	2022	2023	2024
Actuals		Actuals	Actuals	Forecast	Test Year
	5.6	5.8	6.0	6.2	6.2

- Q. WHAT DOES TABLE 5 INDICATE REGARDING GAS OPERATIONS DISTRIBUTION O&M EXPENSES OVER TIME?
- A. Table 5 illustrates that Gas Operations O&M expense has increased only slightly since the 2022 Rate Case. Distribution costs in 2023 are only approximately \$0.2 million higher than in 2022. This increase was primarily a result of climbing labor costs in 2023. We do not anticipate costs will increase in 2024.

In addition, I note that the Company's O&M has been generally flat in recent years as shown in this and the 2022 Rate Case, with some variability, due to the Company's ongoing efforts to increase efficiency, contain O&M expenditures, and deploy cost reduction for customers' benefit.

- 19 Q. HAS THERE BEEN VARIATION IN ANY OF THE CATEGORIES OF O&M?
- A. Yes. Although in the aggregate O&M costs are expected to remain flat compared to 2023 through 2024, there is some variability in individual categories of costs. The Company is anticipating being able to manage the total O&M budget by offsetting rising costs in one category with savings in another. Therefore, although damage prevention is expected to rise roughly \$0.2 million between 2022 and 2024, that increase is offset by an anticipated decline in labor costs of approximately \$0.2 million.

1		V. PROPOSED TARIFF REVISIONS
2		
3	Q.	WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?
4	Α.	In this section of my testimony, I discuss proposed tariff revisions in Section 6
5		General Rules and Regulations, which include additional language with respect
6		to safety and technical requirements to provide clear, upfront information for
7		customers. I also propose minor updates and corrections to several forms
8		included in Section 7, Contract and Agreement Forms.
9		
10	Q.	WHY ARE YOU TESTIFYING ON THIS MATTER?
11	Α.	The changes predominantly arise out of the Gas Operations system. Therefore
12		I am the appropriate Company witness to address them.
13		
14	Q.	What tariff revisions is the Company proposing related to
15		ADDITIONAL LANGUAGE WITH RESPECT TO SAFETY AND FURTHER
16		CLARIFICATIONS FOR CUSTOMERS?
17	Α.	The Company is proposing to add two paragraphs to Section 6, General Rules
18		and Regulations, Section 4.2, Customer's Piping and Equipment, as follows:
19		
20 21 22 23 24 25 26 27		Delivery Pressures. Typical delivery pressure is between 6"-7" w.c. ⁴ depending on service territory. Delivery pressures higher than the typical delivery pressures is considered an elevated delivery pressure. In circumstances that require elevated delivery pressure it is the responsibility of the customer or customer representative to install the appropriate fuel line protections and accept responsibility for confirming their fuel line and appliances are fit for the requested delivery pressure and assume liability for failing to comply with this
28		requirement.

⁴ The abbreviation w.c. stands for water column; inches of water column is a unit of pressure.

Maintenance, Relocation, Abandonment. Customer agrees to maintain the utility clearance requirements over and around all Xcel Energy underground service facilities after installation. Customer agrees to pay the cost of relocating any portion of Xcel Energy's facilities made to accommodate customer needs or required because of alterations to the property which includes any altering of grade, additions to structures, installations of patios, decks, gardens, sidewalks, curbing, paving, blacktop, sod, landscaping, or any other condition which makes maintenance of Xcel Energy's facilities impracticable (this is a safety issue as well). Customer will not enclose or build over the gas service and/or meter at any time. Customer must maintain the proper clearance requirements set forth by the Xcel Energy Standards and Use Manual. In the event alterations to the property are needed that may affect utility services provided by Xcel Energy including load (electric) and/or delivery pressures (gas), Customer agrees to initiate a building and remodeling request prior to any alterations.

- Q. WHY IS THE COMPANY PROPOSING TO ADD THESE PARAGRAPHS TO THE CUSTOMER'S PIPING AND EQUIPMENT SECTION OF THE TARIFF?
- These paragraphs, which are consistent with North Dakota rules and 21 22 regulations, reflect safety and technical requirements consistent with pipeline 23 safety and gas standards and requirements that are already available to 24 customers on the Company's website. Even though the information may be 25 available on the Company's website, we believe customers may first look for this type of information in the General Rules and Regulations section of our 26 27 tariff and may not review details on the website prior to planning or undertaking 28 construction projects that must comply with these requirements. By providing 29 this information upfront and clearly stating the expectations in the General Rules and Regulations, Customer Piping and Equipment section of the 30 31 Company's tariff, customers have a clear point of reference for these safety 32 standards and requirements.

1	Q.	CAN YOU FURTHER DISCUSS THE INFORMATION PROVIDED IN THE PROPOSED
2		PARAGRAPH ON DELIVERY PRESSURES?
3	Α.	Yes. The delivery pressure provided simply clarifies that this is the typical,
4		standard delivery pressure for the majority of our customers. Because customers
5		are able to request service at a higher delivery pressure, the paragraph then
6		provides information relative to customer responsibility for ensuring
7		installation of appropriate fuel line protections and confirming appliances are
8		fit for the requested delivery pressure. This additional paragraph provides clear,
9		upfront information on these important safety requirements and customer
10		responsibilities.
11		
12	Q.	CAN YOU FURTHER DISCUSS THE INFORMATION PROVIDED IN THE PROPOSED
13		PARAGRAPH ON MAINTENANCE, RELOCATION, AND ABANDONMENT?
14	Α.	Yes. The information in the paragraph on maintenance, relocation, and
15		abandonment is related to clearance requirements that must be maintained for
16		all gas service facilities and meters and customer responsibility for the costs of
17		relocating any of the facilities as may be required due to customer-initiated
18		construction projects on a customer's property.
19		
20		For the tariff edits discussed above, see Gas Rate Book Sheet No. 14 included
21		in Volume 2 of the rate case application.
22		
23		VI. CONCLUSION
24		
25	Q.	PLEASE SUMMARIZE YOUR TESTIMONY.
26	Α.	I recommend that the Commission approve the 2024 test year revenue

requirement increases attributable to the Gas Operations system investments

and O&M expenditures, as supported by the information provided in my testimony. The Company's capital additions since the 2022 Rate Case have helped the Company serve new business in a safe and reliable manner. Through these investments, the Company will be able to meet the natural gas demand needs and provide benefits for our North Dakota customers into the future.

- 7 Q. Does this conclude your Direct Testimony?
- 8 A. Yes.

Case No. PU-23-___ Exhibit___(AEB-1), Schedule 1 Page 1 of 1

Statement of Qualifications Alicia E. Berger

I have a Bachelor of Science degree in Business Management from St. Catherine University, St. Paul, Minnesota. I began my career at Xcel Energy in May 2007 as a Damage Facility Analyst in the Damage Prevention department of Xcel Energy Services, Inc., the service company subsidiary of Xcel Energy. Within Damage Prevention, I held positions of increasing responsibility including Damage Prevention Supervisor and Senior Operations Manager. My responsibilities during this period included providing supervisory direction to internal and external contract locating resources across the Xcel Energy Upper Midwest footprint, ensuring compliance with state and Federal regulations, and working with stakeholders through partnership and engagement to reduce underground excavation damages to enhance public safety.

In March of 2019, I moved to the position of Operations Planning and Operational Performance Manager in the Performance and Planning Continuous Improvement department. In this role I was responsible for identifying strategic business plan processes and provided governance to drive operational and finance performance for Xcel Energy distribution electric organization. Additionally, I would lead key projects and served as a liaison to represent the organization with key business partners.

I was promoted to the position of Director of Gas Operations within the Gas department in January 2020 and subsequently Regional Vice President, Gas Operations in August 2023. My duties are directing the development and implementation of short and long-term business plans that support achievement of objectives and lead the development and implementation of labor strategies that help ensure flexible and effective utilization of resources. I am responsible for the operation and maintenance of regional gas distribution, which includes gas emergency response, as well as for the development, execution, and oversight of the gas safety plan and the safety performance of the organization.

STATE OF NORTH DAKOTA BEFORE THE PUBLIC SERVICE COMMISSION

NORTHERN STATES POWER COMPANY)	Case No. PU-23
2024 Natural Gas Rate Increase	j	
APPLICATION	Ć	
)	
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AFFIDAVIT OF Alicia E. Berger

I, the undersigned, being first duly sworn, depose and say that the foregoing is the Direct Testimony of the undersigned, and that such Direct Testimony and the exhibits or schedules sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said testimony as if given by me in formal hearing, under oath.

Alicia E. Berger

Subscribed and sworn to before me, this $\underline{\int}^{\underline{\smile}}$ day of December, 2023.

Notary Public

My Commission Expires: 01/31/2026

KYLE D PEROUTKA
Notary Public
State of Minnesota
My Commission Expires
January 31, 2026