

Northernnotes

We are in business to serve our customers. Fairly. Efficiently. Reliably.

NOVEMBER 2024



MESSAGE FROM LAURA DEMMAN

As our customers and our team at Northern Natural Gas get ready for the challenges of the winter season, I want to thank you for all the planning, practicing, testing and collaboration that you do in preparation for the coming months. In our businesses and communities, we know that successful performance requires thoughtfulness, diligence and investment of time and resources. Each of these elements requires careful judgment of a team of people, and it is important to acknowledge the role of teamwork in our mutual success.

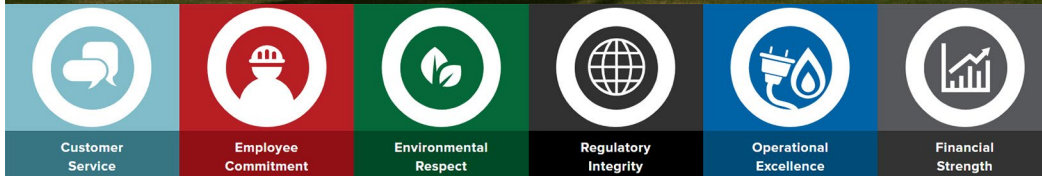
At Northern, we emphasize the importance of teamwork through our C.H.A.M.P.I.O.N. culture framework. We recognize that employees must be empowered to do what makes sense for the business and have the resources, passion and commitment to be successful. We are proud to serve our customers and are aware that it takes many people with a variety of skills to successfully meet expectations for the industry-leading safe and reliable natural gas transportation and storage services that our customers deserve.

Our team is pleased to work with each of you, and we are grateful for your business and partnership.

Sincerely,

Laura Demman
President, Northern Natural Gas

COMPLIANCE
HIGH EXPECTATIONS
ATTENTION TO DETAIL
MANAGEMENT
PERFORMANCE
CONTINUOUS **I**MPROVEMENT
OWNERSHIP
NURTURE A CHAMPION CULTURE



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2024 WINTER FORUM

Members of Northern Natural Gas' commercial and operations teams hosted over 60 customers representing nearly 40 different companies September 18-20, 2024, at Northern's annual Winter Forum in Charleston, South Carolina. Northern's customer service team provided gas scheduling training and delivered sessions on Northern's commitment to customer service, recent pipeline expansion projects, environmental accomplishments and operational updates.

C.J. Brown, senior director of system operations policy and performance support at Southwest Power Pool, served as a guest speaker and led a discussion on the importance of fuel diversity for electric generation, both now and in the future.

Northern's 2025 Winter Forum will take place September 17–19, 2025, in Milwaukee, Wisconsin.

Hope to see you there!

FROM FLOODWATERS TO RELIEF: THE JOINT EFFORT TO RESTORE GAS SERVICE IN SOUTH DAKOTA

Northern is focused on delivering exceptional service to its customers and stands ready to assist during times of need.

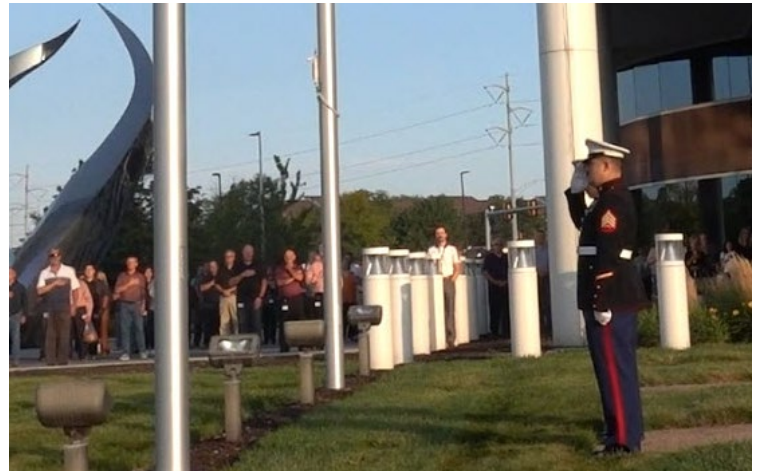
On June 23, 2024, when devastating flooding was occurring in the Midwest, officials in South Dakota made the decision to divert flood waters from the Big Sioux River into McCook Lake, located near North Sioux City, South Dakota. Unfortunately, in the path of the flood water diversion was a MidAmerican Energy natural gas main that was damaged by the rushing water, impacting nearly 500 utility customers. To minimize customer impact, MidAmerican contacted Northern Natural Gas on June 28, 2024, for emergency service from compressed natural gas trucks.

By noon the following day, Northern's compressed natural gas trucks were deployed and operational, providing emergency gas service to MidAmerican. Northern dispatched three trucks from Palmyra and South Sioux City, Nebraska, and Oakland, Iowa, to the area. To attach the trucks to MidAmerican's service line, Northern and MidAmerican personnel worked together to oversee the installation of a natural gas tap into MidAmerican's distribution system and the fabrication of a skid-mounted pressure regulator.

Thanks to the coordination between the companies, MidAmerican was able to safely relight almost half of the impacted customers by the evening of June 29, 2024.



PATRIOT DAY CEREMONY



With the help of Gunnery Sergeant Garay and Sergeant Horn of the United States Marine Corps, Northern Natural Gas hosted a commemorative flag-raising ceremony as an opportunity for the company to come together, reflect and pay respect to those affected by the tragic events of September 11, 2001.

NORTHERN NATURAL GAS CELEBRATES MILESTONES AT ITS REDFIELD UNDERGROUND STORAGE FACILITY



Northern Natural Gas' Redfield underground storage facility in Dallas County, Iowa, reached a pair of significant milestones in 2024 – the 70th anniversary of the first gas injection and 2.0 Tcf of total gas injected. Redfield was the first of three underground gas storage fields successfully developed by Northern between 1950 and 1980.

On August 27, 1954, Northern received authorization from the Federal Power Commission (predecessor to the Federal Energy Regulatory Commission) to construct and operate temporary facilities to enable natural gas injection into the Redfield storage area. On October 11, 1954, the first gas was injected into the reservoir. By the end of 1957, gas-in-place had reached 13 Bcf, and the field had supplied 2.5 Bcf of peaking service to the Des Moines, Iowa, market from its 30 gas storage wells.

After seven years of testing, development and operation, the Federal Power Commission issued permanent authorization for gas storage operations in June 1961. At that time, Redfield had 98 wells and a total contracted demand of 189,000 Dth per day. By 1983, the facility had 191 wells. Accumulated injected gas volume reached 1.0 Tcf in 1991. Following a major expansion beginning in 2007, Redfield now has a total capacity of almost 134 Bcf, with annual cycles of 34 Bcf. The field surpassed 2.0 Tcf of cumulative injections August 28, 2024.



NORTHERN NATURAL GAS IS COMMITTED TO METHANE EMISSIONS SAVINGS

Northern Natural Gas sets annual methane emissions reduction goals through its participation in the EPA Natural Gas Methane Challenge program, a program in which Northern became a founding partner when it was established in 2016. Methane emissions from blowdown and venting activities have offered, and are likely to continue to offer, the greatest reduction opportunities. Northern has adopted various maintenance and engineering measures to minimize venting of natural gas and reduce methane emissions. The following efficient and cost-effective reduction practices have been adopted by Northern in this effort:

- Scheduled maintenance to decrease blowdown occurrences
- Hot taps that allow for tie-in activities without venting during construction
- Line stops used to reduce the length of pipe being blown down
- Capped Emergency Shut Down (ESD) testing methods
- Use of compression to vacate gas into adjacent pipelines
- Utilization of flares to reduce methane emissions during maintenance activities to decrease blowdown volumes

In 2024, Northern is projected to save 586 Mcf of gas emissions from all pipeline blowdowns, planned and unplanned, and forecasts a pipeline emissions savings rate of 85.7% at year-end. Northern continues to evaluate emerging technologies and develop work practices to further reduce methane emissions from all blowdowns.





NOVEMBER 2024 RATE CASE UPDATE

Throughout 2024, Northern Natural Gas has continued to invest in its system to ensure customer reliability needs are met. These investments will eventually require cost recovery. Fortunately, during this period, Northern has also been able to capture significant short-term market opportunities in its Field Area, allowing it to forego a rate case in 2024.

Northern will continue to manage operating costs, improve efficiencies and maximize revenues from market volatility opportunities as they arise. Between 2023 and 2025, Northern will have placed \$1.6 billion of assets into service related to modernization and other maintenance capital. Net of depreciation, this represents \$1.06 billion in non-revenue generating capital that is not being recovered under current rates. This equates to a cost of service “drag” of \$168 million on Northern’s return in 2025. While Northern will continue to evaluate the timing and need for its next rate case, based on this cost of service drag, Northern anticipates it will file a rate case in 2025 for a rate increase effective January 2026.

Northern is committed to transparently communicating the capital requirements necessary to maintain industry-leading reliability and to meet increasing regulatory requirements. Northern will ensure there are no surprises related to the necessity and timing for its next rate case. Please contact your marketing representative or any member of Northern’s executive team with questions, concerns or requests for additional information.

NEW REGULATIONS SIGNIFICANTLY IMPACT OPERATIONS COST

Enactment of new pipeline safety regulations over the last several years are having a major impact and adding significant cost to the operations across the natural gas transmission pipeline industry at unprecedented levels, including at Northern Natural Gas. Northern continues to strive for balanced outcomes, ensuring safety and pipeline integrity while balancing system resilience, excellent customer service and financial impacts on operations.

- **SAFETY OF GAS TRANSMISSION AND GATHERING LINES RULE**

The most significant new regulation is the Safety of Gas Transmission and Gathering Lines Rule, also called the Mega Rule. The Mega Rule was the largest expansion of pipeline safety rules since the original regulations were implemented in the 1970s and was so extensive and complex that the Pipeline and Hazardous Materials Safety Administration (PHMSA) split the proposed rule into three parts. The first part, addressing maximum allowable operating pressure reconfirmation and moderate consequence areas, was published October 2019. The second part, addressing aspects such as pipeline repair and corrosion surveys, was published August 2022. Part two of the rule initially had an effective date of May 2023, but parts were extended to February 2024. The third part of the rule, the Gas Gathering Rule, does not affect Northern.

- **MODERATE CONSEQUENCE AREAS**

The Mega Rule created a new integrity management classification, a moderate consequence area which includes any area with five or more buildings intended for human occupancy within the potential impact radius; for comparison, the high consequence area definition requires 20 buildings within the potential impact radius. The moderate consequence area definition also includes pipeline crossings with interstates and other four-lane roads and highways within the potential impact radius. Assessment of all baseline moderate consequence areas and Class 3 and 4 areas must be completed by 2034.

For Northern, the administrative and oversight requirements of managing the integrity management program increased significantly. Under previous regulations, Northern had approximately 440 high consequence areas. The Mega Rule added slightly more than 800 moderate consequence area segments and nearly 420 Class 3 location segments to Northern’s pipeline integrity assessment regulatory program. As a result of the regulations, Northern has approximately four times as many integrity segments to track and assess. Many of these new segments require capital projects to allow integrity assessment by in-line inspection, hydrotest or other methods.

- **MAXIMUM ALLOWABLE OPERATING PRESSURE RECONFIRMATION (MAOP)**

The Mega Rule also required reconfirmation of MAOP of transmission pipelines in high consequence areas, moderate consequence areas and Class 3 and 4 areas which operate at higher stress (above 30% specified minimum yield strength). Pipelines in these areas may be decades old but must now have the MAOP reconfirmed to meet current design and pressure test requirements. The rule also established a records standard of “Traceable, Verifiable and Complete” which adds another layer of records documentation required for pipelines installed years ago. If adequate records are not available to meet these standards, capital and operations and maintenance projects are required to complete pressure tests or replace pipe. This has substantially increased Northern’s costs. Operators must complete 50% of MAOP reconfirmation projects by 2028 and complete all projects by 2035.

- **RUPTURE MITIGATION VALVE RULE**

On April 8, 2022, the Requirement of Valve Installation and Minimum Rupture Detection Standards (Rupture Mitigation Valve Rule) was published in the Federal Register. The rule requires that remote or automated control valve installation on all new and entirely replaced pipeline segments 6-inch-diameter or greater and two miles or greater length within a contiguous five miles, be completed within 24 months. The rule also requires that the valves be able to isolate the segment within 30 minutes. Existing high consequence areas must be reviewed to determine if automated or remote shut-off valves would be an effective preventive and mitigation measure to reduce risk.

- **SECTION 113 AND 114-PROTECTING OUR INFRASTRUCTURE OF PIPELINES AND ENHANCING SAFETY (PIPES) ACT OF 2020 – METHANE EMISSIONS REDUCTION AND LEAK DETECTION AND REPAIR CRITERIA**

Section 113 of the PIPES Act of 2020 required PHMSA to develop regulations on natural gas emissions reduction and leak reduction and repair. PHMSA conducted inspections of current operator programs per Section 114 of the PIPES Act in 2022; Northern’s inspections were completed with no issues. A new regulation has been drafted which will further define the requirements for these programs.

On May 5, 2023, PHMSA published the proposed rule in the Federal Register. Northern submitted comments through the American Gas Association and Interstate Natural Gas Association, and the proposed rule was discussed during a PHMSA Gas Pipeline Advisory Committee meeting November 27 through December 1, 2023. The proposed rule will increase required patrols and leak surveys, define grading of leaks and create required timelines for pipeline repairs.



GARNER LNG REFRIGERATION COMPRESSOR REPLACEMENT

Northern Natural Gas has replaced the primary refrigeration components of the 1976-vintage Garner, Iowa, liquefied natural gas facility as part of Northern's asset modernization program.

The facility liquefies natural gas and stores it in a large tank on site. When needed, the liquefied natural gas is retrieved from the tank, vaporized and sent to Northern's mainline system to meet customer demand. The plant also provides liquefied natural gas to several customers via truck transport through Northern's ILD rate schedule.

The original facility utilized an electric-driven, 10,000-horsepower refrigeration compressor. Northern has replaced the nearly 50-year-old system with a natural gas turbine, which will reduce operation and maintenance costs and improve the reliability of this critical facility.

Northern's commitment to modernize its gas transmission assets will ensure existing and future customers will continue to have safe, reliable service.



MARKET AREA EXPANSION UPDATE

Northern Natural Gas and its customers have successfully worked together over many years to complete mutually beneficial Market Area expansion projects that result in incremental firm transportation service required by Northern's customers to meet ongoing growth requirements. Since 2007, Northern has invested approximately \$1.0 billion and added approximately 1.5 Bcf per day of pipeline capacity to serve customer growth requirements in the Market Area.

Recently, Northern placed 12,960 Dth per day in service in the Market Area through the \$25.6 million [West Leg 2024](#) Expansion project, as well as 50,889 Dth per day through the \$54.6 million Northern Lights 2023 expansion project. Both projects will meet the growth requirements of several customers through mutually beneficial agreements.

In 2025, Northern will complete the \$66.2 million [Northern Lights 2025](#) Expansion project, which includes 46,064 Dth per day. The expansion activity is forecast to continue into 2026 and beyond. In 2026, Northern will file for authorization to build an East Leg 2026 Expansion, which will include incremental volumes that are still being finalized with customers, along with the associated capital investment. It is also anticipated that open seasons will be necessary in the near future for projected growth on the West Leg in 2026, as well as the East Leg in 2027 and 2028.

With a goal to be the top service provider among interstate pipelines, Northern takes great pride in partnering with its customers for mutually beneficial outcomes. Northern's consistent expansion activity reflects this commitment. Thank you to all of the existing customers for your partnership in meeting your ongoing growth needs, and thanks to the new customers for providing Northern the opportunity to serve you! All of us at Northern look forward to working with all of you for years to come.

For more information on Northern's upcoming expansion projects, or to inquire about a new expansion project, please don't hesitate to reach out to your account representative or Mike Barry in Northern's business development department at 402-398-7105 or Mike.Barry@nngco.com.

HAVE YOU MET...? NOLAN BENDER



Nolan joined Northern Natural Gas in May 2017 as a facility planning engineer. In June 2024, Nolan was promoted to his current position as gas control manager. Prior to joining Northern, Nolan worked as a co-op engineer for Omaha Public Power District.

Nolan earned his bachelor's degree in mechanical engineering from the University of Nebraska-Lincoln.

Nolan enjoys golfing, gardening and supporting Husker athletics. Nolan is married and has a 16-month-old son and two dogs.

HAVE YOU MET...? JUSTIN GLOMSKI



Justin joined Northern Natural Gas in April 2005 as an operations and maintenance technician. In October 2023, Justin was promoted to his current position as director, regional operations (central region). Prior to joining Northern, Justin worked as a controls technician for a manufacturing plant.

Justin earned his associate degree from Dunwoody Institute, his bachelor's degree from University of Wisconsin – Stout, and his Master of Business Administration from Upper Iowa University.

In his free time, Justin enjoys hunting, fishing and spending time with his wife and six children.

CUSTOMER COMMITMENT

Northern Natural Gas' Vision Statement

To be the preferred provider of natural gas transportation and storage services based on our integrity, operational excellence, financial strength and environmental responsibility.

Northern Natural Gas' Mission Statement

We are in business to serve our customers.
Fairly. Efficiently. Reliably.

These statements mean that we will focus on these priorities.

- We will deliver what we promise on time.
- We will share the purpose behind our actions.
- We will commit to making it easy to do business with us.
- We will negotiate and perform in good faith.
- We will continue to invest in the pipeline in order to provide you highly reliable service and to meet your future growth needs.

ABOUT US

Northern Natural Gas is based in Omaha, Nebraska, and operates the largest interstate natural gas pipeline system in the United States, extending from the Permian Basin in Texas to the Upper Peninsula of Michigan. Northern provides transportation and storage services to numerous utilities and end-use customers in the Upper Midwest. Northern provides cross-haul and grid transportation between other interstate and intrastate pipelines in the Permian, Mid-Continent and Midwest areas. Northern also operates three underground natural gas storage facilities and two liquefied natural gas peaking units. These storage facilities are fully contracted and are central to meeting Northern's customers' peak-day system requirements.

Northern accesses supply from every major Mid-Continent basin, as well as the Permian, Rocky Mountain and Western Canadian basins. This supply is ultimately delivered to end-use customers in Minnesota, Iowa, Nebraska, South Dakota, Wisconsin, Illinois and the Upper Peninsula of Michigan.

For technical inquiries or information

Customer Service: 402-960-7947 or 402-960-7948

Questions or comments

If you have questions or comments, contact us at nngcustomerservice@nngco.com.

Feedback and Suggestions

To provide feedback about Northern Notes or suggestions of newsworthy topics to cover in this electronic publication, contact Fletcher McMeen at Fletcher.McMeen@nngco.com.

