

North Dakota Pipeline Authority



Annual Report July 1, 2023 – June 30, 2024

Industrial Commission of North Dakota

Governor Doug Burgum, Chairman

Attorney General Drew H. Wrigley

Agriculture Commissioner Doug Goehring

North Dakota Pipeline Authority

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Overview

At the request of the North Dakota Industrial Commission, the Sixtieth Legislature passed House Bill 1128 authorizing the North Dakota Pipeline Authority. It was signed into law on April 11, 2007. The statutory mission of the Pipeline Authority is “to diversify and expand the North Dakota economy by facilitating development of pipeline facilities to support the production, transportation, and utilization of North Dakota energy-related commodities, thereby increasing employment, stimulating economic activity, augmenting sources of tax revenue, fostering economic stability and improving the State’s economy”. As established by the Legislature, the Pipeline Authority is a builder of last resort, meaning private business would have the first opportunity to invest in and/or build additional needed pipeline infrastructure.

By law, the Pipeline Authority membership is comprised of the members of the North Dakota Industrial Commission. Funding for Pipeline Authority operations and studies comes at the recommendation of the Oil and Gas Research Council and is authorized by the Industrial Commission. On August 1, 2008 the Industrial Commission named Justin J. Kringstad, an engineering consultant, to serve as Director of the North Dakota Pipeline Authority. The North Dakota Pipeline Authority Director works closely with the Department of Mineral Resources Director, North Dakota Petroleum Council President, and leadership of the Industrial Commission. The Pipeline Authority has no other staff and receives no direct General Fund appropriation. The Pipeline Authority Director reports to the Industrial Commission members and the Oil and Gas Research Council on a regular basis.

Statutory Authority

The statutory authority for the Pipeline Authority is outlined in Chapter 54-17.7 of the North Dakota Century Code (N.D.C.C.). Section 54-17.7-04 of the N.D.C.C. delineates the powers of the Pipeline Authority, including but not limited to: 1) making grants, loans, or borrowing money; 2) issuing up to \$800 million in revenue bonds; 3) entering into lease-sale contracts; 4) owning, purchasing, leasing, renting, and disposing of pipeline facilities or the right to capacity in any pipeline system, whether within or outside the state of North Dakota; and 5) entering into contracts to construct, maintain, and operate pipeline facilities.

Before the Pipeline Authority can exercise its power to construct pipeline facilities, it must follow a statutory process designed to ensure public participation and comment. Specifically, the Pipeline Authority must publish a notice describing the need for the pipeline project. Entities interested in constructing the facilities or providing services to meet the identified needs have 180 days to respond by

filing a notice of intent. If the Pipeline Authority receives a notice of intent from an interested entity, it cannot proceed with construction unless it determines that doing so is in the public interest. In making this determination, the Pipeline Authority must consider factors such as the economic impact on the state, economic feasibility, technical performance, reliability, past performance, and the likelihood of successful completion and ongoing operation.

North Dakota Pipeline Regulatory Programs

The Pipeline Authority does not serve in any capacity as a regulatory agency for the pipeline industry. North Dakota's pipeline industry is regulated by several state and federal agencies. Roles of each regulatory entity are complex and the Pipeline Authority urges all interested parties to please contact the agencies below for more information on their jurisdiction of the pipeline industry.

- North Dakota Department of Emergency Services
- North Dakota Department of Environmental Quality
- North Dakota Public Service Commission
- North Dakota Industrial Commission-Department of Mineral Resources-Oil and Gas Division
- Environmental Protection Agency
- Federal Energy Regulatory Commission
- U.S. Department of Transportation-Pipeline and Hazardous Materials Safety Administration-Office of Pipeline Safety
- Homeland Security's Infrastructure Security Division

Summary of Activities

North Dakota's petroleum industry began the 2023-2024 fiscal year with West Texas Intermediate (WTI) oil prices in the mid-\$70s per barrel. Despite these economically attractive prices, only 37 drilling rigs were active in July 2023, as the industry settled into a post-COVID development pace, with roughly one drilling rig operating for every \$2 of WTI oil price. The oil market remained stable throughout the fiscal year, with WTI averaging \$80 per barrel. With this price stability, North Dakota's active drilling rig count remained relatively consistent, fluctuating between the upper 30s and low 40s.

Throughout the 2023-2024 fiscal year, the industry expanded the practice of drilling three-mile laterals to enhance capital efficiency in the development of the Bakken and Three Forks formations. It is estimated that approximately 15% of all wells drilled in the second half of 2023 were three-mile laterals, increasing to 25% in the first half of 2024. These three-mile development patterns significantly boost productive lateral footage while maintaining a relatively modest drilling fleet in the region. Additionally, the industry is working to perfect four-mile laterals to further improve rig efficiencies. Figure 1 illustrates the generalized efficiency gains achieved by utilizing longer lateral lengths in a scenario with forty active drilling rigs.

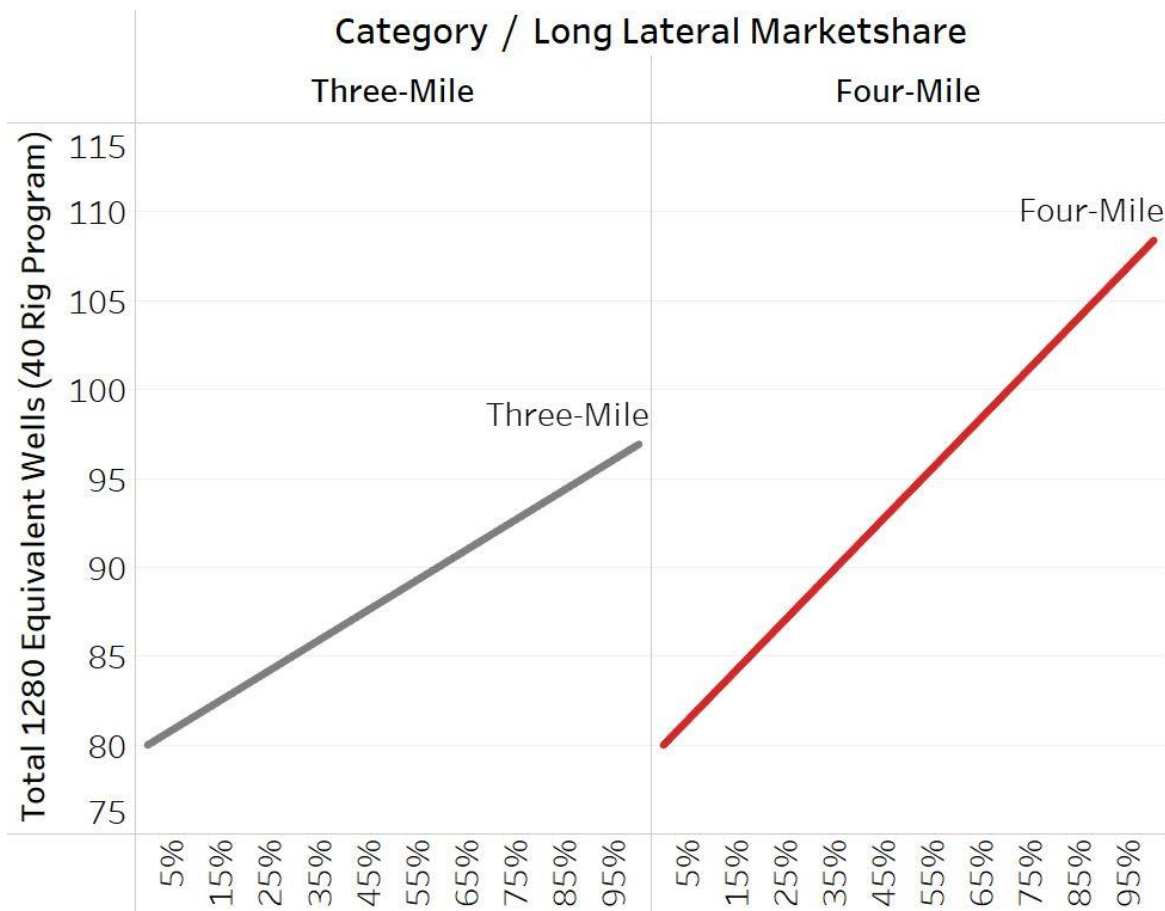


Figure 1. Equivalent two-mile wells (i.e. 1,280) for various market shares of three and four-mile laterals in a forty well program.

Average oil production throughout the fiscal year remained relatively strong at just over 1.2 million barrels per day, though this represents a significant decline from the record high of 1.5 million barrels per day set in late 2019.

Despite the production decline during the final months of the 2023-2024 fiscal year, the long-term outlook for North Dakota’s petroleum industry remains strong. The state's midstream sector continues to adapt to current production levels while planning for future expansion. Over the past year, the Pipeline Authority has been actively engaged in efforts to translate production and development data into oil and natural gas transportation solutions. Collaborating with industry to generate crude oil and natural gas production forecasts to quantify future pipeline needs and timelines remains one of the Pipeline Authority's key responsibilities. Given that pipeline companies tend to be conservative, these forecasting efforts play a critical role in providing the confidence necessary for expansion project planning.

During the fiscal year the Pipeline Authority contacted, met with, and shared information with numerous interested parties including, but not limited to, the following:

Enbridge Pipeline
 TC Energy
 MDU/WBI Energy
 ONEOK
 Viking Pipeline
 Alliance Pipeline
 Northern Border Pipeline
 Moody's Analytics
 Bakken Midstream/Energy
 JPMorgan Chase
 Chord Energy
 PetroNerds
 Steel Reef Infrastructure
 Dakota Natural Gas
 Border States Electric
 Wells Fargo
 Catalyst Midstream
 Triple Oak Power
 East Daley Analytics
 Continental Resources
 Cerilon GTL
 Xcel Energy
 Yildirim Group
 Northern Plains Nitrogen
 Berkeley Research Group
 SOGC Inc
 Jefferies LLC
 Montrail-Williams Electric
 Bitzero
 AIC
 Concord Energy
 Radermacher & Associates
 FTI Consulting
 Schneider Capital Group

Hess Corporation
 Marathon Petroleum
 True Companies
 Fintech/ComboCurve
 Crestwood
 BNSF Railway
 Basin Electric
 Sequent Energy
 Pembina Pipeline
 AgriBank
 Marathon Oil
 Outrigger Energy
 Harvestone Group
 Summit Agriculture
 Great River Energy
 Claire Lasers
 Dakota Energy
 Energy Transfer Partners
 ConocoPhillips
 RBN Energy
 American Aerospace Technologies
 Crusoe Energy
 Mann Energy Services
 S&P Global Platts
 United Energy Trading/Rainbow Gas
 Ottertail Power
 O'Leary Ventures
 Bushel Ag
 Bank of America
 Western EcoSystems Tech. Inc.
 Wood MacKenzie
 Electrogrow/FuelForge
 Inchoo
 Berkeley Research Group

In addition, the Pipeline Authority worked with a number of state and federal agencies to gather information and provide expertise on pipeline issues. Those agencies and entities included:

North Dakota Public Service Commission
 North Dakota Transmission Authority
 North Dakota Oil and Gas Division

North Dakota Department of Commerce
 Energy and Environmental Research Center
 North Dakota Department of Transportation

North Dakota Governor's Office	Department of Environmental Quality
North Dakota Tax Department	Bank of North Dakota
EmPower North Dakota Commission	US Energy Department of Energy
North Dakota Oil & Gas Research Program	Upper Great Plains Transportation Institute
North Dakota OMB	North Dakota State University
North Dakota Department of Trust Lands	North Dakota Department of Water Resources
Texas State Energy Marketing Program	University Alaska-Fairbanks

The Director of the Pipeline Authority also worked with the following trade associations/groups:

North Dakota Petroleum Council
Grand Forks Region Economic Development Corporation
Western Dakota Energy Association
Vision West
Jamestown/Stutsman Development Corporation
Valley Prosperity Partnership
Minot Chamber EDC
North Dakota Society of Professional Engineers

As noted above, the Pipeline Authority has been facilitating discussions between governmental agencies and companies interested in expanding North Dakota's midstream infrastructure.

In addition, the Director of the Pipeline Authority provided information to citizens and news media on issues related to pipelines.

Pipeline Capacity Acquisition and Funding

During the 2023 legislative session, action was taken on HB 1014 to update the Pipeline Authority statute, enhancing the agency's ability to acquire and manage capacity positions on new or expanding pipeline systems.

In addition to providing clarification and intent language, the primary legislative change came through an amendment to subsection 4 of section 54-17.7-04, which included the following funding provisions:

- a. The authority may borrow up to sixty million dollars through a line of credit from the Bank. The interest rate on the line of credit must be the prevailing interest rate charged to North Dakota governmental entities.*
- b. The line of credit must be guaranteed by reserves under section 6 - 09.7 - 05.*
- c. The line of credit may be used to support activities under subsection 3.*
- d. The authority shall repay the line of credit from amounts available. If the amounts available on June 30, 2027, are not sufficient to repay the line of credit, the authority shall notify the director*

of the office of management and budget, and the director of the office of management and budget shall transfer funds from the strategic investment and improvements fund to the Bank for the repayment pursuant to section 6 - 09.7 - 05 based on the amount certified by the Bank.

Before the actions specified in HB 1014, the Pipeline Authority had the legal authority to acquire and retain capacity positions on pipeline systems; however, the financial mechanisms were insufficient to provide practical support for such projects. With the newly expanded funding now available, the Pipeline Authority is actively exploring its use as a tool to assist in the expansion of new natural gas transmission systems.

Crude Oil and Natural Gas Production Forecasting

The Pipeline Authority continued to develop and maintain crude oil and natural gas production forecasts for North Dakota and the U.S. portion of the Williston Basin. These forecasts are widely utilized by both public and private organizations. Two assumption scenarios are modeled to communicate the production impacts of varying price and activity levels. The "Base" case reflects expected production, based on the Federal Energy Information Administration's (EIA) West Texas Intermediate (WTI) oil price forecasts. The "Low" case represents a more conservative production outlook, assuming lower-than-expected activity and/or oil prices. Figure 2 presents a long-term oil production forecast for North Dakota, while Figure 3 illustrates a long-term natural gas production forecast based on the same two activity scenarios for North Dakota.



Figure 2. Long term crude oil production forecast for North Dakota starting in Aug. 2024

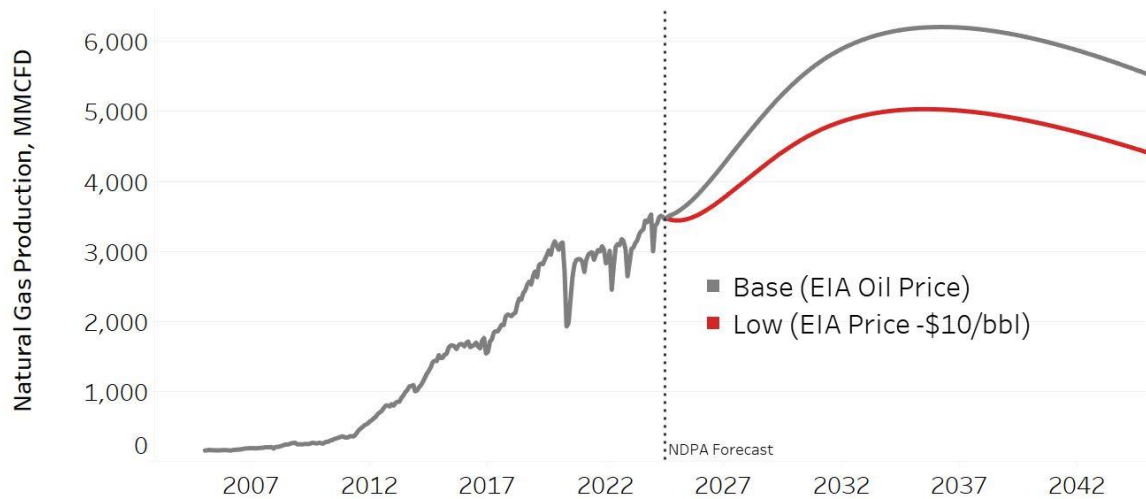


Figure 3. North Dakota natural gas production forecast starting in Aug. 2024

Given the ongoing market uncertainty surrounding the global economic outlook, multiple military conflicts, and Russian energy sanctions, the Pipeline Authority has developed a series of production forecasts based on different well completion scenarios in North Dakota. Figures 4 and 5 depict the near-term estimated oil and natural gas production levels based on the specified number of new well completions per month. These scenario calculations have been highly beneficial for transportation planning, budgeting, and policy development. Additional information on this topic is available on the Pipeline Authority's website.



Figure 4. North Dakota oil production under various completion scenarios

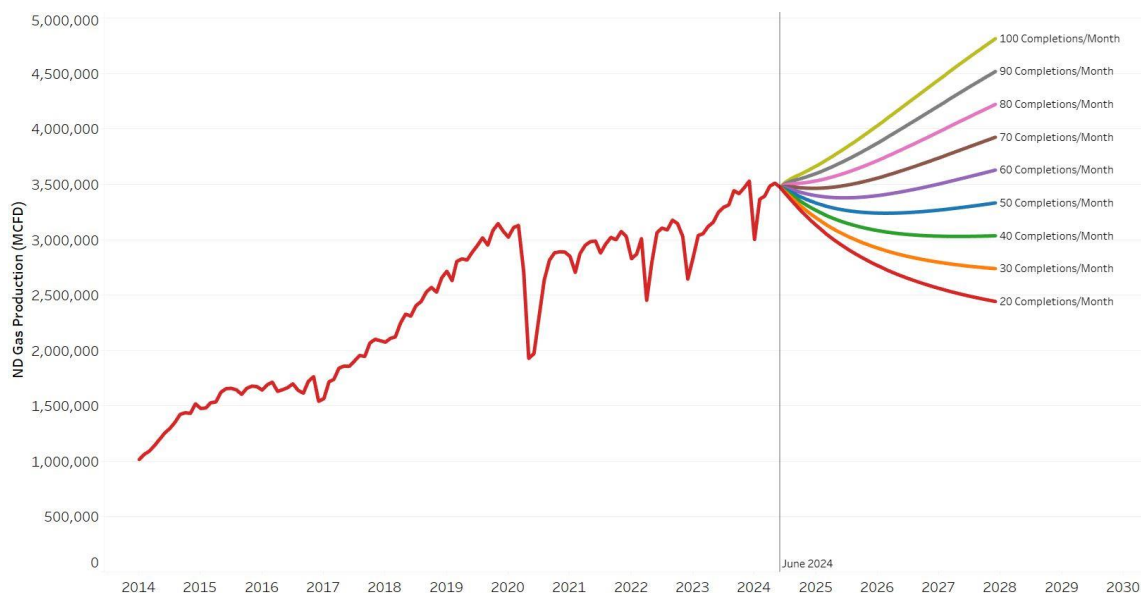


Figure 5. North Dakota natural gas production under various completion scenarios

Natural Gas Liquids

During the 2023-2024 fiscal year, the Pipeline Authority continued to dedicate significant attention to the topic of natural gas liquids (NGLs). Natural gas produced from the Bakken and Three Forks Formations is particularly rich in NGLs such as ethane, propane, and butane. The Pipeline Authority continually updated its forecast models to better understand the production potential of these NGLs and the transportation infrastructure needed to support future growth.

The forecast in Figure 6 presents two potential production scenarios based on different activity level assumptions. North Dakota experienced a significant shortfall in gross pipeline capacity until ONEOK's Elk Creek Pipeline became operational in late 2019. It is anticipated that NGL production will again surpass pipeline capacity by 2027, unless additional system expansions occur or a new market solution is developed. The complexity of NGL transportation is further compounded by the fact that not all NGL pipelines are designed to handle the same types of NGL products. Additionally, natural gas plants in the region produce either purity products or unfractionated products, commonly referred to as Y-grade.

There are several options available to address the growing volume of NGLs in North Dakota. One option is to build, expand, or repurpose existing pipeline systems. A second option is the development of value-added industries that would use NGL products as feedstock. Another potential use for NGLs is in enhanced oil recovery (EOR) within the Williston Basin, as fields continue to mature. The use of NGLs as a working fluid for EOR is still in the research phase, but early lab results have shown promising potential.

To advance the potential of using North Dakota's NGL products as feedstock for value-added industries, funding was allocated to the Energy and Environmental Research Center to study the feasibility of salt cavern storage in the Williston Basin. In late 2020, a research paper was released, indicating that storage

opportunities may be commercially viable in North Dakota. Additional funding was provided during the 2021 and 2023 legislative sessions to develop pilot projects aimed at confirming the study's findings. The Pipeline Authority remains actively engaged in this initiative, as it could significantly impact the transportation and utilization of North Dakota's NGL products.

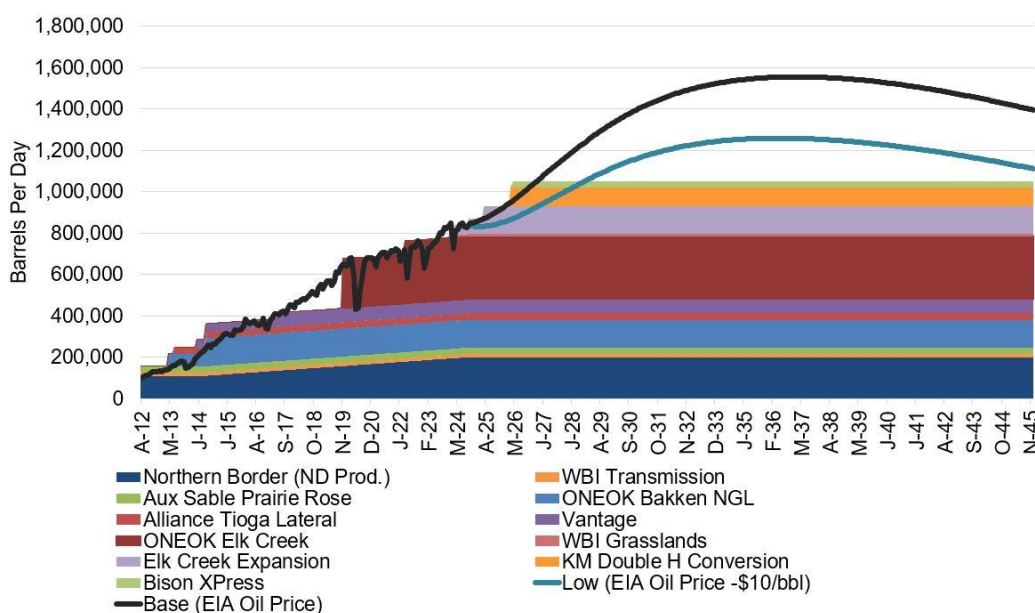


Figure 6. Forecasted North Dakota NGL production and transportation options.

Natural Gas Capture

Although not a regulatory agency, the Pipeline Authority plays an active support role in helping the state maximize natural gas capture. The Pipeline Authority continuously monitors and reports gas capture statistics and provides analysis on current and future developments to industry participants, regulators, policymakers, and the public.

Several significant actions taken by the North Dakota Industrial Commission in recent years have positively impacted natural gas capture efforts. The first was the requirement for operating companies to submit a natural gas capture plan to the Oil & Gas Division, outlining how produced natural gas would be sold or utilized on-site. The second key action was an Industrial Commission order on July 1, 2014, which established gas capture targets through 2020 and provided a means of enforcement by the Oil & Gas Division through production and permitting restrictions.

In November 2018, the Industrial Commission updated the natural gas capture regulations for Bakken and Three Forks production. Additional details on the November update are available on the Oil & Gas Division website.

The current North Dakota gas capture target rates are as follows:

- 74% Capture – Q4 2014
- 77% Capture – Q1 2015
- 80% Capture – Q2 2016
- 85% Capture – Q4 2016
- 88% Capture – Q4 2018
- 91% Capture – Q4 2020

In July 2024, North Dakota’s petroleum industry produced 3.46 billion cubic feet per day (BCFD) of natural gas, achieving a gross capture rate of 94%. Industry estimates suggest that over \$20 billion has been invested in pipeline and processing infrastructure to help meet the state's gas capture targets. To achieve future gas capture goals, the industry will require significant additional investments in gas gathering, processing, and transmission systems.

Natural Gas Processing

For reference, a North Dakota Gas Processing and Transportation map can be found on the Pipeline Authority website and a table of all gas processing plants can be found in Appendix C

New or Expanding Natural Gas Plants

Due to the vast footprint of the Bakken resource, natural gas gathering and processing operators in North Dakota have historically faced significant challenges in keeping pace with the increasingly rapid and efficient drilling and completion techniques. Despite these challenges, the industry is stepping up to capitalize on the substantial economic opportunities presented by the rich natural gas produced in the Bakken.

North Dakota currently has thirty-four natural gas processing and conditioning plants in operation, with a combined processing capacity of approximately 4.3 billion cubic feet per day (BCFD) (Figure 7). The Pipeline Authority anticipates that natural gas processing capacity will need to increase by over 1 BCFD in the coming years to keep pace with production growth. A detailed breakdown of existing and proposed facilities can be found in Appendix C and on the Pipeline Authority website.

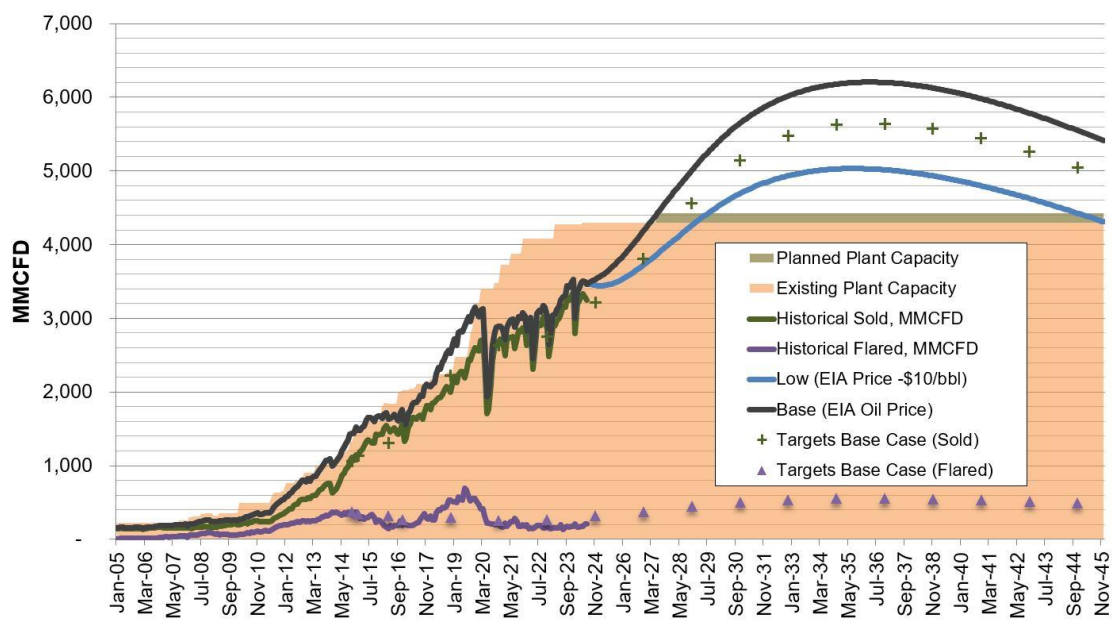


Figure 7. North Dakota natural gas processing plant intake capacity, gas production, gas forecast, and NDIC capture targets. (Forecast starts in Aug. 2024)

Williston Basin Gas Storage

One primary use of residue natural gas is heating residential and commercial buildings. Without the use of underground natural gas storage, the supply chain would struggle to handle significant seasonal demand fluctuations. During the warm summer months, excess natural gas is stored in underground reservoirs and then withdrawn during colder periods when demand is higher (Figure 8). The reservoirs used for natural gas storage are typically depleted gas-producing fields that have been converted to serve a storage function.

The nearest residue gas storage field is located near Baker, Montana, and is operated by WBI Energy. Primarily situated in southeastern Montana within the Cedar Creek Anticline, the Baker field is the largest natural gas storage field in the United States. It has a working gas capacity of over 193 billion cubic feet (BCF) but has been operating with a balance of less than 50 BCF over the past year (Figure 8). Regional interstate residue gas pipelines provide transportation services to and from the Baker storage field.

In September 2024, WBI Energy initiated public discussions to explore expanding system capacity and pipeline connectivity to the Baker storage field. The Pipeline Authority remains actively engaged in these discussions to support production growth and economic development opportunities in the region.

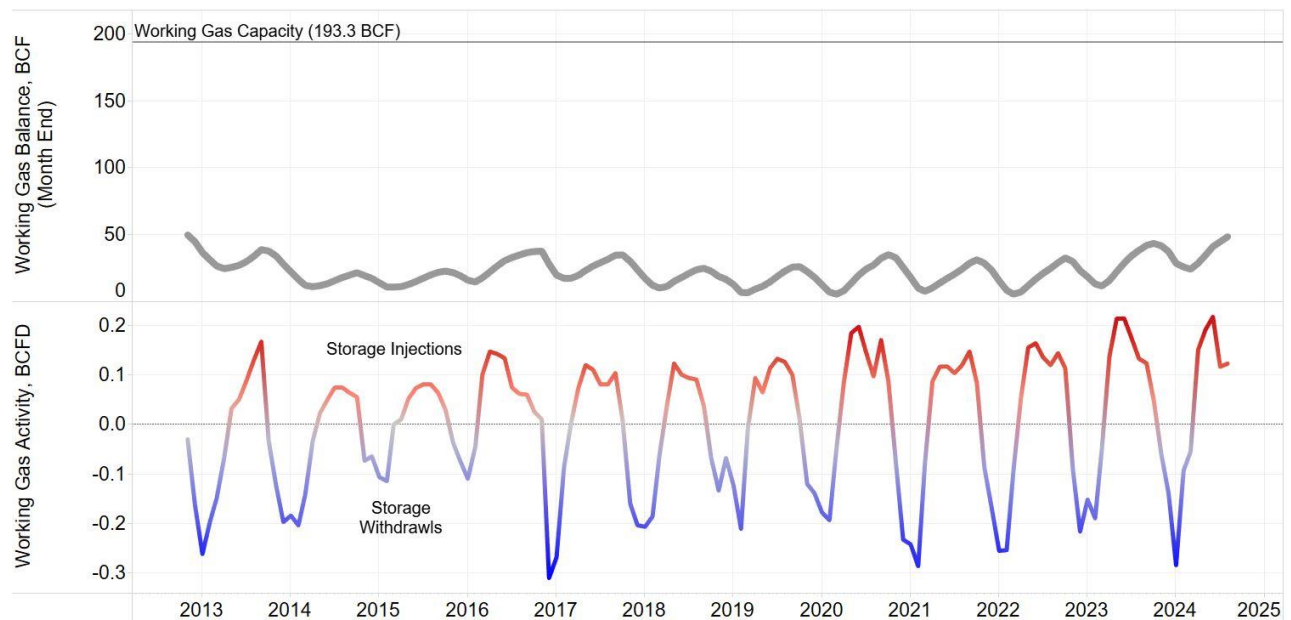


Figure 8. WBI Energy gas storage field activity

North Dakota Freight Advisory Committee

In the fall of 2018, the Pipeline Authority Director, along with several other private and public entities, partnered with the North Dakota Department of Transportation to establish the North Dakota Freight Advisory Committee. The primary objective of the committee is to improve collaboration between transportation providers, industry sectors, and government entities to efficiently expand North Dakota's economy.

In June 2022, a draft of the combined State Freight and Rail Plan was published on the North Dakota Department of Transportation's website. Public outreach and comment periods began in Q3 2022, with the final plan being published in January 2023.

The Committee continues to focus on strategies to enhance the state's freight transportation system by improving efficiency, safety, and connectivity. Its goal is to support economic growth by identifying infrastructure needs, fostering collaboration among stakeholders, and ensuring sustainable freight movement across all modes of transport. Future updates to the State Freight and Rail Plan will be published in the coming years.

Along with the Pipeline Authority, member entities include:

- BNSF Railroad
- Dakota, Missouri Valley, & Western Railroad
- Federal Rail Administration
- Magnum Trucking
- Federal Highway Administration
- North Dakota Department of Commerce

- Teamsters Local 638
- Eger Grain & Livestock
- North Dakota Aeronautics Commission
- United Sugars Corporation
- North Dakota Motor Carriers Association
- North Dakota Mill and Elevator
- North Dakota League of Cities
- North Dakota Trade Office
- North Dakota Department of Transportation
- North Dakota Public Service Commission
- North Dakota Metropolitan Planning Organization
- Mountrail County
- Impact ND

Industry and Public Communications Activities

Pipeline Authority Websites

In an effort to provide industry and public users with the most timely and comprehensive information, the Pipeline Authority continues to update its websites as new data becomes available. The websites enable the Pipeline Authority to share current Williston Basin oil production data, maps, news, publications, basic pipeline information, pipeline safety details, and links to pipeline mapping systems.

Monthly Updates

During the 2023-2024 fiscal year, the Pipeline Authority produced monthly transportation and production reports, providing interested parties with a quick overview of crude oil and natural gas production levels, as well as details on how each commodity was transported and/or processed. This information is presented during monthly media events held in collaboration with the North Dakota Oil & Gas Division. The reports are also posted on the Pipeline Authority's website, and an email distribution list has been established to circulate updates to those interested.

North Dakota Drilling Economics

To assist the midstream industry in understanding current and future petroleum activity levels, the Pipeline Authority regularly publishes analyses exploring the economics of drilling in North Dakota's Bakken and Three Forks formations. This research examines historical drilling success in North Dakota and predicts where drilling may be concentrated during periods of fluctuating oil prices.

As part of this research, Figure 9 compares the expected after-tax rate of return for wells drilled with two- and three-mile lateral lengths. North Dakota operators have increasingly adopted three-mile laterals, observing a 40%-45% increase in well productivity over two-mile laterals while only experiencing a ~25% rise in overall costs. Based on an assumed \$65/bbl at the wellhead, it was found that two-mile wells could consistently achieve a 10%-20% rate of return or higher if they produced at least an average of 200 barrels

of oil per lateral mile per day during the peak production month. Due to efficiency gains, three-mile wells could achieve a similar rate of return while producing only an average of 150 barrels of oil per lateral mile per day during the peak production month. Maps are also maintained to indicate the general locations of the wells analyzed in Figure 9.

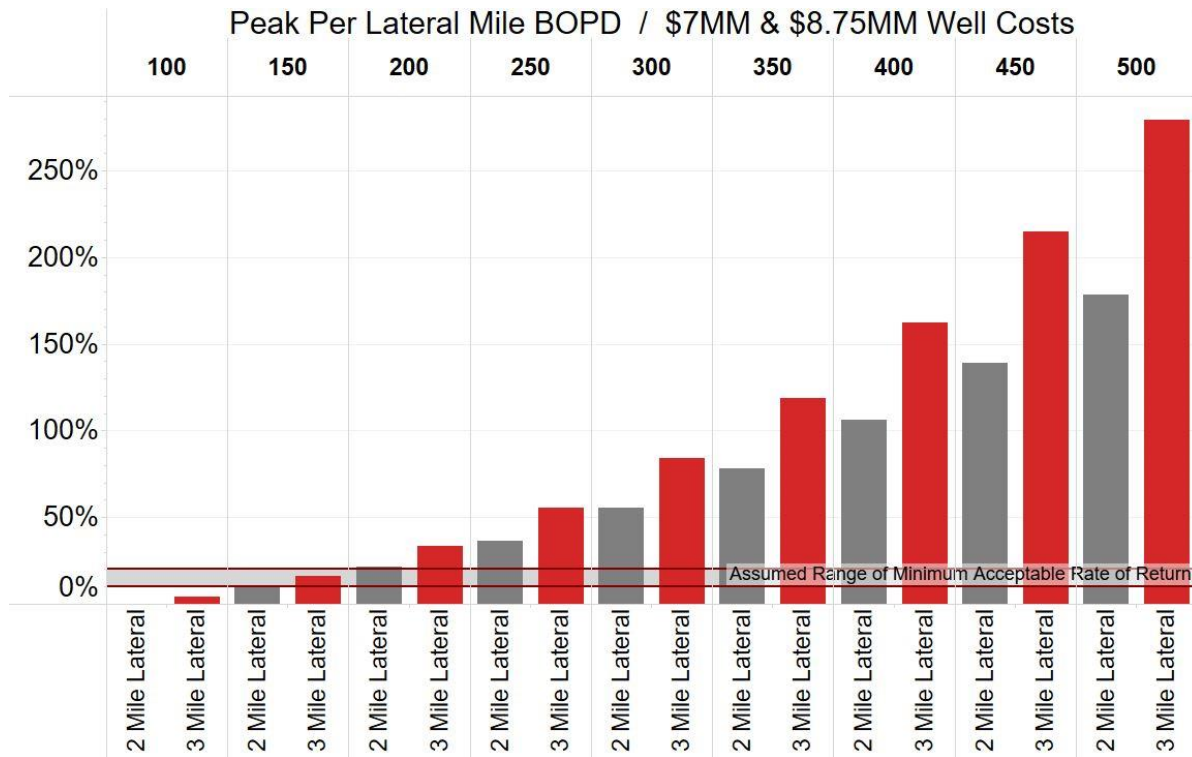


Figure 9. North Dakota drilling economics summary (Assumes \$65/bbl at the wellhead)

Pipeline Presentations

The Pipeline Authority had the opportunity to present at various legislative, industry, and public events during the past fiscal year. These presentations typically focused on North Dakota's transportation dynamics, with additional material covering drilling economics and production techniques. Slides from many of the major events have been made available on the Pipeline Authority's website for public access.

Williston Basin Pipeline Infrastructure

For reference, a series of North Dakota pipeline maps can be found in Appendix A

Pipeline Mileage

In 2023, North Dakota's pipeline industry added 409 miles of new oil, natural gas, and produced water pipelines (Figure 10). The majority of these new pipelines function as gathering systems for oil, natural gas, and produced water (Figure 11). The significant decrease in pipeline construction from 2016 through 2023 was proportional to the slowdown in well completions and the geographic concentration of activity within the core of the oil play. Data from the Federal Department of Transportation and the North Dakota Oil & Gas Division indicates that North Dakota now has over 30,840 miles of gathering and transmission pipelines. Further details about North Dakota's pipeline network can be found on the Pipeline Authority website.

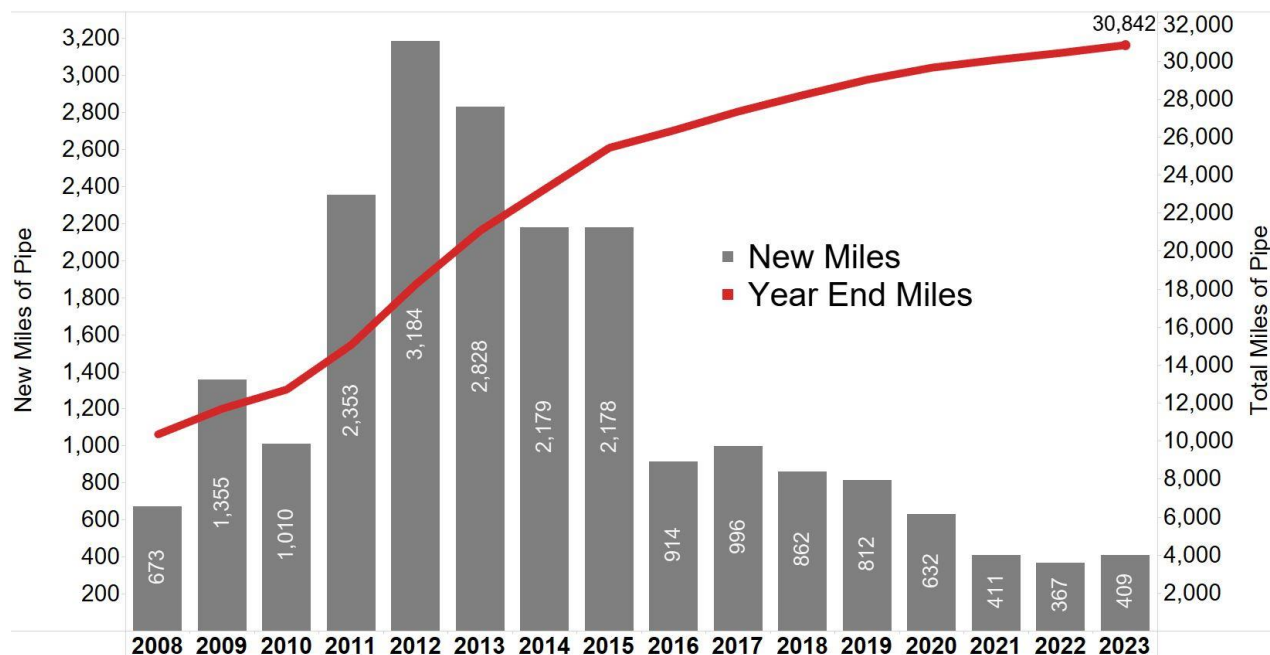


Figure 10. North Dakota pipeline mileage

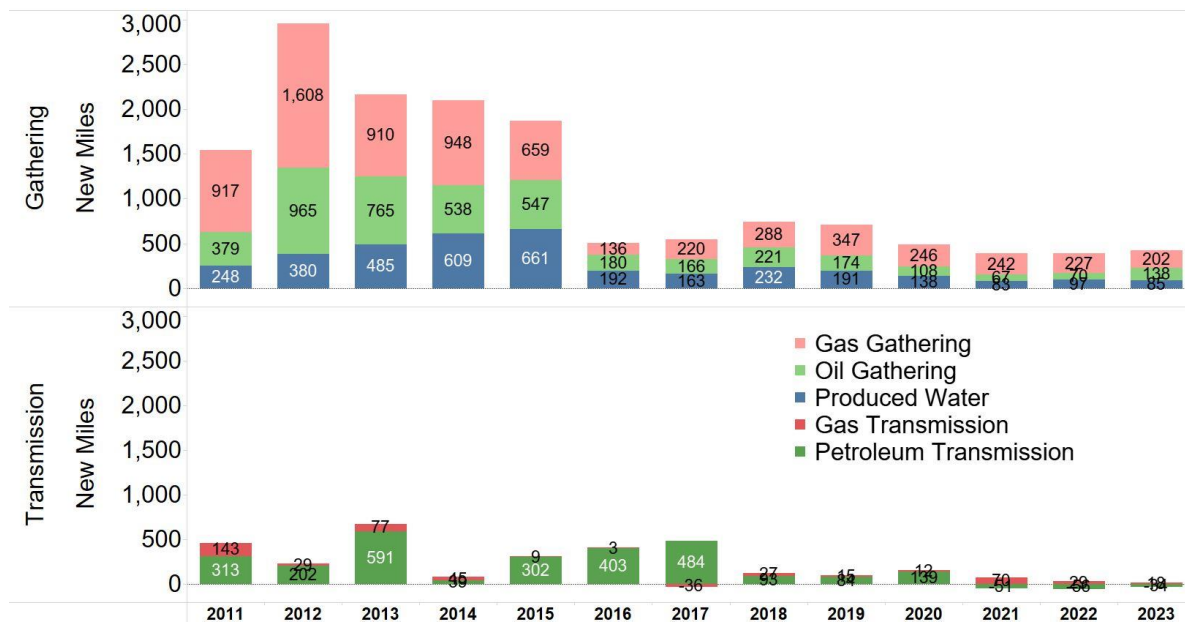


Figure 11. New North Dakota pipeline mileage by category

Crude Oil Pipelines, Refining, and Rail Transportation

Enbridge/North Dakota Pipeline Company: Having completed several expansion projects over the past number of years, Enbridge now has the capacity to move 355,000 BOPD on its pipeline system to Clearbrook, MN. Enbridge completed their work to expand north bound capacity of 145,000 BOPD in early 2013 for the larger scale “Bakken Expansion Project”. Oil using the northbound route navigates the Enbridge Saskatchewan system to an interconnect with the Enbridge Mainline at Cromer, MB. Once on the Mainline system, the Williston Basin oil quickly reenters the United States and meets east bound Enbridge oil at Clearbrook, MN.

Enbridge’s plans to construct the 225,000 BOPD “Sandpiper” system were deferred during the third quarter of 2016 due to unexpected regulatory challenges in Minnesota and ultimately canceled. Enbridge plans to monitor market conditions and reevaluate potential expansion opportunities in North Dakota.

Bridger, Belle Fourche, and Butte Pipelines (Bridger Pipeline System): Bridger and Belle Fourche Pipelines operate as intra-regional pipeline systems moving oil to several pipeline interconnects or rail facilities in the Williston Basin. One such pipeline interconnect is with the Butte Pipeline near Baker, MT. The Butte Pipeline currently has the capacity to move 275,000 BOPD to Guernsey, WY. In Guernsey, WY, the oil is transported to Wood River, IL on the Platte Pipeline, Cushing, OK on the White Cliffs Pipeline, or loaded into rail cars for further transport.

In mid-2022, Bridger Pipeline began constructing a multi-segment expansion project from Johnson’s Corner, ND to Guernsey, WY to meet growing production levels. Placed into service in early 2023, the 16”, 137 mile “South Bend Pipeline” is able to ship 175,000 BOPD to Baker, MT. Additionally, a 191-mile

southern section of new 20" pipeline will move up to 200,000 BOPD of North Dakota and Rockies oil from Hulett, WY to Guernsey, WY. At Guernsey, WY oil has multiple shipping options by pipeline and rail.

BakkenLink: After announcing plans in 2010 to offer a pipeline system connecting the Williston Basin to the Keystone XL Pipeline in Eastern Montana, BakkenLink altered their project scope. Now in service, the BakkenLink system collects crude oil from various locations along its route south of Lake Sakakawea and delivers the oil to a unit train rail facility located near Fryburg, ND. In late 2015, Andeavor (formerly Tesoro Corporation) purchased the BakkenLink pipeline and rail facility from Great Northern Midstream.

In February 2018, Andeavor (now Marathon Petroleum) sought, and was granted, approval from the North Dakota Public Service Commission to add NGL service to the existing BakkenLink crude oil system. Completed in late 2018, the additional NGL service to Fryburg, ND uses three new line segments on the north and south ends of the BakkenLink system.

Energy Transfer Partners: In early 2014, Energy Transfer Partners (ETP) held an open season to solicit interest in a new 30" pipeline from North Dakota to Patoka, IL. In June 2014, ETP announced that they had secured sufficient shipper support to move forward with the project. The project began construction in May 2016 and was placed into commercial service on June 1, 2017. When the "Dakota Access" pipeline began collecting oil north and south of Lake Sakakawea it had the ability to transport up to 520,000 BOPD.

In 2018, two successful open seasons were held for additional service on the Dakota Access pipeline. With additional shipper commitments, the pipeline was expanded to carry up to 600,000 BOPD.

In 2019, ETP began the regulatory process to expand the Dakota Access system up to 1.1 million BOPD through the use of additional pump stations and horsepower at existing pump facilities. In August 2021, ETP announced the most recent completion of the Dakota Access Pipeline system expansion to a new system capacity of 750,000 BOPD. No timelines have been announced as to when the full system expansion up 1.1 million BOPD would be complete.

In 2020, DC District Court Judge James E. Boasberg ruled that the US Army Corp of Engineers needed to conduct a full environmental impact statement (EIS) for the Lake Oahe crossing in south central North Dakota. After months of rigorous review, in May 2021 Judge Boasberg ruled that the Dakota Access pipeline could continue operations while the EIS proceeds. A draft EIS was released in the third quarter of 2023 with the final publication anticipated to be complete in 2025.

Kinder Morgan Double H Pipeline: The 12-inch, 485-mile Double H Pipeline transports oil from North Dakota and Montana to Guernsey, Wyoming, where it connects with other regional pipelines for further distribution. Originally developed by Hiland Partners, the 88,000 BOPD system became operational in 2015. Kinder Morgan acquired the pipeline later that year as part of its purchase of Hiland Partners.

In July 2024, Kinder Morgan announced plans to convert the Double H Pipeline to NGL service in response to changing market demand. The pipeline will be removed from crude oil service in 2025, with NGL transportation expected to begin in the first half of 2026.

Plains All American Pipeline: In November 2010, Plains All American Pipeline (Plains) announced plans to construct a new 103-mile, 12-inch, pipeline from Trenton, ND to an interconnect with the existing Wascana Pipeline at the United States-Canada border in northeast Montana. The “Bakken North” pipeline went into service in May 2014, with an initial capacity of 40,000 BOPD, expandable to 75,000 BOPD.

TC Energy (TransCanada) Bakken Marketlink: On September 13, 2010, TransCanada launched a successful open season for Bakken producers interested in accessing TransCanada’s proposed Keystone XL Pipeline project in eastern Montana. The proposed 100,000 BOPD interconnect would be located near Baker, MT and would require new pumps and tanks to accommodate the Bakken oil. Third party shippers would be necessary to move the crude to the Baker, MT facility from North Dakota.

In November 2015, President Obama announced that the Keystone XL Pipeline was not in the national interest of the United States and that a required Presidential Permit would not be granted. In March 2017, President Trump reversed the White House decision and granted a Presidential Permit to TransCanada for the Keystone XL Pipeline. TC Energy (formerly TransCanada) continued their work towards regulatory approval of the Keystone XL Pipeline, before President Biden canceled the Presidential Permit in January 2021. TC Energy formally cancelled the project in June 2021.

Marathon Petroleum Mandan Refinery (Formerly Andeavor/Tesoro): Expanded by 10,000 BOPD in 2012, Marathon Petroleum operates a 68,000 BOPD refinery in Mandan, ND. The refinery receives its light sweet feedstock through a network of pipelines in the Williston Basin. Products generated at the refinery are distributed directly from a truck rack at the facility or through the NuStar North Pipeline to Eastern North Dakota and Minnesota.

In 2017, Tesoro Corporation changed its name to Andeavor. In the second half of 2018, Andeavor merged with Marathon Petroleum and now operates under the Marathon Petroleum name.

Marathon Petroleum Dakota Prairie Refinery: In late June 2016, Tesoro Corporation purchased the Dakota Prairie Refinery from MDU Resources Group and Calumet Specialty Products Partners. The Dakota Prairie Refinery, began processing 20,000 BOPD at its facility just west of Dickinson, ND in May 2015. The “diesel topping” refinery produced around 7,000 BPD of diesel fuel for regional consumption, while the remaining product was transported for further processing or use.

In 2018, a decision was made to convert the refinery to produce renewable diesel fuel by mid-2020. Beginning in June 2020, the facility no longer used crude oil as a feedstock. Renewable diesel fuel from the facility is now primarily being shipped by rail to markets in California.

Davis Refinery: Meridian Energy Group is planning to construct a crude oil refinery in Billings County, east of the Fryburg Rail Facility in Belfield. The refinery is designed with an inlet oil capacity of 49,500 BPD. All refined products are expected to be marketed regionally with transportation taking place by truck and/or rail. Preliminary site preparation began in July 2018 with plant completion undetermined at time of report publication.

A map of North Dakota crude oil gathering systems can be found on the Pipeline Authority website

Rail Loading Facilities: The transportation of crude oil by rail has played a critical role in moving increasing volumes of crude oil from the Williston Basin to markets across the United States and Canada. Figure 12 illustrates the estimated market share percentages for rail, pipeline, and local refining in the Williston Basin, while Figure 13 presents the estimated volume of oil transported by rail out of North Dakota. Additional maps, capacities, and details about various facilities are available on the Pipeline Authority's website.

A significant decrease in crude-by-rail volumes is evident during the 2015-2017 period in Figures 12 and 13. This decline can be attributed to reduced production in North Dakota and diminished market incentives for using rail transport. Prior to the 2020 industry downturn, crude-by-rail volumes had been steadily increasing as production rose and pipeline egress reached capacity. The Pipeline Authority estimates that six of the more than 20 rail facilities in the region remain active in loading crude oil, with the most active facilities being those capable of handling unit trains and offering multiple inbound/outbound marketing options.

The future utilization of crude-by-rail in North Dakota will be influenced by oil production volumes, market pricing, pipeline capacity, and regulatory oversight.

A map of North Dakota oil rail loading facilities can be found in Appendix B

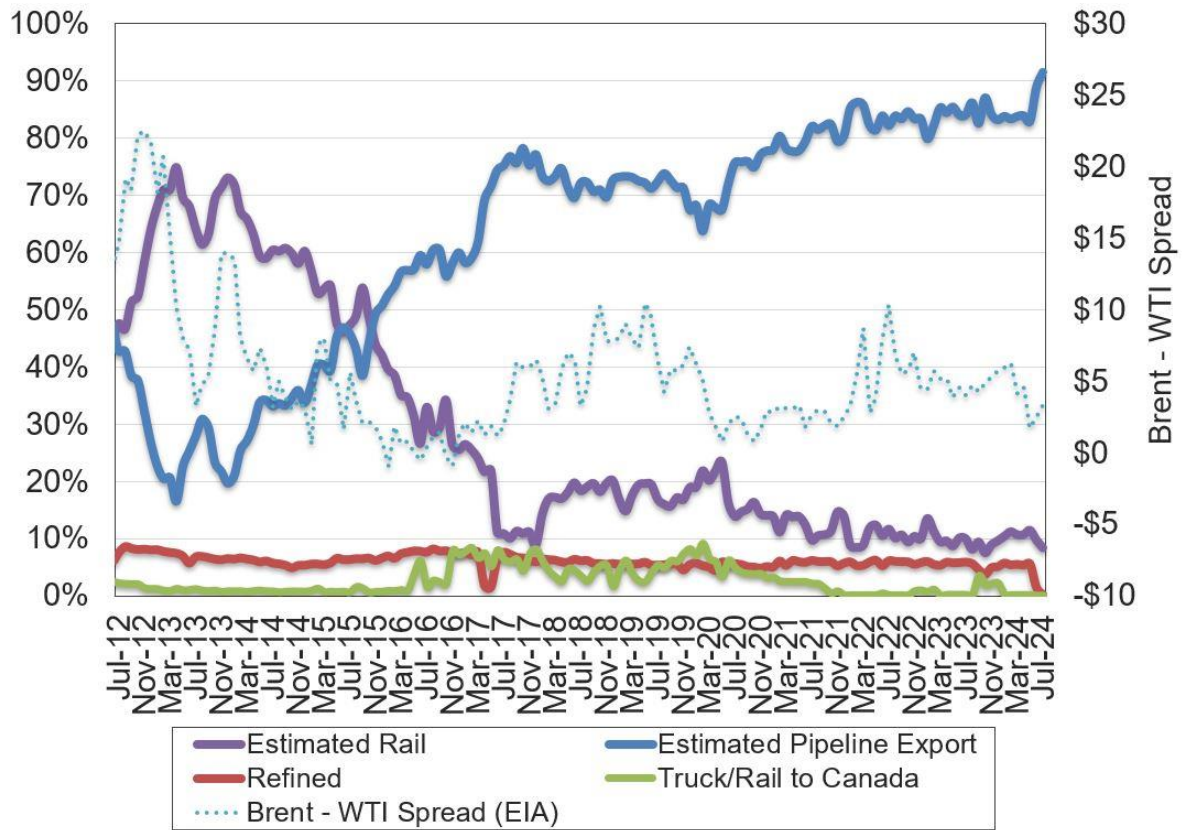


Figure 12. Estimated oil transportation by mode (July 2024 data)



Figure 13. Estimated outbound crude oil rail shipments (July 2024 data)

Natural Gas Pipelines

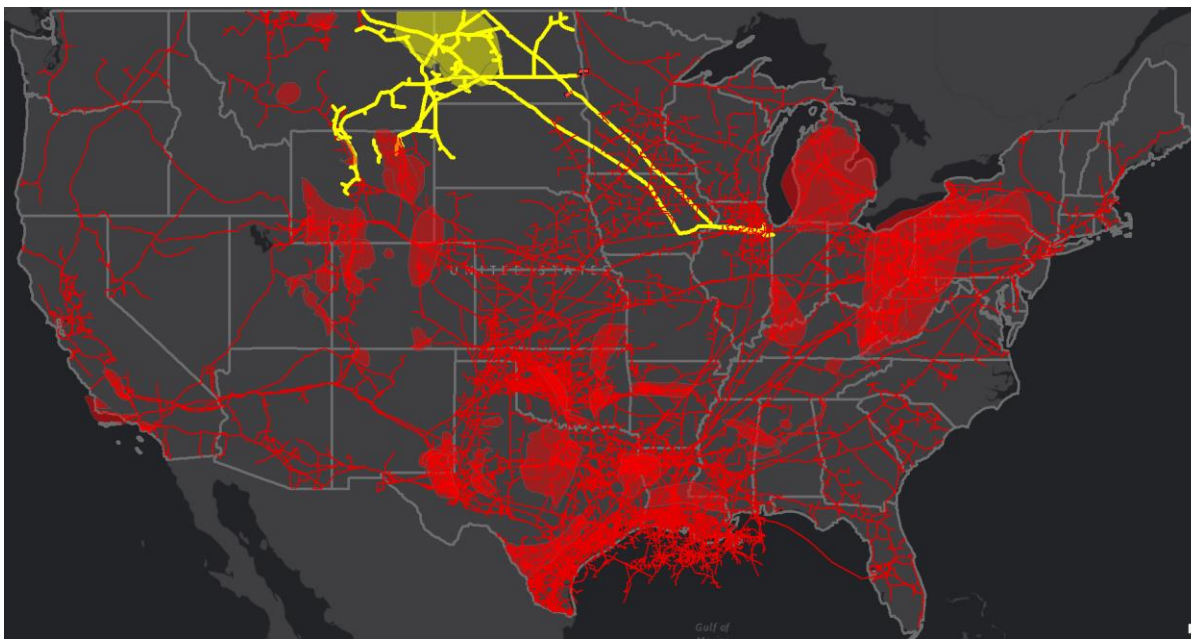


Figure 14. North Dakota's interstate gas pipelines (yellow) and the national interstate gas pipeline network (red)

Alliance Pipeline: The Alliance Pipeline is a high pressure, large diameter natural gas pipeline that originates in British Columbia, Canada and terminates at the Aux Sable gas processing plant near Chicago, IL. The Alliance Pipeline transports “dense gas” or gas that still contains high BTU natural gas liquids, such as propane and butane. In February 2010, the Alliance Pipeline began transporting rich natural gas from North Dakota via a new interconnect with the Prairie Rose Pipeline near Bantry, ND (See Aux Sable below). The 36-inch diameter United States portion of the pipeline has a certified capacity of 1.513 billion cubic feet per day (BCFD). The Alliance Pipeline has one direct North Dakota delivery point in Hankinson and one interconnect with Montana Dakota Utilities to serve industrial manufacturing in Gwinner.

In response to growing natural gas production, Alliance Pipeline announced plans on June 22, 2011, to construct a new, 80-mile, natural gas pipeline from the Hess Gas Plant in Tioga, ND to an interconnection point near Sherwood, ND. Commissioned in late 2013, the “Tioga Lateral Pipeline” has the ability to deliver liquids rich, high BTU, natural gas to Chicago, IL for further processing and transportation. The Tioga Lateral has the capacity to transport up to 126 million cubic feet per day (MMCFD).

Northern Border: The Northern Border Pipeline, owned by TC Pipelines and ONEOK Partners, is a 1,249-mile pipeline originating at the Port of Morgan in Montana and terminating near North Hayden, Indiana. The pipeline has a system receipt capacity of 2.37 BCFD, with less than half of the gas supply in 2020 originating in Canada through a receipt point with the Foothills Pipeline at the Port of Morgan. The 42-inch diameter Northern Border Pipeline receives gas deliveries at a total of seventeen receipt points in the Williston Basin with fourteen of those points for North Dakota gas supply. (See the Bison Pipeline section below for details on the proposed Bison XPress expansion project)

In May 2020, Northern Border submitted a proposed tariff modification to the Federal Energy Regulatory Commission (FERC) that would limit the energy content of flows exiting North Dakota to 1,100 BTU. The FERC decision process resulted in a technical conference being held and multiple opportunities for interested party input. While the Pipeline Authority remained neutral on the proposed tariff modifications, considerable efforts were made to model and quantify the potential impacts to North Dakota's petroleum industry. FERC ultimately rejected the proposed BTU limit, but left open the opportunity for a similar proposal to be filed in the future with additional supporting evidence.

See the "Bison Pipeline" section for details on the Bison Xpress pipeline expansion project.

WBI Energy: Formerly known as Williston Basin Interstate Pipeline Co., WBI Energy operates more than 3,800 miles of natural gas transmission pipelines throughout North Dakota, Montana, Wyoming, Minnesota, and South Dakota. This network of pipelines plays a vital role in North Dakota's natural gas industry. It contains fourteen interconnecting points with other regional pipelines and can also deliver natural gas to local distribution companies or natural gas storage fields. WBI continues to make system upgrades in western North Dakota in order to meet growing customer demand.

In June 2016, WBI announced an open season to connect the eastern North Dakota portion of the system with the Viking Pipeline in western Minnesota. This project, known as the Valley Expansion, does not directly support North Dakota gas production volumes, but rather would serve to provide additional gas volumes to consuming markets in eastern North Dakota. The Valley Expansion project became operational in late 2018.

In early 2019, WBI Energy announced plans to construct a new gas pipeline system called the "North Bakken Expansion Project". Started in July 2021 and completed in Q1 2022, the \$260 million system consists of 60 miles of 24" pipe and 30 miles of 12" pipe. The initial project added 250 MMCFD of capacity from Tioga, ND to an interconnect with the Northern Border Pipeline in McKenzie County. Capacity can be expanded to 600,000 MCFD to meet growing gas volumes in the future.

In Q3 2021, WBI Energy held a successful open season for a system expansion in Southeast North Dakota. The 60.5 mile, 12" pipeline will deliver up to 20.6 MMCFD of natural gas from Mapleton, ND to Wahpeton, ND. WBI Energy began the FERC regulatory process in Q2 2022, with formal support from the Industrial Commission being submitted in June 2022 and final approval received in Q3 2023. The pipeline is scheduled to be in-service Q4 2024 and has the potential to connect to additional nearby communities and end-users.

In Q1 2022, WBI Energy held a successful open season for the expansion and permanent reversal of the existing Grasslands pipeline. The 16" pipeline connects to the Northern Border pipeline near Manning, ND and is slated to deliver gas to two additional natural gas pipelines in Wyoming for further transport to the Cheyenne trading hub. The project began construction in summer 2023 and was completed in Q4 2023. Initial project capacity is estimated to be 94 MMCFD.

Aux Sable: In June 2011, Aux Sable announced the acquisition of the Prairie Rose Pipeline and condensate recovery facility near Stanley, ND. Originally constructed by Pecan Pipeline, the 75-mile, 12-inch system went into service February 2010 and has the capability to transport over 120 MMCFD of unprocessed natural gas from Mountrail County to an interconnect with the Alliance Pipeline near Bantry, ND.

Bison Pipeline: TC Energy placed the 302-mile, 30-inch Bison Pipeline into service in early 2011. The pipeline was built to connect natural gas production in the Powder River Basin of Wyoming to the Northern Border Pipeline in Morton County, North Dakota. The pipeline had an initial capacity of 407 MMCFD and could be expanded to 1 BCFD. From 2018 to the first half of 2020, the Bison Pipeline was idle. Limited and sporadic natural gas transportation resumed in May 2020 and ceased in September 2020.

In the first half of 2022, TC Energy began informally seeking interest for a proposal to reverse the Bison Pipeline to serve growing natural gas transmission needs from North Dakota. In June 2023, a binding open season was held offering 430,000 dekatherms per day of capacity. Two shippers, Hess and ONEOK, signed up for a combined total of 300,000 dekatherms per day of firm capacity. In Q3 2023, TC Energy filed for project approval at FERC with an in-service target of Q1 2026. An expansion from 300,000 to the proposed 430,000 dekatherms per day is possible in the future if supported by shipper demand.

Dakota Natural Gas: Dakota Natural Gas, LLC was formed in 2018 to provide natural gas service to areas of North Dakota that were currently not served by any other natural gas utility. Regulated by the North Dakota Public Service Commission, Dakota Natural Gas was authorized to provide natural gas distribution service to retail and commercial customers in North Dakota. The first project was completed in 2019 and provided gas service from the Viking Pipeline in western Minnesota to the community of Drayton, ND. The second project was completed in late 2021 and delivers gas from the Viking Pipeline to residential and industrial users in the communities of Mayville and Hillsboro, ND. Further expansion to residential and commercial users in Portland, ND was completed in Q4 2022.

A new project to connect the cities of Arvilla and Larimore in Northeast North Dakota was announced in mid-2023 with a target in-service by late 2024.

Natural Gas Liquids Pipelines

ONEOK Bakken NGL Pipeline: On July 26, 2010, ONEOK Partners announced plans to construct a new 12” natural gas liquids pipeline capable of moving 60,000 BPD from existing and planned facilities in the Williston Basin to an interconnect with the Overland Pass Pipeline near Cheyenne, WY. The “Bakken NGL Pipeline” was built to address the high volumes of natural gas liquids that are extracted from the rich Bakken gas during processing. The pipeline operates as a Y-grade system, with product fractionation taking place in Bushton, KS. ONEOK announced completion of the pipeline in April 2013 and an expanded capacity of 140,000 BPD in September 2014.

In February 2018, ONEOK announced a new NGL transmission system known as the Elk Creek Pipeline. The \$1.4 billion project could initially connect 240,000 barrels per day of NGLs from the Williston Basin to further NGL infrastructure in Kansas. Construction of the pipeline began in 2018 and was placed in service late 2019. In mid-2023, ONEOK announced that the Elk Creek Pipeline will be expanded up to 400,000 barrels per day.

Vantage Pipeline: On July 15, 2010, Mistral Energy announced a new 430-mile liquid ethane pipeline from Tioga, ND to Empress, AB. With an initial capacity of 40,000 BPD, the new “Vantage Pipeline” was built to address the high concentration of ethane found in North Dakota’s natural gas. Placed into service Q2 2014 in conjunction with the Hess Tioga Gas Plant Expansion, the pipeline was constructed of 10” pipe. In September 2014, Pembina Pipeline Corporation purchased the Vantage Pipeline from Mistral Midstream.

On February 10, 2015, Pembina Pipeline announced that the Vantage ethane pipeline would expand to connect to ONEOK’s Stateline plants with 50 miles of 8” pipeline. The \$85 million system expansion also included taking the existing mainline capacity from 40,000 bpd to 65,000 bpd. Ethane deliveries from the ONEOK Stateline plants to Vantage began in May 2017.

Kinder Morgan Double H Pipeline: In July 2024, Kinder Morgan announced plans to convert the Double H pipeline from crude oil to NGL service in response to evolving market demand. The pipeline will be removed from crude service in 2025 and will begin transporting NGLs in the first half of 2026. (See crude oil pipeline notes for additional system information)

Carbon Dioxide Pipelines

Dakota Gasification: The Dakota Gasification Company’s, 12-14 inch, 205-mile pipeline went into service in 2000 and transports roughly 150 MMCFD of carbon dioxide to oilfields near Weyburn, SK.

Denbury Resources: Denbury Resources began construction in 2021 on a pipeline to connect the Cedar Creek Anticline oilfields in eastern Montana and southwest North Dakota to the existing Greencore Pipeline at Bell Creek, MT. The 110 mile, \$150 million, extension began injecting carbon dioxide in the field in early 2022.

Project Tundra: Project Tundra has proposed a plan to collect carbon dioxide from the Milton R. Young Station and transport it to the Williston Basin for either sequestration and/or enhanced oil recovery. If approved, a pipeline carrying carbon dioxide from the Young Station could be in service by the late 2020’s.

Midwest Carbon Express: Summit Carbon Solutions, created by Summit Agricultural Group in early 2021, is actively developing the “Midwest Carbon Express” pipeline. If regulatory approvals are granted, the system is projected to be operational in 2027. The Summit Carbon Solutions project will be able to capture and permanently store 18 million tons of carbon dioxide annually, making it the largest such project in the world.

Summit Carbon Solutions would construct the Midwest Carbon Express system across five states, including North Dakota, Nebraska, Iowa, Minnesota, and South Dakota to connect more than 50 ethanol plants for long-term underground sequestration in North Dakota. Initial project costs are estimated at \$8 billion.

Hydrogen Development

Bakken Energy: Bakken Energy, formerly Bakken Midstream Natural Gas, and Mitsubishi Power Americas signed a strategic partnership agreement in early 2021 to create a clean hydrogen hub in North Dakota to produce, store, and transport hydrogen while capturing and sequestering associated carbon dioxide emissions.

Initial plans to utilize the Dakota Gasification Plant near Beulah, ND did not materialize and the company continues to actively evaluate opportunities to proceed.

Liberty Hydrogen Hub: In mid-2022, TC Energy and Marathon Petroleum proposed a new hydrogen hub concept to the Clean Sustainable Energy Authority. Funding from the Clean Sustainable Energy Authority for a FEED study was authorized and will be managed by the Energy and Environmental Research Center. The hub is proposed to be located outside Dickinson, ND with many specific details remaining confidential at time of report.

In the summer of 2024, TC Energy and Marathon Petroleum announced that they will no longer be proceeding with a hydrogen hub in North Dakota. The Energy and Environmental Research Center is actively working to secure new partner(s) to advance the development of a hydrogen hub in North Dakota.

The Pipeline Authority continues to work with additional interested parties on the development of additional hydrogen related projects, including the potential for blending hydrogen into existing natural gas pipelines.

Planned Activities

Over the past year, the Pipeline Authority has continued to experience significant success by collaborating with the industry to quantify future crude oil, natural gas, and natural gas liquids (NGL) production. This work has provided the assurance needed to move forward with various expansion projects. The forecasted petroleum production levels will be regularly updated to reflect emerging industry trends and oil price projections from the U.S. Energy Information Administration. The Pipeline Authority will continue to analyze new and existing development information to gain deeper insights into the crude oil, natural gas, and NGL transportation needs within the Williston Basin.

To support the expansion of natural gas transmission in North Dakota, the Pipeline Authority will continue working with interested parties on project development, exploring all available support options through the newly expanded capacity capabilities.

Additionally, the Pipeline Authority Director will continue to engage with companies investigating the possibility of blending hydrogen into regional natural gas pipelines. Hydrogen blending is common in some regions of the United States and could be highly beneficial for North Dakota, helping to address pipeline gas quality issues while providing a new market opportunity for hydrogen production in the state.

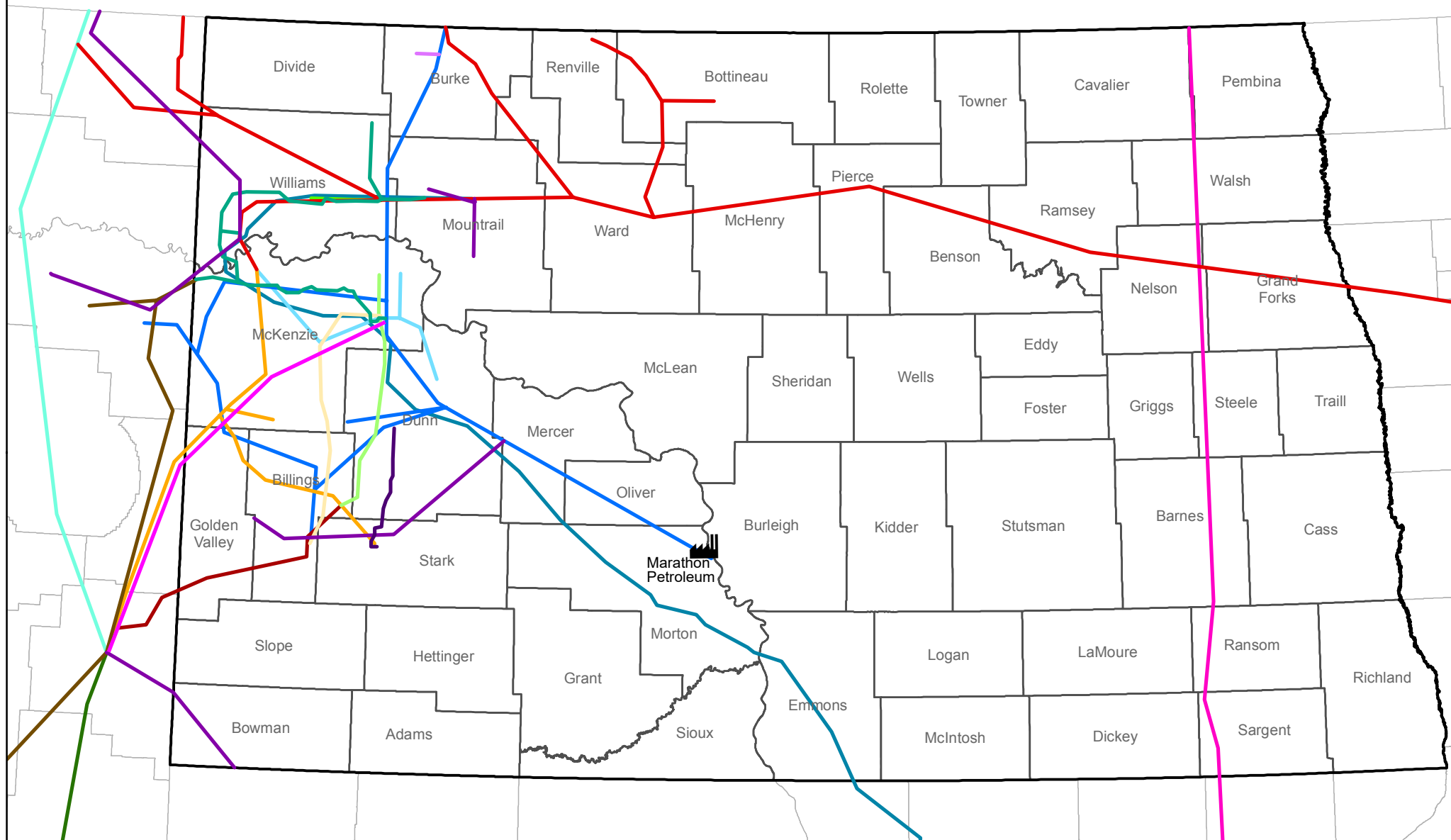
The Pipeline Authority Director will also remain actively involved in his role on the Clean Sustainable Energy Authority's technical committee. Many proposals submitted to the Clean Sustainable Energy Authority are expected to impact or depend on regional midstream energy assets within the state.

The Pipeline Authority will continue its commitment to industry and public information distribution through web events, presentations, monthly updates, and the agency's websites. Information presentations will also be conducted for public audiences, legislative groups, and industry representatives at various events throughout the coming year.

APPENDIX A

North Dakota Pipeline Maps

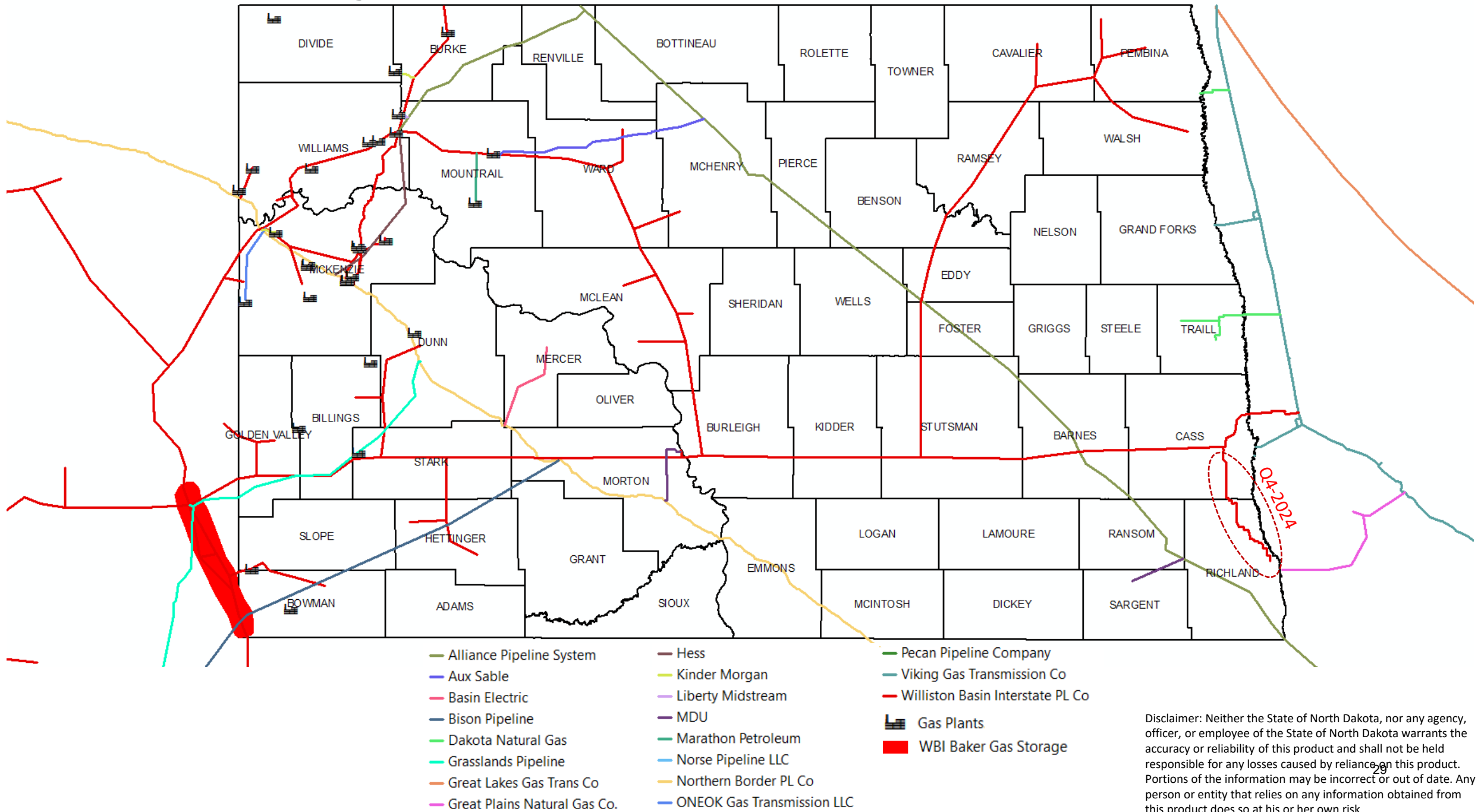
North Dakota Crude Oil Pipelines



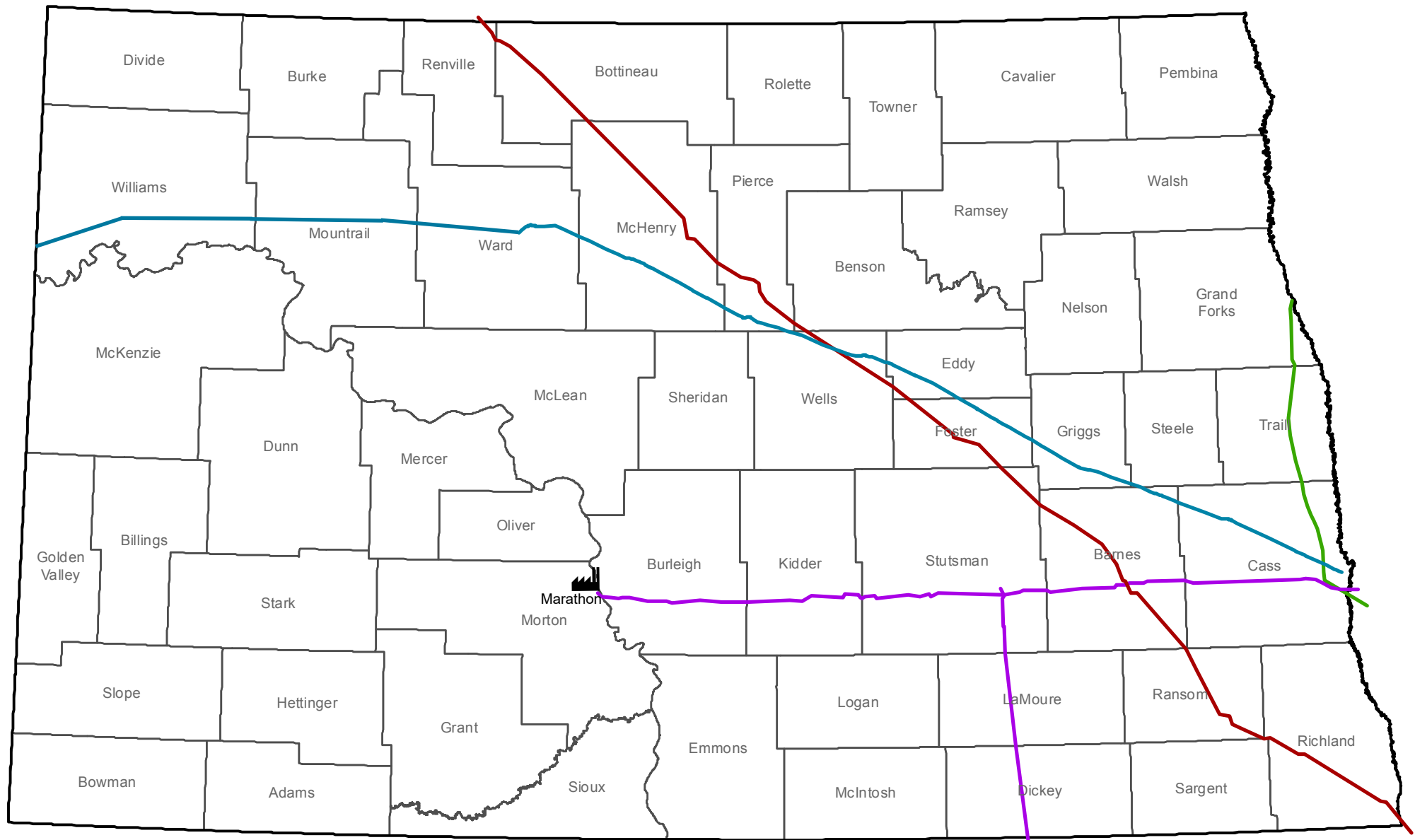
- | | | | | | |
|--------------------|-----------------|---------------|------------|-------------------|----------|
| South Bend | Basin Transload | Butte | Double H | Hiland | Bridger |
| Bakken Oil Express | Belle Fourche | Crestwood | Enbridge | Keystone Pipeline | Targa |
| BakkenLink | Bridger | Dakota Access | Four Bears | Little Missouri | Marathon |

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Major Natural Gas Infrastructure



North Dakota Products Pipelines

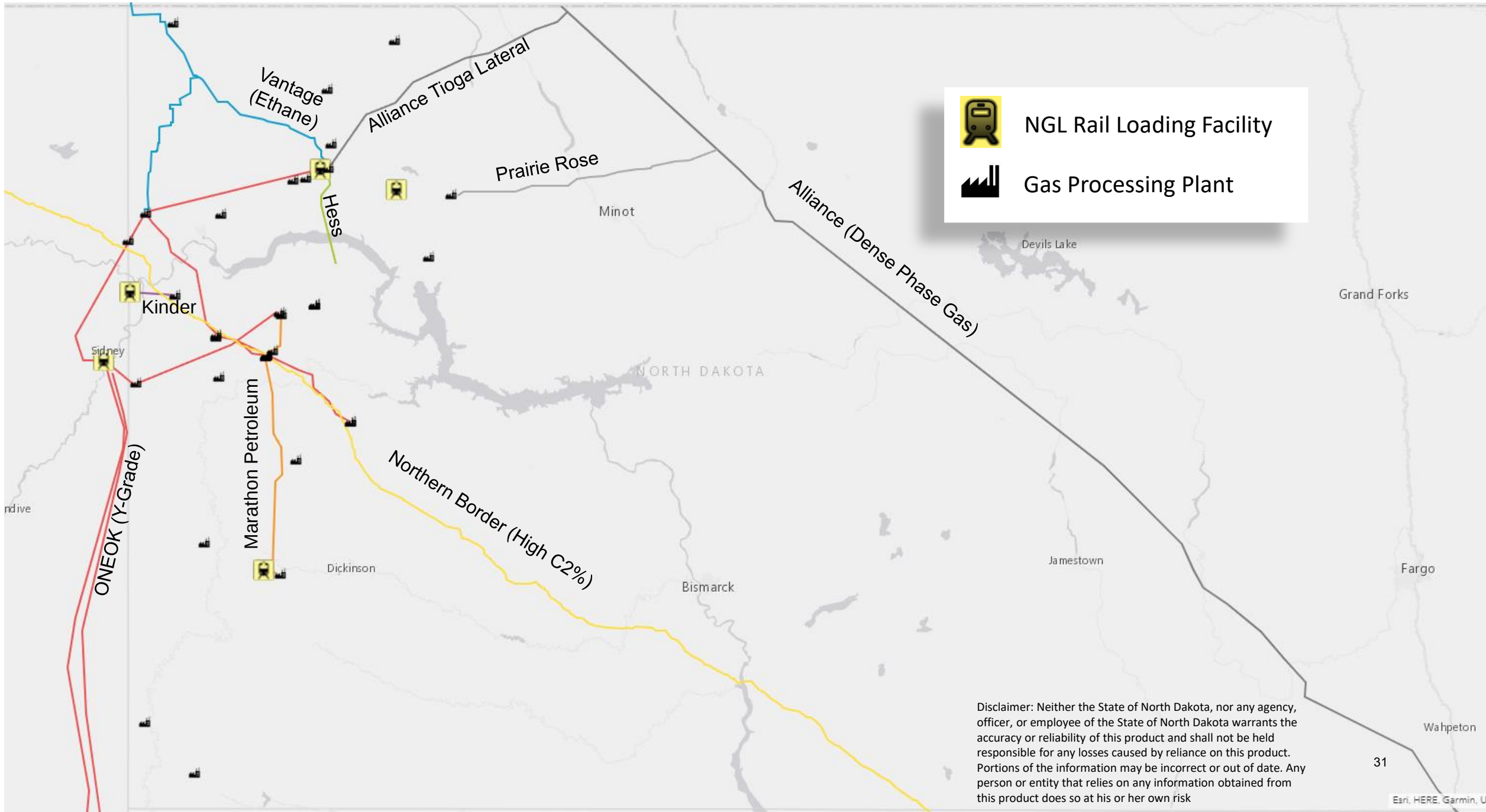


— Cenex Pipeline LLC - Refined Products
 — Magellan Midstream Partners LP - Refined Products
 — Kinder Morgan Cochin - Condensate
 — NuStar Energy - Refined Products
  Refinery

Date: 7/13/2015

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Major Natural Gas Liquids Infrastructure

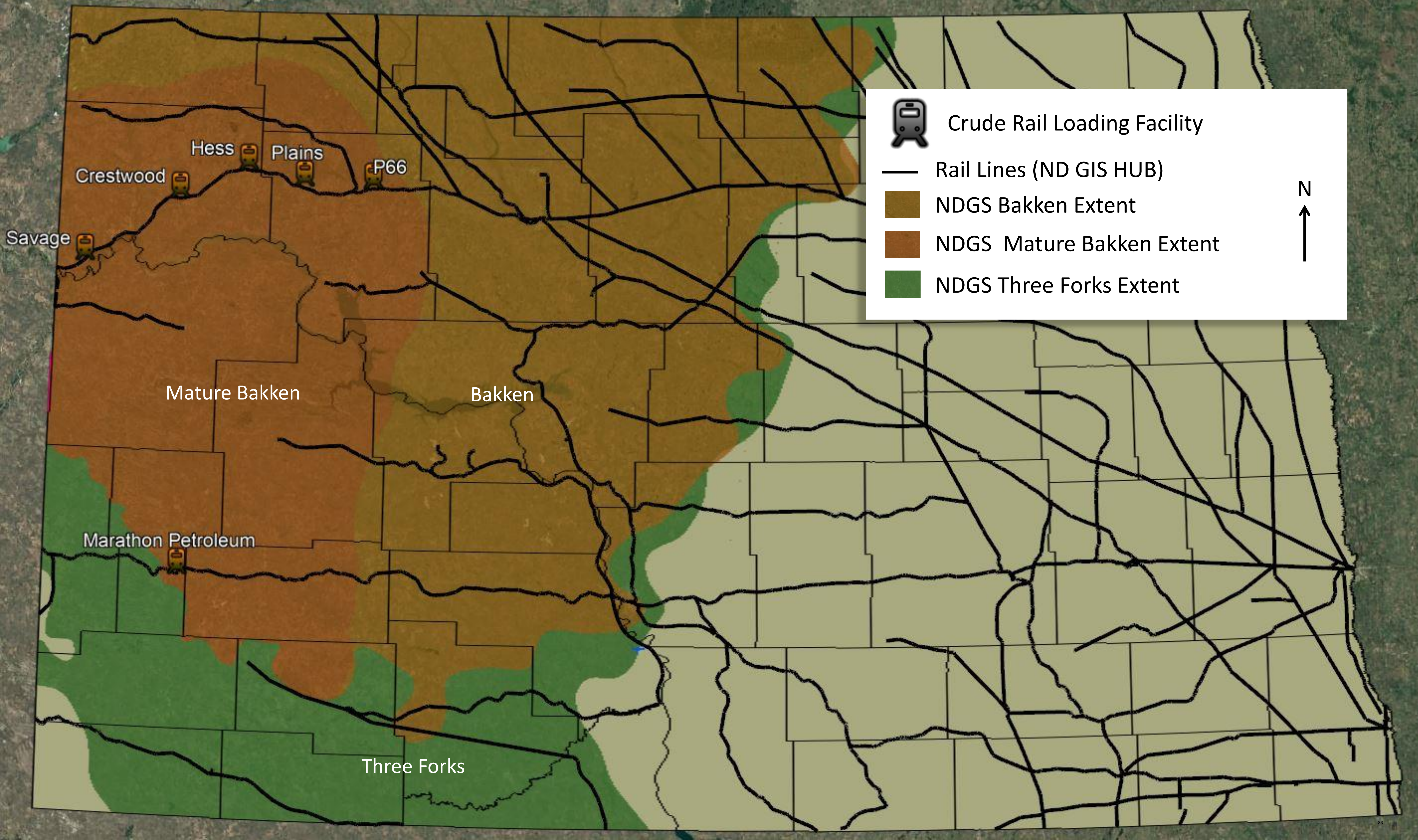


APPENDIX B

North Dakota Crude Oil Rail Loading Map

North Dakota Crude Oil Rail Loading Facilities In Service

North Dakota Pipeline Authority – July 2024



APPENDIX C

North Dakota Gas Processing Plant Table

Natural Gas Processing Capacity, Million Cubic Feet Per Day

Owner Company	Facility	County	2006	2008	2010	2012	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
North Dakota																	
Steel Reef	Lignite	Burke	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
ONEOK	Marmarth	Slope	7.5	7.5	7.5	7.5	7.5	7.5	7.5	NA	NA	NA	NA	NA	NA	NA	NA
ONEOK	Grasslands	McKenzie	63	90	90	90	90	90	90	90	90	90	90	90	90	90	90
ONEOK	Stateline I	Williams	NA	NA	NA	100	100	100	100	120	120	120	120	120	120	120	120
ONEOK	Stateline II	Williams	NA	NA	NA	NA	100	120	120	120	120	120	120	120	120	120	120
ONEOK	Garden Creek I	McKenzie	NA	NA	NA	100	120	120	120	120	120	120	120	120	120	120	120
ONEOK	Garden Creek II	McKenzie	NA	NA	NA	NA	120	120	120	120	120	120	120	120	120	120	120
ONEOK	Garden Creek III	McKenzie	NA	NA	NA	NA	120	120	120	120	120	120	120	120	120	120	120
ONEOK	Lonesome Creek	McKenzie	NA	NA	NA	NA	NA	NA	200	200	280	280	280	280	280	280	280
ONEOK	Demicks Lake	McKenzie	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200	200	200	200	200
ONEOK	Demicks Lake II	McKenzie	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200	200	200	200
ONEOK	Demicks Lake III	McKenzie	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200
ONEOK	Bear Creek	Dunn	NA	NA	NA	NA	NA	NA	80	80	130	130	130	130	130	130	130
ONEOK	Bear Creek II	Dunn	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200	200	200
Petro Hunt	Little Knife	Billings	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
True Oil	Red Wing Creek	McKenzie	4	4	4	4	10	10	10	10	15	15	15	15	15	15	15
Sterling Energy	Ambrose	Divide	0.5	0.5	0.5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EOG Resources	Stanley	Mountrail	NA	20	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*	0*
Whiting Oil & Gas	Ray	Williams	NA	10	NA	NA	NA	10	10	10	15	25	25	25	25	25	25
Andeavor	Robinson Lake	Mountrail	NA	30	45	90	110	130	130	130	130	150	150	150	150	150	150
Andeavor	Belfield	Stark	NA	NA	NA	30	35	35	35	35	35	35	35	35	35	35	35
XTO - Nesson	Ray	Williams	NA	10	10	10	10	25	25	25	25	25	25	100	100	100	100
Hess	Tioga	Williams	110	110	110	110	250	250	250	250	265	265	265	415	415	415	415
Targa/Hess JV	LM4	McKenzie	NA	NA	NA	NA	NA	NA	NA	NA	NA	200	200	200	200	200	200
Kinder Morgan	Badlands	Bowman	4	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Kinder Morgan	Norse	Divide	NA	NA	25	25	25	25	25	25	25	25	25	25	25	25	25
Kinder Morgan	Watford City	McKenzie	NA	NA	NA	90	90	90	90	90	90	90	90	90	90	90	90
Kinder Morgan	Roosevelt	McKenzie	NA	NA	NA	NA	NA	NA	50	50	50	200	200	200	200	200	200
Liberty Midstream Solutions	County Line	Williams	NA	NA	NA	NA	NA	NA	20	20	30	30	30	30	30	30	30
Summit Resources	Knutson	Billings	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**	NA**
Targa Resources	Badlands	McKenzie	NA	NA	NA	45	45	90	90	90	90	90	90	90	90	90	90
USG Midstream Bakken	DeWitt	Divide	NA	NA	NA	NA	3	3	3	3	3	3	3	3	3	3	3
1804 Ltd	Spring Brook	Williams	NA	NA	NA	NA	NA	45	45	45	60	70	70	70	70	70	70
Crestwood	Wild Basin	McKenzie	NA	NA	NA	NA	NA	NA	80	145	320	320	320	320	320	320	320
Crestwood	Arrow	McKenzie	NA	NA	NA	NA	NA	NA	NA	30	30	150	150	150	150	150	150
Caliber Midstream	Hay Butte	McKenzie	NA	NA	NA	NA	10	10	10	10	10	10	10	10	10	10	10
Outrigger Energy II	N/A	Williams	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	250	250	250	270
Aux Sable - Chicago, IL																	
Aux Sable	Prairie Rose	Mountrail	NA	NA	126	126	126	126	126	126	126	126	126	126	126	126	126
Total, MMCFD			222.0	355.0	491.0	901.0	1,444.5	1,599.5	2,029.5	2,137.0	2,492.0	3,202.0	3,402.0	4,077.0	4,077.0	4,277.0	4,297.0



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