INDUSTRIAL COMMISSION OF NORTH DAKOTA

Kelly Armstrong
Governor

Drew H. Wrigley
Attorney General

Doug Goehring
Agriculture Commissioner

Wednesday, July 30, 2025
Governor's Conference Room or Microsoft Teams – 9:00 am
Join on your computer or mobile app
Join the meeting now
Or call in (audio only)
+1 701-328-0950,,504405710#

I. Roll Call and Pledge of Allegiance

(approximately 9:00 am)

II. North Dakota Transmission Authority - Claire Vigesaa

A. **Consideration of Approval of Recommended IIJA Grant Re-Award Project Selection** (Attachment 1)
B. Presentation of NDTA Annual Report (Attachment 1A)
C. Other NDTA Business

(approximately 9:15 am)

III. Renewable Energy Research Program Grant Round 55 – Jordan Kannianen

A. Presentation of Renewable Energy Program Project Management and Financial Report, **Consideration of Approval of De-Commitment of Funding for Previously Awarded Projects** – (Attachment 2)
B. **Consideration of Approval of the Following Grant Applications:**
   i. 55-A University of North Dakota: Producing Silicon Anode Materials for Li-ion Batteries, **$200,000** (Attachment 3)
   ii. 55-B BWR Innovations LLC: Improving Renewable Energy Resources with Hydrogen Offtake, **$500,000** (Attachment 4)
C. Other Renewable Energy Research Program Business

(approximately 9:30 am)

IV. North Dakota Public Finance Authority – DeAnn Ament

A. **Consideration of Approval of the Following State Revolving Fund Loans:**
   - **i.** City of Cando – Drinking Water - $3,275,000 (Attachment 5)
   - **ii.** City of Minot – Drinking Water - $29,575,000 (Attachment 6)
   - **iii.** Western Area Water Supply Authority – Drinking Water - $3,000,000 increase to previously approved $16,500,000 loan (Attachment 7)

B. Presentation of Memo from NDPFA Advisory Committee Regarding SRF Loans Approved Under Policy P-3B (Attachment 8)
   - **i.** City of Jamestown – Drinking Water -$1,984,000 (Attachment 8A)
   - **ii.** City of Grand Forks – Clean Water - $1,316,000 (Attachment (8B)

C. Other NDPFA Business

(approximately 9:45 am)

V. North Dakota Housing Finance Agency – Brandon Dettlaff, Jennifer Henderson

A. Report on 2025 Emergency Solutions Grant (ESG) and North Dakota Homeless Grant (NDHG) Recipients – Jennifer Henderson (Attachment 9)

B. Other Housing Finance Agency Business

(approximately 10:00 am)

VI. Bank of North Dakota – Don Morgan, Kelvin Hullet, Rob Pfennig

A. **Consideration of Approval of Amendments to General Loan Policy -** Kelvin Hullet (Attachment 10)

B. Presentation of College SAVE Audit Report, December 31, 2024 – Rob Pfennig (Attachment 11)

C. Presentation of Second Quarter 2025 Performance Highlights – Don Morgan (Attachment 12)

D. Presentation of May 14, 15, 2025 Non-Confidential Advisory Board and Committee Minutes (Attachment 13)

E. Other BND Business

Meeting Closed to the Public for Executive Session Pursuant to NDCC 6-09-35, 44-04-18.4, 44-04-19.1, 44-04-19.2 and 54-17.7-12

(approximately 10:15 am)

VII. Bank of North Dakota Confidential Business – Don Morgan, Kirby Evanger

A. **Consideration of Approval of Two Loans** – Don Morgan (Confidential Attachment 14)
B. Presentation of Non-Accrual Loans Quarterly Recap/Detail – Kirby Evanger (Confidential Attachment 15)
C. Presentation of Problem Loans – Adversely Classified Quarterly Recap – Kirby Evanger (Confidential Attachment 16)
D. Presentation of Loan Charge-Offs and Recoveries YTD June 30, 2025 – Kirby Evanger (Confidential Attachment 17)
E. Presentation of Off-Balance Sheet Risk Quarterly Recap/Detail – Kirby Evanger (Confidential Attachment 18)
F. Presentation of May 14, 15 2025 Confidential Advisory Board and Committee Minutes (Confidential Attachment 19)
G. Other BND Confidential Business

VIII. Attorney Consultation - North Dakota Supreme Court Decision in Equinor Energy v. NDIC – Nathan Anderson, David Garner

IX. Consideration of Confidentiality Requests Submitted to North Dakota Pipeline Authority Pursuant to Requirements of N.D.C.C 54-17.7-12 – Justin Kringstad

X. North Dakota Mill and Elevator Confidential Business – Vance Taylor, Cathy Dub

A. **Consideration of Approval of FY 2026 Mill and Elevator Strategic Plan** (Confidential Attachments 20, 20A, 20B)
B. Other ND Mill and Elevator Confidential Business

Meeting Returns to Public Session

XI. Action on Executive Session Items

(approximately 11:15 am)

XII. North Dakota Mill and Elevator – Vance Taylor, Cathy Dub

A. 2026 Mill and Elevator Strategic Plan (Attachment 21)
B. Report on FY 2025 Transfers to APUF and General Fund (Attachment 22)

C. Review of Operations, 4th Quarter Ended June 30, 2025 (Attachments 23, 23A)
D. **Consideration of Approval of FY 2026 Capital Plan** (Attachments 24, 24A, 24B)
E. Report on 2025 Gain Share Payments and **Consideration of Approval of FY 2026 Gain Share Plan** (Attachments 25, 25A)
F. Other ND Mill and Elevator Business

(approximately 11:40 am)

XIII. Dept of Mineral Resources – Nathan Anderson

A. **Order 34407 in Case 31675-** Regarding application of KODA Resources Operating LLC to amend field rules to create and establish overlapping 1920 spacing unit, authorize drilling not to exceed five horizontal wells, and/or such further relief as appropriate (Attachment 26)
B. **Order 34409 in Case 31677** – Regarding application of Continental Resources to amend field rules to create and establish two overlapping 1920 spacing units, authorize drilling on or near section line between existing spacing unites and/or such further relief as appropriate (Attachment 27)
C. **Order 32768 in Case 29868 –** Regarding application of Spotted Hawk Development LLC to amend field rules to create and establish overlapping 3520 spacing unite, authorize drilling not to exceed eight horizontal wells, and such further relief as appropriate (Attachment 28)
D. Executive Director Oil and Gas Production Update (Attachment 29)
E. Other DMR Business

(approximately 11:55 am)

XIV. Industrial Commission Administrative Office – Karen Tyler

A. **Consideration of Approval of Compensation Increase for BND President** (Attachment 30)
B. Other Industrial Commission Administrative Office Business

Recess until 1:00 pm

(approximately 1:00 pm)

XV. North Dakota Pipeline Authority – Justin Kringstad

A. Presentation by Intensity Infrastructure Partners (Attachment 31)
Joe Griffin, Chief Executive Officer
Derek Gipson, President & Chief Financial Officer
Matthew Griffin, Sr VP & Chief Commercial Officer
Mike Higgins, Sr VP – Operations and Pipeline Construction
Jeremy Spalvieri, VP – Environmental, Health and Safety
   i. 1:00-1:20 – Public Presentation
   ii. 1:20- 1:30 – Executive Session for Presentation and Discussion of Confidential Information (NDCC 44-04-18.4, 44-04-19.2, 54-17.7-12)
   iii. Meeting Returns to Public Session

(approximately 1:45 pm)

B. Presentation by WBI Energy Transmission (Attachment 32)
Rob Johnson, President, WBI Energy
Nicole Kivisto, President & CEO, MDU Resources Group
Mark Anderson, VP of Business Development & Marketing, WBI Energy
Cory Fong, Director of External Affairs, MDU Resources Group
Justin Dever, St Public Affairs Specialist, MDU Resources Group
   i. 1:45 – 2:05 – Public Presentation
   ii. 2:05-2:15 – Executive Session for Presentation and Discussion of Confidential Information (NDCC 44-04-18.4, 44-04-19.2, 54-17.7-12)
   iii. Meeting Returns to Public Session

C. Other Pipeline Authority Business

XVI. Adjournment

Next Regular Industrial Commission Meeting – Thursday, August 21, 2025
9:00 am – 12:30 pm
Governor's Conference Room

North Dakota Industrial Commission

Claire Vigesaa – Executive Director
ND Transmission Authority
July 30, 2025

North Dakota Transmission Authority

NORTH Dakota Be Legendary.

TOPICS…

- ❑ IIJA 2024 Grant Award Selection
- ❑ NDTA Annual Report to the Commission

IIJA Grid Resilience Formula Grant

- IIJA NDTA Formula Grant FY22/23 $ 7.5 million
- IIJA NDTA Formula Grant FY24 $ 3.9 million
- Application submitted for FY25 $ 3.6 million
- One more potential app for FY26

Plus 15% State Match

- FY22/23 - $1,124,856
- FY24/FY25/FY26 -Est $583,000/yr or $1,782,794

Grant Awards FY22/FY23/FY24

❑ Capital Electric Cooperative	$ 321,930
❑ Otter Tail Power Company	$4,432,088
❑ Northern Plains Electric Cooperative	$ 586,000
❑ McKenzie Electric Cooperative (returned)	$2,843,075
❑ Burke-Divide Electric Cooperative	$ 550,000
❑ City of Lakota	$1,707,109
❑ Verendrye Electric Cooperative	$ 314,250
❑ KEM Electric Cooperative	$ 620,000
❑ City of Valley City	$1,053,000

Special Re-award Grant Award Applications

Applicant	Project	Grant Request	Total Cost
City of Northwood	Advanced Metering	$240,917	$370,642
City of Lakota	Substation Transformer/controls	$1,922,900	$2,870,000
McLean Electric Co-op	Upgrading to Dielectric Reclosers	$515,900	$770,000
Otter Tail Power	Vegetation Management-Proactive	$2,843,075	$5,686,150
MDU	Merricourt Sub-Trans Upgrade	$2,800,000	$7,455,000
Capital Electric Co-op	OVHD to URD Road Crossings	$459,814	$686,290
City of Hillsboro	Electric System Upgrades	$2,800,000	$5,635,000

Total Requests **$11,582,606**

Available Grant Funds **$2,602,356**

Grant Award Recommendation

Anonymous – Technical Review Committee – Consolidated Scoring

Scoring & Highest Impact on Grid Reliability

Grant Applicant	Request	Recommendation
McLean Electric Cooperative	$515,900	$515,900
Montana Dakota Utilities	$2,800,000	$2,086,456
	$3,315,900	**$2,602,356**

Action Requested

ND Industrial Commission acting as the ND Transmission Authority move to advance the following grant requests, totaling $2,602,356, to the DOE:

McLean Electric Cooperative – Updating to Dielectric Reclosers - $515,900

Montana Dakota Utilities – Merricourt Sub-Transmission Upgrade - $2,086,456

NDTA 2024/2025 Activities-Studies

Events

American Coalition on Renewable Energy-Policy Forum, Washington D.C.

Xcel Energy Prairie Island Nuclear Facility Tour

BNI Coal Leadership Team Strategic Discussion Event – Center

Marathon Oil Community Advisory Panel Meetings – Mandan & Dickinson

Western Dakota Energy Association – Minot, ND

Lignite Energy Council – Bismarck, ND

ND Petroleum Council – Medora, ND

ND Reclamation Conference – Watford City

Midwest Governors Association – MID-GRID 2035

Stutsman County Commission Meeting - Jamestown

Midwest Reliability Organization Reliability & Security Summit – Oklahoma City

Bison to Bakken Educational Event – ND Heritage Center

Numerous Data Center Developer Discussions

Transmission & Interconnection Summit 2025 – [illegible]

Studies

Mercury and Air Toxic Standards-2024

Greenhouse Gas Regulations-2024

Generation Resource Adequacy & Transmission Capacity Study for ND NDTA/EERC/PSC – Due 3rd Qtr 2025

69th Legislative Action

- HB 1025 Nuclear Energy Study
- SB 2360 Geothermal
- HB 1579 Large Load
- HB 1258 Zoning Authority

CHALLENGES

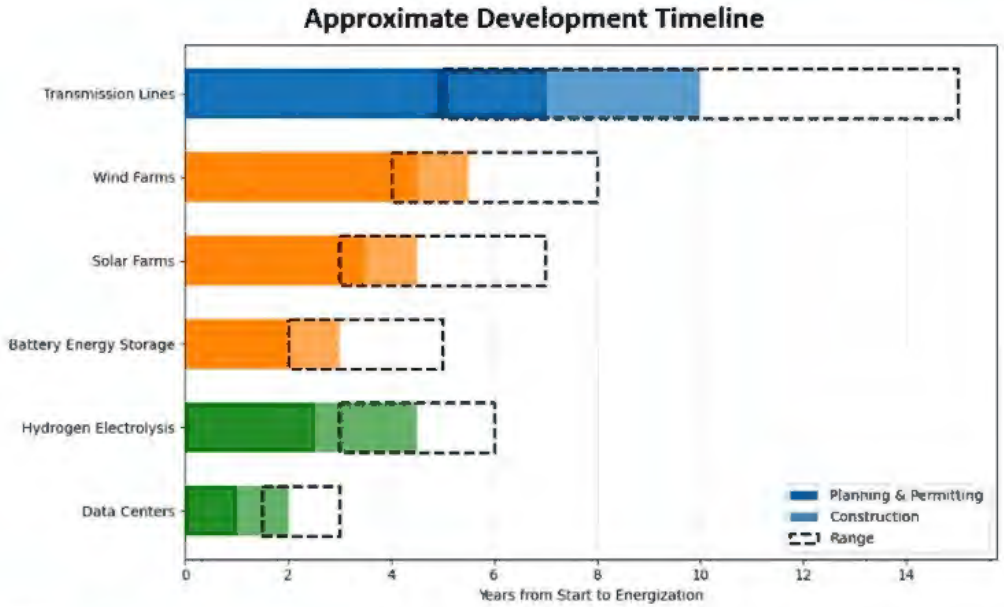
- Unprecedented Demand Growth…AI is super charging growth
- Transmission Planning – Complex at Best
- Long-life assets (impact of policy swings)
- Energy Policy & Long-term Planning/Investment
- Landowner Fatigue - Siting
- Supply Chain Management

Large Loads

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Characteristics

- Peak Demand
- **Fast Interconnection Timeline**
- Demand Profile
- Load Predictability
- Ramp Rate
- Load Type (PEL/Motors/etc.)
- Voltage Sensitivity
- Inaccurate Dynamic Models
- Internal Segmentation

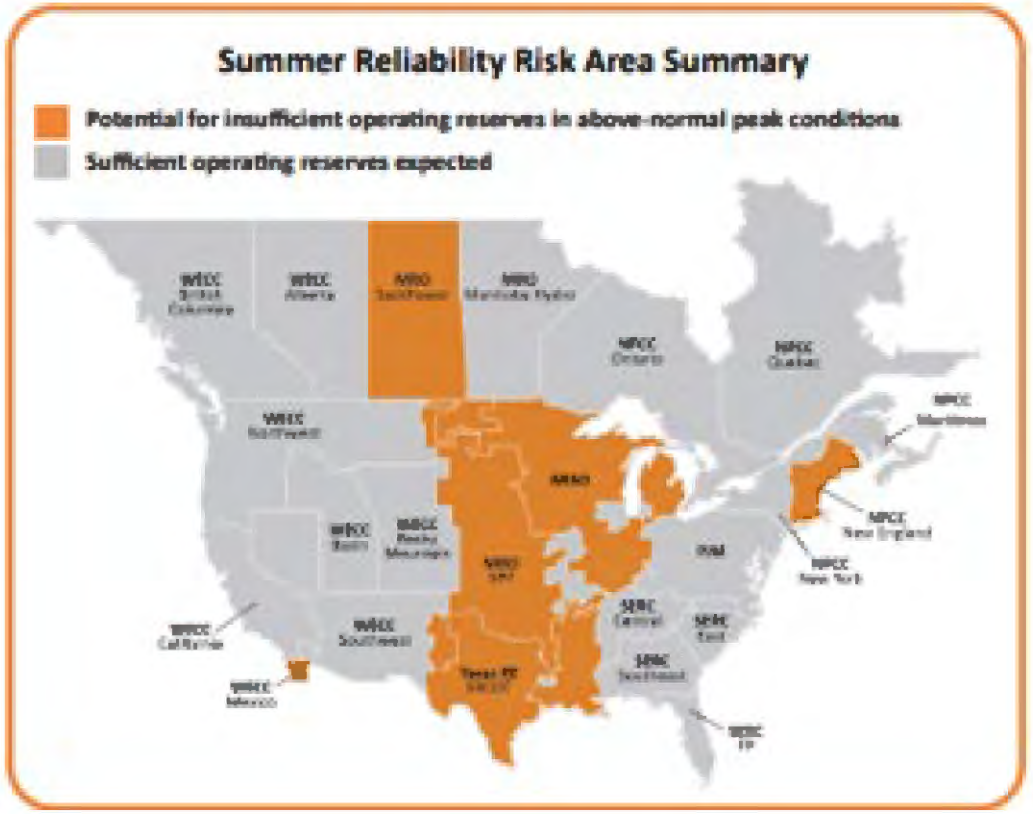


Sources:
https://www.2035report.com/wp-content/uploods/2024/04/GridLab_2035-Reconductoring-Technical-Report.pdf
https://emp.lbl.gov/sites/default/files/2024-04/Queued%20Up%202024%20Edition_R2.pdf

Midwest Reliability Organization
Regional Risk Assessment

1. Uncertain Energy Availability – Extreme Risk
2. Generation Outages During Extreme Cold Weather – High Risk
3. Nation-State Threats – High Risk
4. Supply Chain Compromise – High Risk
5. Malicious Insider Threat – High Risk
6. Inadequate IBR and DER Performance & Modeling – High Risk

2025 Summer Reliability Assessment



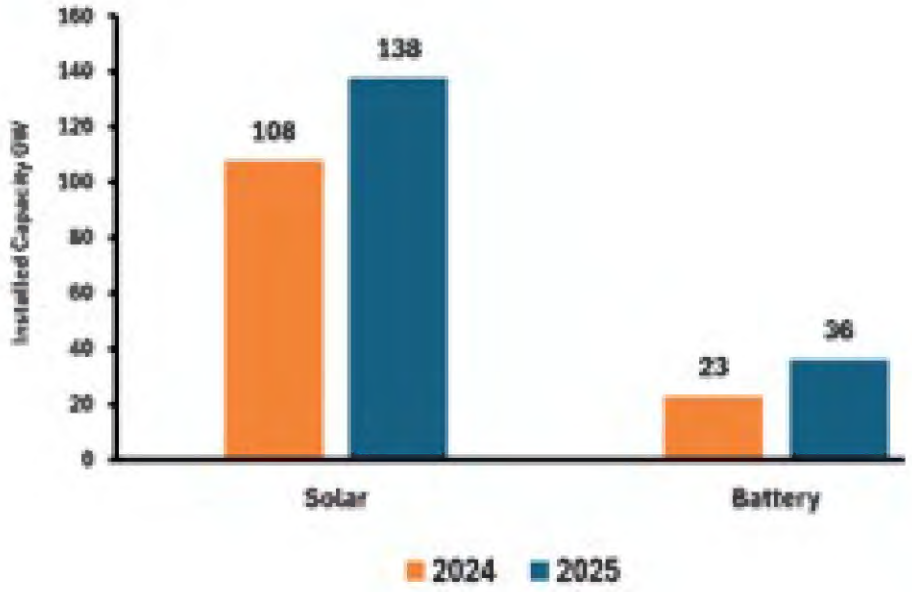
Surging load growth: Load growth has increased by 10 GW, more than doubling the increase from 2023–2024, further straining parts of the system.

2025 Summer Reliability Assessment

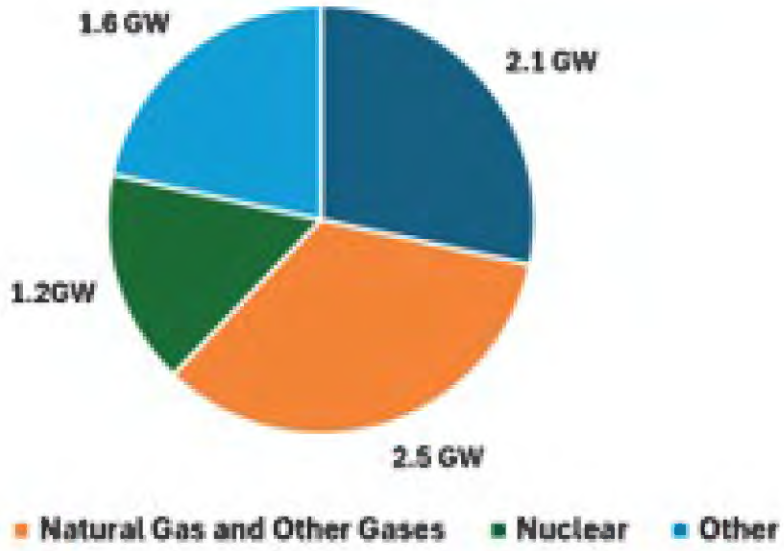
Influx of solar and batteries: These resources are effective in summer. The addition of 30 GW of new solar and 13 GW of new batteries is helping to meet summer peak demand.

Generator retirements: Ongoing generator retirements are reducing dispatchable generation and contributing to shrinking reserves and energy risks.

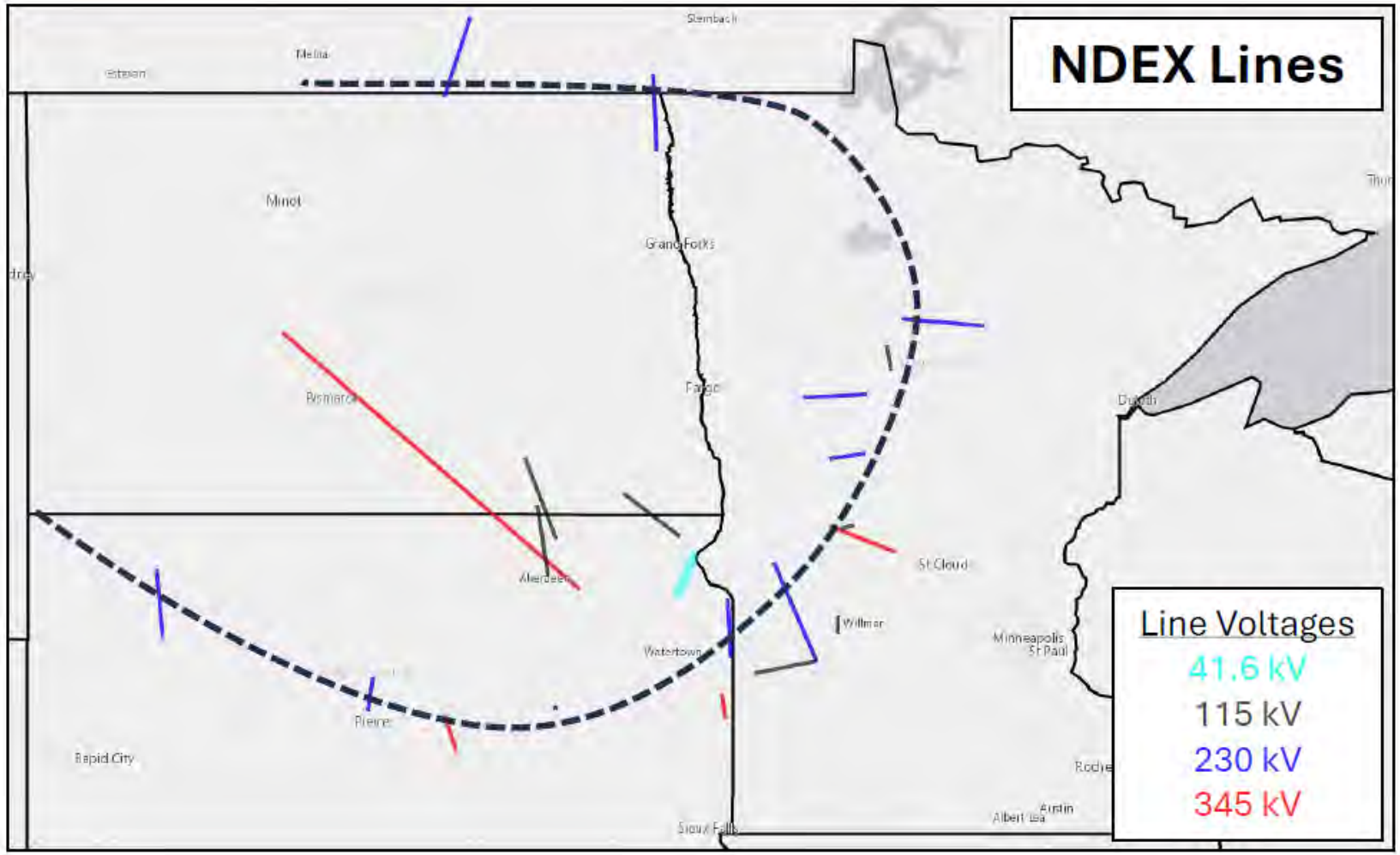
Solar and Battery Resources Installed Capacity



Generator Retirements Since September 1, 2024 Totaled 7.4 GW of Installed Capacity



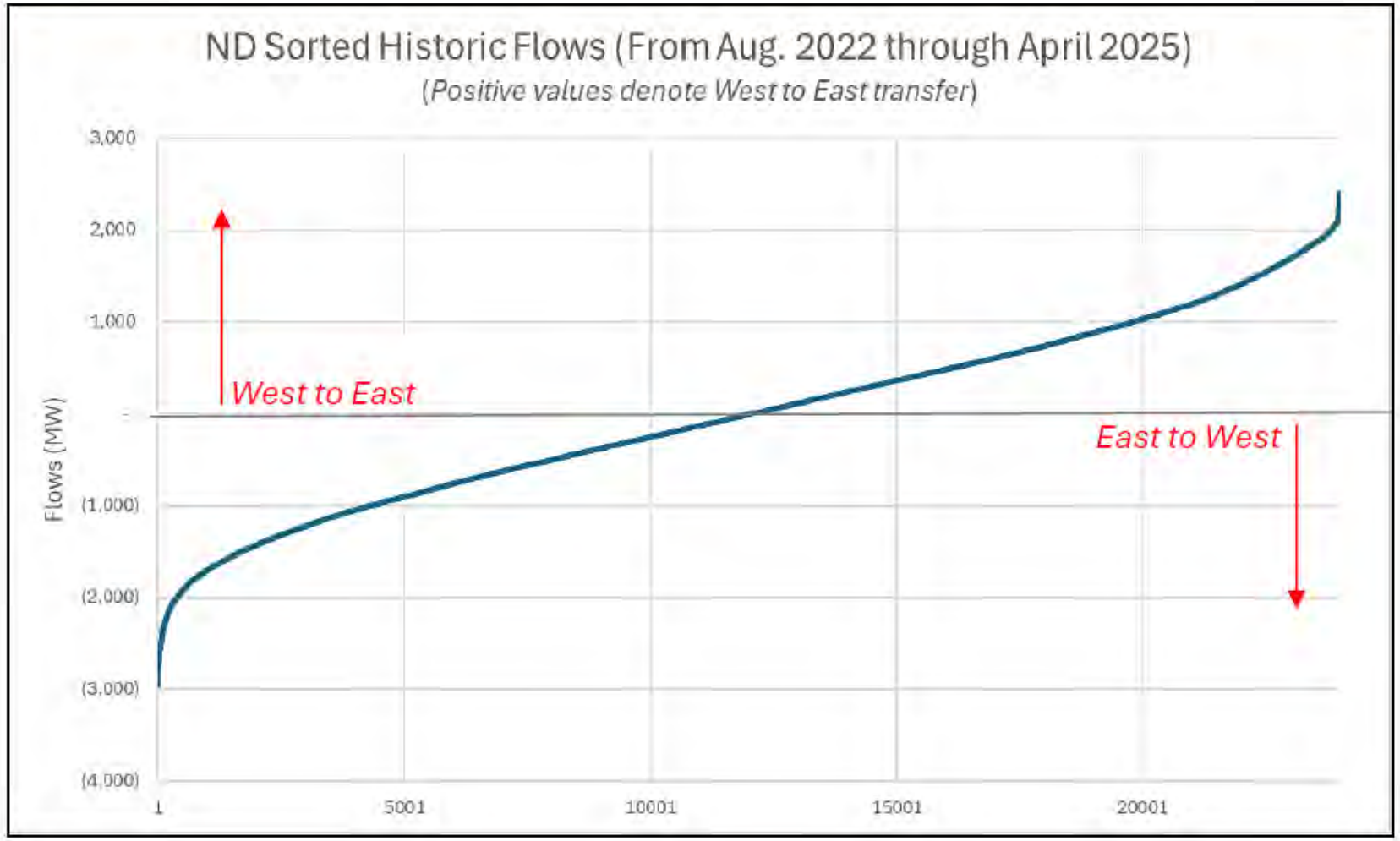
NDEX – North Dakota Export



Defining NDEX

- NDEX (or North Dakota Export) interface is a historic reliability constraint and it is a summation of power flows on several transmission lines and this and this NDEX data flow is still tracked by MISO
- NDEX flow directionality is historically impacted by generation and load levels in ND and surrounding states/provinces

NDEX Historic Flows (Since August 2022)



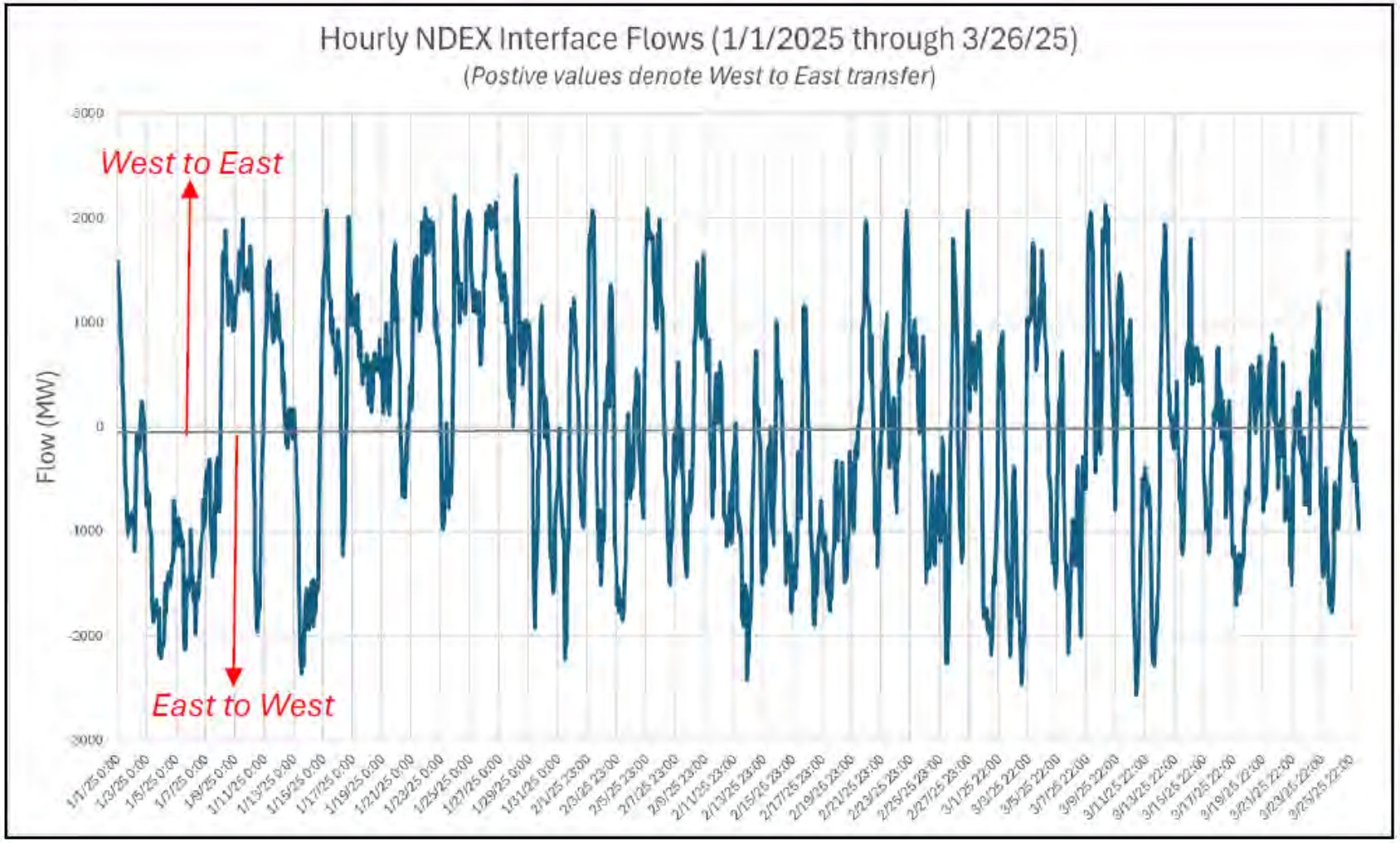
While the day-to-day flows on NDEX change directions, over the past almost three years **flows have gone either direction an equal number of hours.**

Total Hours:

Flows to ND: 12,079

Flows to MN: 11,899

NDEX Historic Flows (Q1 2025)

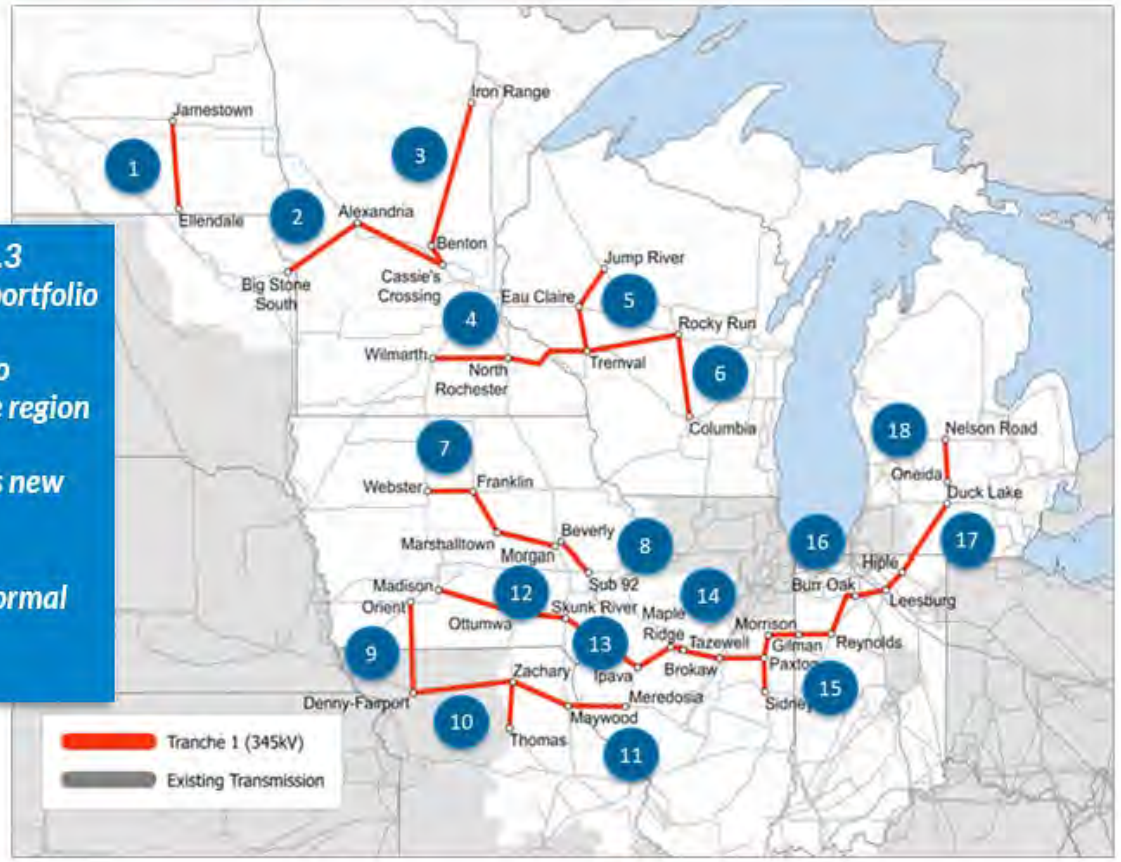


NDEX flows frequently shift – *as often as hourly and not less than daily* **– between west to east and east to west transfer.**

Regional Transmission Organization Activity - MISO

MISO Board of Directors approved Tranche 1 in July of 2022 which included a 345kV portfolio across the footprint with widespread benefits

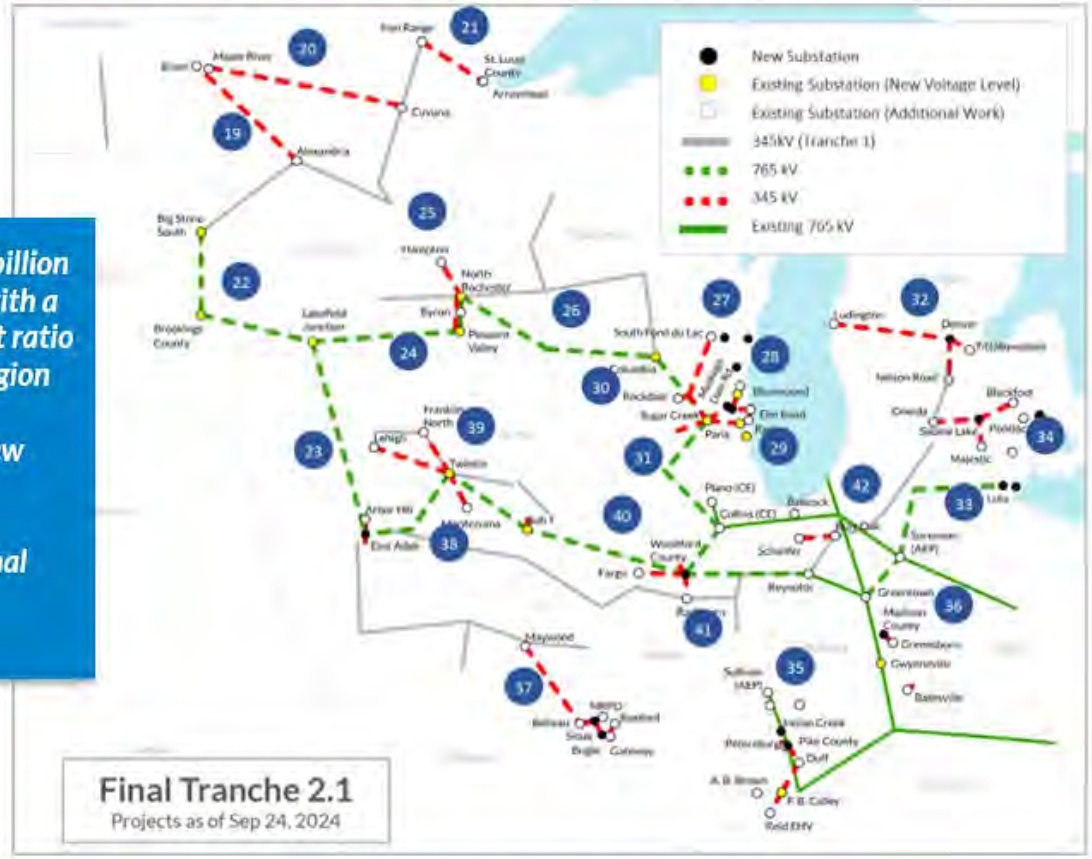
- *18-projects, $10.3 billion Midwest portfolio with a 2.6-3.8 Benefit/Cost ratio spread across the region*
- *Over 2,000 miles new transmission*
- *More than 200 formal meetings*



Regional Transmission Organization Activity - MISO

MISO Board of Directors approved Tranche 2.1 in Dec of 2024 which included a region-wide 765kV backbone with widespread benefits

- *24-projects, $21.9 billion Midwest portfolio with a 1.8-3.5 Benefit/Cost ratio spread across the region*
- *Over 3,600 miles new transmission*
- *More than 300 formal meetings*



MISO's Long Range Transmission Planning: misoenergy.org/planning/transmission-planning/long-range-transmission-planning

Regional Transmission Organization Activity - SPP

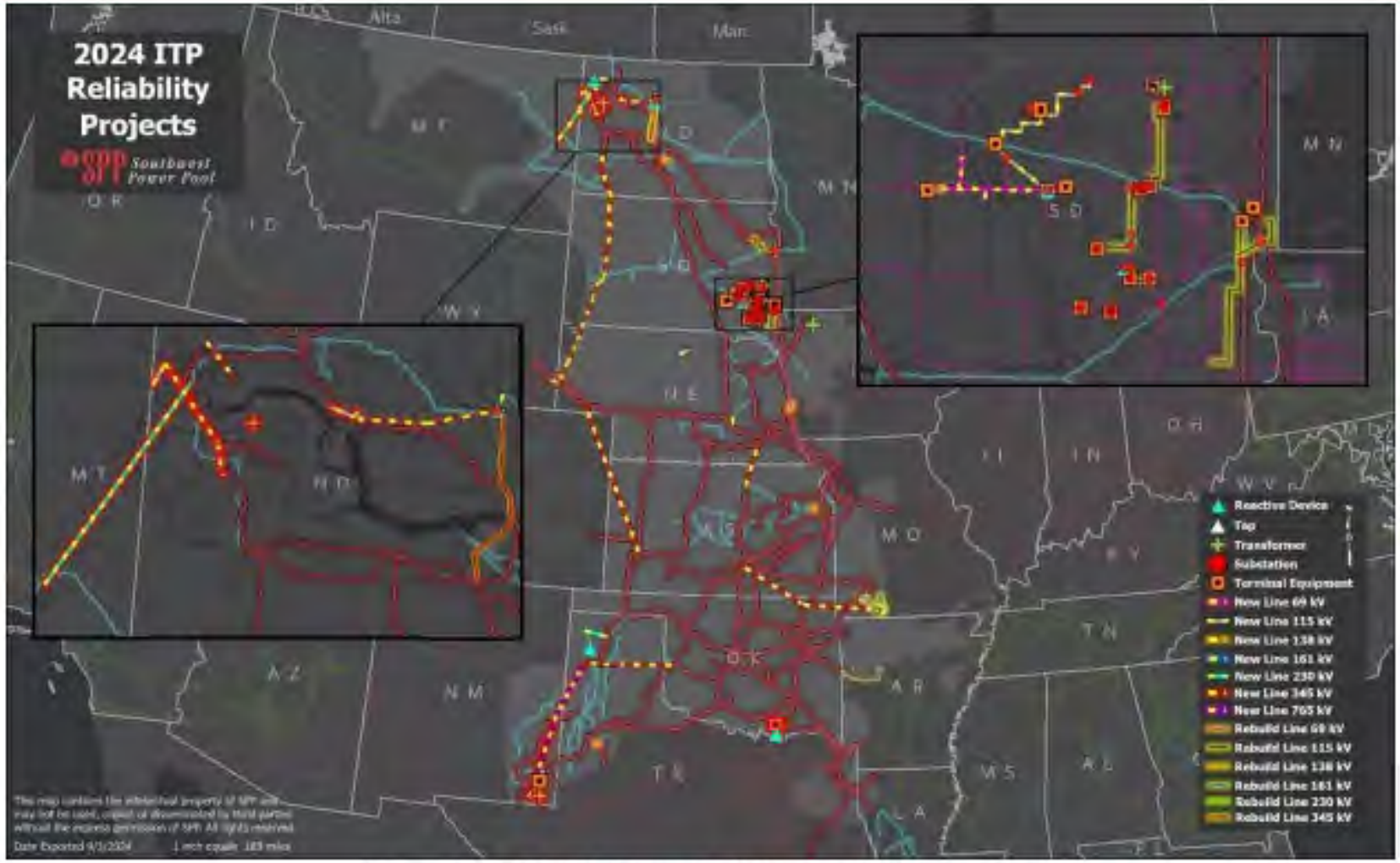


Figure 1.1: 2024 ITP Thermal & Voltage Reliability Projects

2024 Integrated Transmission Plan

2,333 miles of new transmission lines

1,495 miles of 345 kV

293 miles of 765 kV

495 miles of rebuild

89 new transmission projects

$7.68 Billion

MESSAGE TO RTOs

North Dakota has:

- Fuel to power dispatchable generation (coal and natural gas)
- Abundant wind resources
- Favorable regulatory environment
- Business friendly culture

Local Projects - Generation

MDU	150 MW off-take/ownership 250 MW Badger Wind Farm (Logan/McIntosh Counties)	2025
Minnkota Power	370 MW off-take Flickertail Wind Farm (Eddy/Benson)	2027
Otter Tail	295 MW Flickertail Solar Project (Abercrombie)	2028
	200 MW Wind	2029
	20 MW & 75 MW Battery Storage	2029
Basin Electric	Two 250 MW natural gas turbines (Williston)	2025
	1,470 MW combined cycle gas (Epping)	2030

Local Projects-Transmission

Great River Energy	**Dynamic Line Rating Installation**	Ongoing
	Prisma Photonics (detects anomalies)	Ongoing
Basin Electric	Leland Olds-Crane Creek-Tande 345kV (161 miles)	2026
	Wheelock to SK 230 kV (53 miles)	2027
	Tande to SK 230 kV (59 miles)	2027
(from 2024 SPP ITP)	Patent Gate to Pioneer 345 kV	
	Leland Olds – Logan upgrade to 345 kV	
WAPA *(from 2024 SPP ITP)*	Wyoming to Belfield 345 kV (439 miles)	
	Dawson County MT to Williston 230 kV	
	Fargo Substation Bus Upgrade	
	Charlie Creek to Garrison Transmission Rebuild	
	Jamestown Reactor Replacement	

Local Projects-Transmission Lines

Rainbow Energy	Rainbow Substation Build	2025
Minnkota Power	Distribution Substation Automation	On-going
	Sub-transmission Line Rebuilding	On-going
MDU	JETx Project with OTP 345 kV (95 miles)	2028
	Hettinger to Elgin upgrade from 69 kV to 115 kV	2028
	Substation Upgrades:Beulah, Ellendale, Wishek Merricourt and Tioga	
Otter Tail Power	JETx Project with MDU 345 kV (95 miles)	2028
	Maple River to Cuyuna 345 kV (165 miles)	
	Forman – Hankinson 230 kV rebuild (37 miles)	
	Bison to Alexandria 345 kV 2nd circuit (135 miles)	
	Big Stone South – Hankinson – Bison 345 kV	
	Buffalo – Colgate & Rugby-Bottineau 41.6 kV upgrade	
	Next-Generation Grid Resiliency Plan	

Local Projects – Transmission Lines

Xcel Energy	2nd Circuit Brookings County – Twin Cities 345 kV Big Stone – Alexandria 345 kV 2nd Circuit – Alexandria to Monticello 345 kV Wilmarth-North Rochester-Tremval 345 kV Tremval-Eau Claire-Jump River 345 kV MISO Tranche 2.1 some 765 kV and 345 kV sections
Central Power	Apple Creek Distribution Substation Addition Bismarck North Circuit Switcher Replacement Kensal Substation Replacement – Glenfield 43.8 kV line Mallard 115 kV Transformer Replacement Max 115 kV Substation Circuit Switcher Replacement Neal 115 kV Substation Upgrade New Rockford Distribution Substation Replacement Ward 230 kV Substation Control System Replacement Woodworth-Robinson-Tuttle 43.8 kV Transmission Rebuild

High Voltage DC Projects

Minnesota Power Allete	HVDC Modernization Project New Converter Stations Capacity Increase from 550 MW to 900 MW Potential to Increase to 1,500 MW Bi-directional Flow	2029
North Plains Connector	Grid United – Allete 525 kV (420 miles) 3,000 MW Capacity WECC-SPP-MISO	2032

Conclusion

- **Stakeholders are responding**
  - Policy Makers
  - Regional Transmission Organizations
  - North Dakota Utility Operators
- **Demand growth…speeds on**
  - No room for schisms
- **Grateful for the Commission's Commitment**
  - And policy alignment within the state/region

NORTH Dakota

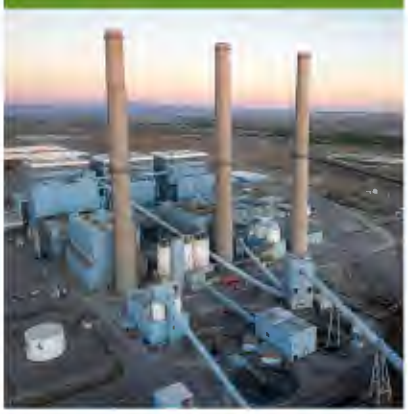
Be Legendary.

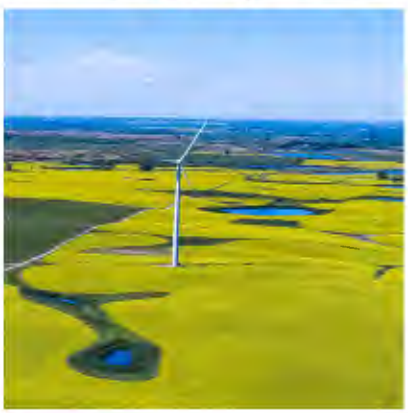
NDTA North Dakota Transmission Authority

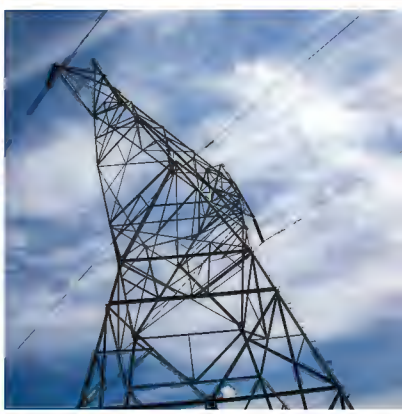
Attachment 1A

2025

ANNUAL REPORT







NORTH DAKOTA TRANSMISSION AUTHORITY

PREFACE

The North Dakota Transmission Authority (Authority) was created by the North Dakota Legislative Assembly in 2005 at the request of the North Dakota Industrial Commission. The Authority's mission is to facilitate the development of transmission infrastructure in North Dakota. The Authority was established to serve as a catalyst for new investment in transmission by facilitating, financing, developing and/or acquiring transmission to accommodate new lignite, wind, natural gas and other energy development. The Authority is a builder of last resort, meaning private business has the first opportunity to invest in and/or build transmission.

By statute, the Authority membership is comprised of the members of the North Dakota Industrial Commission. Claire Vigesaa was appointed Executive Director of the Authority in July 2023. The Executive Director works closely with the Industrial Commission Administrative Office staff and receives direct general fund appropriation.

NORTH DAKOTA INDUSTRIAL COMMISSION

KELLY ARMSTRONG
Governor

DREW H. WRIGLEY
Attorney General

DOUG GOEHRING
Agriculture Commissioner

NORTH DAKOTA TRANSMISSION AUTHORITY

CLAIRE VIGESAA
Executive Director
ND Transmission Authority

STATUTORY AUTHORITY

Statutory authority for the Transmission Authority is found in chapter 17-05 of the North Dakota Century Code. Section 17-05-05 N.D.C.C. delineates the powers of the Authority, including:

1) make grants or loans to borrow money

2) issue up to $800 million in revenue bonds

3) enter lease-sale contracts

4) own, lease, rent and dispose of transmission facilities

5) enter contracts to construct, maintain and operate transmission facilities

6) investigate, plan, prioritize and propose transmission corridors; and

7) participate in regional transmission organizations.

Before the Authority may exercise its power to construct transmission facilities, it must follow a process defined by statute to ensure public participation and comment. In particular, the Authority must publish a notice describing the need for the transmission project. Entities interested in construction of the facilities or furnishing services to satisfy the identified needs have 180 days to respond by filing a notice of intent. If the Authority receives a notice of intent from an interested entity, it may not exercise its power to construct unless the Authority makes a finding that doing so would be in the public interest. In making such a finding, the Authority shall consider the economic impact to the state, economic feasibility, technical performance, reliability, past performance, and the likelihood of successful completion and ongoing operation.

The Authority may finance approved projects through the issuance of bonds. Under current law up to 30 percent of the cost of a project may be financed by selling bonds that include the moral obligation of the State of North Dakota. In other words, up to $240 million of the Authority's $800 million total bonding authority may be sold with the moral obligation of the state. The moral obligation component enhances the marketability of the Authority's bonds.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Transmission Authority is one of 16 agencies, authorities, enterprises and grant programs operated under the direction of the North Dakota Industrial Commission. Karen Tyler serves as the Executive Director of the Industrial Commission providing administrative guidance and support for the North Dakota Transmission Authority. The funding for the operation of the NDTA is within the general fund appropriation to the ND Industrial Commission.

North Dakota is in an enviable position, North Dakota has rich soil for producing crops and grazing livestock. And more, North Dakota has rich energy resources from coal, natural gas and oil to favorable wind energy production. North Dakota leadership has worked hard to create a friendly business climate that encourages entrepreneurship, agricultural product processing, oil/gas development and other high-tech business. North Dakota's success has enabled sons & daughters to come home to good jobs, low taxes and safe living conditions.

As favorable as North Dakota is, the frigid weather in February serves as a serious reminder that we are very dependent on electricity. Interruption in flow of electricity impacts human life, human safety, food production, food processing and food preservation. Beyond our personal needs, health care, commerce, manufacturing, energy production and national security all require a reliable and uninterrupted electric power supply.

Because electricity is not easily or efficiently stored, a robust transportation system is needed to move electricity from the generator to homes and businesses; high voltage transmission lines leading to substations and ultimately to the distribution lines to homes and businesses. The electric grid is a delicate machine that requires critical planning and operation.

To address these concerns, the NDTA participates in both Regional Transmission Organizations (RTOs) serving North Dakota as well as the Midwest Reliability Organization to emphasize North Dakota's desire for an expanded and reliable grid. Further, the NDTA touts North Dakota's rich energy resources that include coal, oil, natural gas and wind; resources that will not only provide energy for North Dakota's growth, but the growth of our neighboring states and nation.

In the last year the NDTA hosted two grid reliability studies that outlined the devastating impacts of the Biden Administration's EPA initiatives: the proposed Mercury and Toxic Air Standards and the Greenhouse Gas Rules. The results of those two studies revealed a dire situation, the premature retirement of dispatchable coal generation would lead to capacity shortfalls as soon as 2028 in the Midcontinent Independent System Operator (MISO) footprint and as soon as 2030 in the Southwest Power Pool (SPP). The administration change in Washington D.C. has relieved this pressure and has enabled coal/gas generation formerly under attack to keep operating.

Because of unprecedented demand growth across the nation and in North Dakota, the NDTA is collaborating with the Energy & Environmental Research Center (EERC) to develop an analytical framework for supporting near-to-long-term planning and decision making around key issues facing North Dakota's electricity sector. Key issues investigated included the impacts of a changing resource mix, new policies and regulations affecting coal-based electricity, increasing penetration of renewable sources, lead times for transmission infrastructure build-out and load growth (large load impact) on resource adequacy and electric reliability within the state as well as the regional grid. The results of the study will help North Dakota identify areas of opportunity to serve new load from ag processing and oil/gas development to data centers.

We are thankful for the transmission and generation projects slated to be built in North Dakota over the next few years, details on these projects follow in the report. In addition to the transmission buildout, incumbent transmission owners are investigating Grid Enhancing Technologies (GETs); products and software that can enhance and maximize the operation of the existing grid.

The electric transmission grid reliability continues to be a critical area of interest for North Dakota, its industry and policy makers. We are thankful that North Dakota leadership comprehends the value of accredited generation capacity and the transmission network to move electrons from the generator to load. We appreciate the collaboration among the ND Industrial Commissioners, ND policy makers, the ND PSC, the RTOs, utility operators and industry to build a more resilient and reliable grid.

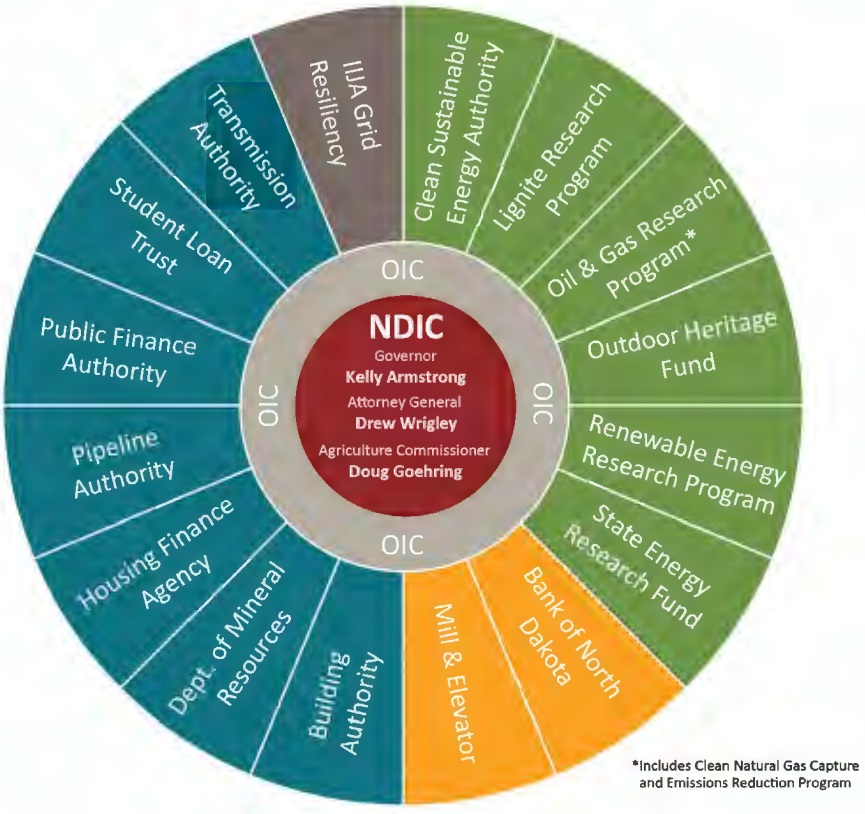
Claire Vigesaa

Executive Director

The chart below shows the relationship between the ND Transmission Authority within the ND Industrial Commission's industries, agencies and programs.

Industrial Commission

Industries, Agencies, and Programs



Legend

- Commission
- IC Admin Office
- Agency Role
- IC Grant Program
- State-Owned Enterprise
- Other Grant Program

January 2025

BUDGET

The 69th ND Legislative Assembly appropriated $400,000 to the ND Industrial Commission general fund budget to operate the NDTA for the 2025-2027 biennium. The Legislative Assembly also appropriated $1,782,794 for the 15% match requirement for the IIJA Grid Resilience Formula Grant Program. This match enabled North Dakota to access $11,885,295 in DOE funds for grid enhancing project awards to utilities serving North Dakota consumers.

In its history, the NDTA has financed one project, Rainbow Energy's purchase of the NEXUS HVDC line that originates at Coal Creek Station and terminates in the Minneapolis area. The bond financing's term is 20 years with interest at a rate of 3.55% per annum secured by the mortgaged property.

***Karen Tyler**, Executive Director of the ND Industrial Commission*
Testifying in support of SB2014

ACTIVITIES

MIDWEST GOVERNORS ASSOCIATION (MGA): The MGA established an initiative (MID-GRID 2035) for regional transmission education and planning to position the Midwest as a modern energy producer and low-cost energy provider, with the goal to establish a long-term transmission grid vision for the region. The NDTA participated in conferences held by the MGA, MID-GRID 2035 quarterly meetings including a conference in Detroit, one in Minnesota that included a tour of Xcel's Prairie Island Nuclear facility and on in Knoxville TN at the Oak Ridge National Laboratory.

MIDWEST RELIABILITY ORGANIZATION (MRO): On October 25, 2023, the NDTA became a member of the MRO in the Adjunct Sector. MRO's primary responsibilities are to: ensure compliance with mandatory reliability standards by entities who use, own or operate the North American bulk power system; conduct assessments of the grid's ability to meet electric power demand in the region; and analyze regional system events. Additionally, MRO creates an open forum for stakeholder experts in the region to discuss important topics related to addressing risk and improving reliable operations of the grid. MRO serves as a vital link between grid owners, users, operators, and other stakeholders who share common reliability interests in the region. The organization presents opportunities to learn with electric grid operators in the region. Board representation from our constituents include Darcy Neigum-MDU, JoAnn Thompson-Otter Tail Power Company, Lloyd Linke-WAPA, Priti Patel-Great River Energy, and Sandra Johnson-Xcel Energy.

REGIONAL TRANSMISSION ORGANIZATIONS: As shown on the map that follows, North Dakota is served by two regional transmission organizations, Mid-Continent Independent System Operator (MISO) and the Southwest Power Pool (SPP). The NDTA attends numerous committee meetings for both MISO and SPP to keep abreast of initiatives that impact grid reliability, particularly for North Dakota. Both RTOs are undergoing transformative shifts due to significant load growth, changing generation mixes and transmission development.

NORTH DAKOTA PUBLIC SERVICE COMMISSION: The NDTA appreciates the proximity to ND PSC staff and the open door to the three commissioners. We share/compare insights to mutually support a reliable grid and affordable energy for North Dakota. Meeting highlights include the semi-annual ND PSC meeting with MISO, SPP, and the MRO.

ND ENERGY DEVELOPMENT AND TRANSMISSION COMMITTEE: The NDTA presented to the interim committee discussing grid reliability concerns and shared highlights of the NDTA's generation resource adequacy studies on MISO & SPP.

NORTH DAKOTA DEPARTMENT OF COMMERCE: The NDTA meets quarterly with ND Department of Commerce staff to discuss economic development needs relating to electric generation and transmission. The NDTA also collaborates with the Department of Commerce staff on the ND State Energy Plan (the ND Grid Resiliency Plan portion). This report is updated annually with help from the EERC.

GOVERNOR'S OFFICE: The NDTA works closely with the Governor's energy staff, sharing information on grid related topics.

ENVIRONMENT/SOCIAL/GOVERNANCE STEERING COMMITTEE: As executive director of the NDTA, I was privileged to serve on the ESG steering committee. The committee was established by SB 2289, directing the energy development and transmission committee to study the ESG impacts and develop a state-wide energy policy. Charlie Gorecki-EERC and Kelvin Hullet-BND chaired the committee. Kayla Ver Helst, Sustainability Officer for the Bank of North Dakota served as the project lead for the ESG study. The completed report, STAND (Sustain, Transform, Authenticate North Dakota) was published in 2024.

TRANSMISSION OWNERS & DEVELOPERS: The NDTA purposed to meet with each transmission owner/developer at their office/headquarters. The meetings on site have proved to be very helpful; gaining a better understanding of the transmission owner's goals, challenges and initiatives.

OUTREACH: There is significant interest in learning about the electric grid and reliability. The NDTA is available to present to associations, communities, and other entities upon request. The NDTA fields regular calls from ND Legislative Leadership, trade associations and community leaders. The NDTA presented and/or participated in the following associations this past year:

American Coalition on Renewable Energy-Policy Forum, Washington D.C.

Xcel Energy Prairie Island Nuclear Facility Tour

BNI Coal Leadership Team Strategic Discussion Event – Center

Marathon Oil Community Advisory Panel Meetings – Mandan & Dickinson

Western Dakota Energy Association – Minot, ND

Lignite Energy Council – Bismarck, ND

ND Petroleum Council – Medora, ND

ND Reclamation Conference – Watford City

Stutsman County Commission Meeting - Jamestown

Midwest Reliability Organization Reliability & Security Summit – Oklahoma City

Bison to Bakken Educational Event – ND Heritage Center

Numerous Data Center Developer Discussions

Transmission & Interconnection Summit 2025 – Washington D.C.

Western Dakota Energy Association Round Table – Watford City

Bison – Bakken Energy Panel – ND Heritage Center

STUDIES

In cooperation with the Attorney General's office, the NDTA produced reports from two studies in 2024. The first study, completed by the American Experiment, considered the impact of new Mercury and Air Toxic Standards (MATS) on the Midcontinent Independent System Operator, MISO. The results of the study showed that EPA proposed MATS regulations would render MISO unable to guarantee capacity for peak demand by 2029.

The second study, conducted by Always On Energy Research, considered the impacts of EPA's proposed greenhouse gas regulations on both MISO and the Southwest Power Pool (SPP). The results demonstrated that MISO would be unable to meet peak demand by 2028 and SPP by 2030 under the proposed regulations.

Both studies provided background information for the NDTA's declaration on the proposed impact of EPA's proposed regulation.

The NDTA is currently collaborating with the Energy & Environmental Research Center (EERC) and Power Systems Engineering to develop an analytical framework for supporting near-to-long-term planning and decision making around key issues facing North Dakota's electricity sector. Key issues investigated included the impacts of a changing resource mix, new policies and regulations affecting coal-based electricity, increasing penetration of renewable sources, lead times for transmission infrastructure build-out and load growth on resource adequacy and electric reliability within the state as well as the regional grid. The final report will be available in the 3rd quarter of 2025.

GRID RESILIENCE GRANTS

IIJA SECTION 40101(D) FORMULA GRANTS

FY22-FY23 Grant Subrecipients	
Capital Electric Cooperative	$ 321,930
Otter Tail Power Company	$ 4,432,088
Northern Plains Electric Cooperative	$ 586,000
McKenzie Electric Power Cooperative	$ 2,843,075 (returned)
FY24 Grant Subrecipients	
Burke-Divide Electric Cooperative	$ 550,000
City of Lakota	$ 1,707,109
Verendrye Electric Cooperative	$ 314,250
KEM Electric Cooperative	$ 620,000
City of Valley City	$ 1,053,000
Direct DOE Transmission Grants	
Minnesota Power Allete (HVDC Modernization)	$ 50,000,000
MISO/SPP (Joint Targeted Interconnection Queue)	$464,000,000
North Plains Connector (High Voltage DC Line)	$700,000,000
Transmission Siting and Economic Development Grants	
Mott Community Center	*$ 14,300,000*
Amidon Fire Hall	*$ 700,000*
MDU (Hettinger to Elgin 115kV upgrade)	$ 15,600,000
Otter Tail Power Company (system automation)	$ 19,600,000

***Jordan Kannianen**, Deputy Director of NDIC Discusses Grant Match Request to Legislative Committee*

MIDWEST RELIABILITY ORGANIZATION

There are approximately 249 companies registered with NERC in MRO's region. These companies are required to comply with mandatory NERC Reliability Standards and requirements, which MRO oversees. Membership with MRO is voluntary, free of charge, and is not based on a company's NERC registration status. MRO has two classes of members: Adjunct Members (The ND Transmission Authority is in this category) and Industry Members that qualify for one of seven industry sectors. Industry Sector Members are allowed to participate on the board of directors and MRO's organizational groups. Currently, MRO has 105 members, including 13 Adjunct Members. The 23-member hybrid board of directors includes four independent directors, two regional directors, and seventeen industry sector directors. The independent and regional directors are elected by all members, and the industry sector directors are elected by the seven sectors those directors represent. The board's Organizational Group Oversight Committee—a sector-based group of board members—oversees MRO's advisory councils and subgroups. The purpose of the organizational groups is to provide a forum for stakeholders across the region to discuss risk, develop risk mitigation strategies, expand outreach and awareness, promote information-sharing, and publish guidance for the region.

The MRO's 2025 Regional Risk Assessment identified the top six risks to reliable and secure operation of the regional bulk power system. The risk level and descriptions follow:

1. Extreme: **Uncertain Energy Availability.** Increasing electricity demand coupled with rapid retirement of traditional power plants creates potential energy shortfalls. This is especially true when replacement generation is variable, weather-dependent and may not be available when needed.

   Drivers: Legislative policies, generator retirements, new resource constraints, demand growth, inadequate transmission.

2. High: **Generation Outages During Extreme Cold Weather.** The electricity grid faces significant challenges during extreme cold weather, which occurs more often and with greater intensity and duration. Recent events resulted in unprecedented customer load shed to maintain system stability.

   Drivers: Insufficient winterization, lack of fuel supply, gas/electric interdependencies, generator retirements.

3. High: **Nation-State Threats.** The strategic objections of nation-state-sponsored actors from China, Russia and Iran pose significant cyber threats to the North American bulk power system. Their objectives vary, but generally aim to weaken our military and economic systems.

   Drivers: Heightened geopolitical tensions, increasing sophistication of threat actors, insufficient internal controls.

4. High: **Supply Chain Compromise.** Occurs when a vendor is the vector for a threat actor who manipulates hardware, software, connected services, or software delivery mechanisms for financial gain. The risk is amplified by the limited number of vendors serving the industry.

   Drivers: Supply chain complexity, growing reliance on third-parties, lack of third-party controls and visibility.

5. High: **Malicious Insider Threat.** Malicious insiders (employees, vendors, contractors) with access to critical systems and intent to do harm, can disrupt bulk power system operations. This risk does not include insider intelligence.

   Drivers: Limited detective controls in place, lack of insider threat programs.

6. High: **Inadequate IBR and DER Performance and Modeling.** Inverter-Based Resources (IBRs) and Distributed Energy Resources (DERs) -wind, solar and battery—are a relatively new technology for generating electricity. Industry and manufacturers are learning how to reliability integrate these resources into the power grid.

   Drivers: Increasing reliance on IBRs to serve load, lack of visibility, lack of experience with technology.

GRID RELIABILITY CHALLENGES

Over the past two years, FERC's 5-year load growth forecast for the USA has increased by almost a factor of five, from 23 GW to 128 GW. The main drivers are investment in data centers and manufacturing. Some high-end forecasts suggest that current load forecasts may not have caught up with growth. However, it is difficult to accurately predict how much manufacturing will be brought back to the USA and how "electrification" of transportation, manufacturing and processing will impact load given the change in Administration. The main drivers of electricity demand growth include:

Artificial intelligence is supercharging data center growth

Advanced domestic manufacturing

Electrification of buildings and transportation

Oil and gas development

Regardless, it will take all "hands on deck" to expeditiously develop generation capacity and transmission assets to meet load growth. Although there has been movement on regulatory relief here in the USA, global competition for transmission and generation building materials and equipment will present challenges for developers. That leads to the critical challenge of timing, failure to get generation and transmission in place to meet industry expectations will limit economic growth as well as hinder grid reliability.

GRID ENHANCING TECHNOLOGIES (GETs)

A future-ready grid requires infrastructure built with the latest technologies, including everything from complex devices compatible with digital technology to fundamental capabilities, such as mapping out the flow of electricity. Grid-enhancing technologies (GETs) maximize the electricity transmission across the existing system through a family of technologies that includes sensors, power flow control devices, and analytical tools.

GETs are gaining traction and have the advantage of speed…compared to the time to build transmission! GETs enables increased transmission capacity, reduces congestion and accelerates generation integration. Great River Energy has one of the largest deployments of drone-installed dynamic line rating sensors in the USA. WAPA and Basin Electric Power Cooperative collaborated on the installation of DLR on WAPA's 230kV transmission line near Watford City. There are three major GETs solutions:

1. **Dynamic Line Ratings (DLR)** – Real-time monitoring of transmission line capacity based on environmental conditions.
    a. Real-time capacity monitoring: DLR adjusts transmission line ratings based on temperature, wind speed and grid conditions.
    b. Reducing congestion costs: DLR can unlock up to 60% more capacity, reducing charges and energy costs.
    c. Enhancing Grid Reliability: Accurate, dynamic ratings improve operational decisions and prevent overload risks.
    d. Support Generation Integration: DLR allows greater utilization of generation by adapting to environmental conditions.

2. **Advanced Power Flow Control (APFC)** – Optimizes power distribution using modular power electronics to enhance grid flexibility.
    a. Optimizing Power Distribution: APFC dynamically adjusts power flow across transmission lines, reducing congestion.
    b. Enhancing Grid Stability: APFC mitigates voltage fluctuations and supports frequency regulation.
    c. Modular and Scalable Deployment: APFC solutions can be installed incrementally and redeployed as needed.

d. Reducing Infrastructure Costs: APFC minimizes the need for costly new transmission lines by improving existing capacity.

3. **Topology Optimization Software (TTO)** – Reconfigures grid topology to reduce congestion and improve transmission efficiency.
   a. Dynamic Grid Reconfiguration: Software-driven topology changes optimize power flows and reduce congestion.
   b. Minimizing Renewable Curtailment: Topology optimization ensures maximum utilization of renewable generation.
   c. Fast and Cost-Effective Deployment: Unlike physical upgrades, software-based solutions can be rapidly implemented.
   d. Enhancing Operational Flexibility: Operators can quickly adjust grid configurations to improve efficiency and resilience.

REGIONAL TRANSMISSION OPERATORS (RTOS)

North Dakota is served by two RTOs, Midcontinent Independent System Operator (MISO) and the Southwest Power Pool (SPP).

The MISO footprint covers the service territories of Otter Tail Power (OTP), Montana-Dakota Utilities (MDU), Great River Energy (GRE), Xcel, Missouri River Energy Services (MRES), and a small amount of transmission assets owned by Upper Missouri Power Cooperative. In addition, MISO has an agreement with Minnkota Power Cooperative that provides them with many of the same services. Western Area Power Administration (WAPA) and Basin Electric Power Cooperative (BEPC) are members of the Southwest Power Pool. SPP BEPC members Mountrail-Williams Electric Cooperative, Central Power Electric Cooperative, Roughrider Electric Cooperative and Mor-Gran-Sou Electric Cooperative have also joined SPP individually due to their transmission ownership.

Combined, North Dakota utilities and transmission developers are part of an extremely complex system that oversees the transmission of over 200,000 megawatts of electricity across 100,000 miles of transmission lines so that utilities can deliver power to homes and businesses in all or part of 20 states.

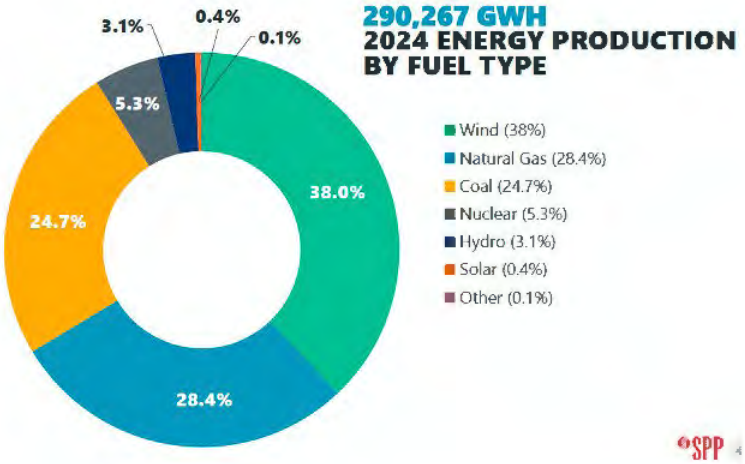
MISO and SPP also operate the power markets in their respective territory. Pricing for selling electricity into the grid and for buying electricity from the grid is managed by them. This process determines which generating units that have been bid into the market by Market Participants (MP) will be providing generation at any point in time and which units will provide various ancillary services to sustain voltage, assure reliability, etc.

WAPA is the Transmission Operator for the SPP transmission network in North Dakota. ND PSC Commissioner Randy Christmann serves on the SPP Regional State Committee. ND PSC Commissioner Jill Kringstad represents the ND PSC on the MISO Advisory Committee. Victor Shock, Director, Public Utilities Division, and PSC staff Chris Hanson, Leif Clark, Robert Frank and Adam Ranfandt participate in RTO committee work.

Both MISO and SPP acknowledge the Administration's support for baseload generation and the pressure relief (proposed EPA regulations) on coal & fossil fuel generation. Avoiding premature shutdown of coal facilities will provide much needed capacity for demand growth. SPP and MISO are both pursuing expedited resource study approaches to speed the interconnection queue process, adding much needed new generation capacity to the grid.

SOUTHWEST POWER POOL (SPP)

The Southwest Power Pool serves members in all or part of 14 states and provides additional energy services in 23 states and provinces. Its service territory covers 557,546 square miles and includes 5,292 substations and 72,884 miles of transmission lines. SPP has 63,908 MW of accredited generation capacity (accredited as of June 2024). SPP's coincident peak load of 56,184 MW occurred on July 31, 2023.



SPP's 2024 Integrated Transmission Plan builds a more reliable and resilient grid, levelized cost across the SPP footprint, provides relief of operational congestion and facilitates generation interconnection, resource adequacy and delivery point additions including:

2,333 miles of new transmission lines

1,495 miles of 345 kV

293 miles of 765 kV

495 miles of rebuilt transmission line

89 new transmission projects

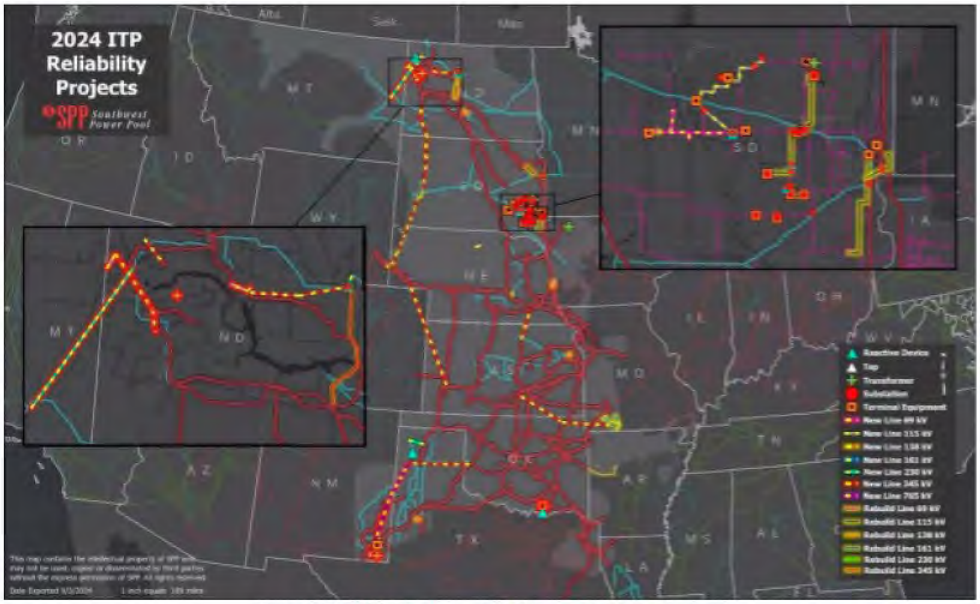


Figure 1.1: 2024 ITP Thermal & Voltage Reliability Projects

The total cost of the Integrated Transmission Plan project list is $7.68 billion. The benefit-to-cost ratio is over 8, supporting the benefits of the Plan.

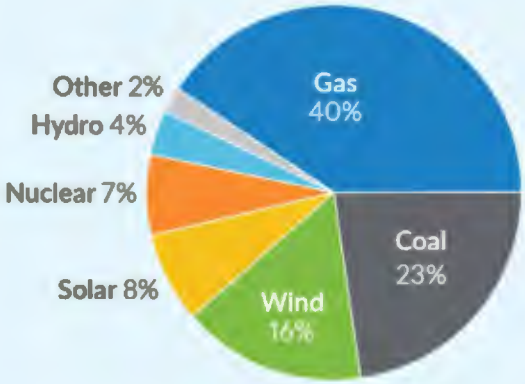
MIDCONTINENT INDEPENDENT SYSTEM OPERATOR (MISO):

The Midcontinent Independent System Operator serves across 15 states and the Canadian province of Manitoba. MISO serves a population of 45 million and has 77,000 miles of transmission line in its network. MISO's record peak demand of 127.1 GW occurred on July 20, 2011.

MISO's reliability footprint and regional control center locations.

INSTALLED CAPACITY

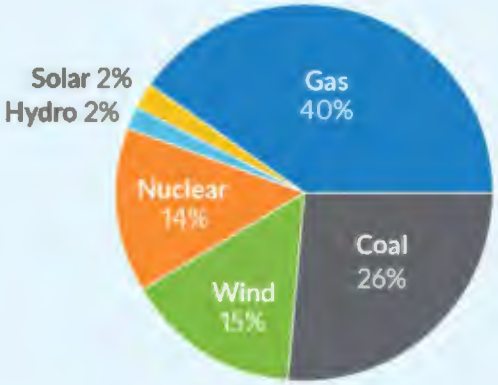
March 2025



203 GW

ENERGY PRODUCTION

January-December 2024



638 Million MWh

*Other: Diesel, Biomass, Storage, Demand Response Resources

Tranche 1 of MISO's Long Range Transmission Plan included 18 projects across the MISO Midwest subregion estimated to cost $10.3 billion. The JETx project was one of the 18 projects in Tranche 1.

MISO Board of Directors approved Tranche 1 in July of 2022 which included a 345kV portfolio across the footprint with widespread benefits

- *18-projects, $10.3 billion Midwest portfolio with a 2.6-3.8 Benefit/Cost ratio spread across the region*
- *Over 2,000 miles new transmission*
- *More than 200 formal meetings*

Regionally Cost Allocated Project Reporting Analysis

Tranche 1 / Multi-Value Project - Project Status, January 2025

#	Project Name	State	Estimated In Service Date: MTEP Approved	Estimated In Service Date: Current Date	Status: State Regulatory Status	Status: Const.	Cost: MTEP Approved (2022$; M)	Cost: Current Cost (2022$; unless noted)	Explanation
1	Jamestown - Ellendale	ND	2028	2028	●		$439	$439	
2	Big Stone South - Alexandria – Big Oaks*	SD/MN	2030	2030	◐		$574	$574	
3	Iron Range - Benton County – Big Oaks*	MN	2030	2030	●		$970	$970	
4	Wilmarth - North Rochester – Tremval (includes Mankato to Mississippi segment)	MN/WI	2028	2028	◐		$689	$685**	
5	Tremval - Eau Clair - Jump River	WI	2028	2028	◐		$505	$505	
6	Tremval - Rocky Run - Columbia	WI	2029	2029	◐		$1,050	$1,050	
7	Webster - Franklin - Marshalltown - Morgan Valley	IA	2028	2028	◐		$755	$755	
8	Beverly - Sub 92	IA	2028	2028	○		$231	$231	
9	Orient - Denny - Fairport	IA/MO	2030	2030	◐		$390	$318**	
10	Denny - Zachary - Thomas Hill - Maywood	MO	2030	2030	◐		$769	$511**	
11	Maywood - Meredosia	MO/IL	2028	2028	◐		$301	$301	
12	Madison - Ottumwa - Skunk River	IA	2029	2029	○		$673	$673	
13	Skunk River - Ipava	IA/IL	2029	2029	◐		$594	$592**	
14	Ipava - Maple Ridge - Tazewell - Brokaw - Paxton East	IL	2028	2028	◐		$572	$572	
15	Sidney - Paxson East - Gilman South - Morrison Ditch	IL	2029	2029	◐		$454	$516**	
16	Morrison Ditch - Reynolds - Burr Oak - Leesburg - Hiple	IL/IN	2029	2029	◐		$261	$675**	Cost change under Variance Analysis review
17	Hiple - Duck Lake	IN/MI	2030	2030	◐		$696	$520**	
18	Oneida - Nelson Rd.	MI	2029	2029	◐		$403	$403	
						Total	$10,324	$10,288	

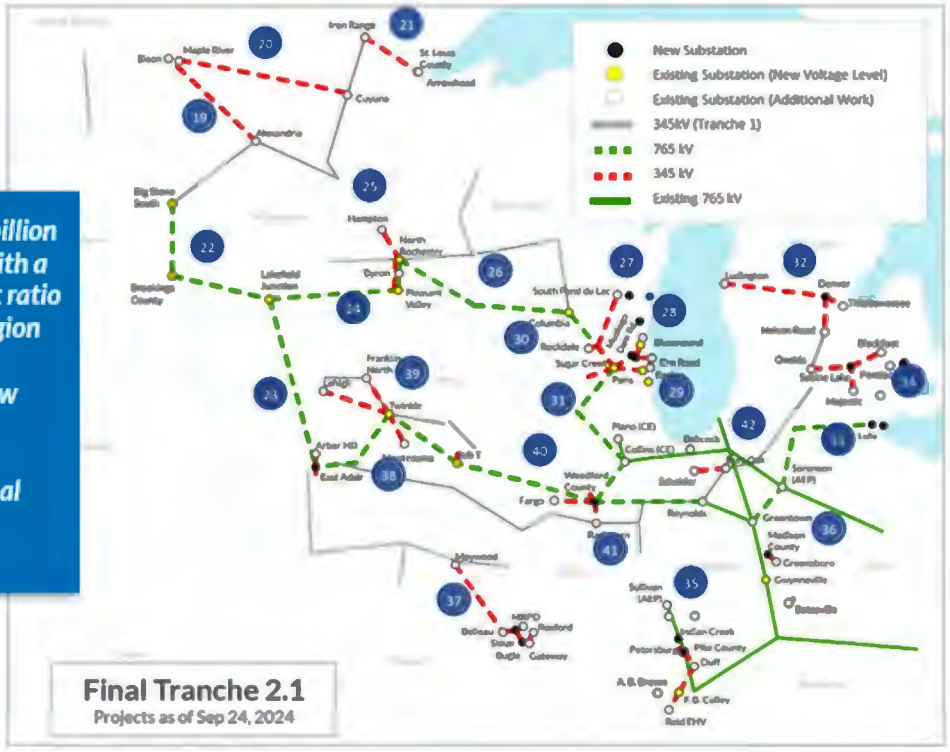
State Regulatory Status Indicator Scale
○ Pending
◐ In regulatory process or partially complete
● Regulatory process complete or no regulatory process requirements

*Big Oaks Substation was formally known as Cassie's Crossing
**Some or all facilities reported in nominal (year of occurrence) dollars

Tranche 2.1's portfolio focused on creating a 765 kV transmission "highway" within the MISO region to maximize value based on land use, line distances, transfer levels and costs. Tranche 2.1 includes two 345kV transmission line projects that reach into North Dakota, the Maple River to Cuyuna transmission line and the Bison to Alexandria transmission line. The total cost of Tranche 2.1 is estimated to be $21.9 billion with a benefit-to-cost ratio between 1.8 and 3.5. MISO is currently working on "Futures" in preparation for the next Tranche phase.

MISO Board of Directors approved Tranche 2.1 in Dec of 2024 which included a region-wide 765kV backbone with widespread benefits

- *24-projects, $21.9 billion Midwest portfolio with a 1.8-3.5 Benefit/Cost ratio spread across the region*
- *Over 3,600 miles new transmission*
- *More than 300 formal meetings*



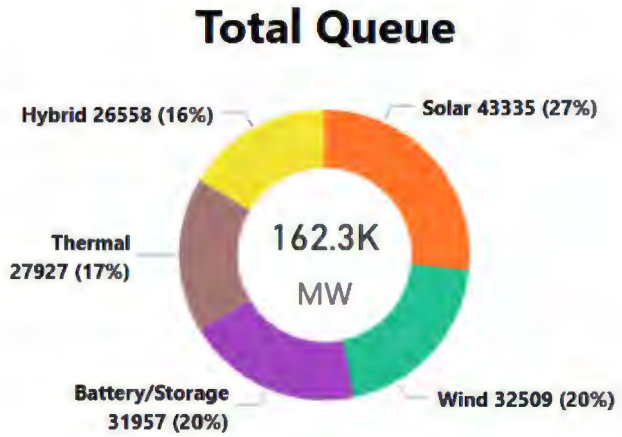
MISO's Long Range Transmission Planning: misoenergy.org/planning/transmission-planning/long-range-transmission-planning

GENERATOR INTERCONNECTION QUEUE (GI)

The generation interconnection queue represents new generators who are waiting in line to be analyzed and connected to the grid. These queues have been overwhelming the last few years; however, both MISO SPP have made great strides in clearing the backlog.

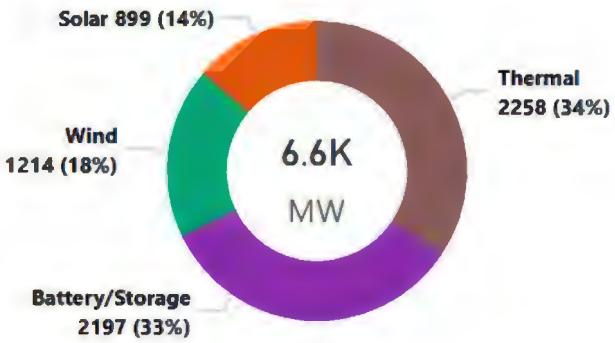
Both MISO and SPP have implemented an "Expedited Resource Addition Study" (ERAS) process. RTOs are experiencing falling reserve margins coupled with lengthy interconnection reviews that slow the process of bringing power supplies online. Future capacity forecasts indicate need for action to ensure the timely addition of new generation and the study process timeline reduction. The ERAS process is a targeted temporary process to speed Generation Interconnection Agreements, providing resources essential to reliability of the grid.

SPP's region wide generation queue as of May 2025 is represented by fuel type in the graph below. The total queue represents 701 projects totaling 162,285.61 MW of installed capacity.

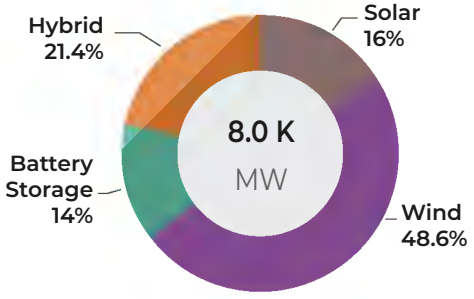


SPP's total generation queue as of May 2025 in North Dakota is represented by fuel type below. North Dakota's generation queue includes 28 projects totaling 6,568 MW of installed capacity.

SPP Generation Queue for North Dakota (May 2025)



MISO's generation queue (8,026 MW active queue) for North Dakota is as follows:



MISO has 250MW of wind with an approved Generators Interconnection Agreement but not yet operational

NORTH DAKOTA GENERATION PROJECTS

Montana Dakota Utilities has executed a 150 MW off-take/ ownership interest in the 250 MW Badger Wind project which is scheduled to be on-line the end of 2025.

In January 2025, **Minnkota Power Cooperative** announced the newest addition to its wind power fleet – a 370-megawatt (MW) wind farm to be developed near New Rockford, North Dakota. The development, named Flickertail Wind Farm, will be owned and operated by PRC Wind, while Minnkota will purchase all energy produced under a long-term agreement. The project is scheduled to begin construction by 2027.

Otter Tail Power Company announced two solar farm projects, a 50 MW farm near Solway MN and a 295 MW farm near Abercrombie, ND. Otter Tail has signed an agreement with Flickertail Solar Project LLC to buy the development assets once the permits and regulatory approvals are received and other contractual requirements are met.

As part of its latest Integrated Resource Plan order in Minnesota, **Otter Tail Power Company** also received approval to add 200 MW of new wind generation and between 20 MW and 75 MW of battery storage by the end of 2029. Specific projects have not yet been identified, but Otter Tail is actively engaging with developers to find projects that will meet these plans.

Basin Electric Power Cooperative has been adding natural gas generation in Northwestern North Dakota at their Pioneer site. Six 18.8 MW reciprocating engine generators came online in April 2025. Two 250 MW natural gas combustion turbines will be added to the fleet and commercial, one in May 2025 and the second one in August 2025. Looking ahead, Basin plans to construct a 1,470 MW combined cycle generating facility near Epping, called the Bison Station. That facility is projected to come online in 2030.

On their renewable front, Basin is working to repower the North Dakota Prairie Winds site near Max, ND. The eighty 1.5 MW wind turbines will be upgraded and capable of 1.6 MW of production. The units will be able to produce more energy at lower wind speeds.

NUCLEAR ENERGY STUDY

The 69th North Dakota Legislature initiated two bills that support nuclear generation studies. Senate Bill 2159 authorized study by removing a prohibition against EERC studying nuclear energy that was in section 15-11-40 (4) of the North Dakota Century Code. SB 2159 was a companion bill to HB 1025. HB 1025 was a Legislative Management Study – Advanced Nuclear Energy. This bill sets up a study for the 2025-26 interim. Legislative management shall study the feasibility, siting and deployment of advanced nuclear power plants in the state. The Study will consider siting, grid connectivity, land use considerations, economic impacts, temporary and permanent nuclear waste store, small modular and micro nuclear reactors and provisions of the North Dakota Century Code that place restrictions on advanced nuclear energy development, if any.

LIGNITE POWER PLANT OF THE FUTURE STUDY-SEPTEMBER 2024

Pursuant to Section 17 of House Bill 1014, enacted during North Dakota's 68th Legislative Assembly, the Energy & Environmental Research Center (EERC) worked with the North Dakota Industrial Commission (NDIC) through its Lignite Research Program (LRP) to conduct this study regarding future lignite electrical generation facilities. The legislature directed that the study include consideration of an energy demand forecast for dispatchable electricity generation and the regulatory environment for future lignite electrical generation facilities, an analysis of the economic impact of future lignite electrical generation facilities and the value-added products or services that may result from those facilities, and other factors related to the development and operation of future lignite electrical generation facilities. Key takeaways from the study include:

- Lignite generation remains the backbone of the regional electric grid.
- Forecasts for sustained load growth in the region necessitate retention and development of dispatchable energy resources.
- Lignite remains a cost-effective fuel for electric power generation.

- Technology options exist to build new, highly efficient lignite-fired electrical generation with post combustion carbon capture.
- Coal gasification and polygeneration provide myriad opportunities to develop value-added products and expand the market in conjunction with low-carbon electric generation.
- The prevalence of critical minerals and REEs in North Dakota's lignite reserves is a significant opportunity for the mining industry as support for domestic sourcing continues to increase.
- Regulatory certainty and financial support are critical to push the development of a future lignite generation facility to commercialization.
- The status of federal regulations remains ambiguous given changes in presidential administrations and approaches to GHG and other environmental rules as well as legal challenges, while the 45Q tax credit continues to drive private sector interest in pursuing CCUS.
- Tremendous opportunity exists for the lignite power sector to provide CO2 for EOR, driving low-carbon oil production and continuing to increase return on North Dakota's Bakken Formation.

NORTH DAKOTA TRANSMISSION PROJECTS

Transmission line development is an exhaustive process, often taking 8-10 years from idea to operation. The load growth, particularly in Western ND has been phenomenal but challenging for the power supplier and transmission developers. Today, there is significant transmission congestion in the Watford City/Williston region as well as in Southeast North Dakota. Fortunately, there are several transmission projects approved and well on their way to construction to alleviate the congestion and accommodate load growth, improve grid reliability and consumer security. The various utility projects are as follows:

GREAT RIVER ENERGY

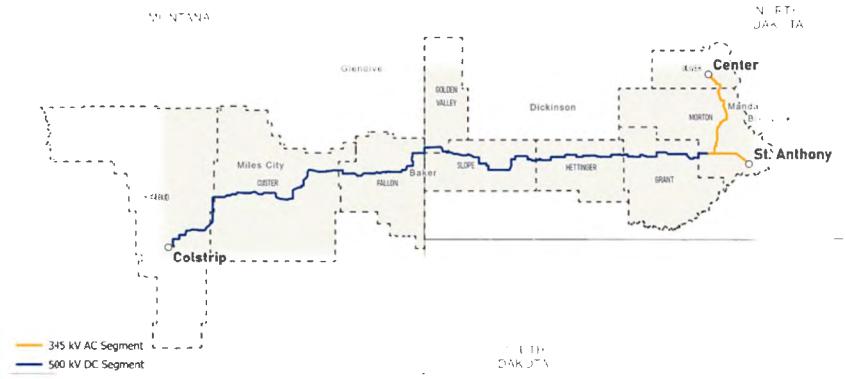
Utilities in the upper Midwest continue to focus on reliability and seek opportunities to reduce congestion on the transmission grid. GRE and other members of Grid North Partners in 2023, identified several projects to reduce congestion by employing technology such as dynamic line ratings (using real-time environmental factors such as wind speed and temperature to adjustment of transmission line power transfer capability) and replacement of substation elements that were limiting the flow of power. GRE and other utilities are replacing and where possible upgrading transmission lines and replacing substation equipment based on age and condition of those elements. This is an ongoing effort that will take several decades to complete.

GRE is engaging in an effort to determine with more particularity outage data and the root cause of the outage and identifying either capital projects or maintenance work orders to reduce the number and/or duration of future outages. GRE meets with its members on a regular basis to better understand the impacts of outages and develop long term solutions that meet their needs.

GRE partnered with Prisma Photonics on a pilot project leveraging GRE's existing overhead fiber optic cables as sensors to detect system anomalies and extreme weather events. The project includes monitoring five transmission lines connected at four substations. Prisma's solution installs optical interrogator units inside substation control buildings and connects to existing fiber optic cables on GRE's transmission lines. The Prisma system utilizes the fiber optic cable as a continuous acoustic sensor, detecting weather events such as wildfire, extreme wind, icing, galloping, and electrical system events including short circuits and partial discharges. The system can also detect vandalism and vegetation contact through vibrations on the transmission line.

GRID UNITED

Grid United and ALLETE's North Plains Connector project is an approximately 420 mile, 525kV HVDC transmission line that will span two states, from Colstrip, MT to St. Anthony, ND & Center, ND. The line will have 3,000 MW of capacity and connect three electric transmission regions: the Western Electricity Coordinating Council, MISO and SPP. North Plains Connector expects construction to begin in 2028, with commercial operation in 2032.



BASIN ELECTRIC POWER COOPERATIVE

Basin's current transmission activity includes the following projects.

Round up to Kummer Ridge 345kV– 33 miles	2024-completed
Leland Olds – Crane Creek - Tande 345kV -161 miles	2026
Wheelock to SK 230kV 53 miles	2027
Tande – SK 230kV 59 miles	2027

There are a couple projects that have come out of SPP's 2024 ITP portfolio in Basin's territory. These include the Patent Gate – Pioneer 345 kV project and the Leland Olds – Logan 230 kV to 345 kV conversion and Logan – Crane Creek 345 kV project.

WESTERN AREA POWER ADMINISTRATION (WAPA)

WAPA's Upper Great Plains (UGP) transmission facilities are under the functional control of the Southwest Power Pool (SPP) Regional Transmission Organization. WAPA-UGP's facilities are included in the annual SPP transmission assessments as appropriate. SPP's recently published 2024 Integrated Transmission Planning assessment identified a portfolio of transmission projects comprised of reliability, winter weather, economic, short circuit, and operational projects that will mitigate many system issues.

To address the rapid load growth in North Dakota, SPP staff recommended a network of new and upgraded lines across the state. One of the major projects in the WAPA footprint is a new 439-mile, 345 kV line from Belfield to Maurine to New Underwood to Laramie River that brings large economic benefits to North Dakota and the SPP region. This project aims to address the extra high voltage deficiency in this area and benefit rural communities in western Nebraska and the Dakotas. Another major project for North Dakota is a new 230 kV line from Dawson County, Montana, to Williston, North Dakota, that would provide reliability and economic benefits and greatly reduced congestion on the area's 115 kV system.

Other age and replacement projects identified by WAPA-UGP in the North Dakota area include a Fargo bus upgrade, Charlie Creek to Garrison transmission line rebuild, and Jamestown reactor replacement. These projects will increase capacity, alleviate congestion, increase storm resilience, and provide for continued stability in their local areas. These updates seek to increase transmission reliability in North Dakota, ensure worker safety and line reliability, and aid in controlling voltage and providing stability to the region.

WAPA-UGP markets and transmits federal hydropower from the region's Pick-Sloan Project dams. Operated by the U.S. Army Corps of Engineers, the Garrison Dam's five turbines, with a total installed capacity of 583 MW, produce around 2 million MWh annually. Garrison continues to receive unit maintenance and protective relay replacements on all units.

RAINBOW ENERGY CENTER

May 1, 2025 brought three years of ownership of Coal Creek Station and the HVDC line from Coal Creek Station to the greater Minneapolis area in Minnesota by Rainbow Energy Center and Nexus Line, respectively. Both assets combined allow for a unique business plan leveraging Rainbow Energy Center's status as an independent power producer. Expansion projects underway allow for continued growth in operations at the site of Coal Creek Station, including the construction of two new substations. The Arc Substation construction was completed in November of 2023 and the Rainbow Substation is anticipated to be completed in the fall of 2025. These additional assets will allow for expansion of generation and implementation of additional on-site load. Current infrastructure has allowed the integration of 205 MW of interruptible on-site load with an opportunity for additional megawatts to come online in the coming year. Integration of on-site load and incremental generation allow flexible and efficient use of the Nexus Line's HVDC system, contributing to the reliability of the overall transmission system.

MINNKOTA POWER COOPERATIVE

Minnkota Power Cooperative (MPC) continues to be engaged in several projects and continuous improvement activities in North Dakota. MPC's Distribution Substation Automation and Modernization program couples the need for addressing aging infrastructure with improving system reliability by modernizing infrastructure and adding last mile communication capabilities to their over 200 delivery points, while also providing real time visibility to help drive system resiliency. The Sub-Transmission Line Rebuild program has also shown increased value to their members with reduced outages, improved load serving capabilities, while also expanding the reach of their fiber optic communication system. In addition, new high voltage interconnects to add additional system flexibility to the sub-transmission system are being completed south of Grand Forks, as well as in proximity to Warsaw/Ardoch area. These enhancements along with leveraging new innovative technologies related to drones and advanced outage detection abilities are resulting in improving reliability metrics for the membership. Due to the support of their members and Minnkota's continued investments, strategic initiatives, and continuous improvement projects, 2024 marked the best system reliability performance in the past 25 years.

MONTANA DAKOTA UTILITIES

Montana Dakota Utilities (MDU) is a partner with Otter Tail Power Company in the JETx 345 kV transmission project from Jamestown to Ellendale. Both ends of the line will have expanded substations, with MDU expanding and upgrading their Ellendale Substation.

MDU plans to upgrade the Hettinger to Elgin transmission line from 69 kV to 115 kV. The in-service date for the new transmission line is 2028.

MDU has several other projects that have been recently completed. They include:

- Rebuilding the Crosby to Zahl 60 kV transmission line
- Rebuilding of the Halliday to Dodge 41.6 kV transmission line
- Substation upgrades at Beulah, Ellendale, Wishek , Merricourt and Tioga

OTTER TAIL POWER COMPANY

Otter Tail Power Company (Otter Tail) is working on several major transmission grid enhancement projects in North Dakota. These include:

Jamestown – Ellendale 345 kV Project
In partnership with Montana-Dakota Utilities, Co. (MDU), Otter Tail is developing a new 95-mile, 345 kV transmission line from Jamestown, ND to Ellendale, ND, that will be double circuit capable. Both ends of the line will have expanded substations, with Otter Tail expanding the Jamestown substation. In addition, Otter Tail will also be replacing the 345/230 kV transformers at the Maple River 345 kV Substation near Fargo, ND, as an underlying upgrade.

Maple River – Cuyuna 345 kV Project
Otter Tail is collaborating with Great River Energy (GRE) and Minnesota Power (MP) to construct a new, approximately 165-mile 345 kV transmission line from the Maple River substation near Fargo, ND, to MP's Cuyuna substation in Crow Wing County, MN. The project is planning to be constructed with double circuit

capable structures. As part of this project, Otter Tail will further expand the Maple River substation to accommodate the new 345 kV line.

Forman – Hankinson 230 kV Rebuild
Otter Tail is also undertaking a project to rebuild the existing 37-mile, 230 kV line between the Forman Substation near Forman, ND, and the Hankinson Substation, near Hankinson, ND.

Bison – Alexandria 345 kV Project
A second 345 kV circuit along the existing 135-mile transmission line from the Bison 345 kV substation near Mapleton, ND, to the Alexandria substation near Alexandria, MN, is to be constructed by Otter Tail, Great River Energy, Minnesota Power, Missouri River Energy Services and Xcel Energy.

Big Stone South – Hankinson – Bison 345 kV Project
As part of the Joint Targeted Interconnection Queue study completed by MISO and the Southwest Power Pool (SPP), Otter Tail and Xcel Energy are moving forward with the development of a new, approximately 75-mile, single circuit 345 kV line from Otter Tail's Hankinson Substation near Hankinson, ND, to Xcel's Bison Substation near Mapleton, ND. Substation improvements are planned at both of the endpoint substations with the most significant improvement involving the construction of a new 345 kV switchyard at Otter Tail's Hankinson Substation. In addition, Otter Tail will continue the new single circuit 345 kV line from Hankinson, ND, a distance of approximately 75-miles, to its Big Stone South Substation near Big Stone City, SD.

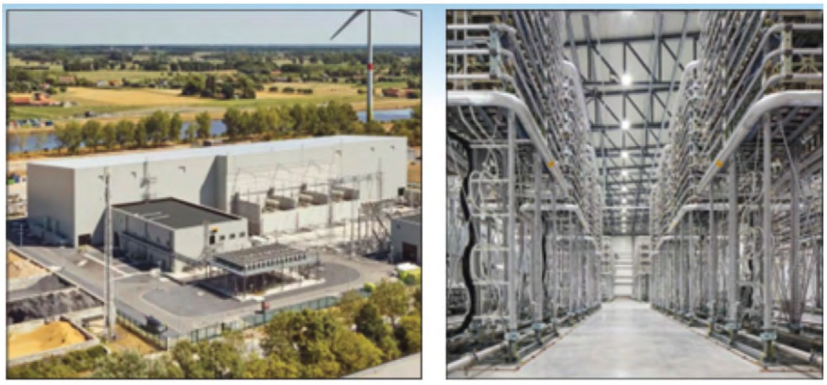
Other Projects
To address concerns with aging infrastructure, Otter Tail is also performing several different transmission line upgrades across its system; some of which are located in North Dakota. For example, 41.6 kV transmission line upgrades are currently underway between Buffalo and Colgate as well as between Rugby and Bottineau.

Otter Tail has also launched a "Next-Generation Grid Resiliency Plan" that will increase inspections of transmission and distribution poles by 63%. The program also includes investment in an Intelligent Vegetation Management System which uses satellite imagery for vegetation analysis, as well as drone-based inspections of 750 miles of transmission lines and 250 substation assessments using ultrasonic technology to evaluate potential component failure.

Lastly, Otter Tail was a successful DOE GRIP applicant and is currently working through grant negotiations. Once finalized, Otter Tail will be directing those grant funds toward an updated load management system.

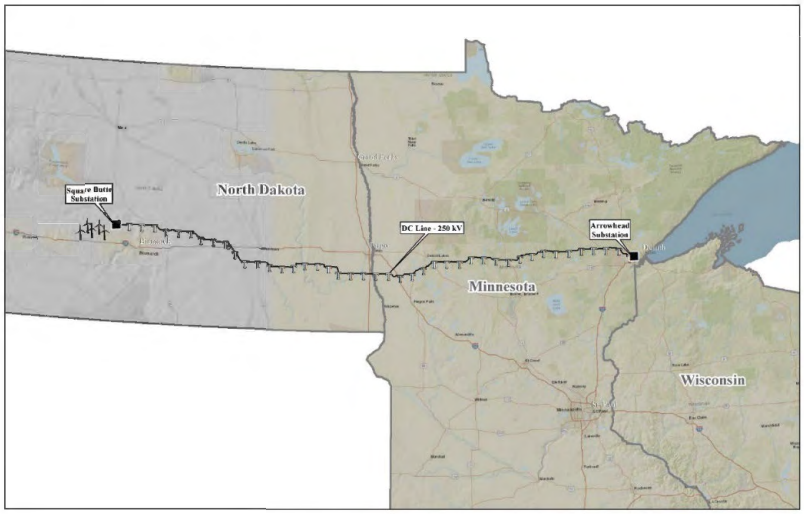
MINNESOTA POWER ALLETE

Minnesota Power Allete has embarked on a HVDC Modernization Project on their HVDC line from Center ND to Duluth, MN; increasing the transmission capacity from 550MW to 900 MW with potential to increase to 1,500 MW. The project work occurs at either end of the HVDC line at the converter stations. The modernization project will also enable electricity to flow either direction and is slated to be complete at the end of the decade.



The new voltage source converter station will look similiar to this one when completed.

-Photos Courtesy of Siemens



XCEL ENERGY

Xcel Energy is working to develop the grid of the future ensuring that generation outlet and resource adequacy is met now and into the future. Xcel Energy is working on the following projects:

Xcel Energy is completing the 2nd circuit from the Brookings Co-Twin Cities 345 kV line to help with the congestion concerns in southwest Minnesota.

Xcel Energy is involved with three projects from the MISO Long Range Transmission Plan (LRTP) Tranche 1 projects. These projects will help address transfer capabilities across the MISO system from the west to east towards the load centers.

1. Big Stone-Alex new 345 kV line, completion of the 2nd circuit from Alex-Monticello 345 kV CAPX line
2. New 345 kV line from Wilmarth-North Rochester-Tramval
3. New 345 kV line from Tremval-Eau Claire-Jump River

Xcel Energy is also involved with several 765 kV sections and 345 kV sections of approved projects from MISO Tranche 2.1 that was approved in December 2024. These projects will help the region add much needed capacity for load serving and generation outlet.

Xcel Energy is working on the MISO LRTP Future Trance 2.2 that will building on the Tranche 1 and 2.1 projects to complete a long-range vision plan for the upper Midwest region.

CENTRAL POWER COOPERATIVE

Apple Creek Distribution Substation – South Bay Addition – They will add a 43.8-13.2kV, 14 MVA distribution substation bay within the existing Apple Creek substation to provide capacity and redundancy in the vicinity of Lincoln, ND.

Bismarck North Circuit Switcher 362 & 462 Replacement – These two fault clearing devices are at the end of their useful life and will be replaced with new 115kV SF6 power circuit breakers.

Kensal Substation Replacement and Kensal Tap to Kensal to Glenfield 43.8kV Transmission Line Project – These projects include construction of approximately 34 miles of new 43.8kV transmission line which will provide looped transmission service to the replacement Kensal distribution substation and the existing Glenfield distribution substation.

Mallard 115kV Substation Capacity Related Transformer Replacement – Central Power ordered a larger transformer for the initial Phase 1 Mallard rebuild project that occurred in 2023 but that transformer was delivered to the Carrington 115kV substation after the Carrington transformer failed. They now plan to replace the smaller 1993

transformer at Mallard with a new larger unit and they will relocate the existing Mallard transformer, which still has a significant life expectancy and value, to the Gibbs 115kV substation.

Max 115kV Substation – Circuit Switcher 362 Replacement – The Max 115kV transformer protection circuit switcher has been deteriorating over the last few years and they plan to replace it with a new 115kV power circuit breaker.

Neal 115kV Substation Equipment Replacement – The Neal 115-43.8kV transformer along with four 43.8kV breakers and the 43.8kV potential transformers are reaching the end of their useful life. They plan to install a new larger 115-43.8kV transformer on a new pad within the Neal substation and to replace the four breakers along with the potential transformers in their existing locations.

New Rockford Distribution Substation Replacement – The Central Power New Rockford distribution substation was built in 1950, and the structures are a compact design with very tight clearances between substation components. Central Power plans to build a larger modern replacement for the New Rockford distribution substation south of the existing substation directly adjacent to the existing transmission line.

Ward 230kV Substation Control System Replacement – The control and protection system for Central Power's part of the substation, which is jointly owned with WAPA, will be replaced as part of a planned equipment replacement rotation. The project will involve designing, building, programming, and replacing the existing control and protection system for the 115kV and 43.8kV portions of the substation using modern microprocessor-based relays and control equipment.

Woodworth to Robinson to Tuttle 43.8kV Transmission Line Rebuild - The 20 mile 43.8kV transmission line between Central Power's Woodworth and Robinson substations was built in 1972 while the 12 mile 43.8kV transmission line between Central Power's Robinson and Tuttle substations was built in 1978. These lines are unshielded with a history of galloping and broken insulators. They plan to build a complete replacement in or near its existing location.

NORTH DAKOTA TRANSMISSION AUTHORITY
STATE CAPITAL, 14TH FLOOR
600 E. BOULEVARD AVE. DEPT. 405
BISMARCK, ND 58505-0840
PHONE: 701.355.2189

DISCLAIMER

This report utilizes data from various sources. Those sources are appreciated for their willingness and availability. If users of this report utilize that information, please go to the source to assure the most accurate and up to date information.

Thanks for the Energy Information Administration (EIA), Southwest Power Pool (SPP), Midcontinent Independent System Operator (MISO), area utilities and WIND and their members especially.

RENEWABLE ENERGY PROGRAM PROJECT MANAGEMENT REPORT

Jordan Kannianen, Deputy Executive Director, NDIC

June 23, 2025

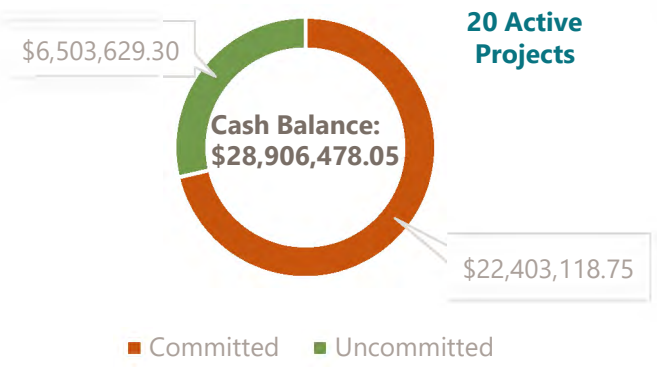
renewable ENERGY PROGRAM

NORTH Dakota

Be Legendary.™

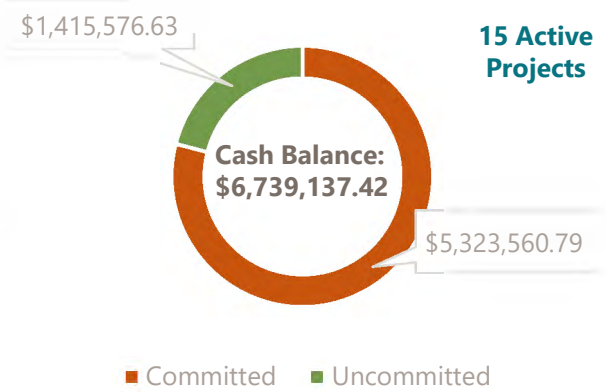
INDUSTRIAL COMMISSION-MANAGED FUNDS

Lignite Research Fund

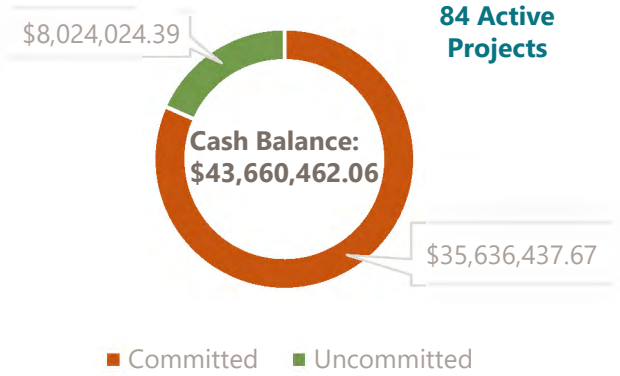


Oil and Gas Research Fund

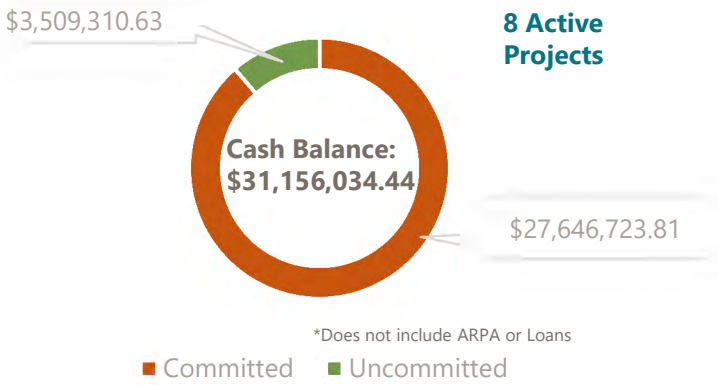
Renewable Energy Fund



Outdoor Heritage Fund



CSEA Fund*

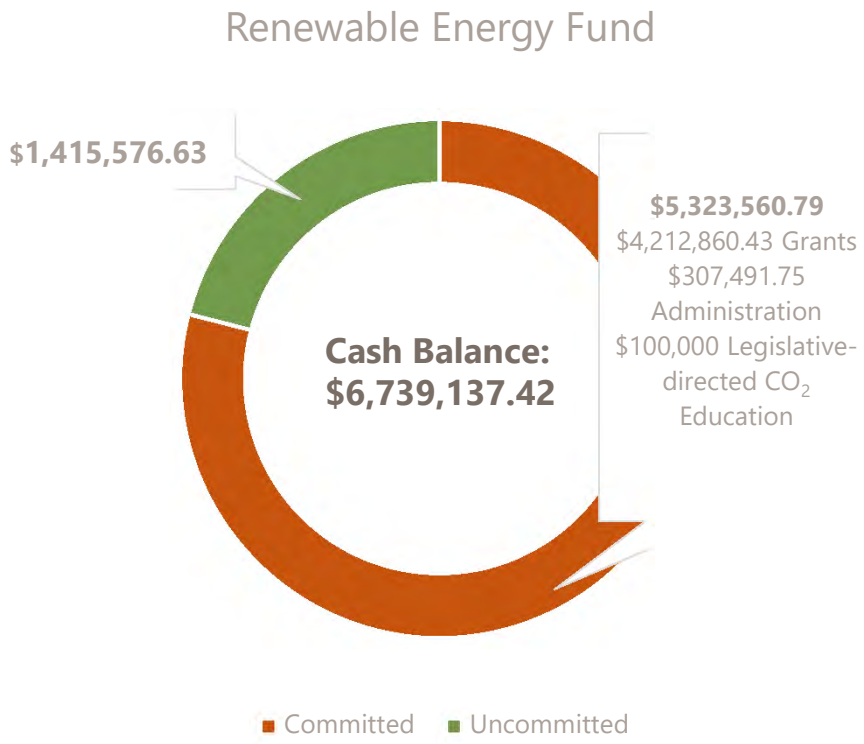


*Does not include ARPA or Loans

Total Active Projects 142

Total Dollars committed 2023-2025 $67,451,330.01

RENEWABLE ENERGY FUND BALANCE JUNE 2025



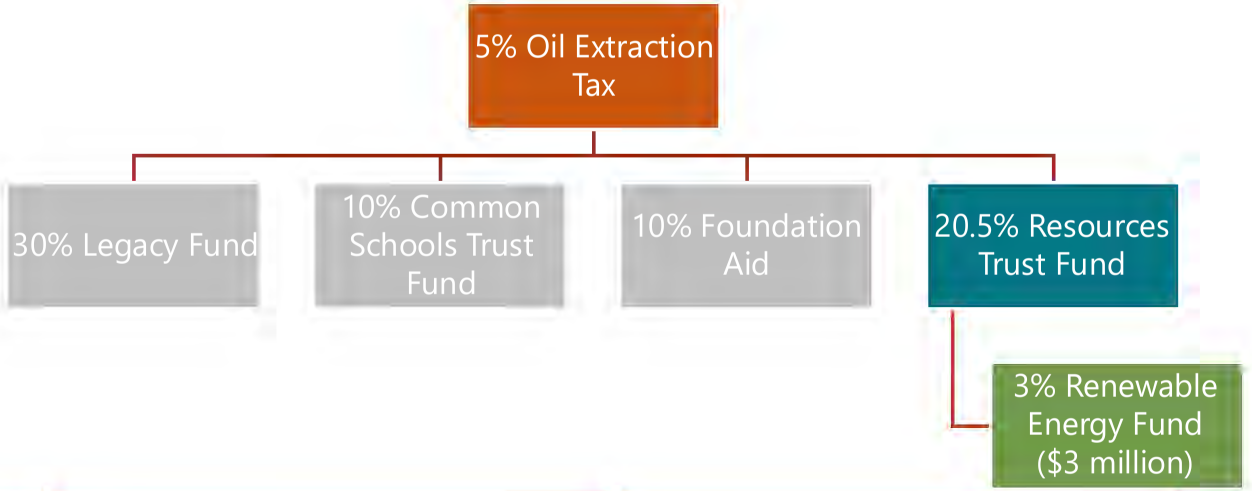
Funding Source:
- **$3 million oil production taxes**

74 Cumulative Projects

15 Active Projects

Cumulative Value:
- **$25.9 million granted**
- **$166.5 million project value**

2025-2027 BIENNIUM APPROPRIATION AND FORECASTED INCOME



Month	OMB Forecast	Actual
August 2025	$454,315	$
September 2025	$469,459	$
October 2025	$469,459	$
November 2025	$454,315	$
December 2025	$469,459	$
January 2026	$454,315	$

Assumes:

$59 & $57/barrel

1.15m & 1.1 m bbls/day

Renewable Energy Development Program								
Grant Round 55 Applications (June 2025)								
Proposal Number	**Applicant**	**Application Title**	**Principal Investigator**	**Total Project Cost**	**Amount Requested**	**Project Duration**	**Description of Project**	**Technical Review Score**
R-055-A	University of North Dakota	Producing Silicon Anode Materials for Li-ion Batteries	Xiaodong Hou	$ 1,249,999.00	$ 200,000.00	1.5 Years	Prototype demonstration of a proven process for producing low-cost and high-performance silicon monoxide (SiO) with graphene coating (SiO/G) anode materials for lithium ion batteries (LIBs)	174.75 / 250
R-055-B	BWR Innovations LLC	Improving Renewable Energy Resources with Hydrogen Offtake	Joel Jorgenson	$ 1,120,232.00	$ 500,000.00	2 Years	Deploying a modular hydrogen production and dispensing system that transforms otherwise wasted renewable energy into high-value, compressed hydrogen	206.33/ 250
				Total Amount Requested	**$ 700,000.00**			
				Total Amount Available	**$ 1,462,473.19**			

DE-COMMITMENT OF FUNDS

- 1. R-027-037 (Landfill Gas) Remaining amount: $485,000
- 2. R-045-054 (Spiritwood Greenhouse) Remaining amount:$500,000 (full award)
- **Total of $985,000.00 in returned commitments to REP**

Renewable Energy Program

Grant Round 55

Application Summary Page

R-055-A

Project Title: Producing Silicon Anode Materials for Li-ion Batteries

Applicant: University of North Dakota

Primary Contact: Xiaodong Hou

Total Project Costs: $1,249,999

REP Request: $200,000

Summary of Project: Prototype demonstration of a proven process for producing low-cost and high-performance silicon monoxide (SiO) with graphene coating (SiO/G) anode materials for lithium ion batteries (LIBs)

Technical Reviewer Comments: (Overall Score 206.33 / 250)

- The proposed research project is well thought out and documented. Suppliers have been found and are supportive of the proposed research. This proposal is one of the better ones I have reviewed. If this funding is approved, I believe this research could be of significant benefit to the state and its residences.
- The proposed work represents a great investment for the state of North Dakota. A successful project will open the door to a potentially new and exciting industry leading to significant investments and job creation in North Dakota.
- This is a well written proposal. Clear goals, clear milestones, clean & itemized budget. There are letters of support from what is expected to be a viable supply chain from feedstock to consumer.

REP Advisory Board Recommendation: Fund

UNIVERSITY OF NORTH DAKOTA

UND.edu

Research & Economic Development
Tech Accelerator, Suite 2050
4201 James Ray Drive Stop 8367
Grand Forks, ND 58202-8367
Website: UND.edu/research

January 29, 2025

Ms. Karlene Fine, Executive Director
North Dakota Industrial Commission
State Capitol – 14th floor
600 East Boulevard Avenue, Dept. 405
Bismarck, ND 58505-0840

Subject: Proposal to the Renewable Energy Program

Dear Ms. Fine:

On behalf of the University of North Dakota, I am pleased to submit Dr. Xiaodong Hou's proposal on "Producing Silicon Anode Materials for Li-ion Batteries," for consideration by the NDIC's Renewable Energy Program. Dr. Hou is a Research Associate Professor in UND's College of Engineering and Mines and is the Principal Investigator for this project. Dr. Hou is proposing an 18-month project with a total requested amount from NDIC of $200,000. The NDIC funding is being requested as a match to the DOE portion of the project, which is currently in the process of being negotiated and awarded for $999,999 under DE-FOA-0003155 as Award Number DE-EE0011725. Additional cost share has been committed by Lattice Materials ($15,000); Leonardite Products ($15,000); Packet Digital ($15,000); and the University of North Dakota ($5000). The total value of the overall project would thus be $1,249,999. We anticipate a start date in approximately April 2025.

Please contact Dr. Hou with any technical questions about the project at (701) 777-6350 or xiaodong.hou@und.edu. If the NDIC selects this proposal for an award, please send any award documents and related communications to Sherry Zeman at sherry.zeman@und.edu for processing on behalf of UND. The $100 application fee is being handled as an electronic payment by UND and should reach your office in a timely manner. Thank you very much for your consideration of this proposal.

Sincerely yours,

DocuSigned by:
Karen Katrinak
DD9BE15BC81D4AA...

Karen Katrinak, Ph.D.
Proposal Lead, Research & Sponsored Program Development
Karen.katrinak@und.edu 701-777-2505

Renewable Energy Program

North Dakota Industrial Commission

Application

Project Title: Producing Silicon Anode Materials for Li-ion Batteries

Applicant: University of North Dakota

Principal Investigator: Xiaodong Hou

Date of Application: February 1, 2025

Amount of Request: $200,000

Total Amount of Proposed Project: $1,249,999

Duration of Project: 1.5 years

Point of Contact (POC): Xiaodong Hou

POC Telephone: 701-777-6350

POC Email: Xiaodong.hou@und.edu

POC Address: 2844 Campus road, Stop 8153

Grand Forks, ND 58202-8153

TABLE OF CONTENTS

1 ABSTRACT

Objective: The Center for Process Engineering Research at the University of North Dakota (UND) College of Engineering & Mines, with support from three long-term industry partners (Lattice Materials, Leonardite Products LLC, and Packet Digital LLC), will conduct a prototype demonstration of a proven process for producing low-cost and high-performance silicon monoxide (SiO) with graphene coating (SiO/G) anode materials for lithium-ion batteries (LIBs). The project's success leverages the following: 1) high-purity Si scrap produced from Lattice Materials' semiconductor manufacturing facility; 2) an innovative plasma-based SiO synthetic production technique, and 3) a unique graphene precursor, humic acid, and UND CPER's patented technology for in-situ synthesis of graphene coated SiO anode. The ultimate goal of this project is to prove the technical and economic merits of the technology at a commercially-relevant scale, readying the technology for commercial licensing to build a North Dakota production facility for high-performance SiO anode materials to meet the ever-increasing anode demands in the LIBs industry.

Expected Results: Expected results include: 1) optimization of a high-performance process for producing SiO/G anodes that meet the target level of performance defined later in **Table 1**, 2) prototype demonstration of the process at 10-20 kg/day, 3) techno-economic analysis and environmental lifecycle analysis to prove the technology's economic and environmental feasibility and merits and 4) a market transformation plan to lay out the next development steps to full commercialization in North Dakota. The proposed project directly benefits North Dakota in multiple ways: 1) new markets for ND mineral resources, including Leonardite and silica, 2) partnership that benefits ND private sector companies in both upstream (Leonardite Products) and downstream (Packet Digital) positions in the value chain, 3) demonstration of an innovative new battery anode manufacturing method that could impact multiple sectors of ND's economy, including electric utilities, transportation, and unmanned serial systems (UAS), 4) new markets/demand for ND's renewable energy resources. We expect that this project will ready the technology for immediate commercial licensing.

Duration: 18 months (Suggested: April 1, 2025 – September 30, 2026)

Total Project Cost: NDIC Share: $200,000 | Total Project: $1,249,999

Participants: UND, University of Idaho, Lattice Materials, Leonardite Products, and Packet Digital.

2 PROJECT DESCRIPTION

2.1 Objectives

The primary objective is to conduct a prototype demonstration of a proven process for producing low-cost and high-performance silicon monoxide (SiO) with graphene coating (SiO/G) anode materials for lithium-ion batteries (LIBs). The achievement of this goal leverages the following key components: 1) high-purity Si scrap produced from Lattice Materials' semiconductor manufacturing facility in Bozeman, MT; 2) an innovative plasma-based synthetic SiO production technique, 3) a unique graphene precursor, humic acid produced from Leonardite Products' facility in Williston, ND, and 4) UND's patented technology for in-situ synthesis of graphene coated SiO anode. The ultimate goal of this project is to prove the technical and economic merits of the technology at a commercially-relevant scale, readying the technology for commercial licensing to build a North Dakota production facility for high-performance SiO/G anode materials to meet the ever-increasing anode demands in the LIBs industry.

The proposed project will address key technical gaps identified from prior technology development efforts. Specific goals related to addressing these gaps and targeting specific improvements to the baseline performance and their technical/economic performance are listed in **Table 1.** The baseline for most of the technical objectives is based on the commercial nano-Si/C produced using the ball milling approach, given its competitiveness alongside SiO anodes and the current lack of SiO anode producers in the US.

Table1. Target Level of Performance

Objective/Goal	Metric	Min Target	Stretch Target	Baseline Performance
Reduced water or chemical consumption	% decrease in volume of water or chemical per ton of Si anode produced	50%	90%	Commercial nano-Si/C anodes
Reduced waste	Reduced waste per unit of SiO anode produced	50%	90%	Commercial nano-Si/C anodes
Reduced energy embodiment through energy-efficient processes	% decrease in energy expended per ton of Si-anode produced	20%	30%	Commercial nano-Si/C anodes
SiO as a byproduct in an existing process	% of domestic demand potentially met by sourcing SiO as a byproduct	25%	50%	Projected 2030 Si anode demand in the US
Improved battery performance	Specific capacity (mAh/g)	1000	1600	Commercial nano-Si/C anodes
	Initial Columbic Efficiency (ICE)	80%	85%	
	Cycling life (80% capacity retention)	600	1000	
Cost competitiveness	% decrease in cost per kAh	40%	65%	Commercial nano-Si/C

2.2 Methodology

An overview of the technology methods is provided below (see Appendix 2 for full confidential details). The SiO/G manufacturing technology involves five steps, summarized as follows. **Step 1** – Feedstock selection and pre-treatment: The silicon feedstock will be supplied by Lattice Materials, and Leonardite by Leonardite Products. **Step 2** – The production of SiO via two approaches: 1) through a self-designed and fabricated plasma reactor and 2) through a conventional resistive heating approach. **Step 3** – SiO classification: The SiO solid will be pulverized and then classified into SiO powders with desired particle sizes. **Step 4** – Graphene coating: our patented technology[1] will be used to produce high-purity humic acid as a graphene precursor from Leonardite to produce SiO/G. **Step 5** – Anode functionalization: the obtained SiO/G composite possesses a high reversible capacity but a low ICE, which will be improved to produce a highly competitive LIB anode by leveraging our expertise in relevant techniques.

We propose the following set of tasks to achieve the project objectives.

Task 1 – Project Management and Planning

UND will perform all project management work necessary to manage the project's scope, schedule and budget (see Sections 5, 6, & 7). As a requirement of the associated DOE funding (80% of the project's cost), additional efforts will involve the development and implementation of a Community Benefits Plan (CBP) focusing on DEIA, energy equity, and workforce investment, and development of a market transformation plan (MTP) detailing future plans necessary to bring the technology to full commercialization.

Task 2 – Production of SiO

Subtask 2.1 – Feedstock procurement and characterization: Silicon feedstock will be supplied by Lattice Materials. The feedstock will be comprehensively analyzed to determine properties that need to be tailored for SiO production, including phase structure, impurity content, and particle size. The phase structure will be analyzed with a X-ray diffratometer (XRD). The feedstock impurity content will be measured using an inductively coupled plasma atomic emission spectrometer (ICP-AES). Particle size and morphology will be characterized with Particle size analyzer and scanning electron microscopy (SEM), respectively.

Subtask 2.2 – Reactor design and fabrication: A SiO production reactor using a plasma generator will be

fabricated. Key parameters of the reactor will be tested and adjusted to control the plasma parameters to meet the proposed production capacity. Dr. Sarah Wu from University of Idaho will lead the design work and the UND team will fabricate the reactor under her guidance.

Subtask 2.3 – Production of SiO: The feedstock input rate, plasma temperature, and vacuum degree in the furnace will be optimized for SiO production. The structure and composition of the produced SiO will be characterized using XRD and ICP-AES. The results will be compared with commercial reference materials.

Subtask 2.4 –SiO post-treatment: The synthesized SiO in subtask 2.3 will be pulverized and then classified to desired sizes. SiO particle size, surface area, and morphology will be characterized using a particle size analyzer, BET analyzer, and SEM, respectively.

Task 3 – Development of SiO/G Composite Anode

Subtask 3.1 – Bench-scale production of SiO/G composite: This subtask aims to produce SiO/G composite from the SiO produced in Task 2 and humic acid supplied by Leonardite Products, using previously proven technology. The raw humic acid will be purified with UND's patented technology using existing equipment developed as a part of UND's rare earth elements (REE) from lignite extraction technology demonstrations. The carbonization degree will be estimated using the ratio of ordered/disordered carbon atoms through a Raman spectrometer, and the porosity will be tested using a BET surface area analyzer.

Subtask 3.2 – Preparation of SiO/G anode: This subtask aims to make the produced SiO/G in subtask 3.1 practical for use as the anode for LIBs. The SiO/G will be blended with graphite to meet the LIB's different capacity demands. The SiO/G and graphite blend will be used as the active material for electrode fabrication. Additionally, we will investigate pre-lithiation methods via solution or solid reactions to improve the ICE of the SiO/G anodes, if needed.

Subtask 3.3 – Battery performance testing: The battery performance of the synthesized SiO/G anodes will be evaluated against the target performance levels defined in Table 1. CR2032 coin-type cells will be prepared using lithium metal as the counter electrode. A limited number of 18650/pouch-cells will be prepared and tested on battery test systems by charging/discharging at certain currents. Electrochemical performance testing, including initial charge-discharge capacity, ICE, and anode cycle life, will be

conducted on a Neware CT-4008 battery testing system (Neware Technology Limited). Cyclic voltammetry (CV) and electrochemical impedance spectroscopy (EIS) tests will also be conducted on a Gamry potentiostat available at UND.

Task 4 – Prototype Demonstration of SiO/G Anode Production

This task will evaluate the reproducibility of the optimized procedures at a larger, commercially-relevant scale. The production processes developed in Tasks 2 and 3, including feedstock pulverization, classification, humic acid purification, and carbonization, will be scaled up using the existing equipment and facility at UND's REE pilot plant. The SiO/G composite anode production scale will be 10-20 kilograms/day. The aforementioned material characterizations and battery performance testing methods will be applied to this task. In addition, full-size 18650 cylindrical cells using the optimal prototype sample will be fabricated and tested, comparing performance against the target metrics in Table 1.

Task 5 – Techno-Economic Analysis (TEA) and Life Cycle Assessment (LCA)

The technical and economic feasibility of the manufacuring process will be investigated after the major variables that affect capital and operating expenses are thoroughly evaluated. The cost estimates will be considered AACE Class 5. A quantitative LCA will be conducted on the SiO/G anode production process, considering the direct and indirect effects from a cradle-to-grave approach on greenhouse gas emissions, land use effects, and other potential environmental effects. These effects will be compared to those from commercial Si anodes for LIBs. The TEA and LCA will be conducted according to DOE guidelines.

2.3 Anticipated Results

The main result will be proving the technical and economic performance of our innovative manufacturing process for producing SiO/G anode materials at a prototype scale of 10-20 kg/day capacity. The techno-economic and environmental feasibility of full commercialization will be demonstrated via TEA and LCA. A MTP will be developed to lay out the next steps required to achieve full commercialization. At the completion of the project, we anticipate being ready for commercial licensing with the aim of developing commercial manufacturing capacity in North Dakota.

2.4 Facilities & Resources

UND has world-class facilities and resources that will be leveraged in this project, including: 1) battery fabrication and performance testing ranging from coin-cells to full 18650 cells, 2) advanced materials characterization laboratories, 3) bench-scale and pilot-scale facilities associated with UND's development of lignite-based REE technologies, which are directly amenable for use in the production of purified humic acid from Leonardite, 4) wet-chemistry labs, 5) various furnace types and sizes that can be used for production of SiO/G composites, and 6) commercial license to AspenPlus process simulation software and license for SimaPro LCA software. See Appendix 7 for additional details. The project will also leverage the facilities of our industry partners. Lattice Materials will supply silicon byproduct materials and associated analysis information from their Bozeman, MT manufacturing facility. Leonardite Products will supply raw Leonardite and processed humic acids from their Williston, ND mine and process plant

2.5 Techniques to Be Used, Their Availability and Capability

Our prior development of SiO/G anodes is summarized in Section 4**.** The key findings can be found in our recent publication[2], and highlighted in **Figure 1**. Confidential details are in Appendix 2.

Humic acid (HA) is an organic material that can be derived from coal or Leonardite, with two-thirds of the carbon atoms sp^2 hybridized, and the rest mainly exist in carboxyl groups or hydroxyl groups (**Fig 1b**).[3] Unlike other graphene precursors, such as graphite and coal tar pitch, that require complex processing, the abundant functional groups make HA soluble in water-based alkaline solutions; therefore, preparing anode materials for graphene coating can be made much simpler using our in-situ aqueous phase approach.

We demonstrated the thin and complete

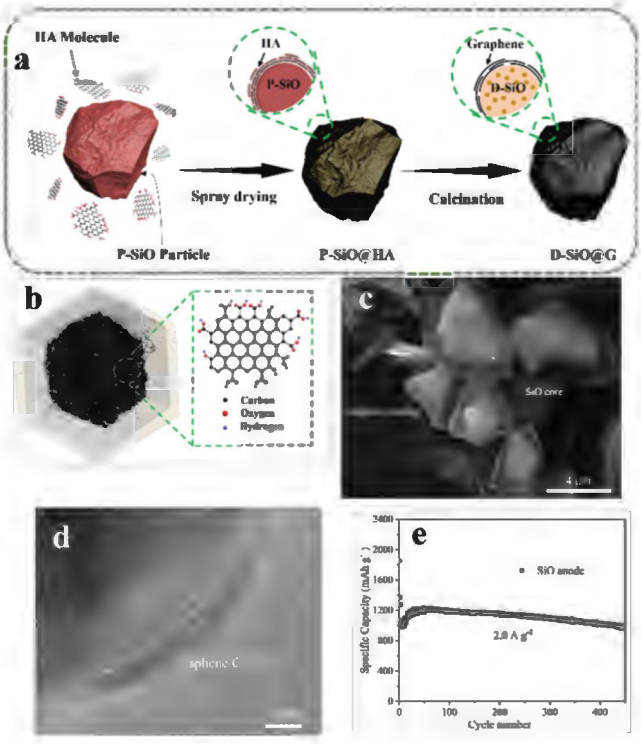


Figure 1. (a) Schematic of the synthesis process for the SiO/G anode. (b) Typical HA molecular model. (c) SEM image of the HF-etched SiO/G particles. (d) HRTEM image of the graphene coating on SiO. (F) Cycling performance of the SiO/G anode.

graphene coating on the SiO particles with HF etching, leaving behind a core of residual SiO encapsulated within intact graphene shells (**Fig 1c**). The TEM image (**Fig 1d**) reveals clear featured graphite lattice fringe corresponding to the graphene coating layer on the surface. The SiO/G (**Fig 1e**) delivered a high initial capacity of 1850 mAh/g, ICE of 79%, and cycling life of 500 cycles with an 85% capacity retention.

2.5.1 Improvements over Competing Technologies

The specific innovations and the advantages over current and emerging technologies are discussed below:

- *Synthetic SiO approach:* Unlike the conventional resistive heating, our technology uses plasma to achieve a higher temperature to produce SiO. This enables practical implementation of continuous feedstock input and SiO production, significantly improving capacity and reducing energy use.
- *In-situ graphene coating*: A unique graphene precursor, humic acid, and UND's patented technology for the in-situ synthesis of graphene-coated SiO anodes significantly simplifies the graphene coating process, lower the coating costs compared to externally adding commercial graphene.
- *SiO vs. nano-Si*: The advantages of SiO over nano-Si are discussed later in Section 2.8. Our technology has a lower environmental impact. Water is mainly used for cooling and can be recycled when the SiO anode is prepared. The process has limited chemical consumption. The feedstocks are environmentally friendly. There is no need for dangerous HF etching commonly used for nano-Si anodes.

2.6 Environmental and Economic Impacts while Project is Underway

The proposed work will involve negligible environmental impacts, as the work involves research-scale demonstrations and desktop engineering work. We will follow all UND permits and procedures for effluent management. Economic impacts during the project will primarily involve employment opportunities for UND faculty, staff and students and the workforce development/ training associated therewith.

2.7 Ultimate Technological and Economic Impacts

Successful commercialization will have broader technological and economic impacts: **1)** Provide significant benefit to our upstream business partners, Lattice Materials and Leonardite Products, by creating a new high-value market for their feedstocks. **2)** Directly benefit the rapidly growing LIB industry, especially the down-stream applications with demands for high-energy and high-power density, such as our

industry partner Packet Digital's UAS applications, 3C consumer electronics, EVs, and eventually energy storage. **3)** Contribute to strengthening the security of the domestic supply chain in a critical area: Li-ion battery technology. **4)** Provide the foundation for a ND-based SiO/G anode manufacturing industry, strongly leveraging the unique mineral and renewable energy resources available in the State and region

2.8 Why the Project is Needed

Silicon is one of the most attractive alternatives for replacing state-of-the-art graphite anodes in LIBs primarily because of its high theoretical capacity (**Table 2**) of 4200 mAh g^{-1} (vs. 372 mAh/g for graphite) and low operating voltage (<1V vs. Li/Li^+);[4] however, it experiences a significant volume change (~300%) during lithiation/delithiation that can cause Si particle fracturing, conductive coating delamination, and solid electrode interface (SEI) instability, causing rapid capacity decay upon cycling.[5-6]

Global silicon anode production is currently limited to two technical routes: nano-Si and SiO. **Table 2** summarizes the state-of-the-art for each. Nano-Si anodes offer enhanced stress resistance, high rate capability and specific capacity, but suffer from low ICE, high costs, and reduced volumetric energy density, limiting their practical use to high-value applications like aviation. In contrast, SiO anodes have a lower capacity but feature reduced volume expansion, better cycling stability, and improved cost-effectiveness, making them more suitable for large-scale applications despite slightly lower performance metrics.

Nano-Si/C and SiO are racing for dominance in the premium LIB market segment within Asia; however, most silicon anode startups favor the nano-Si/C technology. Our project seeks to mitigate the risks associated with the above technology bias, ensuring the stability of the supply chain in anticipation of a potential breakthrough in SiO anode technology. This goal aligns with the US DOE's expectation for domestic critical materials supply chain sustainability, reliability, diversity, security, and resiliency.

Table 2. Properties of graphite, nano-Si, and SiO as anode materials

Parameter	Graphite	Nano-Si	SiO
Capacity	372 mAh g^{-1}	~4200 mAh g^{-1}	~2400 mAh g^{-1}
Cycle life (80% Retention)	>1000	<100	>500
Mechanism	$Li + 6C = LiC_6$	$15Li + 4Si = Li_{15}Si_4$	$(17+x)Li + 5SiO = Li_{15}Si_4 + Li_2O + Li_xSiO_4$
Cost	$5-10/kg	$40-130/kg	~$15-25/kg
Other Key Issues	Poor low-T	Low conductivity & low ICE,	Low conductivity & ICE,

	performance & rate capability	~300% volume change. Severe side reactions with electrolytes	100% volume change

3 STANDARDS OF SUCCESS

The success of this project will be evaluated by following measurable metrics, demonstrated by prototype demonstrations and supplemented by TEA and LCA: **1)** 50% reduced water or chemical consumption, 50% reduced waste, and 20% reduced energy compared with the baseline technology (Table 1); **2)** Improved battery performance with specific capacity 1000 mAh/g and ICE of 80%; **3)** The cost per kAh of SiO/G lowered by 40% compared to the commercial nano-Si/C; and **4)** Successful prototype demonstration at 10-20 kg/day. With success, we anticipate a primary outcome of the proposed work will be readying the technology for licensing to an interested commercial venture/entity.

4 BACKGROUND/QUALIFICIATIONS

4.1 Project Team

The project will be managed through **UND's Center for Process Engineering Research (CPER)**, a team of 100% research focused faculty and staff researchers. Core capabilities include: **1**) technology development and scale-up: through TRL 6-7; **2**) research equipment design and fabrication; **3**) advanced materials characterization; **4**) techno-economic analysis: AACE Class 5 through AACE Class 3; **5**) environmental lifecycle analysis: SimaPro and GREET; **6**) Process engineering simulation, modeling and design: Aspen Plus (commercial license), HSC Chemistry; and **7**) computational fluid dynamics modeling.

The CPER team will be led by the **PI, Dr. Xiaodong Hou**, research associate professor. Dr. Hou is a materials chemist with 20 years of experience synthesizing and characterizing advanced materials. He has over 45 peer-reviewed publications in chemistry materials and holds six patents. Dr. Hou has led multiple projects directly related to developing advanced materials from lignite or Leonardite for LIBs, including the DOE sponsored projects DE-FE0026825, DE-FE0031984, and DE-FE0032139. Dr. Hou will also be supported by UND CPER's REE technology development team, including **Nolan Theaker,** who will assist in prototype-scale production of purified humic acids from Leonardite using the existing REE facilities.

Lattice Materials is a Bozeman, MT-based silicon and germanium parts manufacturer with 30,000 ft^2 of production space. Lattice Materials offers strong support by supplying silicon byproducts generated

from their manufacturing processes, alongside relevant technical assistance. Lattice Materials is also extremely interested in the potential new commercial opportunities. **Leonardite Products** is a Williston, ND-based organic fertilizer producer offering their raw humic acid, a proven graphene precursor. We have collaborated previously with Leonardite Products, and they are willing to provide technical support. Leonardite Products is greatly interested in the excellent commercialization potential of using humic acid as a feedstock to prepare graphene for Li-ion battery applications. **Packet Digital** is a Fargo, ND-based Li-ion battery and power systems manufacturer with a particular focus on Unmanned Aerial System (UAS) applications. Packet Digital enthusiastically offers their strong support for this project, aimed at developing high-energy and high-power density silicon anodes. The company is a domestic partner whose goals of meeting their requirements for supply-chain-sensitive UAS applications match our development perfectly. They will provide commercial reference anode materials and technical assistance in electrode formulation and pouch-cell battery fabrication. **Dr. Sarah Wu (University of Idaho**), an associate professor in chemical and biological engineering, will be engaged as a consultant in the proposed work. Dr. Wu has 9 years of research experience in developing plasma-based reactors and processes for wastewater treatment, green chemical and nano material synthesis, CO_2 conversion, microbial inactivation, and food processing. Dr. Wu's research has been funded heavily by USDA NIFA, DoD SERDP, and industry. She holds an international patent application and US patent on liquid-phase plasma discharge reactor and will design and develop a radio-frequency reactor system for plasma-assisted SiO synthesis in this project.

4.2 Technology Development History

Our previous projects discussed below have proven the feasibility of preparing SiO/G at bench-scale. The low-cost feedstocks (silicon scrap and raw humic acid), proposed plasma-assisted synthetic SiO techniques, and continuous production mode will dramatically reduce the final cost of the SiO/G composite.

4.2.1 *UND's in-situ graphene coating battery electrode materials technology development*

Our team was funded by the NDIC-REP in 2018 to prepare graphene-coated lithium iron phosphate cathode materials (LFP/G) for LIBs (R-035-44) at 10 kg/batch in-situ (TRL 5). Major achievements during this project (2018-2020) included the development of a low-cost procedure that can produce high-purity (>99%)

and low ash content (~1%) humic acid from Leonardite. We successfully demonstrated production of LFP/G at 20 kg/day, with a cost reduction of 69% compared to adding external graphene into LFP.

Our team was selected by the DOE NETL UCFER program in 2019 to develop a SiO/G anode for LIBs based on our core technology of in-situ graphene coating (DE-FE0026825/S000045). The SiO/G anode developed (2019-2021) exhibited remarkable overall battery performance, including a 1st-cycle reversible capacity of 1,800 mAh/g, first-cycle efficiency of 79%, and a cycling life of 500 cycles with an 85% capacity retention. This performance is one of the best results for similar anodes reported in the literature. The UND-owned patent based on the above technology "Battery Materials and Fabrication Methods. (U.S. Patent Application No. 62/706,191, August 4, 2020)" was recently granted.

4.2.2 *Plasma-assisted synthetic technology for hydrogen production*

Our team was selected for DOE funding in 2021 to develop plasma-assisted technology (DE-FE0032061) for hydrogen production via catalytic decomposition of methane. During this lab-scale (TRL 4) project (2021-2024), we designed and constructed a cutting-edge reactor with the ability to execute multiple regimes of plasma discharge, enabling an assessment of the potential of electromagnetic energy to enhance efficiency of methane catalytic decomposition reactions. In addition to this plasma reactor experience, our technical consultant Dr. Sarah Wu is a leading expert in plasma technology and holds a patented technology in continuous liquid phase plasma discharge reactor. She will design and develop a radio-frequency (RF) reactor system for plasma-assisted SiO synthesis in this proposed project.

4.2.3 *UND's expertise in REE/CM recovery technologies*

UND CPER is among the top research groups involved in developing REE and critical minerals (REE/CM) technologies for unconventional resources, such as coal and coal byproducts. We are operating a pilot-scale plant (DE-FE0031835) (TRL 6) and are completing a front-end engineering and design and business planning study (DE-FE0032295), and are actively in a commercialization mode. This proposed project will use the REE/CM facility to produce purified humic acid from Leonardite for the prototype demonstration.

5 MANAGEMENT

The project is organized into five tasks, with key personnel leads and key support personnel identified for

each task (**Figure 2**). The project's PI, Dr. Hou, reports to the UND CPER Director, Dr. Dan Laudal, who will support project management efforts and serve as a technical advisor.

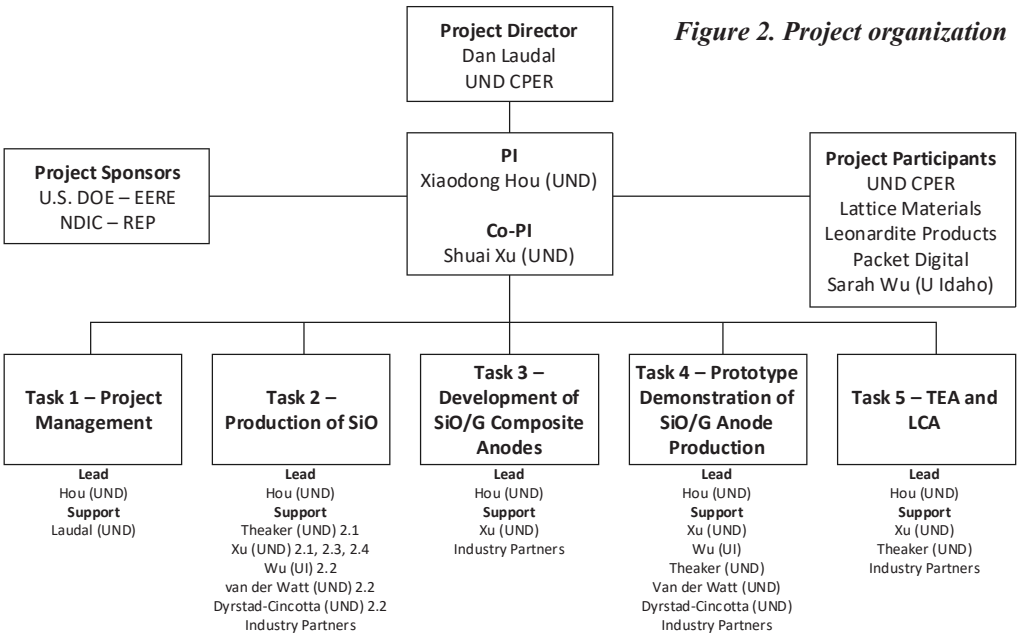


Figure 2. Project organization

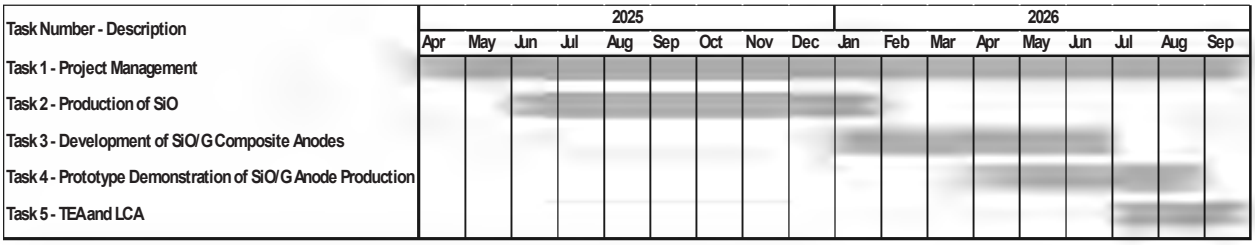
Dr. Hou (PI) and co-PI Dr. Shuai Xu will be responsible for directing technical efforts. The task leads will be responsible for managing the activities within their respective tasks and closely coordinating with the PI. See Appendix 6 for resumes of proposed key personnel.

UND is the applicant and overall project lead, responsible for overseeing project execution, and will be the point of contact for project sponsors and partners. UND will lead efforts associated with feedstock selection and characterization, reactor design and fabrication, SiO and SiO/G anode production process optimization, battery fabrication and testing, and lead the TEA and LCA. **Dr. Sarah Wu** from the University of Idaho will be a technical consultant, leading the efforts of the design of the plasma-assisted reactor in Task 2.2 and providing guidance on its operation in Task 4. The UND team will closely work with her on the fabrication and testing of the reactor based on her design. **Lattice Materials** is an industry partner, providing cost share support that includes supplying Si scrap and SiO byproduct feedstocks; technical support in analyzing, processing, and handling those materials; and commercial information to UND for the TEA and LCA. **Leonardite Products** is an industry partner, providing cost share support that includes supplying raw humic acid feedstock, technical assistance in handling their feedstock, and access to their operation facility. **Packet Digital** is an industry partner, providing cost support that includes supplying commercial reference anode materials and technical assistance in formulating the electrode and designing

and fabricating the pouch cell. The **U.S. Department of Energy,** through the Energy Efficiency and Renewable Energy office, is a project sponsor, providing cash support for 80% of the total project costs.

6 TIMETABLE

The proposed project timeline is 18-months, with an expected start date for the in-negotiation DOE award of April 1, 2025. A simple Gantt chart and milestones table are provided below.



Task No.	Milestone Description (Go/No-Go Decision Criteria)	Milestone Verification Process	Date (Month)
1.1	Project kick-off meeting	Meeting held	2
1.2	Updated Community Benefit Plan (CBP)	Submit to DOE FPM	3
1.3	Market Transformation Plan	Submit to DOE FPM	15
1.4	Final Report	Submit to DOE FPM	18
2.1	The optimal feedstock identified	Quarterly Report	4
2.2	The reactor fabricated	Quarterly Report	5
2.3	SiO production testing completed	Quarterly Report	10
2.4	Bench scale SiO produced	Quarterly Report	10
3.1	Bench scale production of SiO/G completed	Quarterly Report	12
3.2	SiO/G production processes completed	Quarterly Report	14
3.3	Battery performance targets achieved	Quarterly Report	15
4.1	Prototype demonstration of SiO/G anode production succeeds	Quarterly Report	17
5.1	TEA and LCA completed	Submit to DOE FPM	18
1.2	Completed all the objectives in the Community Benefit Plan	Send final report to DOE	18

7 BUDGET

Project Associated Expense	NDIC's Share	Applicant's Share (Cash)	Applicant's Share (in-kind)	DOE Share	Industry Partners' Share
Personnel	105,913	-	-	324,962	-
Fringe Benefits	35,931	-	-	110,241	-
Travel	-	-	-	21,102	-
Equipment	-	-	-	158,753	-
Supplies	-	-	-	22,560	-
Subcontracts	-	-	-	-	45,000
Other Direct Costs	-	-	5,000	127,894	-
Indirect Costs	58,156	-	-	234,487	-
Total	200,000	-	5,000	999,999	45,000

Cost Share Source	Amount	% of Total Project
U.S. Department of Energy	999,999	80%

NDIC - REP	200,000	16%
Lattice Materials	15,000	1.2%
Leonardite Products	15,000	1.2%
Packet Digital	15,000	1.2%
University of North Dakota	5,000	0.40%
TOTAL PROJECT	**1,249,999**	**100%**

The NDIC share will support UND personnel costs, including associated fringe benefits and facilities & administrative costs. ***UND has been selected for award for the 80% cash cost share proposed from the U.S. DOE. This award is currently under negotiation with DOE under DE-FOA-0003155.*** The DOE award selection letter is provided as an attachment in Appendix 5. UND's cost share will take the form of partial tuition support (waivers) for graduate students working on the project. Three industry partners, making up our industry advisory team, will be supporting the project via in-kind and cash cost share. Lattice Materials will provide cash cost share ($5,000) via costs associated with sample collection, analysis, and shipping of silicon materials that will be evaluated in the proposed work. Lattice will provide in-kind support ($10,000) via technical and commercial guidance during project execution. Leonardite Products will provide in-kind cost share ($15,000) through providing samples of processed Leonardite for testing and technical support during project execution. Packet Digital will provide in-kind cost share ($15,000) through providing standard refence materials for battery performance testing and technical support during project execution. UND will also engage with Dr. Sarah Wu, via a consulting contract in the amount of $62,240, to assist with the plasma reactor design and fabrication. Budget notes are in Appendix 4.

8 TAX LIABILITY

The University of North Dakota has no outstanding tax liabilities (see Appendix 8).

9 CONFIDENTIAL INFORMATION

The confidential information is attached as an appendix (Appendix 2).

10 PATENTS AND RIGHTS TO TECHNICAL DATA

The technology for producing HA-derived graphene and SiO/G anode materials for LIBs is currently protected under a patent (U.S. Patent Application No. 62/706,191) solely owned by UND. The additional innovations developed through the proposed work will be considered for patent protection. As we advance

our fabrication and testing efforts, any novel devices, procedures or operational designs that emerge will be evaluated for patentability, and we will file domestic and international patent applications as appropriate. In cases involving IP sharing and technology transfer/ licensing, UND will negotiate a comprehensive IP agreement with the participants, in accordance with the university's existing policies.

11 STATE PROGRAMS AND INCENTIVES

UND, as a state-controlled institution of higher education, has been involved in state programs or incentives in the past 5 years, including previous and ongoing research awards through the NDIC grant programs.

Renewable Energy Program

Grant Round 55

Application Summary Page

R-055-B

Project Title: Improving Renewable Energy Resources with Hydrogen Offtake

Applicant: BWR Innovations, LLC

Primary Contact: Joel Jorgenson Ph.D., PE

Total Project Costs: $1,120,232

REP Request: $500,000

Summary of Project: Deploying a modular hydrogen production and dispensing system that transforms otherwise wasted renewable energy into high-value, compressed hydrogen

Technical Reviewer Comments: (Overall Score 174.75 / 250)

- Given the equipment costs, it appears to be much larger than the existing product but the proposal was not specific on the footprint, how much hydrogen it would produce, how much power would be required, what environmental restrictions are applicable or how much water is required.
- The proposal cites the ability of the technology to use under used renewable generation. That should also be addressed (data available from MISCO.) How much renewable energy is available summer, autumn, winter, spring, day, night, and shoulder hours. This is important because of the cycle time of the equipment.
- Generating H2 is expensive, this project addresses a portion of the problem by putting the H2 next to the user or electrical feed point. Transporting H2 is expensive, the project takes this issue out of the equation. The storage of H2 is problematic for the ideal users of this technology, especially after scale-up. The best part of the project is to have another option for site back-up or remote power availability.
- This proposal is thorough, well organized, concise and easy to read and understand. The objective is clearly defined and achievable and the potential results are in accordance with the stated goals, purposes, and objectives of NDIC’s Renewable Energy Council.

REP Advisory Board Recommendation: Fund

Renewable Energy Program

North Dakota Industrial Commission

Application

Project Title: Improving Renewable Energy Resources with Hydrogen Offtake

Applicant: BWR Innovations LLC

Principal Investigator: Joel Jorgenson, Ph.D., PE

Date of Application: March 28, 2025

Amount of Request: $500,000

Total Amount of Proposed Project: $1,120,232

Duration of Project: 24 months

Point of Contact (POC): Joel Jorgenson

POC Telephone: (701) 205-3103

POC Email: Joel.Jorgenson@bwr-innovations.com

POC Address:

Joel Jorgenson
BWR Innovations LLC
2528 West Main Avenue
West Fargo, ND 58078

TABLE OF CONTENTS

Please use this table to fill in the correct corresponding page number.

ABSTRACT

Objective:
North Dakota leads the nation with an "all of the above" approach to energy production, creating a robust ecosystem where traditional and renewable energy sources work together to maximize economic value. As the state capitalizes on its abundant wind and solar resources, the North Dakota Renewable Energy Program (REP) is uniquely positioned to leverage curtailed power —energy produced but not utilized due to transmission limitations— and abundant and locally available resources such as Ag commodities and byproducts to create new energy products that drive economic growth, resilience, and sustainability. BWR Innovations proposes to revolutionize this process by deploying a cutting-edge modular hydrogen production and dispensing system that transforms otherwise wasted renewable energy into high-value, compressed hydrogen. This clean hydrogen, essential for industrial use, fuel cell technology, and products like sustainable aviation fuel (SAF), represents a significant economic opportunity estimated to reach a $410 billion market by 2030. By capturing and converting excess renewable energy, North Dakota is not only enhancing profitability for its grid-level renewable energy operators but also pioneering a scalable, replicable model of energy independence and resilience that can be deployed nationwide.

Expected Results:
At the conclusion of the project, the installation will be able to improve in the efficiencies and cost effectiveness of installed renewable (solar and wind turbine) systems by providing an offtake for the energy that is produced that cannot be sold on existing electrical transmission lines. Using electricity produced by renewable energy sources that is otherwise curtailed or sold at a loss to electrical grids to power electrolyzers will effectively store renewable energy as compressed hydrogen. Hydrogen is then sold for a profit, making the installed renewable energy sources more profitable.

This system follows on funded research by the US Air Force Research Laboratory (AFRL) and the US Army Research Laboratory (ARL), BWR Innovations will install the first commercial hydrogen production facility in North Dakota. The commercial demand for hydrogen is growing to an estimated $410B market by 2030, and this project provides an end-to-end hydrogen production and retail sale infrastructure.

Success in this project will increase revenue for grid level renewable energy operators such as Minnkota Power and Otter Tail Power, will provide the first commercial hydrogen production off take for the state of North Dakota, and creates a source of hydrogen for microgrids that can be used to improve the electrical grid, creates a source of hydrogen for commercial vehicles using fuel cell technology for over-the-road trucking applications, and municipal, commercial, and residential installations for backup generators that provide uninterrupted power with no emissions or noise and with minimal maintenance.

Duration:
BWR Innovation proposes this project to be completed in twenty-four months.

Total Project Cost:
Our estimated cost for this project is estimated at $1,120,232. This will include an electrolyzer capable of producing high purity hydrogen for fuel cell module use and vehicle use, compression and hydrogen storage (stationary and portable), electrical switchgear to connect to the local grid, safety systems to meet the requirements of fire, electrical, and industrial gas standards, and patented artificial intelligence (AI) software to continuously monitor all electrical parameters and optimizes system performance for highest profitability.

Participants:
Participants for this project include (but are not limited to): BWR Innovations (Fargo, ND), Total Hydrogen Solutions (Katy, TX), Element One (Colorado Springs, CO), Steelhead Composites (Golden, CO), New Eagle (Ann Arbor, MI) Assembly Systems (West Fargo, ND), Newava (Watertown SD), and North Dakota State University (Fargo, ND).

BWR Innovations is the lead institution, leading the research and design efforts of the hydrogen production generation. Total Hydrogen Solutions assists with experienced industrial gas production and specialized components such as hydrogen dispensers for vehicle refueling. Element One produces industrial electrolyzers, and Steelhead Composites provides pressurized containers for hydrogen. New Eagle provides ruggedized electronics running edge-based AI software, and Newava produces electronic harnesses for production and test access. North Dakota State University's College of Engineering and Architecture are technical partners, providing technical review and access to skilled workforce for future growth. Finally, Assembly Systems provides larger-scale manufacturing as the hydrogen production system is positioned for larger-scale commercial production, sales, and global support.

PROJECT DESCRIPTION

Objectives:
This project has the following objectives:

- On-site hydrogen production through the capture of renewable energy,
- On-site energy storage.
- Minimal operating cost,
- Zero carbon emissions,
- Minimal noise,
- Minimal footprint,
- A scalable design that will help put North Dakota as the lead in the nation's energy production.

Methodology:
BWR Innovations will use proven project management and technical development processes used successfully for previous and current projects. Successful projects that are relevant to this proposal are installations for Southern California Gas, sales for the Army Corps of Engineers, and ongoing projects for AFRL and ARL.

BWR Innovations is a partner in the Southern California Gas Home Hydrogen demonstration, a novel approach for creating and storing renewable energy in hydrogen tanks. This Home Hydrogen demonstration uses solar panels only (no wind energy) as its renewable energy source, with the stored hydrogen feeding fuel cell systems provided by BWR Innovations to provide electricity during evening and nighttime hours. Fast Company magazine has recognized the Home Hydrogen demonstration as a "World-Changing Idea".

BWR Innovations has been funded by ARFL to expand this approach from residential to grid level. In February 2024, BWR Innovations received a $5.5M subcontract to provide grid connection, electrolysis, compression, storage, and electrical production using fuel cell modules for a microgrid. This project builds on the patented and proven design from the Southern California Gas project, and demonstrates the scalability, modularity, and AI design developed by BWR Innovations.

This project builds on the design of the "World-Changing Idea", by addressing the unique aspects of renewable resources in North Dakota, specifically solar energy and wind energy. The efficiencies of renewable energy components have increased dramatically over the years, and this project increases the effectiveness of renewable energy systems by providing a means to "bottle sunshine" or "bottle the wind."

Energy storage for grid level systems has been proposed but not yet solved. Batteries are often proposed, but using batteries for electrical storage is not practical, due to the cost, size requirements, and availability of the number of batteries needed for large scale energy storage.

BWR Innovations proposes a unique energy storage methodology, using compressed hydrogen as a means to efficiently and cost-effectively store energy. The compressed hydrogen is created by an electrolyzer, which is powered by the excess electricity from the renewable energy sources. The electrolyzer takes inlet potable water, and splits the hydrogen-oxygen mixture into hydrogen gas and oxygen. The hydrogen is then compressed and stored, in tanks similar to propane tanks found throughout North Dakota.

Compressed hydrogen has a large and expanding market. An application that BWR Innovations has been developing at large scale is the use of hydrogen for electrical production. When the sun stops shining and the wind stops blowing, the compressed hydrogen is used to create electricity through the use of fuel cells. The fuel cells create electricity from compressed hydrogen, and the electricity produced can power the installation. Excess energy from the fuel cells can be sold back to utility companies on demand, as a form of distributed electrical generation to supply electricity to the grid in times of excess demand.

As part of the AFRL project, BWR Innovations is installing a 1MW electrolyzer, compressor, and storage system, creating approximately 450 kg of hydrogen in 24 hours. Once commissioned in Q2 2025, this demonstration system will be among the top five green hydrogen production facilities in the United States. The produced hydrogen is intended to be consumed by electrical generators with fuel cell modules, but the system can also be integrated with dispensers and refueling systems that provide direct point-of-sale of hydrogen to consumer, commercial, or industrial applications.

Figure 1 shows the components of the AFRL project developed by BWR Innovations, and the same components that are proposed in this demonstration project to bring vetted technology and designs to North Dakota. The proven designs paid with AFRL funding can be used in North Dakota to improve the efficiencies of our renewable resources and and foster the creation of a new market of wholesale and retail point-of-use hydrogen for the growing demand.

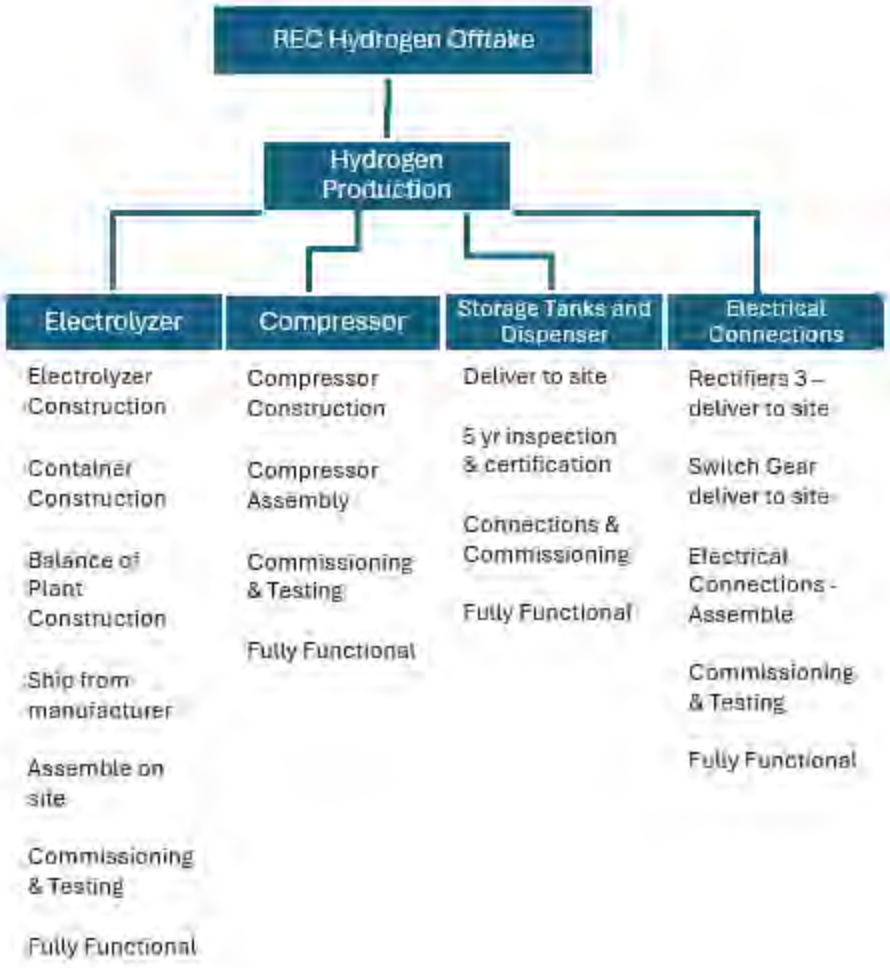


Figure 1. Functional Diagram of the Onsite Hydrogen Production for POS markets.

BWR Innovations uses design methodologies similar to those created for mission-critical electronics, specifically DO-254 design methods. The first major subtask is Requirements Capture, where the requirements, design environment, test plan, and preliminary vendor list are documented. These documents are critical, to accurately capture all of the performance, size, weight, cost, and environmental constraints of the microgrid design. Once all of the documents are complete, a review for all stakeholders occurs where the requirements are refined and ultimately approved. The approved requirements serve as a template for the conceptual and physical design reviews that will follow.

After the requirements are documented, the conceptual design tasks follow. These tasks are using computer aided design to create computer-based models to implement the microgrid requirements. For electrical engineers, the conceptual design tasks are harness designs and printed circuit board designs. Software engineers will create software code, and mechanical engineers will make layouts of chassis, enclosures, and fasteners. At the completion of the conceptual design, a complete set of drawings are available for review. The review verifies that the concept drawings will meet the requirements from the Design Capture phase, but also that the concept drawings have considerations for manufacturing, test, field support, procurement, and marketing.

The third stage is the physical design. The items from the conceptual design are prototyped and combined with procured items for the first integrated working model of the system. With all the pieces assembled and integrated, the working prototype is debugged, tuned, and performance tested against the Design Requirements from the first stage. The physical design may also then be stress tested, to verify reliability and stability, as well as to create procedures for installation, field use, troubleshooting, and customer service support.

The last stage is the design assurance. During this stage, the field-tested design is operated for extended durations to fully understand the issues that would be seen by end customers. Does the microgrid have long startup times, and does the startup time vary from winter to summer? Does humidity affect the energy capture of renewables? Is the pressure level of hydrogen affected by temperature? This stage uses the comprehensive telemetry expertise of BWR Innovations to accumulate the data available from the microgrid system, analyze for changes over time, and then start predictive analysis to be able to treat changes in performance or reliability before the system performance degrades or failures occur. A natural outcome of the design assurance stage is cost modeling and analysis. The cost analysis, combined with the performance data, sets the stage for future recommendations and proposed installations. This stage is data and computation extensive, and BWR Innovations is uniquely poised for a successful design assurance completion.

Anticipated Results:

BWR expects to demonstrate a modular, scalable hydrogen production system capable of producing and dispensing hydrogen using renewable energy. This point-of-sale system will demonstrate the conceptual, technical, and economic viability of converting solar and wind energy to hydrogen for economic and energy value.

The demonstration of the renewable energy storage system will provide energy independence and resiliency. If the hydrogen is used for electrical production, this project ensures electricity to the site independent of rolling blackouts or weather-related electrical power interruptions. Hydrogen production at a small, modular scale creates a new capability for our markets, our consumers, and our electrical grid.

Facilities:

BWR Innovations has design, fabrication, assembly, and test capabilities in our West Fargo location. We have demonstration systems for smaller scale hydrogen production, using a modular design to showcase

the production of hydrogen from water. We have demonstrations for electrical production from hydrogen, showing the integration of our electrical production and the electrical grid (either front-of-meter or behind-the-meter) at the building or transmission level. Finally, we have demonstration systems of our AI systems, to showcase remote autonomous monitoring of hydrogen or electrical production, including (but not limited to) identifying any system or sub-system that is faltering in its operation. In that event, our AI software isolates the faulty component, dispatches technicians if needed, and increases the production of other components to provide a constant source of hydrogen and/or electricity for end customers.

Resources:
No unique or rare resources will be needed for this project.

Techniques to Be Used, Their Availability and Capability:
While the science behind renewable energy and electrolysis has been known for decades, the innovation behind hydrogen components has rapidly accelerated. Public sector and private sector investments over the past few years have accelerated rapidly, with individual components for specific functions.

BWR Innovations is a proven integration partner for multiple worldwide component producers from around the world. Our patented hardware and software designs are recognized by fuel module suppliers such as Intelligent Energy, inverter suppliers such as Sol-Ark, electrolyzer partners such as Enapter, and storage system suppliers such as Steelhead Composites. Our designs are scalable and modular, creating site-specific solutions that can effectively and cost effectively create and store hydrogen with the potential to grow as markets and renewable energy sources grow.

The design proposed for this project is proven with AFRL funding. Our design techniques and methodologies are proven, our components and sub-assemblies are certified for high-reliability applications, and our AI software continually monitors performance and operation to ensure uptime and revenue.

Environmental and Economic Impacts while Project is Underway:
Since this project builds upon the successes of BWR Innovations' projects for Department of Defense applications, this project may use start with the existing (albeit smaller scale) components installed at BWR Innovations. The installed (small scale) electrolyzers, compressors, and telemetry can be connected to larger scale storage systems and dispensers.

To produce a kg of hydrogen with electricity, approximately 50kWh of electricity is needed. This electricity could be from renewable energy (solar and wind), which has negligible operating costs. If grid power is used, electicity may be purchased at peak or off-peak rates for 8 cents to 14 cents per kWh.

At the upper limit of 14 cents per kWh, the cost of production is approximately $7/kg of hydrogen. By comparison, industrial gas prices for hydrogen are approximately $16/kg, and consumer pricing in California (where nearly all of the vehicle hydrogen fueling systems are installed) is $35 to $47/kg. BWR Innovations is developing a power purchase agreement for our green hydrogen produced with our AFRL

system for $10/kg to $12/kg. It is likely that the costs of the produced hydrogen can be driven lower faster than market economics will drive down purchase prices.

Ultimate Technological and Economic Impacts:
BWR Innovations is proposing an installation that is scalable, modular, and reconfigurable in using renewable electricity and storing energy with zero carbon footprint. The system has telemetry monitoring that allows anywhere, anytime, any platform access of authorized users, and has the ability for utility company control. The ultimate goal of the system is to replicate to any site that desires to produce hydrogen as a revenue stream for their wholesale and/or retail markets.

Having the controls available at the utility level produces a robust distribution network. As the future moves towards microgrids and distributed generation of energy, BWR Innovations' concept is a solid basis that can be replicated anywhere in North Dakota, the United States, or in the world.

Hydrogen production is currently concentrated at oil and gas facilities, converting natural gas and hydrocarbons to compressed hydrogen. Industrial hydrogen purchased in North Dakota is produced in Kentucky or other distant states, whereas this project will demonstrate the ability to produce hydrogen at any site with available renewable energy or sufficient space to install renewable energy systems.

Why the Project is Needed:
This project is critically needed to demonstrate the capability of energy storage via compressed hydrogen, to demonstrate the green energy approach of using renewable energy to produce compressed hydrogen, and to demonstrate a standalone microgrid capable of meeting its own energy demand and providing the excess energy as a revenue stream. North Dakota has immense potential with wind and solar energy, but finding the most economical method of selling this energy is not a clear path. The storage of energy via compressed hydrogen and then the sale of this compressed hydrogen into the rapidly growing market for hydrogen could be significant for existing and new wind/solar production capacity. This capability will produce a whole new market for North Dakota farmers with the sale of energy through hydrogen.

STANDARDS OF SUCCESS

Standards of Success should include: The measurable deliverables of the project that will determine whether it is a success; The value to North Dakota; An explanation of what parts of the public and private sector will likely make use of the project's results, and when and in what way; The potential that commercial use will be made of the project's results; How the project will enhance the education, research, development and marketing of North Dakota's renewable energy resources; How it will preserve existing jobs and create new ones; How it will otherwise satisfy the purposes established in the mission of the Program.

The standards of success are straightforward, based on the objectives proposed by BWR Innovations:

- The demonstration of a site producing sufficient hydrogen via renewable available for resale to consumer, commercial, or industrial partners,

- A robust, reliable hydrogen production system that is demonstrated to operate year-round, being impervious to temperature and wind conditions of the North Dakota weather,
- The capability to use renewable energy in a more profitable fashion,
- The demonstration of a reasonable return on investment, where future installations can expect to generate revenue and create cost savings to offset any investments for their hydrogen production system.

If these standards are satisfied, North Dakota would see a new era of energy, energy production, and the sales of systems that would make North Dakota the world's leader in energy systems:

- Hydrogen production systems, in partnership with Total Hydrogen Systems, Element One, and Steelhead Composites,
- Telemetry systems, designed by BWR Innovations, assembled at Assembly Systems, with components from Newava and New Eagle,
- Cloud based monitoring, developed by BWR Innovations,
- Further research, design, teaching, and extension services through North Dakota State University,
- A new market for hydrogen, which North Dakota can utilize in state or to sell/distribute to customers throughout North America.

BACKGROUND/QUALIFICATIONS

Please provide a summary of prior work related to the project conducted by the applicant and other participants as well as by other organizations. ***This should also include a summary of the experience and qualifications pertinent to the project of the applicant, principal investigator, and other participants in the project.***

BWR Innovations is uniquely capable for this project due to our products, partnerships, and intellectual property. Our module fuel cell system, scalable from 4kW to multiple megawatt, is unique in the fuel cell marketplace. Currently, most fuel cells are either targeting mobility and material handling (greater than 50kW) or drones (less than 1200 Watts.) The collaborative partnership between BWR Innovations and Intelligent Energy (see attached letter of support) outlines BWR's role as Intelligent Energy integration partner for turnkey fuel cell systems in the United States. Finally, our issued patents in distributed electrical generation, distributed hydrogen generation, and utility level control of fuel cell systems are barriers to entry to any other entity considering this space.

The technical components of this project are led by Dr. Joel Jorgenson, CEO and President of BWR Innovations. Dr. Jorgenson has earned electrical engineering degrees from North Dakota State University (BSEE, 1987), the University of Iowa (MSEE, 1993), and Iowa State University (Ph.D., 1998), and is currently completing his Masters of Business Administration degree at the University of Illinois. Dr. Jorgenson holds patents in fuel cell systems, power management, and telemetry, and is an adjunct professor at North Dakota State University's Electrical and Computer Engineering Department. Dr. Jorgenson has been awarded Entrepreneur of the Year by the Fargo-Moorhead Chamber of Commerce,

the Architect of Defense by the Minnesota Defense Alliance, and has numerous accolades, publications, and positions.

The program management components of this project are led by Erik Lind, Fuel Cell Systems Program Manager of BWR Innovations. Mr. Lind leads BWR projects for the Air Force, Army, and other agencies, with special focus on hydrogen production and offtake. Administration from the Carlson School of Business at the University of Minnesota.

BWR Innovations was founded in 2018 by Dr. Jorgenson as a *Blue-Water* innovator for telemetry and fuel cell systems. The concept of the Blue Water innovation is based on the business concept by Mauborgne and Kim (*Blue Ocean Strategy, https://www.blueoceanstrategy.com/what-is-blue-ocean-strategy/)*where companies produce novel, unique value-added designs that are not commodity and are not directly available from competition. BWR Innovations was founded on this premise, and has been developing unique designs in fuel cell systems and telemetry that meet an unmet need and are creating new markets. The acronym *BWR* stands for Blue Water Resolute, which means that as we are creating new markets in Blue Oceans, the problems we are tackling are challenging and require resolute focus.

MANAGEMENT

*A description of **how** the applicant will manage and oversee the project to ensure it is being carried out on schedule and in a manner that best ensures its objectives will be met, **and a description of the evaluation points to be used** during the course of the project.*

Projects managed at BWR Innovations use a combination of time-tested project management tools coupled with new technology for a distributed workforce. The online capability of the project management tools allows all users (and project stakeholders) to access project information, view status and progress, and to provide feedback and input.

The overall methodology of the program management is based on DO-254, a set of standards developed for the design of systems used in airborne systems. The Federal Aviation Administration has mandated the adoption of design assurances to be used in the design of electronics and mechanical systems that are integrated into aircraft systems, to assure that structured design methods are created, followed, and documented.

The first step of the project is the Design Capture phase, where each critical part of the design is documented and the interfaces between all parts are defined. For example, in this phase, the complete characteristics of the major components are defined, such as the solar cells, the wind turbine, the electrolyzer and compressor, the hydrogen storage tanks, the fuel cell modules, the inverters, and the telemetry system. Each system will have its performance characteristics established, and a defined means to test, troubleshoot, and repair each component.

The second step of the project is the Conceptual Design phase. During this phase, the architectures of the software, electronics, and mechanical components are defined. Software will be developed using Python, C, and Javascript; Electronic components will be designed using schematic capture, wire harness design, and printed circuit board design software; and mechanical design will use

Solidworks for design and manufacturing. At the end of this phase, the projected performance of each component will be compared against the requirements of the first phase.

The third step of the project is the Physical Design, where components are purchased, assembled, integrated, and tested. At the completion of this stage, the hydrogen microgrid system will be operational, and the performance metrics will be compared against the predicted performance of the Conceptual Design.

The final step of the project is the Design Assurance stage, where components are analyzed for performance within the design limits and for any potential failure points. The stage also allows for Lessons Learned to be documented, to allow for future improvements within this project and for future similar projects.

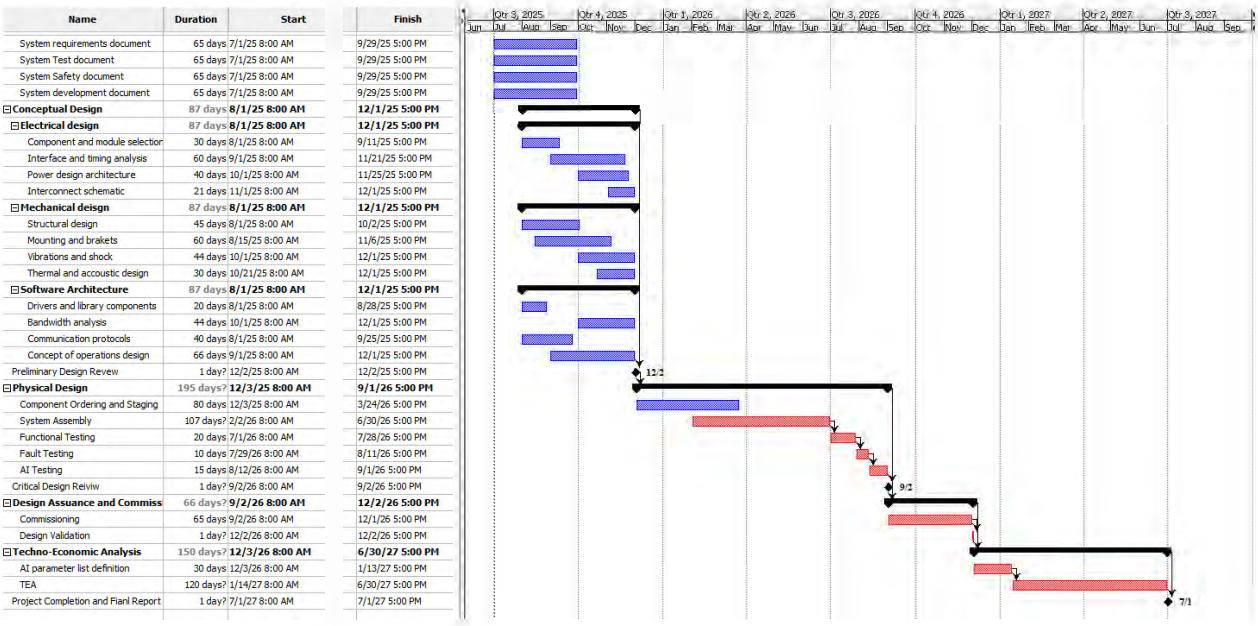
Dr. Jorgenson has used methods of DO-254 for decades. He was first introduced to this methodology while employed at Rockwell Collins (Cedar Rapids, IA) as a design engineer, and taught methods from DO-254 to engineering students at North Dakota State University. This methodology is robust and easy to learn and understand. To track progress, Gantt charts and Trello software are available to all team members and stakeholders.

BWR Innovations is also partnering with North Dakota State University. The specific point of contact at NDSU is Dr. Ben Braaten, Department Chair of Electrical and Computer Engineering. Dr. Braaten is instrumental in identifying faculty wishing to collaborate on research and publication of new discoveries in engineering, agricultural extension, and agricultural financial modeling.

TIMETABLE

Please provide a project schedule setting forth the starting and completion dates, dates for completing major project activities, and proposed dates upon which the interim reports will be submitted.

BWR has developed a preliminary Gantt chart based on a twenty-four-month schedule. Figure 2 shows the Gantt chart, with each of the four steps of the project management, and critical milestones at the end of each stage.



Name	Duration	Start	Finish
System requirements document	65 days	7/1/25 8:00 AM	9/29/25 5:00 PM
System Test document	65 days	7/1/25 8:00 AM	9/29/25 5:00 PM
System Safety document	65 days	7/1/25 8:00 AM	9/29/25 5:00 PM
System development document	65 days	7/1/25 8:00 AM	9/29/25 5:00 PM
Conceptual Design	87 days	**8/1/25 8:00 AM**	**12/1/25 5:00 PM**
Electrical design	87 days	**8/1/25 8:00 AM**	**12/1/25 5:00 PM**
Component and module selection	30 days	8/1/25 8:00 AM	9/11/25 5:00 PM
Interface and timing analysis	60 days	9/1/25 8:00 AM	11/21/25 5:00 PM
Power design architecture	40 days	10/1/25 8:00 AM	11/25/25 5:00 PM
Interconnect schematic	21 days	11/1/25 8:00 AM	12/1/25 5:00 PM
Mechanical deisgn	87 days	**8/1/25 8:00 AM**	**12/1/25 5:00 PM**
Structural design	45 days	8/1/25 8:00 AM	10/2/25 5:00 PM
Mounting and brakets	60 days	8/15/25 8:00 AM	11/6/25 5:00 PM
Vibrations and shock	44 days	10/1/25 8:00 AM	12/1/25 5:00 PM
Thermal and accoustic design	30 days	10/21/25 8:00 AM	12/1/25 5:00 PM
Software Architecture	87 days	**8/1/25 8:00 AM**	**12/1/25 5:00 PM**
Drivers and library components	20 days	8/1/25 8:00 AM	8/28/25 5:00 PM
Bandwidth analysis	44 days	10/1/25 8:00 AM	12/1/25 5:00 PM
Communication protocols	40 days	8/1/25 8:00 AM	9/25/25 5:00 PM
Concept of operations design	66 days	9/1/25 8:00 AM	12/1/25 5:00 PM
Preliminary Design Reveiw	1 day?	12/2/25 8:00 AM	12/2/25 5:00 PM
Physical Design	195 days?	**12/3/25 8:00 AM**	**9/1/26 5:00 PM**
Component Ordering and Staging	80 days	12/3/25 8:00 AM	3/24/26 5:00 PM
System Assembly	107 days?	2/2/26 8:00 AM	6/30/26 5:00 PM
Functional Testing	20 days	7/1/26 8:00 AM	7/28/26 5:00 PM
Fault Testing	10 days	7/29/26 8:00 AM	8/11/26 5:00 PM
AI Testing	15 days	8/12/26 8:00 AM	9/1/26 5:00 PM
Critical Design Reiviw	1 day?	9/2/26 8:00 AM	9/2/26 5:00 PM
Design Assuance and Commiss	66 days?	**9/2/26 8:00 AM**	**12/2/26 5:00 PM**
Commissioning	65 days	9/2/26 8:00 AM	12/1/26 5:00 PM
Design Validation	1 day?	12/2/26 8:00 AM	12/2/26 5:00 PM
Techno-Economic Analysis	150 days?	**12/3/26 8:00 AM**	**6/30/27 5:00 PM**
AI parameter list definition	30 days	12/3/26 8:00 AM	1/13/27 5:00 PM
TEA	120 days?	1/14/27 8:00 AM	6/30/27 5:00 PM
Project Completion and Fianl Report	1 day?	7/1/27 8:00 AM	7/1/27 5:00 PM

Figure 2. Gantt Chart

Interim progress reports are available at any time, as BWR can access design and program progress at any point. BWR Innovations proposes interim reports based on the milestone completions of each stage. Assuming a start of July 1, 2025, those dates are approximately:

- Completion of Requirements Capture: Approximately September 1, 2025
- Completion of Conceptual Design: Approximately December 1, 2025
- Completion of Physical Design: Approximately August 1, 2026
- Completion of Design Assurance and Commissioning: Approximately December 1, 2026
- Completion of Techno-Economic Analysis: Approximately June 30, 2027

Additional reports from BWR's telemetry will be available on a monthly basis during the Design Assurance phase, starting approximately on December 1, 2026.

BUDGET

*Please use the table below to provide an **itemized list** of the project's capital costs; direct operating costs, including salaries; and indirect costs; and an explanation of which of these costs will be supported by the grant and in what amount. The budget should identify all other committed and prospective funding sources and the amount of funding from each source. **Please feel free to add columns and rows as needed.** Higher priority will be given to those projects that have matching private industry investment equal to at least 50% or more of total cost.*

Project Associated Expense	NDIC's Share	Applicant's Share (Cash)	Applicant's Share (In-Kind)
Salary	$0	$0	$160,000
Fringe (21.27%)	$0	$0	$34,032
Equipment	$500,000	$335,000	$0
Site Lease	$0	$0	$0
Installation Costs	$0	$241,200	$0
Total	$500,000	$576,200	$194,032

An itemized list of the equipment is shown below:

Equipment	
Hydrogen Dispenser	$ 186,500.00
Electrolyzer	$ 120,000.00
Compressor	$ 150,000.00
Switchgear	$ 60,000.00
Transformer	$ 50,000.00
Chiller	$ 50,000.00
Electronics	$ 38,500.00
Gas Train	$ 30,000.00
Total	$835,000.00

Please use the space below to justify project associated expenses, and discuss if less funding is available than that requested, whether the project's objectives will be unattainable or delayed.

All components are commercially available, either at BWR Innovations or through our partnership with key suppliers. If less funding is available than requested, BWR is able to scale the size of the project to demonstrate the unique capabilities of the project, albeit at a lower electrical and hydrogen production level.

Salaries listed in the proposal are for BWR Innovations personnel to design, document, debug, install, and monitor the microgrid system over the period of the design project. Fringe benefits are calculated at 21.27% of the salaries. Site lease costs are in-kind support from Grand Farm for the installation of the microgrid on their facility.

If the funding amount is less than requested, the project is scaled in such a way to show capability but at a lower level. Reducing the funding level for the electrolyzer will result in a smaller production unit that has lower performance. The chiller, transformer, and chiller would be scaled back for smaller units, which impacts the economic value of the hydrogen production unit.

July 21, 2025

PUBLIC FINANCE AUTHORITY ADVISORY COMMITTEE

RECOMMENDATION TO THE INDUSTRIAL COMMISSION

The Advisory Committee, at its July 21, 2025 meeting, reviewed, discussed, and recommends approval of a $3,275,000 Drinking Water State Revolving Fund Program loan to the City of Cando.

North Dakota Public Finance Authority
Advisory Committee

Keith Lund, Chairman
Linda Svihovec
John Phillips

NORTH Dakota | Public Finance Authority
Be Legendary.

Memorandum

To: Public Finance Authority Advisory Committee
Miles Silbert, Public Financial Advisory LLC
Kylee Merkel, Bank of North Dakota

From: DeAnn Ament, Executive Director

Date: July 14, 2025

Re: City of Cando
Drinking Water State Revolving Fund Program Loan

Purpose of the Project: Replace cast iron pipe with PVC water main and replace water service lines, curb stops, gate valves and hydrants.

Project Amount:

DWSRF Request	$ 3,275,000
DWSRF Loan Forgiveness	-2,722,060
Net DWSRF Loan	$ 552,940

DWSRF Request	$ 3,275,000
DWR Cost Share	482,500
Project Total	$ 3,757,500

Population to Benefit from the Project: 1,112
Population Served by the System: 1,112

The City will issue revenue bonds payable with water user fees. The requested term for the loan is 30 years. The average net annual payment for the revenue bonds will be $23,416. The reserve requirement will be $29,270 and the 110% coverage requirement will be $25,758.

The City has 581 water connections which monthly pay a minimum of $12 per connection and $9.60/1,000 gallons. Users also pay a debt retirement charge of $5.25 and usage debt retirement charge of $2.80/1,000 gallons.

Water Fund:

	SAO Drafted		Unaudited	
	2021	2022	2023	2024
Interest Revenue	$5,384	$4,242	$7,626	$ 17,719
Operating Revenue	426,789	397,226	452,713	461,498
Operating Expenses	269,422	343,738[1]	314,137[1]	398,484[1]
Net Operating Revenue	162,751	57,730	146,201	80,733
Depreciation	52,746	52,745	-	-
Transfers from City Sales Tax	35,000	-	-	-
Adjusted Net Operating Revenue	$250,497	$110,475	$146,201	$80,733
Bond Payments	$122,500	$125,800	$124,000	$127,200
Net Operating Coverage	204%	88%	118%	63%
Proforma DWSRF Payment	$23,416	$23,416	$23,416	$23,416
Proforma Net Operating Coverage	172%	74%	99%	54%

[1] Included meter purchases and 2024 also included a water purchase "true up" and coating the water tower. When these items were removed net operating coverage was achieved.

With the current rates, the City should meet the 110% net operating coverage requirement.

Outstanding Debt as of June 30, 2025:

	Original Amount	Outstanding Amount
Revenue Bonds [2]	$2,044,000	$ 1,515,000
Total Bonds	$2,044,000	$ 1,515,000

[2] The bond has been paid as agreed. The City has one DWSRF bond outstanding with a balance of $1,515,000.

The average annual bond payment including this new issue is $142,309 or $127 per resident.

The City of Cando is located in Towner County approximately 124 miles northwest of Grand Forks. The total population according to the 2020 census is 1,117; this is an increase of 2 from the 2010 census. The largest employers are Enterprise – CP LLC (manufacturing) employs 75, Towner Medical Center with 72 employees and North Star Public Schools with 58 employees.

North Star School Enrollment:

				Projected
2021-2022	**2022-2023**	**2023-2024**	**2024-2025**	**2025-2026**
283	279	284	283	283

The City's 2024 taxable valuation was $2,788,996. This is an increase of $393,508 over the 2020 taxable valuation.

Property Tax Collections as of March 17, 2025:

Levy Year	Dollar Amount of Levy	Amount Collected to Date of Application	Percentage Collected
2024	$1,253,791	$1,197,380	96%
2023	$1,192,352	$1,174,023	98%
2022	$1,155,565	$1,150,749	100%

Special Assessment Collections as of March 17, 2025:

Year	Dollar Amount	Amount Collected to Date of Application	Percentage Collected
2024	$9,152	$150	2%
2023	$6,757	$5,282	78%
2022	$3,573	$3,439	96%

Mill Levy History:

Year	City	School	Park District	State and County	Other	Total for Each Year
2024	125.97	78.75	35.72	100.42	4.01	344.87
2023	126.10	65.35	34.90	98.77	3.75	328.87
2022	126.37	67.25	38.00	106.57	3.77	341.96
2021	124.01	66.17	37.73	104.79	3.80	336.50
2020	124.81	66.64	38.00	99.25	3.56	332.26

45 South 7th Street
Suite 2950
Minneapolis, MN 55402

612.338.3535
612.338.7264 Fax
www.pfm.com

pfm

Memorandum

TO: DeAnn Ament, Executive Director
North Dakota Public Finance Authority

FROM: PFM Financial Advisors LLC

DATE: July 15, 2025

RE: Marketplace Analysis - Clean Water State Revolving Fund Program
City of Cando

The City of Cando ("City") has presented a request to the Authority and the North Dakota Department of Environmental Quality ("Department") for a $3,275,000 loan of which $2,722,060 is principal forgiveness for a net of $552,940 under Drinking Water State Revolving Fund Program ("DWSRF Program"). The DWSRF Program is used to make subsidized interest rate loans to political subdivisions for the purpose of constructing various water treatment, distribution, and storage facilities as approved by the Department in accordance with federal and state regulations and an updated Intended Use Plan prepared by the Department.

The City intends to use the proceeds to replace cast iron pipe with PVC water main and replace water service lines, curb stops, gate valves and hydrants.

The municipal securities to be acquired by the Authority will be revenue bonds payable from water user fees. The City's average annual payment under the proposed loan will be approximately $23,416 indicating a 110% net revenue coverage requirement of approximately $25,758. The City will be required to deposit $29,270 into a reserve fund with payments of $5,854 per year for the first five years of the loan. Pro forma net operating coverage of the Water Fund was 1.72x, 0.74x, 0.99x and 0.54x for 2021-2024, respectively. Operating expenses in 2022 through 2024 included meter purchases and 2024 included a water purchase "true up" and coating of the water tower. Once those items are removed, the existing net operating revenue will provide sufficient net revenues to meet the 110% coverage requirement.

As of June 30, 2025, the City currently has one Drinking Water SRF loan totaling $1,515,000 outstanding. The City is current in its payments for its outstanding Authority loan.

Funding for the construction of the City's projects has been included in a list of approved projects as prepared and updated by the Department. As an authorized participant in the DWSRF Program, the City will benefit substantially from the subsidized fixed rate loans made under the Program. Consequently, no other financing mechanism can provide a greater cost advantage than that offered by the DWSRF Program.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509
800.472.2166
800.366.6888 TTY
701.328.5600
bnd.nd.gov

Attachment 5E

Memorandum

To: Industrial Commission

From: Kylee Merkel, Business Banker
Bank of North Dakota

Date: July 14, 2025

RE: City of Cando
Drinking Water State Revolving Fund Program

ND Public Finance Authority has delivered to BND their memo which recommends approval of a $3,275,000 loan to the City of Cando under the Drinking Water State Revolving Fund (DWSRF). This project is eligible for $2,722,060 of loan forgiveness under the DWSRF program, making the net loan $552,940. The entire cost of the project is $3,757,500, with Department of Water Resources providing a $482,500 cost-share grant.

The project will replace cast iron pipe with PVC water main and replace related water lines, curb stops, gate valves and hydrants. The requested loan term is 30 years. The City will issue a revenue bond payable with water user fees. The annual payment will average $23,416.

Debt Service Coverage:

	SAO Draft	Unaudited	Unaudited	
Water Fund	**2022**	**2023**	**2024**	**Projected**
Operating Revenue	397,226	452,713	461,498	461,498
Projected Rate Increase				
Interest Revenue	4,242	7,626	17,719	17,719
Operating Expenses	-343,738	-314,137	-398,484	-398,484
Net Operating Revenue	57,730	146,201	80,733	80,733
Plus: One-time items	0	0	90,305	90,305
Plus: Depreciation	52,745	0	0	0
Adjusted Net Operating Income	110,475	146,201	171,038	171,038
Current Debt Service	125,800	124,000	127,200	127,200
Proposed Debt Service				23,416
Total Debt Service				150,616
Debt Service Coverage	88%	118%	134%	114%

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509

800.472.2166
800.366.6888 TTY
701.328.5600

bnd.nd.gov

The City currently provides service to 581 connections which pay a monthly base rate of $12.00 plus $9.60 per 1,000 gallons of usage. In addition, all connections pay a monthly debt retirement fee of $5.25 and $2.80 per 1,000 gallons of usage. The existing revenues will generate sufficient net operating revenues to service the existing debt and proposed debt.

Outstanding Debt (as of September 30, 2024):

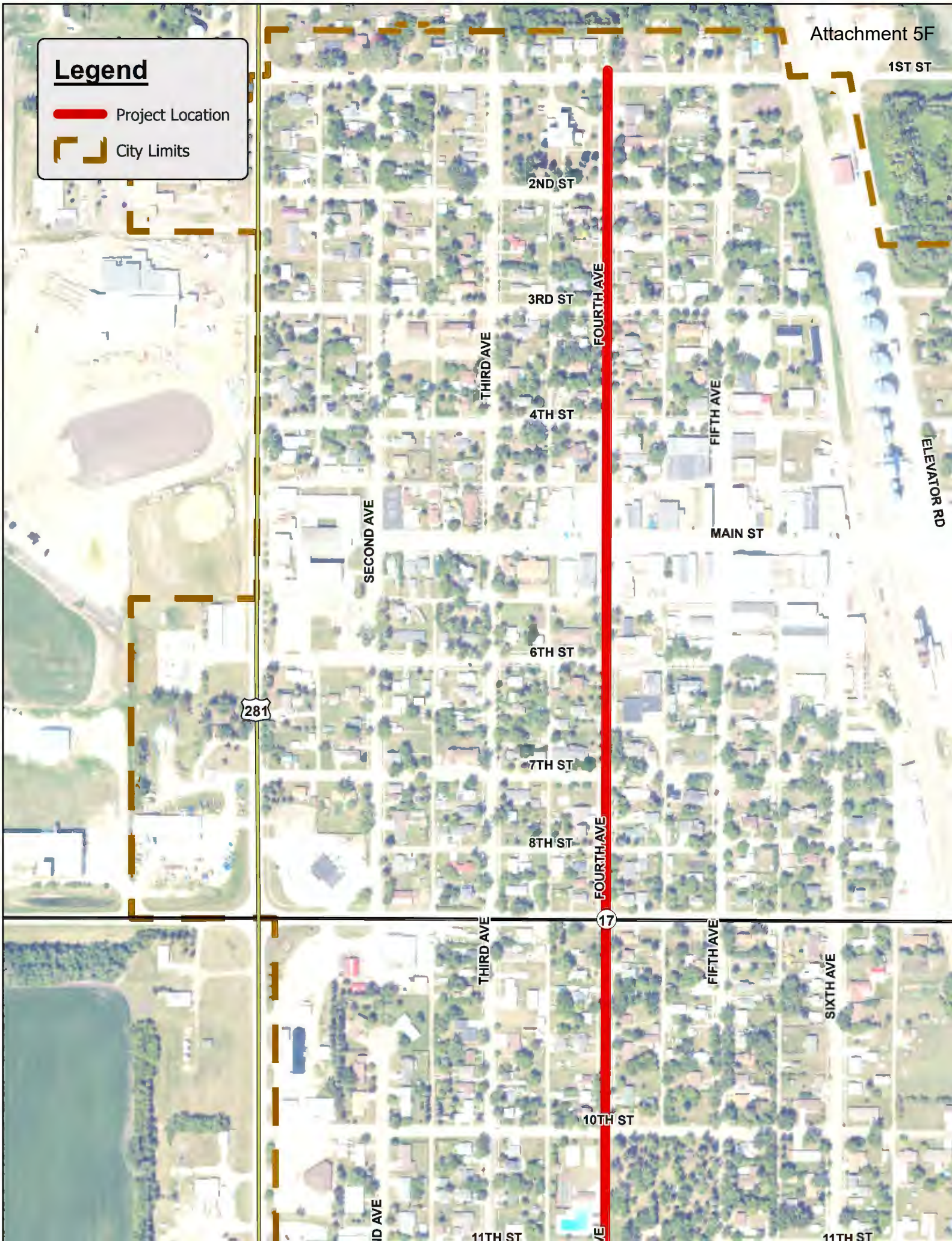
	Original Amount	Current Balance
Revenue Bonds	2,044,000	1,515,000

Average annual debt service requirements are estimated at $142,309, which is an average of $127.40 per resident.

Historical census populations for the City of Cando were 1,117 in 2020, 1,115 in 2010 and 1,342 in 2000. The largest employers in the City are Enterprise Manufacturing, Towner County Medical Center and North Star Public School.

Based upon the PFA recommendation and the benefits obtained with this project, BND concurs with their evaluation and support of the request.

Kylee Merkel
Business Banker


Attachment 5F
Legend
Project Location
City Limits
1ST ST
2ND ST
3RD ST
4TH ST
6TH ST
7TH ST
8TH ST
10TH ST
11TH ST
FOURTH AVE
THIRD AVE
SECOND AVE
FIFTH AVE
SIXTH AVE
MAIN ST
ELEVATOR RD
281
17

July 21, 2025

PUBLIC FINANCE AUTHORITY ADVISORY COMMITTEE

RECOMMENDATION TO THE INDUSTRIAL COMMISSION

The Advisory Committee, at its July 21, 2025 meeting, reviewed, discussed, and recommends approval of a $29,575,000 Drinking Water State Revolving Fund Program loan to the City of Minot.

North Dakota Public Finance Authority
Advisory Committee

Keith Lund, Chairman
Linda Svihovec
John Phillips

NORTH Dakota Be Legendary. | Public Finance Authority

Memorandum

To: Public Finance Authority Advisory Committee
Miles Silbert, Public Financial Management, LLC
Kylee Merkel, Bank of North Dakota

From: DeAnn Ament, Executive Director

Date: July 8, 2025

Re: City of Minot
Drinking Water State Revolving Fund

Purpose of the Project: Identify the composition of the 8,000 unknown service lines and begin replacement of the 280 known lead service lines in the City.

Project Amount:

DWSRF Request	$ 29,575,000
DWSRF Loan Forgiveness	21,059,431
Net DWSRF Loan	$ 8,515,569

Population to Benefit from the Project: 8,000
Population Served by the System: 48,377

The requested term for the Drinking Water State Revolving Fund (DWSRF) loan is 30 years. The City of Minot will issue revenue bonds payable with water/sewer/storm sewer user fees. The net average annual payment for the revenue bonds will be $283,852. The reserve requirement will be $305,000 and the 110% coverage requirement will be $312,238.

The City has 13,896 residential users that pay a monthly water base rate of $11.10 with a $3.86/100 cubic feet charge and 1,213 commercial users that pay $13.60 to $140.47 depending on the pipe size with a $4.35/100 cubic feet charge. There are 12,878 residential sanitary sewer users that pay a monthly base rate of $8.15, and a volume charge of $3.47/100 cubic feet of water consumed while the 1,112 commercial users pay $8.10 monthly and $3.89/100 cubic feet. Storm sewer fees are $14.52 for residential users and $16.52 for non-residential users.

Water/Sewer/Storm Sewer Fund:

	2021	2022	2023	2024
Interest Revenue	-$14,938	-$107,043	$1,530,065	$1,635,578
Operating Revenue	22,909,469	22,841,647	24,243,313	24,482,536
Operating Expenses	33,159,587	35,609,828	38,346,174	39,550,320
Net Operating Loss	-10,265,056	-12,875,224	-12,572,796	-13,432,206
Depreciation	15,507,128	15,858,850	17,104,529	17,230,086
Transfers In -- Sales Tax	1,137,307	1,840,213	798,507	851,927
Adjusted Net Operating Revenue	6,379,379	4,823,839	5,330,240	4,649,807
Revenue Bond Payments	3,475,856	3,795,235	3,783,310	3,508,418
Net Operating Coverage	184%	127%	141%	133%
Proforma DWSRF Bond Payments [1]	$500,291	$500,291	$500,291	$500,291
Proforma Net Operating Coverage	160%	112%	124%	116%

[1] Includes the proforma payment for a DWSRF loan approved in 2024 but not closed until 2025.

The existing net operating revenue will be sufficient to meet the 110% net operating coverage.

The outstanding indebtedness as of December 31, 2024:

	Original Issue	Outstanding Balance
General Obligation Bonds	$ 10,500,000	$ 5,440,000
Refunding Improvement Bonds	17,650,000	10,440,000
Sales Tax Revenue Bonds [2]	52,645,000	48,200,000
Revenue Bonds - Water/Sewer [2]	41,267,946	22,212,660
Revenue Bonds - Airport	28,520,000	19,820,000
	$ 150,582,946	$ 106,112,660

[2] All payments have been made as agreed. The City has two Clean Water SRF and one DWSRF loans with a combined outstanding balance of $13,492,660 as of December 31, 2024.

The average annual debt service payment including the requested loan and the 2024 approved but not closed DWSRF loan is $10,680,089 which is $221 per resident.

The City of Minot is located in Ward County 110 miles north of Bismarck on US Highway 83. Based on the 2020 census, the total population is 48,377; this is an increase of 7,489 from the 2010 census. The largest employers are Minot Air Force Base with 12,123 employees, Trinity Health which has 2,850 employees, and Minot Public Schools employs 1,047.

K-12 School Enrollment:

			Current	Estimated
2021-2022	**2022-2023**	**2023-2024**	**2024-2025**	**2025-2026**
7,733	7,700	7,658	7,658	7,700

The City's 2024 taxable valuation was $238,429,369. This is an increase of $22,175,340 over the 2020 taxable valuation.

Property Tax Collections 6/30/2025:

Levy Year	Dollar Amount of Levy	Amount Collected to Date of Application	Percentage Collected
2024	$23,224,967	$22,996,314	99%
2023	$27,730,619	$27,400,756	99%
2022	$26,648,754	$26,537,317	100%

Special Assessment Collections 6/30/2025:

Year	Dollar Amount	Amount Collected to Date of Application	Percentage Collected
2024	$1,660,507	$1,499,323	90%
2023	$1,633,326	$1,549,546	95%
2022	$1,485,444	$1,435,893	97%

Mill Levy History:

Year	City	School	Park District	State and County	Total for Each Year
2024	97.41	136.35	46.44	61.56	341.76
2023	119.76	139.69	48.30	57.65	365.40
2022	119.15	142.34	48.57	56.95	367.01
2021	121.47	109.34	45.58	58.91	335.30
2020	119.95	109.33	42.66	60.38	332.32

45 South 7th Street
Suite 2950
Minneapolis, MN 55402

612.338.3535
612.338.7264 Fax
www.pfm.com

pfm

Memorandum

TO: DeAnn Ament, Executive Director
North Dakota Public Finance Authority

FROM: PFM Financial Advisors LLC

DATE: July 15, 2025

RE: Marketplace Analysis - Clean Water State Revolving Fund Program
City of Minot

The City of Minot ("City") has presented a request to the Authority and the North Dakota Department of Environmental Quality ("Department") for a $29,575,000 loan of which $21,059,431 is principal forgiveness for a net of $8,515,569 under Drinking Water State Revolving Fund Program ("DWSRF Program"). The DWSRF Program is used to make subsidized interest rate loans to political subdivisions for the purpose of constructing various water treatment, distribution, and storage facilities as approved by the Department in accordance with federal and state regulations and an updated Intended Use Plan prepared by the Department.

The City intends to use the proceeds to identify the composition of the 8,000 unknown service lines and begin replacement of the 280 known lead service lines.

The municipal securities to be acquired by the Authority will be revenue bonds payable from water, sewer, and storm sewer user fees. The City's average annual payment under the proposed loan will be approximately $283,852 indicating a 110% net revenue coverage requirement of approximately $312,238. The City will be required to deposit $305,000 into a reserve fund with payments of $61,000 per year for the first five years of the loan. Pro forma net operating coverage of the Water/Sewer/Storm Sewer Fund was 1.60x, 1.12x, 1.24x and 1.16x for 2021-2024, respectively. The existing net operating revenue will provide sufficient net revenues to meet the 110% coverage requirement.

As of December 31, 2024, the City has $5,440,000 of General Obligation Bonds, $10,440,000 of Refunding Improvement Bonds, $48,200,000 of Sales Tax Revenue Bonds, $22,212,660 of Water/Sewer Revenue Bonds, and $19,820,000 of Airport Revenue Bonds outstanding. The City currently has two Clean Water SRF and one Drinking Water SRF loan totaling $13,492,660 outstanding. The City is current in its payments for its outstanding Authority loan.

Funding for the construction of the City's projects has been included in a list of approved projects as prepared and updated by the Department. As an authorized participant in the DWSRF Program, the City will benefit substantially from the subsidized fixed rate loans made under the Program. Consequently, no other financing mechanism can provide a greater cost advantage than that offered by the DWSRF Program.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509
800.472.2166
800.366.6888 TTY
701.328.5600
bnd.nd.gov

Attachment 6E

Memorandum

To: Industrial Commission

From: Kylee Merkel, Business Banker
Bank of North Dakota

Date: July 15, 2025

RE: City of Minot
Drinking Water State Revolving Fund Program

ND Public Finance Authority has delivered to BND their memo which recommends approval of a $29,575,000 loan to the City of Minot under the Drinking Water State Revolving Fund (DWSRF). This project is eligible for $21,059,531 of DWSRF loan forgiveness, making the net loan $8,515,569. The entire cost of the project is $29,575,000, with DWSRF financing the full cost of the project.

The project will identify and replace lead service lines in the City. The requested loan term is 30 years. The City will issue a revenue bond payable with water, sewer and storm sewer user fees. The annual payment will average $283,852.

Debt Service Coverage:

Water, Sewer & Storm Sewer Fund	2022	2023	2024	Projected
Operating Revenue	22,841,647	24,243,313	24,482,536	24,482,536
Interest Revenue	-107,043	1,530,065	1,635,578	1,635,578
Operating Expenses	-35,609,828	-38,346,174	-39,550,320	-39,550,320
Net Operating Revenue	-12,875,224	-12,572,796	-13,432,206	-13,432,206
Plus: Sales Tax Transfers In	1,840,213	798,507	851,927	851,927
Plus: Depreciation/Transfers In	15,858,850	17,104,529	17,230,086	17,230,086
Adjusted Net Operating Income	4,823,839	5,330,240	4,649,807	4,649,807
Current Debt Service	3,795,235	3,783,310	3,508,418	3,724,857
Proposed Debt Service				283,852
Total Debt Service				4,008,709
Debt Service Coverage	127%	141%	133%	116%

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509

800.472.2166
800.366.6888 TTY
701.328.5600

bnd.nd.gov

The City currently serves 13,896 residential water connections that pay a monthly base rate of $11.10 and a usage charge of $3.86 per 100 cubic feet. The City also serves 1,213 commercial connections that pay a monthly base rate ranging from $13.60 to $140.47, depending on meter size, and a usage charge of $4.35 per 100 cubic feet. The City currently serves 12,878 residential sanitary sewer connections that pay a monthly base rate of $8.15 and a usage charge of $3.47 per 100 cubic feet. The City also serves 1,112 commercial sanitary sewer connections that pay a monthly base rate of $8.10 and a usage charge of $3.89 per 100 cubic feet. Storm sewer monthly fees are $14.52 for residential users and $16.52 for non-residential users. The existing revenues will generate sufficient net operating revenues to service both the new and existing debt.

Outstanding Debt (as of December 31, 2024):

	Original Amount	Current Balance
General Obligation Bonds	10,500,000	5,440,000
Improvement Bonds	17,650,000	10,440,000
Sales Tax Revenue Bonds	52,645,000	48,200,000
Water/Sewer Revenue Bonds	41,267,946	22,212,660
Airport Revenut Bonds	28,520,000	19,820,000
	150,582,946	106,112,660

Average annual debt service requirements are estimated at $10,680,089, which is an average of $220.77 per resident.

Historical census populations for the City of Minot were 48,377 in 2020, 40,888 in 2010 and 36,567 in 2000. The largest employers in the City are Minot Air Force Base, Trinity Health and Minot Public School.

Based upon the PFA recommendation and the benefits obtained with this project, BND concurs with their evaluation and support of the request.

Kylee Merkel
Business Banker

Attachment 6F

July 21, 2025

PUBLIC FINANCE AUTHORITY ADVISORY COMMITTEE

RECOMMENDATION TO THE INDUSTRIAL COMMISSION

The Advisory Committee, at its July 21, 2025 meeting, reviewed, discussed, and recommends approval of a $3,000,000 increase to a previously approved $16,500,000 (total $19,500,000) Drinking Water State Revolving Fund Program loan to Western Area Water Supply Authority (WAWSA).

North Dakota Public Finance Authority
Advisory Committee

Keith Lund, Chairman
Linda Svihovec
John Phillips

NORTH Dakota | Public Finance Authority
Be Legendary.

Memorandum

To: Public Finance Authority Advisory Committee
Miles Silbert, Public Financial Management, LLC
Kylee Merkel, Bank of North Dakota

From: DeAnn Ament, Executive Director

Date: July 17, 2025

Re: Western Area Water Supply Authority
Drinking Water State Revolving Fund Loan

Purpose of the Project: The project will include system expansion to those without rural water service, capacity expansion to existing rural service areas and design for the next expansion of the water treatment facility.

Project Amount:

DWSRF Increase Request	$ 3,000,000
DWSRF Original Request	16,500,000
SWC Cost Share	53,500,000
Project Total	$73,000,000

Users to Benefit from the Project: All users will benefit
Users Served by the System: Five bulk users serving a population of 67,552 which includes the Cities of Williston, Watford City, Ray, Tioga, Stanley, Wildrose, Crosby, Fortuna, Noonan, Columbus and Ross

The requested loan term is 30 years. The Authority will issue revenue bonds payable with user fees for this loan. The average annual payment will be $743,680. The required debt service reserve is $791,700 and the 110% net operating coverage requirement is $818,048.

Domestic Water Rate Charges to Members (per thousand gallons):

	2023	2024	2025	2026	2026
City of Williston	$ 2.26	$ 2.28	$ 2.36	$ 2.39	$ 2.41
North System					
NWRWD	$ 3.90	$ 3.98	$ 4.12	$ 4.17	$ 4.22
R&T WD	$ 3.90	$ 3.98	$ 4.12	$ 4.17	$ 4.22
South System					
MCWRD	$ 4.12	$ 4.18	$ 4.18	$ 4.19	$ 4.21

WAWSA Member Domestic User Rates:

	Base Rate	Volume Charge/Gallons
MCWRD	$ 45.90	$7.19/1000
NWRWD	$ 45.00	$8.80/1,000
R & T	$ 55.00	$8.00/1,000
Williston	$ 7.00	$3.06/748

WAWSA Domestic Net Revenue:

				Unaudited
	2021	2022	2023	2024
Interest Revenue	$9,646	$63,943	$774,985	$890,692
Operating Revenue	11,691,150	12,035,169	13,611,589	14,968,488
Operating Expenses	16,599,653	17,382,379	18,642,058	20,848,224
Net Operating Expenditures	-4,898,857	-5,283,267	-4,255,484	-4,989,044
Depreciation	7,122,230	7,240,488	7,342,073	7,548,710
Adjusted Net Operating Revenue	$2,223,373	$1,957,221	$3,086,589	$2,559,666

Member's Recent Net Operating Coverage:

Member	Audit Year	Net Operating Coverage	Required Reserve Fund
McKenzie County WRD [1]	**2023**	197%	Yes
NWRWD	**2023**	289%	Yes
R & T Water Supply	**2023**	266%	Yes
Williston	**2023**	237%	Yes

[1] Information from the 2023 McKenzie County audit which McKenzie County WRD is a discretely presented component unit.

With an increased average annual payment of $45,372 (previously $698,308) and members' current excess net operating coverage, they should be able to continue to meet their 110% net operating coverage requirements.

Total outstanding debt as of December 31, 2024:

	Original Amount	Outstanding Amount
Paid by Domestic Revenue:		
Member Debt [2]	$10,000,000	$7,280,000
State Loans [2]	43,000,000	27,110,305
	53,000,000	34,390,305
Paid by Industrial Revenue:		
Member Debt [2]	40,888,017	13,605,679
State Loans	87,748,012	40,490,095
	128,636,029	54,095,774
	$181,636,029	$88,486,079

[2] Payments to the NDPFA have been made as agreed. For the District's debt paid by domestic revenue, there are two DWSRF bonds with $21,479,159 outstanding and two District members each have a DWSRF bond with a total of $7,280,000 outstanding. There are three District members that have four DWSRF bonds that are paid by industrial revenues with outstanding balances of $8,530,000.

The average annual debt payments are $6,937,605 which is approximately $103 per user served.

Population Served:

County	2023	2020	2010	2000
Burke	2,163	2,201	1,968	2,242
Divide	2,174	2,195	2,071	2,283
McKenzie	14,280	14,704	6,360	5,737
Mountrail	9,567	9,809	7,673	6,631
Williams	39,368	40,950	22,398	19,761
Total	67,552	69,859	40,470	36,654

School Enrollment:

2025-2026	2024-2025	2023-2024	2022-2023	2024-2022
12,962	12,562	12,172	12,088	11,536

45 South 7th Street
Suite 2950
Minneapolis, MN 55402

612.338.3535
612.338.7264 Fax
www.pfm.com

pfm

Memorandum

TO: DeAnn Ament, Executive Director
North Dakota Public Finance Authority

FROM: PFM Financial Advisors LLC

DATE: July 21, 2025

RE: Marketplace Analysis - Drinking Water State Revolving Fund Program
Western Area Water Supply Authority

The Western Area Water Supply Authority ("Authority") has presented a request to the Authority and the North Dakota Department of Environmental Quality ("Department") for a $3,000,000 increase to their previously approved $16,500,000 loan for a total of $19,500,000 under the Drinking Water State Revolving Fund Program ("DWSRF Program"). The DWSRF Program is used to make subsidized interest rate loans to political subdivisions for the purpose of constructing various water treatment, distribution and storage facilities as approved by the Department in accordance with federal and state regulations and an updated Intended Use Plan prepared by the Department.

The Authority intends to use the proceeds for projects that include system expansion to those without rural water service, capacity expansion to existing rural service areas, and design for the next expansion of the water treatment facility.

The municipal securities to be acquired by the Authority will be revenue bonds payable from user fees. The Authority's average annual payment under the proposed net loan amount will be approximately $743,680 indicating a 110% net revenue coverage requirement of approximately $818,048. The Authority will be required to deposit $791,700 into a reserve fund with payments of $158,340 per year over the first five years of the loan. The average annual payment from members has increased by $45,372. The net operating coverage of the Authority's members in 2023 was 1.97x for McKenzie County Water Resource District, 2.89x for Northwest Rural Water District, 2.66x for R&T Water Supply, and 2.37x for Williston. All members have a reserve fund. The increase in average annual payments and the current net operating coverages of the members will provide sufficient net revenues to meet the 110% coverage requirement.

As of December 31, 2024, the Authority has $34,390,305 of outstanding domestic revenue debt and $54,095,774 of outstanding industrial revenue debt. For debt paid by domestic revenues, the Authority has two DWSRF loans with $21,479,159 outstanding and two loans from two members within the Authority totaling $7,280,000 outstanding. For debt paid by industrial revenues, the Authority has four loans from three members within the Authority totaling $8,530,000 outstanding. The Authority and its members are current in its payments for its outstanding Authority loans.

Funding for the construction of the Authority's projects has been included in a list of approved projects as prepared and updated by the Department. As an authorized participant in the DWSRF Program, the Authority will benefit substantially from the subsidized fixed rate loans made under the Program. Consequently, no other financing mechanism can provide a greater cost advantage than that offered by the DWSRF Program.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509

800.472.2166
800.366 6888 TTY
701.328 5600

bnd.nd.gov

Attachment 7E

Memorandum

To: Industrial Commission

From: Kylee Merkel, Business Banker
Bank of North Dakota

Date: July 18, 2025

RE: Western Area Water Supply Authority
Drinking Water State Revolving Fund Program

ND Public Finance Authority has delivered to BND their memo which recommends approval of a $3,000,000 increase to an existing loan (From $16,500,000 to $19,500,000) to Western Area Water Supply Authority under the Drinking Water State Revolving Fund (DWSRF). The total cost of the project is $73,000,000 with State Water Commission providing a $53,500,000 grant.

The proceeds from the loan will be used to expand the distribution system to users without existing rural water service, expand system capacity and fund design for the next expansion of the water treatment facility. The requested loan term is 30 years. The Authority will issue revenue bonds payable from user fees. The annual payment will average $743,680, an increase of $45,372.

Domestic Debt Service Coverage:

Unaudited Domestic	2021	2022	2023	Projected
Water Sales	8,330,592	8,106,974	9,086,372	9,086,372
Industrial Water Reimbursement	3,193,409	3,730,320	4,251,397	4,251,397
Other Water Income	167,149	197,875	273,820	273,820
Interest Income	9,646	63,943	774,985	774,985
Operating Expenses	-16,599,653	-17,382,379	-18,642,058	-18,642,058
Net Operating Revenue	-4,898,857	-5,283,267	-4,255,484	-4,255,484
Add: Depreciation & Amortization	7,122,230	7,240,488	7,342,073	7,342,073
Adjusted Operating Income	2,223,373	1,957,221	3,086,589	3,086,589
Existing Domestic Debt Service	1,628,317	1,327,520	2,589,805	2,456,648
Proposed Domestic Debt Service				45,372
Total Domestic Debt Service	1,628,317	1,327,520	2,589,805	2,502,020
Projected Debt Service Coverage	136.54%	147.43%	119.18%	123.36%

The table above presents the domestic debt service coverage for the Authority. The table does not include industrial revenues, expenditures or debt service requirements. The domestic and industrial water reimbursement will provide sufficient net operating revenue to service the existing and increased domestic debt service requirements of the Authority.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509

800.472.2166
800.366.6888 TTY
701.328.5600

bnd.nd.gov

Outstanding Domestic Debt (as of December 31, 2024):

	Original Amount	Amount Outstanding
State Domestic Revenue Bonds	$10,000,000	$5,631,146
DWSRF Domestic Revenue Bonds	43,000,000	28,759,159
	$53,000,000	$34,390,305

Average annual domestic debt service requirements are estimated at $2,502,020, which is an average of $179.62 per domestic connection.

The Authority currently provides bulk service to the five member entities of McKenzie County Water Resource District, Northwest Regional Water District, R & T Water District and the cities of Williston and Watford City. The estimated population serviced is 67,552 which includes the Cities of Williston, Watford City, Ray, Tioga, Stanley, Wildrose, Crosby, Fortuna, Noonan, Columbus and Ross.

Based upon the PFA recommendation and the benefits obtained with this project, BND concurs with their evaluation and support of the request.

Kylee Merkel
Business Banker

Attachment 7F

This data is provided by the ND Dept of Water Resources for your convenience. This data is provisional. This service is provided "AS IS" and without warranty of any kind, either express or implied. No warranty, either expressed or implied, is made regarding the accuracy or utility of the data or information presented at this site. The ND Dept of Water Resources is not responsible for any errors or damages that may occur resulting from the use or mis-use of the data that is provided at this site. If you have any questions regarding the data, generation methods, or errors, please direct any these comments to ND Dept of Water Resources.
Phone: (701) 328-4998

NORTH Dakota | Water Resources
Be Legendary.

Western Area Water Supply
(701) 774-6605

Northwest Area Water Supply
(701) 328-1050

Southwest Pipeline Project
Area Served
(701) 225-0241

SWPP
Area Served
(701) 225-0241

SWPP
No Capacity

Trenton Indian Service Area

Fort Berthold Reservation

Turtle Mtn Reservation

Spirit Lake Reservation

Standing Rock Reservation

Sisseton-Wahpeton Reservation

North Dakota Regional Water Supply Projects

North Dakota Dept of Water Resources, February 2023

NORTH Dakota Be Legendary. | Public Finance Authority

Memorandum

To: Industrial Commission: Governor Kelly Armstrong, Attorney General Drew H. Wrigley, Agriculture Commissioner Doug Goehring

From: DeAnn Ament, Executive Director

Date: July 21, 2025

Re: Grand Forks, Clean Water State Revolving Fund
Jamestown, Drinking Water State Revolving Fund

Under current policy, the Public Finance Authority can make loans under the State Revolving Fund Program in an amount not to exceed $2,000,000 and under the Capital Financing Program in an amount not to exceed $500,000 without seeking the final approval of the Industrial Commission. Within this policy, once the loan has been approved, the Public Finance Authority is required to provide the details of the loan to the Industrial Commission. Accordingly, the Public Finance Authority and its Advisory Committee used this policy to approve the following loans.

The committee reviewed the City of Grand Forks's Clean Water State Revolving Fund application for a $1,316,000 loan towards a $2,928,000 project. Locally $1,612,000 will be provided towards the project. The requested term for the loan is 30 years. The project will construct storm sewer along 27th Avenue North and North 32nd Street which will be routed to the recently constructed regional stormwater pond in the development. The project will also allow properties adjacent to 27th Avenue to route their runoff to the storm sewer system. The City will issue improvement bonds payable with special assessments. The improvement bonds will be a contingent general obligation of the City, backed by the statutory requirement that the City will levy a general deficiency tax if the revenues from the collection of special assessments are not sufficient to pay the debt service on the improvement bonds.

The committee reviewed the City of Jamestown's Drinking Water State Revolving Fund application for a $1,984,000 loan towards a $4,823,000 project. DWR Cost Share will provide $2,839,000. This project will replace the Interstate 94 West Business Loop (south segment) cast iron water mains including valves and hydrants with PVC pipe along with the associated appurtenances. The requested term for the loan is 20 years. The City will issue improvement bonds payable with special assessments. The improvement bonds will be a contingent general obligation of the City, backed by the statutory requirement that the City levy a general deficiency tax if the revenues from the collection of special assessments are not sufficient to pay the debt service on the improvement bonds.

The Public Finance Authority's Advisory Committee approved these loans at their July 21, 2025, meeting.

NORTH Dakota | Public Finance Authority
Be Legendary.

Memorandum

To: Public Finance Authority Advisory Committee
Miles Silbert, Public Financial Management
Kylee Merkel, Bank of North Dakota

From: DeAnn Ament, Executive Director

Date: July 9, 2025

Re: City of Jamestown
Drinking Water State Revolving Fund

Purpose of the Project: The Interstate 94 West Business Loop (south segment) cast iron water mains including valves and hydrants will be replaced with PVC pipe along with the associated appurtenances.

Project Amount:

DWSRF Request	$ 1,984,000
DWR Cost Share	2,839,000
Project Total	$ 4,823,000

Population to Benefit from the Project: 5,000
Population Served by the System: 15,849

The requested term for the Drinking Water State Revolving Fund (DWSRF) loan is 20 years. Accordingly, the average annual payment on the loan will be approximately $116,785. The City will issue improvement bonds payable with special assessments. The improvement bonds will be a contingent general obligation of the City, backed by the statutory requirement that the City levy a general deficiency tax in the event that the revenues from the collection of special assessments are not sufficient to pay the debt service on the improvement bonds.

The City has 4,950 residential and 480 commercial users which pay a monthly water base rate of $27.20 including the first 400 cubic feet of water plus $3.40 per 100 CF in excess of 400 CF.

Water Fund:

				Unaudited
	2021	2022	2023	2024
Interest Revenue	$14,402	$24,170	$56,315	$139,365
Operating Revenue	5,749,451	5,688,657	6,240,607	6,302,228
Operating Expenses	3,089,211	4,148,841	6,186,836	3,657,812
Net Operating Revenue	2,674,642	1,563,986	110,086	2,783,780
Depreciation	393,861	488,098	559,823	-
Non-Cash Pension Adjustment	-	-	1,936,986	-
Transfer In	3,228,114	2,541,826	-	-
Adjusted Net Operating Revenue	$6,296,617	$4,593,910	$2,606,895	$2,783,780
Revenue Bond Payments	$1,054,120	$3,242,730	$1,268,750	$950,913
Net Operating Coverage	597%	142%	205%	293%

The City's outstanding indebtedness as of December 31, 2024:

	Original Debt	Outstanding Balance
Revenue Bonds:		
Water [1]	$ 15,042,701	$ 4,780,000
Sewer [1]	16,885,331	9,399,000
Solid Waste [1]	4,249,147	2,670,000
	$ 36,177,179	$ 16,849,000
Improvement Bonds:		
Water and Sewer [1]	$ 13,249,509	$ 6,712,000
Other	37,021,054	17,323,607
	$ 50,270,563	$ 24,035,607
Total Debt	$ 86,447,742	$ 40,884,607

[1] All payments have been made as agreed. The City has nine Clean Water SRF and twelve DWSRF loans with outstanding balances of $23,561,000. There are also two Clean Water SRF and one DWSRF loans that have been approved but are not closed.

The average annual bond payments are $6,594,310, which is $416 per resident.

The City of Jamestown is in Stutsman County, at Interstate 94, 99 miles west of Fargo. The total population according to the 2020 census is 15,849; this is an increase of 422 from the 2010 census. The largest employers in the Jamestown Public Schools with 368 employees, the ND State Hospital with 450 employees and the Anne Carlsen Center with 595 employees.

K-12 School Enrollment:

			Current	Projected
2021-2022	**2022-2023**	**2023-2024**	**2024-2025**	**2025-2026**
2,122	2,145	2,080	2,019	2,000

The City's 2024 taxable valuation was $55,652,032. This is an increase of $8,196,370 over the 2020 taxable valuation.

Property Tax Collections as of June 30, 2025:

Levy Year	Dollar Amount of Levy	Amount Collected to Date of Application	Percentage Collected
2024	$6,588,067	$5,833,847	89%
2023	$6,343,919	$6,240,124	98%
2022	$6,013,735	$5,975,051	99%

Special Assessment Collections as of June 30, 2025:

Year	Dollar Amount	Amount Collected to Date of Application	Percentage Collected
2024	$3,086,650	$2,947,149	95%
2023	$2,933,865	$2,870,178	98%
2022	$2,791,009	$2,766,760	99%

Mill Levy History:

Year	City	School	Park District	State and County	Total for Each Year
2024	118.38	102.00	46.60	69.58	336.56
2023	118.41	102.00	41.38	75.38	337.17
2022	117.92	102.00	40.20	71.98	332.10
2021	118.36	102.00	40.21	71.09	331.66
2020	117.95	100.00	39.36	67.33	324.64

50 South Sixth Street
Suite 2250
Minneapolis, MN 55402

612.338.3535
612.338.7264 Fax
www.pfm.com

pfm

Memorandum

TO: DeAnn Ament, Executive Director
North Dakota Public Finance Authority

FROM: PFM Financial Advisors LLC

DATE: July 15, 2025

RE: Marketplace Analysis - Drinking Water State Revolving Fund Program
City of Jamestown

The City of Jamestown (the "City") has presented a request to the Authority and the North Dakota Department of Environmental Quality ("Department") for a $1,984,000 loan under the Drinking Water State Revolving Fund Program ("DWSRF Program"). The DWSRF Program is used to make subsidized interest rate loans to political subdivisions for the purpose of constructing various water treatment, distribution and storage facilities as approved by the Department in accordance with federal and state regulations and an updated Intended Use Plan prepared by the Department.

The City intends to use the proceeds of the loan to replace the Interstate 94 West Business Loop cast iron mains including valves and hydrants with PVC pipe along with the associated appurtenances.

The municipal securities to be acquired by the Authority will be improvement bonds of the City payable from special assessments levied against the benefited property. The proposed term of the loan is 20 years with a subsidized interest rate of 1.50%. The City's average annual payment under the proposed loan will be approximately $116,785. The improvement bonds will be a contingent general obligation of the City, which will be required by law to levy a general deficiency tax if the revenues collected from the levy of special assessments are insufficient to make the debt service payments.

As of December 31, 2024, the City has $16,849,000 of Revenue Bonds and $24,035,607 of Improvement Bonds outstanding. The City has nine Clean Water SRF and twelve Drinking Water SRF loans with a total outstanding balance of $23,561,000. The City is current in its payments for its outstanding Authority loan.

Funding the construction of the City's improvements has been included in a list of approved uses as prepared and updated by the Department. As an authorized participant in the DWSRF Program, the City will benefit substantially from the subsidized fixed rate loans made under the Program. Consequently, no other financing mechanism can provide a greater cost advantage than that offered by the DWSRF Program.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509
800.472.2166
800.366.6888 TTY
701.328.5600
bnd.nd.gov

Attachment 8A.2

Memorandum

To: Industrial Commission

From: Kylee Merkel, Business Banker
Bank of North Dakota

Date: July 10, 2025

RE: City of Jamestown
Drinking Water State Revolving Fund Program

ND Public Finance Authority has delivered to BND their memo which recommends approval of a $1,984,000 loan to the City of Jamestown under the Drinking Water State Revolving Fund (DWSRF). The entire cost of the project is $4,823,000, with Department of Water Resources providing a $2,839,000 cost-share grant.

The project will replace cast iron water mains, valves and hydrants in a portion of the I-94 West Business Loop. The requested loan term is 20 years. The City will issue an improvement bond payable with special assessment collections. The annual payment will average $116,785.

Water Fund:

Water Fund	2021	2022	2023
Operating Revenue	5,749,451	5,688,657	6,240,607
Interest Revenue	14,402	24,170	56,315
Operating Expenses	-3,089,211	-4,148,841	-6,186,836
Net Operating Revenue	2,674,642	1,563,986	110,086
Plus: Transfers In	3,228,114	2,541,826	0
Plus: Pension Adjustment	0	0	1,936,986
Plus: Depreciation	393,861	488,098	559,823
Adjusted Net Operating Income	6,296,617	4,593,910	2,606,895
Current Debt Service	1,054,120	3,242,730	1,268,750
Debt Service Coverage	597%	142%	205%

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509

800.472.2166
800.366.6888 TTY
701.328.5600

bnd.nd.gov

The City currently serves 4,950 residential connections and 480 commercial connections. All connections pay a monthly base rate of $27.20, and a usage rate of $3.40 per 100 cubic feet, in excess of 400 cubic feet.

Outstanding Debt (as of December 31, 2024):

	Original Amount	Current Balance
Water Revenue Bonds	15,042,701	4,780,000
Sewer Revenue Bonds	16,885,331	9,399,000
Solid Waste Revenue Bonds	4,249,147	2,670,000
Water/Sewer Improvement Bonds	13,249,509	6,712,000
Other Improvement Bonds	37,021,054	17,323,607
	86,447,742	40,884,607

Average annual debt service requirements are estimated at $6,594,310, which is an average of $416.07 per resident.

Historical census populations for the City of Jamestown were 15,849 in 2020, 15,427 in 2010 and 15,527 in 2000. The largest employers in the City are Anne Carlsen Center, North Dakota State Hospital and Jamestown Public Schools

Based upon the PFA recommendation and the benefits obtained with this project, BND concurs with their evaluation and support of the request.

Kylee Merkel
Business Banker

1st Ave S
2nd Ave SW
3rd Ave SW
4th Ave SW
Business Loop West
Riverside Dr.
4th Ave SW
20' EASEMENT
N
Replacement Project
Existing Watermain
Lot Line
Jamestown

NORTH Dakota | Public Finance Authority
Be Legendary.

Memorandum

To: Public Finance Authority Advisory Committee
Miles Silbert, Public Financial Management, LLC
Kylee Merkel, Bank of North Dakota

From: DeAnn Ament, Executive Director

Date: July 15, 2025

Re: City of Grand Forks
Clean Water State Revolving Fund

Purpose of the Project: Construct storm sewer along 27th Avenue North and North 32nd Street which will be routed to the recently constructed regional stormwater pond in the development. The project will also allow properties adjacent to 27th Avenue to route their runoff to the storm sewer system.

Project Amount:

CWSRF Request	$ 1,316,000
Local Funds	1,612,000
Project Total	$ 2,928,000

Population to Benefit from the Project: 200
Population Served by the System: 58,692

The requested term for the Clean Water State Revolving Fund (CWSRF) loan is 30 years. The average annual payment for the improvement bonds will be $54,742. The City will issue improvement bonds payable with special assessments. The improvement bonds will be a contingent general obligation of the City, backed by the statutory requirement that the City will levy a general deficiency tax in the event that the revenues from the collection of special assessments are not sufficient to pay the debt service on the improvement bonds.

The City has 13,323 residential users pay a monthly stormwater base charge of $4.12 and 2,577 commercial users pay a monthly rate of $1.81 per run off unit with a $4.12 minimum charge. The City annually reviews and adjusts the rates.

Stormwater Fund:

	2021	2022	2023
Interest Revenue	$325	-$9,063	$68,146
Operating Revenue	3,098,587	3,127,975	3,267,623
Operating Expenses	3,573,840	3,285,838	3,257,288
Net Operating Revenue	-474,928	-166,926	78,481
Non-cash Pension Adjustment	683,209	24,665	-
Adjusted Net Operating Revenue	$208,281	-$142,261	$78,481

The City outstanding indebtedness as of December 31, 2024:

	Original Amount	Outstanding Amount
General Obligation Bonds	$ 2,735,000	$ 565,000
Special Assessment Bonds	155,438,989	115,001,141
Water/Sewer Revenue Bonds [1]	175,848,141	136,223,442
Sales Tax Revenue Bonds	40,380,000	17,715,000
	$ 374,402,130	$269,504,583

[1] All payments have been made as agreed. The City has eight CWSRF and one DWSRF loans with outstanding balances of $117,797,365 as of December 31, 2024.

The debt outstanding per resident, including the new 2025 requests, is $4,829.

The City of Grand Forks is located in Grand Forks County 82 miles north of Fargo on Interstate 29. Based on the 2020 census, the total population is 59,166; this is an increase of 6,328 from the 2010 census. The largest employers in the City are University of North Dakota which has 5,562 employees, Altru Health Services with 3,400 employees, and Grand Forks Air Force Base employs 2,897.

K-12 School Enrollment:

			Current	Estimated
2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
7,407	7,440	7,428	7,676	7,700

The City's 2024 taxable valuation was $285,657,667. This is an increase of $51,148,346 over the 2020 taxable valuation.

Property Tax Collections 5/31/2025:

Levy Year	Dollar Amount of Levy	Amount Collected to Date of Application	Percentage Collected
2024	25,195,471	22,805,709	91%
2023	25,847,192	24,561,187	95%
2022	24,347,205	23,250,265	95%

Special Assessment Collections 5/31/2025:

Year	Dollar Amount	Amount Collected to Date of Application	Percentage Collected
2024	10,161,885	9,423,991	93%
2023	9,286,257	8,857,595	95%
2022	9,270,607	9,265,636	100%

Mill Levy History:

Year	City	School	Park District	State and County	Total for Each Year
2024	92.25	130.50	36.79	87.00	346.54
2023	96.37	131.69	37.31	87.16	352.53
2022	96.84	110.79	37.80	82.63	328.06
2021	97.02	111.00	37.88	79.29	325.19
2020	97.87	100.94	38.19	80.82	317.82

50 South Sixth Street
Suite 2250
Minneapolis, MN 55402

612.338.3535
612.338.7264 Fax
www.pfm.com

pfm

Memorandum

TO: DeAnn Ament, Executive Director
North Dakota Public Finance Authority

FROM: PFM Financial Advisors LLC

DATE: July 15, 2025

RE: Marketplace Analysis - Clean Water State Revolving Fund Program
City of Grand Forks

The City of Grand Forks ("City") has presented a request to the Authority and the North Dakota Department of Environmental Quality ("Department") for a $1,316,000 loan under the Clean Water State Revolving Fund Program ("CWSRF Program"). The CWSRF Program is used to make subsidized interest rate loans to political subdivisions for the purpose of constructing various wastewater treatment projects and landfill projects as approved by the Department in accordance with federal and state regulations and an updated Intended Use Plan prepared by the Department.

The City intends to use the proceeds to construct storm sewer along 27th Avenue North and North 32nd Street which will be routed to the recently constructed regional stormwater pond in the development while also allowing properties adjacent to 27th Avenue to route their runoff to the storm sewer system.

The municipal securities to be acquired by the Authority will be improvement bonds of the City payable from special assessments levied against the benefited property. The proposed term of the loan is 30 years with a subsidized interest rate of 1.50%. The City's average annual payment under the proposed loan will be approximately $54,742. The improvement bonds will be a contingent general obligation of the City, which will be required by law to levy a general deficiency tax if the revenues collected from the levy of special assessments are insufficient to make the debt service payments.

As of December 31, 2024, the City has $565,000 of General Obligation Bonds, $115,001,141 of Special Assessment Bonds, $17,715,000 of Sales Tax Revenue Bonds and $136,223,442 of Water/Sewer Revenue Bonds outstanding. The City currently has eight Clean Water and one Drinking Water loans outstanding totaling $117,797,365. The City is current in its payments for its outstanding Authority loans.

Funding for the construction of the City's projects has been included in a list of approved projects as prepared and updated by the Department. As an authorized participant in the CWSRF Program, the City will benefit substantially from the subsidized fixed rate loans made under the Program. Consequently, no other financing mechanism can provide a greater cost advantage than that offered by the CWSRF Program.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509
800.472.2166
800.366.6888 TTY
701.328.5600
bnd.nd.gov

Attachment 8B.2

Memorandum

To: Industrial Commission

From: Kylee Merkel, Business Banker
Bank of North Dakota

Date: July 16, 2025

RE: City of Grand Forks
Clean Water State Revolving Fund Program

ND Public Finance Authority has delivered to BND their memo which recommends approval of a $1,316,000 loan to the City of Grand Forks under the Clean Water State Revolving Fund (CWSRF). The entire cost of the project is $2,928,000, with the City contributing $1,612,000 of local funds.

The project is for construction of storm sewer along 27th Avenue North and North 32nd Street, to be routed to the newly construction regional stormwater pond. The requested loan term is 30 years. The City will issue an improvement bond payable with special assessment collections. The annual payment will average $54,742.

Stormwater Fund:

Storm Water Fund	2021	2022	2023
Operating Revenue	3,098,587	3,127,975	3,267,623
Interest Revenue	325	-9,063	68,146
Operating Expenses	-3,573,840	-3,285,838	-3,257,288
Net Operating Revenue	-474,928	-166,926	78,481
Plus: Pension Adjustment	683,209	24,665	0
Adjusted Net Operating Income	208,281	-142,261	78,481

The City currently has 13,323 residential connections that pay a monthly stormwater base charge of $4.12 and 2,577 commercial connections that pay a monthly rate of $1.81 per run off unit with a $4.12 minimum charge. The City annually reviews and adjusts rates as needed.

BND
Bank of North Dakota

PO BOX 5509, 1200 Memorial Hwy.
Bismarck, ND 58506-5509

800.472.2166
800.366.6888 TTY
701.328.5600

bnd.nd.gov

Outstanding Debt (as of December 31, 2024):

	Original Amount	Current Balance
General Obligation Bonds	2,735,000	565,000
Special Assessment Bonds	155,438,989	115,001,141
Sales Tax Revenue Bonds	40,380,000	17,715,000
Water & Sewer Revenue Bonds	175,848,141	136,223,442
	374,402,130	269,504,583

Average annual debt service requirements are estimated at $20,882,256, which is an average of $352.94 per resident.

Historical census populations for the City of Grand Forks were 59,166 in 2020, 52,838 in 2010 and 49,342 in 2000. The largest employers in the City are University of North Dakota, Altru Health System and Grand Forks Air Force Base.

Based upon the PFA recommendation and the benefits obtained with this project, BND concurs with their evaluation and support of the request.

Kylee Merkel
Business Banker

Attachment 8B.3

NORTH DAKOTA housing FINANCE AGENCY

July 30, 2025

TO: Industrial Commission

FR: Brandon Dettlaff, Executive Director

RE: Report 2025 Emergency Solutions Grant and North Dakota Homeless Grant Recipients

The agency serves as the administrator for the Federal Emergency Solutions Grant (ESG) and the state appropriated ND Homeless Grant (NDHG). Similar to multifamily programs, the funds are allocated to recipients through the allocation plan which details the eligible activities and the selection criteria for each program.

Emergency Solutions Grant

Program Overview
Emergency Solutions Grants will be utilized to provide services to individuals experiencing homelessness and those at risk of becoming homeless in the following eligible activities.

- Street Outreach;
- Emergency Shelter;
- Homelessness Prevention;
- Rapid Re-housing Assistance; and
- Homeless Management Information System- HUD required homeless data repository.

Individuals who are seeking homeless prevention services and extended rapid rehousing must meet income limits at 30% area median income. Programs are delivered through local non-profit organizations who are members of the Continuum of Care, the state's homeless response system.

Funding Level
For FY 2025, the federal formula allocation for the small state minimum was $484,140. ESG requires 100 percent match on all but $100,000 of the federal allocation or $384,140. NDHFA uses a portion of NDHG and staffing administrative costs to meet match requirements.

Awards
A total of 18 applications were received requesting $2.4 million for the $731,980 available to award. Seven agencies were selected for funding. A summary of the awards is attached.

North Dakota Homeless Grant

Program Overview
ND Homeless Grant is modeled after ESG with some minor adjustments. Rents are allowed to exceed fair market rent and individuals served can earn up to 50% area median income.

Funding Level
Biennial allocation $9.85 million, allocated over two year period. A portion of the fund is used to pay staff administration costs for the program and cover the required federal match for ESG and the Continuum of Care program.

Awards
A total of 26 applications were received requesting over $7.5 million in funding. Eighteen agencies were selected for funding. A summary of the awards is attached.

2025 Emergency Solutions Grant Awards

Applicant Organization	Location	Operations	Essential Services	Street Outreach	Rapid Rehousing	Homeless Prevention	HMIS	Total
Presentation Partners In Housing	Fargo				0.00	162,500.00	290.00	162,790.00
Southeastern Community Action Agency	Fargo			6,240.00	24,426.00	111,374.00	7,960.00	150,000.00
Youth Works	Bismarck			37,240.00	53,024.00	0.00	450.00	90,714.00
Institute Community Alliances	Iowa				0.00	0.00	160,000.00	160,000.00
Community Violence Intervention Center	Grand Forks	58,500.00			0.00	0.00		58,500.00
YWCA Cass Clay	Fargo	70,000.00			0.00	0.00		70,000.00
Grand Forks Homes-The Nest	Grand Forks	39,976.00			0.00	0.00		39,976.00
TOTALS		168,476.00	0.00	43,480.00	77,450.00	273,874.00	168,700.00	731,980.00

2025 ND Homeless Grant Awards

Applicant Organization	Location	Emergency Shelter - Operation	Essential Services	Outreach	Rapid Rehousing	Homeless Prevention	HMIS	Admin	Funded amount
Presentation Partners in Housing	Fargo					139,330.00			139,330.00
Institute for Community Alliances (HMIS Lead)	Iowa								30,000.00
CAP ND	State of ND				1,174,063.00	820,937.00	5,000.00		2,000,000.00
Youth Works	Bismarck	80,578.00	68,495.00				927.00		150,000.00
AARC - Pam's House	Bismarck	10,000.00	35,000.00				5,000.00		50,000.00
YWCA Cass Clay	Fargo	200,000.00							200,000.00
Community Violence Intervention Center	Grand Forks	68,000.00							68,000.00
Gladys Ray	Fargo	100,000.00	229,330.00						329,330.00
AARC - Hope House	Bismarck	10,000.00	47,500.00		5,000.00	5,000.00	7,500.00		75,000.00
Grand Forks Homes-The Nest	Grand Forks		175,940.00				4,060.00	20,000.00	200,000.00
United Way Grand Forks	Grand Forks	90,000.00	85,000.00				5,000.00	20,000.00	200,000.00
Northlands Resue Mission	Grand Forks	58,550.00	39,150.00				2,300.00		100,000.00
New Life Center	Fargo	150,000.00							150,000.00
Domestic Violence Rape Crisis Center	Dickinson	100,000.00							100,000.00
Amachi	Devils Lake	46,000.00	10,000.00	10,000.00			8,200.00		74,200.00
Missouri Slope Area United Way	Bismarck	260,000.00					10,000.00	30,000.00	300,000.00
Men's Winter Refuge	Minot	20,000.00	5,000.00						25,000.00
Women's Action Resource Center	Beulah	4,000.00			9,500.00	11,500.00			25,000.00
TOTALS		1,197,128.00	695,415.00	10,000.00	1,188,563.00	976,767.00	47,987.00	70,000.00	4,215,860.00

Attachment 11

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

BASIC FINANCIAL STATEMENTS
December 31, 2024 and 2023
and
SUPPLEMENTARY INFORMATION
December 31, 2024
(With Independent Auditor's Report Thereon)

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

TABLE OF CONTENTS

LANDMARK
CERTIFIED PUBLIC ACCOUNTANTS

INDEPENDENT AUDITOR'S REPORT

Bank of North Dakota and
Ascensus Broker Dealer Services, LLC
College SAVE

Report on the Audit of the Basic Financial Statements

Opinion

We have audited the accompanying statements of fiduciary net position and statements of changes in fiduciary net position of **College SAVE** (the Plan) as of and for the years ended December 31, 2024 and 2023, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements.

In our opinion, the basic financial statements present fairly, in all material respects, the fiduciary net position of the Plan as of December 31, 2024 and 2023, and the changes in its fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (U.S. GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Basic Financial Statements* section of our report. We are required to be independent of the Plan and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Emphasis of Matter – Other

As disclosed in Note 1, the Plan is included in the state of North Dakota's financial reporting entity as a fiduciary fund. The assets of the Plan are held in the College SAVE Trust (the Trust). These basic financial statements present only the activities and balances attributable to the Plan and do not purport to, and do not, present fairly the fiduciary net position or changes in fiduciary net position of the Trust or any other fiduciary funds of the state of North Dakota as of and for the years ended December 31, 2024 and 2023. Our opinion is not modified with respect to this matter.

Landmark PLC, Certified Public Accountants
200 W Capitol Ave, Ste 1700 | Little Rock, AR 72201 | Telephone (501) 375-2025 | Fax (501) 375-8704 | www.landmarkcpas.com

Report on the Audit of the Basic Financial Statements *(Continued)*

Responsibilities of Management for the Basic Financial Statements

Management is responsible for the preparation and fair presentation of the basic financial statements in accordance with U.S. GAAP, and for the design, implementation and maintenance of internal control relevant to the preparation and fair presentation of basic financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the basic financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Basic Financial Statements

Our objectives are to obtain reasonable assurance about whether the basic financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not absolute assurance, and therefore is not a guarantee that an audit conducted in accordance with U.S. GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the basic financial statements.

In performing an audit in accordance with U.S. GAAS and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the basic financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the basic financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the basic financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Plan's ability to continue as a going concern for a reasonable period of time.

We are required to communicate to those charged with governance regarding, among other matters, the planned scope and timing of the audits, significant audit findings and certain internal control-related matters that we identified during the audits.

Report on the Audit of the Basic Financial Statements *(Continued)*

Required Supplementary Information

U.S. GAAP requires that management's discussion and analysis on pages 7 through 14 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board as it is considered to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with U.S. GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the Plan's basic financial statements. The schedules of fiduciary net position and changes in fiduciary net position by investment option on pages 40 through 43 are presented for purposes of additional analysis and are not a required part of the basic financial statements. These schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the 2024 basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with U.S. GAAS. In our opinion, the information in these schedules is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 31, 2025, on our consideration of the Plan's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Plan's internal control over financial reporting and compliance.

Landmark PLC

Little Rock, Arkansas
March 31, 2025

(This page intentionally left blank)

Management's Discussion and Analysis

(Unaudited)

(This page intentionally left blank)

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)
December 31, 2024 and 2023

This management's discussion and analysis is intended to provide readers an objective discussion of the basic financial statements of College SAVE (the Plan) as of and for the years ended December 31, 2024, 2023 and 2022. This discussion and analysis, which is supplementary information required by the Governmental Accounting Standards Board (GASB), is intended to provide a highly summarized overview of the Plan's assets, liabilities, fiduciary net position and changes in fiduciary net position and should be read in conjunction with the Plan's financial statements and notes thereto, which are included on pages 17 through 37. In addition, readers may find useful the supplementary information on pages 40 through 43, which include information about the investment options offered to account owners.

* * * * *

College SAVE was established in September of 2000 to encourage the investment of funds to be used for qualified higher education expenses at eligible institutions, as authorized under North Dakota Century Code Title 6, Chapter 9, Section 38. Plan assets are held for the benefit of account owners and their designated beneficiaries in the College SAVE Trust (the Trust), for which the Bank of North Dakota (the Bank) serves as Trustee. The Plan is administered as a "qualified tuition program" in compliance with Section 529 of the Internal Revenue Code of 1986, as amended, and both the Plan and the Trust are exempt from federal taxation.

The Bank has established rules to administer, manage, promote and market the Plan, which are set forth in North Dakota Administrative Code Title 12.5, Article 2, Chapter 1. As allowed under these rules, the Bank may contract with third-party service providers to perform administrative duties related to the Plan and to manage the Plan's investments.

Pursuant to the College SAVE Plan Management Agreement, as amended, Ascensus Broker Dealer Services, LLC (ABD) serves as the Plan Manager, and Ascensus College Savings Recordkeeping Services, LLC (ACSR) serves as the recordkeeping and servicing agent. Collectively, ABD and ACSR are referred to as "Ascensus Government Savings (AGS)." The Vanguard Group, Inc. (Vanguard) provides investment advisory and related administrative services.

Financial Highlights

The following highlight some of the Plan's key financial results:

- At December 31, 2024, 2023 and 2022, the Plan's fiduciary net position totaled $644.0 million, $602.3 million and $541.3 million, respectively. Fiduciary net position increased $41.7 million, or 6.9%, from December 31, 2023, to December 31, 2024, after increasing $61.0 million, or 11.3%, from December 31, 2022, to December 31, 2023.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)
December 31, 2024 and 2023

Financial Highlights *(Continued)*

- Withdrawals exceeded contributions by $13.8 million, $11.7 million and $9.8 million for the years ended December 31, 2024, 2023 and 2022, respectively.
- Contributions during the years ended December 31, 2024, 2023 and 2022, totaled $48.5 million, $45.6 million and $45.5 million, respectively. Contributions increased $2.9 million, or 6.4%, from December 31, 2023, to December 31, 2024, after increasing $96.9 thousand, or 0.2%, from December 31, 2022, to December 31, 2023.
- Withdrawals during the years ended December 31, 2024, 2023 and 2022, totaled $62.3 million, $57.4 million and $55.4 million, respectively. Withdrawals increased $5.0 million, or 8.7%, from December 31, 2023, to December 31, 2024, after increasing $2.0 million, or 3.6%, from December 31, 2022, to December 31, 2023.
- Administrative fees totaled $3.8 million, $3.5 million and $3.6 million for the years ended December 31, 2024, 2023 and 2022, respectively. These fees, which are based on the Plan's fiduciary net position, are paid to the Bank, AGS and Vanguard for performing oversight, administrative and investment duties.
- For the year ended December 31, 2024, the Plan experienced net investment income of $59.3 million, resulting from the net increase in the fair value of investments of $41.5 million and dividends, capital gain distributions and interest of $17.8 million. For the year ended December 31, 2023, the Plan experienced net investment income of $76.2 million, resulting from the net increase in the fair value of investments of $60.2 million and dividends, capital gain distributions and interest of $16.0 million. For the year ended December 31, 2022, the Plan experienced a net investment loss of $92.5 million, resulting from the net decrease in the fair value of investments of $104.8 million, somewhat offset by dividends, capital gain distributions and interest of $12.3 million.
- The number of active accounts has increased from 52,933 at December 31, 2022, to 55,597 at December 31, 2023, to 58,224 at December 31, 2024. The average active account balance increased from approximately $10.2 thousand at December 31, 2022, to approximately $10.8 thousand at December 31, 2023, and further increasing to approximately $11.1 thousand at December 31, 2024.
- BND Match awards totaling approximately $137.7 thousand, $155.4 thousand, and $129.2 thousand in 2024, 2023 and 2022, respectively, were granted to qualifying account owners.
- New Baby Match awards totaling approximately $242.4 thousand, $222.9 thousand, and $214.0 thousand in 2024, 2023 and 2022, respectively, were granted to qualifying account owners.
- Kindergarten Kickoff Match awards totaling approximately $68.3 thousand, $73.7 thousand and $64.2 thousand in 2024, 2023 and 2022, respectively, were granted to qualifying account owners.

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)
December 31, 2024 and 2023

Overview of the Basic Financial Statements

The Plan's basic financial statements comprise the statement of fiduciary net position, the statement of changes in fiduciary net position and the related notes to the financial statements. The statement of fiduciary net position presents information on the Plan's assets and liabilities, with the difference between them representing net position held in trust for account owners and their beneficiaries. The statement of changes in fiduciary net position shows how the Plan's fiduciary net position changed during the year. The notes to the financial statements provide additional explanatory information about the amounts presented in the financial statements. It is essential that readers of this report consider the information in the notes to obtain a full understanding of the Plan's financial statements.

The Plan is included in the financial reporting entity of the state of North Dakota as a fiduciary fund. Assets are held in a trust for account owners and beneficiaries and cannot be used to support other governmental programs.

The Plan's basic financial statements are prepared in accordance with accounting and financial reporting standards for governmental entities set forth by the GASB. As required under generally accepted accounting principles applicable to fiduciary fund types, the Plan's basic financial statements are prepared using the accrual basis of accounting. Mutual funds are reported at fair value, and investment contracts are reported at contract value. All investment transactions are recorded on a trade-date basis. Realized and unrealized gains and losses are reported as "net increase (decrease) in the fair value of investments" on the statements of changes in fiduciary net position. Dividends and capital gain distributions are recorded on the ex-dividend date rather than when they are received. Contributions are recognized when they are received, provided enrollment in the Plan has been successfully completed, and withdrawals are recognized when the withdrawal request has been received and approved for payment. Administrative fees are recognized in the period when the related services are provided, regardless of when cash is paid.

Financial Analysis

Fiduciary Net Position

The following condensed statements of fiduciary net position provide a "snapshot" of the overall financial position of the Plan:

	December 31, 2024	December 31, 2023	December 31, 2022
Total assets	$ 645,754,190	$ 603,611,061	$ 542,865,229
Total liabilities	1,747,739	1,309,381	1,544,991
Net position held in trust for account owners and beneficiaries	$ 644,006,451	$ 602,301,680	$ 541,320,238

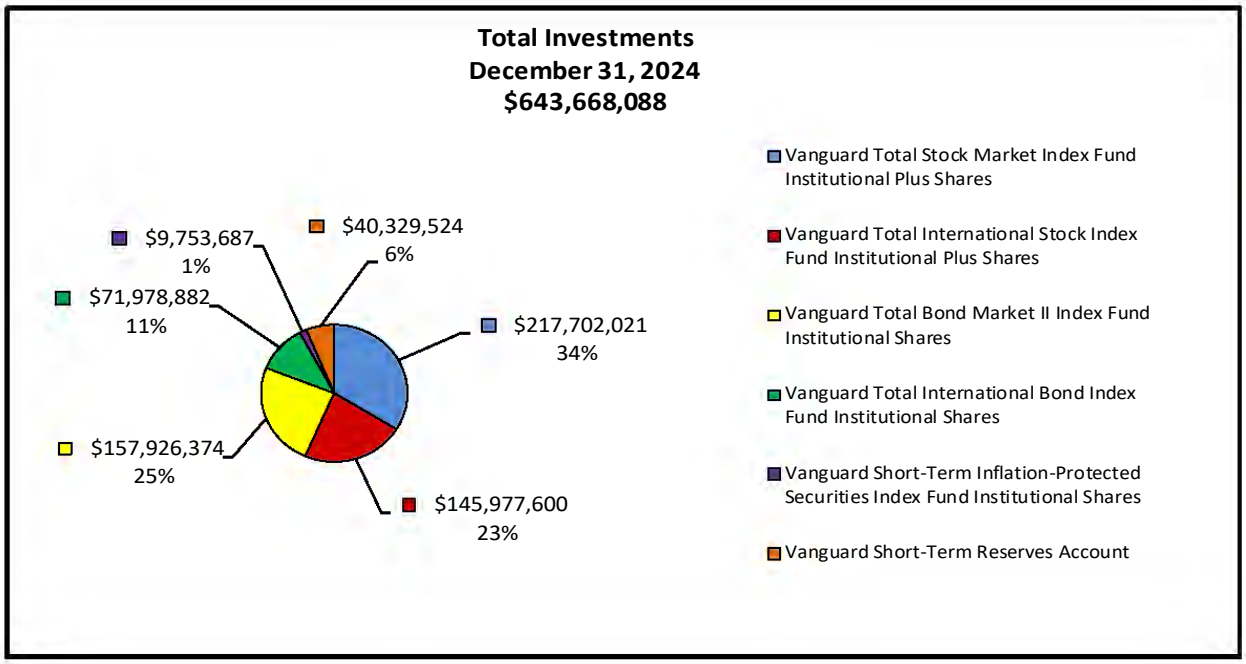
MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)
December 31, 2024 and 2023

Financial Analysis *(Continued)*

Fiduciary Net Position *(Continued)*

The reported balance of net position held in trust for account owners and their beneficiaries represents the cumulative total of contributions since the Plan's inception, increased (decreased) by net investment income (loss), and decreased by withdrawals and administrative fees.

Investments, which totaled $643.7 million, $602.5 million, and $541.7 million at December 31, 2024, 2023 and 2022, respectively, represent over 99% of the Plan's total assets. Account owners are able to direct investment of their contributions into one or more investment options and unit classes, each of which is invested in one or more Vanguard mutual funds or investment contracts (the Underlying Funds) in accordance with a predetermined asset allocation strategy approved by the Bank. At December 31, 2024, 2023 and 2022, the Plan's Underlying Funds are as follows:



Note: Percentages are stated as a percent of total investment value.

College SAVE™

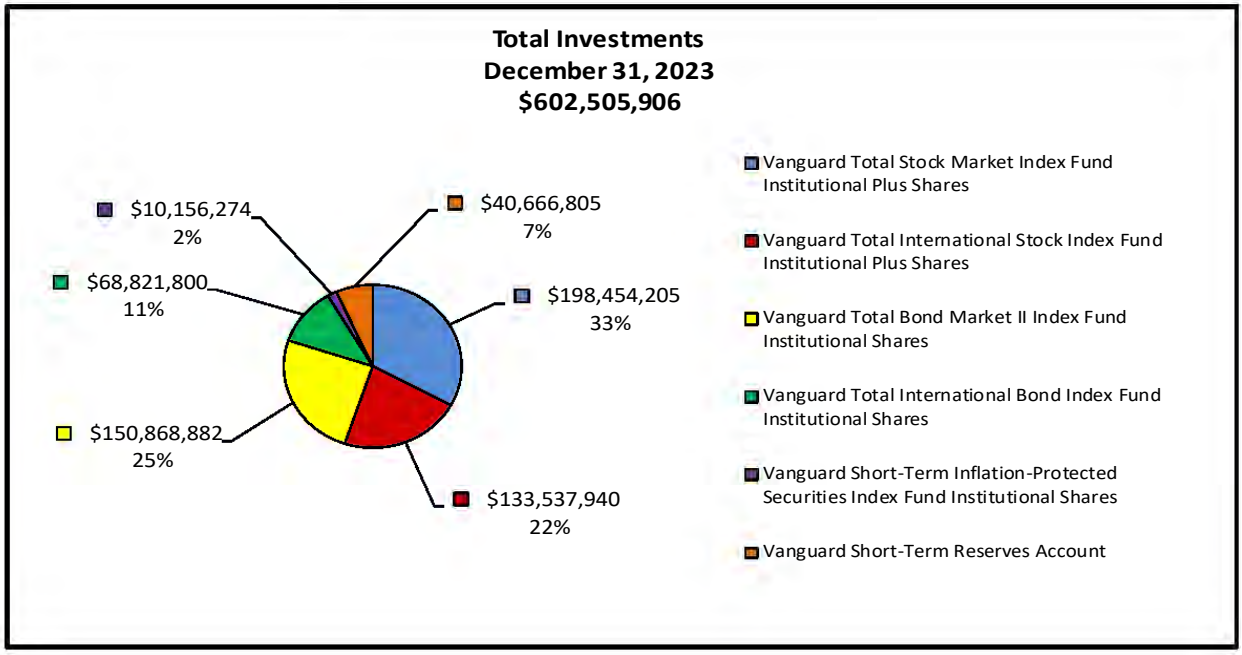
Bank of North Dakota's 529 Plan

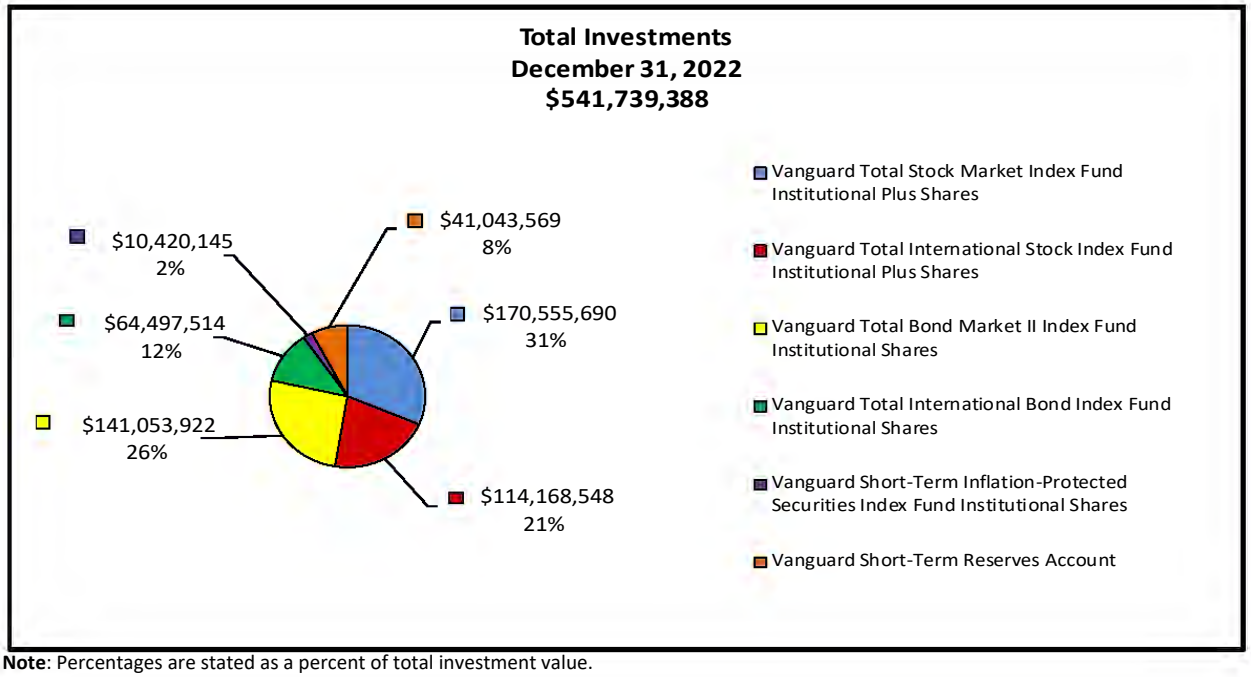
(A Fiduciary Fund of the State of North Dakota)

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)
December 31, 2024 and 2023

Financial Analysis *(Continued*

Fiduciary Net Position *(Continued)*





Note: Percentages are stated as a percent of total investment value.

Financial Analysis *(Continued)*

Fiduciary Net Position *(Continued)*

Other assets, which totaled $2.1 million at December 31, 2024, $1.1 million at December 31, 2023 and $1.1 million at December 31, 2022, comprise amounts to be invested or distributed on behalf of account owners and their beneficiaries and receivables for proceeds from Underlying Fund sales transactions. The Plan's liabilities, which totaled $1.7 million at December 31, 2024, $1.3 million at December 31, 2023 and $1.5 million at December 31, 2022, comprise accrued administrative fees, payables for withdrawals approved but not yet paid and payables for Underlying Fund purchase transactions.

Changes in Fiduciary Net Position

The following statements of changes in fiduciary net position summarize how the Plan's net position held in trust for account owners and their beneficiaries changed during the years presented:

	Year Ended December 31, 2024	Year Ended December 31, 2023	Year Ended December 31, 2022
Contributions	$ 48,529,661	$ 45,631,896	$ 45,535,022
Net investment income (loss)	59,330,637	76,217,001	(92,537,420)
Withdrawals	(62,329,496)	(57,357,966)	(55,381,845)
Administrative fees	(3,826,031)	(3,509,489)	(3,586,782)
Net increase (decrease)	41,704,771	60,981,442	(105,971,025)
Net position held in trust for account owners and beneficiaries, beginning of year	602,301,680	541,320,238	647,291,263
Net position held in trust for account owners and beneficiaries, end of year	$ 644,006,451	$ 602,301,680	$ 541,320,238

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

MANAGEMENT'S DISCUSSION AND ANALYSIS
(Unaudited)
December 31, 2024 and 2023

Investment Commentary

The following section provides a brief description of each of the Plan's investments. More complete information can be found in the *College SAVE Plan Disclosure Statement and Participation Agreement* document or in each mutual fund's prospectus and annual report.

The Vanguard Total Stock Market Index Fund Institutional Plus Share Class is passively managed, using index sampling. This fund invests in large-, mid- and small-capitalization stocks diversified across growth and value investment styles and seeks to track the performance of the CRSP U.S. Total Market Index. This fund experienced returns of 23.76%, 26.03% and (19.51%) for the years ended December 31, 2024, 2023 and 2022, respectively. The share price of this fund increased from $174.63 at December 31, 2022, to $216.65 at December 31, 2023, to $264.58 at December 31, 2024.

The Vanguard Total International Stock Index Fund Institutional Plus Share Class employs an indexing investment approach and seeks to track the performance of the FTSE Global All Cap ex U.S. Index, which is designed to measure equity market performance in developed and emerging markets, excluding the United States. This fund experienced returns of 5.19%, 15.54% and (15.97%) for the years ended December 31, 2024, 2023 and 2022, respectively. The share price of this fund increased from $111.44 at December 31, 2022, to $124.53 at December 31, 2023, to $126.75 at December 31, 2024.

The Vanguard Total Bond Market II Index Fund Institutional Share Class is passively managed, using index sampling and seeks to track the performance of the Bloomberg U.S. Aggregate Float Adjusted Index. This fund provides broadly diversified exposure to the entire U.S. investment grade bond market and is intermediate in duration. This fund experienced returns of 1.31%, 5.66% and (13.12%) for the years ended December 31, 2024, 2023 and 2022, respectively. The share price of this fund increased from $9.37 at December 31, 2022, to $9.59 at December 31, 2023, but decreased to $9.36 at December 31, 2024.

The Vanguard Total International Bond Index Fund Institutional Share Class is passively managed, using index sampling and seeks to track the performance of the Bloomberg Global Aggregate ex-USD Float Adjusted RIC Capped Index (USD Hedged). This fund provides broad exposure to non-U.S. investment grade bonds, primarily bonds issued by developed countries, but also some from emerging markets countries. This fund experienced returns of 3.71%, 8.85% and (12.89%) for the years ended December 31, 2024, 2023 and 2022, respectively. The share price of this fund increased from $28.42 on December 31, 2022, to $29.60 on December 31, 2023, but decreased to $29.45 on December 31, 2024.

Investment Commentary *(Continued)*

The Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Share Class employs an indexing investment approach designed to track the performance of the Bloomberg U.S. Treasury Inflation-Protected Securities (TIPS) 0-5 Year Index. This index is a market-capitalization-weighted index that includes all inflation-protected public obligations issued by the U.S. Treasury with remaining maturities of less than five years. This fund experienced returns of 4.75%, 4.61% and (2.80%) for the years ended December 31, 2024, 2023 and 2022, respectively. The share price of this fund increased from $23.44 at December 31, 2022, to $23.83 at December 31, 2023, to $24.30 at December 31, 2024.

The Vanguard Short-Term Reserves Account seeks to provide current and stable income while maintaining a $1 net asset value. This fund seeks to achieve its objective by diversifying among high-credit-quality investments and investment contracts that are structured to smooth market gains and losses over time. This fund experienced returns of 2.88%, 2.55% and 1.59% for the years ended December 31, 2024, 2023, and 2022, respectively.

Recent Developments

Investment Option Changes

Effective April 11, 2025, the three Aged-Based Options will close, and assets will be automatically transferred into either one of eleven new Target Enrollment Portfolios or two existing Individual Portfolios, based on the designated beneficiary's date of birth and the account owner's risk tolerance.

Requests for Information

This financial report is designed to provide a general overview of the Plan's financial status and changes in financial status. Additional information can be found at www.collegesave4u.com. If you have any questions about the information provided, please call the Plan's customer service representatives at 1-866-728-3529.

Basic Financial Statements

(This page intentionally left blank)

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

STATEMENTS OF FIDUCIARY NET POSITION
December 31, 2024 and 2023

	2024	2023
ASSETS		
Investments	$ 643,668,088	$ 602,505,906
Cash and cash equivalents	1,376,475	795,752
Receivables from investments sold	709,627	309,403
Total Assets	645,754,190	603,611,061
LIABILITIES		
Payables for investments purchased	527,233	203,565
Withdrawals payable	888,625	798,667
Accrued administrative fees	331,881	307,149
Total Liabilities	1,747,739	1,309,381
NET POSITION HELD IN TRUST FOR ACCOUNT OWNERS AND BENEFICIARIES	$ 644,006,451	$ 602,301,680

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
Years Ended December 31, 2024 and 2023

	2024	2023
ADDITIONS		
Contributions	$ 48,529,661	$ 45,631,896
Investment income:		
Dividends, capital gain distributions and interest	17,762,172	16,048,137
Net increase in the fair value of investments	41,568,465	60,168,864
Net investment income	59,330,637	76,217,001
Total Additions	107,860,298	121,848,897
DEDUCTIONS		
Withdrawals	62,329,496	57,357,966
Administrative fees	3,826,031	3,509,489
Total Deductions	66,155,527	60,867,455
NET INCREASE	41,704,771	60,981,442
NET POSITION HELD IN TRUST FOR ACCOUNT OWNERS AND BENEFICIARIES, BEGINNING OF YEAR	602,301,680	541,320,238
NET POSITION HELD IN TRUST FOR ACCOUNT OWNERS AND BENEFICIARIES, END OF YEAR	$ 644,006,451	$ 602,301,680

See accompanying notes to financial statements.

(This page intentionally left blank)

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 1: ORGANIZATION AND NATURE OF OPERATIONS

The following provides a brief description of College SAVE (the Plan). For more information and disclosures about the Plan, refer to the *College SAVE Plan Disclosure Statement and Participation Agreement* available on the Plan's website (www.collegesave4u.com) or call 1-866-728-3529.

(a) General

The Plan was created in September of 2000, pursuant to North Dakota Century Code Title 6, Chapter 9, Section 38, to enable residents of North Dakota (and other states) to save on a tax-favored basis for qualified higher education expenses. The Plan is designed to comply with the requirements for treatment as a "qualified tuition program" under Section 529 of the Internal Revenue Code of 1986, as amended, and any regulations and other guidance issued thereunder (Section 529).

The College SAVE Trust (the Trust) was created to hold the assets of the Plan. The Bank of North Dakota (the Bank), an enterprise fund of the state of North Dakota, is the designated Trustee. Assets of the Plan can only be used for the benefit of account owners and their beneficiaries and cannot be used by the state of North Dakota or the Bank to support other programs or operations. The Plan is included in the financial reporting entity of the state of North Dakota as a fiduciary fund.

These basic financial statements present only the balances that are directly attributable to the Plan. These basic financial statements are not intended to, and do not, represent a complete presentation of the financial position and changes in financial position of the Trust or any other fiduciary funds of the state of North Dakota.

(b) Administration

As Trustee, the Bank is the authority responsible for oversight and overall administration of the Plan. Rules governing the operation of the Plan, as adopted by the Bank, are set forth in the North Dakota Administrative Code Title 12.5, Article 2, Chapter 1 (the Administrative Code). The Administrative Code allows the Bank to enter into contracts with service providers, agents or third-party contractors to administer the Plan, provide investment advice for the Plan, provide accounting and recordkeeping services for the Plan, enroll participants, process account owner transactions and market the Plan.

Pursuant to the College SAVE Plan Management Agreement, as amended (the Management Agreement), Ascensus Broker Dealer Services, LLC (ABD) serves as the Plan Manager and Ascensus College Savings Recordkeeping Services, LLC (ACSR) serves as the recordkeeping and servicing agent. Collectively, ABD and ACSR are referred to as "Ascensus Government Savings (AGS)."

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 1: ORGANIZATION AND NATURE OF OPERATIONS (Continued)

(b) Administration *(Continued)*

Pursuant to the terms of the North Dakota 529 Program Operational Agreement, as amended (the Operational Agreement), The Vanguard Group, Inc. (Vanguard) provides investment advisory and related administrative services.

The Bank of New York Mellon Corporation (BNY Mellon) is the custody agent for the Plan, responsible for maintaining a custody account to provide for the safekeeping and recordkeeping of certain assets invested in the Plan.

NOTE 2: SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of Accounting

In accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) applicable to fiduciary fund types prescribed by the Governmental Accounting Standards Board (GASB), the Plan's basic financial statements are prepared using the flow of economic resources measurement focus and accrual basis of accounting.

(b) Income Taxes

The Plan has been designed to comply with the requirements for treatment as a "qualified tuition program" under Section 529. As such, the Plan is exempt from federal and state income tax.

(c) Estimates

The preparation of basic financial statements, in conformity with U.S. GAAP, requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results may differ from those estimates.

(d) Investments

The Plan's investments consist of Vanguard mutual funds and investment contracts (the Underlying Funds).

The mutual funds are reported at fair value, determined by Vanguard based on the net asset value per share of each mutual fund as of the close of the New York Stock Exchange (NYSE) on the reporting date. Net realized and unrealized gains (losses) are included in "net increase (decrease) in the fair value of investments" on the statements of changes in fiduciary net position. Purchase and sales of shares of mutual funds, as well as investments into or withdrawals from the investment contracts, are recorded on a trade-date basis. Dividends and capital gain distributions are recorded on the ex-dividend date and are automatically reinvested in additional shares of the respective mutual fund.

NOTE 2: SIGNIFICANT ACCOUNTING POLICIES (Continued)

(d) Investments *(Continued)*

The investment contracts, which include contracts issued by financial institutions and insurance companies, are fully benefit-responsive and are reported at contract value, which is equal to contributions, plus interest credited at a guaranteed rate, less withdrawals and any applicable fees and expenses. Interest is accrued as it is earned.

Accounting standards categorize fair value measurements according to a hierarchy that is based on valuation inputs that are used to measure fair value. Level 1 inputs are quoted prices for identical assets in active markets that can be accessed at the measurement date. Level 2 inputs are inputs other than quoted market prices that are observable for an asset, either directly or indirectly. Level 3 inputs are unobservable. The fair values of the Plan's mutual funds are determined using Level 1 inputs. The fair value standards are not applicable to the investment contracts, since they are reported at contract value, rather than fair value.

(e) Cash and Cash Equivalents

Cash and cash equivalents generally include contributions received that have not yet been invested in Underlying Funds and/or redemption proceeds from Underlying Funds for withdrawals that have not yet been distributed in accordance with account owners' instructions.

Contribution and withdrawal transactions are processed through a non-interest-bearing account maintained at BNY Mellon in the Plan's name. The bank balances of this account at December 31, 2024 and 2023, are $92,770 and $29,590, respectively. Balances in this account are insured by the Federal Deposit Insurance Corporation (FDIC), along with any other accounts maintained at BNY Mellon under the same taxpayer identification number, in the aggregate, up to the maximum amount allowable under federal law. Amounts in excess of FDIC insurance limits are not collateralized or covered by supplementary insurance.

Excess cash balances are swept daily from the BNY Mellon account described in the preceding paragraph into a separate account and invested in a government money market mutual fund structured to maintain a net asset value per share equal to $1. The balances of this account at December 31, 2024 and 2023, are $1,946,632 and $1,688,457, respectively.

Cash and cash equivalents also include the Plan's equity position in a non-interest-bearing pooled cash account maintained by Vanguard for the benefit of the Plan and other Vanguard clients to settle investment buy and sell transactions. This account is held in the name of Vanguard and is insured by the FDIC up to the maximum amount allowable under federal law. Balances in excess of FDIC insurance limits are not collateralized or covered by supplementary insurance. The Plan's equity position in this account, which is ($182,394) and ($105,838) at December 31, 2024 and 2023, respectively, is segregated from balances attributable to other Vanguard clients on Vanguard's books and records.

NOTE 2: SIGNIFICANT ACCOUNTING POLICIES (Continued)

(f) Contributions

Individuals or entities meeting eligibility requirements who execute a participation agreement with the Plan may establish an account to which cash contributions may be made, subject to certain minimum contribution requirements and limitations on the aggregate amount of contributions. Contributions received by AGS prior to the close of the NYSE are recorded as increases in fiduciary net position on the date they are received, provided that all related documentation is found to be in good order and approved by AGS.

Account owners may elect to invest their contributions in one or more investment options offered by the Plan, consisting of six (6) Individual Portfolios and three (3) Age-Based Options. The Individual Portfolios are structured for various time horizons and levels of risk tolerance and are designed to allow account owners flexibility in managing their asset allocations. The Age-Based Options allow account owners to choose a predetermined investment strategy based on their risk tolerance and the age of the beneficiary. Over time, as the beneficiary approaches college age, the asset allocation becomes more conservative.

In addition to the various investment options, the Plan offers two unit classes, the Direct Class (available to account owners who do not utilize a financial advisor to invest in the Plan) and the Advisor Class (available to account owners who utilize a financial advisor to invest in the Plan). As more fully disclosed in Note 4, each unit class is subject to a different fee structure.

In exchange for contributions to the Plan, account owners receive full and/or fractional interests, or units, issued by the Trust. These units are municipal fund securities. Although money contributed to the Plan is invested in investment options that hold mutual funds or investment contracts, the units themselves are not direct investments in the mutual funds or the investment contracts. These units are not insured by the FDIC, the Bank or the state of North Dakota, nor have they been registered with the Securities and Exchange Commission or any state commission.

In addition, although account owners can select the investment options in which their contributions are invested, they cannot direct the selection or allocation of the Underlying Funds composing each investment option.

The Trustee allows North Dakota resident account owners who meet certain eligibility requirements to be considered for a BND Match award. Once all requirements are met, and the account owner has contributed to their account within twelve (12) months from the enrollment date, a dollar for dollar match up to $300 will be awarded. BND Match awards total approximately $137.7 thousand and $155.4 thousand for the years ended December 31, 2024 and 2023, respectively, and are included in contributions on the statements of changes in fiduciary net position.

NOTE 2: SIGNIFICANT ACCOUNTING POLICIES (Continued)

(f) Contributions *(Continued)*

New Baby Match allows North Dakota newborns to be considered for a one-time award. To be eligible to receive this award, interested persons must complete and return an enrollment form during the time the beneficiary, who must be a North Dakota resident, is twelve (12) months old or younger. In addition, the account owner has up to twelve (12) months from enrollment date to contribute to the account in order to be eligible to receive a dollar for dollar match in an amount of up to $200. New Baby Match awards total approximately $242.4 thousand and $222.9 thousand for the years ended December 31, 2024 and 2023, respectively, and are included in contributions on the statements of changes in fiduciary net position.

The Kindergarten Kickoff Match allows North Dakota resident beneficiaries who meet certain requirements to be considered for a one-time award. To be eligible to receive this award, interested persons must complete and return an enrollment form during the time the beneficiary, who must be a North Dakota resident, is five (5) or six (6) years old. In addition, the account owner has up to twelve (12) months after being awarded the grant or prior to the beneficiary's seventh birthday to contribute to the account in order to be eligible to receive a dollar for dollar match in an amount of up to $100. Kindergarten Kickoff Match awards total approximately $68.3 thousand and $73.7 thousand for the years ended December 31, 2024 and 2023, respectively, and are included in contributions on the statements of changes in fiduciary net position.

The Bank, on behalf of the account owner and designated beneficiary, will open a single matching account when their application for a specific match is verified. This matching account holds all match designations and assets regardless of the combination of matches applicable. The Bank retains ownership of the assets in this matching account until the account owner submits a request in good order for a qualified withdrawal to an eligible educational institution.

(g) Withdrawals

Account owners may request withdrawals for qualified or non-qualified expenses. It is the responsibility of the account owner to determine whether or not the withdrawal is for qualified educational expenses and to calculate the applicable amount of federal or state tax or penalties for non-qualified withdrawals, if any. Withdrawals are recorded as deductions from fiduciary net position on the date the withdrawal request is found to be in good order and approved by AGS.

Withdrawals include annual account maintenance fees, which are $20 for each account and are assessed annually during the anniversary month of the account opening. This fee is not charged to BND Match, New Baby Match or Kindergarten Kickoff Match accounts, nor is it charged to those accounts for which the account owner or the beneficiary is a North Dakota resident. In addition, accounts established prior to February 28, 2002, where either the account owner or the beneficiary was a resident of South Dakota

NOTE 2: SIGNIFICANT ACCOUNTING POLICIES (Continued)

(g) Withdrawals *(Continued)*

at the time of account opening, are not subject to this fee. Withdrawals also may include service fees for other transactions, such as returned checks, overnight delivery charges, outgoing wire transfers and requests for historical statements. These annual account maintenance fees and service fees, which total approximately $170.5 thousand and $178.0 thousand for the years ended December 31, 2024 and 2023, respectively, are paid to AGS.

(h) Exchanges and Transfers

For each of the Age-Based Options, account balances will automatically be exchanged from one investment option to another more conservative investment option as the beneficiary approaches college age. In addition, subject to certain limitations and restrictions, account owners may generally direct that their account balance be reinvested in one or more different investment options twice per calendar year. Transfers of funds between investment options are referred to as "exchanges." Under certain conditions, account assets may be transferred from one beneficiary to another or from one account owner to another. These transactions are referred to as "transfers." The amounts of contributions and withdrawals reported on the statements of changes in fiduciary net position do not include exchanges or transfers, as these transactions have no impact on the net position of the Plan.

(i) Unit Valuation

Each account owner's full and/or fractional interest in an investment option is evidenced by a unit. The net asset value of a unit is calculated daily based on the value of the Underlying Funds, adjusted for the effects of such transactions as accrued administrative fees and investment income that has not been reinvested. The value of any individual account is determined by multiplying the number of units in an investment option attributable to that account owner by the net asset value per unit of that investment option.

(j) Indemnification

Neither the Bank, Vanguard, AGS nor any other person or entity, indemnifies any account owner or designated beneficiary against losses or other claims arising from the official or unofficial acts, negligent or otherwise, of members of the Bank, Vanguard or AGS. The Bank, Vanguard and AGS have entered into contracts related to the operation and administration of the Plan that contain a variety of representations and warranties that provide general indemnifications. The maximum exposure under these arrangements is unknown, as this would involve future claims that may be made against the Bank, Vanguard or AGS that have not yet occurred. However, the Bank, Vanguard and AGS have not experienced any prior claims or losses pursuant to these contracts, and the risk of loss is expected to be remote.

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS

(a) Investments by Type

At December 31, 2024 and 2023, investments held in the various investment options are detailed in the schedules that follow. Percentages are rounded to the nearest tenth of a percent.

2024

Underlying Fund	Designation	Balance as of December 31, 2024	Percent of Total Balance
Aggressive Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	$ 95,369,053	59.9%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	63,887,228	40.1%
		159,256,281	100.0%
Aggressive Portfolio [(1)]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	24,676,651	52.2%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	16,629,920	35.1%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	4,193,312	8.9%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	1,798,836	3.8%
		47,298,719	100.0%
Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	39,802,393	44.8%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	26,651,119	29.9%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	15,765,961	17.7%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	6,782,083	7.6%
		89,001,556	100.0%

[(1)] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio.

(Continued)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

2024			
Underlying Fund	Designation	Balance as of December 31, 2024	Percent of Total Balance
Blended Growth Portfolio [1]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	$ 14,613,730	37.2%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	9,786,151	25.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	10,365,753	26.4%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	4,464,866	11.4%
		39,230,500	100.0%
Moderate Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	20,790,952	29.7%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	13,987,596	20.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	24,690,152	35.2%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	10,598,737	15.1%
		70,067,437	100.0%
Blended Moderate Growth Portfolio [1]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	10,023,822	22.4%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	6,643,942	14.9%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	19,585,859	43.9%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	8,415,235	18.8%
		44,668,858	100.0%

[1] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio.

(Continued)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

Underlying Fund	Designation	2024 Balance as of December 31, 2024	2024 Percent of Total Balance
Conservative Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	$ 8,160,567	14.7%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	5,513,760	10.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	29,133,212	52.7%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	12,494,140	22.6%
		55,301,679	100.0%
Conservative Portfolio [(1)]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	4,264,853	7.4%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	2,877,884	5.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	35,525,963	61.3%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	15,235,027	26.3%
		57,903,727	100.0%
Income Portfolio			
Vanguard Short-Term Reserves Account	Stable Value	12,923,880	25.0%
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	Inflation-Protected Bond	9,308,319	18.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	17,816,390	34.5%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	11,634,553	22.5%
		51,683,142	100.0%

[(1)] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio.

(Continued)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

2024			
Underlying Fund	**Designation**	**Balance as of December 31, 2024**	**Percent of Total Balance**
Balanced Income Portfolio [1]			
Vanguard Short-Term Reserves Account	Stable Value	$ 1,246,220	50.1%
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	Inflation-Protected Bond	298,625	12.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	569,053	22.9%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	371,998	15.0%
		2,485,896	100.0%
Conservative Income Portfolio [1]			
Vanguard Short-Term Reserves Account	Stable Value	1,833,107	75.0%
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	Inflation-Protected Bond	146,743	6.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	280,719	11.5%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	183,407	7.5%
		2,443,976	100.0%
Interest Accumulation Portfolio			
Vanguard Short-Term Reserves Account	Stable Value	24,326,317	100.0%
Total Investments		$ 643,668,088	

[1] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio.

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

2023			
Underlying Fund	Designation	Balance as of December 31, 2023	Percent of Total Balance
Aggressive Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	$ 83,681,552	59.8%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	56,359,738	40.2%
		140,041,290	100.0%
Aggressive Portfolio [(1)]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	23,135,292	52.4%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	15,541,845	35.2%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	3,863,081	8.7%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	1,651,613	3.7%
		44,191,831	100.0%
Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	36,374,115	45.0%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	24,447,264	30.2%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	14,105,685	17.4%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	6,027,399	7.4%
		80,954,463	100.0%

[(1)] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio.

(Continued)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

	2023		
Underlying Fund	Designation	Balance as of December 31, 2023	Percent of Total Balance
Blended Growth Portfolio [1]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	$ 13,585,963	37.3%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	9,153,648	25.3%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	9,494,102	26.2%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	4,056,438	11.2%
		36,290,151	100.0%
Moderate Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	20,041,972	30.0%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	13,461,146	20.2%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	23,245,631	34.9%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	9,932,364	14.9%
		66,681,113	100.0%
Blended Moderate Growth Portfolio [1]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	9,170,876	22.6%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	6,188,111	15.2%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	17,744,168	43.6%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	7,583,596	18.6%
		40,686,751	100.0%

[1] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio Option.

(Continued)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

2023			
Underlying Fund	Designation	Balance as of December 31, 2023	Percent of Total Balance
Conservative Growth Portfolio			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	$ 8,366,957	15.0%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	5,631,832	10.1%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	29,344,036	52.5%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	12,543,318	22.4%
		55,886,143	100.0%
Conservative Portfolio [(1)]			
Vanguard Total Stock Market Index Fund Institutional Plus Shares	Domestic Large Blend	4,097,478	7.5%
Vanguard Total International Stock Index Fund Institutional Plus Shares	International Large Blend	2,754,356	5.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	33,584,699	61.3%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	14,352,195	26.2%
		54,788,728	100.0%
Income Portfolio			
Vanguard Short-Term Reserves Account	Stable Value	13,500,656	25.0%
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	Inflation-Protected Bond	9,732,801	18.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	18,670,651	34.5%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	12,144,350	22.5%
		54,048,458	100.0%

[(1)] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio.

(Continued)

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(a) Investments by Type *(Continued)*

	2023		
Underlying Fund	**Designation**	**Balance as of December 31, 2023**	**Percent of Total Balance**
Balanced Income Portfolio [1]			
Vanguard Short-Term Reserves Account	Stable Value	$ 938,801	49.7%
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	Inflation-Protected Bond	225,796	12.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	438,030	23.2%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	284,223	15.1%
		1,886,850	100.0%
Conservative Income Portfolio [1]			
Vanguard Short-Term Reserves Account	Stable Value	2,469,931	75.0%
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	Inflation-Protected Bond	197,677	6.0%
Vanguard Total Bond Market II Index Fund Institutional Shares	Intermediate-Term Bond	378,799	11.5%
Vanguard Total International Bond Index Fund Institutional Shares	Intermediate-Term Bond	246,304	7.5%
		3,292,711	100.0%
Interest Accumulation Portfolio			
Vanguard Short-Term Reserves Account	Stable Value	23,757,417	100.0%
Total Investments		$ 602,505,906	

[1] Age-Based Option portfolio only. Not available for investment as an Individual Portfolio Option.

NOTE 3: INVESTMENTS (Continued)

(b) Vanguard Short-Term Reserves Account

The Plan maintains a stable value separate account that serves as an underlying asset for certain investment options. This account, which is managed by Vanguard, invests in traditional and synthetic (wrap) contracts issued by insurance companies, bank investment contracts issued by financial institutions and a money market mutual fund. These contracts are held in the name of the Bank, as Trustee of the Trust in which the Plan's assets are held. The underlying holdings of this account at December 31, 2024 and 2023, are as follows:

	2024	2023
Investment contracts, at contract value		
Traditional contracts:		
Metropolitan Life	$ 690,175	$ 779,020
New York Life Insurance Company	222,949	217,502
Total traditional contracts	913,124	996,522
Wrap contracts:		
American General Life Insurance Company	3,096,979	3,010,913
Citibank	3,008,683	2,927,434
JPMorgan Chase Bank	2,119,610	2,061,538
Massachusetts Mutual Life Insurance Company	4,126,762	4,010,875
Metropolitan Life	3,646,778	3,551,074
Nationwide Life	4,025,675	3,916,645
New York Life Insurance Company	4,285,182	4,173,675
Pacific Life	3,563,547	3,467,577
Prudential Insurance Company	3,907,103	3,798,381
State Street Bank	4,098,864	3,984,422
Transamerica	3,052,418	2,968,340
Total wrap contracts	38,931,601	37,870,874
Vanguard Federal Money Market Fund	484,799	1,799,409
Total Vanguard Short-Term Reserves Account	$ 40,329,524	$ 40,666,805

The crediting rates on these contracts range from 1.95% to 4.90% at December 31, 2024, and from 0.90% to 3.33% at December 31, 2023. These rates may reset periodically.

The underlying assets of the wrap contracts are set forth in the related agreements and are the Vanguard Institutional Short-Term Bond Fund and the Vanguard Institutional Intermediate-Term Bond Fund. The fair value of these underlying assets at December 31, 2024 and 2023, is $36,933,734 and $35,687,186, respectively.

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 3: INVESTMENTS (Continued)

(b) Vanguard Short-Term Reserves Account *(Continued)*

The bank investment contracts are not insured by the FDIC or otherwise covered by collateral or supplementary insurance.

(c) Net Increase in the Fair Value of Investments

The following table calculates the net increase in the fair value of investments during the years ended December 31, 2024 and 2023:

	2024	2023
Value of investments, end of year	$ 643,668,088	$ 602,505,906
Less cost of investments purchased and investment income reinvested during the year	(109,115,253)	(100,905,789)
Plus proceeds from investments sold during the year	109,521,536	100,308,135
Less value of investments, beginning of year	(602,505,906)	(541,739,388)
Net increase in the fair value of investments	$ 41,568,465	$ 60,168,864

(d) Investment Risk

The mutual funds in which the Plan invests include various types of investment securities in their asset holdings, such as corporate debt and equity securities, obligations of the U.S. government and government agencies and international debt and equity securities. These securities are exposed to interest rate, market and credit risk, and it is at least reasonably possible that changes in their fair values could occur in the near term, materially affecting account owner balances and the amounts reported in the Plan's basic financial statements.

U.S. GAAP requires that certain disclosures be made related to the Plan's investment policy and exposure to credit risk, interest rate risk and foreign currency risk, which are included in the paragraphs that follow.

Investment Policy

The Underlying Funds in which the Plan's assets are invested and the allocation of the Underlying Funds within each investment option are specified in the Management Agreement and the Operational Agreement and may not be changed without approval of the Bank. There is no separate investment policy that specifically addresses credit risk, interest rate risk, concentrations of credit risk or foreign currency risk.

NOTE 3: INVESTMENTS (Continued)

(d) Investment Risk *(Continued)*

Credit Risk

Certain mutual funds invest in bonds issued by corporations, foreign governments, the U.S. government, its agencies and instrumentalities. Through its investment in bond funds, the Plan is indirectly exposed to credit risk, which is the risk that a bond issuer will fail to pay interest and principal, when due, as a result of adverse market or economic conditions. The bond funds in which the Plan invests are not rated as to credit quality by a nationally recognized statistical rating organization.

The Plan's mutual funds are not subject to classification by custodial credit risk, which is the risk the Plan will not recover the value of investments that are in the possession of an outside party.

Interest Rate Risk

The Plan is indirectly exposed to interest rate risk through its investment in bond funds. Interest rate risk is the risk that changes in interest rates will adversely impact the fair value of an investment. Average maturity, which is a measure of interest rate risk, is the average length of time until fixed-income securities held by a fund reach maturity and will be repaid, taking into consideration the possibility that the issuer may call a bond before its maturity date. In general, the longer the average maturity, the more a fund's share price will fluctuate in response to a change in interest rates. Average duration is also a measure of how much the value of the bonds held by a fund will fluctuate in response to changes in interest rates. As of December 31, 2024, the average maturity and average duration of the bond funds in which the Plan invests are as follows:

	Average Maturity	Average Duration
Vanguard Short-Term Inflation-Protected Securities Index Fund Institutional Shares	2.4 years	2.3 years
Vanguard Total Bond Market II Index Fund Institutional Shares	8.3 years	5.9 years
Vanguard Total International Bond Index Fund Institutional Shares	8.7 years	7.1 years
Vanguard Federal Money Market Fund	25 days	N/A

Foreign Currency Risk

The Vanguard Total International Stock Index Fund Institutional Plus Shares invests in a diversified index of non-U.S. stocks representing the major developed and emerging equity markets, and the Vanguard Total International Bond Index Fund Institutional Shares invests in diversified investment grade, fixed-income investments issued in currencies other than the U.S. dollar. There are certain inherent risks involved when investing in international securities that are not present with investments in domestic securities, such as foreign currency exchange rate fluctuations, adverse political and economic developments and the possible prevention or delay of currency exchange due to foreign governmental laws or restrictions.

NOTES TO FINANCIAL STATEMENTS
December 31, 2024 and 2023

NOTE 4: ADMINISTRATIVE FEES AND OTHER EXPENSES

(a) Administrative Fees

As provided in the Management Agreement and the Operational Agreement, AGS, Vanguard and the Bank are entitled to service fees, including plan management fees and state administrative fees, which are calculated based on the fiduciary net position of each investment option, accrued daily and paid monthly.

In addition, Advisor Class units of each investment option, excluding the Interest Accumulation Portfolio, are subject to an ongoing distribution and service fee, which is calculated based on net position of Advisor Class units in each investment option and accrued daily. This fee is paid monthly to AGS, and on a quarterly basis is distributed to financial advisors for certain distribution and account-related services. Direct Class units are not subject to the distribution and service fee.

Administrative fees related to the years ended December 31, 2024 and 2023, are as follows:

	2024	2023
AGS	$ 2,703,598 [1]	$ 2,483,287 [1]
Vanguard	490,241	456,837
Bank	632,192	569,365
Total administrative fees	$ 3,826,031	$ 3,509,489

[1] Includes distribution and service fees ultimately paid to financial advisors.

(b) Underlying Fund Expenses

Vanguard also receives compensation for management of the mutual funds in which the Plan invests. This compensation is not included in administrative fees presented on the Plan's statements of changes in fiduciary net position since it reduces the amount of investment income available for distribution to the Plan and is not a direct expense paid from Plan assets.

(c) Other Administrative Expenses

The Bank incurs certain costs in performing administrative, marketing and oversight services for the Plan and funding BND Match, New Baby Match and Kindergarten Kickoff Match for qualifying account owners. These costs, which total $563,485 and $748,543 for the years ended December 31, 2024 and 2023, respectively, are not paid directly from Plan assets and are not reported as expenses in the accompanying basic financial statements.

NOTE 4: ADMINISTRATIVE FEES AND OTHER EXPENSES (Continued)

(c) Other Administrative Expenses *(Continued)*

Pursuant to the terms of the Management Agreement, AGS is required, on an annual basis, to provide a cash marketing commitment to the Bank for marketing of the Plan and a marketing support commitment for the design, production and distribution of collateral marketing materials, including the Plan's disclosure statement, and for phone and email sales and service support. The commitment amounts vary each year. The annual cash marketing commitment and marketing support commitment, which total $337,384 and $327,557 for the years ended December 31, 2024 and 2023, respectively, are not paid directly from Plan assets and are not reported as expenses in the accompanying basic financial statements.

Supplementary Information

(This page intentionally left blank)

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

SCHEDULE OF FIDUCIARY NET POSITION BY INVESTMENT OPTION
December 31, 2024

	Aggressive Growth Portfolio	Aggressive Portfolio*	Growth Portfolio	Blended Growth Portfolio*	Moderate Growth Portfolio	Blended Moderate Growth Portfolio*	Conservative Growth Portfolio
ASSETS							
Investments	$ 159,256,281	$ 47,298,719	$ 89,001,556	$ 39,230,500	$ 70,067,437	$ 44,668,858	$ 55,301,679
Cash and cash equivalents (cash overdraft)	533,619	138,288	230,873	209,685	134,844	57,828	116,619
Receivables from investments sold	-	-	-	-	-	-	60,733
Total Assets	159,789,900	47,437,007	89,232,429	39,440,185	70,202,281	44,726,686	55,479,031
LIABILITIES							
Payables for investments purchased	279,142	46,144	49,801	73,198	68,893	9,610	-
Withdrawals payable	113,291	3,889	70,879	10,357	17,192	7,334	110,126
Accrued administrative fees	83,486	22,801	47,127	19,102	35,940	22,597	28,352
Total Liabilities	475,919	72,834	167,807	102,657	122,025	39,541	138,478
NET POSITION HELD IN TRUST FOR ACCOUNT OWNERS AND BENEFICIARIES	$ 159,313,981	$ 47,364,173	$ 89,064,622	$ 39,337,528	$ 70,080,256	$ 44,687,145	$ 55,340,553
UNIT INFORMATION[1] [2]							
Advisor Class							
Units outstanding	2,183,636	1,025,085	1,419,505	987,769	1,278,392	1,498,026	1,256,921
Net asset value per unit	$ 35.76	$ 16.32	$ 31.34	$ 14.50	$ 24.69	$ 12.72	$ 19.09
Direct Class							
Units outstanding	3,995,434	1,835,517	2,540,019	1,689,053	2,560,955	1,971,712	2,464,303
Net asset value per unit	$ 20.33	$ 16.69	$ 17.55	$ 14.81	$ 15.04	$ 13.00	$ 12.72

[1] Rounded to the nearest whole unit.

[2] Rounded to the nearest hundredth.

* Age-based Option portfolio only. Not available for investment as an Individual Portfolio Option.

See Independent Auditor's Report.

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

SCHEDULE OF FIDUCIARY NET POSITION BY INVESTMENT OPTION
December 31, 2024

	Conservative Portfolio*	Income Portfolio	Balanced Income Portfolio*	Conservative Income Portfolio*	Interest Accumulation Portfolio	Plan Total
ASSETS						
Investments	$ 57,903,727	$ 51,683,142	$ 2,485,896	$ 2,443,976	$ 24,326,317	$ 643,668,088
Cash and cash equivalents (cash overdraft)	49,041	24,539	1,937	6,820	(127,618)	1,376,475
Receivables from investments sold	155,848	295,798	-	7,923	189,325	709,627
Total Assets	58,108,616	52,003,479	2,487,833	2,458,719	24,388,024	645,754,190
LIABILITIES						
Payables for investments purchased	-	-	445	-	-	527,233
Withdrawals payable	239,684	279,330	-	-	36,543	888,625
Accrued administrative fees	31,993	28,749	1,008	1,140	9,586	331,881
Total Liabilities	271,677	308,079	1,453	1,140	46,129	1,747,739
NET POSITION HELD IN TRUST FOR ACCOUNT OWNERS AND BENEFICIARIES	$ 57,836,939	$ 51,695,400	$ 2,486,380	$ 2,457,579	$ 24,341,895	$ 644,006,451
UNIT INFORMATION[1] [2]						
Advisor Class						
Units outstanding	2,942,759	2,037,974	21,841	57,475	952,314	
Net asset value per unit	$ 11.07	$ 14.42	$ 10.82	$ 10.88	$ 11.35	
Direct Class						
Units outstanding	2,225,603	2,006,099	203,626	164,771	1,193,398	
Net asset value per unit	$ 11.35	$ 11.12	$ 11.05	$ 11.12	$ 11.34	

[1] Rounded to the nearest whole unit.

[2] Rounded to the nearest hundredth.

***** Age-based Option portfolio only. Not available for investment as an Individual Portfolio Option.

See Independent Auditor's Report.

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION BY INVESTMENT OPTION
Year Ended December 31, 2024

	Aggressive Growth Portfolio	Aggressive Portfolio*	Growth Portfolio	Blended Growth Portfolio*	Moderate Growth Portfolio	Blended Moderate Growth Portfolio*	Conservative Growth Portfolio
ADDITIONS							
Contributions	$ 15,446,885	$ 6,033,366	$ 5,714,050	$ 3,550,805	$ 4,764,957	$ 2,607,908	$ 3,061,934
Investment income:							
Dividends, capital gain distributions and interest	3,302,922	1,096,479	2,221,695	1,058,549	2,068,640	1,394,330	1,893,842
Net increase (decrease) in the fair value of investments	19,201,612	5,112,610	7,959,736	2,830,416	3,936,512	1,657,100	1,110,858
Net investment income	22,504,534	6,209,089	10,181,431	3,888,965	6,005,152	3,051,430	3,004,700
Exchanges and transfers in	8,229,631	9,269,784	18,949,799	17,120,281	23,263,972	23,503,782	26,420,196
Total Additions	46,181,050	21,512,239	34,845,280	24,560,051	34,034,081	29,163,120	32,486,830
DEDUCTIONS							
Withdrawals	8,962,978	1,178,007	5,854,963	736,987	3,916,115	1,364,254	6,931,667
Administrative fees	944,087	264,640	537,424	217,324	419,384	256,315	339,194
Exchanges and transfers out	16,980,855	16,963,655	20,341,619	20,567,935	26,291,637	23,561,466	25,612,215
Total Deductions	26,887,920	18,406,302	26,734,006	21,522,246	30,627,136	25,182,035	32,883,076
NET INCREASE (DECREASE)	19,293,130	3,105,937	8,111,274	3,037,805	3,406,945	3,981,085	(396,246)
NET POSITION HELD IN TRUST FOR ACCOUNT AND BENEFICIARIES, BEGINNING OF YEAR	140,020,851	44,258,236	80,953,348	36,299,723	66,673,311	40,706,060	55,736,799
NET POSITION HELD IN TRUST FOR ACCOUNT AND BENEFICIARIES, END OF YEAR	$ 159,313,981	$ 47,364,173	$ 89,064,622	$ 39,337,528	$ 70,080,256	$ 44,687,145	$ 55,340,553

***** Age-based Option portfolio only. Not available for investment as an Individual Portfolio Option.

See Independent Auditor's Report.

College SAVE™

Bank of North Dakota's 529 Plan

(A Fiduciary Fund of the State of North Dakota)

SCHEDULE OF CHANGES IN FIDUCIARY NET POSITION BY INVESTMENT OPTION
Year Ended December 31, 2024

	Conservative Portfolio*	Income Portfolio	Balanced Income Portfolio*	Conservative Income Portfolio*	Interest Accumulation Portfolio	Plan Total
ADDITIONS						
Contributions	$ 2,639,596	$ 2,844,525	$ 255,736	$ 229,090	$ 1,380,809	$ 48,529,661
Investment income:						
Dividends, capital gain distributions and interest	2,071,261	1,809,676	70,885	86,957	686,936	17,762,172
Net increase (decrease) in the fair value of investments	49,623	(276,560)	(9,424)	(4,018)	-	41,568,465
Net investment income	2,120,884	1,533,116	61,461	82,939	686,936	59,330,637
Exchanges and transfers in	25,523,964	11,789,054	1,462,872	1,374,546	7,866,019	174,773,900
Total Additions	30,284,444	16,166,695	1,780,069	1,686,575	9,933,764	282,634,198
DEDUCTIONS						
Withdrawals	13,626,185	13,310,624	36,204	457,920	5,953,592	62,329,496
Administrative fees	363,490	346,697	10,622	15,970	110,884	3,826,031
Exchanges and transfers out	13,123,479	4,870,550	1,134,870	2,046,524	3,279,095	174,773,900
Total Deductions	27,113,154	18,527,871	1,181,696	2,520,414	9,343,571	240,929,427
NET INCREASE (DECREASE)	3,171,290	(2,361,176)	598,373	(833,839)	590,193	41,704,771
NET POSITION HELD IN TRUST FOR ACCOUNT AND BENEFICIARIES, BEGINNING OF YEAR	54,665,649	54,056,576	1,888,007	3,291,418	23,751,702	602,301,680
NET POSITION HELD IN TRUST FOR ACCOUNT AND BENEFICIARIES, END OF YEAR	$ 57,836,939	$ 51,695,400	$ 2,486,380	$ 2,457,579	$ 24,341,895	$ 644,006,451

* Age-based Option portfolio only. Not available for investment as an Individual Portfolio Option.

See Independent Auditor's Report.

LANDMARK
CERTIFIED PUBLIC ACCOUNTANTS

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Bank of North Dakota and
Ascensus Broker Dealer Services, LLC
College SAVE

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of **College SAVE** (the Plan), as of and for the year ended December 31, 2024, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements, and have issued our report thereon dated March 31, 2025.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the basic financial statements, we considered the Plan's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the basic financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we do not express an opinion on the effectiveness of the Plan's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's basic financial statements will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Landmark PLC, Certified Public Accountants
200 W Capitol Ave, Ste 1700 | Little Rock, AR 72201 | Telephone (501) 375-2025 | Fax (501) 375-8704 | www.landmarkcpas.com

Bank of North Dakota and
Ascensus Broker Dealer Services, LLC
College SAVE

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Plan's basic financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and agreements, noncompliance with which could have a direct and material effect on the basic financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Plan's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Plan's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Little Rock, Arkansas
March 31, 2025

LANDMARK
CERTIFIED PUBLIC ACCOUNTANTS

Bank of North Dakota and
Ascensus Broker Dealer Services, LLC
College SAVE

We have audited the statement of fiduciary net position, the statement of changes in fiduciary net position and the related notes to the financial statements (collectively, "the basic financial statements") of **College SAVE** (the Plan) as of and for the year ended December 31, 2024, and have issued our report thereon dated March 31, 2025. Professional standards require that we advise you of the following matters relating to our audit.

Our Responsibility in Relation to the Basic Financial Statement Audit

As communicated to Ascensus College Savings Recordkeeping Services, LLC (ACSR) in our engagement letter dated February 7, 2022, as amended, and to Mr. James Barnhardt, College SAVE Plan Administrator, and the members of the Executive Committee of the Bank of North Dakota (the Bank) in our letter dated January 23, 2025 (a copy of which was provided to Ascensus Broker Dealer Services, LLC (ABD)), our responsibility, as described by professional standards, is to form and express an opinion about whether the basic financial statements that have been prepared by management subject to oversight provided by the Bank are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP). Our audit of the basic financial statements does not relieve the Bank or ABD of any responsibilities with respect to the Plan.

Our responsibility, as prescribed by professional standards, is to plan and perform our audit to obtain reasonable, rather than absolute, assurance about whether the basic financial statements are free of material misstatement. An audit of basic financial statements includes consideration of the system of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control over financial reporting. Accordingly, as part of our audit, we considered the system of internal control of the Plan solely for the purpose of determining our audit procedures and not to provide any assurance concerning such internal control.

We are also responsible for communicating significant matters related to the audit that are, in our professional judgment, relevant to the Bank's and ABD's responsibilities in overseeing the financial reporting process. However, we are not required to design procedures for the purpose of identifying other matters to communicate to the Bank or ABD.

Planned Scope and Timing of the Audit

We conducted our audit consistent with the planned scope and timing we previously communicated to ACSR in our engagement letter dated February 7, 2022, as amended, and to Mr. James Barnhardt and members of the Executive Committee of the Bank in our letter dated January 23, 2025.

Compliance with All Ethics Requirements Regarding Independence

The engagement team, others in our firm, as appropriate, and our firm have complied with all relevant ethical requirements regarding independence.

As part of this engagement, we were requested to perform certain services that are above and beyond those required to perform an audit under professional standards, referred to as "nonattest services." Specifically, we have assisted management in the clerical aspects of drafting the basic financial statements, management's discussion and analysis (MD&A) that accompanies the basic financial statements as required supplementary information (RSI), and the schedules of fiduciary net position and changes in fiduciary net position for each investment option that accompany the basic financial statements as other supplementary information (collectively, "SI"). In addition, we have provided assistance in adjusting investment and participant balances from settlement date to trade date basis, recording withdrawals payable and eliminating exchange, transfer and cancelled transactions from contributions and withdrawals for purposes of financial reporting. All nonattest services were performed by individuals who were not part of the audit engagement team and were subject to audit and supervisory review by members of the audit engagement team and the engagement partner. ABD has reviewed, approved and accepted responsibility for the accuracy and completeness of the basic financial statements, MD&A, SI and all adjustments.

Significant Risk Identified

During our audit, we identified management override of internal controls to be a significant risk. We obtained an understanding of the design and implementation of controls to mitigate this risk, and we designed tailored audit procedures with this risk in mind.

Qualitative Aspects of the Entity's Significant Accounting Practices

Significant Accounting Policies

Neither the Governmental Accounting Standards Board (GASB) nor the Financial Accounting Standards Board (FASB) has established authoritative guidance specific to accounting and reporting for qualified tuition programs organized under Section 529 of the Internal Revenue Code of 1986, as amended. As the Plan was created by and is operated pursuant to North Dakota Century Code Title 6, Chapter 9, Section 38, and is included in the financial reporting entity of the state of North Dakota as a fiduciary fund, the Plan's basic financial statements are prepared following accounting and financial reporting standards set forth in in GASB Statement No. 34, *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments,* as amended, applicable to fiduciary funds.

Management has the responsibility to select and use appropriate accounting policies. The significant accounting policies adopted by the Plan are described in Note 2 to the financial statements. There has been no initial selection of accounting policies, nor have there been any changes in significant accounting policies or their application during the year ended December 31, 2024. No matters have come to our attention that would require us, under professional standards, to inform you about the methods used to account for significant unusual transactions or the effect of significant accounting policies in controversial and emerging areas for which there is a lack of authoritative guidance or consensus, other than as discussed in the preceding paragraph.

Qualitative Aspects of the Entity's Significant Accounting Practices *(Continued)*

Significant Accounting Estimates

Accounting estimates and related disclosures are an integral part of the basic financial statements prepared by management and are based on management's current judgments. Those judgments are normally based on knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the basic financial statements and because of the possibility that future events affecting them may differ significantly from management's current judgments. During our audit, we did not observe any significant estimates.

Basic Financial Statement Disclosures

Certain financial statement disclosures involve significant judgment and are particularly sensitive because of their significance to financial statement users. Note 3 to the financial statements discloses information about the Plan's investments, including required disclosures regarding investment policies, credit risk, interest rate risk and foreign currency risk. Note 4 to the financial statements discloses information about administrative fees paid to the Bank, ABD and the Plan's investment manager.

The disclosures in the basic financial statements are neutral, consistent and clear.

Significant Unusual Transactions

For purposes of this communication, professional standards require us to communicate significant unusual transactions identified during our audit. There were no significant unusual transactions identified as a result of our audit procedures.

Significant Difficulties Encountered During the Audit

We encountered no significant difficulties in dealing with management relating to the performance of our audit.

Identified or Suspected Fraud

We have not identified, nor have we obtained information that indicates material fraud may have occurred.

Uncorrected and Corrected Misstatements

For purposes of this communication, professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that we believe are trivial, and communicate them to the appropriate level of management. Further, professional standards require us to also communicate the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances or disclosures, and the basic financial statements as a whole. Uncorrected misstatements or matters underlying those uncorrected misstatements could potentially cause future-period basic financial statements to be materially misstated, even though the uncorrected misstatements are immaterial to the basic financial statements currently under audit. In addition, professional standards require us to communicate all material, corrected misstatements that were brought to the attention of management as a result of our audit procedures. There were no misstatements identified by us as a result of our audit.

Disagreements with Management

For purposes of this communication, professional standards define a disagreement with management as a matter, whether or not resolved to our satisfaction, concerning a financial accounting, reporting or auditing matter, which could be significant to the Plan's basic financial statements or the auditor's report. No such disagreements arose during the course of the audit.

Circumstances that Affect the Form and Content of the Auditor's Report

Professional standards require that we communicate any circumstances that affect the form and content of our auditor's report. Our auditor's report includes an unmodified opinion on the basic financial statements of the Plan. An emphasis of matter paragraph is included following our opinion, explaining that the Plan is included as a fiduciary fund in the financial reporting entity of the state of North Dakota, that the basic financial statements of the Plan include only balances and transactions attributable to the Plan and that they are not intended to represent the basic financial statements of any other fiduciary funds of the state of North Dakota. Our report also includes paragraphs explaining that we do not express an opinion on the information in MD&A, and that we express an opinion on the information in the SI in relation to the basic financial statements as a whole.

Representations Requested from Management

We have requested certain representations from ABD, which are included in their management representation letter dated March 31, 2025. A copy of this letter is included in **Attachment A**.

Matters Resulting in Consultation Outside the Engagement Team

In some cases, management may decide to consult with other accountants about auditing and accounting matters. Management informed us that, and to our knowledge, there were no consultations with other accountants regarding auditing and accounting matters.

Management's Discussion and Analysis

Pursuant to professional standards, our responsibilities as auditors do not extend to information presented in MD&A. However, in accordance with such standards, we have applied certain limited procedures to the information presented therein. Our procedures consisted of inquiries of management regarding the methods of preparing the information in MD&A and comparing the information therein to the basic financial statements. In addition, we considered the consistency of such information to management's responses to our inquiries and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information presented in MD&A because these limited procedures are not sufficient information on which to express an opinion or provide assurance. We are responsible for communicating any information which we believe is a material misstatement of fact. However, nothing came to our attention that caused us to believe the information in MD&A, or its manner of presentation, is materially inconsistent with the information appearing in the basic financial statements.

Other Supplementary Information

We were engaged to report on the SI. With respect to the information in SI, we made certain inquiries of management and evaluated the form, content and methods of preparing the information presented therein to determine that the information complies with U.S. GAAP, the method of preparing the SI has not changed from the prior period, and the information in SI is appropriate and complete in relation to our audit of the basic financial statements. We compared and reconciled the information in SI to the underlying accounting records used to prepare the basic financial statements or to the basic financial statements themselves.

Other Significant Matters, Findings or Issues

In the normal course of our professional association with the Plan, we generally discuss a variety of matters with management, including the application of accounting principles and auditing standards, significant events or transactions that occurred during the year, operating and regulatory conditions affecting the Plan and operational plans and strategies that may affect the risks of material misstatement. None of the matters discussed resulted in a condition to our retention as the Plan's auditors.

Marketing Commitment

Pursuant to Section 10.4(a) of the College Save Plan Management Agreement, as amended (the Plan Management Agreement), ABD is required on an annual basis to provide a cash marketing commitment for marketing of the Plan; a marketing support commitment for the design, production and distribution of collateral marketing materials, including the Plan's disclosure statement, and to provide phone and email sales and service support; and a cash payment deducted from the marketing support commitment, as determined by the Bank. Marketing expenses incurred and related cash payments are not reflected in the Plan's basic financial statements and were not subject to our audit procedures. In addition, we have not performed any procedures to audit the ABD's compliance with the requirements of Section 10.4(a).

Underlying Fund Expenses

The mutual funds in which the Plan's assets are invested are subject to underlying fund expenses, which include investment advisory expenses, administrative and other expenses of those funds and are paid to the managers of those funds. These underlying fund expenses are not reported as expenses in the Plan's basic financial statements since they reduce the amount of income distributable by the mutual funds to the Plan in the form of dividends and capital gain distributions and are not paid from Plan assets. We did not perform any audit procedures with respect to the underlying fund expenses, except as necessary to determine that the correct expense rates were utilized in the accrual of administrative expenses.

Distribution and Service Fees

Pursuant to Section 9.1(a) of the Plan Management Agreement, ABD is directly responsible for the payment of the distribution and service fees to financial advisors and broker-dealers out of the administrative fees paid to ABD. We performed procedures to audit the administrative fees attributable to ABD. However, the payment of the distribution and service fees is the responsibility of and an expense of ABD, and we have not performed any audit procedures with respect to the distribution and service fees.

Other Significant Matters, Findings or Issues *(Continued)*

Administration Costs

As disclosed in Note 4(c) to the financial statements, the Bank incurs certain costs associated with marketing and administration of the Plan. These costs are not paid from Plan assets, are not reported as expenses in the Plan's basic financial statements and were not subject to our audit procedures.

Restriction on Use

This information is intended solely for the use of the Bank and ABD and its affiliates and is not intended to be, and should not be, used by anyone other than these specified parties.

Respectfully,

Landmark PLC

Little Rock, Arkansas
March 31, 2025

June 30, 2025

BND

Bank of North Dakota

Performance Highlights

BANK OF NORTH DAKOTA
BALANCE SHEET - COMPARATIVE DATA
JUNE 30, 2025 - UNAUDITED

(In Thousands)

	6/30/2025	Budget	Difference	% Change	6/30/2024
Cash	$ 142,274	$ -	$ 142,274	-	$ 285,081
Due from Banks	273,750	225,000	48,750	21.67%	216,733
Federal funds sold	28,000	55,000	(27,000)	-49.09%	37,735
Securities	4,073,438	4,163,082	(89,644)	-2.15%	4,173,304
Loans					
Commercial	4,076,195	4,163,155	(86,960)	-2.09%	3,859,286
Agriculture	831,200	774,125	57,075	7.37%	768,805
Residential	273,673	267,554	6,119	2.29%	301,722
Student Loans	980,199	977,446	2,753	0.28%	1,040,784
	6,161,267	6,182,280	(21,013)	-0.34%	5,970,597
Less allow for credit loss	(118,602)	(108,883)	(9,719)	-8.93%	(105,633)
	6,042,665	6,073,397	(30,732)	-0.51%	5,864,964
Other assets	139,772	182,927	(43,155)	-23.59%	160,613
Total assets	$ 10,699,899	$ 10,699,406	$ 493	0.00%	$ 10,738,430
Deposits -					
Non-interest bearing	$ 495,874	$ 425,000	$ 70,874	16.68%	$ 459,645
Interest bearing	8,103,446	7,927,798	175,648	2.22%	8,794,331
	8,599,320	8,352,798	246,522	2.95%	9,253,976
Federal funds purchased and repurchase agreements	278,235	325,000	(46,765)	-14.39%	312,907
Short term borrowings	530,000	794,347	(264,347)	-33.28%	-
Off Balance Sheet Reserve Allowance	8,078	10,568	(2,490)	-23.56%	10,259
Other Liabilities	15,919	16,971	(1,052)	-6.20%	14,680
Total Liabilities	9,431,552	9,499,684	(68,132)	-0.72%	9,591,822
Equity	1,268,347	1,199,722	68,625	5.72%	1,146,608
Total Liabilities and Equity	$ 10,699,899	$ 10,699,406	$ 493	0.00%	$ 10,738,430

BND's primary financial objective is to maintain the strength and integrity of the Bank while generating a consistent financial return to the State.

- BND reports assets of $10.7 billion.
- The $4.1 billion securities portfolio is primarily a source of liquidty. As the Bank identifies excess funds and the portfolio runs off, maturities can be reinvested, utilized to fund new loans, or reduce short and long-term borrowings.
- The loan portfolio balance is $6.2 billion. State institution funding and line of credit draws in commercial participation programs are below budget levels. Activity in the Farm Disaster program drove the ag portfolio over budget. The balance of the residential loan portfolio continues to decline due to normal loan runoff. The student loan portfolio continues to focus on state-sponsored DEAL loans.
- Changes in the Bank's Equity position are a result of net income, changes in unrealized gain/loss positions, allocations of capital to various legislative programs, and distributions to the State's General Fund. For the six months ended June 30, 2025, the Bank transfered $140.0 million to the General Fund, $23.0 million to buydown programs and $3.9 million to other state programs. During 2024, the Bank transferred $20.0 million to the Statewide Interoperable Radio Network, $26.5 million to buydown programs and $4.8 million to other state programs.

BANK OF NORTH DAKOTA
INCOME STATEMENT - COMPARATIVE DATA
JUNE 30, 2025 - UNAUDITED

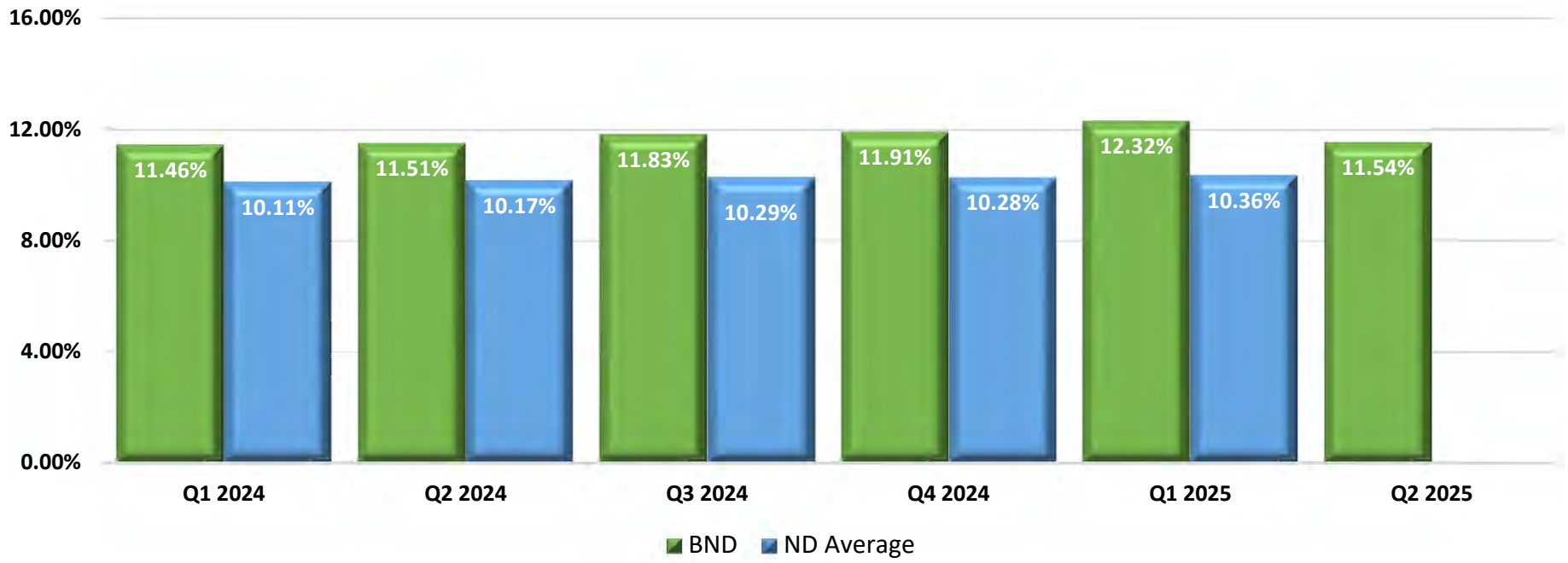
(In Thousands)

	6/30/2025	Budget	Difference	% Change	6/30/2024
Interest Income	$ 247,169	$ 237,954	$ 9,215	3.9%	$ 215,081
Interest Expense	109,802	106,472	3,330	-3.1%	95,311
Net Interest Income	137,367	131,482	5,885	4.5%	119,770
Provision for Credit Losses	9,707	6,000	3,707	-61.8%	5,615
Net Interest Income After Provision	127,660	125,482	2,178	1.7%	114,155
Non-Interest Income	(12,689)	(4,658)	(8,031)	172.4%	3,846
Non-Interest Expense					
Salaries and benefits	12,777	11,852	925	-7.8%	10,505
Occupancy and equipment	419	482	(63)	13.1%	348
IT & System Costs	4,229	5,763	(1,534)	26.6%	3,612
Other Operating Expenses	3,637	4,078	(441)	10.8%	3,512
	21,062	22,175	(1,113)	5.0%	17,977
Net Income	$ 93,909	$ 98,649	$ (4,740)	-4.8%	$ 100,024

BND's primary financial objective is to maintain the strength and integrity of the Bank while generating a consistent financial return to the State.

- BND reported earnings of $93.9 million for the first half of 2025.
- Interest income exceeded budget by $9.2 million primarily due to higher rates on securities and increased agricultural and PACE loan volumes.
- Interest expense reported higher than budget by $3.3 million. Higher average deposit balances, rates and Federal funds purchased led to the increase.
- Provision expense is higher than budget primilarily due to added reserves for select individual credits.
- Non-interest income year-to-date was negative $12.7 million. This includes a year-to-date $16.8 million loss on the sale of short duration, low yielding securities. The Bank utilized the proceeds from the sales to purchase longer duration, higher yielding securities for its portfolio.
- Non-Interest Expense is $1.1 million under budget. This consists of several operating components largely due to timing of incurrences, specifically with IT projects, loan servicing expenses, legal and other service related expenses.

Leverage Ratio



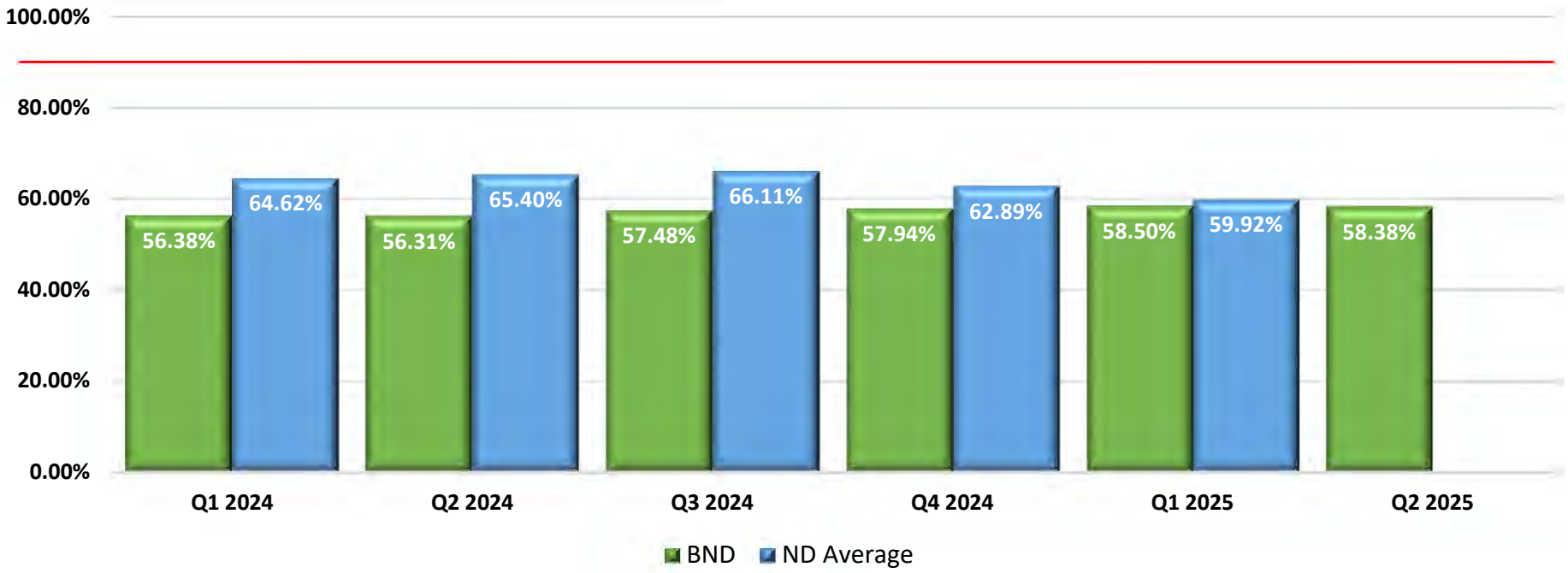
- Leverage ratio is a measure of financial strength. It is calculated by dividing Tier One Capital by average assets for the quarter. As of June 30, 2025, average asset size is $10.6 billion compared to $10.5 billion one year ago. Tier One Capital is $1.2 billiion. Fluctuating quarterly ratios are the result of the Bank's quarterly earnings offset by capital transfers including $140.0 million to the State's General Fund, $49.5 million to buydown programs, $20.0 million to Statewide Interoperable Radio Network and $8.7 million to other state programs in the last 6 quarters.

- As of June 30, 2025, the Bank's leverage ratio decreased to 11.54%.

- As of March 31, 2025, the leverage ratio for all insured commercial banks in the state was 10.36%.

The North Dakota average is obtained from the Federal Financial Institutions Examination Council (FFIEC) who tabulates input from commercial banks in North Dakota. *Note*: The North Dakota average for the current quarter has not yet been determined, as the FFIEC publishes this data approximately 60 days after the completion of each calendar quarter.

Net Loans to Earning Assets



- Net Loans to Earning Assets is a ratio used to measure the liquidity of a financial institution.
- BND has established an internal guideline for the Net Loans to Earning Assets Ratio to be 90% or lower (red line).
- As shown above, BND is well within this limit at 58.38%.
- As of March 31, 2025, the ratio for all insured commercial banks in the state is 59.92%.

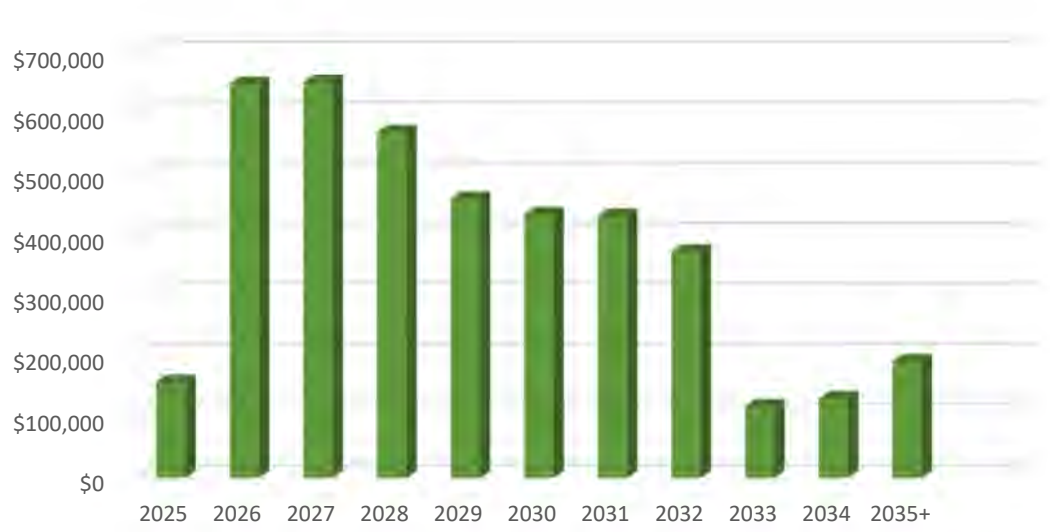
The North Dakota average is obtained from the Federal Financial Institutions Examination Council (FFIEC) who tabulates input from commercial banks in North Dakota. Note: The North Dakota average for the current quarter has not yet been determined, as the FFIEC publishes this data approximately 60 days after the completion of each calendar quarter.

Security Portfolio / Trends

(in thousands)

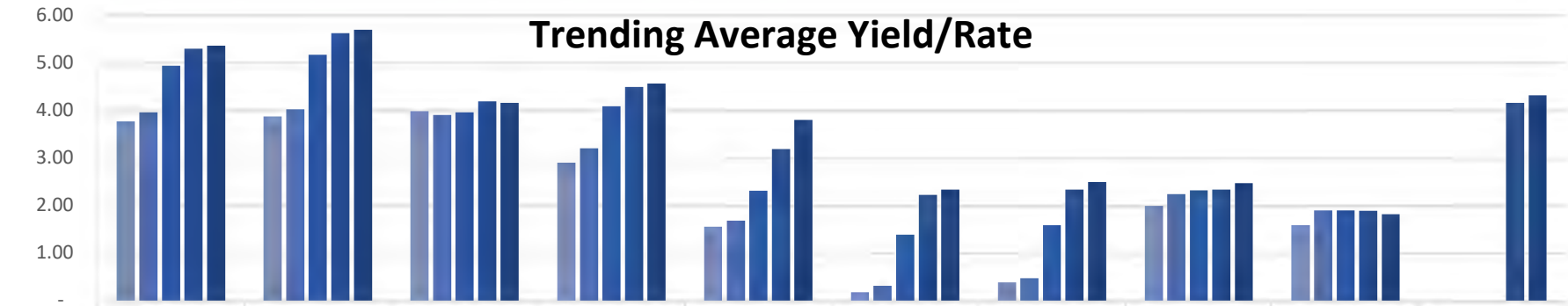
BND Security Portfolio Balance: $4.1 Billion

Principal Cash flow Projections



- The Security Porfolio provides Bank of North Dakota with a source of liquidity, interest rate risk management as well as earnings.
- The duration of the portfolio as of June 30, 2025 was 3.2 years.
- The average yield on the investment portfolio for June 30, 2025 was 4.03%.

Trending Average Yield/Rate



	Commercial Portfolio	Ag Portfolio	Residential Portfolio	Student Loan Portfolio	Securities	Deposits	Cost of Funds	Net Interest Margin	Return on Assets	BND Total State Return
2021	3.77	3.88	3.99	2.91	1.56	0.19	0.40	2.00	1.60	-
2022	3.97	4.03	3.91	3.21	1.69	0.33	0.49	2.25	1.91	-
2023	4.95	5.18	3.97	4.10	2.32	1.40	1.60	2.33	1.91	-
2024	5.30	5.63	4.20	4.50	3.20	2.23	2.35	2.34	1.90	4.17
LTM 2025	5.37	5.70	4.16	4.57	3.81	2.35	2.51	2.48	1.83	4.33 *

*YTD

Five-Year History

(In Thousands)

- Between 2020 and 2021 the state received $1.25 billion in Federal CARES ACT dollars and $1.0 billion in Amercian Rescue Plan Funds. As of June 30th, approximately $166 million of these funds remain at the Bank waiting for projects to be finalized.

- The Bank assets were $10.7 billion for second quarter of 2025. Adequate liquidity has allowed the Bank to continue to grow its loan portfolio and reinvest in its investment portfolio as securities mature.

- The loan portfolio has grown 29% from $4.7 billion in 2021 to $6.2 billion as of June 30, 2025, continuing the Bank's mission to deliver quality, sound financial services that promote agriculture, commerce, and industry in North Dakota.

Bank of North Dakota Peer Group Comparison

Bank of North Dakota Peer Group Comparison				
As of 03/31/2025	**BND**	**Banker's Bank Peer Composite**	**ND Bank's Peer Composite**	**Top 10 Participation Banks**
NPLs/Loans	0.72	0.80	1.09	1.08
ROAA	2.08	1.03	1.07	1.02
ROAE	16.97	8.18	11.47	11.48
Tier 1 Lev. Capital	12.32	13.14	9.61	9.66
Net Interest Margin	2.77	2.55	2.79	2.93
Ave. Cost of Funds	2.44			2.49

Banker's Bank Peer Group	ND Bank's Peer Group
Banker's Bank	Bell Bank
First National Banker's Bank	First International Bank
Pacific Coast Bankers' Bank	Alerus Financial
TIB, National Association	Choice Financial Group
United Bankers Bank	

- BND established a peer group for the purpose of measuring performance. Though a pure-play peer group does not exist, BND selected five national banker's banks with assets greater than $1.0 billion and four North Dakota banks with assets greater than $3.0 billion. The top 10 particiapation banks is based on volume of loans BND participates with financial instititions in the state at the time of reporting.

- The Bank's profits are utilized in 4 ways: appropriated through the State Legislature to fund the General Fund, mission driven programs, retained in BND Capital and interest paid on state deposits. BND's ratios will fluctuate as the organization maintains a balance between adequate liquidity and capital while managing the volatility of its deposit base.

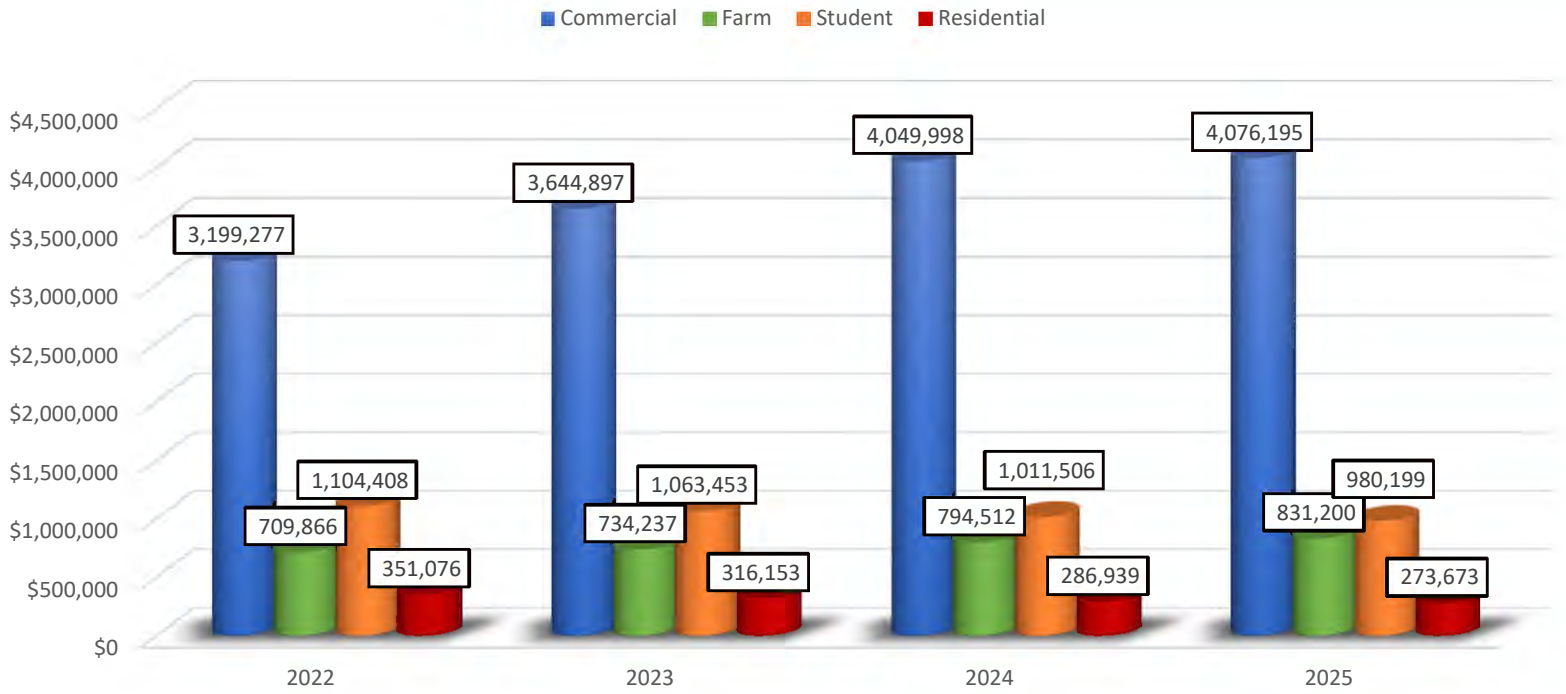
Loan Originations

(includes renewals)
Year to Date

	June 30, 2025		June 30, 2024		Variance	
	###	$$$	###	$$$	###	$$$
Bank Participations - Commercial	114	468,746,718	118	496,415,403	(4)	(27,668,685)
State Institution	1	125,000,000	4	189,432,000	(3)	(64,432,000)
Bank Stock	18	121,073,612	12	78,769,946	6	42,303,666
Flex PACE	91	37,899,684	95	37,219,687	(4)	679,997
PACE	5	15,293,785	4	31,608,625	1	(16,314,840)
Business Development	24	8,516,964	30	9,370,160	(6)	(853,196)
Affordable Housing Flex PACE	3	2,996,489	1	217,750	2	2,778,739
Accelerated Growth	2	1,575,000	2	2,250,000	0	(675,000)
Biofuels PACE	6	964,767	3	328,927	3	635,840
Match	0	0	1	60,000,000	(1)	(60,000,000)
COVID-19 PACE Recovery	0	0	1	3,691,819	(1)	(3,691,819)
Flex PACE w/ADD buydown	0	0	1	1,200,000	(1)	(1,200,000)
Total Commercial Loans	**264**	**782,067,019**	**272**	**910,504,317**	**(8)**	**(128,437,298)**
Farm & Ranch	75	103,810,104	98	122,964,523	-23	(19,154,419)
Farm Disaster Programs	192	64,378,731	0	0	192	64,378,731
Beginning Farmer Real Estate	25	9,573,682	14	4,385,987	11	5,187,695
Established Farmer	22	9,182,017	19	13,168,926	3	(3,986,909)
Farm Service Agency	9	5,972,275	4	1,648,593	5	4,323,682
Ag Pace	37	4,399,453	50	4,643,619	-13	(244,166)
Beginning Farmer Chattel	56	3,516,368	57	3,678,653	-1	(162,285)
Farm Operating	17	2,197,350	12	1,176,000	5	1,021,350
Family Farm	2	235,287	0	0	2	235,287
Total Agricultural Loans	**435**	**203,265,267**	**254**	**151,666,301**	**181**	**51,598,966**
DEAL Loans	3,257	23,157,141	4,418	29,461,791	(1,161)	(6,304,650)
DEAL One	48	2,216,299	40	1,472,837	8	743,462
DEAL Consolidation	0	0	164	669,859	(164)	(669,859)
Purchased Student Loans	1	48,021	4	117,269	(3)	(69,248)
Total Student Loans	**3,306**	**25,421,461**	**4,478**	**31,721,756**	**(1,320)**	**(6,300,295)**
Total Bank of North Dakota Loans	**4,005**	**1,010,753,747**	**5,004**	**1,093,892,374**	**(1,147)**	**(83,138,627)**
Legislature-Directed Programs						
Clean Sustainable Energy	1	30,000,000	1	17,000,000	0	13,000,000
Infrastructure RLF	6	16,290,917	9	74,566,000	(3)	(58,275,083)
Department of Water Resources RLF	2	12,802,440	0	0	2	12,802,440
Medical Facility Infrastructure	1	5,450,000	0	0	1	5,450,000
R WISH (Rural Workforce Housing Initiative Program)	1	3,078,000	0	0	1	3,078,000
Beginning Entrepreneur Loan Guarantee	18	1,054,974	19	1,419,050	(1)	(364,076)
Legacy Investment Technology Loan Fund	3	747,500	11	5,632,600	(8)	(4,885,100)
School Construction	0	0	1	8,085,000	(1)	(8,085,000)
Bulk Propane Storage Tank RLF	0	0	1	149,425	(1)	(149,425)
Fuel Production Facility/Value Add Guarantee	0	0	2	5,800,000	(2)	(5,800,000)
Legislature-Directed	**32**	**69,423,831** **0**	**44**	**112,652,075**	**(12)**	**(43,228,244)**

Consolidated Loan Portfolio

(In Thousands)



COMMERCIAL - The commercial loan portfolio increased by $26 million during the first half of 2025 with BND funding and renewing $782 million of loans. The largest area of activity was in commercial participations with BND funding and renewing $469 million.

AGRICULTURE - The farm loan portfolio increased by $37 million during the first half of 2025 with BND funding and renewing $203 million of loans. Farm and Ranch loans led the way with $104 million, followed by Farm Disaster Programs which funded $64 million in loans.

STUDENT - The student loan portfolio decreased by $31 million during the first half of 2025. BND disbursed $25 million in DEAL loans during the first half of 2025.

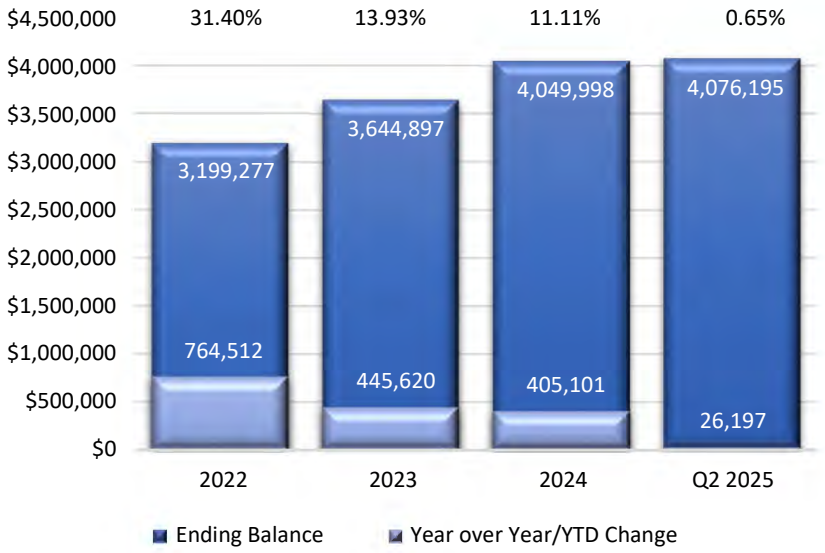
RESIDENTIAL - Transition of all residential originations to Housing Finance Agency occurred on August 1, 2021, and the transition of nearly all residential servicing and collections to Housing Finance Agency occurred on October 1, 2021. As a result, the residential loan portfolio decreased by $133 million since year end 2021.

Commercial Loan Portfolio

(In Thousands)

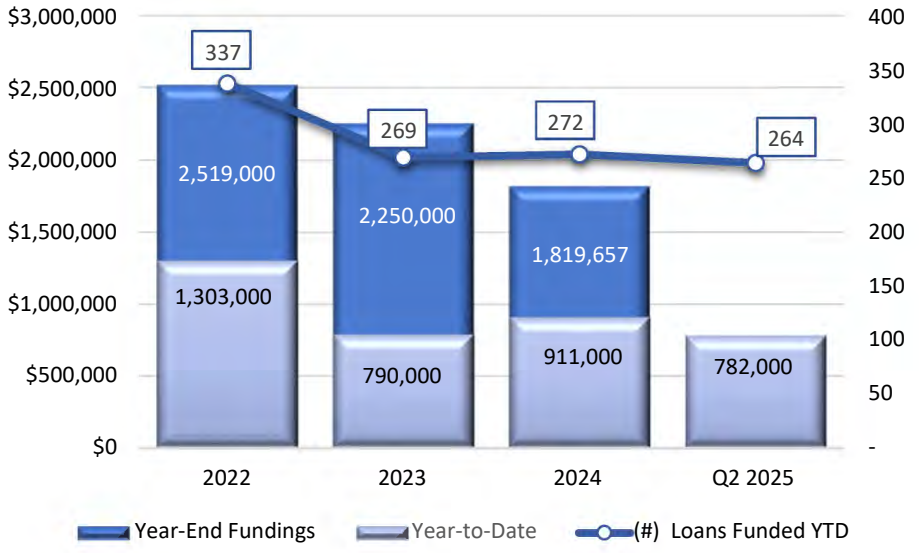
Total Commercial Portfolio

Year over Year/YTD Change



Loans Funded

Year-End & Year-to-Date



Portfolio Composition				
Loan Type	**2022**	**2023**	**2024**	**2025**
Bank Participation	55%	60%	61%	62%
PACE Loans	13%	14%	15%	16%
Bank Stock	11%	11%	10%	9%
State & Pol. Subs	8%	4%	3%	3%
Other	13%	11%	11%	10%

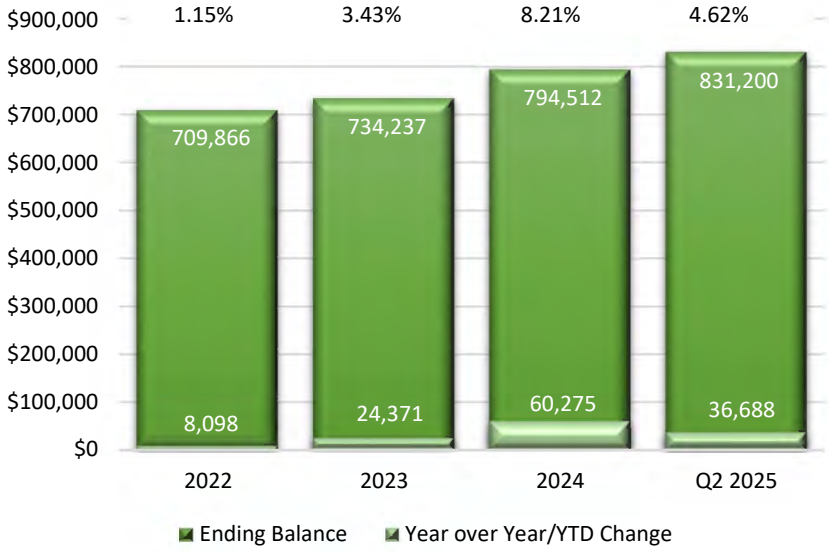
- The commercial loan portfolio increased by $26 million with BND funding and renewing $782 million of loans during the first half of 2025.
- The largest areas of activity were in commercial participations funding and renewing $469 million, state institutions $125 million followed by bank stock funding and renewing $121 million in loans.

Agriculture Loan Portfolio

(In Thousands)

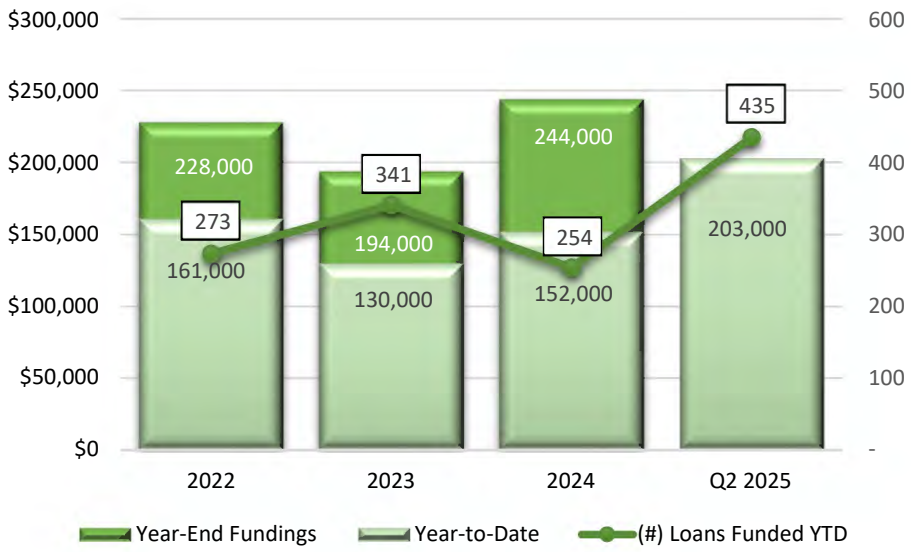
Total Agriculture Portfolio

Year over Year/ YTD Change



Loans Funded

Year-End & Year-to-Date



Portfolio Composition				
Loan Type	**2022**	**2023**	**2024**	**2025**
Farm & Ranch	19%	22%	26%	28%
Beginning Farmer	32%	30%	27%	27%
Established Farmer	26%	25%	24%	24%
Farm Financial Stability/Farm Disaster Loans	19%	13%	11%	12%
Other	4%	5%	12%	9%

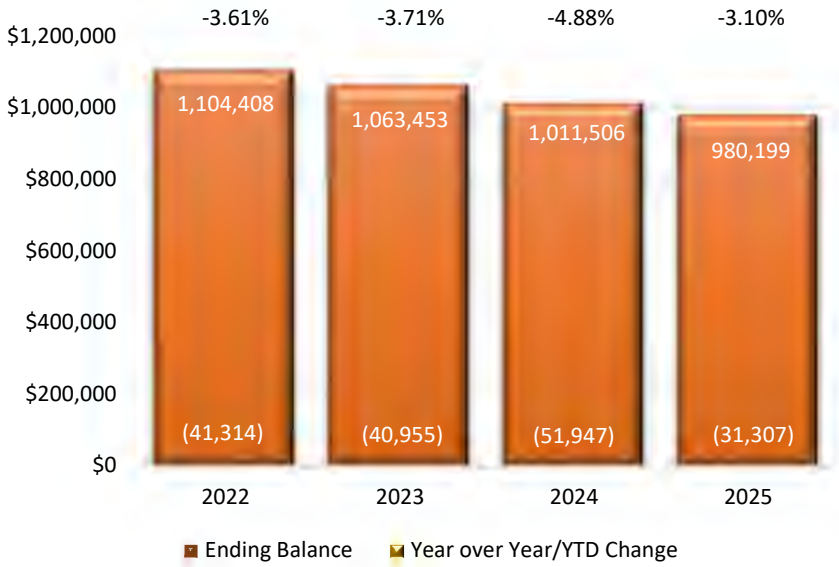
- The agriculture portfolio increased by $37 million with BND funding and renewing $203 million of loans during the first half of 2025.
- The largest areas of activity were Farm and Ranch loans with $104 million and $64 million in Farmer Disaster Programs duing the first half of 2025.

Student Loan Portfolio

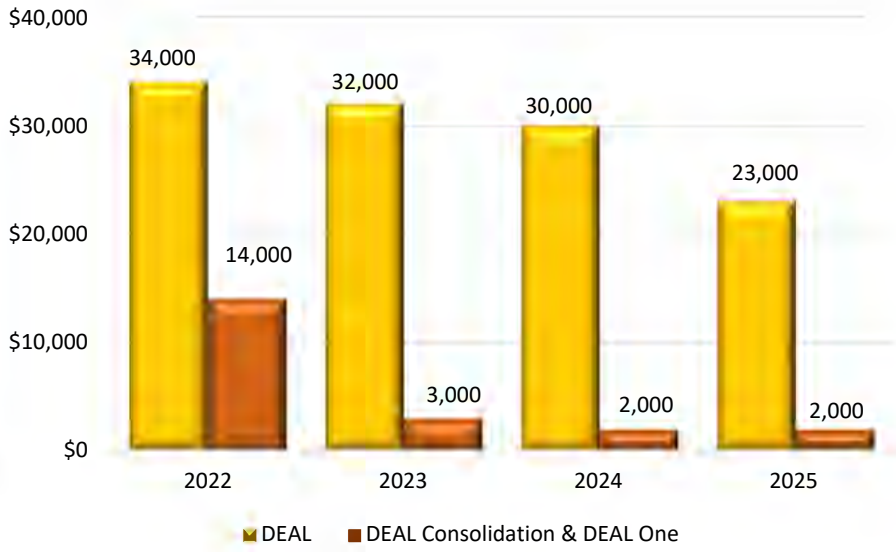
(In Thousands)

Total Student Portfolio

Year over Year /YTD Change



DEAL Loans Funded YTD



Portfolio Composition				
Loan Type	**2022**	**2023**	**2024**	**2025**
DEAL	56%	57%	58%	59%
DEAL One	39%	38%	37%	36%
DEAL Consolidation	5%	5%	5%	5%

History of DEAL Rates (In-State)				
Interest Rate	**2022**	**2023**	**2024**	**2025**
Fixed	6.46%	6.43%	6.62%	6.65%
Variable	6.24%	6.86%	5.85%	5.82%

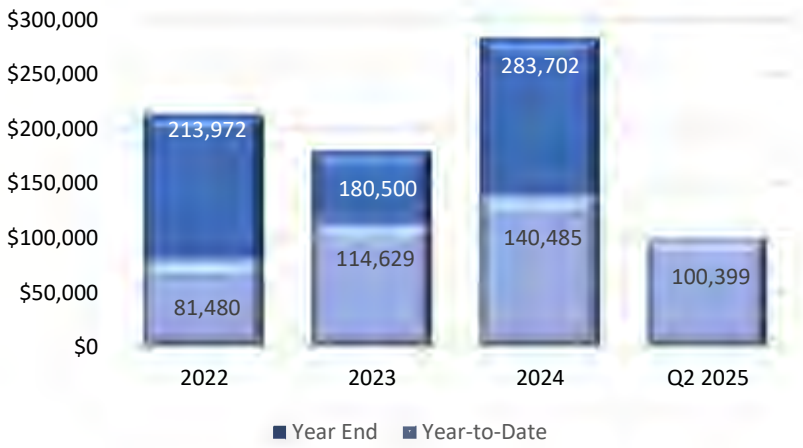
- The student loan portfolio decreased by $31 million during the first half of 2025, with BND disbursing $25 million in DEAL loans.

Commercial PACE

(In Thousands)

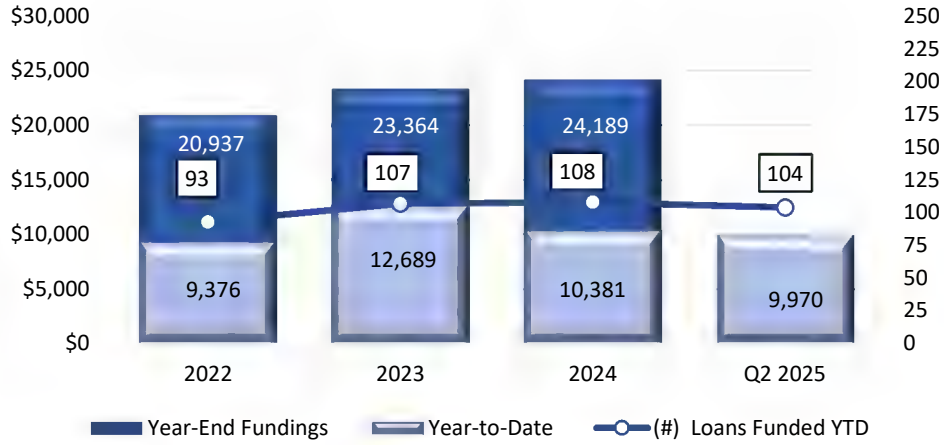
PACE Loan Amounts

Year-End & Year-to-Date



PACE Buydown Funded

Year-End & Year-to-Date



Loan Type	2021	2022	2023	2024
Pace	19%	26%	25%	23%
Flex Pace	53%	56%	60%	65%
Affordable Housing	15%	12%	9%	7%
Biofuels	9%	3%	3%	3%
Medical Pace	4%	4%	3%	2%

2023-2025 Biennium Buydown Funding (Commercial)					
	Pace	**Flex**	**Housing**	**Biofuels**	**Total**
Total Available					$40,000
Funded/ Committed	$7,321	$34,571	$1,731	$2,228	$45,851
Remaining Buydown*					$0
*Remaining buydown may be transferred between funds as needed.					

- A total of 95 Flex PACE loans were funded in the first half of 2025 for a total of $100 million compared to 100 in 2024. Flex PACE buydown demand continues due to the financing of essential community services and community approved businesses throughout North Dakota.

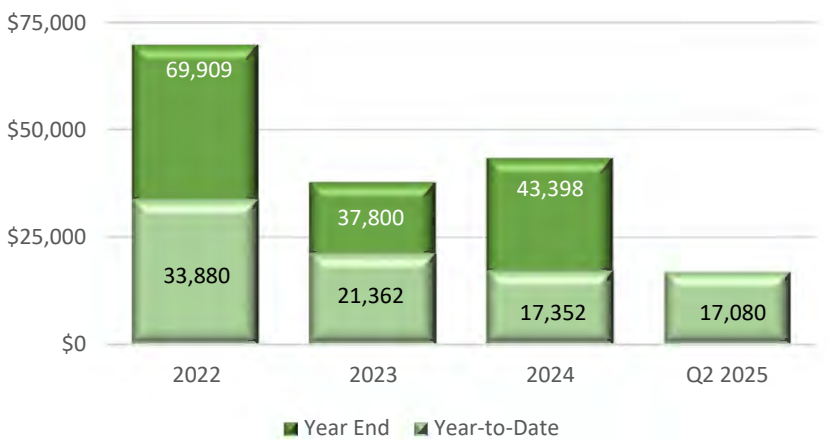
- A total of 4 PACE loans were funded in the first half of 2025 for a total of $9 million compared to 4 in 2024. Additional PACE loans funded were 5 biofuels for $2 million.

Ag PACE & Beginning Farmer

(In Thousands)

Loan Amounts

Year-End & Year-to-Date



Buydown Funded

Year-End & Year-to-Date

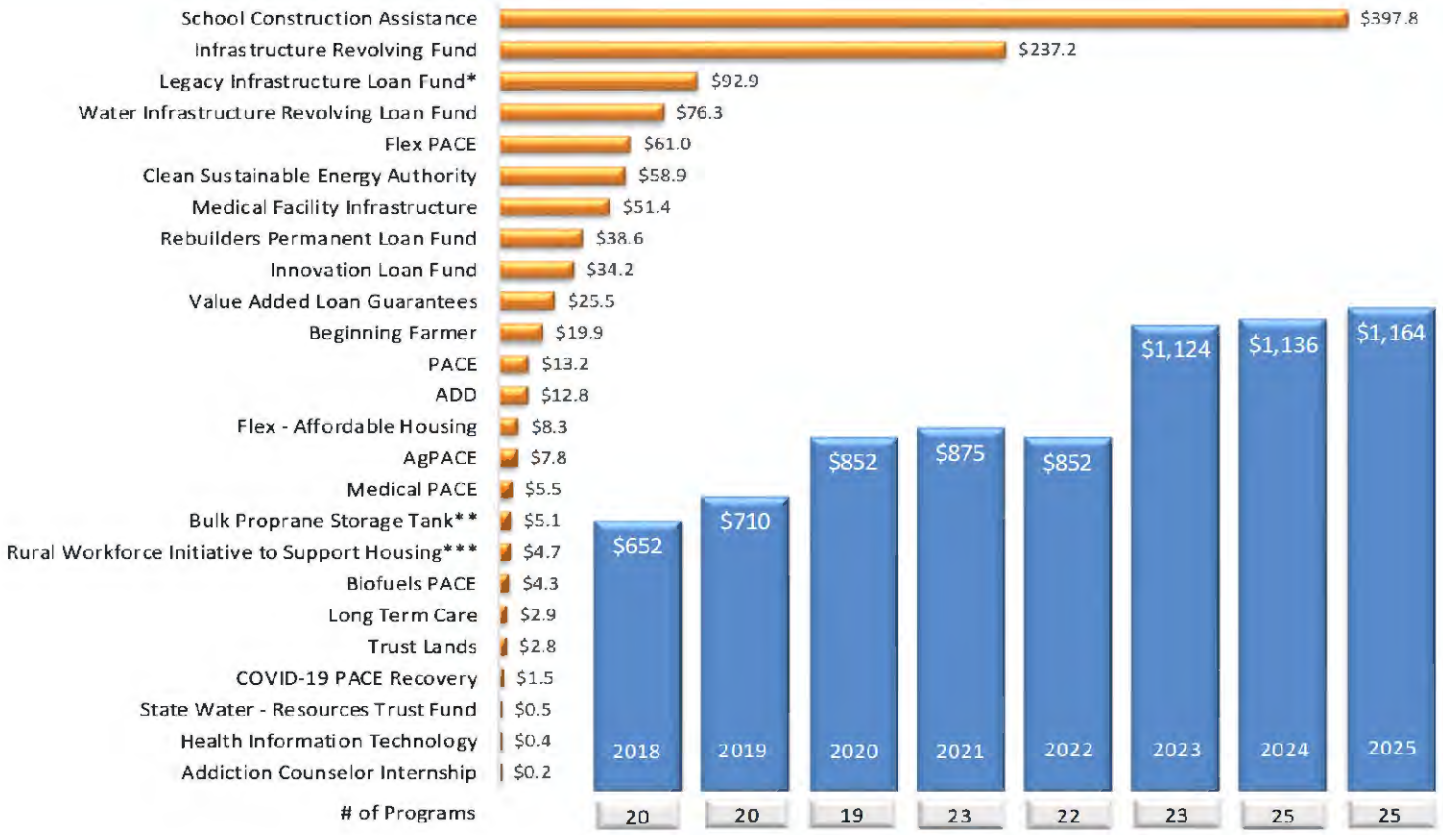
Loan Type	2021	2022	2023	2024
Ag Pace	23%	26%	46%	49%
Beginning Farmer - Real Estate	67%	65%	39%	39%
Beginning Farmer - Chattel	10%	9%	15%	12%

2023-2025 Biennium Buydown Funding (Agriculture)			
	Ag Pace	Beginning Farmer	Total
Total Available			$20,000
Funded/Committed	$4,343	$5,291	$9,634
Remaining Buydown*			$10,366
*Remaining buydown may be transferred between funds as needed.			

- There were 37 Ag PACE loans funded in the first half of 2025 compared to 50 in 2024. The Production Enhancement Program (PEP) has also created more opportunity for field tiling projects. A total of 65% or 24 of the projects were for field tiling.
- A total of 25 Beginning Farmer Real Estate loans were funded in the first half of 2025 compared to 14 in 2024. Increased volume is attributed to lower interest rates.
- A total of 55 Beginning Farmer Chattel loans were funded in the first half 2025 compared to 57 in 2024.

Legislature-Directed Loan Programs

(Total Assets In Millions)

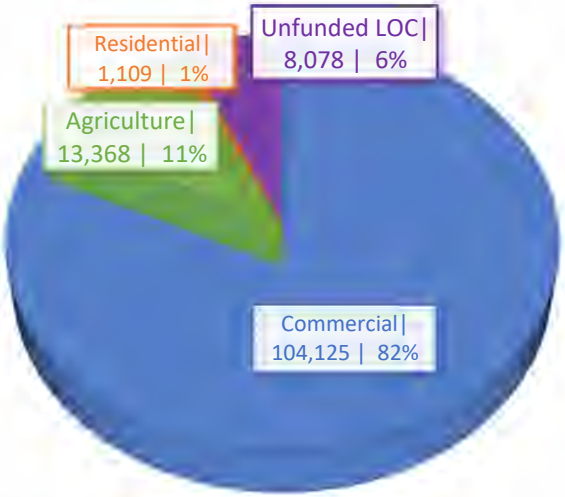


- BND currently administers $1.2 billion in net assets for legislature-directed loan programs. These programs serve a wide range of purposes, including school construction, water projects, general and medical infrastructure, and disaster recovery.
- *Legacy Infrastructure Loan Fund created in December 2023. Loans purchased from Infrastructure Revolving Loan Fund.
- ** SB 2242 created the Bulk Propane Storage Tank Revolving Loan Fund (BPST) during the 68th Legislative Session. This special fund was established by transferring $5 million in cash from the Strategic Investment and Improvements Fund (SIIF).
- ***Rural Workforce Initiative to Support Housing created in November 2024 to help rural communities with construction of market rate housing for workforce when a company is locating or expanding in a community of 20,000 and under in population. BND has committed $10 million of capital for the program.

Credit Quality

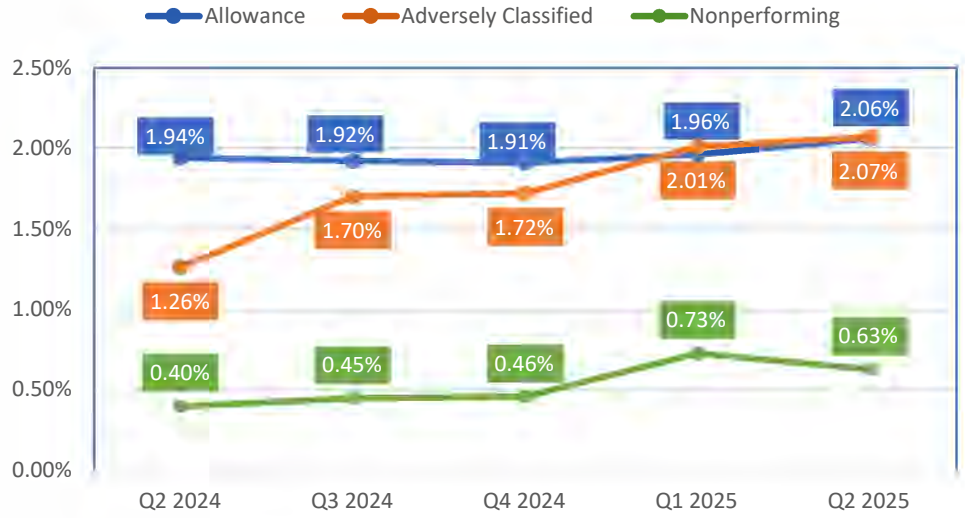
(In Thousands)

Allowance of $126,680 on Portfolio of $6,161,267 or 2.06%



Quarterly Credit Quality Ratios

(As a Percentage of Total Loans)



Quarter	Allowance for Credit Losses	Loan Portfolio	Allowance %	North Dakota Average
June 2025	$126,680	$6,161,267	2.06%	TBD
March 2025	$119,979	$6,123,581	1.96%	1.21%
December 2024	$117,103	$6,142,955	1.91%	1.19%
September 2024	$116,361	$6,068,527	1.92%	1.19%
June 2024	$115,892	$5,970,597	1.94%	1.21%

- BND adopted the CECL Accounting Standard as of January 1, 2023. As of June 30, 2025, BND's total allowance as a percentage of total loans is 2.06%, higher than the most recently posted North Dakota average of 1.21%. Total allowance increase of $6.7 million since last quarter is primarily related to specific reserve needs for loans that moved to impaired status during the 2nd quarter. BND's allowance percentage can be attributed to the Bank's mission driven nature of our loan portfolio. BND continues to evaluate the need to adjust allowance provision based on the changing economic conditions.

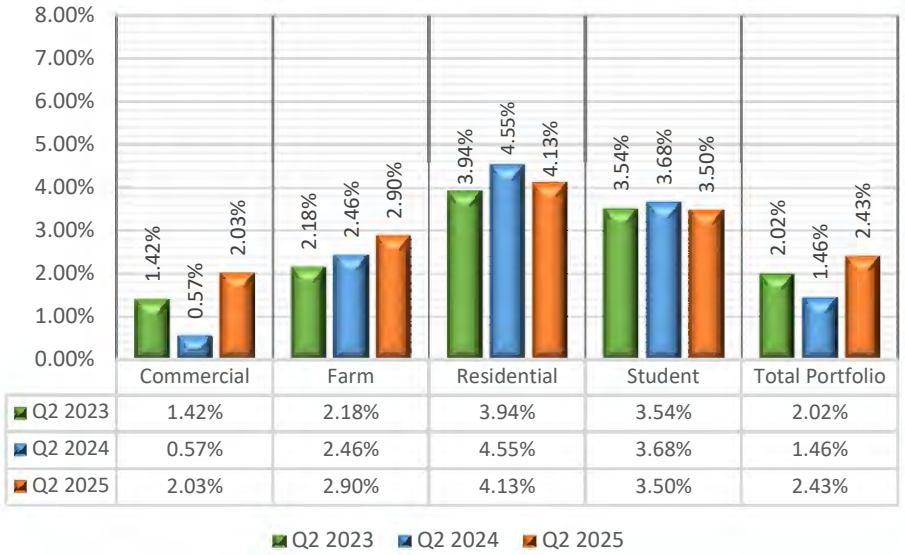
- Excluding the DEAL Student Loan portfolio, which is reserved for separately through the Guarantee Agency, BND's total allowance as a percentage is 2.34%. BND's total allowance as a percentage of all non-guaranteed loans is 2.57%.

- As of June 30, 2025, the percent of non-performing loans is 0.63%, a decrease from last quarter, and lower than the most recently posted North Dakota average of 0.89%. Adversely classified loans as a percentage of total loans equaled 2.07%, an increase from last quarter and higher than the most recent North Dakota average of adversely classified loans was 1.48%.

Credit Quality

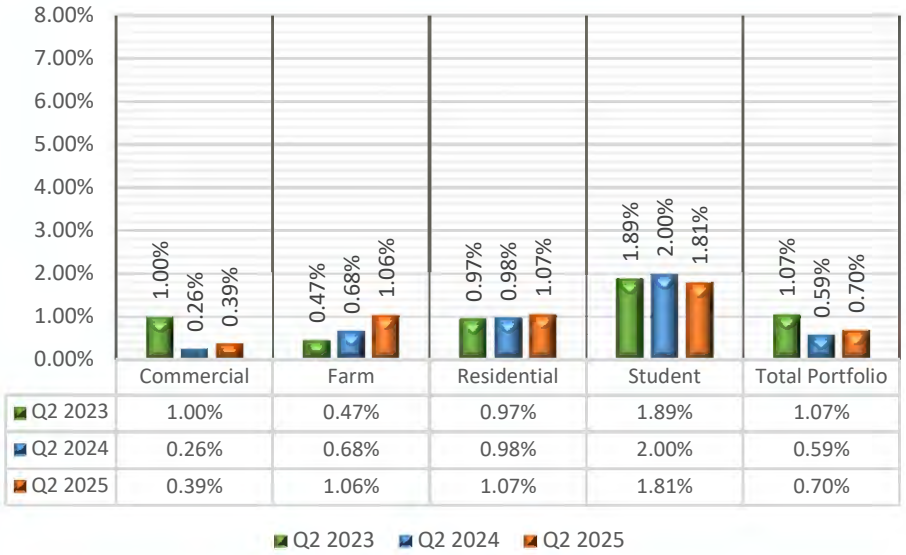
(Year over Year)

Delinquencies over 30 Days



	Commercial	Farm	Residential	Student	Total Portfolio
Q2 2023	1.42%	2.18%	3.94%	3.54%	2.02%
Q2 2024	0.57%	2.46%	4.55%	3.68%	1.46%
Q2 2025	2.03%	2.90%	4.13%	3.50%	2.43%

Delinquencies over 90 Days



	Commercial	Farm	Residential	Student	Total Portfolio
Q2 2023	1.00%	0.47%	0.97%	1.89%	1.07%
Q2 2024	0.26%	0.68%	0.98%	2.00%	0.59%
Q2 2025	0.39%	1.06%	1.07%	1.81%	0.70%

(In $000's)	2025	2024	2025	2024
	> 30 days	> 30 days	> 90 days	> 90 days
Commercial	$82,585	$21,822	$16,060	$10,024
Farm	$24,078	$18,933	$8,792	$5,227
Residential	$11,284	$13,713	$2,931	$2,940
Student Loans	$26,479	$29,235	$13,730	$15,862
Totals	$144,425	$83,703	$41,513	$34,053

- Commercial delinquencies were 2.03% of which 0.39% were delinquent over 90 days. This is an increase to delinquencies compared to June 30, 2024 and 2023; however, delinquencies over 90 days are lower than compared to prior quarter ends. The increase of commercial delinquencies is attributed to a few large relationships that are being monitored. Delinquencies were higher than the North Dakota average of 1.45%.

- Farm delinquencies were 2.90% of which 1.09% were delinquent over 90 days with a majority of past dues monitored being direct farm real estate credits that are well collateralized. Delinquencies were higher when compared to June 30, 2024 and higher than the North Dakota average of 1.21%.

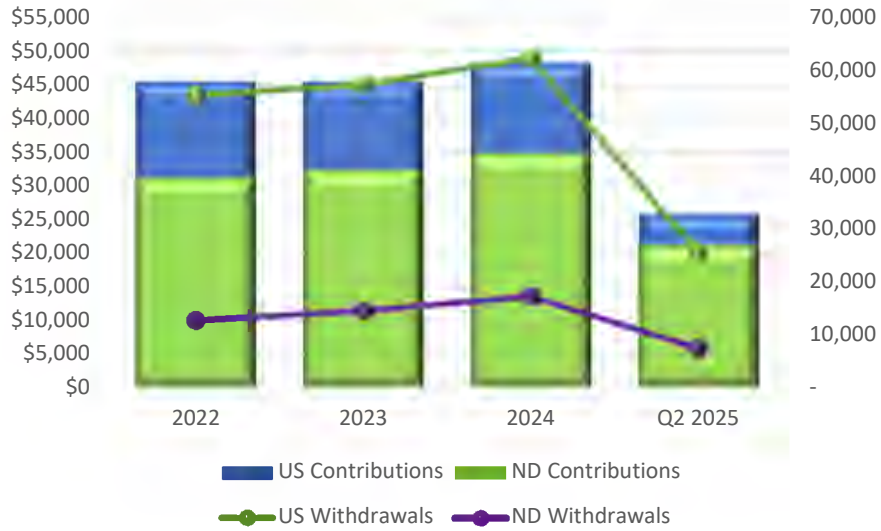
- Residential delinquencies were 4.13% of which 1.07% were delinquent over 90 days. FHA delinquencies of 7.00% are lower than the North Dakota 30-day average of 7.88% and over 90-day delinquencies of 1.78% is lower than the average of 3.10%. Nearly all residential delinquencies represent federally guaranteed loans.

- The overall student loan portfolio has a delinquency rate of 3.50% with 1.81% of the loans being over 90 days. The $13.7 million delinquent over 90 days is a decrease compared to 15.9 million as of June 30, 2024.

College Save

Net Assets ($000) and Total Accounts (#)

Contributions & Withdrawals ($000)



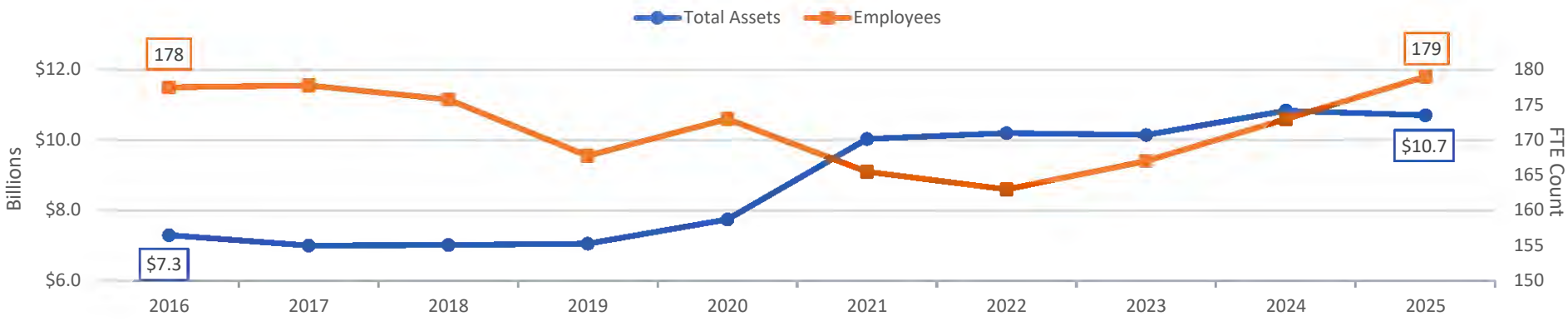
BND, New Baby, Kindergarten Match

(# of Accounts)

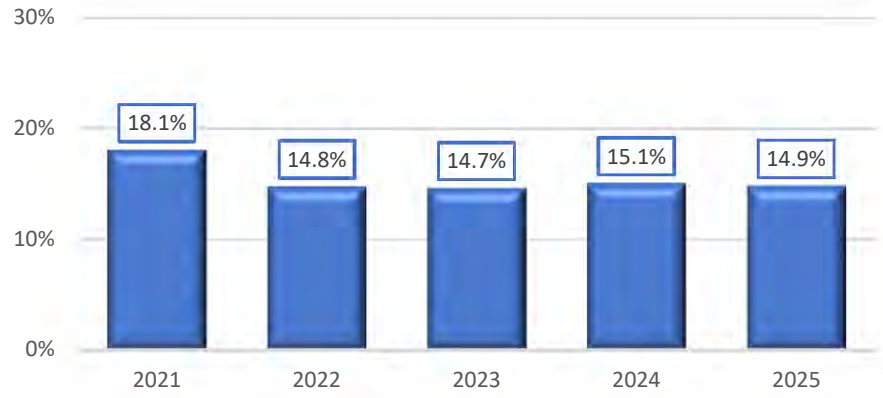
- North Dakota assets have surpassed 57% of total assests, while seeing record distributions
- College SAVE set a record 25,501 match accounts for North Dakota residents

Human Resources

Total Assets & Employees



BND's Trending Efficiency Ratio



Assets & Earnings per Employee

- From 2016 to present, assets increased 47% to $10.7 billion, last twelve months earnings increased 43% while total FTEs increased less than 1%. Earnings per employee have increased from $767 thousand in 2016 to $1.1 million or 42%.

- The efficiency ratio measures a bank's overhead costs as a percentage of its revenue; the lower the ratio, the better. June 2025 ratio excludes the $16.8 million loss on the sale of securities.

- The Bank is authorized for 187 FTEs.

North Dakota State Mill & Elevator
Strategic Plan FY 2026

Our Mission:

The mission of the North Dakota Mill & Elevator is to:

- Promote and provide support to North Dakota agriculture, commerce, and industry.
- Provide superior quality, consistency, and service to our customers.
- Grow the business and provide a profit to our owners – the citizens of North Dakota.
- Conduct our business with the highest integrity so that our employees, customers, suppliers, and owners are proud to be associated with the North Dakota Mill & Elevator.

Our Leadership Team

Vance Taylor, President and CEO
Cathy Dub, Chief Financial Officer
Russ Bischof, Vice President Sales
Brent Massmann, Vice President Transportation
Peder Skjoiten, Vice President Grain Procurement
Chad Boushee, Vice President Quality Assurance & Tech Services
Dillon Janousek, Vice President Production Operations

Our Strategic Plan

Key Objective 1: Promote and Support North Dakota Agriculture, Commerce, and Industry

Key Objective 2: Identify and Respond to Emerging Issues in the Flour Milling Industry

Key Objective 3: Maximize Profit Potential

Key Objective 4: Grow our Customer Base

Key Objective 5: Invest in and Protect our Employees

Accomplishments for FY 25

1. Purchased 40,347,000 bushels of wheat from regional farmers and elevators, which was delivered by 35,070 trucks and 1,456 railcars.

2. Shipped 18,751,692 cwts. of flour to customers.
3. Earned gross revenues of $476 million.
4. Achieved profits of $26.7 million.
5. Passed our FSSC 22000 Surveillance Audit.
6. Generated an economic impact of $1,111,586,000 to the Greater Grand Forks area.

ND Mill & Elevator
1823 Mill Road
Grand Forks ND 58208
1-800-538-7721

North Dakota Mill & Elevator
FY 2025 Transfers

	Dollars	Percent
FY 2025 Profit	$ 26,694,411.27	
Ag Product Utilization Fund	$ 1,334,720.56	5.0%
General Fund	$ 12,679,845.36	50% of remaining profits
Total Transfers	$ 14,014,565.92	

* Transfers made Monday, July 21, 2025

North Dakota Mill
FY 2024-2025 Biennium Transfers

	Dollars	Percent		
FY 2024 Profit	$ 20,795,168.10			
Ag Product Utilization Fund	$ 1,039,758.41	5.0%		
General Fund	$ 9,877,704.85	50% of remaining profits		
Total Transfers	$ 10,917,463.26			
FY 2025 Profit	$ 26,694,411.27			
Ag Product Utilization Fund	$ 1,334,720.56	5.0%		
General Fund	$ 12,679,845.36	50% of remaining profits		
Total Transfers	$ 14,014,565.92			
Biennium Transfers	2023-2025		$ 17,000,000.00	Estimate
APUF	$ 2,374,478.97			
General Fund	$ 22,557,550.21			
Total Transfers	$ 24,932,029.18			

North Dakota Mill
Review of Operations
4th Quarter Ended June 30, 2025
Pre-Audit

SUMMARY

Operations in the 4th Quarter led to a profit of $9,164,367 compared to a profit of $5,767,217 in last year's 4th Quarter. For the year we had a profit of $26,694,411 compared to $20,795,168 last year.

	Quarter		Year to date	
	6/25	**6/24**	**6/25**	**6/24**
Profits	$9,164,367	$5,767,217	$26,694,411	$20,795,168
Sales	118,201,365	122,415,824	476,072,638	504,415,675
Cwt. Shipped				
Spring	4,420,734	4,153,485	17,221,267	16,016,114
% to Total	92.1%	91.5%	91.8%	91.4%
Durum/Blends	380,299	387,410	1,530,425	1,513,068
Total	**4,801,033**	**4,540,895**	**18,751,692**	**17,529,182**
Bulk Shipments	3,991,547	3,744,387	15,567,868	14,496,511
% to Total	83.1%	82.5%	83.0%	82.7%
Bag Shipments	769,882	760,890	3,013,587	2,861,867
% to Total	16.1%	16.7%	16.1%	16.3%
Tote Shipments	39,604	35,618	170,237	170,804
% to Total	.8%	.8%	.9%	1.0%
Family Flour Shipments	166,049	151,471	603,213	542,274
% to Total	3.5%	3.3%	3.2%	3.1%
Organic Flour Shipments	28,847	21,884	118,671	113,639
% to Total	.6%	.5%	.6%	.6%

Grain Purchased:				
Spring	9,590,814	8,610,264	36,748,525	33,917,108
Durum	927,417	827,543	3,598,822	3,308,422
Total	**10,518,231**	**9,437,807**	**40,347,347**	**37,225,530**

SALES

4th Quarter

Sales for the 4th Quarter were $118,201,365 compared to $122,415,824 last year. Shipments of 4,801,033 cwts. are 260,138 cwts. more than last year's 4th Quarter. Bag shipments for the 4th Quarter are 769,882 cwts. compared to 760,890 cwts. last year. Tote shipments are 39,604 cwts. compared to 35,618 cwts. last year. Family flour shipments of 166,049 cwts. is 14,578 cwts. higher than last year's 4th Quarter. Organic flour shipments of 28,847 cwts. is 6,963 cwts. above last year.

Year-to-Date

Sales for the fiscal year came in at $ 476,072,638. This is 5.6% less than last year. The price of grain settled is $1.25 per bushel less than last year. Shipments of 18,751,692 cwts. are 1,222,510 cwts. more than last year. Year-to-date bag shipments are 3,013,587 cwts. or 151,720 cwts. more than last year. Year-to-date tote shipments are 170,237 cwts. compared to 170,804 cwts. last year. Family flour shipments for the year are 603,213 cwts., which is a11.2% increase from last year. Organic flour shipments are 118,671 cwts. compared to 113,639 cwts. last year.

OPERATING COSTS

4th Quarter

Operating costs for the 4th Quarter are $15,233,074 compared to $14,061,483 last year, an increase of 8.3%. The mill experienced a pension gain of $718,655 in the last fiscal year. Operating cost per cwt. of production is $3.20 compared to $3.03 last year, an increase of 5.6%.

Year-to-Date

Year-to-date operating costs are $55,827,756 compared to $50,226,703 last year, an increase of $5,601,053. Operating costs per cwt. of production for the year are $2.99 compared to $2.86 last year.

PROFITS

4th Quarter

For the 4th Quarter we experienced a profit of $9,164,367 compared to a profit of $5,767,217 last year. Gross margins as a percentage of gross sales for the Quarter were 21.3% compared to 17.0% last year, an increase of 4.0%.

Year-to-Date

For the year we had a profit of $26,694,411 compared to profits of $20,795,168 last year. Gross margins as a percentage of gross sales for the year were 18.2% compared to 15.0% last year, an increase of 3.2%.

Risk Management Position

The table below shows our hedge ratio by futures month going forward. A hedge ratio shows the relationship between our net cash position and our futures position. The mill does remain at risk for the basis.

Position Report
30-June-25

Period		Hedge Ratio
Sep-25		1.0
Dec-25		1.0
Mar-26		1.0
May-26		1.0
July-26		1.0
Net Position		1.0

North Dakota Mill
Quarterly Income Statement Summary
For the Twelve Months Ending Monday, June 30, 2025

	4th Qtr Jun 2025	4th Qtr Jun 2024	Change	Fiscal Year 2025	Fiscal Year 2024	Change
GROSS SALES	$118,201,365	$122,415,824	($4,214,459)	$476,072,638	$504,415,675	($28,343,036)
SALES DEDUCTIONS	(25,814,030)	(25,633,425)	(180,605)	(100,114,382)	(94,092,579)	(6,021,803)
NET SALES	$92,387,335	$96,782,399	($4,395,064)	$375,958,256	$410,323,096	($34,364,839)
COGS	($67,226,816)	($75,948,229)	$8,721,412	($289,413,324)	($334,686,221)	$45,272,897
GROSS MARGIN	$25,160,519	$20,834,171	$4,326,348	$86,544,932	$75,636,874	$10,908,058
Gross Margin	21.3%	17.0%	4.3%	18.2%	15.0%	3.2%
OPERATING EXPENSES						
PRODUCTION	($13,030,218)	($10,849,216)	($2,181,002)	($45,559,299)	($39,434,680)	($6,124,620)
QUALITY CONTROL	(466,181)	(405,849)	(60,332)	(1,628,504)	(1,489,802)	(138,702)
MARKETING	(769,838)	(810,294)	40,456	(3,134,486)	(2,858,699)	(275,787)
GENERAL & ADMIN	(966,837)	(1,996,124)	1,029,287	(5,505,467)	(6,443,522)	938,056
TOTAL OPERATING EXPENSES	($15,233,074)	($14,061,483)	($1,171,591)	($55,827,756)	($50,226,703)	($5,601,053)
per cwt production	$3.20	$3.03	$0.17	$2.99	$2.86	$0.13
OPERATING INCOME	$9,927,445	$6,772,687	$3,154,757	$30,717,177	$25,410,172	$5,307,005
OTHER INCOME	$123,281	$167,368	($44,087)	$403,642	$614,360	($210,717)
OTHER EXPENSES	(886,358)	(1,172,839)	286,481	(4,426,408)	(5,229,363)	802,955
NET INCOME	$9,164,367	$5,767,217	$3,397,151	$26,694,411	$20,795,168	$5,899,243
PRODUCTION - CWTS.						
SPRING WHEAT FLOUR	4,383,972	4,254,725	129,247	17,167,692	16,079,499	1,088,192
% to total	92.1%	91.8%	0.3%	91.9%	91.5%	0.4%
DURUM FLOUR/SEMO	376,749	379,860	(3,111)	1,520,982	1,495,485	25,497
% to total	7.9%	8.2%	(0.3%)	8.1%	8.5%	(0.4%)
TOTAL CWTS.	4,760,721	4,634,585	126,136	18,688,674	17,574,984	1,113,689
SALES - CWTS.						
SPRING WHEAT	4,420,734	4,153,485	267,250	17,221,266	16,016,114	1,205,152
% to total	92.1%	91.5%	0.6%	91.8%	91.4%	0.4%
DURUM & BLENDS	380,299	387,410	(7,111)	1,530,426	1,513,068	17,358
% to total	7.9%	8.5%	(0.6%)	8.2%	8.6%	(0.4%)
TOTAL CWTS.	4,801,033	4,540,895	260,138	18,751,692	17,529,182	1,222,510
BY-PRODUCTS	70,036	67,823	2,213	274,857	261,432	13,425
Price per ton	$92.18	$88.52	$3.66	$99.74	$132.64	-$32.90

NORTH DAKOTA MILL
Capital Expenditures for FY 2025
July 30, 2025

Capital Expense Item	Approved / Remaining Budget	Net Capital Cost	Under / (Over)	Completed Project Cost
Plant				
* Grain Terminal Belt Conveyor Upgrades	457,514	-	457,514	
* Midds Storage and Handling System Phase I, II, & III	19,961,132	15,365,095	4,596,037	
* K Mill High Pressure Fans	450,000	181,350	268,650	
* Packing Flour Transfer Upgrade	161,650	40,552	121,098	
* Flour Transfer B Filter and Conveyor	63,706	-	63,706	
Old Warehouse, Lab and SC 3 Roofs	53,829	-	53,829	111,171
Door Upgrades	112,726	105,062	7,664	152,336
* Fire Protection Water Pump	100,433	66,914	33,519	
* Electrical Generation	2,453,975	276,520	2,177,455	
Sifters	179,775	169,923	9,853	790,148
* B Mill Reflow	405,600	170,103	235,497	
* K Mill Upgrades	491,828	403,475	88,353	
* E Mill Upgrades	386,269	189,001	197,268	
* Regrind System Capacity Increase	450,000	191,183	258,817	
* A, B, C Mill Combistoners	322,500	297,500	25,000	
Air Makeup System Fans	338,714	338,714	0	350,000
* B & K Mill Tempering Systems	227,355	207,118	20,237	
Plant Lighting	300,000	298,997	1,003	298,997
* WW Mill Upgrades	226,628	23,558	203,069	
* Lab & K Mill HVAC Upgrades	193,736	96,126	97,610	
Semolina Bin Bottoms	200,000	140,388	59,612	140,388
D Mill Cleaning Ductwork	100,000	99,479	521	99,479
* G Mill Farina System	75,000	-	75,000	
* Loadout Software	460,462	166,576	293,886	
* Terminal Leg Head and Boot Replacements Engineering	550,000	3,423	546,577	
* B-Mill Improvements	1,700,000	363,267	1,336,733	
* K-Mill Tanks & Splitters	110,000	18,459	91,541	
* H-Mill & Cleaning House Upgrades	220,000	-	220,000	
* D-Mill Bucket Elevator & Cleaning House	350,000	-	350,000	
* G & I Mill Impactors	140,000	100,766	39,234	
A-Mill Rollstand Components	180,000	176,503	3,497	176,503
* Tote Packers (2)	350,000	51,422	298,578	
Small Packing Line Shrink Tunnel	110,000	91,775	18,225	91,755
* C Mill Rollstand Controllers	250,000	-	250,000	
* Rotex Screeners	200,000	-	200,000	
* A/B Mill 9th Floor Project Engineering	250,000	5,541	244,460	
* Track 3 Flour Loadout Engineering	250,000	-	250,000	
* Roof Replacements	1,050,000	11,546	1,038,454	
* Road & Lot Upgrades	350,000	188,851	161,149	
* Rail Track Upgrades	1,250,000	349	1,249,651	
* Lockers & Bathrooms Upgrade	150,000	-	150,000	
Lab Equipment	170,000	166,440	3,560	166,440
Front End Payloader	400,000	373,851	26,149	373,851
Skidsteer	100,000	44,685	55,315	55,315
* Air Compressors (3)	150,000	98,141	51,859	
* Spare Transformers (2)	250,000	11,734	238,266	
* Switchgear Replacements	450,000	-	450,000	
* Roll Chill/Corrugation Equipment	800,000	469,669	330,331	
Computers/Technology				
Systems Improvements, Replacements, and Upgrades	300,000	-	300,000	
Other	500,000	336,247	163,753	
Powerhouse Smoke Stack Lowering				57,100
Ink Jet Coders (2)				32,449
AB Mill Chiller Replacement				207,352
Air Makeup System Fans Supplemental				39,346
Total Capital Expenditures	**$ 38,752,832**	**$ 21,340,304**	**$ 17,412,528**	**$ 3,142,630**

* Carried over to Fiscal Year 2026

NORTH DAKOTA MILL
Capital Plan for FY 2026
July 30, 2025

Capital Expense Item	Remaining Budget
Carryover from FY 2025	
Plant	
Grain Terminal Belt Conveyor Upgrades	$ 457,514
Midds Storage and Handling System Phase I, II, & III	4,596,037
K Mill High Pressure Fans	268,650
Packing Flour Transfer Upgrade	121,098
Flour Transfer B Filter and Conveyor	63,706
Fire Protection Water Pump	33,519
Electrical Generation	2,177,455
B Mill Reflow	235,497
K Mill Upgrades	88,353
E Mill Upgrades	197,268
Regrind System Capacity Increase	258,817
A, B, C Mill Combistoners	25,000
B & K Mill Tempering Systems	20,237
WW Mill Upgrades	203,069
Lab & K Mill HVAC Upgrades	97,610
G Mill Farina System	75,000
Loadout Software	293,886
Terminal Leg Head and Boot Replacements Engineering	546,577
B-Mill Improvements	1,336,733
K-Mill Tanks & Splitters	91,541
H-Mill & Cleaning House Upgrades	220,000
D-Mill Bucket Elevator & Cleaning House	350,000
G & I Mill Impactors	39,234
Tote Packers (2)	298,578
C Mill Rollstand Controllers	250,000
Rotex Screeners	200,000
A/B Mill 9th Floor Project Engineering	244,460
Track 3 Flour Loadout Engineering	250,000
Roof Replacements	1,038,454
Road & Lot Upgrades	161,149
Rail Track Upgrades	1,249,651
Lockers & Bathrooms Upgrade	150,000
Air Compressors (3)	51,859
Spare Transformers (2)	238,266
Switchgear Replacements	450,000
Roll Chill/Corrugation Equipment	330,331
Total Carryover Capital Expenditures	**$ 16,709,548**

FY 2026 Capital Expense Item	Plan
Plant	
Plant Network Replacement	700,000
Condinsate Return Tank	200,000
Pallet Stretch Wrap Machine	200,000
Whole Wheat Optical Sorter	425,000
Truck and Trailer Parking Lot	150,000
K-Mill Electrical Feeders	600,000
Electracial Capacitors	250,000
C-Mill Entoleters	125,000
Rail Yard Storage Tracks	1,700,000
Lab Insulating and Re-Siding	160,000
Main Office HVAC System	850,000
Computers/Technology	
Systems Improvements, replacements, and upgrades	300,000
Other	500,000
Total New Capital Expenditures	**$ 6,160,000**
Total Capital Expenditures	**$ 22,869,548**

FY 2026 Capital Projects for Consideration

7/30/2025

1	**Plant Network Replacement** Replace our outdated plant network with a new optic fiber system to improve plant programable logic control communications.	**$700,000**
2	**Condinsate Return Tank** Our current steam condensate tank is worn to the point where replacement is required.	**$200,000**
3	**Pallet Stretch Wrap Machine** Purchase and Install a new automated stretch wrap machine on the PT1 packaging line to replace a worn out unit.	**$200,000**
4	**Whole Wheat Optical Sorter** Purchase and install new optical sorter on our Whole Wheat Mill cleaning system.	**$425,000**
5	**Truck and Trailer Parking Lot** Strip top soil and install a new base and top with gravel. This will provide space to dolly down 40 bulk flour trailers.	**$150,000**
6	**K-Mill Electrical Feeders** Replace worn out connections from transformer to main switches on the K Mill.	**$600,000**
7	**Electrical Capacitors** Purchase and install new capacitors for the G,H,and I Mills to improve electrical efficiency.	**$250,000**
8	**C Mill Entoleters** Purchase and install 2 new entoleters on the C Mill to replace worn out units.	**$125,000**
9	**Rail Yard Storage Tracks** Install two storage tracks to allow space for 54 additional rail cars resulting in lower demmurage costs.	**$1,700,000**
10	**Lab Insulation and Re-Siding** Remove siding, insulate and install new siding and windows on our lab building.	**$160,000**
12	**Main Office HVAC System** Replace the worn out and unreliable main office heating and cooling system.	**$850,000**
13	**Computers / Technology** Several system improvements, replacements and upgrades are required on our management information system.	**$300,000**
14	**Other Capital**	**$500,000**
Total New Capital Projects		**$ 6,160,000**

NORTH DAKOTA MILL
GAIN SHARING PROGRAM
FY2026

- **Eligibility – all full-time employees on June 30, 2026 are eligible.**
- **No pay out of any bonuses if profit before gain sharing expense accrual and any unknown adjustments (Pension, etc.), positive or negative does not exceed 5.0 million dollars.**
- **No payout on the profit part of the plan if profit before gain sharing expense accrual and any unknown adjustments (Pension, etc.), positive or negative does not exceed 10.0 million dollars.**
- **Payout will be calculated as a percent of employee compensation from July 1, 2025 to June 30, 2026.**
- **Goal numbers were set to reflect current realities for the new plan year.**
- **Goal numbers were set by the President and CEO and are attainable with effort.**

The plan consists of two independent parts. 4% potential payout is from exceeding gain sharing goals and an un-capped potential payout is from profits.

For the year ending June 30, 2026 the goals are as follows: Gain Sharing 1st Part – 4% Bonus Potential*

Goals

Cwt./man-hour (includes all hours)	**43.0**
Cost per cwt. (pre gain sharing exp. and pension adjust.)	**$2.80**
Yield	**77.8%**
Safety Record	**172 Points**

***4% bonus potential if all numbers are met or exceeded. Each goal is worth 1% of the 4%.**

Gain Sharing 2nd Part – Uncapped Bonus Potential

Profits (before gain sharing expense accrual and pension adjustments):

10.0 million = 0.0% bonus pay out
Each additional 1.0 million in profits = 1.0% bonus payout.

NOTE: The 1st Part of the gain sharing goals begin to payout at a profit (before gain sharing expense accrual and any unknown adjustments - Pension, etc. , positive or negative) level greater than $5.0 million. The 2nd Part of the gain sharing goals begin to payout at a profit (before gain sharing expense accrual) level greater than $10.0 million.

EXAMPLE #1:
The mill makes $5.0 million profit (before gain sharing expense accrual and any unknown adjustments - Pension, etc. , positive or negative) and we exceed the goal for cwt./man-hour and cost/cwt. but not the safety record or yield. The total bonus received would be 2% for goals + 0% for profit = 2.0%.

EXAMPLE #2:
The mill makes $11.0 million profit (before gain sharing expense accrual and any unknown adjustments - Pension, etc., positive or negative) and we exceed the goal for cwt./man-hour, cost/cwt., and the safety record but not the yield. The total bonus received would be 3% for goals + 1.0% for profit = 4.0%.

Docket for Hearing
Thursday, April 24, 2025
N.D. Oil & Gas Division N.D. Oil & Gas Division 1000 East Calgary Avenue

Case No. 31675, Order No. 34407: Application of KODA Resources Operating, LLC for an order amending the field rules for the Writing Rock-Bakken Pool, Divide County, ND, so as to create and establish an overlapping 1920-acre spacing unit comprised of Sections 19, 30 and 31, T.161N., R.101W., authorizing the drilling of a total not to exceed five horizontal wells on said proposed spacing unit and/or such further relief.

Docket for Hearing
Thursday, April 24, 2025
N.D. Oil & Gas Division N.D. Oil & Gas Division 1000 East Calgary Avenue

Case No. 31677, Order No. 34409: Application of Continental Resources, Inc. for an order amending the field rules for the Brooklyn-Bakken Pool and/or Dollar Joe-Bakken Pool, Williams County, North Dakota, so as to create and establish the following: (i) two overlapping 1920-acre spacing units comprised of Sections 6, 7 and 18; and Sections 19, 30 and 31, T.155N., R.97W., authorizing the drilling of a horizontal well on each proposed overlapping 1920-acre spacing unit; and, (ii) four overlapping 3840-acre spacing units comprised of Sections 1, 12 and 13, T.155N., R.98W. and Sections 6, 7 and 18, T.155N., R.97W.; Sections 24, 25 and 36, T.155N., R.98W. and Sections 19, 30 and 31, T.155N., R.97W.; Sections 5, 6, 7, 8, 17 and 18, T.155N., R.97W.; and Sections 19, 20, 29, 30, 31 and 32, T.155N., R.97W., authorizing the drilling of a horizontal well on or near the section line between existing spacing units on each proposed overlapping 3840-acre spacing unit, and/or such further relief.

Docket for Hearing
Thursday, June 26, 2025
N.D. Oil & Gas Division N.D. Oil & Gas Division 1000 East Calgary Avenue

Case No. 29868, Order No. 32768: (Continued) Application of Spotted Hawk Development, LLC for an order amending the field rules for the Van Hook-Bakken Pool, McLean and Dunn Counties, ND, so as to create and establish an overlapping 3520-acre spacing unit comprised of Sections 16, 17, 18, 19, 20, and N/2 of Section 21, T.150N., R.91W., authorizing the drilling of a total not to exceed eight horizontal wells on said proposed overlapping 3520-acre spacing unit, and such other and further relief as appropriate.

NORTH Dakota | Mineral Resources
Be Legendary.™

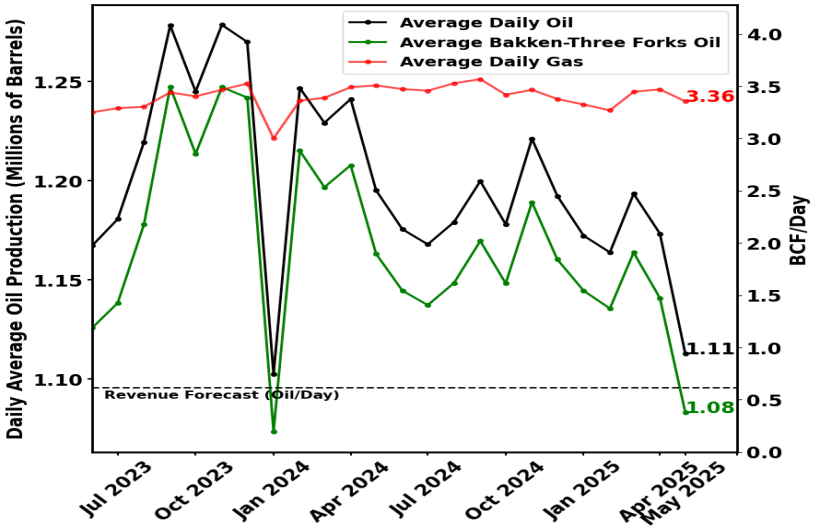
DMR DIRECTOR'S CUT
EXECUTIVE SUMMARY

July 22, 2025
May 2025 Production Numbers

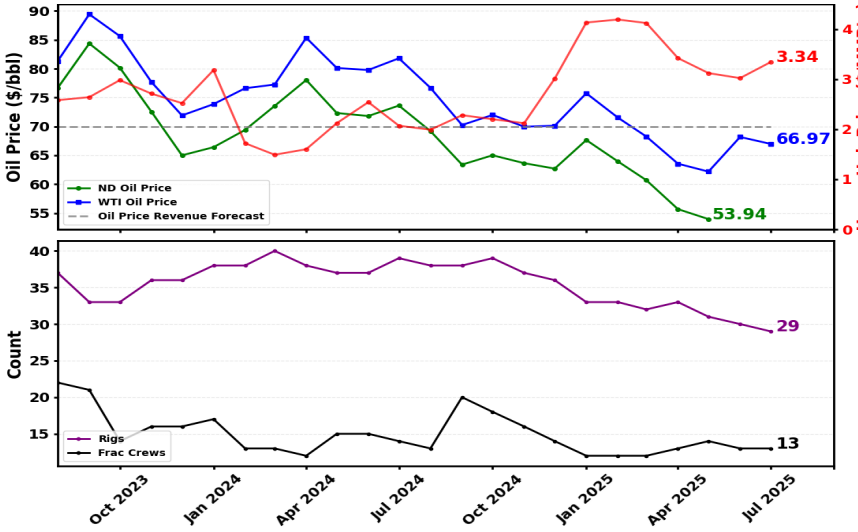
EXECUTIVE SUMMARY

Month and Year	May 2025
Days	31
Oil Production (bbls)	34,496,480
Average Daily Oil (bbls/day)	1,112,790
Gas Production (MCF)	104,010,409
Average Daily Gas (MCF/day)	3,355,174
Daily Average Oil Revenue Forecast (bbls/day)	1,100,000
Oil Revenue Forecast Price ($/bbl)	70
Avg Daily Bakken-Three Forks Prod (bbls/day)	1,083,283
Bakken Production (%)	97.30
Other Production (%)	2.70
Bakken-Three Forks Wells (%)	89
Percentage Other Wells (%)	11
WTI Oil Price ($/bbl) (current)	66.97
ND Oil Price ($/bbl)	53.94
Henry Hub Price (USD/MMBtu)	3.34
Wells Permitted (June)	97
Wells Completed (June)	65
Waiting On Completion	330
Inactive Wells	2,304
Total Producing Wells	19,322
Fort Berthold Total Oil	149,229
Fort Berthold Fee Oil	49,625
Fort Berthold Trust Oil	104,604
Fort Berthold Total Rigs	1
Fort Berthold Fee Rigs	0
Fort Berthold Trust Rigs	1
Fort Berthold Total Wells	3,010
Fort Berthold Fee Wells	709
Fort Berthold Trust Wells	2,301
Fort Berthold Waiting On Completion	1
Fort Berthold Total Permits	150
Fort Berthold Fee Permits	16
Fort Berthold Trust Permits	134
North Dakota Rigs (current)	29
North Dakota Frac Crews (current)	13

NORTH DAKOTA PRODUCTION

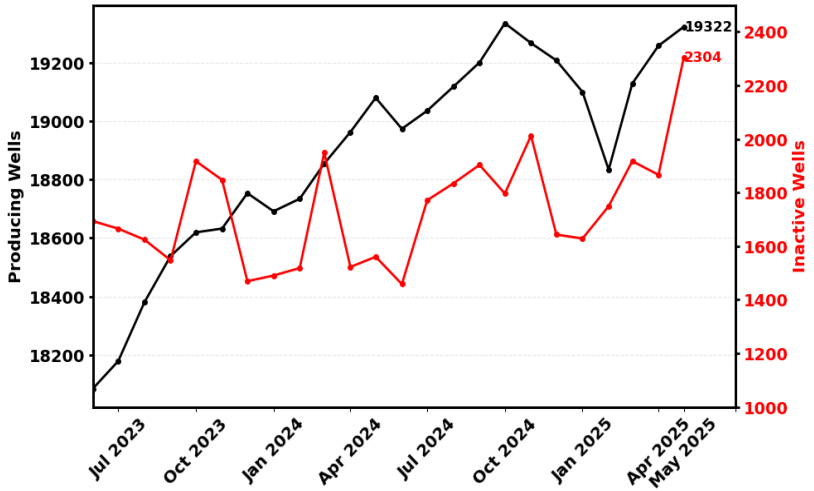


PRICING AND ACTIVITY LEVELS

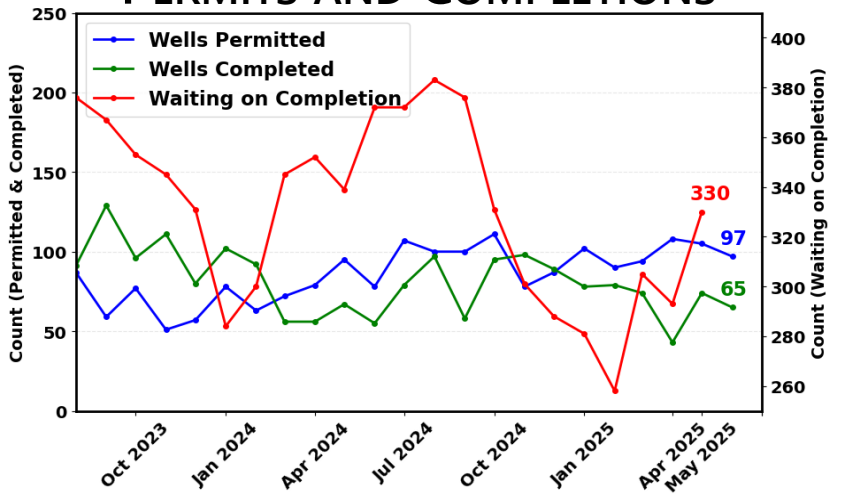


Henry Hub Price Source: https://www.eia.gov/dnav/ng/hist/rngwhhdm.htm

WELL COUNT



PERMITS AND COMPLETIONS



Industrial Commission of North Dakota

TO: North Dakota Industrial Commission Members

FR: Executive Director Karen Tyler

DT: July 30, 2025

RE: Bank of North Dakota President Salary Increase

Section 17 of House Bill 1015 adopted by the 69th Legislative Assembly states in part:

The 2025-27 biennium compensation adjustments for permanent state employees **are to average 3 percent per eligible employee for the first fiscal year of the biennium** and are to average 3 percent per eligible employee for the second year of the biennium. **The increases for the first year of the biennium are to be given beginning with the month of July 2025, to be paid in August 2025**, and for the second year of the biennium are to be given beginning with the month of July 2026, to be paid in August 2026.

Since joining the Bank as President in August of 2024, Don Morgan has led with excellence and a dedicated commitment to upholding the Bank's mission and serving North Dakota citizens and businesses. The Bank Advisory Board has recommended the following salary increase effective July 1, 2025, and I concur with their recommendation:

	Current	**3%**	**New**
Don Morgan	430,000	12,900	442,900

Thank you for your consideration.

State Capitol 14th Floor
600 E. Boulevard Ave.
Bismarck ND 58505-0840

Karen Tyler, Executive Director
Jordan Kannianen, Deputy Director

Phone | 701-328-3722
Email | ndicinfo@nd.gov
Website | ndic.nd.gov

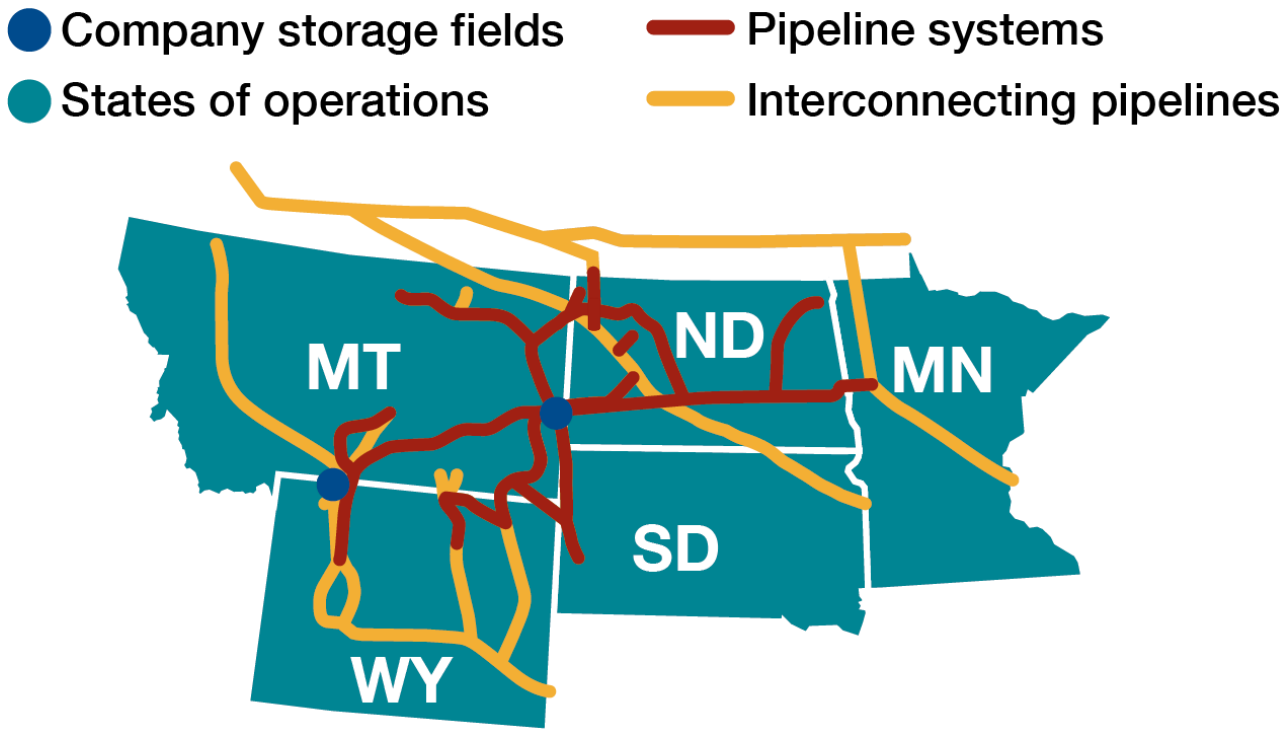
Presentation Materials Will Be Distributed During The Meeting

WBI ENERGY®
An MDU Resources Group company

Bakken East Pipeline

Rob Johnson - President

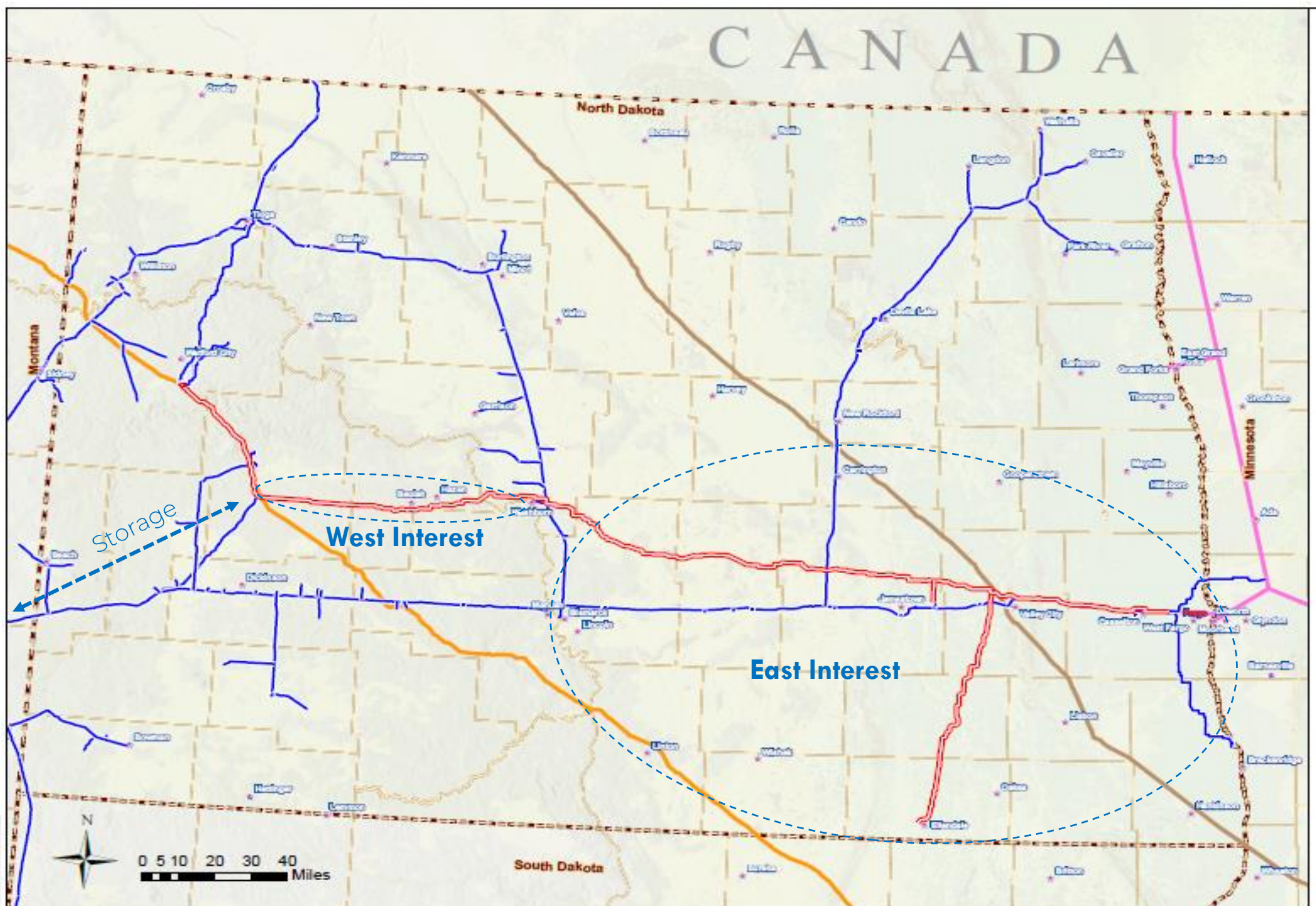
WBI Energy Operations



Transmission

- 3,800 miles of transmission pipeline
- 2.9 Bcf/day of system capacity
- 14 interconnecting points
- Storage (193 Bcf working gas capacity)
- Approx. 350 employees
- FERC regulated interstate pipeline

- Transport ~60% of Bakken residue gas
- Transport ~68% ND natural gas consumption



Proposed Bakken East Pipeline Project

Overview Exhibit

Legend

- Cities
- Bakken East Pipeline Project
- Existing WBI System

Foreign Natural Gas Pipelines

- Alliance
- Viking
- Northern Border Pipeline

- State Boundaries
- County Boundaries

Scale: 1:1,750,000

WBI ENERGY TRANSMISSION

Key Advantages

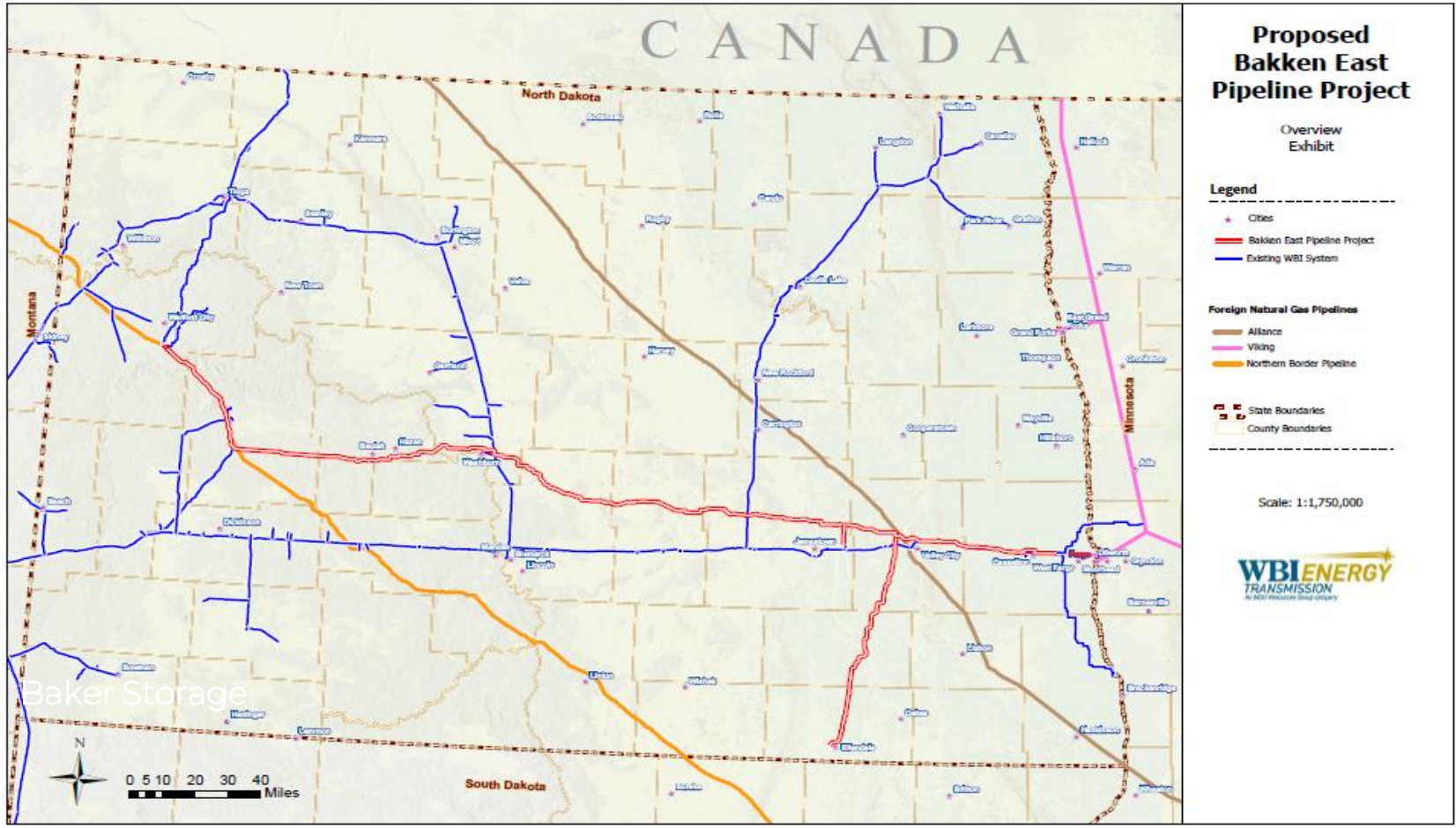
- 100 Years of interstate pipeline experience and expertise
  - Workforce of 350, skilled in all facets of interstate pipeline operations
  - Integrated system of assets and strategic position in the Bakken
- Support natural gas production growth in the Bakken
  - Additional natural gas take away capacity will be necessary
  - Direct access to 24 existing gas processing facilities in the Bakken
- Enhance Economic Development across North Dakota
  - Power generation including potential for data centers along with industrial growth will require natural gas

Key Advantages

- No stacking of rates or fuel charges across WBI Energy's integrated system
- Direct access to storage
- Interconnects with multiple interstate pipelines
- Enhanced security and reliability for central and eastern ND
- Service to additional ND communities
- FERC Regulated – transparent, non-discriminatory, open access

Bakken East Overview

- Proposed Route:
  - Phase 1: Elkhorn Creek to Washburn, ND
  - Phase 2: Washburn to Mapleton, ND
- Miles of Pipe
  - Phase 1: ~125 miles 36” pipe
  - Phase 2: ~225 miles 30” pipe
  - Ellendale Lateral: ~80 miles 20” pipe
- Compression (~55,000 add’l HP)
  - Two new compressor stations
    - Washburn
    - Alliance
  - Expand existing compressor stations
    - Elkhorn Creek
    - Mapleton
- Interconnects with Northern Border, Alliance and Viking



WBI ENERGY
An MDU Resources Group company


CANADA
Estevan
Winkler
Minot
Williston
New Town
Devils Lake
Grand Forks
Sidney
NORTH DAKOTA
Glendive
Medora
Dickinson
Bismarck
Jamestown
Wahpeton
Ellendale
Existing Pipeline
New Pipeline
Cities
Processing plants
Bakken East connections with WBI Energy's integrated system
Northern Border Pipeline
Alliance Pipeline
Viking Pipeline
Expanded gas access created by Bakken East connection
Baker Storage Field

Bakken East – Preliminary Work

- 85% permission to survey received for 350 mile mainline

- 20% permission to survey received for Ellendale Lateral

- 150 miles of wetland and general habitat surveys completed
- 54 miles of cultural surveys and staging yards completed
- 205 miles of special status species surveys completed

State Support – Key Takeaways

- Bridge timing of varying customer needs for gas with project in-service date
- Competitive rates for all customers
- Provides incremental egress capacity for Bakken operators
- Provides increased access to natural gas for North Dakota communities, commercial users and industrial users
- Supports potential upsizing of pipeline for long-term strategic and economic growth in the state

WBI ENERGY®
An MDU Resources Group company

Questions