

TEN YEAR PLAN: 2026-2036
North Plains Connector LLC

June 2026

In accordance with N.D.C.C. § 49-22-04 and N.D.A.C. Ch. 69-06-02, North Plains Connector LLC submits the following Ten Year Plan for years 2026 through 2036.

- (1) *A description of the general location, size, and type of all facilities to be owned or operated by the utility during the ensuing ten years, as well as those facilities to be removed from service during the ten-year period.*

North Plains Connector LLC (North Plains) plans to construct and operate the North Plains Connector, a proposed interregional high voltage electric transmission line system and associated facilities. intended to connect the Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) on the eastern grid with the Western Electricity Coordinating Council (WECC) electrical power markets on the western grid.

North Plains proposes to site, construct, and operate the North Dakota portion of the North Plains Connector (Project) in Golden Valley, Slope, Hettinger, Grant, Morton, and Oliver counties. The Project will involve constructing new permanent electric transmission line segments and associated facilities. The Project's new permanent electric transmission lines and associated facilities will include the following:

- High-Voltage Direct Current (HVDC) Transmission Line – This segment of the Project will consist of an approximately 168-mile-long, 525-kilovolt (kV) HVDC transmission line segment extending from the Montana-North Dakota state line through Golden Valley, Slope, Hettinger, Grant, and Morton counties and terminate at the Morton County Converter Station.
- Oliver Transmission Line – This segment of the Project will consist of an approximately 52-mile-long, 345-kV alternating current (AC) transmission line segment located in Oliver and Morton counties, North Dakota. The line will extend east and north from the Morton County Converter Station in Morton County to the East Oliver Substation in Oliver County, North Dakota.
- Morton Transmission Line – This segment of the Project will consist of an approximately 22-mile-long, 345-kV AC transmission line segment located in Morton County, North Dakota. The line will extend east and southeast from the Morton County Converter Station to the Morton County Switchyard.
- Morton County Converter Station – The AC/DC converter station will be located in Morton County, North Dakota and serve as the connection point between the HVDC Transmission Line, Oliver Transmission Line, and Morton Transmission Line.

- Fiber Repeater Stations – The Project will include 2 or 3 fiber repeater stations along and connected to the HVDC Transmission Line to mitigate signal loss in the optical power ground wire (OPGW).

The Project will also include appurtenances and equipment, including OPGW and grounding components. The Project will require temporary workspaces during the construction phase to access the construction site, access structure locations, stage equipment and materials, splice wires and conductor lines, and install the various Project components.

The Project will connect to the following facilities, which will be permitted, owned, and operated by other separate entities:

- East Oliver Substation – The planned East Oliver Substation is a 345-kV substation under development by Minnesota Power. The East Oliver Substation is being developed independently from North Plains as a part of the Minnesota Power HVDC Modernization Project that was approved by the Commission on June 4, 2025, in case number PU-24-381. For North Plains, the East Oliver Substation will be expanded to serve as the interconnection point to MISO for the eastern grid.
- Morton County Switchyard – The Morton County Switchyard is under development and will be owned and operated by Basin Electric Power Cooperative. The switchyard will be located in Morton County, North Dakota and serve as the connection point between the Morton Transmission Line and the interconnection to the SPP system for the eastern grid.

The Montana facilities are not part of the Project, but include a new 500-kV AC electrical transmission line segment and an AC/DC converter station in Rosebud County, and the remainder of the HVDC transmission line extending from the existing Colstrip Converter Station to the Montana-North Dakota state line.

North Plains is a joint venture between North Plains Connector Holdings LLC, a subsidiary of Grid United LLC (Grid United), and Pattern NPC Transmission LLC (Pattern). Grid United is a Houston, Texas-based company developing energy infrastructure to power the future. Grid United is focused on the infrastructure needed to make the United States power grid more modern, efficient, reliable, and secure. Grid United is the majority investor and has led Project development efforts, including land acquisition, survey, stakeholder relations, and permitting efforts. Pattern is an energy infrastructure development and operations company with recent HVDC transmission construction experience. Pattern is joining North Plains as a minority investor and will support Project execution and construction.

Other than the proposed Project, North Plains does not have any transmission or generation facilities located in North Dakota. The Project will have an estimated life of greater than 10 years. As such, North Plains does not have any plans to decommission any transmission or generation facilities within the timeframe of this plan.

- (2) *An identification of the location of the tentative preferred site for all electric energy conversion facilities and the tentative location of all electric transmission facilities on which construction is intended to be commenced within the ensuing five years and such other information as may be required by the commission. The site and corridor identification shall be made in compliance with the criteria published by the commission pursuant to section 49-22-05.1.*

As noted above, the proposed Project route goes through Golden Valley, Slope, Hettinger, Grant, Morton, and Oliver counties. A map depicting the location of the proposed Project in North Dakota is provided as part of the Consolidated Application for Certificate of Corridor Compatibility and Route Permit (Consolidated Application) for the Project (see Case No. PU-26-082). As discussed in the Consolidated Application, the Project has been designed to comply with the exclusion and avoidance areas referenced in N.D.C.C. § 49-22-05.1 and identified in N.D.A.C. Section 69-06-08-02.

- (3) *A description of the efforts by the utility to coordinate the plan with other utilities so as to provide a coordinated regional plan for meeting the utility needs of the region.*

The Project plans to connect MISO and SPP on the eastern grid with WECC electrical power markets on the western grid. North Plains submitted interconnection requests to MISO in June 2023 and December 2025 to facilitate the connection of the Project to the planned East Oliver Substation and an interconnection request to SPP in May 2022 to facilitate the connection of the Project to the new Morton County Switchyard.

The SPP Transmission Working Group endorsed the North Plains Connector Planning Study in May 2025 identifying a minor amount of network upgrades to interconnect to the SPP system reliably. MISO is currently conducting studies to assess the impact of the Project on their surrounding transmission system, including identifying any potential upgrades or modifications needed to maintain grid reliability. The results of these studies will ensure the Project is safely integrated into the existing grid infrastructure in accordance with required technical and regulatory standards.

North Plains will coordinate with the incumbent utilities (Basin Electric Power Cooperative, Inc. and Minnesota Power in North Dakota) on a specific timeline to interconnect the existing facilities to the new facilities.

- (4) *A description of the efforts to involve environmental protection and land-use planning agencies in the planning process, as well as other efforts to identify and minimize environmental problems at the earliest possible stage in the planning process.*

Core to North Plains' development philosophy is the integration of stakeholder input prior to officially entering the regulatory process. North Plains has engaged federal, state, Tribal, and local stakeholders throughout the development of the Project to incorporate feedback into Project siting. North Plains will continue to consult with these stakeholders to identify, avoid, minimize, and/or mitigate potential impacts to the environment from the construction and operation of the Project. North Plains has also been working closely with counties and townships to ensure conformance with local land use regulations, including securing zoning permits and entering into road use agreements, as needed. To assist with this agency and

stakeholder engagement and analysis, North Plains has engaged a team of qualified environmental consulting and legal firms to study and identify avoidance and exclusion areas within the proposed Project corridor and route, in accordance with N.D.C.C. Ch. 49-22 and N.D.A.C. Section 69-06-08-02.

Detailed information regarding the stakeholder coordination is provided in the Consolidated Application (Case No. PU-26-082).

- (5) *A statement of the projected demand for the service rendered by the utility for the ensuing ten years and the underlying assumptions for the projection, with that information being as geographically specific as possible, and a description of the manner and extent to which the utility will meet the projected demands.*

Transmission infrastructure forms the backbone of the nation's power system, ensuring that Americans have constant access to affordable and reliable electricity to power homes, businesses, and communities. Like other forms of infrastructure, such as transportation, municipal water/wastewater, and communications, the electrical grid needs significant investment in maintenance upgrades and modernization to meet rapidly changing market demands.

While the United States has an abundance of energy generation resources spread throughout the country, these resources are not always located in proximity to, or connected to load centers; thus the nation relies on a highly functioning, effectively connected grid to deliver reliable power from generation to load. Complicating the nation's electrical system, the United States contains not one but three separate grids, known as interconnections. These three systems—the Western Interconnection, Eastern Interconnection, and the Texas Interconnection (or Electric Reliability Council of Texas)—are managed independently and transfer very limited amounts of energy between each other.

There are currently seven “cross-seam” connections between the Western and Eastern Interconnections; however, these small back-to-back DC ties are located in remote locations at the very edge of the seam and serve localized needs. These ties were designed to meet the load obligations of nearby utilities or wholesale power providers rather than to serve larger regional demand.

This grid structure has functioned for several decades, but changing market dynamics are forcing development of a more robust system. First, electrical energy consumption is increasing across the U.S. The U.S. Energy Information Administration's (EIA) 2025 Annual Energy Outlook estimates that total electricity consumption across all sectors could increase by 50 percent between 2024 and 2050.¹ Based on recent studies, demand is anticipated to grow significantly across MISO, SPP, and WECC. MISO's peak demand is projected to increase at an average annual rate of 1 percent to 2 percent per year, with gross energy consumption rising 1.9

¹ U.S. Energy Information Administration, *Annual Energy Outlook 2025*. Retrieved from <https://www.eia.gov/outlooks/aeo/>. Accessed June 15, 2026.

percent to 3.3 percent per year through 2044.² Similarly, SPP's net peak demand is expected to grow at an average annual rate of approximately 1.95 percent per year, increasing from 54,987 MW in 2024 to 60,560 MW in 2029.³ WECC's peak demand and annual electricity consumption are expected to increase at an average annual rate of approximately 1.9 percent per year through 2034, with peak demand increasing from 164,000 megawatts in 2025 to 193,000 megawatts in 2034.⁴ Traditional capacity increases from performing minor system upgrades or adding new generation are unable to keep pace with this rapidly changing market demand.

Additional factors that affect the ability of the U.S. electrical grid to reliably deliver energy to consumers and underscore the need for significant transmission infrastructure investment include the following:

- extreme weather events that affect regional grid resiliency;
- changes in the generation resource portfolio mix that affect reliability by reducing the ability to balance supply and demand in real time; and
- rapid increases in new large electric loads.

The North Plains Connector, including the Project, is expected to provide additional transfer capacity at 525-kV between the eastern and western grids. This high-capacity, bi-directional connection is intended to:

- improve reliability for both Interconnections by increasing transfer capacity and access to additional generation between markets;
- improve resiliency through bi-directional power flow control, along with dynamic voltage and frequency support, to help maintain grid stability and operational flexibility; and
- mitigate weather-driven system outages by providing a path to quickly and efficiently shift power where needed most.

² MISO, *MISO 2024 Load Forecast and Process Enhancements Workshop (December 18, 2024)*. Retrieved from <https://cdn.misoenergy.org/20241218%20Medium%20and%20Long%20Term%20Forecast%20Workshop%20Presentation667265.pdf>. Accessed November 2025; MISO, *2024 Long-Term Load Forecast Report* (2024). Retrieved from https://cdn.misoenergy.org/MISO%20Long%20Term%20Load%20Forecast%20Whitepaper_December%202024667166.pdf. Accessed November 2025.

³ SPP, *2024 SPP Resource Adequacy Report* (2024). Retrieved from <https://www.spp.org/documents/71804/2024%20spp%20june%20resource%20adequacy%20report.pdf>. Accessed November 2025.

⁴ WECC, *Western Assessment of Resource Adequacy* (2024). Retrieved from <https://feature.wecc.org/wara/>. Accessed December 2025.

Regulations governing the electrical grid require the Project to sell capacity without preference towards a particular generation technology. Portions of the Project or capacity rights may be owned by electric utilities, cooperatives, government entities, corporate energy providers, or independent generators in the WECC, MISO, or SPP regional power markets.

Overall, this Project offers North Dakota a unique opportunity to meet growing energy needs, strengthen the electric grid, lower transmission cost burdens, and expand markets for the state's energy producers. Additional detail regarding the purpose and benefits of the Project is provided in the Consolidated Application (Case No. PU-26-082).