



# NORTH DAKOTA

TRANSMISSION AUTHORITY

**ANNUAL REPORT**  
JULY 1, 2013 - JUNE 30, 2014

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## OVERVIEW

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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 and wind energy development. The Authority is a builder of last resort, meaning private business has the first opportunity to invest in and/or build needed transmission.

By statute the Authority membership is comprised of the members of the North Dakota Industrial Commission. Andrea Stomberg was appointed Director in March, 2014. The Director works closely with the Executive Director of the NDIC, Ms. Karlene Fine. The Authority has no other staff, and receives no direct general fund appropriation.

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## SUMMARY OF ACTIVITIES

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Whether the issue is project development or legislative initiatives, the Authority is actively engaged in seeking ways to improve North Dakota's energy export capabilities along with transmission capabilities within the state. To be successful Authority staff must have an understanding of the technical and political challenges associated with moving energy from generator to satisfied customer. Outreach to existing transmission system owners and operators and potential developers in order to understand the nuances of successful transmission infrastructure development is necessary. Another key element for success is working with elected officials at

the state and federal levels to ensure that legislation and public policy are designed to support the movement of electricity generated from North Dakota's abundant energy resources to local, regional and national markets.

### North Dakota Industrial Commission



Jack Dalrymple  
Governor



Wayne Stenehjem  
Attorney General



Doug Goehring  
Agriculture Commissioner

### North Dakota Transmission Authority



Andrea Stomberg  
Director

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# STATUTORY AUTHORITY

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Statutory authority for the 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 or to borrow money;
- 2) issue up to \$800 million in revenue bonds;
- 3) enter into lease-sale contracts;
- 4) own, lease, rent and dispose of transmission facilities;
- 5) enter into 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 constructing 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 powers 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 present law up to 30% 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 total \$800 million bonding authority may be sold with the moral obligation of the state. The moral obligation component will enhance the marketability of the Authority's bonds.



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# KEY ELEMENT: OUTREACH

A significant element of the Authority's mission is to solicit ideas from interested parties regarding solutions to transmission expansion issues in North Dakota. Outreach can occur through one-on-one contacts or by participation in organizations and programs designed to bring a wide variety of people and groups together to share ideas and develop solutions.

A number of issues have been brought to the attention of the Authority that may have legislative or regulatory remedies. These include streamlining the Public Service Commission siting regulations, modification of rights-of-way tenure for public utility infrastructure in North Dakota, and concerns about US Fish and Wildlife Service guidelines related to marking of transmission lines within whooping-crane migration areas.

There are a number of transmission projects underway that will expand transmission available to North Dakota generators or may in some way affect transmission or generation in North Dakota. These are summarized briefly below.

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## • **CAPX2020**

CapX2020 is a Minnesota-based initiative of 11 utilities to expand the transmission grid to ensure continued reliable and affordable service. Planning studies indicated that Minnesota customer demand for electricity will increase 4,000 to 6,000 megawatts (MW) by 2020. New transmission lines designed to meet this increasing demand as well as to support renewable energy expansion will be built in phases. The lines identified in the first phase of the effort include:

- Bemidji-Grand Rapids, 68 miles, 230-kV
- Fargo-St. Cloud-Monticello, 250 miles, 345-kV
- Hampton-Rochester-La Crosse, 150 miles, 345-kV
- Brookings County-Hampton, 200 miles, 345-kV

Of particular interest to North Dakota is the Fargo-St. Cloud-Monticello line. This project is designed to alleviate electric reliability concerns in the St. Cloud, Alexandria and Red River Valley areas, as well as meet the region's projected electric growth and provide an outlet for new generation. The Fargo – Monticello line is expected to be in service in 2015.

- **MINNKOTA POWER COOPERATIVE PROJECT**

Construction has been completed on the Center to Grand Forks (CGF) 345-kilovolt Transmission Line. When energized the \$353 million, 250-mile line will transport energy from the Milton R. Young Station near Center, N.D., to Minnkota Power Cooperative's service territory in eastern North Dakota and northwest Minnesota. The CGF Project is the longest line in state history that begins and ends within the state of North Dakota. It's also Minnkota's largest capital investment ever in transmission facilities. The line will meet Minnkota's obligations as a transmission services provider for grid reliability and long-term load growth needs.

- **BASIN ELECTRIC POWER COOPERATIVE WESTERN ND PROJECT**

In response to the enormous growth in western North Dakota related to oil and gas development, Basin Electric has completed the necessary studies for the construction of a 200 mile 345kV line from the Antelope Valley Station (AVS) to connect to substations near Grassy Butte and Williston, and end near Tioga, North Dakota at the Neset 345-kV Substation. The environmental studies are completed and awaiting final approval. Construction on the AVS to Neset 345-kV line is scheduled to begin in 2014.

- **BIG STONE SOUTH TO ELLENDALES (BSSE)**

The Big Stone South to Ellendale MVP line is a 150-175 mile transmission line from the proposed Big Stone South substation to the proposed Ellendale substation near Ellendale, North Dakota. Montana-Dakota Utilities Co. and Otter Tail Power Company will jointly own the line. MISO has scheduled the line to be in service by 2019. Siting permits have been obtained by the project.

- **GREAT NORTHERN TRANSMISSION LINE PROJECT**

In October, Minnesota Power filed a certificate of need with the Minnesota Public Utilities Commission for this proposed approximately 240-mile 500kV line, which will link a Manitoba Hydro transmission line at the Canada-U.S. border to a Minnesota Power electric substation on Minnesota's Iron Range. While not directly impacting North Dakota, part of the filing references wind/hydro synergies between hydropower from Manitoba and wind from North Dakota facilities, as well as a reduction in coal generation used by Minnesota Power. The regional impacts will be studied by MISO as part of their transmission expansion studies.

- **WESTERN AREA POWER ADMINISTRATION (WESTERN)**

The Upper Great Plains Region (UGP) of the Western Area Power Administration (Western) manages transmission facilities in Montana, North Dakota, South Dakota, Nebraska, Minnesota and Iowa, and markets power from the Pick-Sloan Missouri Basin Program-Eastern Division. UGP transmission facilities are integrated with the transmission facilities of Basin Electric Power Cooperative and Heartland Consumers Power District to form the Integrated System (IS). Recently the IS owners announced their intent to join the regional transmission organization (RTO) Southwestern Power Pool (SPP) with full integration by October, 2015.

- **ALLETE ENERGY CORRIDOR**

A comprehensive pathway for moving the varied energy resources of North Dakota is the idea behind the ALLETE Energy Corridor. ALLETE Clean Energy is moving forward with plans to develop the concept which would provide for the movement of natural gas, petroleum products, water and wastewater, wind energy and future sequestered carbon.

The backbone of the energy corridor is an existing 465-mile path that contains a direct current transmission line running between Center, North Dakota, and Duluth, Minnesota. The energy corridor may parallel adjacent right of way along this existing path, as well as some 60 miles west to the Bakken shale oil fields.

- **XCEL ENERGY TRANSMISSION DEVELOPMENT COMPANY**

The newly formed Xcel Energy Transmission Development Company, LLC (XETD) proposed a transmission Formula Rate for inclusion in the MISO Open Access Transmission, Energy and Operating Reserve Markets Tariff. XETD is a transmission-only company established by Xcel Energy Inc. in April 2014 to, among other things, develop and own transmission projects in the MISO region. With the finalization of a competitive bidding process for transmission projects in MISO, other companies may also develop similar companies. The North Dakota provision allowing incumbent transmission developers a first right of refusal to develop MISO transmission in their service territories is significant and may be challenged by independent transmission developers.

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# KEY ELEMENT: PLANNING

Achieving a high level understanding of regional transmission planning represents a major portion of the Authority's workload. This is accomplished through participation in the regional planning efforts of entities such as the FERC-recognized regional transmission organizations (RTOs) representing North Dakota transmission owners and developers. The RTOs members and stakeholders determine how to improve the country's transmission infrastructure, remove transmission "bottlenecks" and how to improve the transmission of energy, including low-carbon and zero-carbon energy, from production areas to major load centers. The RTOs screen, model and propose cost effective transmission projects to enhance regional energy movement.

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- **MIDCONTINENT INDEPENDENT TRANSMISSION SYSTEM OPERATOR (MISO) TASK FORCES**

The MISO supports a number of task forces and study groups that evaluate the feasibility of new lines and line upgrades designed to facilitate the interconnection of both traditional and renewable generation in the MISO footprint. These are approved as Midwest Transmission Expansion Projects or as Multi-Value Projects (MVPs).

The transmission lines identified by the MVP studies are lines that are expected to have significant economic and reliability benefits to MISO customers. The significance of a transmission project being identified as an "MVP line" is that the cost of building the line will be allocated across the MISO footprint. Of particular importance to North Dakota are the Ellendale to Big Stone, the Big Stone to Brookings and Brookings to Twin Cities MVP lines which are in the permitting process or under construction. Numerous other projects are under active consideration in the MISO West area to upgrade or build new transmission or substation facilities ([www.misoenergy.org](http://www.misoenergy.org)). MISO west includes portions of Montana, North Dakota, Minnesota, Iowa and Wisconsin.

Detailed planning of electrical infrastructure in the MISO footprint, which covers the service territories of OTP, MDU, GRE, XCEL and MRES in North Dakota, is actively managed by the technical taskforces at MISO, and cost effective and timely solutions are approved by the MISO board. With the recent announcement that Western and Basin Electric Power Cooperative (BEPC) intend to join the FERC approved RTO, the Southwestern Power Pool (SPP) by October, 2015, similar infrastructure planning and cost sharing will be available to these entities. As a result, sophisticated transmission planning by RTOs will cover the entire state of North Dakota, as well as much of the surrounding states.

EPA's recent Clean Power Plan proposal will have significant impacts on power generation in the state and country. MISO is actively involved in modeling compliance scenarios and impacts to reliability. The state is represented in the Organization of MISO states, as well as by MISO members who participate in MISO modeling and review. While the EPA's proposal does not impact transmission directly, it may impact how transmission is utilized and how North Dakota generation plants are dispatched

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# KEY ELEMENT: GOVERNMENT ACTION

Providing elected officials with the information necessary to make informed decisions is another function of Authority staff. Whether the issue is setting state energy policy regarding transmission development or commenting on federal transmission legislation, the Authority serves as a resource for decision-makers. In the last year the Authority was busy on several fronts working with the following entities: the EmPower ND Commission, Governor's Office, Department of Commerce, and the ND Public Service Commission.

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- **EMPOWER ND COMMISSION**

The Authority was an active participant in the EmPower ND Commission work. Authority activities included briefing the Commission on transmission issues in North Dakota and participating in the design of Commission goals. In the 2014 EmPower ND report the EmPower Commission highlighted infrastructure needs in North Dakota.

- **INTERAGENCY COORDINATION**

As important as everything else discussed in this report, is the coordination of efforts among the various government entities with an interest in transmission development. In particular, meetings are held with the representatives from the Public Service Commission to discuss the status of transmission projects. On occasion other offices request technical support and policy guidance from Authority staff.

- **WESTERN NORTH DAKOTA ENERGY DEVELOPMENT INFORMATION EXCHANGE COUNCIL**

At the request of the Governor, Basin Electric, MDU and the Transmission Authority serve on the Western North Dakota Energy Development Information Exchange Council. The purpose of this Council is to serve as a conduit for the exchange of future energy development plans in the Williston Basin. Other members of the Council include several oil and gas companies and representatives from the NDDOH, DOC, Division of Mineral Resources and State Water Commission.

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## **CONCLUSION**

The expansion of transmission capacity in the State of North Dakota was one of the key reasons for the creation of the Authority in 2005. As many in North Dakota have discovered there are no easy answers to the perplexing questions of how to quickly expand transmission infrastructure in order to export more energy from our state. The transmission issues are complex and changes to the system must be made with great care to ensure the reliability of the existing system and to maintain the ability of the system to provide electricity to its customers 24 hours a day, seven days a week.

The Authority has identified regulatory changes that should be considered to ease transmission development in the state, and to reduce incentives to locate transmission outside the state's boundaries. Long term, transmission builders and wildlife interests need to develop reasonable

and workable guidelines or rules to protect migratory birds while allowing transmission development within migration corridors. Protection of incumbent transmission owners and developers as MISO identifies future transmission lines to be built within the state will be important.

Anticipated finalization of the Clean Power Plan will impact generation in the state and the region, and likely change transmission requirements and use. Continued participation by the state and industry in the administrative process as this rule is finalized is critical.

The good news is that new transmission is being built and will continue to be built as the demand for new generation grows not only in the region, but also in the nation. The North Dakota Transmission Authority will continue to work to help facilitate development.

