



NORTH DAKOTA

TRANSMISSION AUTHORITY

ANNUAL REPORT
JULY 1, 2012 - JUNE 30, 2013

OVERVIEW

At the request of the North Dakota Industrial Commission (NDIC), the North Dakota Transmission Authority (Authority) was created by the North Dakota Legislative Assembly in 2005. Since its inception the Authority's mission has been 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 would have the first opportunity to invest in and/or build additional needed transmission.

By statute the Authority membership is comprised of the members of the North Dakota Industrial Commission. Sandi Tabor served as director of the Authority from October 2006 through February 2013. The Commission subsequently named Curtis Jobs to serve as Acting Transmission Authority Director. The Authority 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.

SUMMARY OF ACTIVITIES

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 in-depth understanding of the technical and political challenges associated with moving energy from generator to satisfied customer. Detailed planning is a prerequisite along with outreach to potential developers and existing transmission system owners and operators in order to understand the nuances of successful transmission infrastructure development and to

meet the goals set by the EmPower ND Commission of increasing North Dakota's installed capacity of wind generation to 5,000 megawatts by 2020.

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 take advantage of moving electricity generated from North Dakota's abundant energy resources to local, regional and national markets. During the year the Authority continued to focus its efforts on three key areas: planning, outreach and government action.

North Dakota Industrial Commission



Jack Dalrymple
Governor



Wayne Stenehjem
Attorney General



Doug Goehring
Agriculture Commissioner

North Dakota Transmission Authority



Sandi Tabor
Director

STATUTORY AUTHORITY

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.



KEY ELEMENT: OUTREACH

A significant element of the Authority's mission is to solicit ideas from interested parties regarding solutions to transmission constraint issues in North Dakota. Outreach can occur in many ways, whether through one-on-one contacts with individuals or by participating in organizations and programs designed to bring a wide-variety of people and groups together to share ideas and develop solutions. The Authority's outreach program includes both individual contacts and participation in larger group meetings.

- **CAPX2020**

CapX2020 is a Minnesota-based joint initiative of 11 transmission-owning utilities to expand the electric 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 must be built in phases designed to meet this increasing demand as well as to support renewable energy expansion. 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 was 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. With route permits from the MN Public Utilities Commission in hand, construction on the Minnesota portion of the Monticello to Fargo line began in 2012. The North Dakota Public Service Commission (PSC) issued a route permit in 2012. The Fargo – Monticello line is expected to be in service in 2015.

- **MINNKOTA POWER COOPERATIVE PROJECT**

Construction of the 260-mile 345kV transmission line proposed by Minnkota Power Cooperative, Inc. began in the summer of 2012. The new line will run from Center to Grand Forks and is expected to be completed by February 2014. The line will move energy from the existing Milton R. Young II power station directly into the Minnkota service territory. Reallocation of energy presently transmitted on the existing line to this new line will also allow more energy from potential future wind power developments to be carried. The estimated cost of the project is \$350 million.

- **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 future construction of a 200-mile 345kV line from the Antelope Valley Station (AVS) to connect to the substations near Grassy Butte and Williston, and end near Tioga, North Dakota at the Neset 345kV Substation. The environmental studies are completed awaiting final approval and Basin Electric has secured the majority of the easements along the potential corridor. The demand for electricity has exceeded what the Williston Basin Load Growth Study predicted for generation and transmission requirements needed to serve the new growth in Western North Dakota. Construction on the AVS to Neset 345kV line is scheduled to begin in 2014.

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

The Big Stone South to Ellendale 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 manage the permitting, construction and operation of the line. As noted above, in fiscal year 2012 Mid-continent Independent System Operators, Inc (MISO) identified the BSSE transmission line as an important multi-value project (MVP). MISO has scheduled the line to be in service by 2019.

- **MANITOBA HYDRO PROJECT**

There are two options (East, West) to bring approximately 1100 MWs of new Manitoba hydro to provide a balancing to the wind generation. The West line option would build a 500kV line from Winnipeg to the Fargo-Moorhead Area and a 345kV line from Fargo-Moorhead to Monticello, Minnesota. The study has shown MISO benefits for both routes. The final report issued during the past year included a recommendation to include both projects in appendix

B (study phase) of the MISO Transmission Expansion Planning (MTEP 13). This will mean that both of these routes will be further studied to determine the feasibility of being moved to appendix A, the construction phase.

North Dakota base-load coal plants could be displaced by the Manitoba Hydro generation according to the MISO study. This warrants North Dakota's attention as it could have an impact on North Dakota's coal base-load generation. North Dakota should request MISO to conduct a thorough review of the effect of building a 500kV transmission line to accommodate new Manitoba Hydro on North Dakota's generation fleet.

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

The Upper Great Plains Region (UGP) of the Western Area Power Administration (WAPA) 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). UGP manages a balancing authority center in Watertown, S.D. Recently the IS owners have explored the possibility of joining a regional transmission organization (RTO).

The final decision to proceed with a public process does look to take place sometime in 2013 starting with a notice in the federal register outlining the meeting schedule and a website where pertinent information could be obtained. Possible meeting places include Lincoln, Nebraska, Sioux Falls, South Dakota, Fargo or Bismarck, North Dakota and Billings, Montana. Outreach will go to the preference customers of WAPA power that include cooperatives, municipals and tribes. The ultimate decision to join an RTO will be made by the WAPA Administrator, but the Department of Energy will be part of the process. A final decision would not be expected until late 2013 or in the first quarter 2014. WAPA will look at two RTOs, the Midwest Independent System Operators (MISO) and the Southwest Power Pool (SPP). In March 2013, Basin Electric passed a resolution supporting WAPA in its public process and recommended SPP as their choice for membership.

KEY ELEMENT: PLANNING

Transmission planning at the macro level represents a major portion of the Authority's workload. Through participation in several regional planning efforts and one major national focus, entities representing significant portions of the United States continue to discuss how to improve the country's aging transmission infrastructure and how to improve the transmission of low-carbon and zero-carbon energy from rural areas to urban areas. Areas of common ground are being identified as well as areas of local and regional concerns in forums that encourage debate and resolution.

- **WILLISTON BASIN LOAD GROWTH STUDY**

In the fall of 2011 discussion occurred among a number of groups interested in electric transmission capacity in western North Dakota. Basin Electric and MDU participated in the discussions, and each company identified the need for a more detailed load growth analysis. The Commission awarded a contract to Bismarck-based Kadmas, Lee and Jackson to conduct the study. The Authority served as project manager with Basin Electric and MDU serving as consulting partners. The study included in-depth interviews with numerous companies associated with oil and gas development in the Williston Basin, including secondary suppliers. Population studies were conducted by research scientists from North Dakota State University. The final study was released in October, 2012 and showed that there was a need for nearly three times the current electric load over the next 20 years – from 971 MW to 3300 MW in 2032.

- **MULTI-VALUE PROJECTS (MVP TASK FORCE)**

As a result of prior work accomplished by the Upper Midwest Transmission Development Initiative and the Regional Generation Outlet Study (RGOS), the Midwest ISO (MISO) established the MVP Candidate Task Force to evaluate the feasibility of the "starter project" lines identified as being common to all three RGOS transmission expansion scenarios. The new MVP category was designed to facilitate

the interconnection of location-constrained resources (renewable and traditional generation) in the MISO footprint.

During fiscal year 2012, the MVP process moved from a study to a final recommendation and ultimately the approval of 17 lines identified in the MVP Study as MVP lines. The transmission lines identified by the MVP study are lines that have near-term value to the ultimate build-out of transmission across the MISO footprint. 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 (# 6), Big Stone to Brookings (# 1) and Brookings to Twin Cities (# 2) lines. With the MISO Board approval several companies interested in participating in the construction of certain MVP lines will take the next steps necessary before actual construction begins. Montana-Dakota Utilities Co. (MDU), Great River Energy (Great River), Otter Tail Power Co. (Otter Tail) and Xcel have indicated an interest in building the Ellendale to Twin Cities segments. During the past year the Authority has continued to work with these companies regarding the potential build-out of this transmission.

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, the ND Tax Department, ND Public Service Commission, ND Legislative Assembly and the Congressional Delegation.

- **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. The EmPower Commission's transmission goal continues to be to increase North Dakota's energy export capacity to 7,500 megawatts by 2020 in coordination with other states and regional planning entities and to facilitate permitting, construction and upgrading transmission systems provided acceptable cost allocation methodology is developed and approved by FERC.

- **NORTH DAKOTA LEGISLATIVE ASSEMBLY**

Provided technical support on legislation supported by the EmPower Commission and provided technical information to the legislators on transmission issues during the 2013 legislative session.

- **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 regular meetings are held with the representatives from the Public Service Commission to discuss the status of transmission projects. Authority staff also provided regular briefings to the Industrial Commission. The Authority staff also provided comments and background to the Governor's staff on transmission issues raised at various regional and national meetings. 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 are serving 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.

- **PSC SITING JURISDICTION WORKGROUP**

Authority staff continued to coordinate meetings of the PSC Siting Jurisdiction Workgroup to finalize rules related to wind farm siting. The group consisting of representatives from industry and state agencies completed work on the rules in early summer 2012 and the PSC finalized rules later in the summer. The rules were adopted by the PSC in November 2012.

- **WESTERN ND ENERGY COUNCIL**

In light of the numerous studies addressing various issues associated with oil and gas development in the Williston Basin, Authority staff participates with the Department of Commerce and the Governor's Office in the Western ND Energy Council. The Western ND Energy Council serves as a forum where each study group shares information regarding their respective study and provides an opportunity for everyone to discuss issues of common concern.



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, 7 days a week. 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 new development.

