

# NORTH DAKOTA

TRANSMISSION AUTHORITY

**ANNUAL REPORT**  
JULY 1, 2011 - JUNE 30, 2012

---

## 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 has served as director of the Authority since October 2006. Ms. Tabor 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. 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. 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.

### 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: 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 discussions 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 NDIC awarded a contract to Bismarck-based Kadrmaz, Lee and Jackson to conduct the study. The Transmission Authority will serve 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 is scheduled to be presented to the NDIC at its October 2012 meeting.

- **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 the last year, the MVP process moved from a study to a final recommendation. 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.

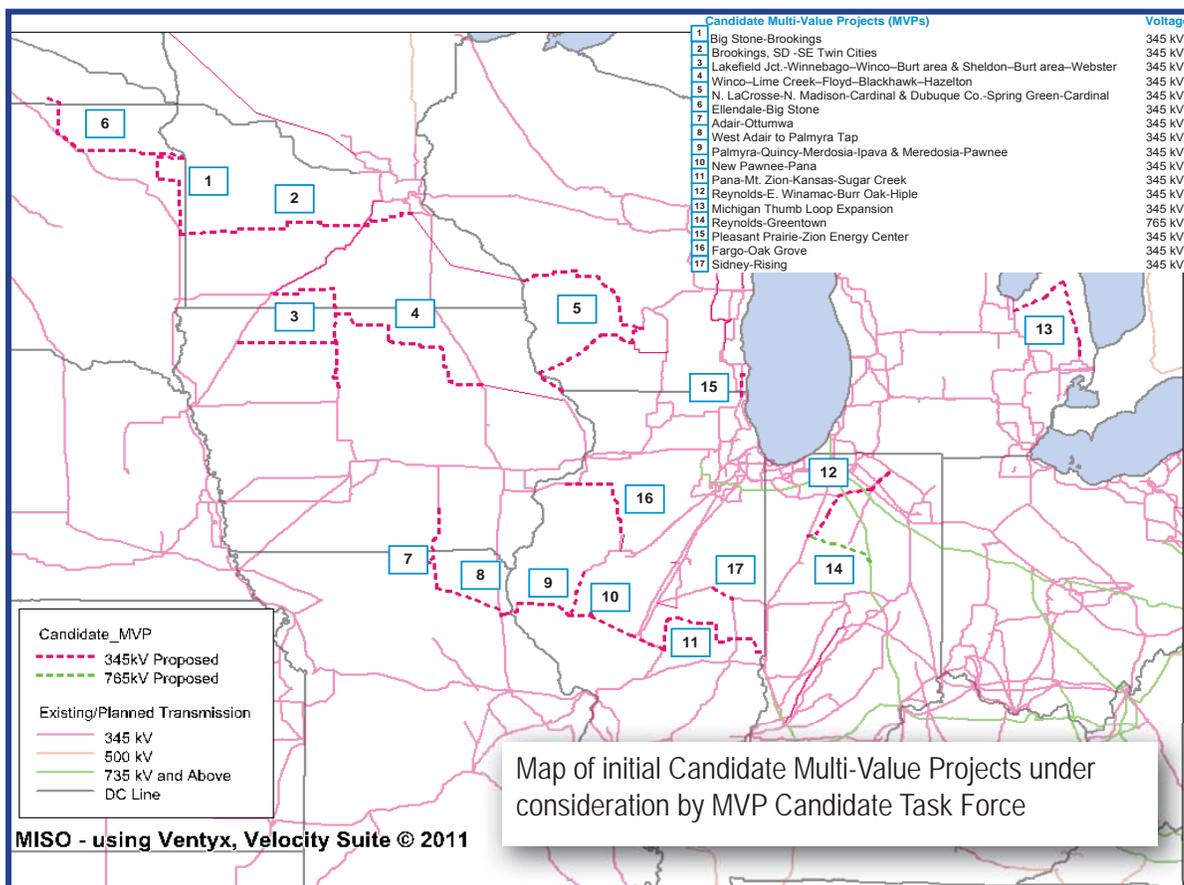
In September 2011 the Authority sent a letter supporting the proposed MVP lines to the President of MISO. At the request of Authority staff the North Dakota Congressional Delegation followed suit with a letter of support in November 2011. On December 8, 2011, the MISO Board of Directors approved the designation of the 17 lines identified in the MVP Study as MVP lines.

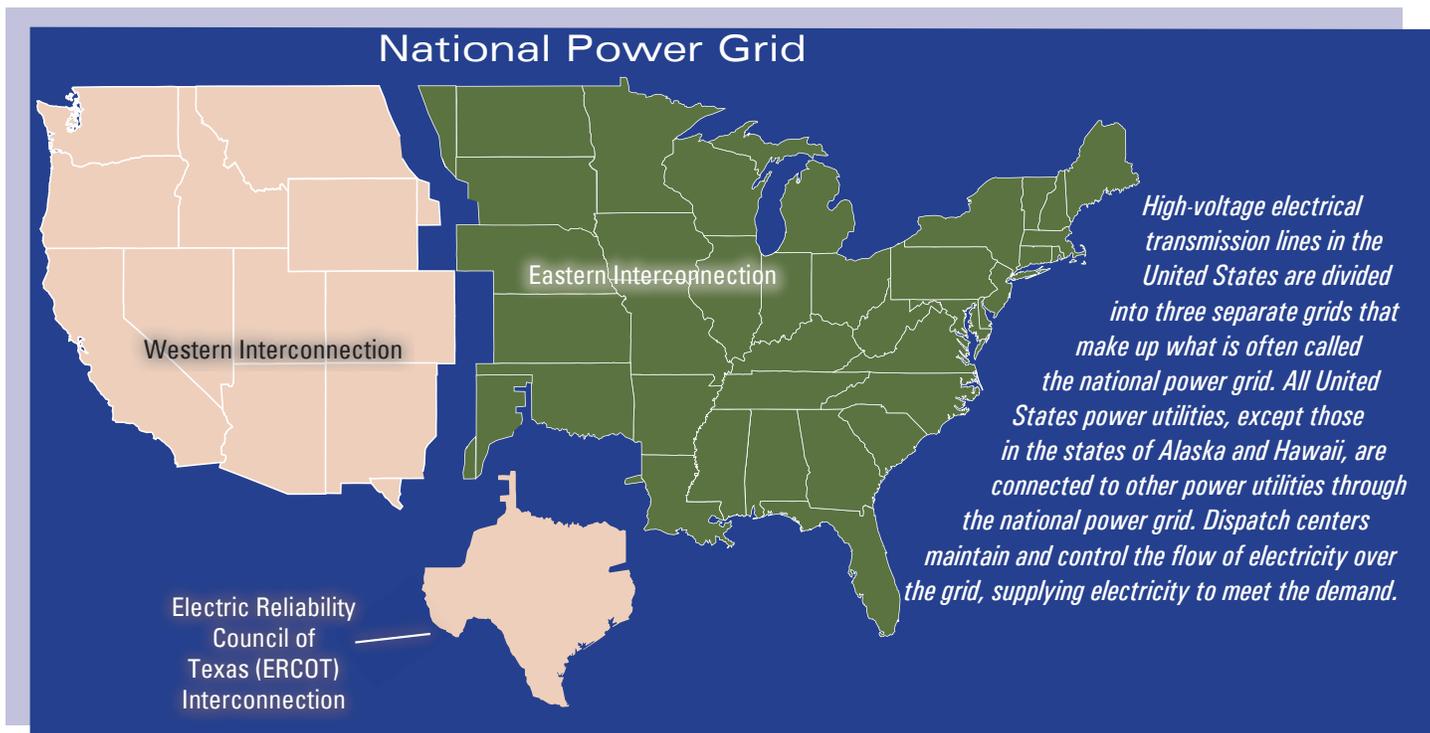
Of particular importance to North Dakota are the Ellendale to Big Stone (# 6), Big Stone to Brookings (# 1) and Brookings to Twin Cities (# 2) lines. With the MISO Board approval several companies interested in participating in the construction of certain MVP lines will take the next steps necessary 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.

## • EASTERN INTERCONNECTION STATES PLANNING COUNCIL

The American Recovery and Reinvestment Act of 2009 (ARRA) required states to coordinate planning in the Eastern Interconnection and provided the Department of Energy (DOE) with planning grant monies to encourage a state-led transmission planning process. The Eastern Interconnection States Planning Council (EISPC) was formed in June 2009 to apply for a DOE planning grant. The focus of EISPC (which includes 39 states and the District of Columbia and the City of New Orleans) was to develop concepts for moving zero-carbon and low-carbon energy throughout the Eastern Interconnection. A grant of \$14 million was awarded to the group in late 2009 to fund a 4-year planning process.

Authority staff, along with representatives from the ND Public Service Commission, represents North Dakota at EISPC meetings. During the last year modeling based on





futures and sensitivities was done in order to begin the process of designing potential transmission scenarios. In addition the group worked on several studies including the identification of energy zones in each state. Argonne National Laboratory developed an interactive program which allows interested parties to work on different energy zone scenarios across the Eastern Interconnection footprint. Additionally, a number of subcommittees are developing white papers on a number of topics, including energy efficiency, demand response, energy storage, distributed renewable resources, distributed fossil fuel resources, nuclear power potential, and clean coal potential. All of the white papers will be completed in 2013.

structure, generation and transmission are managed and coordinated by an independent third party. The report did not make recommendations, but instead recommended that EISPC address a series of questions that will help inform and guide state policy decision-making. The questions focus on the impact of future EPA and FERC proposals/orders on future generation planning, and on what planning rules and market structures will actually induce investment in generation resources. The report on Phase II activities will be released at the end of 2012.

The EISPC also released the Phase 1 report summarizing EISPC activity through 2011. The report concluded that market structures, federal and state policies and transmission incentives could impact transmission planning throughout the Eastern Interconnection. Detailing market structures throughout the states, the report examined how the differences between states could affect private investment and state approaches to planning and resource development. For example, the report noted there are two “fundamentally different market structures” within the interconnection: the traditional structure, and the regional transmission organization (RTO) structure. Both ensure reliable electric service, but the power is managed in distinct fashions. The traditional structure is built around vertically integrated utilities offering generation, transmission, distribution and system operation as a single package. In the RTO

---

---

# 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.

---

---

- **UPPER GREAT PLAINS TRANSMISSION COALITION**

The Coalition is comprised of a broad range of groups interested in solving transmission issues in the region. The Coalition meets periodically to discuss recent events at the local, state, regional and federal levels. For instance, at its last meeting current events at MISO, WAPA, CapX 2020 and the various regional planning efforts were discussed. Of particular interest were the planning efforts among regional transmission operators



*photo courtesy of CapX2020*

(RTOs) required by Federal Energy Regulatory Commission (FERC) Order 1000. MISO and other RTOs located to the south and east are considering ways to improve coordination of cross systems movement. The group also discussed the potential flowgate issues between non-MISO and MISO systems. Concerns were raised that curtailments could occur if MISO continues to use non-MISO systems without adequate compensation. It was announced that the Independent System had cancelled its tariff agreement with MISO. The repercussions of this development could be significant and the issue is before FERC.

• **CAPX 2020**

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 2011. 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 early 2013. 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 \$310 million.

• **MONTANA-DAKOTA UTILITIES PROJECT**

Once the MISO board approved of the MVP lines, MDU announced that they would be working with Otter Tail



Power Company to build the Ellendale to Big Stone line. The companies will be filing the necessary paperwork to preserve their priority status to build the line and also reviewing potential routes. MISO has scheduled the line to be in service by 2019.

- **MANITOBA HYDRO PROJECT**

Authority staff held discussions with representatives from Minnesota Power, Xcel and Great River Energy regarding the potential construction of a 500 kV line from Manitoba Hydro in either northern Minnesota or the Red River Valley in North Dakota. Two studies are being conducted by MISO and will include an analysis of the impact of the lines to North Dakota.

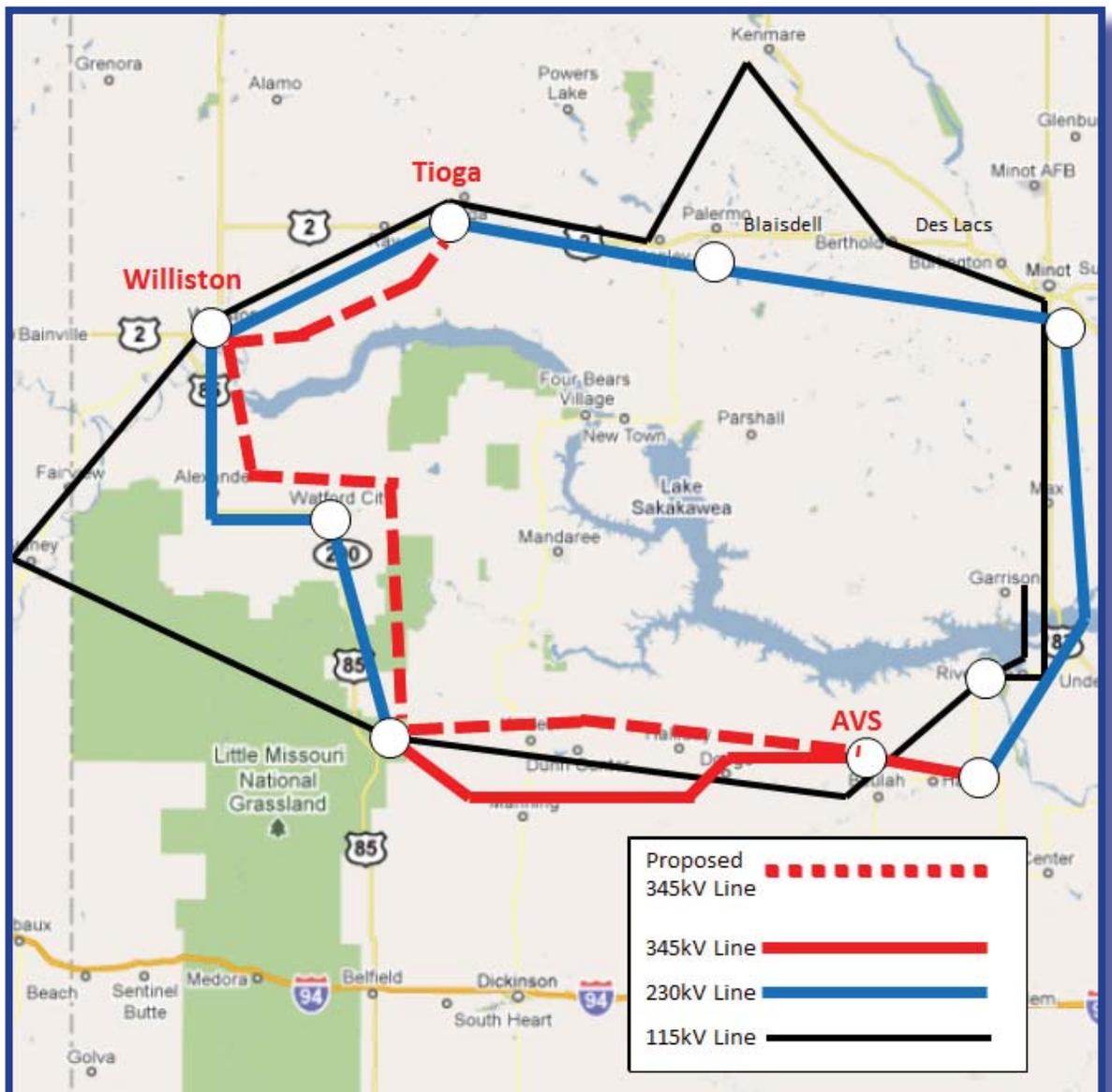
- **BASIN ELECTRIC POWER COOPERATIVE WESTERN ND PROJECT**

In response to the enormous growth in western North Dakota related to oil and gas development, Basin Electric began the necessary studies for the future construction of a 345kV line from the Antelope Valley Station to the Tioga area. Various environmental studies

are being conducted and Basin is working to secure easements along the potential corridor. The results of the Williston Basin Load Growth Study will provide more details as to the exact generation and transmission requirements needed to serve the new growth in Western North Dakota.

- **TRANSMISSION DEVELOPMENT**

During the last two years over 587 miles of high-voltage transmission lines representing over \$670 million in capital investment have been constructed, are under construction or are in the planning stages for future construction.



---

---

---

# 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. In the 2012 Empower ND report the EmPower Commission highlighted infrastructure needs in North Dakota. In particular the report recommended that the State of North Dakota maintain a comprehensive long-range forecast for energy production and supply across all sectors, specifically looking at needed infrastructure to support growth.

- **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. On occasion other offices request technical support and policy guidance from Authority staff. For instance, the Attorney General requested staff to review a request from the Connecticut attorney general asking North Dakota to sign-on to comments critical of a FERC transmission incentives proposal.

- **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.

- **U.S. FOREST SERVICE STUDY**

Authority staff also participated in a scoping meeting sponsored by the US Forest Service regarding the 345 kV line proposed for construction by Basin Electric in western North Dakota. Authority staff also coordinated meetings with natural gas companies and electric generation companies to gauge interest in the development of a utility corridor through Forest Service land.

- **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.

- **INTERSTATE COMPACT ON TRANSMISSION SITING**

At the request of Rep. Kim Koppleman, Authority staff serves on a committee drafting an interstate compact for transmission siting. The national group organized by the Council for State Governments met throughout the year to develop and refine the model compact agreement. The final compact should be ready for approval in late 2012.

### **WILLISTON BASIN STUDY ROUNDTABLE**

In light of the numerous studies addressing various issues associated with oil and gas development in the Williston Basin, Authority staff in conjunction with the Department of Commerce formed the WB Study Roundtable. The Roundtable 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.

- **DEPARTMENT OF ENERGY (DOE) CONGESTION STUDY**

In November, Governor Dalrymple received a request from the DOE for data related to transmission congestion in North Dakota. The request represented the beginning of a required national study that must be conducted by DOE every three years. The focus of the study was to identify national interest transmission corridors. Transmission projects sited within national interest corridors may be eligible for special consideration by DOE if state regulators reject the siting of the projects. In past DOE studies, the "Dakotas-Minnesota" area was listed as an area of principal interest, i.e. a "Conditional Congestion Area." In December Authority staff held a meeting with regional transmission owners to discuss the questions included in the DOE letter. Staff filed answers to the DOE questions and awaits information on the results of the DOE study.



---

## **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 ensure new development.



