

# NORTH DAKOTA LEGISLATIVE MANAGEMENT

Minutes of the

## ENERGY DEVELOPMENT AND TRANSMISSION COMMITTEE

Thursday, July 8, 2010  
Roughrider Room, State Capitol  
Bismarck, North Dakota

Senator Rich Wardner, Chairman, called the meeting to order at 9:00 a.m.

**Members present:** Senators Rich Wardner, John M. Andrist, Jim Dotzenrod, Robert M. Horne, Joe Miller, George Nodland; Representatives Mike Brandenburg, Matthew M. Klein, Todd Porter, Dave Weiler

**Members absent:** Representatives Tracy Boe, Lee Kaldor

**Others present:** EmPower ND Commission Members Shane C. Goettle, Ron Day, Terry Goerger, Mike Rud, Ron Ness, Curtis Jabs, Mark Nisbet, Randy Schneider, Andrea Stomberg, David Straley, Sandi Tabor, John Weeda, Chuck MacFarlane

See [Appendix A](#) for additional persons present.

**It was moved by Representative Klein, seconded by Senator Miller, and carried on a voice vote that the minutes of the previous meeting be approved as distributed.**

### COMPREHENSIVE ENERGY POLICY OVERVIEW - EMPOWER ND COMMISSION REPORT

Mr. Shane C. Goettle, Commissioner, Department of Commerce, made a presentation ([Appendix B](#)) on the EmPower ND Commission and on the major policy goals for all energy; wind; transmission; lignite and coal conversion facilities; ethanol; biodiesel; biomass; energy efficiency; refining; oil and gas; natural gas processing; petroleum marketing; solar, geothermal, hydrogen, and hydropower; workforce; and infrastructure. He said the general principles are to grow all energy industries, use sound science and economics, support research and development for new technologies, support incentives over mandates, support fair regulations and friendly business climate, and be environmentally responsible.

Mr. Goettle provided testimony based on a draft of a report ([Appendix C](#)) of the EmPower ND Commission entitled *EmPower ND 2010-2025 Comprehensive State Energy Policy*. He said wind is currently at approximately 1,200 megawatts on the ground. He said the goal is to have 5,000 megawatts by 2020. He said this state needs an additional 2,000 megawatts in transmission by 2020 to meet the goal of 7,500 megawatts export capacity. He said 350 million gallons of ethanol are now being produced, and the goal is to have 450 million gallons

by 2015. He said this state is fourth among states in energy production for oil.

In response to a question from Senator Nodland, Mr. Goettle said the largest demand for workforce is in the oil and gas industry. He said Williston State College petroleum training has trained over 4,000 people for the oil and gas industry. He said the Department of Commerce and the North Dakota Petroleum Council are studying the number of skills needed by a workforce through a survey of 77 employers. He said the skill-set may be changing, and there may be a need for a higher skill-set.

In response to a question from Senator Andrist, Mr. Goettle said the challenge to recruiting people from states where there is high unemployment is housing. He said out-of-state applicants will apply, but they need a place to live if hired in this state.

In response to a question from Senator Andrist, Mr. Goettle said the market needs confidence before there will be an investment in new housing. He said the credit crunch problem also has created issues with people receiving access to local banking. He said the federal government has created volatility by not having an energy policy. He said despite all of this, some developers are starting to build housing.

In response to a question from Senator Horne, Mr. Goettle said housing is being provided through recreational vehicles, skid shacks, man camps, and tents. He said there is some apartment construction, and a few homes are being constructed. He said some workers have credit issues and are good candidates for the rental market.

In response to a question from Senator Miller, Mr. Goettle said the two-year institutions have quickly developed programs to provide training for the energy industry--Williston State College for oil and gas and Lake Region State College for wind. He said the University of North Dakota and Minot State University are working on four-year degrees, but creating a four-year degree program takes more time. He said the University of North Dakota is working on an engineering program in geology, and Minot State University is working on an energy economics degree.

Mr. Goettle said the Department of Commerce is engaging some communities in a housing study. He said this study will be important for developers. He said another study is of employers to determine housing needs. He said the study with communities will find out what the capacity issues are for the communities.

Senator Nodland said there was over \$20 million in debt because of overbuilding in Dickinson and Williston with the last oil boom. He said local people are reluctant to invest because of the historical failure of investing in an oil boom. He said political subdivisions need help from the state in the form of planning and infrastructure, not just money.

In response to a question from Senator Nodland, Mr. Goettle said planning is the key, and there is a need for quantifiable information. He said Watford City has hired an engineering firm, and Stanley is looking at the same, to review infrastructure and plan for growth. He said the Department of Commerce is cost-sharing this planning.

In response to a question from Senator Miller, Mr. Goettle said North Dakota has an opportunity in all areas of energy. He said there have been great advances made in the area of renewables. He said North Dakota wants to be first in American energy, no matter what the demand.

### **Wind**

Mr. Mark Nisbet, North Dakota Principal Manager, Xcel Energy, Inc., Fargo, presented the portion of the report on wind energy. He said there is approximately 1,200 megawatts of installed wind energy with 6,000 megawatts in the planning stages. He said there were one to two megawatts eight years ago. He said legislation last session improved siting for transmission and addressed taxation issues.

In response to a question from Senator Andrist, Mr. Nisbet said the competitiveness of wind as compared with coal depends upon whether a coal plant is an existing coal plant or a new plant. He said wind is competitive with new plants. He said the cost for fuel for wind is zero and is not affected by inflation. He said federal tax credits are secure in the short term and make wind power viable.

In response to a question from Representative Porter, Mr. Nisbet said wind siting could stand the oversight of the Public Service Commission. He said industry wants development without negative landowner impacts. He said 6,000 megawatts of planned wind energy will need to be developed in an orderly manner.

In response to a question from Representative Porter, Mr. Chuck MacFarlane, President and CEO, Otter Tail Power Company, Fergus Falls, Minnesota, said North Dakota has more megawatts sited than South Dakota and is in a different situation than South Dakota, so comparisons between the two as to siting may not be appropriate.

In response to a question from Representative Porter, Mr. Goettle said the commission recommended that the siting threshold for the Public Service Commission be reviewed. He said there are issues when a wind farm is sited next to an existing wind farm and both separately are below the siting threshold but combined exceed the siting threshold. He said there is an issue in the northeast and central part of this state concerning unmanned aerial testing

at the University of North Dakota. He said a wind farm creates challenges for radar. He said there are competitive economic reasons to not want wind in a particular area. He said siting needs to be reviewed as the best sites are being taken. He said the less favorable sites need to be weighed against other uses.

In response to a question from Senator Miller, Mr. Nisbet said the federal tax credit for wind is critical.

In response to a question from Senator Horne, Mr. Nisbet said wind energy can be stored as compressed air or through the creation of hydrogen. He said there are some batteries that can store up to one megawatt of power but are the size of a semitrailer.

In response to a question from Representative Brandenburg, Mr. Nisbet said there needs to be a fair regulatory environment for the development of wind. He said he does not support socialization impact zoning. He said if there is regulation at the state level, there will be more consistency and less of a personal adversarial tone that can arise if the decision is local.

In response to a question from Representative Brandenburg, Mr. Ron Ness, President, North Dakota Petroleum Council, said there is lots of pressure for the Legislative Assembly to respond quickly, but the Legislative Assembly needs to base decisions on science after careful reflection.

Senator Wardner said there is a fine line between local control and the administrative ease of state control in siting.

### **Transmission**

Ms. Sandi Tabor, Director, North Dakota Transmission Authority, presented the portion of the report on transmission. She said there are 250 miles of transmission under construction and recently completed at an estimated investment of \$81.8 million. She said cost allocation--who pays and how much--for transmission will be determined soon. She said Midwest ISO will file a tariff on July 15, and the Federal Energy Regulatory Commission should approve the tariff. She said as the result of initiatives by Midwest ISO and the Upper Midwest Transmission Development Initiative, there will be a plan for moving power across the Midwest ISO footprint.

In response to a question from Representative Klein, Ms. Tabor said the cost allocation agreement provides for more socialization of the cost across the footprint with less impact on any one state.

In response to a question from Representative Brandenburg, Ms. Tabor said Midwest ISO has cleaned up the queue and has provided a fast track for viable projects. She said she has not heard a complaint about the queue for a year.

### **Lignite and Coal Conversion Facilities**

Mr. David Straley, Manager, Government and Public Affairs, North Dakota Operations, North American Coal Corporation, presented the portion of

the report on lignite and coal conversion facilities. He said lignite represents 29,000 jobs, of which 4,000 are direct and 25,000 are indirect. He said the lignite industry provides \$100 million in tax revenue a year. He said the first power plant built in the last 20 years was recently built in this state. He said there is at least an 800-year supply of coal in this state. He said the challenges to the coal industry are the availability of technology, the development of technology, and the affordability of technology. He said the goal is to keep the coal industry we have while building new clean coal plants and creating new industries of coal to liquids or gas. He said as a matter of policy, there needs to be a public education program for carbon dioxide. He said North Dakota is one of the 12 clean air states, and the commission supports reasonable federal air quality standards and encourages Congress to support preemption by the Environmental Protection Agency of state and local regulation of carbon dioxide emissions. He said the EmPower ND Commission supports the long-term sequestration of carbon dioxide.

In response to a question from Senator Miller, Mr. Straley said last legislative session the Legislative Assembly approved a law that made core space belong to the surface owner and for rules to be adopted by the Industrial Commission for sequestration. He said the state has addressed the issue of carbon dioxide sequestration well.

Senator Miller said he is concerned with the percentage of 25 percent of renewable energy by 2025 because it hamstrings the growth of other resources. He said he prefers a solid number instead of a percentage.

In response to a question from Senator Andrist, Mr. Straley said coal to gas is still viable with the increased amounts and lowered prices of natural gas. He said the development of an energy resource should not be restricted because there is something better at the present time. He said coal to gas and liquids cuts down on imported oil. He said the more domestic energy the better. He said all energy types should have an even platform for competition. He said coal to liquids and emerging technologies need to be incorporated into the state tax code.

### **Ethanol**

Mr. Randy Schneider, President, North Dakota Ethanol Producers Association, presented the portion of the report on ethanol. He said 350 million gallons of ethanol are produced at present, and the goal is 450 million gallons by 2015. He said there are 42,000 flex fuel vehicles in North Dakota. He said 2009 legislation provided incentives for blender pumps and created a checkoff program for the ethanol utilization council. He said the cap for the amount of ethanol that can be produced by corn is being reached. He said ethanol will have to be made from biomass in the future. He said this diversification will benefit North Dakota. He said the major challenge to ethanol is pipeline infrastructure. He said most

ethanol is moved by rail at present. He said the countercyclical ethanol production incentive program works well as an incentive program. He said there needs to be improvements in the marketing, distribution, and use of ethanol. He said a 100 million gallon ethanol plant has 100 trucks deliver feedstock each day.

In response to a question from Representative Klein, Mr. Schneider said the cost for an ethanol pipeline is no different from a traditional oil and gas pipeline.

In response to a question from Senator Wardner, Mr. Schneider said research is being conducted by the Energy and Environmental Research Center and North Dakota State University for the use of switchgrass and wheat straw as feedstocks for ethanol.

In response to a question from Senator Dotzenrod, Mr. Schneider said the Spiritwood facility will use wheat straw. He said the development of sugar beets as a feedstock is in the early stages. He said if there is success with cellulosic ethanol at Spiritwood, there will be more efforts and opportunities. He said ethanol plants in western North Dakota have worked with oil companies to use the carbon dioxide created by the ethanol plant for tertiary recovery. He said the plants in the eastern part of the state do not have a market for carbon dioxide because there is not a local food processing facility.

### **Biodiesel**

Mr. Terry Goerger, farmer, Mantador, presented the portion of the report on biodiesel. He said biodiesel is suffering because of the nonextension of federal programs. He said North Dakota is a leader in feedstocks for biodiesel. He said canola is used because of its high oil content. He said there is research being done to provide more oil and create better cold flow capabilities from canola oil. He said biodiesel is like vegetable oil. He said the Energy and Environmental Research Center has created a biobased diesel fuel that is very similar to regular diesel fuel. He said the federal renewable fuel standards will be increased to require one billion gallons by 2020. He said there is a need for a heated blender in North Dakota. He said there needs to be longer federal incentives. He said the incentives should last for five years. He said the state should consider a biodiesel countercyclical production incentive like the one provided for ethanol.

In response to a question from Senator Miller, Mr. Goerger said biofuel does not eliminate the need for urea tanks. He said biofuel of 20 percent or higher reduces greenhouse gases, cancer-causing chemicals, and particulates. He said biodiesel aids lubricity.

In response to a question from Representative Klein, Mr. Ron Day, Tesoro Refinery, Mandan, said there is a joint venture between Tesoro, the Energy and Environmental Research Center, and an

engineering company to marry biodiesel with a refinery.

In response to a question from Senator Wardner, Mr. Goerger said the majority of biodiesel is transported by rail, but some is transported by truck.

In response to a question from Senator Dotzenrod, Mr. Goerger said the main impediment to having a large fleet of diesel passenger vehicles is the Environmental Protection Agency's rules. He said Europe is not as strict as the United States. He said as new technologies are applied to diesel engines, more engines will meet United States standards, and more vehicles will be sold in the United States.

### **Biomass**

Mr. John Weeda, Plant Manager, Coal Creek Station, Great River Energy, Underwood, presented the portion of the report on biomass. He said the main impediment to the use of biomass is the infrastructure needed to produce, store, and transport the biomass. He said the main uses of biomass are cellulosic-based ethanol and cofiring biomass with coal. He said biomass is not cost-competitive with alternatives. He said there needs to be infrastructure for production, storage, and transportation. He said because the industry is in the infancy stage, investment is not there to develop the infrastructure. He said biomass is in competition with higher-returning crops and needs to use residues and marginal lands to be successful. He said the Spiritwood facility is looking at a 20 million gallon per year cellulosic ethanol plant. He said the leftover byproduct can be used as a fuel to be cofired with lignite.

In response to a question from Senator Miller, Mr. Weeda said soil scientists have shown that 50 percent or less of crop residue may be removed without fertilizer replacement. He said the industry will need to work with producers to pay producers for the biomass.

In response to a question from Senator Miller, Mr. Goettle said over time, wheat has been genetically altered to have a shorter stalk. He said if there were a biomass industry, then longer stalks may be developed or reintroduced. He said there are many dynamics in this industry, which is in its infancy. He said cofiring with coal will develop the market.

In response to a question from Representative Brandenburg, Mr. Weeda said part of the plan is that producers would not have to invest in equipment. He said there would be centralized equipment that would harvest the biomass for cellulosic ethanol.

### **Energy Efficiency**

Mr. Goettle reviewed the portion of the report on energy efficiency. He said more than \$44 million in federal stimulus dollars have been invested in North Dakota to improve energy efficiency in homes.

In response to a question from Senator Wardner, Mr. Goettle said the legislation allowing the Department of Commerce to place energy code

provisions in the State Building Code is in the education and training phase. He said gaps between federal standards and state standards are not that great because the cold weather in North Dakota requires buildings to be built at high efficiencies. He said under federal law, the state has eight years to get up to a certain standard of efficiency.

### **Refining**

Mr. Day presented the portion of the report on refining. He said the Tesoro Refinery was recently upgraded to increase sulfur reduction capabilities to get down to 15 parts per million. He said the refining study will show it is not economically feasible to have a true refinery. He said a topping facility may be better. He said a topping facility segregates base components of crude oil into a gasoline-like substance and a diesel-like substance. He said there has been a drop in gasoline demand, and this is the first significant drop he has seen. He said diesel has not dropped to the same degree. He said Europe dumps gasoline on the open market because Europe uses diesel. He said diesel has become better because it does not smell, gets better gas mileage, and the engines last longer. He said he does not see demand in gasoline growing until 2020.

In response to a question from Senator Horne, Mr. Day said the economy is an issue in siting a new refinery. He said it is difficult to find a market for gasoline, and perhaps 25,000 barrels to 30,000 barrels a day might be able to find a market. He said more will be determined in the second phase of the study.

In response to a question from Senator Andrist, Mr. Day said the refinery business is difficult at best, and Tesoro had a loss last quarter. He said Tesoro is a straight refining company and does not do exploration. He said East Coast refineries are shutting down, and refineries are running at 70 percent of capacity. He said just a few years ago refineries were running at 95 percent capacity.

In response to a question from Representative Porter, Mr. Day said there are some incremental opportunities for expansion in Mandan. He said there is a market for 3,000 barrels to 5,000 barrels a day of diesel in this state. He said 15,000 barrels to 20,000 barrels of diesel enter North Dakota from out of state. He said to make 20,000 barrels of diesel, a refiner makes 30,000 barrels of gasoline for which there is no demand.

In response to a question from Representative Porter, Mr. Day said there is no incentive to allow pipeline export of gasoline because of the long-haul tariff, which is higher than a short-haul tariff. He said a short-haul tariff is needed for the export of refined product from North Dakota to South Dakota.

In response to a question from Senator Dotzenrod, Mr. Day said our culture will not move to diesel if there is low-cost gas. He said it would be a better utilization of hydrocarbons if gas were used as a chemical feedstock.

### **Oil and Gas**

Mr. Ness presented the portion of the report on oil and gas. He said 95 barrels out of 100 barrels are left in the ground in the Bakken Formation with the best technology. He said he expects over 300,000 barrels per day to come out of the Bakken Formation. He said the two major challenges to oil and gas development are prices and federal government legislation, especially hydraulic fracturing legislation. He said the industry favors a simplified state tax structure. He said the state needs to get the resources and people needed to the Department of Mineral Resources. He said there needs to be long-term infrastructure planning for the Bakken Formation.

In response to a question from Senator Horne, Mr. Ness said water depots will bring trucks to the correct roads. He said the development of the pipelines and water depots are a win-win with counties because the counties can provide for long-term development of future county water needs.

In response to a question from Senator Andrist, Mr. Ness said the distribution formula for tax revenue is broken. He said the tax revenues need to meet the infrastructure needs of the counties and need to be used for planning for the future.

In response to a question from Senator Andrist, Mr. Ness said another interim committee is investigating a surplus impact fund for emergency road situations.

In response to a question from Representative Klein, Mr. Ness said there has not been an incident of water supply being damaged by hydraulic fracturing.

In response to a question from Senator Miller, Mr. Ness said there needs to be a review of all funding streams from oil. He said the tax structure as applied to each company is a disaster.

Senator Wardner said oil taxes are in lieu of property taxes. He said if there is not a road and an oil company needs a road, the oil company pays for the construction of the road, not the county.

### **Natural Gas Processing**

Mr. Ness presented the portion of the report on natural gas processing. He said over \$400 million has been spent on new projects in the last two years. He said the Bakken Formation produces a wet gas. He said although there is a policy to reduce flaring, flaring needs to be allowed because of the miniscule value of natural gas.

### **Petroleum Marketing**

Mr. Mike Rud, President, North Dakota Petroleum Marketers Association, presented the portion of the report on petroleum marketing. He said on a per capita basis, North Dakota is one of the largest consumers of gasoline and diesel. He said there needs to be a national policy for liability relief for petroleum marketers for leaks, especially leaks caused by higher blends of renewables.

In response to a question from Senator Wardner, Mr. Rud said there is \$4.5 million in the superfund in

North Dakota. He said the cost for fixing leaks is rising, and there needs to be a review of the funding source.

### **Solar, Geothermal, Hydrogen, and Hydropower**

Mr. Goettle presented the portion of the report on solar, geothermal, hydrogen, and hydropower. He said the Energy and Environmental Research Center built a facility for hydrogen technology. He said there is some promise for deep geothermal wells in the Bakken Formation. He said North Dakota State University has developed liquid silicone which makes solar panels more efficient.

In response to a question from Representative Porter, Mr. Goettle said there may not be enough tax information to provide members on the geothermal tax credit bill.

### **Workforce**

Mr. Goettle presented the portion of the report on workforce. He reviewed the Lake Region State College wind energy worker training program, the Williston State College petroleum training program, the University of North Dakota petroleum engineering degree, the Bismarck State College National Energy Center of Excellence, and the Minot State University energy economics degree.

### **Infrastructure**

Mr. Goettle reviewed the portion of the report on infrastructure. He said during the 2009 legislative session, the caps for the formula funding were removed, and funding for oil-producing counties was increased to a projected \$165 million. He said there were improvements to Highway 85 to allow for passing and left-hand turns. He said there are housing studies with six communities in the Bakken Formation. He said the studies engage the communities on plans for infrastructure and involve the real and perceived barriers of developers. He said there is a study of county and township roads. He said the study involves the current conditions, planning, cataloging needs and running forecasts, reviewing traffic patterns, and assessing long-term uses. He said the work is being completed by the Upper Great Plains Transportation Institute and is being funded by the oil and gas-producing counties. He said this will provide useful information for the next Legislative Assembly. He said the Department of Commerce is cost-sharing on a 1-to-3 match with Watford City and McKenzie County to hire an engineering company to assess the industry coming into the area. He said planning is critical.

Senator Nodland said some small counties and cities are overwhelmed and do not have resources for planning.

Senator Andrist said there needs to be some emergency funding for situations when there is no time for planning.

In response to a question from Senator Dotzenrod, Senator Nodland said an inch and a half overlay costs approximately \$350,000 per mile, one mile of new gravel costs between \$50,000 and \$80,000, and a new county paved road costs up to \$1 million for each quarter mile.

In response to a question from Senator Dotzenrod, Mr. Goettle said \$65 million to \$70 million has already gone out, and \$165 million is the projection, but that amount may be larger. He said from information from Mountrail County, an overlay costs \$400,000 per mile, rebuilding a paved road costs \$1 million per mile, and a chip seal costs \$30,000 per mile.

Senator Wardner said low-priced energy is needed for a good quality of life. He said energy drives commerce.

### **ENERGY CONSERVATION AND EFFICIENCY STANDARDS FOR PUBLIC BUILDINGS BILL DRAFT**

At the request of Chairman Wardner, committee counsel presented a bill draft [[10067.0100](#)] that would require the Division of Community Services to adopt construction standards that are consistent with the silver building rating of the leadership in energy and environmental design rating system. He said the

standards would apply to new public buildings in excess of \$2 million and to modifications in excess of \$500,000. He said the bill draft provides for an exemption if a written analysis is provided that proves the cost of compliance significantly outweighs the benefits.

Representative Klein said a similar bill did not pass last legislative session. He said one of the reasons the bill did not pass was because of the lack of good information. He said the bill draft is based on legislation from other states, and the lower level of the silver rating was chosen as compared to other states. He said there needs to be something in the law for efficiency in public buildings.

Senator Horne said he supports the goal of energy conservation, and the bill draft should be given serious consideration.

No further business appearing, Chairman Wardner adjourned the meeting at 2:45 p.m.

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Timothy J. Dawson  
Committee Counsel

ATTACH:3