15.0242.01000

FISCAL NOTE
Requested by Legislative Council
12/19/2014

Bill/Resolution No.: SB 2036

1 A. **State fiscal effect:** *Identify the state fiscal effect and the fiscal effect on agency appropriations compared to funding levels and appropriations anticipated under current law.*

	2013-2015 Biennium		2015-2017 Biennium		2017-2019 Biennium	
	General Fund	Other Funds	General Fund	Other Funds	General Fund	Other Funds
Revenues						
Expenditures						
Appropriations						

1 B. **County, city, school district and township fiscal effect:** *Identify the fiscal effect on the appropriate political subdivision.*

	2013-2015 Biennium	2015-2017 Biennium	2017-2019 Biennium
Counties			
Cities			
School Districts			
Townships			

2 A. **Bill and fiscal impact summary:** *Provide a brief summary of the measure, including description of the provisions having fiscal impact (limited to 300 characters).*

SB 2036 removes the sunsets and extends the period of time certain power plant equipment can be exempt from sales tax. It also provides a coal conversion exemption for beneficiated coal used within a coal conversion facility.

B. **Fiscal impact sections:** *Identify and provide a brief description of the sections of the measure which have fiscal impact. Include any assumptions and comments relevant to the analysis.*

It is not known how much beneficiated coal might be subject to the exemption from coal conversion tax. Further, it is not known if there are qualifying projects that might receive the sales tax exemptions provided in this bill. The overall fiscal impact cannot be determined.

3. **State fiscal effect detail:** *For information shown under state fiscal effect in 1A, please:*

A. **Revenues:** *Explain the revenue amounts. Provide detail, when appropriate, for each revenue type and fund affected and any amounts included in the executive budget.*

B. **Expenditures:** *Explain the expenditure amounts. Provide detail, when appropriate, for each agency, line item, and fund affected and the number of FTE positions affected.*

C. **Appropriations:** *Explain the appropriation amounts. Provide detail, when appropriate, for each agency and fund affected. Explain the relationship between the amounts shown for expenditures and appropriations. Indicate whether the appropriation or a part of the appropriation is included in the executive budget or relates to a continuing appropriation.*

Name: Kathryn L. Strombeck
Agency: Office of Tax Commissioner
Telephone: 328-3402
Date Prepared: 01/16/2015

2015 SENATE FINANCE AND TAXATION

SB 2036

2015 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Lewis and Clark Room, State Capitol

SB2036
1/19/2015
Job Number 22095

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Alicia Gross

Explanation or reason for introduction of bill/resolution:

Relating to the sales and use tax exemption for beneficiated coal and equipment for certain power plants, an exemption from the coal conversion facility privilege tax for beneficiated coal produced for use within a coal conversion facility, and the severance and sales and use tax exemption for coal used in certain plants; and to provide an effective date.

Minutes: Attachment #1, 2, 3, 4

Chairman Cook opened the hearing on SB2036.

Tim Dawson, Legislative Council. I am here today I staffed the Energy Development and Transmission Committee. This bill came from that committee. Neither for nor against SB2036.

Chairman Cook -- Beneficiated coal is what?

Tim Dawson -- Dried coal.

Senator Dotzenrod -- When you say: such tax. Is that the coal conversion tax we're talking about?

Tim Dawson -- If you look on page 29, it's the coal conversion facilities tax.

Alan Anderson, Commissioner, North Dakota Department of Commerce, as well as Chairman of the Empower North Dakota Commission (Attachment #1)

Senator Triplett -- The intention of drying the coal was that it would become economic to move out of state and be sold elsewhere, but that hasn't happened?

Alan Anderson -- My understanding is that only about ½ of 1% of the coal currently qualifies for the beneficiation. It has not been a large amount.

Senator Triplett -- So, ½ of 1% of what goes where?

Alan Anderson -- ½ of 1% of the coal that's produced in North Dakota qualifies as beneficiated.

Senator Triplett -- Has anyone found a market for that out-of-state, for that small amount of beneficiated coal?

Alan Anderson -- I don't believe so.

Tyler Hamman, Director of Government Affairs for the Lignite Energy Council. (Attachment #2)

Chairman Cook -- The sales tax exemption that sunsets, that is a sales tax exemption on equipment purchased by a plant that's going to use beneficiated coal?

Tyler Hamman -- Sales and use tax exemption for the coal used in the facilities.

Chairman Cook -- Sales tax on the coal?

Tyler Hamman -- Correct. It's a severance and use tax exemption. On page 31 of the bill.

Chairman Cook -- We'll clarify that.

Senator Unruh -- You mentioned that 4 power plants in North Dakota are using beneficiated coal, could you tell us which 4 power plants those are?

Tyler Hamman -- Coal Creek Station, Milton R. Young Station, Antelope Valley Station, Leland Olds Station.

Senator Bekkedahl -- Can you give us the nuts and bolts? I understand the severance tax would be equal, but is it an equal amount of tax to beneficiate as it is to convert coal? Is the amount the same per ton?

Tyler Hamman --Severance tax remains the same at 37 ½ cents per ton; conversion tax works out to be about 37 ½ cents per ton; beneficiation tax is about 20 cents per ton. So it is not quite equal.

Senator Triplett -- You talk about that since 2010 that the beneficiation practices have dramatically improved the environmental qualities of lignite, can you describe some of those for us?

Tyler Hamman -- I'm familiar with a couple of them. At most of the facilities, it's mostly a chemical process where they treat the coal and you achieve significant reductions in criteria pollutants.

David Straley, North American Coal & subsidiary companies. Urging support of SB2036. We strongly believe, from the legislative intent back in 1989, that the legislature never intended for us to receive or be subject to double taxation on the same coal. We

think this is more of a policy change, rather than an actual physical impact. Our industry is continually under attack. Most of the power plants in North Dakota do burn North Dakota lignite. They do beneficiate it. We believe that should be subject to a bifurcation in the tax code and we should not be subject to a second tax on that coal.

Chairman Cook -- The sales tax exemption, it's for equipment purchased by a power plant that is going to use beneficiated coal?

David Straley -- Dale will cover that issue.

Senator Triplett -- As the legislature believed 20 years ago, that this beneficiation process is developed to a higher level would work for export, are we still covered in this bill, in the sense that we would not lose an opportunity to tax the coal, if it's removed from the state?

David Straley -- Yeah, with clarification. This bill would exempt any coal conversion facility that is beneficiating the coal. It would exempt them from that beneficiation portion. If new technology were developed that would dry the coal and we could compete with the out-of-state coals from Wyoming, the state would receive the severance tax, a tax on the beneficiation plant at a rate of 20 cents per ton, or 1 ½% of the gross receipts.

Dale Niezwaag, Basin Electric Power Cooperative & Dakota Gasification Company. We are in full support of SB2036 **(Attachment # 3)**

Chairman Cook -- AVS & Leland Olds, is that all they use is beneficiated coal?

Dale Niezwaag -- In our case, yes, for AVS and for Leland Olds.

Senator Triplett -- Are you saying that the transition costs of beneficiating it is using up whatever potential increases in btu's. Is that what you're saying? By doing the process you're using up enough energy that you're not getting any net gain in btu's but are only getting the gain in environmental quality?

Dale Niezwaag -- For Midkota, which is the Milton R. Young Station, for Basin Electric which is AVS & Leland Olds, we are seeing an environmental impact with no btu change. The process at Coal Creek Station, where they are actually drawing, they are seeing a slight increase in the btu value.

Senator Dotzenrod -- The way it is operating today is the process of beneficiation occurring at the site where the coal is mined and burned for energy? Is there beneficiated coal being used at Spiritwood and is that the same thing where beneficiating really occurs onsite at the plant where it gets burned, or there an operation somewhere in the state that just does beneficiation?

Dale Niezwaag -- You're correct on the assumption that the idea at the beginning was that there were going to be these beneficiation plants built in the state and they would do a couple of things. (meter 27:27)

Chairman Cook -- Are there any hazards to transporting beneficiated coal?

Dale Niezwaag -- To my knowledge, no.

Senator Triplett -- Since there's less of it, whatever the hazards, it should be less.

Chairman Cook -- I was wondering if it was more volatile.

Brent Bogar, representing the coal conversion counties. (Attachment #4)

Chairman Cook -- I appreciate your pointing out in your testimony that the school revenue is imputed at 75%. So we can reduce the revenue here on your charts to the schools.

Senator Dotzenrod -- Are you conceding the fact that the beneficiated coal, as we operate the tax law today is paying 3 taxes. As a matter of fairness, it would probably make sense to do what this bill proposes. You are saying, the problem is this fairness has a downside for us and you would like to see us somehow make that up someway.

Brent Bogar -- The coal conversion counties supports the industry and understands the industry's concern of it being a double taxation. The concern is the change in the revenue in the discussion that the board has had is that if there some way to phase this in so that they can appropriately adjust their budgets for that versus it being a one-time hit and having to make that up at one time, versus being to see it rolled back over a period of time.

Chairman Cook -- You'd hate to see that coal industry go away, wouldn't you?

Brent Bogar -- Absolutely.

Senator Triplett -- If you agree with the fundamental fairness of the position, rather than asking for a phase in, why are you not asking for some other consideration from the legislature? (meter 33:28)

Brent Bogar -- There were a number of discussions, and to be fair to the coal conversion counties, we had a discussion last night with the industry, we've not had a lot of time to digest and look at various options. Part of the position is knowing where various revenue streams for the state are. (meter 33:53)

Chairman Cook closed the hearing on SB2036.

2015 SENATE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Lewis and Clark Room, State Capitol

SB 2036
1/26/2015
Job # 22530

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature: mmoxson for Alice Grove

Explanation or reason for introduction of bill/resolution:

Minutes:

Chairman Cook opened committee work on SB 2036.

Senator Laffen made a motion for a **Do Pass**. Seconded by **Senator Triplett**.

Senator Bekkedahl asked if they received a fiscal note on the local political subdivisions.

Senator Cook replied that they wouldn't get a fiscal note but they had testimony.

Senator Unruh said the majority of the tax revenue loss from this tax is in her district and there have been conversations with the political subdivision people there regarding that loss of revenue. They are fairly comfortable going forward and so is she. She plans to support the bill.

Roll call vote 7-0-0. **Motion carried**. **Carrier is Senator Laffen**.

Date: 1-26-15

Roll Call Vote #: 1

2015 SENATE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO 2036

Senate Finance and Taxation Committee

☐ Subcommittee

Amendment LC# or Description:

Recommendation: ☐ Adopt Amendment
☒ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐

Motion Made By Sen. Laffen Seconded By Sen. Triplett

Senators	Yes	No	Senators	Yes	No
Chairman Dwight Cook	✓		Senator Jim Dotzenrod	✓	
Vice Chairman Lonnie Laffen	✓		Senator Connie Triplett	✓	
Senator Brad Bekkedahl	✓				
Senator Dave Oehlke	✓				
Senator Jessica Unruh	✓				

Total (Yes) 7 No 0

Absent 0

Floor Assignment Sen. Laffen

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2036: Finance and Taxation Committee (Sen. Cook, Chairman) recommends **DO PASS** (7 YEAS, 0 NAYS, 0 ABSENT AND NOT VOTING). SB 2036 was placed on the Eleventh order on the calendar.

2015 HOUSE FINANCE AND TAXATION

SB 2036

2015 HOUSE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

SB 2036
3/4/2015
24313

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Mary Brucker

Explanation or reason for introduction of bill/resolution:

A bill relating to the sales and use tax exemption for beneficiated coal and equipment for certain power plants, an exemption from the coal conversion facility privilege tax for beneficiated coal produced for use within a coal conversion facility, and the severance and sales and use tax exemption for coal.

Minutes: Attachment #1, 2, 3, 4

Chairman Headland: Opened hearing.

Tim Dawson, Legislative Council: Introduced bill. This bill places beneficiated coal at parity with other coal. There was an expiration date in the bill that is being removed. Everything up to page 31 relates to sales and use tax and treats beneficiated coal the same as regular coal. The main substantive change is on page 31 at the top; this provides an exemption from the coal conversion facilities privileged tax for beneficiated coal used within a coal conversion facility. A beneficiated coal would be dried coal. The next section relates to the severance tax exemption for certain facilities like agricultural commodity processing facilities or facilities owned by the state or a political subdivision.

Chairman Headland: Is there any testimony in support?

Alan Anderson, Commissioner for North Dakota Department of Commerce and chairman of EmPower North Dakota Commission: Distributed testimony in support. See attachment #1.

Representative Haak: You list the five bills that you would like passed and I think that would be a comprehensive energy with renewable and traditional. Do you have a priority of what your top bill is to pass?

Alan Anderson: We didn't go through an official prioritization. Some are probably a little bit more important but as a commission there is a balance and fairness with all the different industries so it's difficult for us to prioritize on some of that.

Representative Froseth: The fiscal note indicates that the fiscal impact cannot be projected. I would think the coal would have some effect on tax collections.

Alan Anderson: It comes down to a fairness issue. That is really one of the things the EmPower Commission tried to get to is looking at all whether it's renewable or the traditional. Taxing twice is what's done whether it's oil and gas so it would be similar to the coal side for taxing twice. I don't believe the initial language was set up to tax three times; we weren't able to use a lot of that beneficiated coal in the state at that time. It was designed to make sure that if we exported it someone else would get some tax on it.

Chairman Headland: If that was the case would we still receive that tax benefit if it was exported?

Al Anderson: Yes.

Chairman Headland: Is there further testimony in support?

Dale Niezwaag, Basin Electric Power Cooperative and Dakota Gasification Company: Distributed testimony in support. See attachment #2. Also distributed testimony from Jason Bohrer, Lignite Energy Council, who was unable to testify. See attachment #3.

Representative Klein: I understand there is a lot of interest in other countries, China in particular, who is interested in this beneficiated coal. Has any of it been shipped out and have they used any of it?

Dale Niezwaag: Not to my knowledge. Several years ago we did a lot of work with the southern states and shipped some coal down to Florida and Arkansas to be tested but to my knowledge no lignite has been shipped out of the country.

David Straley, North American Coal: Distributed testimony in support from Stacey Dahl, Minnkota Power. See attachment #4.

Al Christianson, Great River Energy: We are one of the companies that have invented a technology called dry fining that is doing this. We looked at trying to compete with Powder River Coal in the early 2000s but about the time we thought we could do that with our beneficiated coal they cut their coal price in half so we couldn't. Now we are converting it into electricity at our plant. It does great things for us environmentally and it improves our efficiency by three percent. Our technology is being looked at in North Dakota, China, Indonesia, and throughout the United States.

Chairman Headland: Are you using it at Spiritwood as well?

Al Christianson: Spiritwood station is our newest power plant located east of Jamestown. We are shipping beneficiated coal from Coal Creek Station to Spiritwood. It's paying three taxes now but under this bill it would pay two taxes; severance tax in McLean County and conversion tax in Stutsman County.

Representative Haak: Do you have an estimate of how much you pay in this third tax?

Al Christianson: You would multiply the number by the number of tons it's beneficiated but I haven't done the math. We beneficiate about 7.5 million tons a year at Coal Creek.

Chairman Headland: Is there anyone else who would like to testify in support? Is there any opposition? Are there any questions for the tax department? Seeing none we will close the hearing on SB 2036.

2015 HOUSE STANDING COMMITTEE MINUTES

Finance and Taxation Committee
Fort Totten Room, State Capitol

SB 2036
3/4/2015
24328

☐ Subcommittee
☐ Conference Committee

Committee Clerk Signature Mary Brucker

Explanation or reason for introduction of bill/resolution:

A bill relating to the sales and use tax exemption for beneficiated coal and equipment for certain power plants, an exemption from the coal conversion facility privilege tax for beneficiated coal produced for use within a coal conversion facility, and the severance and sales and use tax exemption for coal.

Minutes: No attachments

Chairman Headland: Is there any discussion?

Representative Dockter: Made a motion for a do pass.

Representative Klein: Seconded.

Representative Hatlestad: What's the percentage of tax on the beneficiated coal?

Dale Niezwaag, Basin Electric: The tax is either $.20 on each ton of beneficiated coal or one and one quarter percent of a gross receipt.

Roll call vote: 12 yes 0 no 2 absent
Motion carries for do pass.

Representative Klein will carry this bill.

Date: 3-4-15
Roll Call Vote #: 1

2015 HOUSE STANDING COMMITTEE
ROLL CALL VOTES
BILL/RESOLUTION NO. 2036

House Finance and Taxation Committee

☐ Subcommittee

Amendment LC# or Description: _____

Recommendation: ☐ Adopt Amendment
☒ Do Pass ☐ Do Not Pass ☐ Without Committee Recommendation
☐ As Amended ☐ Rerefer to Appropriations
☐ Place on Consent Calendar

Other Actions: ☐ Reconsider ☐ _____

Motion Made By Rep. Dockter Seconded By Rep. Klein

Representatives	Yes	No	Representatives	Yes	No
CHAIRMAN HEADLAND	✓		REP HAAK	✓	
VICE CHAIRMAN OWENS	AB		REP STRINDEN	AB	
REP DOCKTER	✓		REP MITSKOG	✓	
REP TOMAN	✓		REP SCHNEIDER	✓	
REP FROSETH	✓				
REP STEINER	✓				
REP HATLESTAD	✓				
REP KLEIN	✓				
REP KADING	✓				
REP TROTTIER	✓				

Total (Yes) 12 No 0

Absent 2

Floor Assignment Rep. Klein

If the vote is on an amendment, briefly indicate intent:

REPORT OF STANDING COMMITTEE

SB 2036: Finance and Taxation Committee (Rep. Headland, Chairman) recommends **DO PASS** (12 YEAS, 0 NAYS, 2 ABSENT AND NOT VOTING). SB 2036 was placed on the Fourteenth order on the calendar.

2015 TESTIMONY

SB 2036

#1

DEPARTMENT OF COMMERCE TESTIMONY ON SENATE BILL 2036
JANUARY 19, 2015, 9:00 A.M.
SENATE FINANCE AND TAXATION COMMITTEE
LEWIS AND CLARK ROOM
SENATOR DWIGHT COOK, CHAIRMAN

ALAN ANDERSON – COMMISSIONER, ND DEPARTMENT OF COMMERCE

Good morning, Mr. Chairman and members of the committee, my name is Alan Anderson and I serve as the Commissioner for the North Dakota Department of Commerce, as well as chairman of the EmPower North Dakota Commission.

On behalf of the EmPower ND Commission, I am here today to speak in favor of Senate Bill 2036. This is a bill that was recommended by the Commission and approved by the interim Energy Development and Transmission committee. A complete list of bills recommended and supported by the Commission is below:

- Senate Bill No. 2032 – Oil and Gas Development Strategic Planning Authority.
- Senate Bill No. 2033 – Oil & Gas Tax Trigger Mechanism.
- Senate Bill No. 2034 – Oil Gathering Pipelines Sales Tax Exemption.
- Senate Bill No. 2035 – Value-Added Energy Facility Sales Tax Exemption.
- Senate Bill No. 2036 – Coal Beneficiation.
- Senate Bill No. 2037 – Wind Energy Incentives & New Coal Mine Sales Tax Exemption.

Senate Bill 2036 relates to taxation of beneficiated coal. Sections 1 through 3 and section 5 remove sunsets relating to allowing the same tax treatment for beneficiated coal as are allowed for coal. These changes were originally approved in Senate Bill 2035 (2009). The sunset was put in place in 2009 to allow an opportunity to review whether the changes had the intended impact of increasing the use of North Dakota coal, especially as this coal competes with coal from other states.

Section 1 was intended to be clarification of the sales tax exemption for beneficiated coal. However, it was sunsetted with the rest of SB 2035 (2009).

Sections 2 and 3 allow beneficiated coal to receive the same sales and use tax exemptions as "coal in its natural form." Section 2 relates to sales tax and section 3 relates to use tax.

Section 4 provides an exemption to the coal beneficiation tax for coal that is also subject to the coal conversion tax. The EmPower ND Commission felt this was a tax fairness issue as currently beneficiated coal is taxed three times: when it is extracted from the ground (coal severance); when it is beneficiated; and when it is converted into electricity (coal conversion). With this change coal would be taxed twice: severance tax and either conversion or beneficiation.

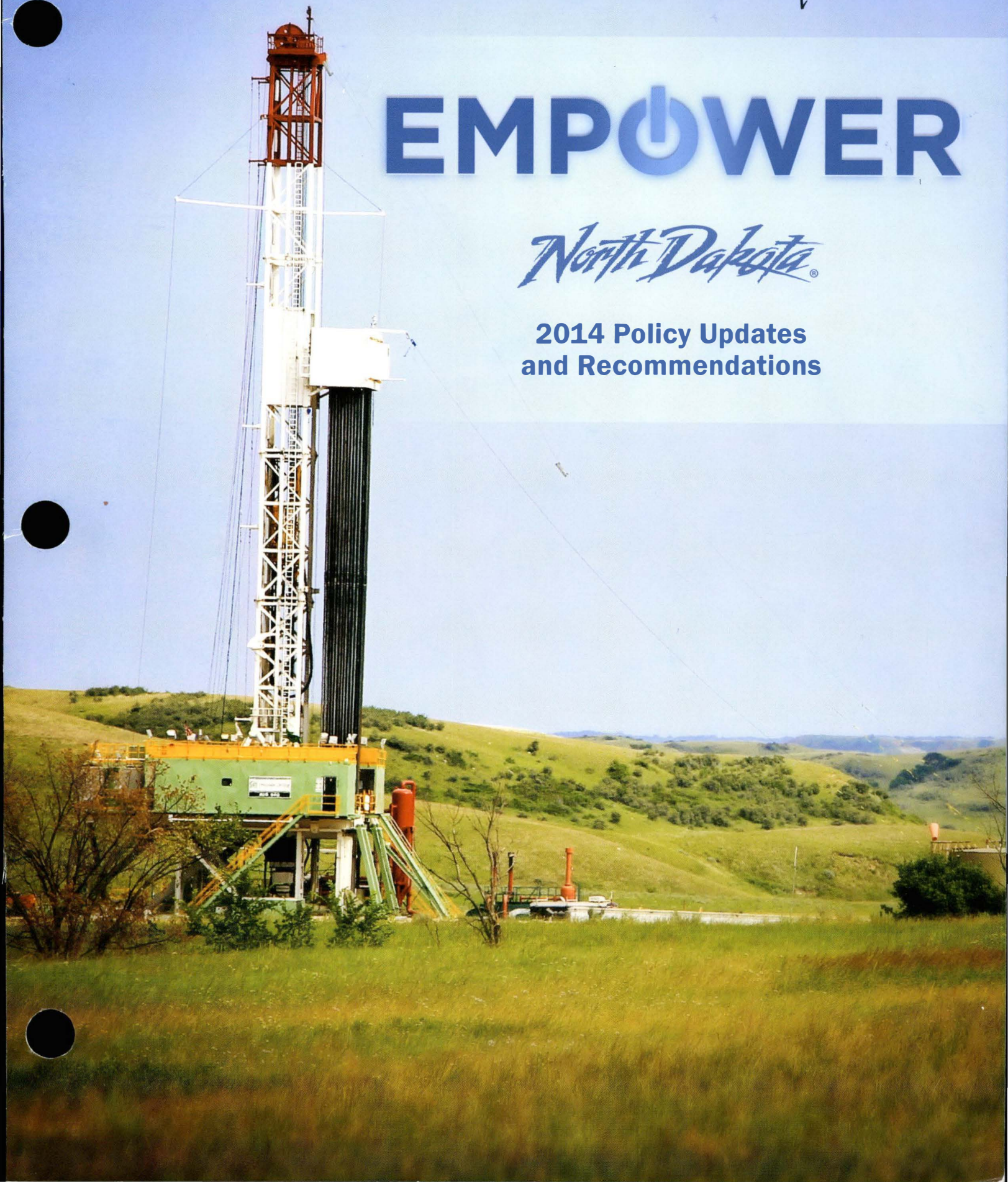
Mr. Chairman and members of the Finance and Taxation Committee, I respectfully request your favorable consideration of Senate Bill 2036. That concludes my testimony and I am happy to entertain any questions.

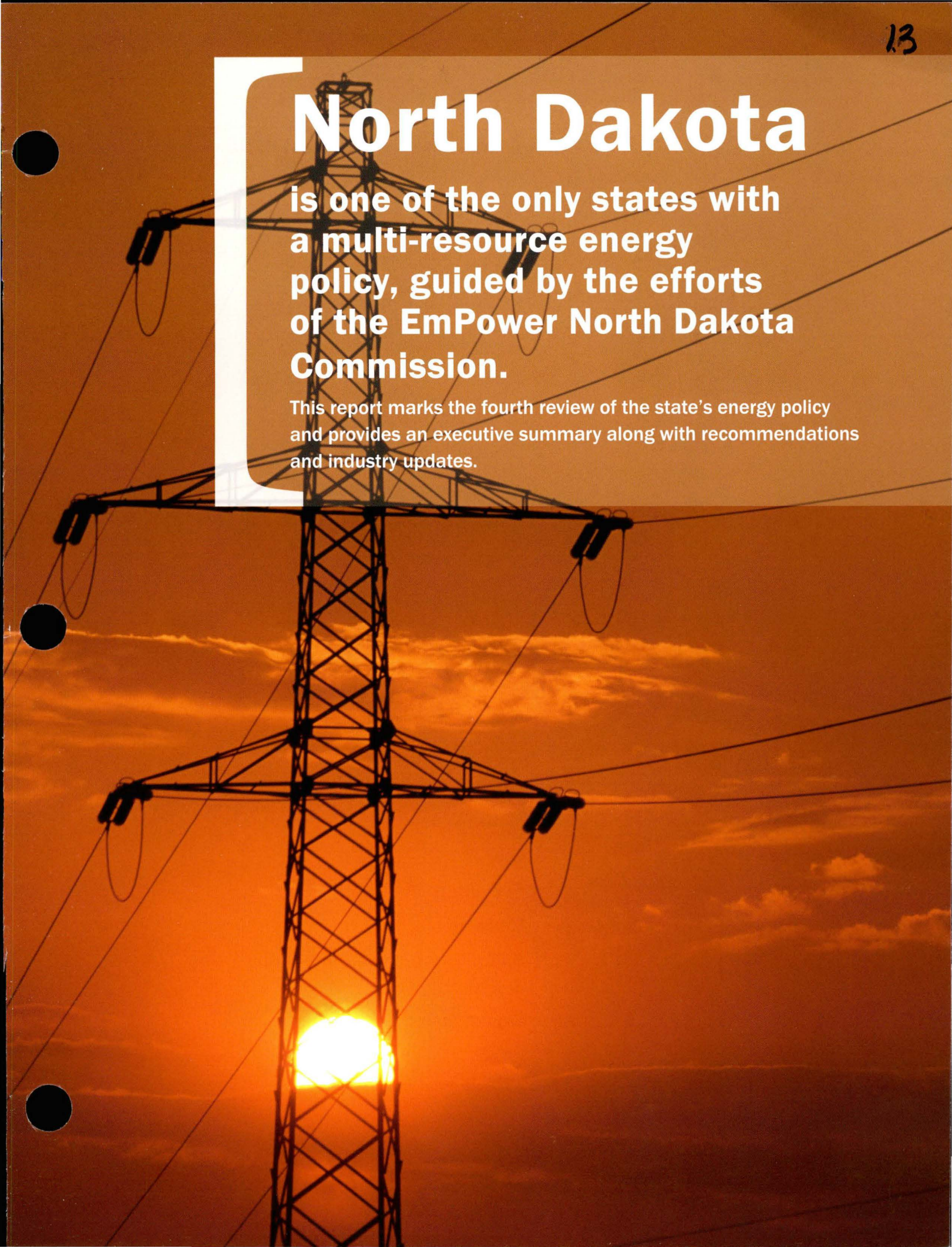
SB 2036
1-19-15
#12

EMPOWER

North Dakota®

2014 Policy Updates and Recommendations





North Dakota

is one of the only states with a multi-resource energy policy, guided by the efforts of the EmPower North Dakota Commission.

This report marks the fourth review of the state's energy policy and provides an executive summary along with recommendations and industry updates.

EmPower North Dakota

2014 POLICY UPDATES AND RECOMMENDATIONS

North Dakota® DEPARTMENT OF COMMERCE

North Dakota

is the 2nd largest oil-producing state in the nation.

Executive Summary

Through the EmPower North Dakota Commission, leaders from all major energy industries in North Dakota meet regularly with one common goal: to be critical thinkers for the development of the state's energy resources.

The strategic partnerships between North Dakota's long-standing and emerging energy industries enable all sectors of the industry to work together as they meet our state's and country's energy needs without government mandates.

North Dakota is proactive and aggressive in addressing energy development and serves as a model for America in fostering innovative, long-term energy strategies to meet our nation's growing energy demand and need for energy security in an environmentally responsible manner.

The state's diverse energy landscape celebrates many successes:

- North Dakota is the second largest oil-producing state in the nation and would be the 20th largest producing country in the world with production of one million barrels per day as of April 2014. The industry has over 10,100 producing oil wells, employs 65,000 direct and indirect jobs, has a $30 billion economic impact, and contributes $11 million per day to the state and political subdivisions in oil production taxes.

- Utility companies produce 4,000 megawatts of lignite and other coal generation at seven locations providing low cost, reliable electric power to two million customers in North Dakota, South Dakota, Minnesota, Montana and Iowa. North Dakota is one of the country's top 10 coal-producing states, mining approximately 30 million tons every year since 1988, which results in an annual economic impact of $3 billion.

Executive Summary (continued)

- North Dakota leads the nation in the production of 10 different agricultural commodities including two commodities used for liquid fuels. Several additional crops provide feedstock for successful and developing bio-refining industries in North Dakota.

- Between 2007-2012 North Dakota increased its energy production by 179.7 percent.

- North Dakota has gone from 1.0 percent of the U.S. energy production to 2.7 percent and from being 23rd to 12th among U.S. states between 2007-2012.

- North Dakota continues to develop a thriving ethanol industry, which ranks 9th in the nation. It contributes more than $640 million annually to the economy and supports more than 10,000 direct and indirect jobs. The state has established itself as a national leader in flex fuel pump infrastructure and has seen a 50 percent increase in flex fuel vehicles over the past three years with 98,100 currently on the road.

- There are 22 natural gas processing plants operating in western North Dakota. The oil and gas industry is investing over $6 billion in infrastructure to capture natural gas, and four additional new or expanded plants are planned to come online by 2016. Natural gas gathering systems connected to 2,020 wells in 2013, up 113 percent from 949 wells in 2011.

- In 2013, North Dakota ranked 12th in the nation in installed wind energy capacity. The North Dakota Public Service Commission has permitted over 1,672 megawatts of wind generation.

- The state's only operating oil refinery has expanded to 70,000 barrels per day. In addition, a 20,000 barrels per day diesel topping refinery is under construction with an expected completion by December 2014. A number of other refineries are in various stages of planning and permitting.

Future Vision

North Dakota's future is one where many of the energy sectors have the potential to not only grow, but also develop new economies based on value-added opportunities related to energy resources. In order to move forward, the state needs to address several key areas crucial to the expansion of energy production and extraction. North Dakota needs to work with the industry to begin exploring ways to capture opportunities to develop raw resources into new products, including petrochemicals, plastics, nanofibers, manufactured products or materials yet to be discovered.

The EmPower North Dakota Commission has identified five critical components for continuing to grow energy production and new energy-related industries:

1. **Infrastructure** – Up-to-date infrastructure is the foundation for continuing existing development and expanding into new areas.

2. **Workforce** – As the energy industry expands, the workforce must be available to meet the demands.

3. **Research and Development** – Research and development serves as the bridge for industry to move from concepts to new development and commercialization.

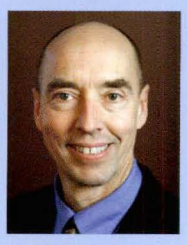
4. **Regulatory Environment** – A regulatory environment, at both the federal and state levels, that encourages economic growth while ensuring environmentally-responsible development of natural resources is essential.

5. **Energy Growth Incentives** – New and continued incentives are needed to capitalize on development opportunities across North Dakota's energy sectors.

1.8

EmPower ND Commission Members

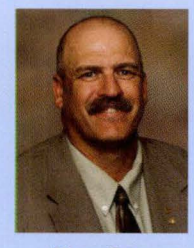
In 2007, the North Dakota Legislature formalized energy policy and created the 16-member EmPower Commission which includes representatives from across the energy industry. Their insights provide the substance for this updated EmPower North Dakota Comprehensive State Energy Policy.



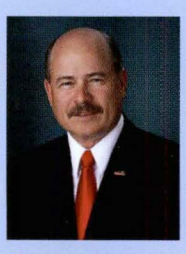
Al Anderson
North Dakota Department of Commerce, chairman

Jason Bohrer
Lignite Energy Council, lignite coal

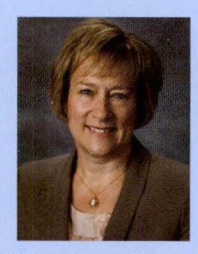
Mark Bring
Otter Tail Power Company, ex officio



Ron Day
Tesoro, refining or gas-processing



Terry Goerger
farmer, agriculture

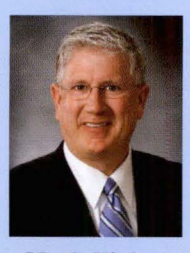


Margaret Hodnik
Allete, Inc., ex officio

Eric Mack
Archer Daniels Midland, biodiesel

Ron Ness
North Dakota Petroleum Council, oil and gas

Dale Niezwaag
Basin Electric Power Cooperative, generation and transmission electric cooperatives



Mark Nisbet
Xcel Energy, wind

Mike Rud
North Dakota Petroleum Marketers Association, petroleum marketers

Randy Schneider
North Dakota Ethanol Producers Association, ethanol

Jay Skabo
Montana-Dakota Utilities Co., investor-owned utilities

David Straley
North American Coal Corporation, lignite coal producing industry

Sandi Tabor
KLJ, ex officio

John Weeda
Great River Energy, biomass

Julie Voeck
NextEra Energy Resources, LLC., ex officio

Commission Recommendations

INFRASTRUCTURE

Adequate infrastructure – such as water pipelines, roads, oil and natural gas pipelines, railroads, electric transmission lines, power generation and affordable housing – is key to the efficient and effective development of North Dakota's energy resources. While most current infrastructure needs are related to oil and gas development in western North Dakota, all energy sectors benefit from similar infrastructure support throughout the state. Infrastructure provides the backbone for North Dakota's energy industry to export products to the rest of the nation, and perhaps the world. In addition, this component is critical to the growth of communities, the minimization of development impacts, and enhanced public safety.

The 2013 Legislative Assembly made substantial progress towards meeting the critical infrastructure needs of the state with an investment of $2.5 billion in oil and gas impacted areas, nearly double the amount appropriated in 2011. However, continued growth of our energy industry and the state's economy are leading to infrastructure shortfalls and more must be done to assist communities in closing the gap.

The EmPower North Dakota Commission receives regular updates from the North Dakota Department of Commerce staff regarding continued western needs. Of the many concerns raised by local leaders, infrastructure issues were identified as critical to maintaining North Dakota's quality of life. In order to meet the growing demands of western North Dakota, the state needs to continue to make a long-term commitment of capital to address the acute infrastructure shortfalls related to the significant growth of oil and gas production, processing and transportation facilities.

Adequate infrastructure is key to the efficient and effective development of North Dakota's energy resources.

Transportation infrastructure development includes construction and upgrading of roads and bridges on state, county and township systems. In 2013, western North Dakota experienced a 25 percent increase in vehicle miles traveled. As oil and gas activities continue, as well as agricultural movement, this increased traffic will create greater need and frequency for repairs and replacement. The Upper Great Plains Transportation Institute's 2014 study

In 2013, western North Dakota experienced a 25 percent increase in vehicle miles traveled.

INFRASTRUCTURE (continued)

of county, township and tribal transportation infrastructure needs estimates the following state investment is needed for the 2015-2017 biennium:

- Unpaved roads - $548 million
- Paved roads - $377 million
- Bridges - $70 million

New methods to provide adequate funding to address these critical areas must be designed. Without a new approach, local governments and communities will continue to fall behind resulting in continued impact on development and quality of life. Concerns related to environmental issues like increased dust from trucks, proper storage of waste water, and others must also be addressed. Challenges also exist in the construction of necessary infrastructure as landowners become reluctant to grant easements on their property.

In light of the issues facing infrastructure related to energy development in the state, the Commission urges the State of North Dakota to:

- Support the passage of legislation within the first 30 days of the 2015 legislative session providing infrastructure funding to oil and gas impacted areas to ensure early availability of adequate funding to allow bidding processes to occur and result in timely use of the 2015 construction season.
- Support changes to the gross production tax distribution formula to provide additional funding to assist with local infrastructure needs.
- Support a transportation funding level that meets the needs identified by the Upper Great Plains Transportation Institute.
- Recommend the immediate creation of an authority focused on regional infrastructure (roads, airports, emergency and medical services, water and waste water, etc.) that will work with communities in coordinating strategic planning efforts in the hub cities of Dickinson, Minot and Williston, and primary Bakken counties of Dunn, McKenzie, Mountrail and Williams. These efforts should:
    - Provide periodic updates and evaluation on the progress of infrastructure development and future needs to the legislature in regards to state and community planning and investments.
    - Work in cooperation with the Energy Impact Coordinator to understand local issues and efforts.
    - Assist in data gathering and coordination of infrastructure funding, providing recommendations with input from local communities and distributing agencies.
- Create a trigger mechanism that will make additional funds available to oil impacted communities from the state share of the oil tax revenue when revenue exceeds certain thresholds.
- Support expansion of existing water systems to provide capacity to meet growing community and commercial needs.
- Support the State Water Commission's efforts to increase access to Lake Sakakawea water for community and commercial needs to alleviate pressure on other water sources, reduce local truck traffic and improve road safety.
- Monitor the railroad infrastructure upgrade plan within North Dakota to ensure there is adequate ability to the meet the export demand of all commodities to market.

WORKFORCE

North Dakota has one of the best business climates in the country fueling unprecedented growth, leading to a shortage of workers in virtually every industry and every corner of our state. As a result, securing skilled workforce to meet the needs of the state's business community is a high priority. As the state's demand for workers continues to grow, there needs to be greater focus on training and retaining our youth, as well as promoting opportunities to attract workers from outside the state.

The need to recruit and retain a permanent workforce is evident in the following statistics:

- 25,000 jobs are currently open across North Dakota.
- North Dakota is expected to add over 76,000 jobs between 2010 and 2020.
- Healthcare, construction, energy, manufacturing, transportation, public services, agriculture, tourism and retail all report significant workforce shortages.

The State's workforce needs are not just limited to the oil and gas industry.

- About 35 percent of all current job openings are energy related.
- About 85 percent of private jobs in the state are not oil and gas related.
- The Fargo area has the most job openings in the state, followed by Bismarck.

25,000 jobs are currently open across North Dakota. Over 60 percent of these exist outside the oil and gas counties.

As workforce needs continue to grow, the funding sources that support infrastructure and community development must be enhanced. Companies and private investors are working to address housing shortages throughout the state by providing crew camps, apartments, single- and multi-family homes. Single family housing is very important to attract the high-demand, high-skilled workforce the energy industry needs long-term. The state must continue to support the key infrastructure that supports the ease of development in many of our western communities.

WORKFORCE (continued)

Many of the state's new families also have unique financial needs. The Housing Incentive Fund, administered by the North Dakota Housing Finance Agency, is working to meet the need for affordable housing, but greater enhancements are necessary.

One of the challenges impacting the energy industry's ability to attract qualified employees is the lack of knowledge about the tremendous opportunities for young people in the energy industry. Many high-demand positions in several energy sectors rely heavily on skills in science, technology, engineering and mathematics (STEM). Incorporating STEM courses at an earlier age and educating career counselors and parents about high-demand careers will facilitate the long-term growth of the energy workforce talent pool. To improve the overall situation, the energy industry and research councils supported the development of curriculum for grades 4 and 8 which will be rolled out in Fall 2014. Discussions with officials at the Department of Public Instruction were initiated to understand how best to develop high school curriculum. These efforts are on-going. Curriculum development, however, is only part of the puzzle. Energy representatives also met with representatives from Valley City State University to discuss STEM education initiatives and the opportunity for energy curriculum development to train students pursuing teaching degrees. While great strides have been made in curriculum development, the needs for securing a stable funding source for curriculum maintenance and continued development is critical.

The current workforce landscape has many vocational or technical degree openings that can provide well paying, life-long careers (i.e., welders, lineman, electricians, boilermakers and mechanics). Many of the current energy-related workforce needs could be filled by individuals with vocational or technical skills.

Industry and education groups need to continue to work together to bring awareness to career and specialized training opportunities in North Dakota. The State of North Dakota and the energy industry must continue to strengthen existing partnerships to educate students of all ages about the wide variety of vocational and technical degree openings. Focus on this effort has proven successful; for example, at the recently expanded diesel mechanic program at North Dakota State School of Science in Wahpeton, most graduates leave with a North Dakota-based position in-hand as the school partners with business to meet critical workforce needs. The development of more training programs focused on meeting growing workforce requirements will need continued support by the legislature, EmPower North Dakota Commission and others. Adequate funding must be available for these important educational programs that support energy-related careers.

Also supporting the industry is TrainND, which provides customized training programs such as CDL and safety training, and employee development initiatives across the state. These training programs give North Dakota businesses an edge to better

WORKFORCE (continued)

compete on a local, national and international level. Continued support for programs such as TrainND and Operation Intern, which match youth with businesses while supporting long-term workforce growth in North Dakota, are critical.

In an effort to assist with workforce demand, the North Dakota Economic Development Foundation has launched the Find the Good Life in North Dakota campaign, a workforce recruitment effort. It is a private/public sector funded program designed to help solve the greatest challenge facing our business community: workforce development, recruitment and retention. The fundraising goal of $2.5 million will fund a comprehensive two-year campaign focused on increasing workforce within North Dakota and securing out-of-state workers and students to fill high-demand careers. The campaign works with North Dakota companies and industry organizations to promote jobs through strategies such as out-of-state job fairs, veteran recruitment and other efforts.

The energy industry looks to the Governor's Workforce Development Council and Job Service North Dakota to better identify energy workforce needs and how North Dakota can maximize resources to meet those needs into the future. These efforts will ensure that Governor Dalrymple and the legislature receive the information necessary to sustain the long-term growth of the energy sector in North Dakota.

In light of the issues facing workforce related to energy development in the state, the Commission urges the State of North Dakota to:

- Continue support of the Housing Incentive Fund to the level suggested by the North Dakota Housing Finance Agency to meet market conditions, and consider a trigger on an annual basis for additional funds.
- Increase efforts to educate North Dakota's youth about the state's natural resources by funding the development, implementation and sustainability of curriculum at the elementary and high-school level to encourage interest in energy careers through the North Dakota Department of Public Instruction.
- Encourage and enable the energy industry to collaborate with the North Dakota University System, Governor's Workforce Development Council, Job Service North Dakota and other agencies to:
    - Encourage industry interaction with teachers and guidance counselors to grow youth knowledge and interest in energy careers and to better retain youth for high-demand career options.
    - Provide greater accessibility to career and technical education programs, especially through adequate training facilities. Career examples include, but are not limited to:
        - Science, technology, engineering, and mathematics (STEM) education
        - Industrial equipment supplier supported programs
        - Commercial driver's license (CDL) training sites
        - Emergency medical services
        - Technical trades/internships
        - Energy careers
        - Workforce safety careers
- Support increased funding for workplace safety and training. Examples of efforts include:
    - Training workforce safety professionals
    - New-hire training
    - Back-to-work efforts
- Support legislation which recognizes the role distance learning will play in the future of education and improve access to technology for students using distance learning programs.

RESEARCH AND DEVELOPMENT

A key component to assuring the use of our valuable natural resources now and into the future is research and development (R&D). The state has been a leader in fostering R&D partnerships between private industry, higher education and research facilities. As R&D funding is reduced at the federal level, the state's role along with its partners is even more critical in finding ways to utilize North Dakota's vast energy resources. Through existing R&D programs, the state has the potential to allow R&D to undertake a new role in understanding the synergies between renewable and traditional energy resources.

For traditional fuels like lignite, oil and natural gas, R&D provides a road map for the development of new technologies that will provide fewer emissions and cleaner energy in the exploration stage or in the energy conversion process. For instance, lignite R&D projects are examining new ways to lower mercury, nitrogen oxide and sulfur dioxide emissions. The lignite R&D is focused on preserving the existing fleet of lignite based plants by developing new options for control of criteria pollutants such as NOx, metals like mercury and CO_2 capture and sequestration. In addition, new technologies for options to produce low cost energy based on lignite that can meet the environmental challenges under today's regulatory climate are under development. Approximately $8 million is available each biennium to fund the lignite R&D program. The funding is derived from two cents per ton R&D tax, a dedicated percentage of the Coal Trust Fund and for a limited time a portion of the coal conversion tax. A portion of this funding is also used by the North Dakota Transmission Authority to work on transmission issues which can limit energy development opportunities in the state.

Through existing R&D programs, the state has the potential to allow R&D to undertake a new role in ensuring the future prosperity of North Dakota's vast energy resources.

The potential opportunities for secondary oil and gas recovery in North Dakota are in the very early stages of development. The importance of pursuing these opportunities is demonstrated by what is currently being done at the Dakota Gasification Company's plant in Beulah where CO_2 is captured and delivered by pipeline to the Weyburn oil field in Saskatchewan, Canada. It is estimated that the CO_2 being injected will extend that field's productive life for 25 years and result in production of as much as 130 million barrels

RESEARCH AND DEVELOPMENT (continued)

of oil that might otherwise have been abandoned. More research and technology development needs to occur to better understand how CO_2 injection or other methods of enhanced oil recovery can be applied in North Dakota's oil shale play.

The phenomenal growth over the past few years in oil and gas production is primarily due to the utilization of new technologies and practices. Research and development is needed to foster enhanced oil recovery in the Bakken and Three Forks Formations as well as other legacy formations. Other potential formations are currently being studied and wait for that "key" to unlock these natural resources for production. Through the Bakken Optimization Program, the oil and gas R&D program – in partnership with industry, the Energy and Environmental Research Center and higher education – is looking for the best methods to capture the oil and gas resources that remain underground and to do it with minimum impact to the land. This program includes research on waste minimization and utilization, spill remediation and land reclamation. Funding for the oil and gas R&D program is appropriated indirectly from the oil and gas production taxes at $10 million per biennium. A portion of this funding is used to provide staff for the Pipeline Authority and to carry on the Authority's work on oil and gas transportation issues.

The renewable R&D program is funded at $3 million per biennium from the state's Resources Trust Fund. This program promotes the growth of North Dakota's renewable energy industries through research, development, marketing and education. Funded projects have included the development of new renewable feedstocks, as well as technologies to process renewable energy.

As all our energy resources are developed, these research programs can play a critical role in advancing value-added processing and manufacturing across the state. The IHS study commissioned by the legislature is one step in that process. Now the work must continue in identifying

Similar to the tremendous growth witnessed in value-added agriculture, North Dakota can become a leader in value-added manufacturing related to oil and gas development.

the specific opportunities that the state can partner with the private sector to continue to grow the state's economy for years to come. Similar to the tremendous growth witnessed in value-added agriculture, North Dakota can become a leader in value-added manufacturing related to energy development.

In light of the issues and opportunities needing research and development related to energy resources, the Commission urges the State of North Dakota to:

- Continue to support existing R&D programs to ensure the development and implementation of new technologies and promote new growth for all energy resources. Consider increasing the funding level for lignite research and oil and gas research programs.
- Support the additional appropriation of research dollars to be used by the lignite and oil and gas research councils to support R&D activities to resolve the technical problems associated with the commercial deployment of carbon capture technologies, seek additional incremental improvements in the recovery of oil through enhanced oil recovery using CO_2 or other gases, and develop and fund a FEED study to identify commercial opportunities associated with the beneficial capture and use of CO_2 as well as the need to meet the region's growing energy demand.
- Create and implement a strategy to assist North Dakota in developing viable petro- and bio-chemical industries.

REGULATORY ENVIRONMENT

Current EmPower North Dakota Commission goals and policy statements reflect concerns regarding the existing federal regulatory climate that often fails to provide for reasonable, responsible and cost-effective regulations over many facets of the energy industry. The Commission's goals and policies can be summarized as stated below:

The federal government should provide a fair and responsible regulatory environment based on sound science and the capacity of current technology to ensure future energy development. Federal regulations must be cost-effective and include sufficient lead time for industry to adapt to new statutory requirements affecting production or products. Federal regulations must be structured in ways to minimize placing new barriers on investment and development.

The current federal regulatory environment incorporates a "one-size-fits-all" policy that fails to take into account the unique nature of each state. North Dakota should encourage federal agencies to recognize unique environmental issues and to work with the state to develop regulations that are flexible, sensible and allow for state agencies to have primacy in the program.

Understanding the economic impact of federal regulations on the state's economy is also important. The energy industry can serve as a valuable ally in helping the state identify and analyze the impact of federal regulations on the citizens of North Dakota, as well as the energy industry. Simply understanding the impact of federal regulations, however, is only one part of the equation. Providing input to federal regulators on particularly onerous proposed regulations is a crucial part of the overall strategy to protect the state's interest. Equally important are communications with the North Dakota congressional delegation on federal regulations of importance to the state.

North Dakota must also recognize both the growth of all energy sectors and the additional burdens new regulations place on state regulatory agencies. Appropriate regulatory programs are a necessary part of ensuring that North Dakota can maintain its clean environment in conjunction with a healthy business environment. Staff and resources for state regulatory agencies need to expand to manage federal regulatory requirements and to ensure North Dakota retains primacy over these regulatory programs.

REGULATORY ENVIRONMENT (continued)

In light of the issues facing federal regulatory assessment related to energy development in the state, the Commission urges the State of North Dakota to:

- Encourage federal agencies to recognize environmental issues unique to North Dakota and work with state agencies to develop regulations that are flexible, sensible and allow for state primacy.
    - Encourage state agencies to provide regular updates on energy-related issues to the Commission and identify ways in which the Commission can support agency efforts on federal issues.
    - Establish new venues for state and federal regulatory agencies to collaborate on federal rulemaking efforts in ways that address individual state issues.
- Use the EmPower North Dakota Commission to better understand the economic impact of federal regulatory proposals on North Dakota.
    - Comment on proposed federal regulations with significant potential impact on the state's economy and engage the North Dakota Congressional delegation to actively challenge the implementation of final regulations posing a threat to North Dakota's economy.
- Recognize the additional burdens new energy development and regulations are placing on state regulatory agencies and provide adequate funding and staffing levels for the North Dakota Department of Health, North Dakota Department of Mineral Resources, North Dakota Public Service Commission, and North Dakota State Water Commission to ensure that each will be able to properly manage their respective programs.
    - Support legislative solutions which allow state agencies to design competitive compensation and benefit packages in order to attract and retain experienced employees in the disciplines related to energy development.
- Encourage the State of North Dakota to identify North Dakota-based solutions to manage waste generated from energy production.

ENERGY GROWTH INCENTIVES

North Dakota's energy industry growth has been phenomenal. While overall production of various forms of energy is at an all-time high, the state is on the brink of moving to the next level of production – adding value to each of our energy resources. The first steps in this journey were realized with the natural gas and ethanol value-added studies conducted during the present biennium. The EmPower North Dakota Commission guided these studies and supports the recommendations of each. These studies, however, reflect just the beginning of a number of initiatives lead by various energy sectors focused on discovering new ways to bring value to existing and new resources.

As the State and industry teamed together in these efforts, a key component that should not be lost is maintaining North Dakota's business friendly environment. While new initiatives will mean hundreds of millions of dollars of new investment in North Dakota, industry has always been able to rely on the State's willingness to offset a portion of the initial investment through tax incentives.

In light of the opportunities related to the next phase of energy development, the Commission urges the State of North Dakota to:

- Support incentives to expand value-added energy opportunities.
    - Provide a sales tax exemption for value-added energy facilities including both equipment and building materials, similar to the existing incentive for value-added agriculture.
- Support incentivizing or enhancing CO_2 capture, storage and enhanced oil recovery opportunities.
- Support an extraction tax credit on oil extraction for the development of technologies for beneficial use of drill cuttings.
- Support incentivizing or enhancing remote natural gas capture technology to minimize flaring.
- Support incentives to expand natural gas or liquid natural gas markets.
- Ensure tax certainty for wind to encourage future investment in renewable wind resources, recognizing the strategic role wind will play in continuing to enhance North Dakota's diverse energy portfolio.
- Support incentivizing the co-location of energy-related infrastructure in the same right-of-way.
- Support removing the beneficiation tax for coal conversion facilities that are subject to coal conversion tax.
- Support removing the sunset on the severance tax exemption for beneficiated coal used in agricultural commodity processing facilities.
- Remove the sunset on the sales tax exemption for beneficiated coal when used in agricultural processing facilities.
- Support a sales tax exemption for oil gathering lines.

Energy Sector Updates

BIODIESEL	North Dakota biodiesel production uses about 65 percent of the state's canola production, or about 700,000 acres worth of canola.
BIOMASS	Researchers at North Dakota State University continue the development of hybridized biomass in pellet form for use in manufacturing processes. Biocomposite pellets could replace up to 40 percent of petroleum-based plastics used in manufacturing.
ENERGY EFFICIENCY	Energy conservation efforts helped weatherize over 4,000 homes for low-income individuals across North Dakota.
ETHANOL	The ethanol industry contributes more than $640 million annually to the state's economy and supports more than 10,000 jobs.
LIGNITE	North Dakota's lignite industry generates 4,000 megawatts of electricity to 2 million customers and an economic impact of over $3 billion.
NATURAL GAS	The oil and gas industry is investing over $6 billion in infrastructure to capture natural gas, and four additional new or expanded plants are planned to come online by 2016.
OIL	North Dakota's oil industry generates more than $30 billion of economic activity and supports 35,000 direct workers and more than 65,000 indirect jobs across all sectors of the economy.
PETROLEUM MARKETING	Over 500 million gallons of diesel fuel are being used annually in oil activity, in comparison to annual consumption across the state of 1 billion gallons.
REFINING	In addition to Tesoro Mandan Refinery, North Dakota's second refinery – Dakota Prairie Refinery, LLC – is scheduled for start-up in December 2014.
SOLAR, GEOTHERMAL, HYDROGEN & HYDRO POWER	The Garrison Dam on the Missouri River, with a capacity of 583 megawatts, is North Dakota's 5th largest plant in electricity generation capacity.
TRANSMISSION	Basin Electric Power Cooperative, Inc. received approval from the North Dakota Public Service Commission for their 200-mile 345 kV line from the Antelope Valley Station to a substation located near Tioga.
WIND	Since 2012, the North Dakota Public Service Commission has approved wind projects with total investments estimated at $1.33 billion.

BIODIESEL

Biodiesel is a clean burning alternative fuel produced from renewable domestic resources that can help narrow the energy supply and demand gap. In North Dakota, biodiesel is primarily produced from canola oil feedstock, but can be made from any vegetable oil as well as from animal fats or used frying oils from restaurants and/or food manufacturing plants. The biodiesel industry is still in the defining stages of development in the United States. The volatile U.S. Biodiesel Blenders Credit has made it difficult for smaller plants to stay in business over the past few years. Currently, there is one biodiesel production facility operating in North Dakota, ADM Velva. Limited demand for biodiesel from within the state of North Dakota will limit the possibility of any new production plants in the state.

Highlights include:

- North Dakota biodiesel production uses about 65 percent of the state's canola production, or about 700,000 acres worth of canola.

- Each bushel of canola can produce 2.9 gallons of biodiesel.
- The ADM Velva plant brings jobs and new tax base into the area.
- The North Dakota State Research Center in Minot has been operating a field plot tractor fueled by B100 canola biodiesel for ten years with no mechanical issues.
- Since the canola biodiesel plant was built, North Dakota canola farmers have enjoyed historically high canola seed prices.
- State funding through the Centers of Excellence initiative has fostered a partnership between North Dakota State University and Monsanto to increase acreage and oil content of canola. The release of this new canola line in the near future will expand acreage and yields, increasing the available feedstock for biodiesel production in North Dakota.
- Investments in the Renewable Energy Development Fund have enabled the Energy and Environmental Research Center to develop a bio-based diesel with traits identical to petroleum-based diesel. The Biofuels PACE Program remains available as a financing incentive for new biofuel production facilities in North Dakota.

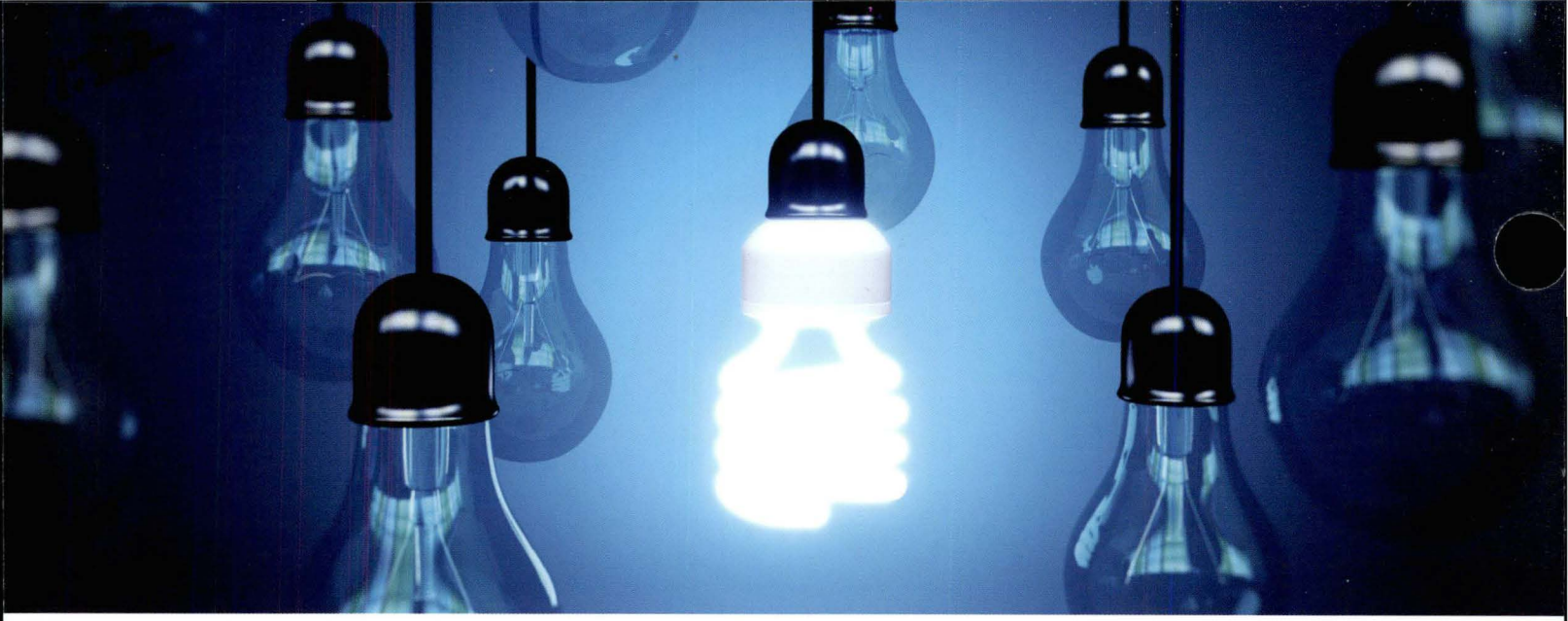
Each bushel of canola can produce 2.9 gallons of biodiesel.

BIOMASS

North Dakota's biomass industry has potential for significant contribution to the state's economy as it evolves. Both North Dakota State University and the Energy & Environmental Research Center, University of North Dakota, have numerous projects underway for biomass utilization. These projects include a wide variety of uses from gasification technology to nanofibers. In addition, there are industry efforts underway to use crop residues and wood waste for ethanol or other energy applications. Commercial application is yet to be achieved as the state works to grow support for biomass as a viable industry in North Dakota.

Highlights include:

- Research sponsors and North Dakota State University continue to work actively toward finalizing a business plan and developing the first energy beet to ethanol commercial installation. Energy beet field trials are being conducted at five regional locations across North Dakota in an effort to study productivity and sustainability. Beet and juice storage studies are also being conducted.
- North Dakota State University has also developed the biomaterials used in the "bio-boom," a hybrid of 20 to 30 percent renewable biomaterials, flax fiber and fiberglass used in a crop sprayer manufactured by AGCO Corporation.
- Midwest AgEnergy is constructing Dakota Spirit AgEnergy at Spiritwood, with the intent of producing 65 million gallons per year of ethanol. Once the backbone conventional ethanol facility is in operation, potential use of biomass at the facility will be evaluated again.
- North Dakota State University researchers are collaborating with several companies, including Composite Innovations Centre in Winnipeg, Manitoba. The research studies renewable biomaterials – canola, soybeans, flax and more – in combination with petroleum-based polymers and plastics for an array of products.
- Researchers at North Dakota State University continue to research the development of hybridized biomass in pellet form for use in manufacturing processes. Biocomposite pellets could replace up to 40 percent of petroleum-based plastics used in manufacturing.



ENERGY EFFICIENCY

Energy efficiency continues to be a high priority in homes and public buildings around the state. Over 11,000 energy efficiency and renewable energy rebates were given out to North Dakota residents and businesses resulting in $3.4 million in energy cost savings.

Highlights include:

- The 2013 Legislature provided for a transfer of one-half of one percent in the oil extraction tax deposited in the Resources Trust Fund to the energy conservation fund for public buildings, not to exceed $1.2 million per biennium.
- Using State Energy Plan funding, the North Dakota State University (NDSU) Agricultural and Biosystems Engineering Department and NDSU Extension Service provided education and technical assistance on energy efficiency and conservation through programs such as Home Energy 101, home builders educational seminars, 4-H leader training on the importance of home energy, and energy savings opportunities related to grain drying.
- Energy conservation efforts helped weatherize over 4,000 homes for low-income individuals across North Dakota.
- North Dakotans' received 3,800 rebates (at $150 each) for ENERGY STAR refrigerators, saving approximately 2 million kilowatt hours annually.

Over $900,000 annually will be saved from the implementation of energy savings measures in 19 North Dakota state facilities such as the State Capitol, North Dakota State School of Science and University of North Dakota.

- Approximately 197 local government buildings in 120 communities have been retrofitted through the Energy Efficiency and Conservation Block Grant (made possible with ARRA funding), annually saving over $1.1 million.
- Over $900,000 annually will be saved from the implementation of energy savings measures in 19 North Dakota state facilities such as the State Capitol, North Dakota State School of Science and University of North Dakota.
- The state building code now encompasses the 2009 International Energy Conservation Code and the International Residential Code energy efficiency requirements.

ETHANOL

The ethanol industry contributes more than $640 million annually to the state's economy and supports more than 10,000 jobs. North Dakota's ethanol plants employ nearly 200 workers directly in positions such as chemists, engineers, accountants, managers and support staff. The average annual wage for an ethanol plant employee in North Dakota is approximately $64,000.

Highlights include:

- North Dakota ranks 9th in the nation for ethanol production.
- North Dakota's ethanol industry has the capacity to produce:
  - 400 million gallons of ethanol, more than 10 times the amount produced in 2005.
  - 1.3 million tons of dry distillers grains, a high-value livestock feed.
  - 6 million gallons of corn oil, used in the biodiesel industry.
- Each North Dakota ethanol plant is located in a community with a population of less than 2,500 and contributes an average of 49 jobs and an average annual payroll of $3.3 million to the community.
- Approximately nine percent of the 400 million gallons of ethanol produced annually in North Dakota is blended with gasoline and sold within the state.
- North Dakota ethanol plants use approximately 140 million bushels of corn annually with more than 80 percent of the corn purchased from North Dakota farmers.
- North Dakota is a national leader in the establishment of flex fuel pumps and was the ninth state to offer E15. There are also 98,100 flex fuel vehicles (FFV), more than a 50 percent increase since 2011.
- Ethanol is blended with nearly 85 percent of the taxable fuel sold in North Dakota, which is a nearly 30 percent increase from 2012.
- The ethanol industry partnered with the state's corn growers and the Renewable Energy Program to implement a two-year ethanol marketing campaign. Over the life of the campaign, there was a 36 percent increase in statewide ethanol sales from 2010 to 2013.
- A bio-refinery is under construction near Jamestown. It is a 65-million gallon per year conventional dry mill ethanol plant and is projected to be completed in the spring of 2015.
- North Dakota's ethanol industry is reviewing the results of the Study to Evaluate Value-Added Market Opportunities for Ethanol Produced in North Dakota conducted by IHS Chemical and considering future opportunities.

LIGNITE

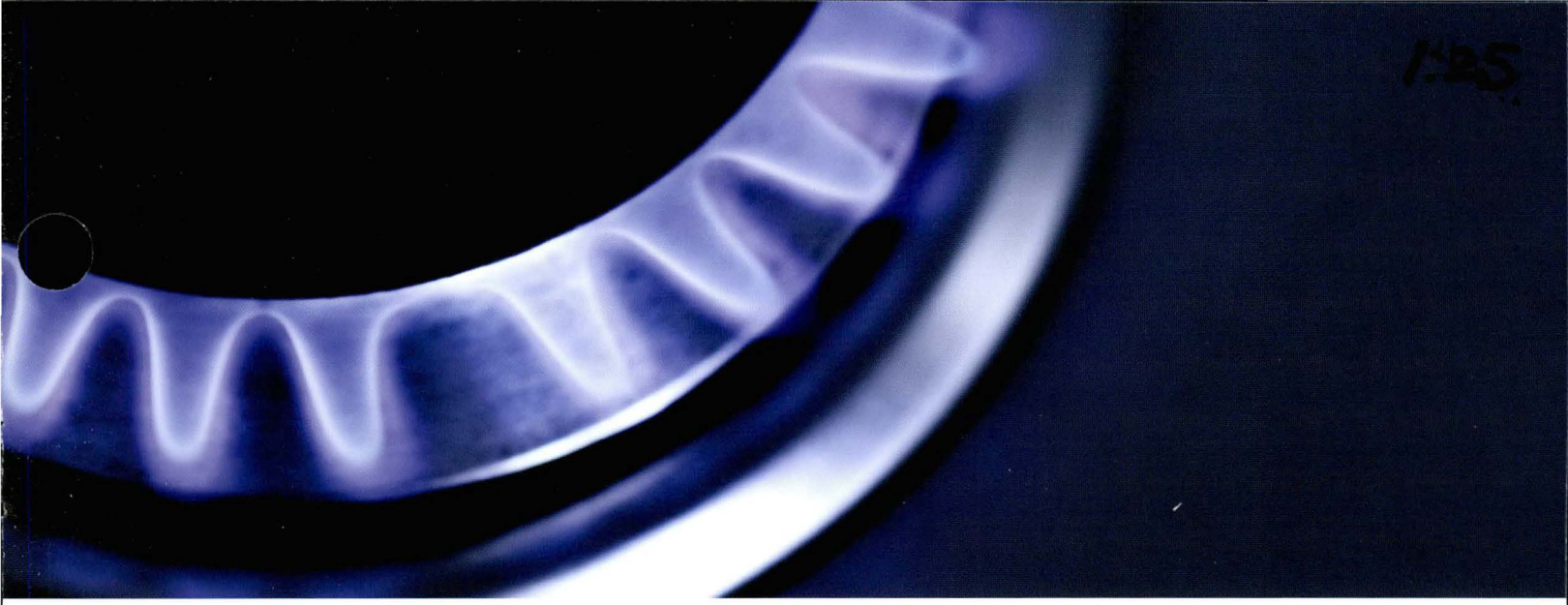
North Dakota's lignite industry is a vital part of the state's economy with an economic impact of more than $3 billion. The state supports 4,000 megawatts of lignite and other coal generation at seven locations providing low cost, reliable and clean electric power to two million customers in North Dakota, South Dakota, Minnesota, Montana and Iowa. North Dakota is one of the country's top 10 coal-producing states, mining approximately 30 million tons every year since 1988.

Nearly 80 percent of the lignite coal mined annually is used to generate electricity. About 13 percent is used to make synthetic natural gas that is delivered to 400,000 homes and businesses in the eastern United States, and seven percent is used to produce fertilizer products containing anhydrous ammonia and ammonium sulfate.

Highlights include:

- The 99 megawatts Spiritwood Station near Jamestown was commissioned in 2011. The plant is currently awaiting completion of the adjacent steam host to allow the plant to generate with the economics of a combined heat and power plant as designed.
- The Great Plains Synfuels Plant (Synfuels Plant), owned by Dakota Gasification Company (Dakota Gas), is the only commercial-scale coal gasification plant in the U.S. manufacturing natural gas. Average daily production of natural gas is about 153 million cubic feet, the majority of which is used in the eastern United States.
- The Synfuels Plant supplies carbon dioxide to the world's largest carbon capture and storage project in the world in Saskatchewan, Canada, for use in enhanced oil recovery. Dakota Gas currently captures between 2.5 and 3 million metric tons of CO_2 per year.
- Dakota Gas exports about 152 million cubic feet per day of CO_2 to Canada – about 50 percent of the CO_2 produced when running at full rates. As of 2013, Dakota Gas has captured almost 25 million metric tons of CO_2.
- Through 2013, more than 27,000 acres of mined land in North Dakota have gone through final bond release, equivalent to over 42 square miles.
    - A portion of reclaimed land has been devoted to public use such as Harmony Lake and Coal Lake which can now be used for hunting, fishing, photography, birding, canoeing, boating and other outdoor activities.
    - Basin Electric Power Cooperative's Glenharold mine received its final bond release in 2012. Over its 30 year productive life the mine won three national awards for its reclamation work.
- As of 2014, the Lignite Research Council is participating in 20 research and development projects worth over $180 million. Many of these projects focus on ways to reduce, capture and store CO_2.

Nearly 80 percent of the lignite coal mined annually is used to generate electricity.



NATURAL GAS

North Dakota produced 347 billion cubic feet of natural gas, processed 233 billion cubic feet of natural gas and paid $22 million in production taxes in 2013. Natural gas gathered and captured in North Dakota heats over 4.8 million homes in the U.S. Over the past two years, North Dakota's natural gas industry has worked hard to connect more than 3,800 new wells to gas plants.

There are 22 natural gas processing plants operating in western North Dakota. The oil and gas industry is investing over $6 billion in infrastructure to capture natural gas, and four additional new or expanded plants are planned to come online by 2016. These plants will add more than 400 million cubic feet of gas processing capacity and create hundreds of high-paying jobs in rural communities.

Highlights include:

- Natural gas gathering systems were connected to 2,020 wells in 2013. This is up 113 percent from 949 wells connected in 2011.
- The North Dakota Industrial Commission, through the Oil and Gas Research Program in partnership with private parties, has invested more than $10 million in research for new technologies to produce, capture and use natural gas at well sites. The results are intended to encourage and promote the use of new technologies that have a positive economic and environmental impact on oil and gas exploration. Examples include:
    - A $450,000 grant awarded to the Energy & Environmental Research Center to use for enhanced recovery of oil and natural gas in North Dakota.
    - An $8 million grant awarded to the Energy & Environmental Research Center to use for optimizing oil and natural gas production in North Dakota.
    - An $873,300 grant awarded to Bakken Express, LLC to use toward a $3 million natural gas capture initiative.
    - A $750,000 grant awarded to Energy & Environmental Research Center to use toward a $1.9 million natural gas capture initiative.
    - A $375,000 grant awarded to Blaise Energy, Inc. to use toward a $7.475 million natural gas capture initiative.
- Natural gas liquids present many opportunities for value-added energy. A study on value-added opportunities relating to natural gas liquids and ethanol was commissioned by the North Dakota Department of Commerce and was published in May 2014.
- As of 2012, North Dakota is the 14th largest natural gas producing state.

1.26

OIL

North Dakota's oil industry generates more than $30 billion of economic activity and supports 35,000 direct workers and more than 65,000 indirect jobs across all sectors of the economy. The necessary job skills continue to broaden as industry moves from the exploration phase towards the development phase.

As more new wells begin producing, more technical, permanent jobs will result. The average annual wage for an oil industry employee in North Dakota in 2012 was approximately $97,841, which is 118 percent above the statewide average wage of $44,914.

Highlights include:

- North Dakota is the second largest oil-producing state in the nation and would be the 20th largest producing country in the world.
- In April 2014, there were over 10,100 oil wells producing 1 million barrels of oil per day.
- Oil production taxes in 2013 exceeded $2.9 billion. Monthly oil tax collections exceeded $300 million in March 2014.
- Oil and gas production taxes accounted for 50 percent of North Dakota's total revenue collections in 2013.
- At $100 and 1 million BOPD, the industry contributes $11 million per day to the state and political subs (from the two oil taxes). Of this, $1 million per day goes to the counties/cities/schools/townships.
- In May 2014, North Dakota's Legacy Fund, which receives 30 percent of the oil tax revenue, has a balance of more than $2 billion dollars.

PETROLEUM MARKETING

North Dakota petroleum marketers are dedicated to providing quality product, great customer service and continue to be strong community leaders and supporters. Consumer demand always has and always will dictate what a petroleum retailer offers its customers.

The unprecedented economic growth in the state has been very good for the retail petroleum industry. One of the major challenges amidst all the prosperity has been finding adequate supplies of diesel, gas and even propane, particularly during peak demand seasons for the industrial and agricultural sectors. Workforce availability remains a major concern in the retail service arena with strong, high paying jobs developing across the state in all sectors of the economy.

Highlights include:

- There are roughly 500 petroleum marketers in North Dakota. There are also about 750 convenience stores/truck stops across the state. This number has grown significantly in the past few years as the state's economy continues to prosper and expand. These operations deal in every aspect of refined petroleum and renewable fuel products ranging from wholesale and supply to the numerous retail outlets scattered across the state.
- From April 2013 to April 2014, retail petroleum dealers sold about 500 million gallons of taxable gasoline in the state as well as close to one billion gallons of taxable diesel fuel. This figure does not take into account the roughly 900 million gallons of diesel fuel sold for non-highway use vital to agricultural, industrial and energy sectors within the state. Over 500 million gallons of diesel fuel are being used annually in oil activity alone.
- North Dakota petroleum marketers continue to support research and development of renewable fuels as viable sources of alternate energy.
- North Dakota gas retailers have been among the nation's leaders in promoting the sale of renewable fuels. North Dakota installed more than 220 flex fuel pumps, but as of December 2013 study that number has decreased to about 100 due to a number of factors. The North Dakota petroleum retailers and ethanol industry continue to work together to address these issues.

REFINING

North Dakota's refining capacity continues to expand with the continued growth of the Bakken Oil production. Several new refinery projects are being evaluated statewide.

Highlights include:

- North Dakota currently has one refinery in operation, Tesoro Mandan Refinery, with a crude operating capacity of 70,000 barrels per day.
- A second facility, Dakota Prairie Refinery, LLC, is under construction and is scheduled for start-up in December 2014. The Dakota Prairie Refinery will have a crude capacity of 20,000 barrel per day and will produce 7,000 to 10,000 barrels per day of diesel and other byproducts. It is the first refinery built in the U.S. since 1976.
- Several other diesel topping plants and refinery projects are currently being evaluated. These projects include a 20,000 barrel per day diesel topping plant near Trenton (Dakota Oil Processing) and a 15,000 barrel per day refinery near Makoti [Mandan, Hidatsa, and Arikara (MHA) Nation]. These projects are in various planning stages.

The Dakota Prairie refinery is the first refinery built in the U.S. since 1976.

SOLAR, GEOTHERMAL, HYDROGEN & HYDRO POWER

North Dakota has invested in research for hydrogen, solar and geothermal applications. This includes $2.5 million for a Centers of Excellence project at the Energy & Environmental Research Center's National Center for Hydrogen Technology, which is attracting hydrogen-based business to the state; funding for research at University of North Dakota for commercial application of geothermal; and funding for solar energy research at North Dakota State University.

Highlights include:

- Several electric cooperatives offer a program to help ranchers install solar powered stock pond watering pumps in rural areas where it is uneconomical to construct electric transmission lines. As an example, Verendrye Electric Cooperative has provided support for over 300 solar pumps and avoided building about 300 miles of distribution line at a savings of about $30,000 per mile.
- Whiting Oil uses solar PV systems at oil well sites to power pump jacks in isolated areas in which electrical services is not available.
- The Geothermal Laboratory at the University of North Dakota is conducting a geothermal power demonstration project in North Dakota in collaboration with the U.S. Department of Energy, Continental Resources, Inc., Slope Electric Cooperative and Access Energy, LLC. Start-up is scheduled for Summer 2014. The objective of the project is to demonstrate and test the technical and economic feasibility of generating electricity from non-conventional, low-temperature geothermal resources using Organic Rankine Cycle (ORC) technology.
- The Garrison Dam on the Missouri River, with a capacity of 583 megawatts, is North Dakota's fifth largest plant in electricity generation capacity.

Photo by Sgt. Brett Miller, North Dakota National Guard Visual Information

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TRANSMISSION

The development of new transmission in North Dakota continues as companies construct lines to support new load growth as well as to connect new generation to the electric grid. Studies to identify impacts of new load on existing transmission systems and identify new lines needed for the future continue at individual companies and at regional transmission planning entities.

Highlights include:

- North Dakota Transmission Authority conducted a study of the impact of oil and gas development in the Williston Basin on electric load growth and transmission infrastructure.
- Basin Electric Power Cooperative, Inc. received approval from the North Dakota Public Service Commission for their 200-mile 345 kV line from the Antelope Valley Station to a substation located near Tioga. Construction will begin in Fall 2014 once federal approvals are received. This new line will help meet increasing regional electric demand and improve the reliability of the existing system, strengthening the electric infrastructure throughout the region.
- Basin Electric Power Cooperative and the Western Area Power Administration are moving forward with plans to join the Southwest Power Pool (SPP) Regional Transmission Organization. Final approvals will be sought in 2014 and, if successful, the two organizations will begin actual operations with SPP in 2015.
- Minnkota Power Cooperative is constructing a 345-kV transmission line that will stretch 250 miles from Center to Grand Forks, to be completed by August 2014.
- CapX2020 is a group of 11 Midwest-based utilities constructing more than 700 miles of new 345 kV transmission lines in the upper Midwest. One of the proposed routes is a 210-mile line that starts west of Fargo and stretches east to St. Cloud, Minnesota. The line is expected to be in service in 2015 and will support growing regional power demand and improve access to renewable energy.
- Otter Tail Power Company and Montana-Dakota Utilities Co. have jointly proposed the Big Stone South to Ellendale (BSSE) Transmission Line, a 345-kV line from Ellendale to a substation near Big Stone City, South Dakota. The project, which will be approximately 150 to 170 miles in length, is anticipated to cost between $270 and $390 million and will be in service in 2019.
- ALLETE and its subsidiary ALLETE Clean Energy have proposed an energy corridor with a backbone following an existing 465-mile path that contains a direct current transmission line running between Center and Duluth, Minnesota The energy corridor would expand a pathway along strategic portions of the existing right of way to minimize land use and optimize energy delivery infrastructure development within North Dakota. It is envisioned that various lengths of the corridor would be used for movement of natural gas, wastewater, petroleum and other products.
- Transmission costs vary depending on voltage, terrain type, conductors, length, right-of-way costs and many other factors. Many sources around the country report that average transmission costs for a new 345 kV line can be between $1 and $2 million per mile, depending on design and environmental conditions.

Many sources around the country report that average transmission costs for a new 345 kV line can be between $1 and $2 million per mile, depending on design and environmental conditions.

WIND

Over the last few years, many of the region's utilities completed construction of wind facilities in order to comply with renewable portfolio standards in states surrounding North Dakota, meet internal policies related to diverse energy portfolio standards, secure a fixed price energy source, or to meet other business goals. Since 2008, the wind industry in North Dakota has found itself in a state of transition. Driven by a number of factors, including the economic slowdown caused by the 2008 recession and the resulting decrease in demand for electricity, prices for electric power have fallen significantly and regional congestion on the transmission system has impacted the construction of new wind facilities. In addition to these industry challenges, the uncertain future of Production Tax Credit (PTC), which Congress has yet to extend beyond December 2013, lingers as well. Yet, in spite of these issues, the capacity of the wind industry grew during the last year, but at a much lower rate than in recent years.

Despite the various challenges, wind energy prices have decreased significantly over the past seven years. Efficiencies in technology and market pressures have driven wind energy prices down over 50 percent to meet market demands.

Highlights include:

- Since 2012, the North Dakota Public Service Commission has approved wind projects with total nameplate capacity of over 700 MW. If these approved projects are constructed, the total investment associated with the projects is estimated at $1.33 billion.
- More than 990 wind turbines are operating in 26 North Dakota counties.
- There are currently 700 megawatts of wind under construction in 2014.
- North Dakota ranked twelfth in the nation in wind capacity at the end of 2013, with 1,672 megawatts of wind in service.
- In the last two years, installed wind capacity in the state grew by only 104 megawatts, compared to 250 MW in the prior two-year period.

More than 990 wind turbines are operating in 26 North Dakota counties.

Demand for wind is anticipated to be strong with wind energy being a scalable, cost- effective, emission-free renewable resource in the region. Recent wind energy prices have made wind more attractive to many utilities, regulators and end users. There is also federal regulatory pressure moving the energy generation industry towards cleaner, renewable resources like wind energy.

The Midcontinent Independent System Operator, Inc. (MISO) is responsible for operation of the transmission grid across all or parts of 15 states, (including portions of North Dakota) and the Canadian province of Manitoba. The upgraded MISO transmission system has improved reliability and allows for additional wind energy to be connected to the grid. The expansion of the grid will allow for additional amounts of new wind energy on the regional transmission system.

North Dakota is well-positioned to develop additional wind energy and become a larger exporter of wind energy.

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DEPARTMENT OF COMMERCE

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August 2014, 300 printed

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#2

Testimony on SB 2036
Tyler Hamman, Director of Government Affairs, Lignite Energy Council
Presented before the Senate Finance and Taxation Committee
January 19, 2015

Mr. Chairman, members of the committee, I would like to respectfully submit the LEC's comments for the record in support of Senate Bill 2036. This is an important piece of legislation that would correct the misapplication of a tax on the lignite industry by clarifying when coal is taxed for certain uses.

By way of background, lignite produced in North Dakota is subject to a combination of the following taxes: severance tax when it is removed from the ground, as well as conversion tax when the coal is converted to electricity or natural gas, and beneficiation tax when the physical or environmental qualities of the coal are improved. 25 years ago, the LEC supported the creation of the beneficiation tax to incentivize technology that proposed to increase the BTU content of lignite to enhance its marketability and usability.

In other words, if we increased the BTU content of lignite, it would allow for it to compete with subbituminous coal from Montana and Wyoming and be transported out of state. The beneficiation tax would also ensure that the state and counties would still receive revenue from coal that was transported out of the state, and/or revenue in-lieu of less conversion taxes being paid because less lignite would be needed for electricity due to the higher heating value.

Since that time, the beneficiation practices envisioned to increase the heating value of lignite from 6,200 BTU to over 10,000 BTU have not come to fruition. However, beneficiation practices have been developed that dramatically improve the environmental qualities of lignite before it is burned for power production, and this beneficiated coal is now being used at four power plants in North Dakota.

It was intended that the beneficiation tax would address any shortfalls in conversion tax revenue due to beneficiation, yet time has shown that the practice has not impacted the amount of lignite being used for power production in the state. Senate Bill 2036 would ensure that the tax structure does not unfairly tax power plants that are beneficiating coal for use in their facilities by clarifying that beneficiated coal produced for use by a coal conversion facility is not subject to the beneficiation tax. Under this bill, a coal-burning power plant would pay the

#2.2

conversion tax and be exempt from the beneficiation tax, and a non-coal conversion facility pays the beneficiation tax and is exempt from conversion tax.

Senate Bill 2036 also removes the sunset on a sales and use tax exemption to incentivize the use of beneficiated lignite for electricity and to produce steam for agricultural processing (such as the Spiritwood plant, which although built a few years ago had to delay startup operation until late 2014), and for facilities - NDSU, UND, handful of sugar plants - in North Dakota currently using coal from out-of-state. Finally, the legislation continues a severance tax exemption for coal used by agricultural processing facilities. Overall, this legislation is a commonsense proposal that will provide further incentive for the production and use of value-added lignite in North Dakota. Accordingly, the bill received the endorsement of the North Dakota EmPower Commission, and was considered by the interim Energy Development and Transmission Committee. The Lignite Energy Council urges your favorable consideration of Senate Bill 2036.

Thank you for your time, and I would be happy to answer any questions you may have.

#3

North Dakota Senate Bill 2036
Dale Niezwaag - Basin Electric Power Cooperative
Senate Finance and Taxation Committee
January 19, 2015

Mr. Chairman and members of the committee, my name is Dale Niezwaag, representing Basin Electric Power Cooperative and the Dakota Gasification Company. I am here today in support of SB 2036.

A question the committee may have is, why after 25 years are we now asking for this law to be changed. In 2010 several lignite power plants in North Dakota started beneficiating lignite to improve its environmental qualities before processing it in their plants. At that time we didn't know what the full effect of beneficiating might be, we now understand the effects.

The existing law provided for an exemption of the state portion of the beneficiation tax for five years and also allowed the counties to exempt their portion if requested. In January of 2014 Basin Electric asked Mercer County to provide that exemption and the county declined. We understand the counties view that if they are eligible to receive the funds they are reluctant to give them up, but we have an obligation to our members to operate as fiscally responsible as possible.

We then reviewed the history of the legislation and obtained a better understanding of the intent of the original legislation and the current consequences of the law. The intent of the legislation in 1989 was twofold, 1) maintain the current revenue steam to the counties and the state if the anticipated beneficiation process resulted in only half of the coal being used in North Dakota plants, and 2) Provide revenue to the counties and states for coal that was mined from North Dakota but shipped and used in other states.

The reality is that the technology envisioned to significantly reduce the emissions and almost double the BTU value of lignite did not materialize and the current beneficiation practices do not negatively impact the state and county tax funds. What industry currently has is a tax increase on the beneficiation without the anticipated benefits. SB 2036 will fix this situation.

I thank the committee for their time and consideration and would urge a Do Pass vote SB 2036. I would be happy to answer any questions.

#4

Testimony Regarding SB2036

North Dakota Coal Producing Counties Association

January 19, 2015

The coal industry and the local governments of the coal producing counties have a long history of cooperation and partnership. The county officials of these counties are not unsympathetic to the concerns of the industry that the tax addressed by SB2036 appears to increase taxation as a result of coal treatment that results no reduction in the coal consumed – as apparently was anticipated at one time.

Despite the logic, the abrupt change in resource revenue to the local governments of these counties is of considerable concern. As the chart indicates, the amount of revenue – though not huge – is quite significant if it must be replaced with property taxes. It should be noted that the school revenue is imputed at 75%, so the true impact to schools is somewhat less.

As the committee is well aware, two of our coal counties are also minor producers of oil, and with the current economics of oil production, are anticipating a downturn in this revenue stream as well.

The elimination of the tax that this bill proposes would be much easier to support if it came at a time of increasing revenues from other sources, rather than at a time that property tax is already a likely source of revenue replacement.

Analysis of Coal Beneficiation Tax Revenue

12-Months - Nov. 2013 Through Oct. 2014

Total Beneficiation Tax	5,137,117
State/Exempted	4,366,549
County/15%	770,568

			Revenue Gain after Imputing School 75%	Approximate Mill Value of Revenue
McLean	County	146,033	146,033	
	Cities	109,525	109,525	
	Schools	109,525	27,381	
		365,083	282,939	5.09
Mercer	County	94,677	94,677	
	Cities	71,008	71,008	
	Schools	71,008	17,752	
		236,692	183,436	5.83
Oliver	County	49,813	49,813	
	Cities	37,360	37,360	
	Schools	37,360	9,340	
		124,533	96,513	8.89

SB 2036
3-4-15
#1 p. 1

North Dakota
LEGENDARY

DEPARTMENT OF COMMERCE TESTIMONY ON SENATE BILL 2036
MARCH 4, 2015, 9:00 A.M.
HOUSE FINANCE AND TAXATION COMMITTEE
REPRESENTATIVE CRAIG HEADLAND, CHAIRMAN

ALAN ANDERSON – COMMISSION, ND DEPARTMENT OF COMMERCE

Good morning, Mr. Chairman and members of the committee, my name is Alan Anderson and I serve as the Commissioner for the North Dakota Department of Commerce, as well as chairman of the EmPower North Dakota Commission.

On behalf of the EmPower ND Commission, I am here today to speak in favor of Senate Bill 2036. This is a bill that was recommended by the Commission and approved by the interim Energy Development and Transmission committee. A list of the bills the House of Representatives will be seeing that has been recommended and supported by the Commission is below:

- Senate Bill No. 2034 – Oil Gathering Pipelines Sales Tax Exemption.
- Senate Bill No. 2035 – Value-Added Energy Facility Sales Tax Exemption.
- Senate Bill No. 2036 – Coal Beneficiation.
- Senate Bill No. 2037 – Wind Energy Incentives.
- Senate Bill No. 2318 – Carbon Dioxide Capture Equipment Used for Enhanced Oil Recovery.

Senate Bill 2036 relates to taxation of beneficiated coal. Sections 1 through 3 and section 5 remove sunsets relating to allowing the same tax treatment for beneficiated coal as are allowed for coal. These changes were originally approved in Senate Bill 2035 (2009). The sunset was put in place in 2009 to allow an opportunity to review whether the changes had the intended impact of increasing the use of North Dakota coal, especially as this coal competes with coal from other states.

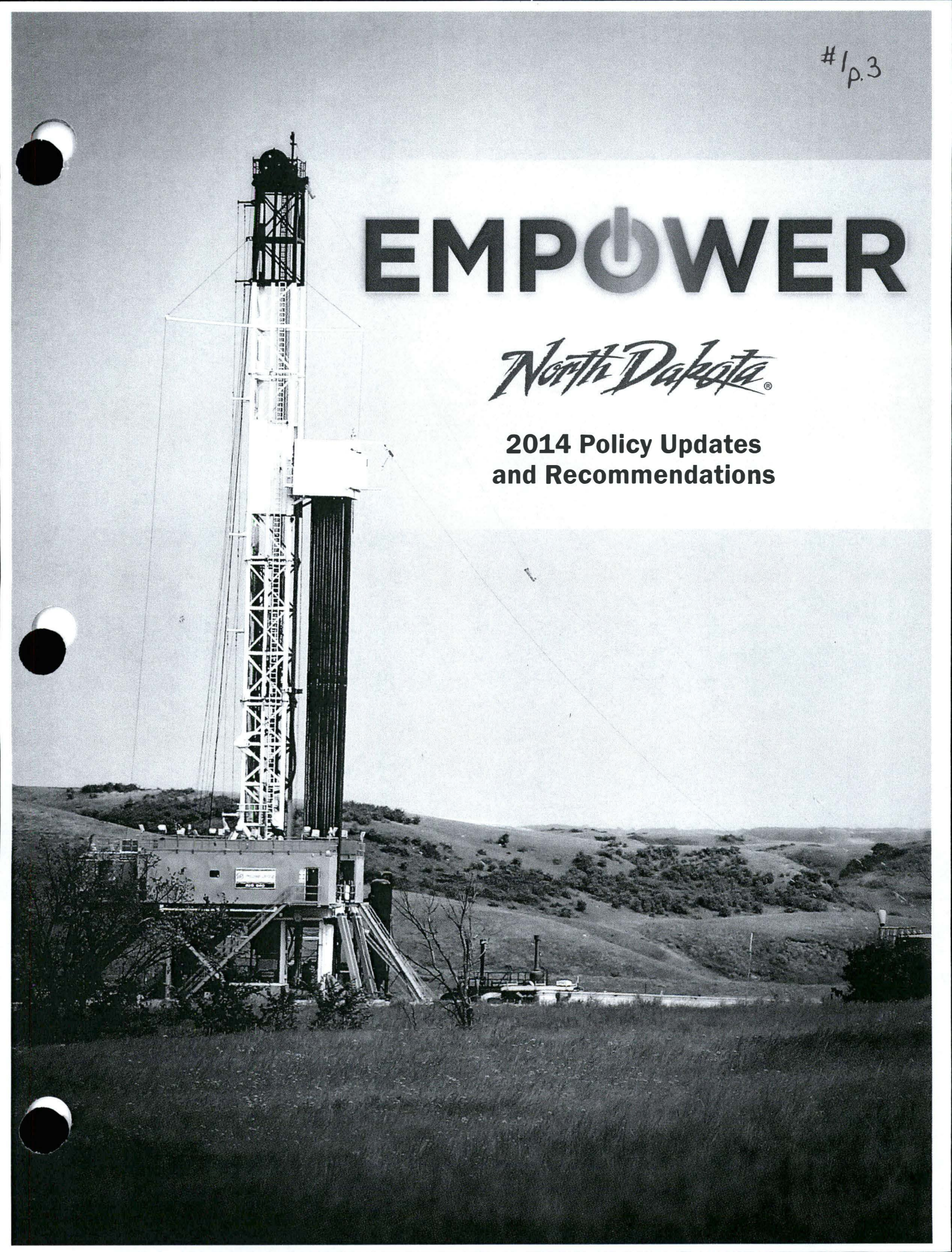
Section 1 was intended to be clarification of the sales tax exemption for beneficiated coal. However, it was sunsetted with the rest of SB 2035 (2009).

Sections 2 and 3 allow beneficiated coal to receive the same sales and use tax exemptions as "coal in its natural form." Section 2 relates to sales tax and section 3 relates to use tax.

Section 4 provides an exemption to the coal beneficiation tax for coal that is also subject to the coal conversion tax. The EmPower ND Commission felt this was a tax fairness issue as currently beneficiated coal is taxed three times: when it is extracted from the ground (coal severance); when it is beneficiated; and when it is converted into electricity (coal conversion). With this change coal would be taxed twice: severance tax and either conversion or beneficiation.

Mr. Chairman and members of the Finance and Taxation Committee, I respectfully request your favorable consideration of Senate Bill 2036. That concludes my testimony and I am happy to entertain any questions.

#1 p. 3



EMPOWER

North Dakota®

2014 Policy Updates and Recommendations

#1 p 4

North Dakota

is one of the only states with a multi-resource energy policy, guided by the efforts of the EmPower North Dakota Commission.

This report marks the fourth review of the state's energy policy and provides an executive summary along with recommendations and industry updates.

#1 p. 5

EmPower North Dakota

2014 POLICY UPDATES AND RECOMMENDATIONS

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DEPARTMENT OF COMMERCE

Executive Summary

Through the EmPower North Dakota Commission, leaders from all major energy industries in North Dakota meet regularly with one common goal: to be critical thinkers for the development of the state's energy resources.

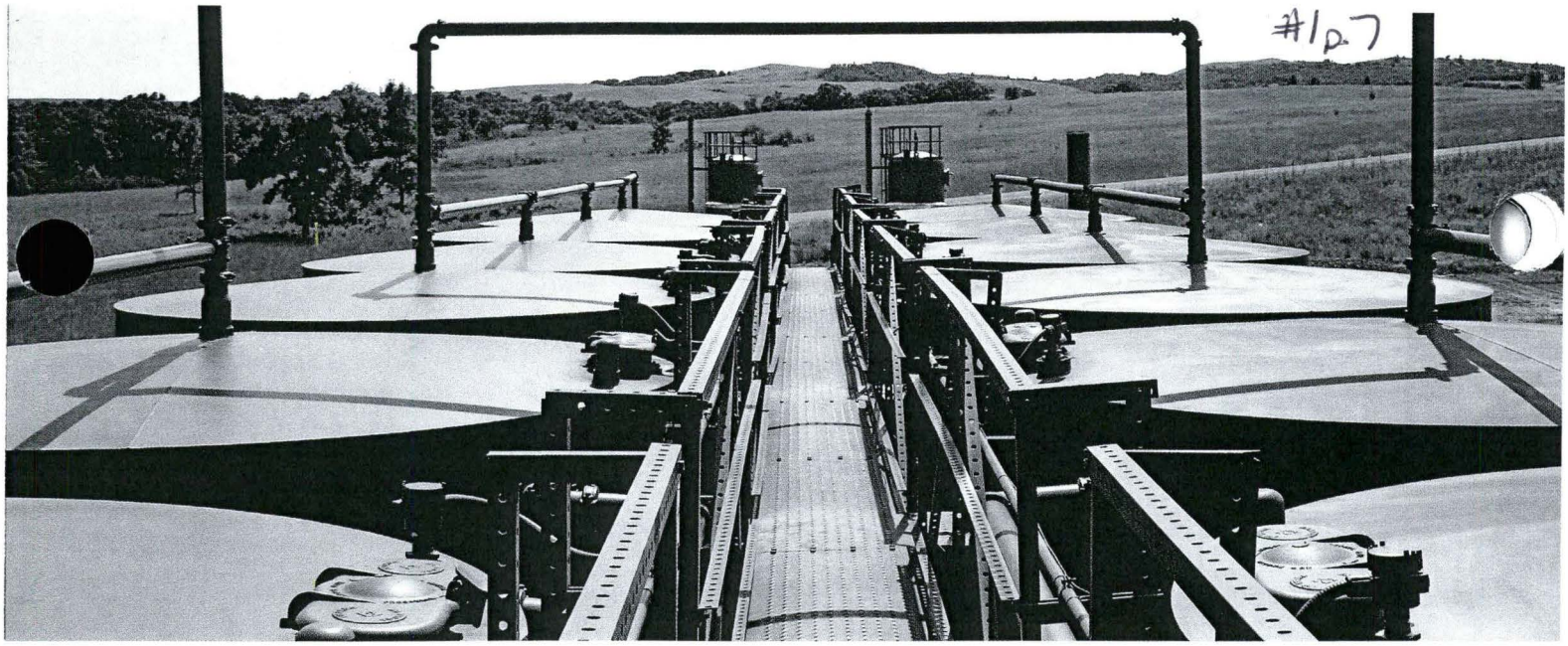
The strategic partnerships between North Dakota's long-standing and emerging energy industries enable all sectors of the industry to work together as they meet our state's and country's energy needs without government mandates.

North Dakota is proactive and aggressive in addressing energy development and serves as a model for America in fostering innovative, long-term energy strategies to meet our nation's growing energy demand and need for energy security in an environmentally responsible manner.

The state's diverse energy landscape celebrates many successes:

- North Dakota is the second largest oil-producing state in the nation and would be the 20th largest producing country in the world with production of one million barrels per day as of April 2014. The industry has over 10,100 producing oil wells, employs 65,000 direct and indirect jobs, has a $30 billion economic impact, and contributes $11 million per day to the state and political subdivisions in oil production taxes.

- Utility companies produce 4,000 megawatts of lignite and other coal generation at seven locations providing low cost, reliable electric power to two million customers in North Dakota, South Dakota, Minnesota, Montana and Iowa. North Dakota is one of the country's top 10 coal-producing states, mining approximately 30 million tons every year since 1988, which results in an annual economic impact of $3 billion.



Executive Summary (continued)

- North Dakota leads the nation in the production of 10 different agricultural commodities including two commodities used for liquid fuels. Several additional crops provide feedstock for successful and developing bio-refining industries in North Dakota.

- Between 2007-2012 North Dakota increased its energy production by 179.7 percent.

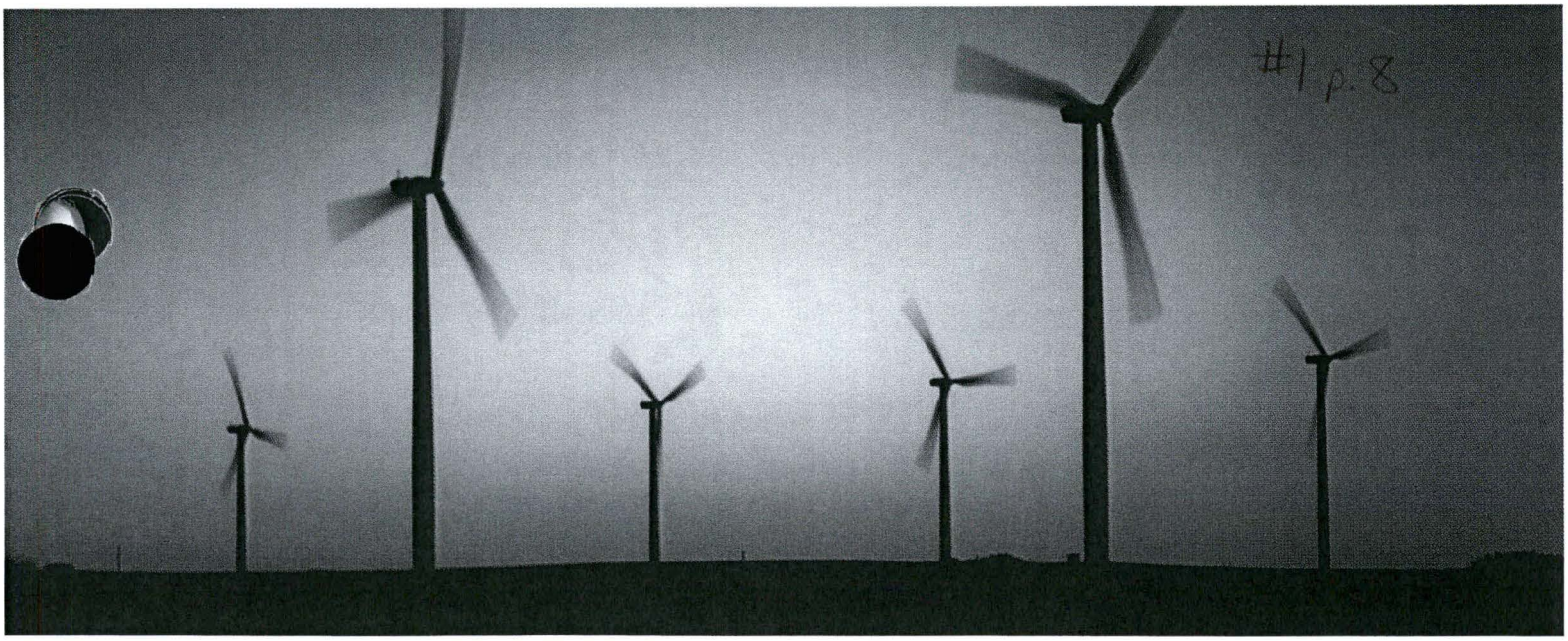
- North Dakota has gone from 1.0 percent of the U.S. energy production to 2.7 percent and from being 23rd to 12th among U.S. states between 2007-2012.

- North Dakota continues to develop a thriving ethanol industry, which ranks 9th in the nation. It contributes more than $640 million annually to the economy and supports more than 10,000 direct and indirect jobs. The state has established itself as a national leader in flex fuel pump infrastructure and has seen a 50 percent increase in flex fuel vehicles over the past three years with 98,100 currently on the road.

- There are 22 natural gas processing plants operating in western North Dakota. The oil and gas industry is investing over $6 billion in infrastructure to capture natural gas, and four additional new or expanded plants are planned to come online by 2016. Natural gas gathering systems connected to 2,020 wells in 2013, up 113 percent from 949 wells in 2011.

- In 2013, North Dakota ranked 12th in the nation in installed wind energy capacity. The North Dakota Public Service Commission has permitted over 1,672 megawatts of wind generation.

- The state's only operating oil refinery has expanded to 70,000 barrels per day. In addition, a 20,000 barrels per day diesel topping refinery is under construction with an expected completion by December 2014. A number of other refineries are in various stages of planning and permitting.



Future Vision

North Dakota's future is one where many of the energy sectors have the potential to not only grow, but also develop new economies based on value-added opportunities related to energy resources. In order to move forward, the state needs to address several key areas crucial to the expansion of energy production and extraction. North Dakota needs to work with the industry to begin exploring ways to capture opportunities to develop raw resources into new products, including petrochemicals, plastics, nanofibers, manufactured products or materials yet to be discovered.

The EmPower North Dakota Commission has identified five critical components for continuing to grow energy production and new energy-related industries:

1. **Infrastructure** – Up-to-date infrastructure is the foundation for continuing existing development and expanding into new areas.

2. **Workforce** – As the energy industry expands, the workforce must be available to meet the demands.

3. **Research and Development** – Research and development serves as the bridge for industry to move from concepts to new development and commercialization.

4. **Regulatory Environment** – A regulatory environment, at both the federal and state levels, that encourages economic growth while ensuring environmentally-responsible development of natural resources is essential.

5. **Energy Growth Incentives** – New and continued incentives are needed to capitalize on development opportunities across North Dakota's energy sectors.

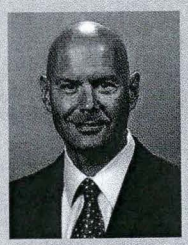
#1 p. 9

EmPower ND Commission Members

In 2007, the North Dakota Legislature formalized energy policy and created the 16-member EmPower Commission which includes representatives from across the energy industry. Their insights provide the substance for this updated EmPower North Dakota Comprehensive State Energy Policy.

Al Anderson
North Dakota Department of Commerce, chairman

Jason Bohrer
Lignite Energy Council, lignite coal



Mark Bring
Otter Tail Power Company, ex officio

Ron Day
Tesoro, refining or gas-processing

Terry Goerger
farmer, agriculture

Margaret Hodnik
Allete, Inc., ex officio

Eric Mack
Archer Daniels Midland, biodiesel

Ron Ness
North Dakota Petroleum Council, oil and gas

Dale Niezwaag
Basin Electric Power Cooperative, generation and transmission electric cooperatives

Mark Nisbet
Xcel Energy, wind

Mike Rud
North Dakota Petroleum Marketers Association, petroleum marketers

Randy Schneider
North Dakota Ethanol Producers Association, ethanol

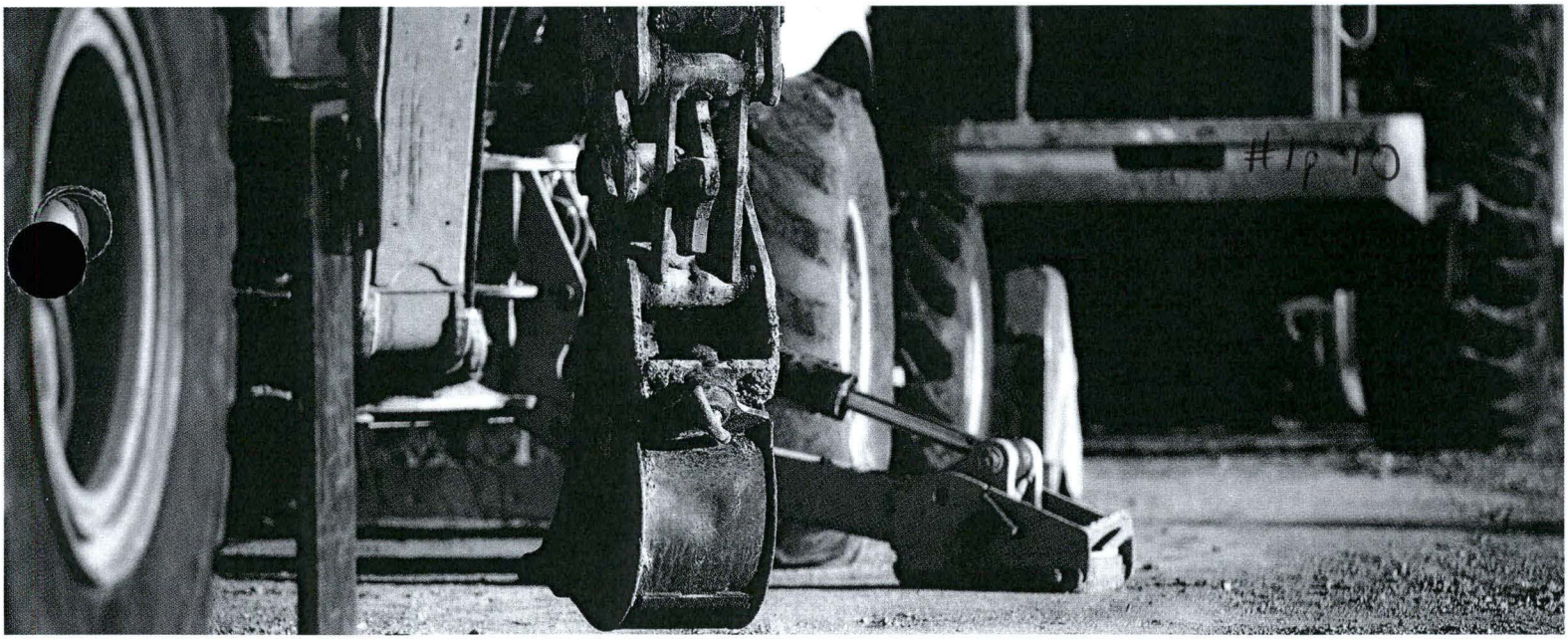
Jay Skabo
Montana-Dakota Utilities Co., investor-owned utilities

David Straley
North American Coal Corporation, lignite coal producing industry

Sandi Tabor
KLJ, ex officio

John Weeda
Great River Energy, biomass

Julie Voeck
NextEra Energy Resources, LLC., ex officio



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Commission Recommendations

INFRASTRUCTURE

Adequate infrastructure – such as water pipelines, roads, oil and natural gas pipelines, railroads, electric transmission lines, power generation and affordable housing – is key to the efficient and effective development of North Dakota's energy resources. While most current infrastructure needs are related to oil and gas development in western North Dakota, all energy sectors benefit from similar infrastructure support throughout the state. Infrastructure provides the backbone for North Dakota's energy industry to export products to the rest of the nation, and perhaps the world. In addition, this component is critical to the growth of communities, the minimization of development impacts, and enhanced public safety.

The 2013 Legislative Assembly made substantial progress towards meeting the critical infrastructure needs of the state with an investment of $2.5 billion in oil and gas impacted areas, nearly double the amount appropriated in 2011. However, continued growth of our energy industry and the state's economy are leading to infrastructure shortfalls and more must be done to assist communities in closing the gap.

The EmPower North Dakota Commission receives regular updates from the North Dakota Department of Commerce staff regarding continued western needs. Of the many concerns raised by local leaders, infrastructure issues were identified as critical to maintaining North Dakota's quality of life. In order to meet the growing demands of western North Dakota, the state needs to continue to make a long-term commitment of capital to address the acute infrastructure shortfalls related to the significant growth of oil and gas production, processing and transportation facilities.

Adequate infrastructure is key to the efficient and effective development of North Dakota's energy resources.

Transportation infrastructure development includes construction and upgrading of roads and bridges on state, county and township systems. In 2013, western North Dakota experienced a 25 percent increase in vehicle miles traveled. As oil and gas activities continue, as well as agricultural movement, this increased traffic will create greater need and frequency for repairs and replacement. The Upper Great Plains Transportation Institute's 2014 study

In 2013, western North Dakota experienced a 25 percent increase in vehicle miles traveled.

INFRASTRUCTURE (continued)

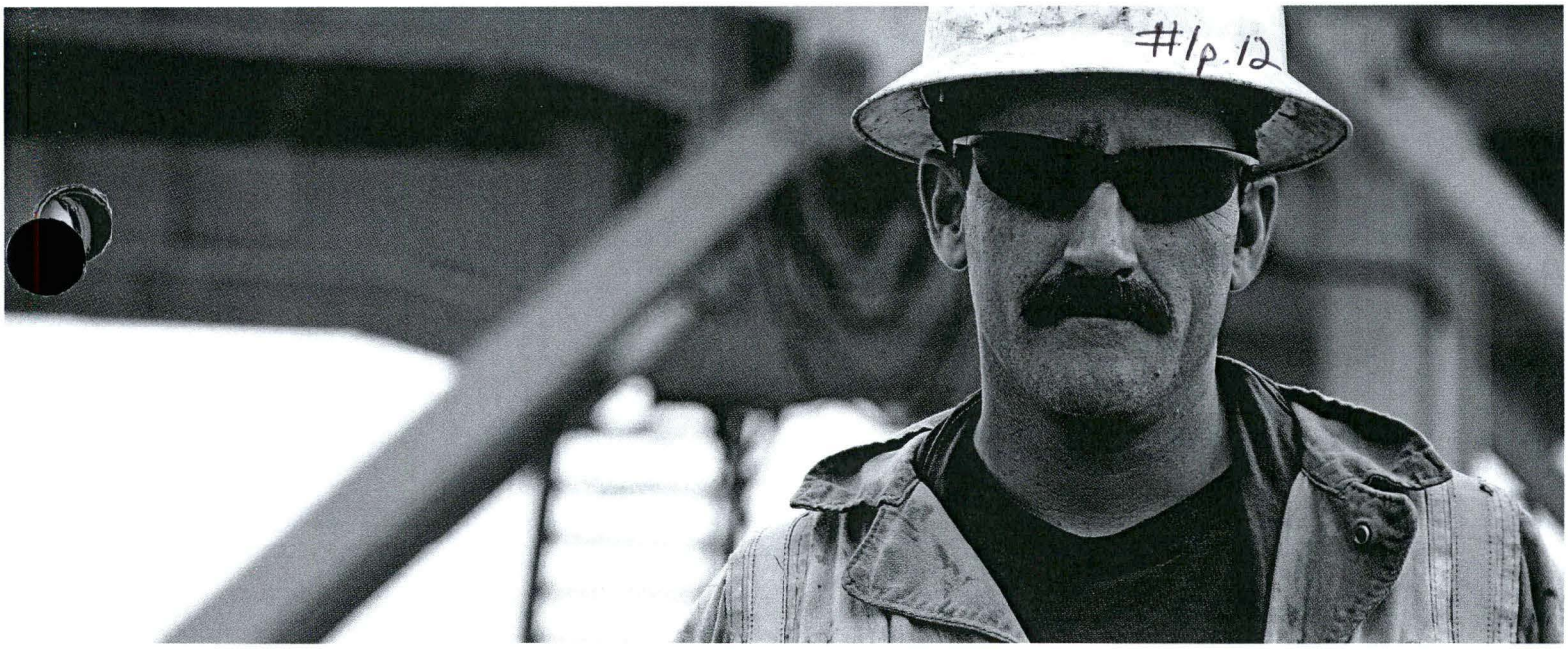
of county, township and tribal transportation infrastructure needs estimates the following state investment is needed for the 2015-2017 biennium:

- Unpaved roads - $548 million
- Paved roads - $377 million
- Bridges - $70 million

New methods to provide adequate funding to address these critical areas must be designed. Without a new approach, local governments and communities will continue to fall behind resulting in continued impact on development and quality of life. Concerns related to environmental issues like increased dust from trucks, proper storage of waste water, and others must also be addressed. Challenges also exist in the construction of necessary infrastructure as landowners become reluctant to grant easements on their property.

In light of the issues facing infrastructure related to energy development in the state, the Commission urges the State of North Dakota to:

- Support the passage of legislation within the first 30 days of the 2015 legislative session providing infrastructure funding to oil and gas impacted areas to ensure early availability of adequate funding to allow bidding processes to occur and result in timely use of the 2015 construction season.
- Support changes to the gross production tax distribution formula to provide additional funding to assist with local infrastructure needs.
- Support a transportation funding level that meets the needs identified by the Upper Great Plains Transportation Institute.
- Recommend the immediate creation of an authority focused on regional infrastructure (roads, airports, emergency and medical services, water and waste water, etc.) that will work with communities in coordinating strategic planning efforts in the hub cities of Dickinson, Minot and Williston, and primary Bakken counties of Dunn, McKenzie, Mountrail and Williams. These efforts should:
    - Provide periodic updates and evaluation on the progress of infrastructure development and future needs to the legislature in regards to state and community planning and investments.
    - Work in cooperation with the Energy Impact Coordinator to understand local issues and efforts.
    - Assist in data gathering and coordination of infrastructure funding, providing recommendations with input from local communities and distributing agencies.
- Create a trigger mechanism that will make additional funds available to oil impacted communities from the state share of the oil tax revenue when revenue exceeds certain thresholds.
- Support expansion of existing water systems to provide capacity to meet growing community and commercial needs.
- Support the State Water Commission's efforts to increase access to Lake Sakakawea water for community and commercial needs to alleviate pressure on other water sources, reduce local truck traffic and improve road safety.
- Monitor the railroad infrastructure upgrade plan within North Dakota to ensure there is adequate ability to the meet the export demand of all commodities to market.



WORKFORCE

North Dakota has one of the best business climates in the country fueling unprecedented growth, leading to a shortage of workers in virtually every industry and every corner of our state. As a result, securing skilled workforce to meet the needs of the state's business community is a high priority. As the state's demand for workers continues to grow, there needs to be greater focus on training and retaining our youth, as well as promoting opportunities to attract workers from outside the state.

The need to recruit and retain a permanent workforce is evident in the following statistics:

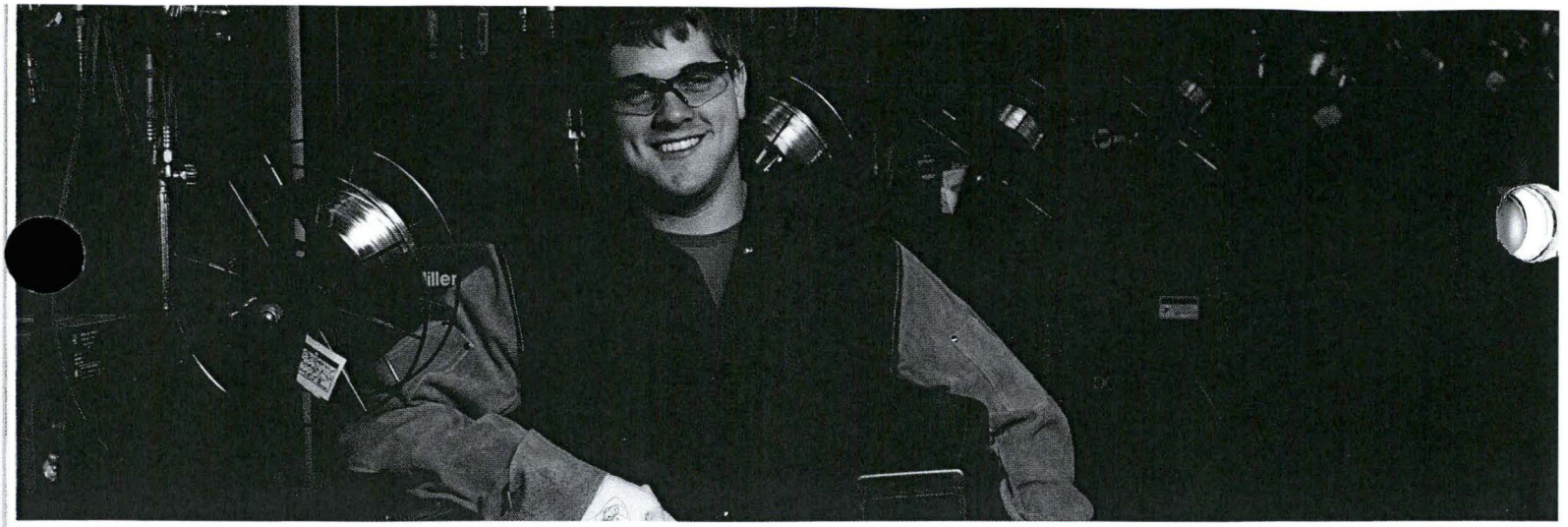
- 25,000 jobs are currently open across North Dakota.
- North Dakota is expected to add over 76,000 jobs between 2010 and 2020.
- Healthcare, construction, energy, manufacturing, transportation, public services, agriculture, tourism and retail all report significant workforce shortages.

The State's workforce needs are not just limited to the oil and gas industry.

- About 35 percent of all current job openings are energy related.
- About 85 percent of private jobs in the state are not oil and gas related.
- The Fargo area has the most job openings in the state, followed by Bismarck.

25,000 jobs are currently open across North Dakota. Over 60 percent of these exist outside the oil and gas counties.

As workforce needs continue to grow, the funding sources that support infrastructure and community development must be enhanced. Companies and private investors are working to address housing shortages throughout the state by providing crew camps, apartments, single- and multi-family homes. Single family housing is very important to attract the high-demand, high-skilled workforce the energy industry needs long-term. The state must continue to support the key infrastructure that supports the ease of development in many of our western communities.



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WORKFORCE (continued)

Many of the state's new families also have unique financial needs. The Housing Incentive Fund, administered by the North Dakota Housing Finance Agency, is working to meet the need for affordable housing, but greater enhancements are necessary.

One of the challenges impacting the energy industry's ability to attract qualified employees is the lack of knowledge about the tremendous opportunities for young people in the energy industry. Many high-demand positions in several energy sectors rely heavily on skills in science, technology, engineering and mathematics (STEM). Incorporating STEM courses at an earlier age and educating career counselors and parents about high-demand careers will facilitate the long-term growth of the energy workforce talent pool. To improve the overall situation, the energy industry and research councils supported the development of curriculum for grades 4 and 8 which will be rolled out in Fall 2014. Discussions with officials at the Department of Public Instruction were initiated to understand how best to develop high school curriculum. These efforts are on-going. Curriculum development, however, is only part of the puzzle. Energy representatives also met with representatives from Valley City State University to discuss STEM education initiatives and the opportunity for energy curriculum development to train students pursuing teaching degrees. While great strides have been made in curriculum development, the needs for securing a stable funding source for curriculum maintenance and continued development is critical.

The current workforce landscape has many vocational or technical degree openings that can provide well paying, life-long careers (i.e., welders, lineman, electricians, boilermakers and mechanics). Many of the current energy-related workforce needs could be filled by individuals with vocational or technical skills.

Industry and education groups need to continue to work together to bring awareness to career and specialized training opportunities in North Dakota. The State of North Dakota and the energy industry must continue to strengthen existing partnerships to educate students of all ages about the wide variety of vocational and technical degree openings. Focus on this effort has proven successful; for example, at the recently expanded diesel mechanic program at North Dakota State School of Science in Wahpeton, most graduates leave with a North Dakota-based position in-hand as the school partners with business to meet critical workforce needs. The development of more training programs focused on meeting growing workforce requirements will need continued support by the legislature, EmPower North Dakota Commission and others. Adequate funding must be available for these important educational programs that support energy-related careers.

Also supporting the industry is TrainND, which provides customized training programs such as CDL and safety training, and employee development initiatives across the state. These training programs give North Dakota businesses an edge to better

WORKFORCE (continued)

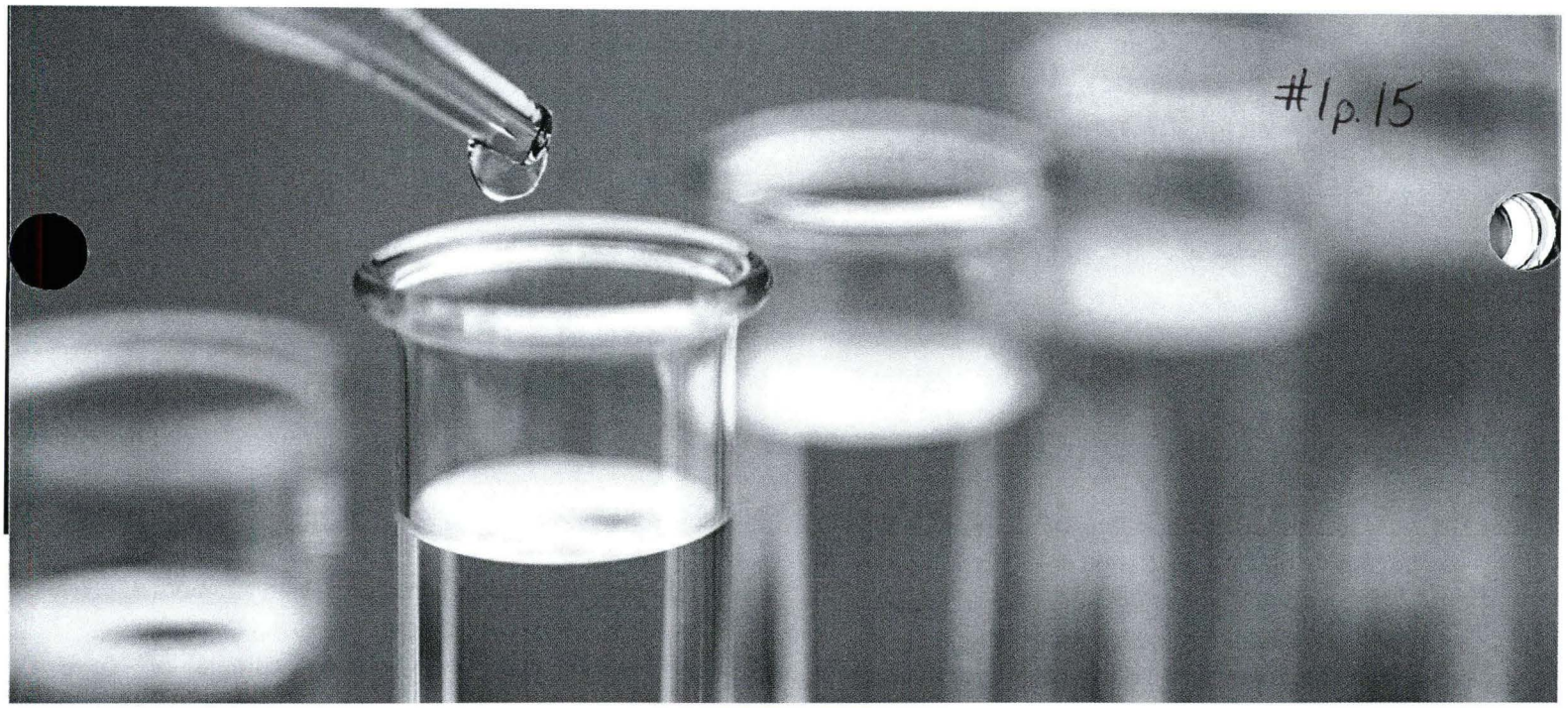
compete on a local, national and international level. Continued support for programs such as TrainND and Operation Intern, which match youth with businesses while supporting long-term workforce growth in North Dakota, are critical.

In an effort to assist with workforce demand, the North Dakota Economic Development Foundation has launched the Find the Good Life in North Dakota campaign, a workforce recruitment effort. It is a private/public sector funded program designed to help solve the greatest challenge facing our business community: workforce development, recruitment and retention. The fundraising goal of $2.5 million will fund a comprehensive two-year campaign focused on increasing workforce within North Dakota and securing out-of-state workers and students to fill high-demand careers. The campaign works with North Dakota companies and industry organizations to promote jobs through strategies such as out-of-state job fairs, veteran recruitment and other efforts.

The energy industry looks to the Governor's Workforce Development Council and Job Service North Dakota to better identify energy workforce needs and how North Dakota can maximize resources to meet those needs into the future. These efforts will ensure that Governor Dalrymple and the legislature receive the information necessary to sustain the long-term growth of the energy sector in North Dakota.

In light of the issues facing workforce related to energy development in the state, the Commission urges the State of North Dakota to:

- Continue support of the Housing Incentive Fund to the level suggested by the North Dakota Housing Finance Agency to meet market conditions, and consider a trigger on an annual basis for additional funds.
- Increase efforts to educate North Dakota's youth about the state's natural resources by funding the development, implementation and sustainability of curriculum at the elementary and high-school level to encourage interest in energy careers through the North Dakota Department of Public Instruction.
- Encourage and enable the energy industry to collaborate with the North Dakota University System, Governor's Workforce Development Council, Job Service North Dakota and other agencies to:
  - Encourage industry interaction with teachers and guidance counselors to grow youth knowledge and interest in energy careers and to better retain youth for high-demand career options.
  - Provide greater accessibility to career and technical education programs, especially through adequate training facilities. Career examples include, but are not limited to:
    - Science, technology, engineering, and mathematics (STEM) education
    - Industrial equipment supplier supported programs
    - Commercial driver's license (CDL) training sites
    - Emergency medical services
    - Technical trades/internships
    - Energy careers
    - Workforce safety careers
- Support increased funding for workplace safety and training. Examples of efforts include:
  - Training workforce safety professionals
  - New-hire training
  - Back-to-work efforts
- Support legislation which recognizes the role distance learning will play in the future of education and improve access to technology for students using distance learning programs.



RESEARCH AND DEVELOPMENT

A key component to assuring the use of our valuable natural resources now and into the future is research and development (R&D). The state has been a leader in fostering R&D partnerships between private industry, higher education and research facilities. As R&D funding is reduced at the federal level, the state's role along with its partners is even more critical in finding ways to utilize North Dakota's vast energy resources. Through existing R&D programs, the state has the potential to allow R&D to undertake a new role in understanding the synergies between renewable and traditional energy resources.

For traditional fuels like lignite, oil and natural gas, R&D provides a road map for the development of new technologies that will provide fewer emissions and cleaner energy in the exploration stage or in the energy conversion process. For instance, lignite R&D projects are examining new ways to lower mercury, nitrogen oxide and sulfur dioxide emissions. The lignite R&D is focused on preserving the existing fleet of lignite based plants by developing new options for control of criteria pollutants such as NOx, metals like mercury and CO_2 capture and sequestration. In addition, new technologies for options to produce low cost energy based on lignite that can meet the environmental challenges under today's regulatory climate are under development. Approximately $8 million is available each biennium to fund the lignite R&D program. The funding is derived from two cents per ton R&D tax, a dedicated percentage of the Coal Trust Fund and for a limited time a portion of the coal conversion tax. A portion of this funding is also used by the North Dakota Transmission Authority to work on transmission issues which can limit energy development opportunities in the state.

Through existing R&D programs, the state has the potential to allow R&D to undertake a new role in ensuring the future prosperity of North Dakota's vast energy resources.

The potential opportunities for secondary oil and gas recovery in North Dakota are in the very early stages of development. The importance of pursuing these opportunities is demonstrated by what is currently being done at the Dakota Gasification Company's plant in Beulah where CO_2 is captured and delivered by pipeline to the Weyburn oil field in Saskatchewan, Canada. It is estimated that the CO_2 being injected will extend that field's productive life for 25 years and result in production of as much as 130 million barrels

RESEARCH AND DEVELOPMENT (continued)

of oil that might otherwise have been abandoned. More research and technology development needs to occur to better understand how CO_2 injection or other methods of enhanced oil recovery can be applied in North Dakota's oil shale play.

The phenomenal growth over the past few years in oil and gas production is primarily due to the utilization of new technologies and practices. Research and development is needed to foster enhanced oil recovery in the Bakken and Three Forks Formations as well as other legacy formations. Other potential formations are currently being studied and wait for that "key" to unlock these natural resources for production. Through the Bakken Optimization Program, the oil and gas R&D program – in partnership with industry, the Energy and Environmental Research Center and higher education – is looking for the best methods to capture the oil and gas resources that remain underground and to do it with minimum impact to the land. This program includes research on waste minimization and utilization, spill remediation and land reclamation. Funding for the oil and gas R&D program is appropriated indirectly from the oil and gas production taxes at $10 million per biennium. A portion of this funding is used to provide staff for the Pipeline Authority and to carry on the Authority's work on oil and gas transportation issues.

The renewable R&D program is funded at $3 million per biennium from the state's Resources Trust Fund. This program promotes the growth of North Dakota's renewable energy industries through research, development, marketing and education. Funded projects have included the development of new renewable feedstocks, as well as technologies to process renewable energy.

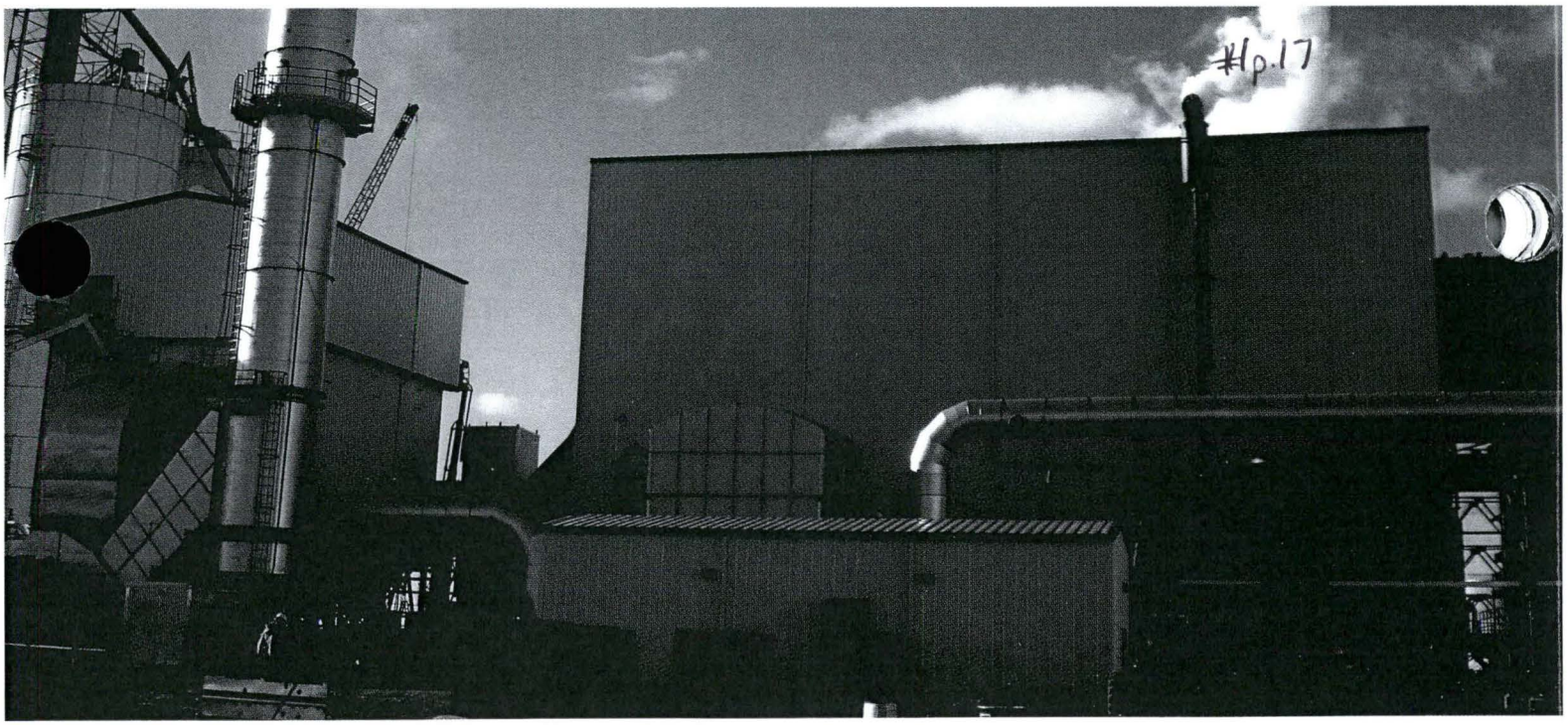
As all our energy resources are developed, these research programs can play a critical role in advancing value-added processing and manufacturing across the state. The IHS study commissioned by the legislature is one step in that process. Now the work must continue in identifying

Similar to the tremendous growth witnessed in value-added agriculture, North Dakota can become a leader in value-added manufacturing related to oil and gas development.

the specific opportunities that the state can partner with the private sector to continue to grow the state's economy for years to come. Similar to the tremendous growth witnessed in value-added agriculture, North Dakota can become a leader in value-added manufacturing related to energy development.

In light of the issues and opportunities needing research and development related to energy resources, the Commission urges the State of North Dakota to:

- Continue to support existing R&D programs to ensure the development and implementation of new technologies and promote new growth for all energy resources. Consider increasing the funding level for lignite research and oil and gas research programs.
- Support the additional appropriation of research dollars to be used by the lignite and oil and gas research councils to support R&D activities to resolve the technical problems associated with the commercial deployment of carbon capture technologies, seek additional incremental improvements in the recovery of oil through enhanced oil recovery using CO_2 or other gases, and develop and fund a FEED study to identify commercial opportunities associated with the beneficial capture and use of CO_2 as well as the need to meet the region's growing energy demand.
- Create and implement a strategy to assist North Dakota in developing viable petro- and bio-chemical industries.



REGULATORY ENVIRONMENT

Current EmPower North Dakota Commission goals and policy statements reflect concerns regarding the existing federal regulatory climate that often fails to provide for reasonable, responsible and cost-effective regulations over many facets of the energy industry. The Commission's goals and policies can be summarized as stated below:

The federal government should provide a fair and responsible regulatory environment based on sound science and the capacity of current technology to ensure future energy development. Federal regulations must be cost-effective and include sufficient lead time for industry to adapt to new statutory requirements affecting production or products. Federal regulations must be structured in ways to minimize placing new barriers on investment and development.

The current federal regulatory environment incorporates a "one-size-fits-all" policy that fails to take into account the unique nature of each state. North Dakota should encourage federal agencies to recognize unique environmental issues and to work with the state to develop regulations that are flexible, sensible and allow for state agencies to have primacy in the program.

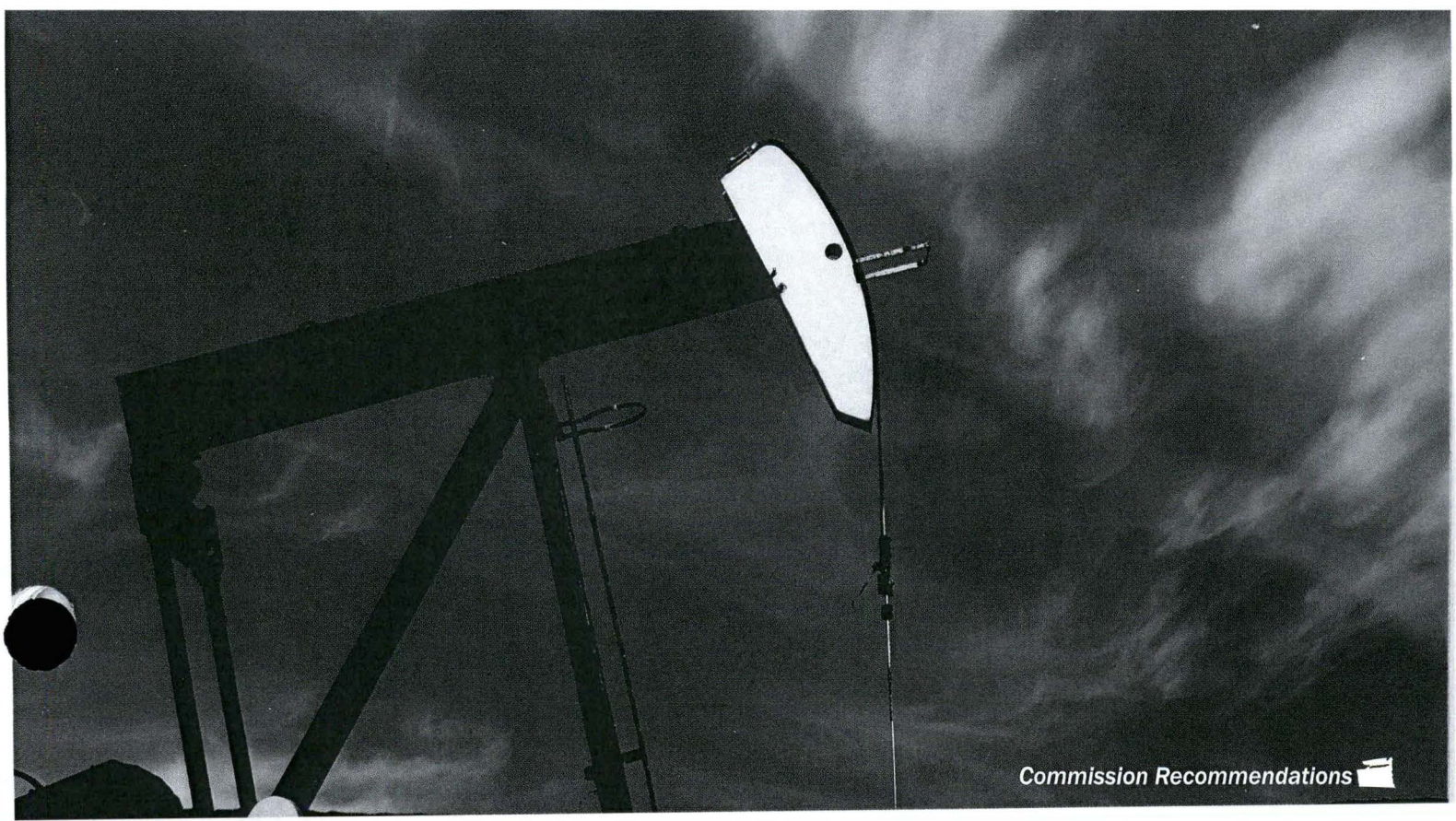
Understanding the economic impact of federal regulations on the state's economy is also important. The energy industry can serve as a valuable ally in helping the state identify and analyze the impact of federal regulations on the citizens of North Dakota, as well as the energy industry. Simply understanding the impact of federal regulations, however, is only one part of the equation. Providing input to federal regulators on particularly onerous proposed regulations is a crucial part of the overall strategy to protect the state's interest. Equally important are communications with the North Dakota congressional delegation on federal regulations of importance to the state.

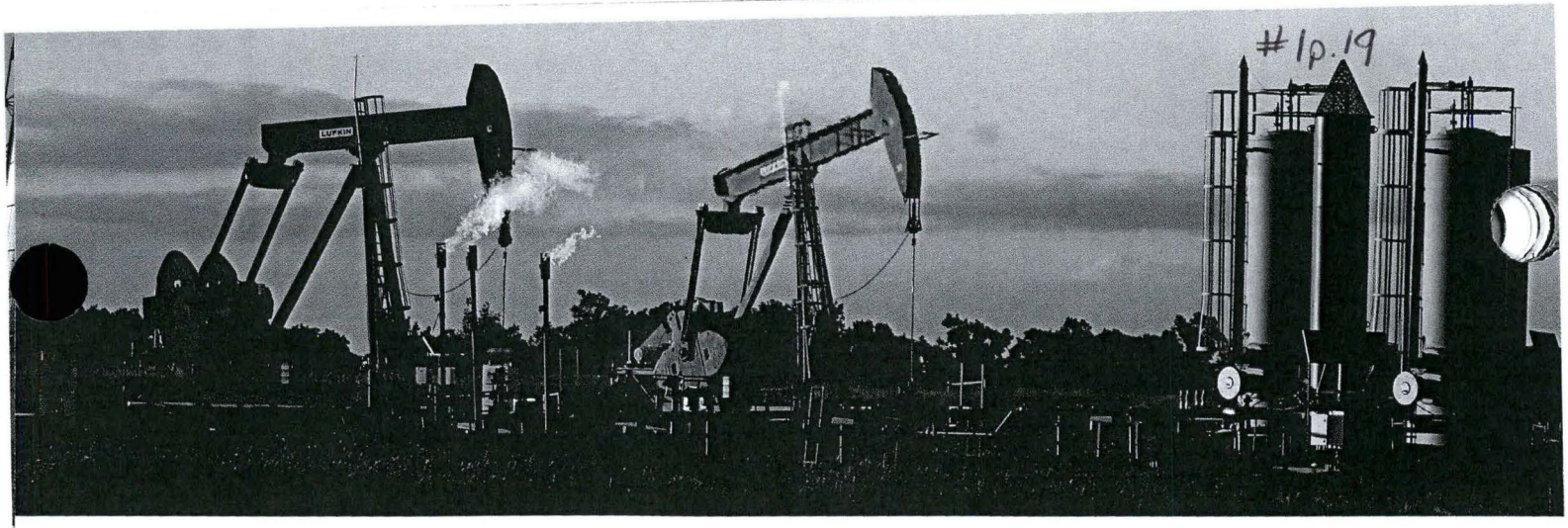
North Dakota must also recognize both the growth of all energy sectors and the additional burdens new regulations place on state regulatory agencies. Appropriate regulatory programs are a necessary part of ensuring that North Dakota can maintain its clean environment in conjunction with a healthy business environment. Staff and resources for state regulatory agencies need to expand to manage federal regulatory requirements and to ensure North Dakota retains primacy over these regulatory programs.

REGULATORY ENVIRONMENT (continued)

In light of the issues facing federal regulatory assessment related to energy development in the state, the Commission urges the State of North Dakota to:

- Encourage federal agencies to recognize environmental issues unique to North Dakota and work with state agencies to develop regulations that are flexible, sensible and allow for state primacy.
  - Encourage state agencies to provide regular updates on energy-related issues to the Commission and identify ways in which the Commission can support agency efforts on federal issues.
  - Establish new venues for state and federal regulatory agencies to collaborate on federal rulemaking efforts in ways that address individual state issues.
- Use the EmPower North Dakota Commission to better understand the economic impact of federal regulatory proposals on North Dakota.
  - Comment on proposed federal regulations with significant potential impact on the state's economy and engage the North Dakota Congressional delegation to actively challenge the implementation of final regulations posing a threat to North Dakota's economy.
- Recognize the additional burdens new energy development and regulations are placing on state regulatory agencies and provide adequate funding and staffing levels for the North Dakota Department of Health, North Dakota Department of Mineral Resources, North Dakota Public Service Commission, and North Dakota State Water Commission to ensure that each will be able to properly manage their respective programs.
  - Support legislative solutions which allow state agencies to design competitive compensation and benefit packages in order to attract and retain experienced employees in the disciplines related to energy development.
- Encourage the State of North Dakota to identify North Dakota-based solutions to manage waste generated from energy production.





ENERGY GROWTH INCENTIVES

North Dakota's energy industry growth has been phenomenal. While overall production of various forms of energy is at an all-time high, the state is on the brink of moving to the next level of production – adding value to each of our energy resources. The first steps in this journey were realized with the natural gas and ethanol value-added studies conducted during the present biennium. The EmPower North Dakota Commission guided these studies and supports the recommendations of each. These studies, however, reflect just the beginning of a number of initiatives lead by various energy sectors focused on discovering new ways to bring value to existing and new resources.

As the State and industry teamed together in these efforts, a key component that should not be lost is maintaining North Dakota's business friendly environment. While new initiatives will mean hundreds of millions of dollars of new investment in North Dakota, industry has always been able to rely on the State's willingness to offset a portion of the initial investment through tax incentives.

In light of the opportunities related to the next phase of energy development, the Commission urges the State of North Dakota to:

- Support incentives to expand value-added energy opportunities.
    - Provide a sales tax exemption for value-added energy facilities including both equipment and building materials, similar to the existing incentive for value-added agriculture.
- Support incentivizing or enhancing CO_2 capture, storage and enhanced oil recovery opportunities.
- Support an extraction tax credit on oil extraction for the development of technologies for beneficial use of drill cuttings.
- Support incentivizing or enhancing remote natural gas capture technology to minimize flaring.
- Support incentives to expand natural gas or liquid natural gas markets.
- Ensure tax certainty for wind to encourage future investment in renewable wind resources, recognizing the strategic role wind will play in continuing to enhance North Dakota's diverse energy portfolio.
- Support incentivizing the co-location of energy-related infrastructure in the same right-of-way.
- Support removing the beneficiation tax for coal conversion facilities that are subject to coal conversion tax.
- Support removing the sunset on the severance tax exemption for beneficiated coal used in agricultural commodity processing facilities.
- Remove the sunset on the sales tax exemption for beneficiated coal when used in agricultural processing facilities.
- Support a sales tax exemption for oil gathering lines.

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Energy Sector Updates

BIODIESEL	North Dakota biodiesel production uses about 65 percent of the state's canola production, or about 700,000 acres worth of canola.
BIOMASS	Researchers at North Dakota State University continue the development of hybridized biomass in pellet form for use in manufacturing processes. Biocomposite pellets could replace up to 40 percent of petroleum-based plastics used in manufacturing.
ENERGY EFFICIENCY	Energy conservation efforts helped weatherize over 4,000 homes for low-income individuals across North Dakota.
ETHANOL	The ethanol industry contributes more than $640 million annually to the state's economy and supports more than 10,000 jobs.
LIGNITE	North Dakota's lignite industry generates 4,000 megawatts of electricity to 2 million customers and an economic impact of over $3 billion.
NATURAL GAS	The oil and gas industry is investing over $6 billion in infrastructure to capture natural gas, and four additional new or expanded plants are planned to come online by 2016.
OIL	North Dakota's oil industry generates more than $30 billion of economic activity and supports 35,000 direct workers and more than 65,000 indirect jobs across all sectors of the economy.
PETROLEUM MARKETING	Over 500 million gallons of diesel fuel are being used annually in oil activity, in comparison to annual consumption across the state of 1 billion gallons.
REFINING	In addition to Tesoro Mandan Refinery, North Dakota's second refinery – Dakota Prairie Refinery, LLC – is scheduled for start-up in December 2014.
SOLAR, GEOTHERMAL, HYDROGEN & HYDRO POWER	The Garrison Dam on the Missouri River, with a capacity of 583 megawatts, is North Dakota's 5th largest plant in electricity generation capacity.
TRANSMISSION	Basin Electric Power Cooperative, Inc. received approval from the North Dakota Public Service Commission for their 200-mile 345 kV line from the Antelope Valley Station to a substation located near Tioga.
WIND	Since 2012, the North Dakota Public Service Commission has approved wind projects with total investments estimated at $1.33 billion.

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BIODIESEL

Biodiesel is a clean burning alternative fuel produced from renewable domestic resources that can help narrow the energy supply and demand gap. In North Dakota, biodiesel is primarily produced from canola oil feedstock, but can be made from any vegetable oil as well as from animal fats or used frying oils from restaurants and/or food manufacturing plants. The biodiesel industry is still in the defining stages of development in the United States. The volatile U.S. Biodiesel Blenders Credit has made it difficult for smaller plants to stay in business over the past few years. Currently, there is one biodiesel production facility operating in North Dakota, ADM Velva. Limited demand for biodiesel from within the state of North Dakota will limit the possibility of any new production plants in the state.

Highlights include:

- North Dakota biodiesel production uses about 65 percent of the state's canola production, or about 700,000 acres worth of canola.

- Each bushel of canola can produce 2.9 gallons of biodiesel.
- The ADM Velva plant brings jobs and new tax base into the area.
- The North Dakota State Research Center in Minot has been operating a field plot tractor fueled by B100 canola biodiesel for ten years with no mechanical issues.
- Since the canola biodiesel plant was built, North Dakota canola farmers have enjoyed historically high canola seed prices.
- State funding through the Centers of Excellence initiative has fostered a partnership between North Dakota State University and Monsanto to increase acreage and oil content of canola. The release of this new canola line in the near future will expand acreage and yields, increasing the available feedstock for biodiesel production in North Dakota.
- Investments in the Renewable Energy Development Fund have enabled the Energy and Environmental Research Center to develop a bio-based diesel with traits identical to petroleum-based diesel. The Biofuels PACE Program remains available as a financing incentive for new biofuel production facilities in North Dakota.

Each bushel of canola can produce 2.9 gallons of biodiesel.

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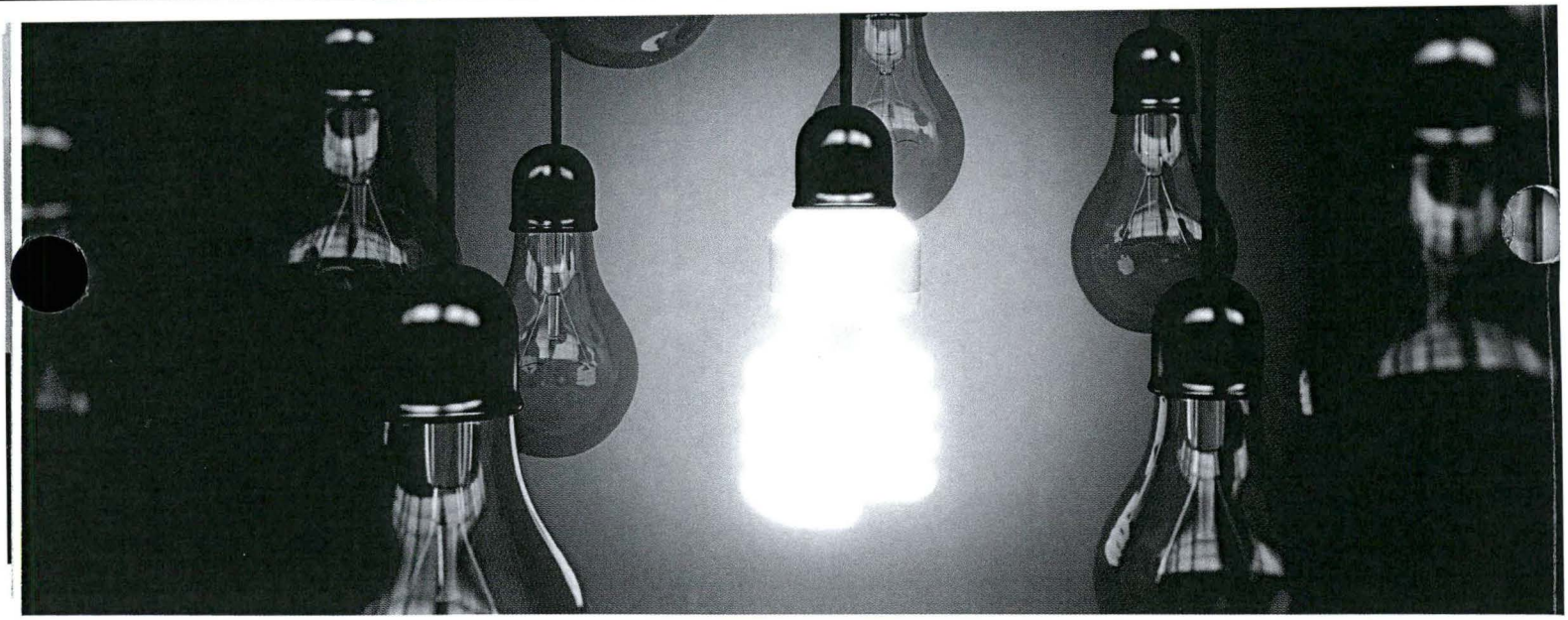
BIOMASS

North Dakota's biomass industry has potential for significant contribution to the state's economy as it evolves. Both North Dakota State University and the Energy & Environmental Research Center, University of North Dakota, have numerous projects underway for biomass utilization. These projects include a wide variety of uses from gasification technology to nanofibers. In addition, there are industry efforts underway to use crop residues and wood waste for ethanol or other energy applications. Commercial application is yet to be achieved as the state works to grow support for biomass as a viable industry in North Dakota.

Highlights include:

- Research sponsors and North Dakota State University continue to work actively toward finalizing a business plan and developing the first energy beet to ethanol commercial installation. Energy beet field trials are being conducted at five regional locations across North Dakota in an effort to study productivity and sustainability. Beet and juice storage studies are also being conducted.
- North Dakota State University has also developed the biomaterials used in the "bio-boom," a hybrid of 20 to 30 percent renewable biomaterials, flax fiber and fiberglass used in a crop sprayer manufactured by AGCO Corporation.
- Midwest AgEnergy is constructing Dakota Spirit AgEnergy at Spiritwood, with the intent of producing 65 million gallons per year of ethanol. Once the backbone conventional ethanol facility is in operation, potential use of biomass at the facility will be evaluated again.
- North Dakota State University researchers are collaborating with several companies, including Composite Innovations Centre in Winnipeg, Manitoba. The research studies renewable biomaterials – canola, soybeans, flax and more – in combination with petroleum-based polymers and plastics for an array of products.
- Researchers at North Dakota State University continue to research the development of hybridized biomass in pellet form for use in manufacturing processes. Biocomposite pellets could replace up to 40 percent of petroleum-based plastics used in manufacturing.



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ENERGY EFFICIENCY

Energy efficiency continues to be a high priority in homes and public buildings around the state. Over 11,000 energy efficiency and renewable energy rebates were given out to North Dakota residents and businesses resulting in $3.4 million in energy cost savings.

Highlights include:

- The 2013 Legislature provided for a transfer of one-half of one percent in the oil extraction tax deposited in the Resources Trust Fund to the energy conservation fund for public buildings, not to exceed $1.2 million per biennium.
- Using State Energy Plan funding, the North Dakota State University (NDSU) Agricultural and Biosystems Engineering Department and NDSU Extension Service provided education and technical assistance on energy efficiency and conservation through programs such as Home Energy 101, home builders educational seminars, 4-H leader training on the importance of home energy, and energy savings opportunities related to grain drying.
- Energy conservation efforts helped weatherize over 4,000 homes for low-income individuals across North Dakota.
- North Dakotans' received 3,800 rebates (at $150 each) for ENERGY STAR refrigerators, saving approximately 2 million kilowatt hours annually.

Over $900,000 annually will be saved from the implementation of energy savings measures in 19 North Dakota state facilities such as the State Capitol, North Dakota State School of Science and University of North Dakota.

- Approximately 197 local government buildings in 120 communities have been retrofitted through the Energy Efficiency and Conservation Block Grant (made possible with ARRA funding), annually saving over $1.1 million.
- Over $900,000 annually will be saved from the implementation of energy savings measures in 19 North Dakota state facilities such as the State Capitol, North Dakota State School of Science and University of North Dakota.
- The state building code now encompasses the 2009 International Energy Conservation Code and the International Residential Code energy efficiency requirements.

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ETHANOL

The ethanol industry contributes more than $640 million annually to the state's economy and supports more than 10,000 jobs. North Dakota's ethanol plants employ nearly 200 workers directly in positions such as chemists, engineers, accountants, managers and support staff. The average annual wage for an ethanol plant employee in North Dakota is approximately $64,000.

Highlights include:

- North Dakota ranks 9th in the nation for ethanol production.
- North Dakota's ethanol industry has the capacity to produce:
  - 400 million gallons of ethanol, more than 10 times the amount produced in 2005.
  - 1.3 million tons of dry distillers grains, a high-value livestock feed.
  - 6 million gallons of corn oil, used in the biodiesel industry.
- Each North Dakota ethanol plant is located in a community with a population of less than 2,500 and contributes an average of 49 jobs and an average annual payroll of $3.3 million to the community.
- Approximately nine percent of the 400 million gallons of ethanol produced annually in North Dakota is blended with gasoline and sold within the state.
- North Dakota ethanol plants use approximately 140 million bushels of corn annually with more than 80 percent of the corn purchased from North Dakota farmers.
- North Dakota is a national leader in the establishment of flex fuel pumps and was the ninth state to offer E15. There are also 98,100 flex fuel vehicles (FFV), more than a 50 percent increase since 2011.
- Ethanol is blended with nearly 85 percent of the taxable fuel sold in North Dakota, which is a nearly 30 percent increase from 2012.
- The ethanol industry partnered with the state's corn growers and the Renewable Energy Program to implement a two-year ethanol marketing campaign. Over the life of the campaign, there was a 36 percent increase in statewide ethanol sales from 2010 to 2013.
- A bio-refinery is under construction near Jamestown. It is a 65-million gallon per year conventional dry mill ethanol plant and is projected to be completed in the spring of 2015.
- North Dakota's ethanol industry is reviewing the results of the Study to Evaluate Value-Added Market Opportunities for Ethanol Produced in North Dakota conducted by IHS Chemical and considering future opportunities.

LIGNITE

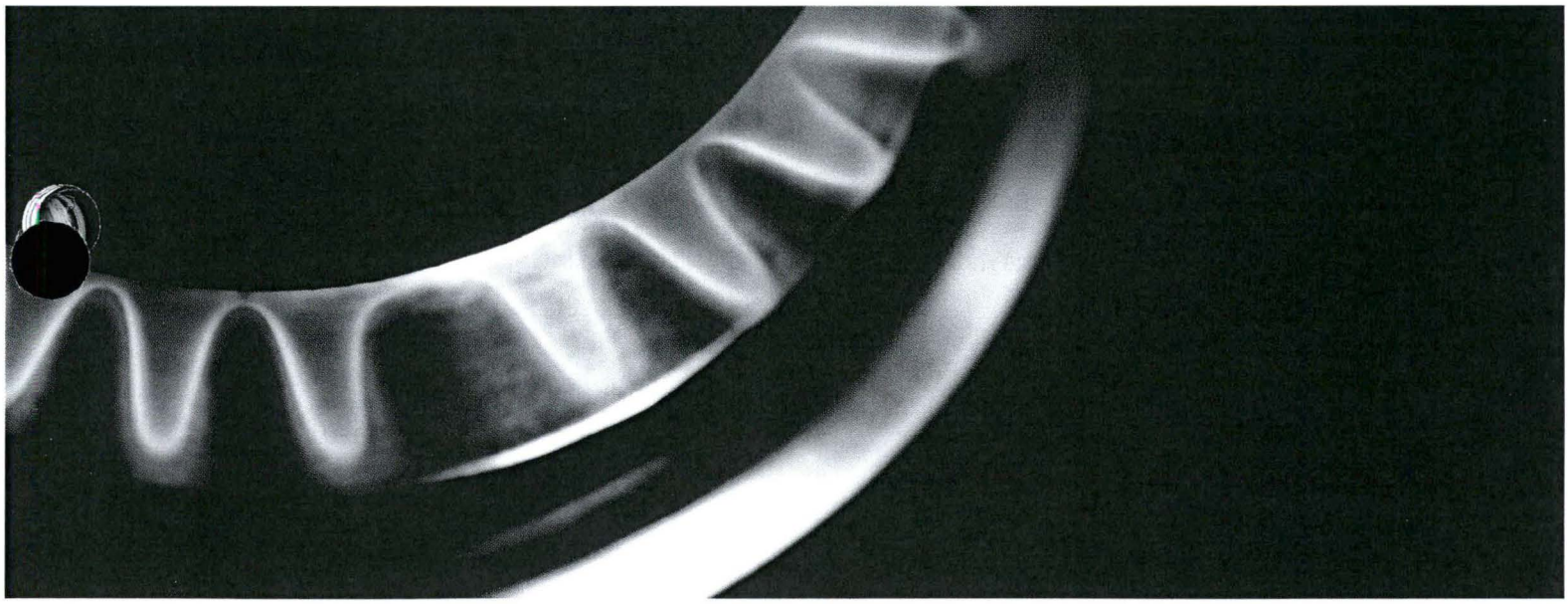
North Dakota's lignite industry is a vital part of the state's economy with an economic impact of more than $3 billion. The state supports 4,000 megawatts of lignite and other coal generation at seven locations providing low cost, reliable and clean electric power to two million customers in North Dakota, South Dakota, Minnesota, Montana and Iowa. North Dakota is one of the country's top 10 coal-producing states, mining approximately 30 million tons every year since 1988.

Nearly 80 percent of the lignite coal mined annually is used to generate electricity. About 13 percent is used to make synthetic natural gas that is delivered to 400,000 homes and businesses in the eastern United States, and seven percent is used to produce fertilizer products containing anhydrous ammonia and ammonium sulfate.

Highlights include:

- The 99 megawatts Spiritwood Station near Jamestown was commissioned in 2011. The plant is currently awaiting completion of the adjacent steam host to allow the plant to generate with the economics of a combined heat and power plant as designed.
- The Great Plains Synfuels Plant (Synfuels Plant), owned by Dakota Gasification Company (Dakota Gas), is the only commercial-scale coal gasification plant in the U.S. manufacturing natural gas. Average daily production of natural gas is about 153 million cubic feet, the majority of which is used in the eastern United States.
- The Synfuels Plant supplies carbon dioxide to the world's largest carbon capture and storage project in the world in Saskatchewan, Canada, for use in enhanced oil recovery. Dakota Gas currently captures between 2.5 and 3 million metric tons of CO_2 per year.
- Dakota Gas exports about 152 million cubic feet per day of CO_2 to Canada – about 50 percent of the CO_2 produced when running at full rates. As of 2013, Dakota Gas has captured almost 25 million metric tons of CO_2.
- Through 2013, more than 27,000 acres of mined land in North Dakota have gone through final bond release, equivalent to over 42 square miles.
    - A portion of reclaimed land has been devoted to public use such as Harmony Lake and Coal Lake which can now be used for hunting, fishing, photography, birding, canoeing, boating and other outdoor activities.
    - Basin Electric Power Cooperative's Glenharold mine received its final bond release in 2012. Over its 30 year productive life the mine won three national awards for its reclamation work.
- As of 2014, the Lignite Research Council is participating in 20 research and development projects worth over $180 million. Many of these projects focus on ways to reduce, capture and store CO_2.

Nearly 80 percent of the lignite coal mined annually is used to generate electricity.



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NATURAL GAS

North Dakota produced 347 billion cubic feet of natural gas, processed 233 billion cubic feet of natural gas and paid $22 million in production taxes in 2013. Natural gas gathered and captured in North Dakota heats over 4.8 million homes in the U.S. Over the past two years, North Dakota's natural gas industry has worked hard to connect more than 3,800 new wells to gas plants.

There are 22 natural gas processing plants operating in western North Dakota. The oil and gas industry is investing over $6 billion in infrastructure to capture natural gas, and four additional new or expanded plants are planned to come online by 2016. These plants will add more than 400 million cubic feet of gas processing capacity and create hundreds of high-paying jobs in rural communities.

Highlights include:

- Natural gas gathering systems were connected to 2,020 wells in 2013. This is up 113 percent from 949 wells connected in 2011.
- The North Dakota Industrial Commission, through the Oil and Gas Research Program in partnership with private parties, has invested more than $10 million in research for new technologies to produce, capture and use natural gas at well sites. The results are intended to encourage and promote the use of new technologies that have a positive economic and environmental impact on oil and gas exploration. Examples include:
    - A $450,000 grant awarded to the Energy & Environmental Research Center to use for enhanced recovery of oil and natural gas in North Dakota.
    - An $8 million grant awarded to the Energy & Environmental Research Center to use for optimizing oil and natural gas production in North Dakota.
    - An $873,300 grant awarded to Bakken Express, LLC to use toward a $3 million natural gas capture initiative.
    - A $750,000 grant awarded to Energy & Environmental Research Center to use toward a $1.9 million natural gas capture initiative.
    - A $375,000 grant awarded to Blaise Energy, Inc. to use toward a $7.475 million natural gas capture initiative.
- Natural gas liquids present many opportunities for value-added energy. A study on value-added opportunities relating to natural gas liquids and ethanol was commissioned by the North Dakota Department of Commerce and was published in May 2014.
- As of 2012, North Dakota is the 14th largest natural gas producing state.

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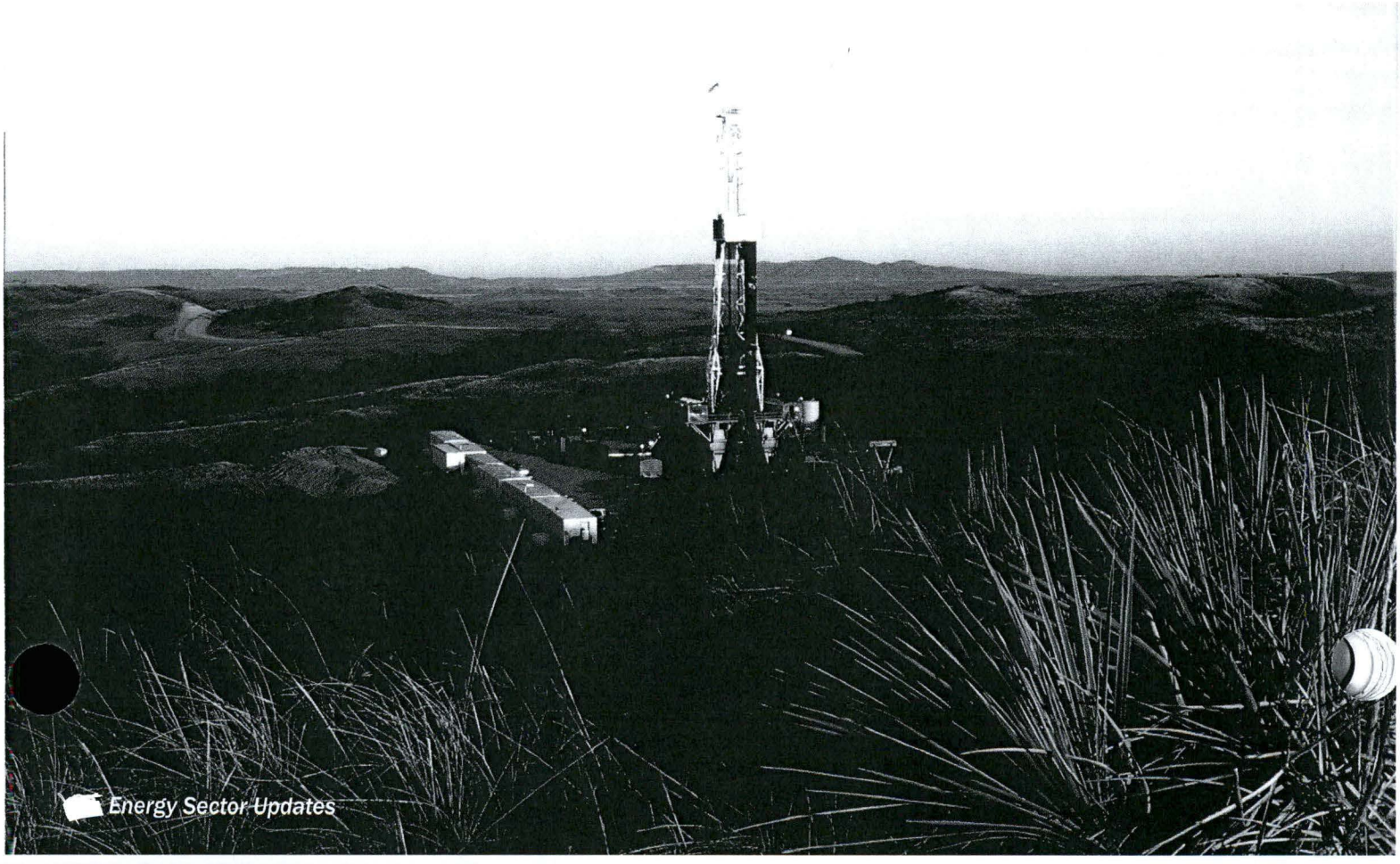
OIL

North Dakota's oil industry generates more than $30 billion of economic activity and supports 35,000 direct workers and more than 65,000 indirect jobs across all sectors of the economy. The necessary job skills continue to broaden as industry moves from the exploration phase towards the development phase.

As more new wells begin producing, more technical, permanent jobs will result. The average annual wage for an oil industry employee in North Dakota in 2012 was approximately $97,841, which is 118 percent above the statewide average wage of $44,914.

Highlights include:

- North Dakota is the second largest oil-producing state in the nation and would be the 20th largest producing country in the world.
- In April 2014, there were over 10,100 oil wells producing 1 million barrels of oil per day.
- Oil production taxes in 2013 exceeded $2.9 billion. Monthly oil tax collections exceeded $300 million in March 2014.
- Oil and gas production taxes accounted for 50 percent of North Dakota's total revenue collections in 2013.
- At $100 and 1 million BOPD, the industry contributes $11 million per day to the state and political subs (from the two oil taxes). Of this, $1 million per day goes to the counties/cities/schools/townships.
- In May 2014, North Dakota's Legacy Fund, which receives 30 percent of the oil tax revenue, has a balance of more than $2 billion dollars.



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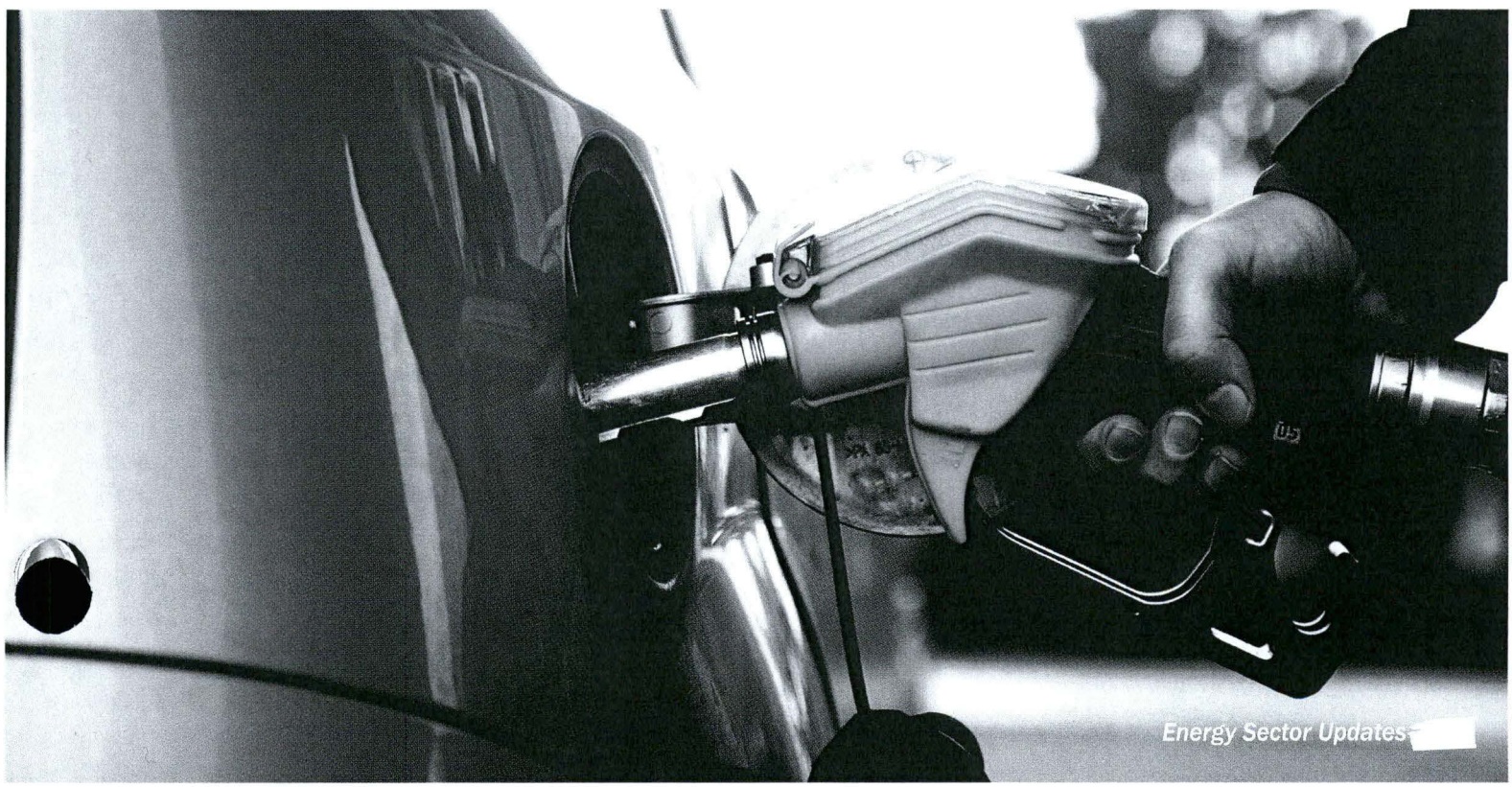
PETROLEUM MARKETING

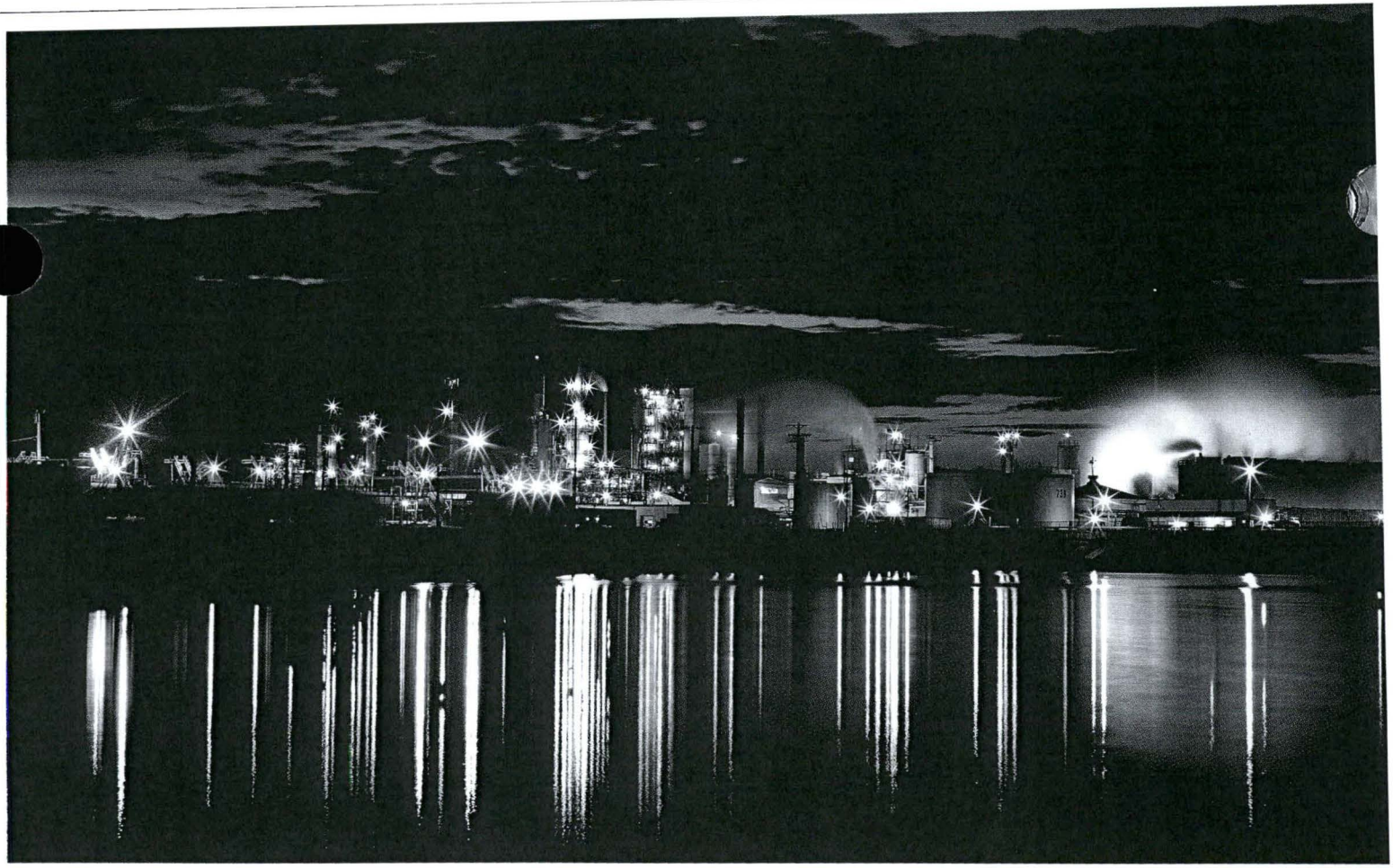
North Dakota petroleum marketers are dedicated to providing quality product, great customer service and continue to be strong community leaders and supporters. Consumer demand always has and always will dictate what a petroleum retailer offers its customers.

The unprecedented economic growth in the state has been very good for the retail petroleum industry. One of the major challenges amidst all the prosperity has been finding adequate supplies of diesel, gas and even propane, particularly during peak demand seasons for the industrial and agricultural sectors. Workforce availability remains a major concern in the retail service arena with strong, high paying jobs developing across the state in all sectors of the economy.

Highlights include:

- There are roughly 500 petroleum marketers in North Dakota. There are also about 750 convenience stores/truck stops across the state. This number has grown significantly in the past few years as the state's economy continues to prosper and expand. These operations deal in every aspect of refined petroleum and renewable fuel products ranging from wholesale and supply to the numerous retail outlets scattered across the state.
- From April 2013 to April 2014, retail petroleum dealers sold about 500 million gallons of taxable gasoline in the state as well as close to one billion gallons of taxable diesel fuel. This figure does not take into account the roughly 900 million gallons of diesel fuel sold for non-highway use vital to agricultural, industrial and energy sectors within the state. Over 500 million gallons of diesel fuel are being used annually in oil activity alone.
- North Dakota petroleum marketers continue to support research and development of renewable fuels as viable sources of alternate energy.
- North Dakota gas retailers have been among the nation's leaders in promoting the sale of renewable fuels. North Dakota installed more than 220 flex fuel pumps, but as of December 2013 study that number has decreased to about 100 due to a number of factors. The North Dakota petroleum retailers and ethanol industry continue to work together to address these issues.





#1 p. 29

REFINING

North Dakota's refining capacity continues to expand with the continued growth of the Bakken Oil production. Several new refinery projects are being evaluated statewide.

Highlights include:

- North Dakota currently has one refinery in operation, Tesoro Mandan Refinery, with a crude operating capacity of 70,000 barrels per day.
- A second facility, Dakota Prairie Refinery, LLC, is under construction and is scheduled for start-up in December 2014. The Dakota Prairie Refinery will have a crude capacity of 20,000 barrel per day and will produce 7,000 to 10,000 barrels per day of diesel and other byproducts. It is the first refinery built in the U.S. since 1976.
- Several other diesel topping plants and refinery projects are currently being evaluated. These projects include a 20,000 barrel per day diesel topping plant near Trenton (Dakota Oil Processing) and a 15,000 barrel per day refinery near Makoti [Mandan, Hidatsa, and Arikara (MHA) Nation]. These projects are in various planning stages.

The Dakota Prairie refinery is the first refinery built in the U.S. since 1976.

SOLAR, GEOTHERMAL, HYDROGEN & HYDRO POWER

North Dakota has invested in research for hydrogen, solar and geothermal applications. This includes $2.5 million for a Centers of Excellence project at the Energy & Environmental Research Center's National Center for Hydrogen Technology, which is attracting hydrogen-based business to the state; funding for research at University of North Dakota for commercial application of geothermal; and funding for solar energy research at North Dakota State University.

Highlights include:

- Several electric cooperatives offer a program to help ranchers install solar powered stock pond watering pumps in rural areas where it is uneconomical to construct electric transmission lines. As an example, Verendrye Electric Cooperative has provided support for over 300 solar pumps and avoided building about 300 miles of distribution line at a savings of about $30,000 per mile.
- Whiting Oil uses solar PV systems at oil well sites to power pump jacks in isolated areas in which electrical services is not available.
- The Geothermal Laboratory at the University of North Dakota is conducting a geothermal power demonstration project in North Dakota in collaboration with the U.S. Department of Energy, Continental Resources, Inc., Slope Electric Cooperative and Access Energy, LLC. Start-up is scheduled for Summer 2014. The objective of the project is to demonstrate and test the technical and economic feasibility of generating electricity from non-conventional, low-temperature geothermal resources using Organic Rankine Cycle (ORC) technology.
- The Garrison Dam on the Missouri River, with a capacity of 583 megawatts, is North Dakota's fifth largest plant in electricity generation capacity.

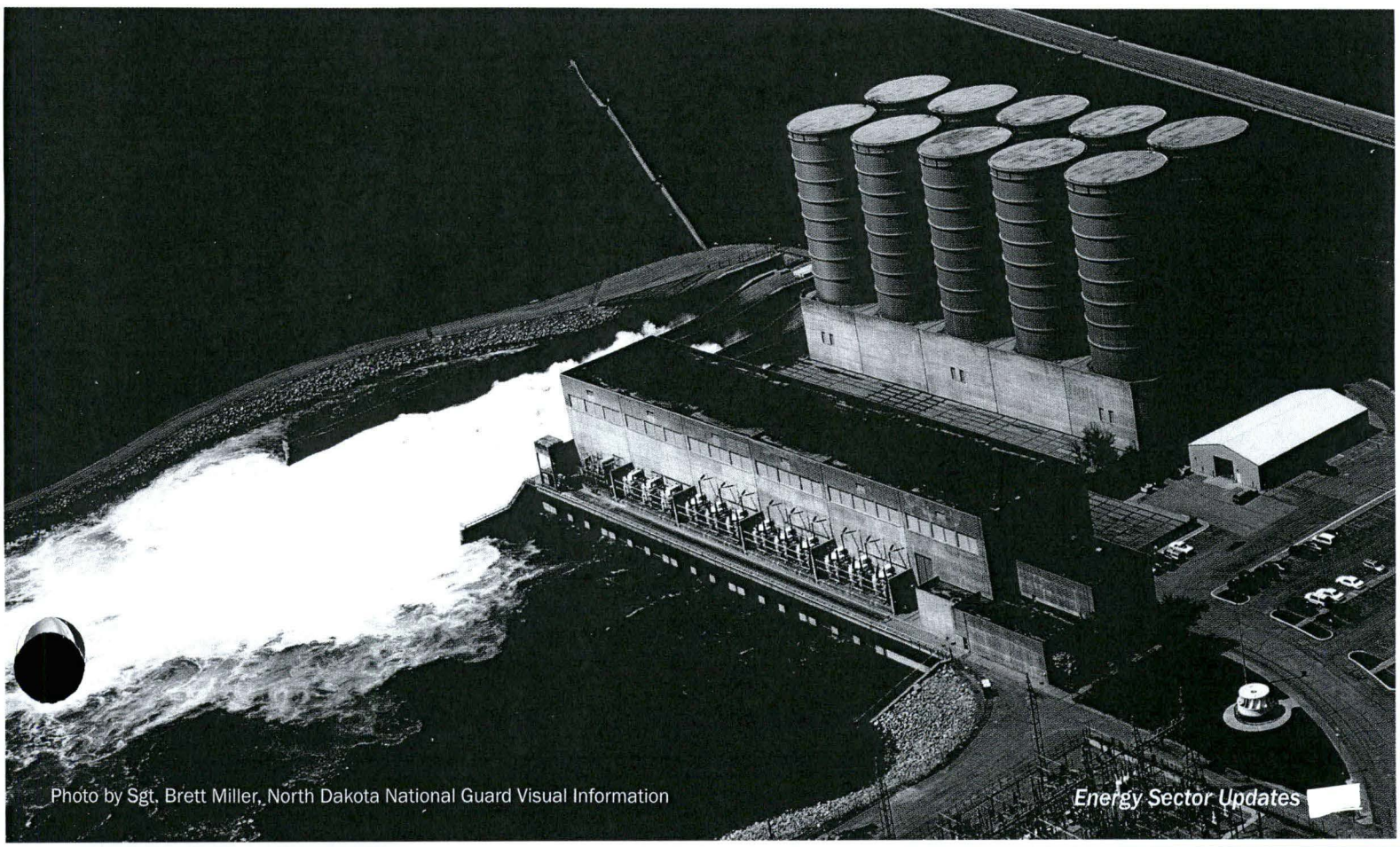


Photo by Sgt. Brett Miller, North Dakota National Guard Visual Information

TRANSMISSION

The development of new transmission in North Dakota continues as companies construct lines to support new load growth as well as to connect new generation to the electric grid. Studies to identify impacts of new load on existing transmission systems and identify new lines needed for the future continue at individual companies and at regional transmission planning entities.

Highlights include:

- North Dakota Transmission Authority conducted a study of the impact of oil and gas development in the Williston Basin on electric load growth and transmission infrastructure.
- Basin Electric Power Cooperative, Inc. received approval from the North Dakota Public Service Commission for their 200-mile 345 kV line from the Antelope Valley Station to a substation located near Tioga. Construction will begin in Fall 2014 once federal approvals are received. This new line will help meet increasing regional electric demand and improve the reliability of the existing system, strengthening the electric infrastructure throughout the region.
- Basin Electric Power Cooperative and the Western Area Power Administration are moving forward with plans to join the Southwest Power Pool (SPP) Regional Transmission Organization. Final approvals will be sought in 2014 and, if successful, the two organizations will begin actual operations with SPP in 2015.
- Minnkota Power Cooperative is constructing a 345-kV transmission line that will stretch 250 miles from Center to Grand Forks, to be completed by August 2014.
- CapX2020 is a group of 11 Midwest-based utilities constructing more than 700 miles of new 345 kV transmission lines in the upper Midwest. One of the proposed routes is a 210-mile line that starts west of Fargo and stretches east to St. Cloud, Minnesota. The line is expected to be in service in 2015 and will support growing regional power demand and improve access to renewable energy.
- Otter Tail Power Company and Montana-Dakota Utilities Co. have jointly proposed the Big Stone South to Ellendale (BSSE) Transmission Line, a 345-kV line from Ellendale to a substation near Big Stone City, South Dakota. The project, which will be approximately 150 to 170 miles in length, is anticipated to cost between $270 and $390 million and will be in service in 2019.
- ALLETE and its subsidiary ALLETE Clean Energy have proposed an energy corridor with a backbone following an existing 465-mile path that contains a direct current transmission line running between Center and Duluth, Minnesota The energy corridor would expand a pathway along strategic portions of the existing right of way to minimize land use and optimize energy delivery infrastructure development within North Dakota. It is envisioned that various lengths of the corridor would be used for movement of natural gas, wastewater, petroleum and other products.
- Transmission costs vary depending on voltage, terrain type, conductors, length, right-of-way costs and many other factors. Many sources around the country report that average transmission costs for a new 345 kV line can be between $1 and $2 million per mile, depending on design and environmental conditions.

Many sources around the country report that average transmission costs for a new 345 kV line can be between $1 and $2 million per mile, depending on design and environmental conditions.

WIND

Over the last few years, many of the region's utilities completed construction of wind facilities in order to comply with renewable portfolio standards in states surrounding North Dakota, meet internal policies related to diverse energy portfolio standards, secure a fixed price energy source, or to meet other business goals. Since 2008, the wind industry in North Dakota has found itself in a state of transition. Driven by a number of factors, including the economic slowdown caused by the 2008 recession and the resulting decrease in demand for electricity, prices for electric power have fallen significantly and regional congestion on the transmission system has impacted the construction of new wind facilities. In addition to these industry challenges, the uncertain future of Production Tax Credit (PTC), which Congress has yet to extend beyond December 2013, lingers as well. Yet, in spite of these issues, the capacity of the wind industry grew during the last year, but at a much lower rate than in recent years.

Despite the various challenges, wind energy prices have decreased significantly over the past seven years. Efficiencies in technology and market pressures have driven wind energy prices down over 50 percent to meet market demands.

Highlights include:

- Since 2012, the North Dakota Public Service Commission has approved wind projects with total nameplate capacity of over 700 MW. If these approved projects are constructed, the total investment associated with the projects is estimated at $1.33 billion.
- More than 990 wind turbines are operating in 26 North Dakota counties.
- There are currently 700 megawatts of wind under construction in 2014.
- North Dakota ranked twelfth in the nation in wind capacity at the end of 2013, with 1,672 megawatts of wind in service.
- In the last two years, installed wind capacity in the state grew by only 104 megawatts, compared to 250 MW in the prior two-year period.

More than 990 wind turbines are operating in 26 North Dakota counties.

Demand for wind is anticipated to be strong with wind energy being a scalable, cost- effective, emission-free renewable resource in the region. Recent wind energy prices have made wind more attractive to many utilities, regulators and end users. There is also federal regulatory pressure moving the energy generation industry towards cleaner, renewable resources like wind energy.

The Midcontinent Independent System Operator, Inc. (MISO) is responsible for operation of the transmission grid across all or parts of 15 states, (including portions of North Dakota) and the Canadian province of Manitoba. The upgraded MISO transmission system has improved reliability and allows for additional wind energy to be connected to the grid. The expansion of the grid will allow for additional amounts of new wind energy on the regional transmission system.

North Dakota is well-positioned to develop additional wind energy and become a larger exporter of wind energy.

SB 2036
3-4-15
#2

Support for North Dakota Senate Bill 2036
Dale Niezwaag - Basin Electric Power Cooperative
House Finance and Taxation Committee
March 4, 2015

Current Taxes Assessed on Coal:

- Coal severance tax is paid when coal is removed from the ground (70% to counties/30% to Constitutional Trust Fund)
- Coal conversion tax is paid when coal is converted to electricity or natural gas (85% state/15% county)
- Coal beneficiation tax is paid when the physical or environmental qualities of coal are improved (85% state/15% county)
- The state portion of tax (85%) is exempt for 5 years from the date of first taxable production

History on Coal Beneficiation:

- Enacted in 1989
- Beneficiation technology proposed to increase the BTU content of lignite from 6,200 to 10,500
- Goals of the legislation were to:
  - Improve the transportability/usability of coal by removing moisture and other materials
  - Keep Wyoming and Montana coal out of North Dakota
  - Maintain the current tax revenue from coal use
- Problems addressed by the original legislation:
  - If coal was transported out of state or not used by a coal conversion facility, the state wouldn't receive any tax revenue
  - If the BTU content of the coal was dramatically increased less coal would be used, decreasing the state tax revenue
  - Keep the state revenue portion whole for coal converted in the state

Unintended Consequence of 1989 Legislation:

- Current beneficiation practices improve the environmental qualities of coal but:
  - Do not reduce the moisture content of the coal, which would increase the ability to be transported
  - Do not significantly increase the BTU content of lignite, which would reduce the amounts used in coal conversion facilities
- Current situation forces the payment of conversion and beneficiation taxes on the same coal without the anticipated benefits proposed in the 1989 legislation.

Beneficiated Coal Use in North Dakota:

- Currently used at 4 power plants in ND
  - Basin Electric = Antelope Valley Station and Leland Olds Station
  - Great River Energy = Coal Creek Station
  - Minnkota Power Cooperative = Milton R. Young Station

Proposed Legislative Solution:

- Modifies existing law so either coal conversion tax OR coal beneficiation tax is paid on coal.
- Allows coal to be beneficiated and used in:
  - Coal-burning power plants to produce electricity
    - ✓ Pays conversion tax
    - ✓ Exempt from beneficiation tax
  - Non-coal conversion facility
    - ✓ Pays the beneficiation tax
    - ✓ Exempt from conversion tax
- Legislation also continues severance tax exemption for:
  - Coal conversion facilities to produce steam for ag commodity processing facilities

SB 2036
3-4-15
#3 p 1

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Testimony in Support of SB 2036
Submitted by the Lignite Energy Council before the House Finance and Taxation Committee
March 4, 2015

Mr. Chairman, members of the committee, please accept these comments for the record on behalf of the Lignite Energy Council (LEC) in support of Senate Bill 2036. This is an important piece of legislation that would correct the misapplication of a tax on the lignite industry by clarifying when coal is taxed for certain uses.

By way of background, lignite produced in North Dakota is subject to a combination of the following taxes: severance tax when the coal is removed from the ground, as well as conversion tax when the coal is converted to electricity or natural gas, and when the coal is "beneficiated" by improving the physical or environmental qualities of the coal. 25 years ago, the LEC supported the creation of the beneficiation tax to incentivize technology that proposed to increase the BTU content of lignite to enhance its marketability and usability.

In other words, if we increased the BTU content of lignite, it would allow for it to compete with subbituminous coal from Montana and Wyoming and be transported out of state. The beneficiation tax was meant to ensure that the state and counties would still receive revenue from coal that was transported out of the state, and/or revenue in-lieu of less conversion taxes being paid because less lignite would be needed for electricity due to the higher heating value.

Since that time, the beneficiation practices envisioned to increase the heating value of lignite from 6,200 BTU to over 10,000 BTU have not come to fruition. However, beneficiation practices have been developed that dramatically improve the environmental qualities of lignite before it is burned for power production, and this beneficiated coal is now being used at four power plants in North Dakota.

It was intended that the beneficiation tax would address any shortfalls in conversion tax revenue due to beneficiation, yet time has shown that the practice has not impacted the amount of lignite being used for power production in the state. Senate Bill 2036 clarifies that beneficiated coal produced for use by a coal conversion facility is not subject to the beneficiation tax. This will ensure that the tax structure does not unfairly tax power plants that are beneficiating coal for use in their facilities. Under this bill, a coal-burning power plant would pay the conversion tax and be exempt from the beneficiation tax, and a non-coal conversion facility would pay the beneficiation tax and be exempt from conversion tax.

Senate Bill 2036 also removes the sunset on a severance and sales and use tax exemption for the use of lignite and beneficiated lignite in agricultural processing facilities. Overall, this legislation is a commonsense proposal that will provide further incentive for the production and use of value-added lignite in North Dakota. Accordingly, the bill received the endorsement of the North Dakota EmPower Commission, was considered by the interim Energy Development and Transmission Committee, and was unanimously approved by the Senate. The LEC urges your favorable consideration of Senate Bill 2036.

SB 2036
3-4-15
#4

Minnkota Power
MPC COOPERATIVE, INC.
Your Touchstone Energy® Partner

North Dakota Senate Bill 2036

House Tax & Finance Committee

March 4, 2015

Chairman Headland and Members of the House Tax and Finance Committee:

Thank you for the opportunity to provide testimony in support of SB 2036, which ensures that coal used in North Dakota conversion facilities pays a beneficiation tax or a conversion tax, but not both.

Minnkota operates the Milton R. Young Station located in Center, ND, which has two lignite fired units for electric generation. Several years ago, Minnkota paired with a company called Clean Coal Solutions, Inc. (CCS) a Colorado-based power plant technology and research firm. As a result of that relationship, the Young Station has commenced use of CyClean™ additives in its boilers. The additives are applied to the coal designed to improve cyclone boiler operations and reduce power plant emissions. The CyClean™ additives have proven the ability to reduce mercury emissions by more than 40 percent and nitrogen oxide (NOx) emissions by an additional 20 percent.

The project has resulted in a win for both Minnkota and CCS, and has produced environmental benefits in the way of reduced emissions. While the current beneficiation process improves the environmental qualities of coal, it does not reduce the moisture content of coal or increase the BTU content of the lignite (which would reduce the amount of coal used in conversion facilities). The current law forces an additional tax payment on the same coal, without the benefits proposed in the 1989 beneficiation tax legislation that my colleagues have outlined for you.

I encourage the committee to change the state tax code to reflect incentives, not penalties, for technology that has the potential to produce clean coal technology.

Sincerely,

Stacey Dahl

Stacey Dahl
Manager of External Affairs