

## NORTH DAKOTA LEGISLATIVE MANAGEMENT

Minutes of the

**TAXATION COMMITTEE**

Thursday, June 30, 2016  
Roughrider Room, State Capitol  
Bismarck, North Dakota

Senator Jessica Unruh, Chairman, called the meeting to order at 9:00 a.m.

**Members present:** Senators Jessica Unruh, Brad Bekkedahl, Dwight Cook, Jim Dotzenrod, Lonnie J. Laffen, Connie Triplett; Representatives Jason Dockter, Glen Froseth, Patrick R. Hatlestad, Craig Headland, Tom Kading, Jim Kasper, Jerry Kelsh, Alisa Mitskog, Vicky Steiner

**Members absent:** Senator David Hogue; Representatives Wesley R. Belter, Marie Strinden

**Others present:** See [Appendix A](#)

**It was moved by Senator Cook, seconded by Representative Dockter, and carried on a voice vote that the minutes of the April 27, 2016, meeting be approved as distributed.**

**ENHANCED OIL AND GAS RECOVERY STUDY**

Chairman Unruh called on the Legislative Council staff for presentation of a memorandum entitled [Tax Incentives Associated with Enhanced Recovery of Oil and Gas](#). The Legislative Council staff said the memorandum provides a snapshot of the existing incentives related to the enhanced recovery of oil and gas for the committee to review in conjunction with any policy recommendations contained in IHS Energy's final report.

**IHS Energy**

Chairman Unruh called on Ms. Irena Agalliu, Managing Director, and Mr. Curtis Smith, Director of Consulting, IHS Energy, for a presentation ([Appendix B](#)) pertaining to the findings in IHS Energy's final report ([Appendix C](#)). Ms. Agalliu reviewed the work IHS Energy completed over the last 9 months related to enhanced oil recovery (EOR) techniques in both conventional and unconventional fields. She said IHS Energy reviewed federal and state level EOR incentives and reviewed the economics of EOR activities in this state to provide a variety of alternative policy solutions for the committee's consideration. She provided a brief overview of the report's findings and said there is significant potential for carbon dioxide (CO<sub>2</sub>) EOR in this state with incremental production estimates ranging from 1.2 billion to 1.8 billion barrels over the next 20 years. She said this potential is tempered by the wide range of uncertainty surrounding the technology required for EOR in unconventional plays. She said only 22 to 27 percent of the technically recoverable incremental production could be economically produced within the 2017-36 study period. She said there is more certainty regarding EOR in conventional plays because the technology used in conventional plays is proven. She said barriers to EOR in conventional plays center around the availability and affordability of CO<sub>2</sub>. She said the directive of the study was to assess policies that could potentially stimulate additional recovery in a manner that is beneficial to the interests of the state, the industry, and other stakeholders.

Ms. Agalliu said factors that will influence the development of CO<sub>2</sub> EOR include advances in technology, access to economical and abundant supplies of CO<sub>2</sub>, and incentives that encourage the use of CO<sub>2</sub> for EOR. She said the extent to which sources of CO<sub>2</sub> supply will be developed in this state depend on a variety of factors, including the extent to which federal influences, such as the federal Clean Power Plan, create a necessity for development and the extent to which the state develops policies to incentivize the capture of carbon from coal-fired power plants. She said successful CO<sub>2</sub> EOR projects typically have access to an abundant supply of low-cost CO<sub>2</sub> from naturally occurring deposits or natural gas processing facilities, have a purchase agreement that adjusts the price of CO<sub>2</sub> depending of the price of oil, are within a reasonable distance from CO<sub>2</sub> sources to reduce transportation costs, or are vertically integrated having control over the CO<sub>2</sub> source, the pipeline transport, and the EOR operation.

In response to a question from Representative Froseth, Mr. Smith said the injection tests conducted in the Bakken Formation in 2008 were conducted in horizontal wells.

In response to a question from Senator Bekkedahl, Ms. Agalliu said if CO<sub>2</sub> were captured at all major gas processing facilities in this state, the amount of CO<sub>2</sub> captured would be less than one ton.

Ms. Agalliu said one source of gas the state might use for enhanced recovery is natural gas that is currently being flared. Mr. Smith said none of the gas processing facilities in this state capture CO<sub>2</sub> because the CO<sub>2</sub> content of the gas at these facilities is quite low.

Ms. Agalliu said the Bakken Formation would require an estimated 35 million metric tons (MMt) of CO<sub>2</sub> per year by 2035 for EOR. She said this amount is almost double the targeted amount of state CO<sub>2</sub> reductions required under the federal Clean Power Plan for 2030 and beyond. She said developing technology to bridge the gap between the cost to capture CO<sub>2</sub> and the price of CO<sub>2</sub> would be very beneficial both for the environment and the state. She reviewed the various state and federal incentives relating to CO<sub>2</sub> and enhanced recovery but noted with the current break-even prices, no combination of incentives would be enough to make certain projects move forward. She said the price of oil would need to exceed \$100 per barrel for the majority of EOR projects in conventional fields to break even in regard to costs. She said the high costs associated with EOR in conventional fields are related to a number of factors, including the age of the fields and the condition of the wells.

In response to a question from Senator Bekkedahl, Ms. Agalliu said combined EOR activities in the Bakken Formation and in conventional fields have the potential to contribute 6,000 jobs at the state level and 4,300 jobs at the national level, per year, for years 2022-36. She said direct revenues to the state from combined EOR activities in the Bakken Formation and in conventional fields could result in direct revenues to the state ranging from \$6.3 billion to \$9.7 billion during the study period.

Ms. Agalliu discussed federal programs that promote carbon capture and sequestration, including EOR tax credits, CO<sub>2</sub> sequestration credits, investment credits for advanced coal projects, and loan guarantees. She said there are 53 active capture technology projects receiving funding from the Department of Energy. She said of the \$3.4 billion designated for carbon capture and sequestration programs under the American Recovery and Reinvestment Act, only 58 percent of those funds were actually spent.

In response to a question from Senator Bekkedahl, Ms. Agalliu said many projects that received federal grants ended up losing the grants for failing to meet designated benchmarks. She said various deadlines apply which require a project to be brought to fruition within a 5-year period.

In response to a question from Senator Dotzenrod, Ms. Agalliu said the cost per ton to capture CO<sub>2</sub> from a power plant is very high. She said it is projected the cost to capture CO<sub>2</sub> at the Petra Nova coal-fired power plant in Texas will be \$50 per ton of CO<sub>2</sub>. She said the objective of developing CO<sub>2</sub> capture technologies for power plants is to bring the price of capture down to \$30 per ton of CO<sub>2</sub>.

In response to a question from Senator Cook, Ms. Agalliu said the Petra Nova power plant is being retrofitted with Mitsubishi technology. She said Mitsubishi has an investment interest in the power plant and the related EOR operation. She said over \$1 billion has been invested in the plant and the plant is expected to be completed by the end of 2016. She said the Department of Energy has funded approximately 20 percent of the plant's investment costs. She said the other seven plants that qualified for federal funding are no longer receiving funding due to significant delays and huge cost overruns. She said the Kemper County project in Mississippi was expected to require a \$2.2 billion investment but has expended \$6.6 billion in investment costs. She said the report makes certain assumptions regarding the investment cost of retrofitting coal-fired power plants in this state with the technology used at the Petra Nova power plant. She said the technology applied in Texas could be applied in this state if it is successful at the Petra Nova plant.

Ms. Agalliu said most states have introduced incentives relating to the capture of CO<sub>2</sub> from power plants for sequestration or use in EOR. She said the extent to which the availability of state incentives have contributed to advancing CO<sub>2</sub> EOR is debatable. She said other factors, such as the high CO<sub>2</sub> emission reduction requirements North Dakota is facing under the Clean Power Plan, also may affect the development of CO<sub>2</sub> capture or sequestration projects. She reviewed the differences between Class II and Class VI injection wells and said North Dakota assumes liability for post-injection site care 10 years after injection ceases.

In response to a question from Senator Bekkedahl, Ms. Agalliu said states provide various definitions regarding when injection ceases. She said defining the term as the point when a well bore has been plugged would make more sense in regard to the state's assumption of liability. Once a well is plugged, she said, the state would have assurances the well has been inspected and leakage is not occurring.

In response to a question from Representative Froseth, Ms. Agalliu said she did not have information regarding injection projects targeted at sequestering CO<sub>2</sub> in North Dakota as her research only focused on CO<sub>2</sub> EOR injection projects.

Ms. Agalliu reviewed the three primary sources of CO<sub>2</sub>, which include naturally occurring CO<sub>2</sub> fields, CO<sub>2</sub> captured from gas processing plants, and CO<sub>2</sub> captured from other industrial plants, such as power plants. She said CO<sub>2</sub> from naturally occurring sources is the most prevalent source of CO<sub>2</sub> used in EOR projects due to the low cost of supply. She said EOR projects are typically located within reasonable proximity to CO<sub>2</sub> sources due to the high costs of transporting CO<sub>2</sub>. She said the three main areas where CO<sub>2</sub> EOR projects are occurring are in the Permian Basin, the Gulf Coast, and Wyoming. She said the Permian Basin projects source CO<sub>2</sub> from naturally occurring CO<sub>2</sub> fields in Colorado and New Mexico and from nearby gas processing plants, the Gulf Coast projects source CO<sub>2</sub> from the Jackson Dome CO<sub>2</sub> field and nearby industrial plants, and the Wyoming projects source CO<sub>2</sub> from two large gas processing plants.

Ms. Agalliu said the estimated cost to capture CO<sub>2</sub> at power plants is \$115 per ton. If new technology brings the price down to \$50 to \$60 per ton, she said, it would narrow the gap between the price of CO<sub>2</sub> from power plants and the price of CO<sub>2</sub> from other industrial sources, which is currently at \$37 per ton. She said the cost of CO<sub>2</sub> from other industrial sources is slightly higher than the cost of CO<sub>2</sub> from naturally occurring sources. She said North Dakota potentially could source CO<sub>2</sub> from Wyoming for use in EOR projects if current CO<sub>2</sub> pipelines are extended into this state. She said the primary candidate for CO<sub>2</sub> sourced from within this state would be CO<sub>2</sub> derived from the Dakota Gasification Company. She said the Dakota Gasification Company is under contract to supply CO<sub>2</sub> for use in EOR projects in Canada but the CO<sub>2</sub> potentially could be redirected for use in this state when the existing contracts expire. Of the six lignite coal-fired power plants in the state, she said, there is potential for five of those plants to invest in carbon capture technology. She said this state's coal-fired plants are emitting 28 MMT of CO<sub>2</sub> per year. She said the cost to retrofit the five coal-fired plants would be approximately \$7.46 billion and would result in the capture of 30 to 40 percent of emissions, or 9.8 MMT of CO<sub>2</sub> per year. She said the cost estimates were arrived at by using cost comparisons for the Petra Nova project in Texas and the Boundary Dam project in Saskatchewan.

In response to a question from Chairman Unruh, Ms. Agalliu said IHS Energy reviewed the megawatts of electricity a plant produced when calculating the amount of CO<sub>2</sub> a plant could capture. She said only one of the four units is being used for carbon capture at the Petra Nova plant.

Mr. Smith reviewed the fundamentals of how CO<sub>2</sub> EOR functions and said other gases, such as ethane, also could be injected for use in EOR. He said the technology behind CO<sub>2</sub> EOR in conventional fields has been proven. He said conventional fields that make good candidates for CO<sub>2</sub> EOR are fields that have had a successful water flood. He said in unconventional fields, such as those in the Bakken Formation, the technology behind CO<sub>2</sub> EOR is not proven. He said most experts agree that Bakken Formation fields should not undergo a water flood but should transition directly from primary production to enhanced production derived from injecting gasses such as CO<sub>2</sub>. If the required technology could be developed for EOR in the Bakken Formation, he said, the size of the prize for that development would be enormous. He said there are an estimated 167 billion to 900 billion barrels of oil in place in the Bakken Formation. He said recovering even 5 percent of that amount would equate to 8.4 billion to 45 billion barrels of oil. He said early modeling has been conducted for CO<sub>2</sub> EOR in the Bakken Formation, but the actual results from initial injection tests did not produce as robust results as were seen in the lab. He said some valuable lessons have been learned in the lab. He said the Energy and Environmental Research Center has determined that CO<sub>2</sub> must remain in the reservoir for a period of time, referred to as the "bathing process," to soak its way into the rock matrix rather than sweeping through from the injector well to the producing well.

In response to a question from Senator Bekkedahl, Mr. Smith said there have been 5 injection tests. He said an injection test was completed in a vertical well in 2008 in the Elm Coulee field in Montana. He said another test in 2008 was completed by EOG Resources, Inc. in a horizontal well in the Parshall field in Mountrail County. In the Mountrail County test, he said, CO<sub>2</sub> was injected for 29 days and allowed to soak for an additional 10 days before the well was put back into production. He said this test achieved very little response in regard to production. He said the results of the test indicated that CO<sub>2</sub> had migrated to surrounding wells. He said EOG Resources, Inc. also conducted a water injection test in the Parshall field from 2012 through 2014 which confirmed the ineffectiveness of water injection in the Bakken Formation. He said methane was injected following the water flood and increased production was observed in offset wells less than a mile away. He said a recent 16 well pilot conducted by EOG Resources, Inc. in the Eagle Ford Formation also is showing promising results following methane injection. He said the decision to inject ethane, methane, or CO<sub>2</sub> for EOR comes with certain advantages and disadvantages, both in terms of cost and effectiveness.

In response to a question from Senator Bekkedahl, Mr. Smith said whether gas injected into a field that did not undergo water flooding would be considered a secondary or tertiary recovery method would depend on the wording of each state's statutes. Ms. Agalliu said it may be better to define the particular substance used for EOR when discussing incentives rather than applying broad definitions for secondary or tertiary recovery methods.

In response to a question from Representative Hatlestad, Mr. Smith said it is unclear whether the results seen in the Eagle Ford Formation pilot projects were a result of increased miscibility or increased pressure as EOG Resources, Inc. has not disclosed detailed results regarding the project.

Representative Froseth said it does not seem like the economics are right for oil companies to pursue these types of EOR projects based on the results of the pilot projects and questioned where the cashflow will come from to encourage industry to capture CO<sub>2</sub>.

Mr. Smith said with the current lack of technology, low oil prices, and high costs of CO<sub>2</sub> the economics for CO<sub>2</sub> EOR do not make sense. He said this process is forward-looking to develop the technology to capture CO<sub>2</sub> in a more cost-effective manner and inject that CO<sub>2</sub> for purposes of EOR. He said there is an abundance of research occurring, but proof of concept has yet to be established. At this stage, he said, it is more likely funding would need to come from the government and oil companies willing to invest in research.

Ms. Agalliu said IHS Energy anticipates oil prices recovering to \$100 per barrel or above around 2023. She said she does not anticipate any CO<sub>2</sub> EOR projects starting before that time unless incentives are put in place to reduce the break-even price for producers. If changes are made to the existing federal income tax credit to lower the break-even prices, she said, some CO<sub>2</sub> EOR projects could start as early as 2019. She said developments in CO<sub>2</sub> capture technology, technology relating to CO<sub>2</sub> EOR in the Bakken Formation, and decreased disparity between the price of CO<sub>2</sub> and the cost to capture CO<sub>2</sub> all will need to occur before CO<sub>2</sub> EOR projects would move forward. Once these conditions are right for development, she said, the state would see significant production from these EOR projects.

Mr. Smith said recovery projections for the Bakken and the Three Forks Formations, based on quarter-mile well spacing, would be in the range of 5 to 7.5 percent of the original oil in place. He said the sweet spots would be in the Sanish field in Mountrail County. In the case one scenario, he said, alternating producing wells would be able to be converted into injection wells at a relatively modest cost and the estimated recovery would be 5 percent from each well. In the case two scenario, he said, new injector wells would need to be drilled and injector and producer wells would need to be closer together. He said the estimated recovery in the case two scenario would be 7.5 percent from every two wells. He said more CO<sub>2</sub> would be required in case two than in case one, approximately 41.3 MMt per year. He said the model assumes 20 percent of the CO<sub>2</sub> injected could be captured out of the resulting production and reinjected. He said total recovery estimates over the 20-year study period would be 1.2 billion barrels of oil for case one, requiring 900 MMt of CO<sub>2</sub>, and 1.8 billion barrels of oil for case two, requiring 1,000 MMt of CO<sub>2</sub>.

In response to a question from Representative Hatlestad, Mr. Smith said if a producer fracks the middle Bakken or Upper Three Forks Formations, there likely will be some CO<sub>2</sub> leakage between the two formations. He said if a producer could frac the lower Bakken Formation, CO<sub>2</sub> could potentially flow into the Upper Three Forks Formation and reduce the number of wells that would need to be drilled.

In response to a question from Senator Bekkedahl, Mr. Smith said the recovery estimates represent incremental recovery, over and above any primary recovery amounts.

In response to a question from Senator Cook, Mr. Smith said nitrogen is used in about 15 to 20 percent of the EOR projects worldwide, but it is not used much in the United States.

Ms. Agalliu reviewed the economic modeling approach used in the study and said the four primary components of the model include cost modeling, price forecasting, field development analysis, and fiscal modeling based on North Dakota's current fiscal system. She said application of the model for purposes of CO<sub>2</sub> EOR in the Bakken Formation resulted in incremental production estimates of 254 million to 473 million barrels of oil during the 2017-36 timeframe. She said direct revenues to the state are estimated at \$4.7 billion to \$7.4 billion. She said capital investment costs range from \$6.5 billion to \$7.7 billion and operating costs range from \$28.5 billion to \$39.2 billion. She said costs associated with the purchase of CO<sub>2</sub> account for roughly 30 percent of the operating costs. She said the demand for CO<sub>2</sub> is estimated at 233 to 307 MMt. She said 56 percent of the required CO<sub>2</sub> could be obtained from anthropogenic sources of CO<sub>2</sub> captured in this state. She said the annual demand for CO<sub>2</sub> is estimated at 35 MMt per year beginning in 2035, which is almost double the volume of emission reductions required under the Clean Power Plan. She said the price of oil would need to rise to over \$100 per barrel for producers to yield a 10 percent rate of return on CO<sub>2</sub> EOR projects in the Bakken Formation. She said the application of various fiscal incentives could move up the timeline for CO<sub>2</sub> EOR in the Bakken Formation.

Ms. Agalliu said application of the model for purposes of CO<sub>2</sub> EOR in conventional fields over the same timeframe resulted in incremental production estimates of 18 million to 35 million barrels of oil. She said direct revenues to the state are estimated at \$139 million and \$439 million. She said costs to industry are expected to range from \$1.3 billion to \$2.3 billion and the amount of CO<sub>2</sub> required is estimated at 5.7 to 11.5 MMt during the 20-year timeframe. She said the amount of CO<sub>2</sub> captured at the Dakota Gasification Company, at 300 MMt per year, would be more than sufficient to meet the needs of CO<sub>2</sub> EOR in conventional fields. She said the costs associated with CO<sub>2</sub> EOR in conventional fields are prohibitive and would be over \$100 per barrel. She said considering these costs, fiscal incentives for CO<sub>2</sub> EOR in conventional fields are not likely to impact the development of those fields.

In response to a question from Representative Hatlestad, Ms. Agalliu said CO<sub>2</sub> injected for EOR should not escape into the air. She said a portion of the injected CO<sub>2</sub> will be recovered in the resulting production and can be reinjected and the remainder of the injected CO<sub>2</sub> will remain in the reservoir. She said this is commonly referred to as incidental storage of CO<sub>2</sub>.

Ms. Agalliu said the report addresses the direct, indirect, and induced impacts projected to result from CO<sub>2</sub> EOR. She said the model returns results regarding employment, total value added, and government revenues. She said the study shows the number of jobs created each year would range from 5,800 to 7,400. She said EOR activity in the Bakken Formation would contribute an average of \$470 million in labor income to the state each year. By the end of 2036, she said, EOR activities are expected to contribute a combined \$1.6 billion to gross domestic product and gross state product. She said direct revenues to the state are expected to range between \$6.3 billion and \$9.7 billion during the study period. She said EOR activities in conventional fields have a much smaller impact than EOR activities in the Bakken Formation.

Ms. Agalliu reviewed various policy alternatives the state may wish to consider to encourage CO<sub>2</sub> EOR activities. She said one policy option would be to offer a deduction against oil extraction tax liability for CO<sub>2</sub> operating costs associated with EOR in the Bakken Formation and in conventional fields. She said \$5 and \$10 credits per ton of CO<sub>2</sub> also were considered for CO<sub>2</sub> EOR in both the Bakken Formation and in conventional fields. In addition, she said, a 50 percent reduction in oil extraction tax and gross production tax was considered. She said these policy options would be in lieu of the current 5-year and 10-year oil extraction tax exemptions for tertiary recovery projects. She said policy options that would be in addition to existing incentives include a 50 percent reduction in gross production tax and a \$400,000 credit against oil extraction tax liability per injector well. She said both incentives would apply only to conventional fields. She explained how application of these incentives would impact the break-even prices for CO<sub>2</sub> EOR projects. She said federal credits have the largest impact on CO<sub>2</sub> EOR projects. She said the current credit in Section 45Q of the Internal Revenue Code offers a \$10 credit for EOR and a \$20 credit for carbon capture and sequestration per ton of CO<sub>2</sub>. She said the federal credit is available only for the first 75 million tons of CO<sub>2</sub>. She said state policy options that would be the most comparable to the federal credit would be the \$10 per ton credit against oil extraction tax liability or a deduction for CO<sub>2</sub> operating costs. She said an oil extraction tax deduction for operating costs may be more difficult to administer than a flat \$10 credit per ton of CO<sub>2</sub>.

In response to a question from Senator Bekkedahl, Ms. Agalliu said the power plant would receive the \$20 per ton federal credit related to CO<sub>2</sub> capture and the EOR operator would receive the \$10 per ton credit for using the CO<sub>2</sub> for enhanced recovery. She said there is potential for one entity to receive both credits if the CO<sub>2</sub> capture operation and the EOR operation were vertically integrated. She said federal House Resolution No. 4622 is currently seeking to increase the credit to \$30 per ton for both capture and EOR and remove the 75 million ton cap.

In response to a question from Senator Cook, regarding the likelihood of power plants being able to utilize a \$20 federal credit for CO<sub>2</sub> capture, Ms. Agalliu said the challenge lies in the amount of time it takes a power plant to move from initial concepts to operational capture. She said the cap on the federal credit creates uncertainty for plant operators because it is possible the credit may no longer be available by the time a plant operator is able to capture CO<sub>2</sub>. She said the primary beneficiaries of the federal credit are EOR operators.

In response to a question from Chairman Unruh, Ms. Agalliu said the job creation estimates in the report account for the direct, indirect, and induced jobs created as a result of CO<sub>2</sub> EOR. She said about 50 percent of those jobs would be sourced to locations outside this state.

In response to a question from Representative Steiner, Ms. Agalliu said the cost of allowing a credit for 30 percent of a producer's operating costs would amount to an 8 percent reduction on the base case scenario.

In response to a question from Senator Cook, Ms. Agalliu said the sale price of CO<sub>2</sub> referenced in the report is based on national averages.

In response to a question from Representative Froseth, Ms. Agalliu said North Dakota does not produce enough

CO<sub>2</sub> for use in EOR. She said absent additional capture capabilities being developed in this state, North Dakota could potentially transport CO<sub>2</sub> into the state from sources in Wyoming.

Mr. Smith said Denbury is extending a CO<sub>2</sub> pipeline into southwest Montana. He said it is possible the pipeline could be extended into North Dakota if opportunities for EOR are available.

Chairman Unruh said she would be interested in receiving additional information on the policy options regarding a \$10 credit per ton of CO<sub>2</sub> and the deduction for CO<sub>2</sub> operating costs. She said she is particularly interested in how these two incentives might translate for injection of other types of gasses.

Mr. Smith said he could provide the committee with information regarding the use of other types of gasses.

In response to a question from Senator Triplett, Mr. Smith said pilot projects that created incidental impacts on surrounding wells were considered to be single well tests for purposes of the report.

Chairman Unruh thanked the representatives of IHS Energy for their report. She said the committee has 10 days to accept the final report pursuant to the contract provisions.

In response to a question from Senator Triplett, Chairman Unruh said the motion would not need to be contingent on receipt of the technical corrections IHS Energy would be submitting following the meeting.

**It was moved by Senator Cook, seconded by Representative Dockter, and carried on a roll call vote that the final report provided by IHS Energy be approved.** Senators Unruh, Bekkedahl, Cook, Dotzenrod, Laffen, and Triplett and Representatives Dockter, Froseth, Hatlestad, Headland, Kading, Kasper, Kelsh, and Steiner voted "aye." No negative votes were cast.

In response to a question from Senator Cook, Chairman Unruh said industry representatives will be notified of the final report and given the opportunity to provide comments at the committee's next meeting. She said the committee also will be looking at possible bill drafts relating to the options IHS Energy presented today.

Representative Kasper said he would be interested in hearing from industry representatives regarding the use of methane for EOR.

Senator Triplett said she would like to hear from representatives of the Tax Department regarding replacing the relatively easy to administer 5- and 10-year oil extraction tax holiday with an incentive that would require more detailed cost accounting.

Chairman Unruh said she also would like to hear from the Tax Department, especially in regard to the anticipated administrative costs associated with these two options.

### **Comments by Interested Persons**

Chairman Unruh invited comments from interested parties regarding IHS Energy's final report. No comments were received.

### **EmPower North Dakota Commission**

Chairman Unruh called on Mr. Alan Anderson, Commissioner, Department of Commerce, and Chairman, EmPower North Dakota Commission, for a presentation ([Appendix D](#)) regarding the commission's policy recommendations relating to the committee's study of enhanced recovery of oil and gas. Mr. Anderson said the Commission provided the following four recommendations to the interim Energy Development and Transmission Committee:

- Provision of sales tax equity among fuel sources through the removal of the sunset on the sales tax exemption for wind-powered electrical generation facilities;
- Provision of incentives for the capture and use of carbon dioxide;
- Investment in foundational research relating to the state's energy resources; and
- Investment in research and development for large-scale commercialization opportunities.

Mr. Anderson said an example of an investment in a large-scale commercialization opportunity would be an investment in the Allam Cycle. He said EmPower North Dakota stands ready to assist the committee if the committee decides to pursue legislation relating to any of EmPower North Dakota's recommendations.

In response to a question from Senator Bekkedahl, Mr. Anderson said while the presence of federal credits,

such as the federal wind energy tax credit, may create some disparity among the producers of other energy sources, EmPower North Dakota looks at credits from a state standpoint with the view that all energy sources should be on an equal playing field at the state level. He said the state does not have control over what happens at the federal level regarding policies that may be either beneficial or detrimental to various energy producers.

In response to a question from Chairman Unruh, Mr. Jason Bohrer, President and Chief Executive Officer, Lignite Energy Council, and member, EmPower North Dakota Commission, said EmPower North Dakota reviewed the sales tax exemption for wind-powered electrical generation facilities prior to the 2015 legislative session and found that extending the sunset date on the credit would place North Dakota on par with incentives available in other states. He said extending the sunset date provides a slight advantage when compared to incentives in some states and closes the gap when compared to the incentives available in other states.

Senator Cook said the interim Political Subdivision Taxation Committee is studying the sales tax incentive for wind-powered electrical generation facilities.

Mr. Bohrer said EmPower North Dakota does not wish to get ahead of the direction the interim Political Subdivision Taxation Committee may be taking on that incentive. He said EmPower North Dakota will defer to that committee on this issue. He said EmPower North Dakota's goal is to create an easy to understand system of taxation that is as equalized as possible across energy industries.

In response to a question from Representative Headland, Mr. Bohrer said recommendations advanced by EmPower North Dakota are the result of a unanimous vote by the commission.

### **COMMITTEE DISCUSSION AND DIRECTIVES**

Chairman Unruh called for any additional feedback from committee members regarding the agenda for the committee's next meeting.

Senator Triplett said she would be in favor of having the Legislative Council staff begin the bill draft relating to secondary and tertiary recovery definitions for the committee's review at the upcoming meeting.

Chairman Unruh asked the Legislative Council staff have the bill draft prepared for the committee's next meeting and also complete further work on the additional options the committee considered from IHS Energy's final report.

No further business appearing, Chairman Unruh adjourned the meeting at 3:05 p.m.

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Emily L. Thompson  
Counsel

ATTACH:4