ENERGY DEVELOPMENT AND TRANSMISSION COMMITTEE

The Energy Development and Transmission Committee was created in 2007 and was made permanent in 2011. Under North Dakota Century Code Section 54-35-18, the committee is directed to study the impact of a comprehensive energy policy for the state and the development of each facet of the energy industry from the obtaining of raw natural resources to the sale of the final product in this state, other states, and other countries. The study requires the committee to develop a comprehensive statewide energy policy that supports the long-term development of energy opportunities in the state and seeks solutions to challenges arising during the development of energy opportunities. The study also requires the committee to engage industry stakeholders to develop a regulatory environment that allows for responsible growth while resolving conflicts and developing synergy between energy and agriculture programs. The study may include reviewing and recommending policies related to extraction, generation, processing, transmission, transportation, marketing, distribution, and use of energy.

In addition to its statutory study responsibilities, the committee was assigned three studies:

- House Concurrent Resolution No. 3034 (2023) directed a study of sustainable energy policies to maximize the economic viability of existing energy sources, assess future demands on electricity in the state, and determine the feasibility of advanced nuclear energy development and transmission in the state.
- Senate Bill No. 2366 (2023) directed a study of the accessibility of natural gas in small communities. The study required a review of existing programs to assist small communities with gaining access to natural gas and accessibility assistance programs that may need to be extended.
- Section 16 of House Bill No. 1012 (2023) directed a study of the effect of electric vehicles (EVs) in the state. The study required consideration of the assessment of fees to offset reductions in motor fuel tax revenues; the impact of EVs on electric demand and the electrical grid; the installation of EV charging infrastructure by private and public entities, including potential funding sources; the impact to public services and public transportation providers; and the effect on employment opportunities and other economic impacts, including tourism, automobile dealers, the energy industry, and the critical minerals industry. The study required input from key stakeholders, including EV manufacturers, EV dealers, electric utilities, EV charging station manufacturers, and other transportation entities.

The Legislative Management assigned the committee the responsibility to receive 13 reports:

- A biennial report from the Energy Policy Commission on the commission's recommendations for the state's energy policy, pursuant to Section 17-07-01.
- A biennial report from the Clean Sustainable Energy Authority regarding the authority's activities and the financial impact on state revenue and the state's economy of the programs administered by the authority, pursuant to Section 54-63.1-04
- A report from the Department of Transportation (DOT) regarding an update on the deployment and administration of EV charging stations, pursuant to Section 24-02-45.4.
- A report from DOT on the department's findings and recommendations on the department's study of the feasibility and impact of imposing an EV charging tax to offset lost revenue from gas tax sales, pursuant to Section 1 of House Bill No. 1081 (2023).
- At least one report from the State Energy Research Center regarding the center's study of prospective in-state resources of economically feasible accumulations of critical minerals, including rare earth elements and other high-value minerals or materials that may be suitable for extraction and enrichment, pursuant to Section 14 of House Bill No. 1014 (2023).
- At least one report from the State Energy Research Center regarding the status and results of its salt cavern underground energy storage and research project, pursuant to Section 15 of House Bill No. 1014 (2023).
- At least one report from the Energy and Environmental Research Center regarding the status of the center's study of future lignite electrical generation facilities, pursuant to Section 17 of House Bill No. 1014 (2023).
- Annual reports from the State Energy Research Center on all research activities and accomplishments, pursuant to Section 15-11-40.
- A biennial written report from the North Dakota Transmission Authority on its activities, pursuant to Section 17-05-13.
- A report from the Agriculture Commissioner regarding the implementation of, and services provided under, the postproduction royalty oversight program, pursuant to Section 4.1-01-26.

- A biennial report from the North Dakota Pipeline Authority on its activities, pursuant to Section 54-17.7-13.
- Annual reports from the operator of a coal conversion facility that receives a carbon dioxide capture credit for certain coal conversion facilities regarding the facility's carbon dioxide capture project, pursuant to Section 57-60-02.1.
- A biennial report from the High-Level Radioactive Waste Advisory Council on its findings, pursuant to Section 38-23-08.

Committee members were Senators David Hogue (Chairman), Brad Bekkedahl, Keith Boehm, Ryan Braunberger, Dale Patten, and Merrill Piepkorn and Representatives Dick Anderson, Mike Brandenburg, Alisa Mitskog, Corey Mock, Todd Porter, and Don Vigesaa.

COMPREHENSIVE AND SUSTAINABLE ENERGY POLICY STUDY

The committee is responsible for studying a comprehensive statewide energy policy, pursuant to Section 54-35-18. In addition to its statutory responsibilities, House Concurrent Resolution No. 3034 (2023) directed a study of sustainable energy policies to maximize the economic viability of existing energy sources, assess future demands on electricity in the state, and determine the feasibility of advanced nuclear energy development and transmission in the state. Due to the similarities in the studies directed by Section 54-35-18 and House Concurrent Resolution No. 3034, the two studies were combined into a comprehensive study.

Background

Section 54-35-18 directs the committee to study the impact of a comprehensive energy policy for the state and the development of each facet of the energy industry, from the obtaining of raw natural resources to the sale of the final product in this state, other states, and other countries. The committee's duties under Section 54-35-18 were expanded by Senate Bill No. 2289 (2023), which requires the committee to develop a comprehensive statewide energy policy that supports the long-term development of energy opportunities in the state and seeks solutions to challenges arising during the development of energy opportunities. The study also may include the review of, and recommendations relating to, policies affecting extraction, generation, processing, transmission, transportation, marketing, distribution, and use of energy.

As part of this study, the committee received a report from the Energy Policy Commission, also known as the EmPower ND Commission.

Energy Policy Commission Report

In 2009, the Energy Policy Commission was created by House Bill No. 1322, codified as Section 17-07-01, to develop a comprehensive energy policy and to monitor progress toward reaching the goals of the policy. The commission consists of the Commissioner of Commerce as Chairman and members appointed by the Governor to represent the agriculture community, Lignite Energy Council, North Dakota Petroleum Council, biodiesel industry, biomass industry, wind industry, ethanol industry, North Dakota Petroleum Marketers Association, North Dakota investor-owned electric utility industry, generation and transmission electric cooperative industry, lignite coal-producing industry, refining or gas-processing industry, and additional nonvoting members.

The committee received a report from the Energy Policy Commission regarding the commission's three subcommittees--public policy, research and development, and infrastructure. The commission did not provide any specific energy policy recommendations during the 2023-24 interim or updates to the commission's 2022 energy plan. The commission is continuing to review the benefits, location, and safety of using carbon dioxide captured from industrial sources like power plants, ethanol plants, and gas processing plants for enhanced oil recovery. The commission continues to express its support for the development of carbon capture, usage and storage, and carbon dioxide enhanced oil recovery, and suggested the state continue its environmental, social, and governance investment criteria initiative to assist businesses, market state investment opportunities, and continue growing the state's energy industry.

Clean Sustainable Energy Report

The committee received a report from the Clean Sustainable Energy Authority regarding its activities and the program's financial impact on state revenues and the state's economy, pursuant to Section 54-63.1-04. According to the report, the purpose of the Clean Sustainable Energy Authority is to support the research and development of large-scale projects and technologies that advance energy production and diversify the state's economy while reducing environmental impacts

During the 2023 legislative session, the authority received $30 million in appropriations to repay a portion of the existing Bank of North Dakota line-of-credit and was authorized an additional $250 million line-of-credit from the Bank for long-term, low-interest loans. During the 2023 special legislative session, the authority was directed to issue a loan

of up to $125 million for a fertilizer development project. The project and the entire $125 million loan was accepted by NextEra.

According to the report, as of November 2024, the uncommitted balance of the clean sustainable energy fund is $3.38 million. The authority has approved $64.5 million in grants and $545.5 million in loans for 20 active projects. The 20 projects include natural gas flaring projects, synfuels production, fertilizer production, lithium-ion battery production, hydrogen production, lignite combustion production enhancements, natural gas conversion, carbon capture, farm data sharing, carbon emission, lithium iron phosphate cathode materials, the expansion of the Dickinson renewable fuel facility, manufacturing biodegradable carbon-negative biopolymers, and projects to evaluate the potential of using geothermal power generation on oil and gas production sites.

Testimony

Rainbow Energy Center

The committee received testimony from a representative of Rainbow Energy Center relating to the future of Coal Creek Station and the successful operation of a coal plant in a low-carbon world. According to the testimony, Rainbow Energy Center is an independent power producer and the state's most efficient power plant with 700 employees and an estimated annual fiscal impact to the state of $1.5 billion. Testimony indicated the Nexus Line Transmission System is a high-voltage, direct current line owned by Rainbow Energy extending 436 miles between North Dakota and Minnesota with 99.5 percent availability. Testimony contended the system brings value to Coal Creek Station by delivering electricity from Coal Creek Station to Minnesota, serving 1.7 million people each day, and relieving transmission congestion in the state.

The committee was informed Rainbow Energy Center's vision includes optimizing operational efficiencies, maximizing power delivery, generating renewable energy, and expanding carbon capture technology. Testimony contended Rainbow Energy Center's goal is to run Coal Creek Station at full capacity.

The committee discussed the negative impacts of environmental and social governance policies and was informed Rainbow Energy Center has not experienced any negative impacts regarding environmental and social governance policies from banks or other entities outside the state.

Dakota Gasification Company

The committee toured the Great Plains Synfuels Plant and received testimony from representatives of the Dakota Gasification Company and Basin Electric Cooperative regarding the Great Plains Synfuels Plant and future projects. According to the testimony, the Dakota Gasification Company's primary goal is to operate the Great Plains Synfuels Plant at maximum capacity. The committee was informed the company added $100 million to its 10-year infrastructure improvement plan for fertilizer units and carbon dioxide projects to ensure the facility is operating continuously and at maximum capacity.

Pioneer Generation Station

The committee was informed construction on Pioneer Generation Station Phase IV in Williston is scheduled for 2024, which will add 590 megawatts (MW) of generation capacity to the Bakken region. Additional projects in the region are planned to finalize by 2030, adding an additional 1,400 MW of generation capacity.

North Dakota Transmission Authority

The committee received testimony from a representative of the North Dakota Transmission Authority regarding Transmission Authority studies on the impact of Environmental Protection Agency (EPA) regulations on the resource adequacy of the Midcontinent Independent System Operator (MISO) and Southwest Power Pool (SPP) grids.

The committee was informed reliance on a wind impacted reserve source for electricity is very dangerous due to variations of peak load times. Testimony indicated MISO and SPP do not have control over resource choices because some states have mandates affecting a utility's choice of resources and energy markets favor the lowest-cost resource, causing subsidized resources to be selected to operate first. According to the testimony, an additional concern is limited transmission capacity. The committee was informed the transmission capacity required to transport energy to the market, especially from dispersed renewable energy locations, is insufficient and capacity markets have been ineffective in encouraging additional capacity. Testimony contended a significant investment in transmission capacity in the state will be needed, together with investments in low- or negative-carbon technologies, to allow the state to continue as a leader in the energy industry.

ALLETE, Inc.

The committee received testimony from a representative of ALLETE, Inc., regarding energy infrastructure in the state. According to the testimony, the high-voltage direct current (HVDC) project by ALLETE, Inc., aims to upgrade the Square Butte transmission system, which spans 465 miles from Center, North Dakota, to Hermantown, Minnesota. Initially

commissioned in 1975, this system's capacity will increase from 550 MW to 900 MW with the planned modernization of two converter stations using the latest voltage-source technology. This project, estimated to cost $1 billion, has received $50 million in United States Department of Energy grants and $25 million from Minnesota, with additional funding being sought from North Dakota. Completion is scheduled between 2028 and 2030, and the peak construction period will employ around 220 workers.

The committee was informed the North Plains Connector, a joint project between ALLETE, Inc., and North Plains Connector, is a new transmission corridor designed to connect three energy regions--MISO, SPP, and the Western Electricity Coordinating Council--through a 412-mile HVDC line. With a planned capacity of 3,000 MW, the line will enable bidirectional power flow and integrate energy systems in the Midwest and western United States, improving resilience and reliability. Approximately 90 percent of the right-of-way has been acquired, with the remaining 11 percent pending across private, state, and federal lands. Testimony indicated key milestones include completing land surveys in 2024 and targeting a final in-service date of 2031.

The committee discussed the critical demand for expanded alternating current and HVDC infrastructure in the Upper Midwest to support projected utility load growth. Testimony indicated this need aligns with MISO's Long Range Transmission Planning, which emphasizes the requirement for robust transmission systems to meet rising electricity demands. The committee was informed ALLETE, Inc., aims to address these challenges with a stakeholder-first approach, engaging extensively in environmental, community, and regulatory processes to support both the HVDC modernization and the North Plains Connector projects.

Midcontinent Independent System Operator

The committee received testimony from a representative of MISO regarding the impact the EPA and other external sources have on resource generation. According to the testimony, MISO manages electricity transmission for 45 million customers across 15 states in the United States and in Manitoba, Canada. Testimony indicated the responsibilities of MISO include ensuring grid reliability and managing the transition to renewable energy. The committee was informed MISO is facing significant changes due to increasing electrification, extreme weather, and decarbonization initiatives. Testimony indicated these factors have led to transformations in resource generation, including a rise in renewable sources like wind and solar. The committee was informed MISO's resource adequacy construct is evolving to ensure continued reliability under a changing risk profile driven by the resource fleet transition. Testimony indicated MISO anticipates significant resource additions, retirements, and load growth with a trend toward increasing renewables over the next several years.

The committee was informed MISO's transmission expansion in the state is part of a larger effort to support grid reliability and accommodate the increasing shift toward renewable energy sources. The committee was informed the Long Range Transmission Planning initiative, particularly Tranche 1, includes 18 projects across the MISO Midwest subregion, with a total estimated cost of $10.3 billion. In North Dakota, specific upgrades, such as the Jamestown-Ellendale project, are designed to enhance transmission capacity and reduce interconnection costs for new generation, facilitating the transition to cleaner energy sources like wind. Testimony contended these expansions are essential to address regional planning needs, integrate renewable energy, and maintain grid stability under increasing demand.

The committee was informed external factors like EPA regulations may have a significant impact on MISO’s resource generation. Testimony contended the EPA's proposed carbon standards for coal and gas units, as well as other regulations related to emissions and waste, could accelerate the retirement of coal plants or force the plants to adopt carbon capture technologies. The committee was informed approximately 25 gigawatts of coal capacity in the MISO region may need to adopt gas co-firing or carbon capture technology by 2030.

Southwest Power Pool

The committee received testimony from a representative of the SPP regarding the impact the EPA and other external pressures have on generation resources. The testimony indicated the SPP is one of North America's nine independent system operators and regional transmission organizations serving approximately 18 million people across a 552,885-square-mile territory. Testimony indicated the SPP is responsible for ensuring reliable power supply, managing transmission infrastructure, and operating competitive electricity markets. Its operations also include resource adequacy, transmission expansion, and market operations.

The committee was informed EPA regulations have had a notable impact on SPP's resource generation, particularly affecting coal and natural gas plants. According to the testimony, as part of the EPA's environmental regulations and emissions standards, there is a notable shift toward retiring older fossil fuel plants, with an emphasis on adopting cleaner energy alternatives like wind and solar.

According to the testimony, SPP's Transmission Expansion Plan focuses on improving grid reliability and accommodating future energy demands through stakeholder-driven, member-funded processes. The plan addresses

both near- and long-term transmission needs, incorporating economic and reliability considerations. It includes interregional projects in collaboration with neighboring regions like MISO and customer-initiated projects to support new generation connections. Notable upgrades involve HVDC technology, which enhances long-distance transmission efficiency. According to the testimony, the SPP's Transmission Expansion Plan ensures the grid's capacity to handle increasing renewable energy integration and meet future energy needs.

The committee was informed SPP's Transmission Expansion Plan is necessary to address several critical challenges. These include the growing demand for electricity, the increasing integration of renewable energy sources like wind and solar, and the retirement of older, thermal generation facilities. Testimony contended as the energy landscape shifts toward more intermittent renewables, robust and expanded transmission infrastructure is essential for maintaining grid reliability and meeting future energy needs. The committee was informed the plan ensures new generation resources can be effectively connected to the grid, and the transmission system remains resilient amid changing energy demands and extreme weather conditions.

Electric Grid Resilience

The committee received testimony from representatives of Montana-Dakota Utility Resources Group Inc., the Industrial Commission, and the Public Service Commission regarding electricity congestion in the Bakken region and the effect of data centers on the electric grid and utility rates.

According to the testimony, the city of Williston is a high-load growth area lacking adequate transmission to support a localized data center. Testimony contended the Williston data center has caused significant congestion, limiting the generation capacity across the entire regional power grid. The committee was informed Montana-Dakota Utility Resources Group Inc., has filed a complaint with the Federal Energy Regulatory Commission after being charged transmission congestion fees from the SPP and MISO regional transmission organizations.

The committee was informed the Public Service Commission does not have the statutory authority to control the siting location of a data center or cryptocurrency facility. Under current projections, the Transmission Authority and the Industrial Commission concluded by year 2029 the MISO regional grid will not have sufficient power to meet the electrical demand of users.

The committee received testimony from a representative of the North Dakota Transmission Authority regarding transmission infrastructure. The committee was informed the 2023-24 Winter Reliability Assessment indicated a large portion of the North American bulk power system is at risk of insufficient electricity supply during peak winter conditions. Testimony indicated prolonged, geographically expansive cold snaps threaten the reliability of bulk power system generation, and the availability of natural gas used by many generators. Testimony contended system operators may face a sharp simultaneous increase in demand, resulting in a constrained supply, as electric heating systems consume more power in cold temperatures. Testimony indicated areas of natural gas transmission congestion include the Bakken and Southeast North Dakota. The committee was informed MISO has approved 18 new transmission projects, including JETx, a transmission line from Jamestown to Ellendale, which are needed in 2030 to ensure a reliable and resilient transmission system.

Environmental Protection Agency Regulations and North Dakota

The committee received testimony from the Governor and a representative of the Department of Environmental Quality and Department of Mineral Resources regarding the proposed federal rules and regulations of the EPA. The committee was informed the proposed rules and regulations could have a significant impact on industries crucial to the state, including agriculture, baseload energy, and oil and gas. Testimony indicated the state is monitoring over 30 proposed federal rules and regulations that pose a risk to these sectors. The testimony contended the state has a sovereign interest and responsibility in developing resources for its citizens and a commercial responsibility in providing energy to citizens throughout the Midwest.

The committee was informed the Department of Environmental Quality holds primary responsibility for numerous environmental programs within the state. Testimony indicated general concerns over the legality of the proposed rules and regulations aimed at shutting down the state's coal-fire power industry. The committee discussed the need for additional funding to enable the Attorney General to contest the federal rules and regulations impacting the state. Testimony contended there is an unprecedented pace of the new regulations attacking North Dakota industries, despite the state having some of the cleanest air in the country.

Carbon Dioxide Storage

The committee received testimony from a representative of the Department of Mineral Resources regarding carbon sequestration and the potential use of carbon dioxide in the state. According to the testimony, the department is reviewing a permit for a project that would enable the utilization of approximately 360 million tons of carbon storage, with anticipated

capacity increases from 0.1 to 0.25 percent. The committee was informed North Dakota has an overall carbon storage capacity of 252 billion tons.

The testimony identified critical pipeline infrastructure needs, including a pipeline from Wyoming to supply southwestern North Dakota, another from the south to capture carbon dioxide emissions from ethanol, fertilizer, and other plants, and a third from Boundary Dam in the north to support storage within the state. The testimony emphasized the importance of establishing policies regarding extraterritorial jurisdiction to effectively manage carbon sequestration activities across these regions.

Advanced Nuclear Energy Development

The committee received testimony from a representative of the Department of Commerce regarding the future of nuclear energy and the current demand for baseload power in the state. According to the testimony, North Dakota exports less of its power each year due to regional demand. Testimony indicated the state is facing challenges in maintaining reliable baseload power because existing coal plants in the state are approaching or have surpassed their intended operational lifespan. Testimony contended electrification trends and the rapid growth in data centers and other high-energy industries across the Midwest are responsible for the increase in electrical demand in North Dakota.

To address challenges, the testimony indicated potential short- and long-term solutions. In the short-to-mid-term, natural gas combustion turbines are considered a viable option due to the state's abundant natural gas resources, despite supply chain and infrastructure backlogs. For the long-term, the department is considering utilizing existing infrastructure for nuclear energy as a stable, emissions-free solution. The committee was informed the department is actively engaging with national laboratories and joining a consortium with other states to evaluate nuclear options.

The committee received testimony from a representative of Gateway for Accelerated Innovation in Nuclear (GAIN) regarding the feasibility of advanced nuclear energy development and an overview of state engagement strategies to advance nuclear energy development. The committee was informed GAIN works directly with state policymakers, utilities, and industrial stakeholders to introduce advance nuclear technologies and connect states with technical and financial resources from the United States Department of Energy. The committee was informed, in 2024, 123 legislative measures regarding advanced nuclear energy feasibility studies and working groups were proposed nationwide.

The committee was informed advanced reactors, including small modular reactors and microreactors, are designed for flexibility, supporting diverse applications beyond electricity, such as hydrogen production, water desalination, and industrial heat. Testimony indicated GAIN is supporting coal-to-nuclear transition studies in Arizona, Kentucky, and Montana, and exploring the use of retired coal plant sites for nuclear energy projects. Testimony contended this strategic focus on advanced reactors highlights their potential as safe, low-waste solutions adaptable to the changing energy landscape and capable of supporting a resilient, sustainable power grid.

The committee received testimony from a representative of the United States Nuclear Regulatory Commission regarding advanced nuclear energy. The committee was informed, in December 2023, the United Arab Emirates announced its goal to shift away from fossil fuels to reach net-zero emissions by 2050. Twenty-four countries, including the United States, have committed to tripling nuclear energy use by 2050, supporting a global trend in nuclear development. Currently, 53 countries operate 223 research reactors, and over 200 nuclear reactors power naval ships and submarines. More than 420 nuclear reactors are operational across 33 countries, with the United States leading as the largest operator with 94 units. Testimony contended nuclear energy offers scalable and flexible commercial and regulatory advantages, supporting incremental growth in electricity demand and additional uses such as repowering fossil fuel sites, industrial heat production, water purification, desalination, and hydrogen production.

Bank of North Dakota

The committee received a report from the Bank of North Dakota on the Bank's findings and recommendations regarding its study on environmental, social, and governance trends, laws, and policies that impact businesses and industries of this state, pursuant to Section 5 of House Bill No. 1429 (2023). The committee was informed the study included individuals from the Legislative Assembly, private industries, associations, and state agencies. The study consisted of eight working groups completing over 80 interviews to address areas of sustainability. According to the report, the state is charting a new course of action by demonstrating how transformation and innovation can thrive in a world focused on carbon management, while not neglecting its commitment to energy and agriculture.

Committee Considerations

The committee considered a bill draft to provide for a Legislative Management study relating to the development of advanced nuclear energy. The study includes evaluations of site locations, electric connectivity, land use considerations, and economic impacts, with participation from higher education and energy industry participants. The bill draft provides an appropriation of $500,000 for the purpose of contracting for consulting services. Committee members agreed the study to determine the feasibility of advanced nuclear energy development and transmission was larger than anticipated

and should be expanded to provide a potential solution to issues relating to increased load growth in North Dakota. Committee members agreed the proposed study must consider social and community interests regarding the location of a nuclear facility, and acknowledged a community's acceptance of a facility is a key factor in the siting and permitting process.

Recommendations

The committee recommends a bill draft [25.0429.02000] directing a Legislative Management study on advanced nuclear energy.

NATURAL GAS ACCESSIBILITY IN SMALL COMMUNITIES STUDY

Senate Bill No. 2366 (2023) directed a study of the accessibility of natural gas in small communities, including a review of existing programs to assist small communities with gaining access to natural gas and accessibility assistance programs that may need to be extended.

Background

During the 2019-20 interim, the Energy Development and Transmission Committee received information regarding natural gas developments, capture, usage, and services as a part of its study of a comprehensive energy policy for the state and the development of each facet of the energy industry. The committee was informed the North Bakken Expansion Project would provide 200 million cubic feet of natural gas transportation capacity per day. In addition, the project would provide approximately 67 miles of new pipeline construction, compression, and ancillary facilities to transport natural gas from core Bakken production areas in western North Dakota to an interconnection point with Northern Border Pipeline. The project was expected to be completed in 2021, cost $220 million, be designed using 20-inch diameter pipeline, and provide residue gas service from north of Lake Sakakawea to Northern Border Pipeline in McKenzie County. Natural gas produced from the Bakken and Three Forks Formations is very high in natural gas liquids such as ethane, propane, and butane. It was expected natural gas liquid production would exceed pipeline capacity again in 2021, and until further system expansions take place or a new market option is developed.

During the 2021-22 interim, the Energy Development and Transmission Committee studied natural gas and propane infrastructure development in the state. The committee received information regarding the cost ranges for various types of natural gas and propane infrastructure. The committee acknowledged several positive steps have been taken to promote and expand natural gas and propane infrastructure development to unserved and underserved communities in the state. Committee members recognized additional funds and tax exemptions might be needed to encourage improvement and expansion of natural gas and propane infrastructure. The committee indicated the state's tax incentive provisions for oil and gas are operating as intended.

The committee was informed the state is the 11th largest gas-producing state. Ninety-one communities, comprised of approximately 150,000 customers, have access to natural gas service in North Dakota. Three hundred sixty-six communities, comprised of approximately 46,000 homes, do not have access to natural gas service. The three driving forces for new gas pipelines are supply push, demand pull, and system reliability.

Testimony

The committee received testimony from a representative of the North Dakota Pipeline Authority regarding the accessibility of natural gas in small communities and transmission needs in the state. The committee was informed the state's natural gas infrastructure is expanding to meet increasing production and transmission needs. Testimony indicated the state's current network, including the Northern Border and WBI Energy pipelines, is being upgraded through projects like the WBI Energy Grasslands South and Bakken XPress, which will add significant takeaway capacity. However, challenges remain, particularly in expanding infrastructure to eastern North Dakota, where low demand and high project costs make development difficult. Testimony contended, despite these hurdles, increased production and ongoing pipeline projects offer potential for economic growth, with opportunities to improve local consumption and better connect the state's natural gas supply to broader markets.

The committee received testimony from representatives of the cities of New Town and Parshall regarding the accessibility of natural gas in small communities and transmission needs in the state. The committee was informed small communities support increased access to natural gas, and ease of access to natural gas increases economic development opportunities, which, in turn, attract more businesses and people to a community. Testimony contended the state should redirect distribution projects to smaller communities for the benefit of North Dakotans.

The committee received testimony from a representative of Montana-Dakota Utilities (MDU) regarding natural gas services in the state and costs and other barriers to delivering natural gas to small communities. According to the testimony, MDU provides electricity and natural gas to 1,180,770 customers across 459 communities. Testimony indicated the benefits of natural gas include reliability, resilience, abundant supply, and lower energy costs. The committee was informed of the barriers to providing natural gas to smaller cities including the distance between the

pipeline and the communities, interconnection costs, conversion rates, population density, and customer connection costs. Testimony indicated MDU has tentative plans to expand natural gas service to Kindred, Colfax, and Walcott beginning in fall 2024, and continuing into 2025. The committee was informed House Bill No. 1170 (2023) provides for a 15-year property tax exemption on transmission and distribution to serve a community without natural gas, lowering the contribution costs for the projects.

The committee received testimony from a representative of Dakota Natural Gas regarding the accessibility of natural gas in small communities. According to the testimony, Dakota Natural Gas specifically focuses on providing natural gas to smaller communities. The committee was informed North Dakota's temporary tax exemptions and market zone rates are a step in the right direction; however, they do not solve the problem of unserved communities. Testimony indicated the major barriers to transmission are distance and expense, both of which require unique options to overcome. Testimony contended creative solutions may include bundling users in grant applications, streamlining grants directly to interstate pipelines to minimize income tax impacts, and having the state take an active role in working with interstate pipeline to create access hubs serving multiple small communities.

The committee received testimony from a representative of the Department of Health and Human Services relating to the low-income home energy assistance program (LIHEAP). The committee was informed LIHEAP helps eligible households with the costs of home heating and weatherization. The program assists with partial payments for natural gas, electricity, propane, fuel oil, coal, wood, and other fuel sources. It also offers emergency assistance to prevent shutoffs or ensure fuel deliveries, along with furnace cleaning, repair, and replacement services. Households eligible for LIHEAP include those whose rent payments include the cost of heat if the household is not receiving housing assistance or residing in subsidized housing, those who have difficulty paying fuel bills due to other rising costs and are in danger of losing their heating source, and those who have received a shut-off notice, have had heat disconnected, or have run out of fuel.

The committee was informed LIHEAP supports 14,200 households in North Dakota. Testimony indicated LIHEAP partners with the Department of Commerce and the Community Action Partnership to provide weatherization services like insulation and weather stripping. The program operates from October to May for heating assistance, while other services, such as emergency aid, are available year around.

Committee Consideration

Committee members acknowledged several positive steps the state has taken to promote and expand natural gas and propane infrastructure development to unserved and underserved communities in the state. Committee members recognized federal funding is absent regarding transmission and accessibility of natural gas in small communities and also recognized block grants could be used to help assist local communities.

Conclusion

The committee makes no recommendation regarding its study of the accessibility of natural gas in small communities.

ELECTRIC VEHICLE STUDY

House Bill No. 1012 (2023) directed a study of the effect of EVs in the state. The study required consideration of the assessment of fees to offset reductions in motor fuel tax revenues; the impact of EVs on electric demand and the electrical grid; the installation of EV charging infrastructure by private and public entities, including potential funding sources; the impact to public services and public transportation providers; and the effect on employment opportunities and other economic impacts, including tourism, automobile dealers, the energy industry, and the critical minerals industry. The study required input from key stakeholders, including EV manufacturers, EV dealers, electric utilities, EV charging station manufacturers, and other transportation entities.

Background

The EV market in the United States has grown rapidly, from an estimated 320,000 EV units in 2019, to an estimated 800,000 EVs sold in 2022. By 2030, industry analysts predict EVs will comprise 40 to 50 percent of new car sales. As of June 2022, the United States Department of Energy estimates 640 EVs are registered in North Dakota, the fewest in any state. In comparison, more than 750,000 traditional fuel vehicles are registered in the state.

Federal and state policies have supported growth in the EV industry by encouraging the use of EVs and the development of charging infrastructure. The Inflation Reduction Act of 2022 extends to 2032, the Internal Revenue Service clean vehicle tax credit of up to $7,500 for new EV or fuel cell EV purchases. The Act also provides incentives for electrifying heavy-duty vehicles and funding for charging infrastructure.

As of July 2021, 47 states and the District of Columbia offer incentives to support deployment of EVs and related infrastructure, either through state legislation or private utility incentives within the state. Common EV incentives offered by states include tax credits for purchasing EVs, inspection or emissions test exemptions, parking incentives, utility rate

reductions, and high-occupancy vehicle lane exemptions. Electric vehicle incentives have not been adopted in North Dakota, Kansas, or Kentucky.

Historically, repairs and improvements to highways have been funded by federal and state taxes collected on fuel sales. In North Dakota, a substantial portion of the state's road and bridge construction and maintenance costs are paid with motor fuel tax revenues. Decreased motor fuel tax collections resulting from increased fuel efficiency and the use of EVs is leading some state policymakers to consider other ways to pay for transportation infrastructure.

Testimony

The committee received testimony from a representative of the Alliance for Automotive Innovation regarding the assessment of EV fees to offset reductions in motor fuel tax revenues. The committee was informed the EV market is expanding, with 114 different models now available in the United States, including cars, utility vehicles, pickup trucks, and vans. Testimony indicated, in 2023, EVs made up 9.5 percent of new light-duty vehicle sales, averaging an annual increase of 2.5 percent. In contrast, North Dakota's EV sales averaged only 1.28 percent.

The committee was informed public charging infrastructure for EVs remains inadequate across the United States. Testimony indicated the installation of public EV chargers has not kept pace with the current and projected sales of EVs. Although the number of publicly available chargers increased by 27 percent in 2023, EV sales increased by 51 percent during the same period.

The committee discussed several options to offset the reduction in motor fuel tax revenues. These options included implementing an EV fee, assessing vehicle miles traveled taxes, and applying taxes on electricity based on kilowatt-hours (kWh). Testimony indicated EV fees act as a regressive tax, because the tax does not relate to fuel usage or public benefit. Testimony indicated EV fees often create financial hardships for consumers because the taxes usually are collected in a lump sum, fail to account for nonresident roadway usage, and add to the initial cost of purchasing an EV. However, testimony contended EV fees offer low administrative costs for states, a short ramp-up time to generate revenue, stable revenue expectations, and do not require GPS tracking.

The committee was informed a vehicle miles traveled tax could provide a new approach to accurately capture public roadway usage. Testimony indicated this tax is progressive, increases with greater road or fuel usage, and does not require additional upfront money for vehicle purchases. However, the tax fails to account for nonresident roadway usage, necessitates GPS tracking, and generally is unpopular among vehicle owners.

The committee was informed a kWh tax could benefit the state because the tax is progressive, captures nonresidential use of in-state EV supply equipment, and aligns with the current gas tax by taxing the volume of fuel consumed. However, testimony indicated a kWh tax still presents challenges, such as the costs associated with segmenting electricity in residential settings and potential difficulties in establishing appropriate rates to meet revenue expectations.

North Dakota Department of Transportation Report

The committee received a report from DOT regarding an update on the deployment and administration of EV charging stations, pursuant to Section 24-02-45.4. According to the report, on September 12, 2023, the department issued a request for proposals to engage a consultant for the National Electric Vehicle Infrastructure (NEVI) Program, selecting HDR Engineering, Inc. An initial meeting was held on December 7, 2023, and DOT has maintained weekly meetings with HDR Engineering, Inc., to oversee program implementation. Additionally, on September 29, 2023, the Federal Highway Administration approved the updated EV Plan, which enabled the release of fiscal year 2024 NEVI Program funds for obligation.

The report indicated DOT hosted a networking event on May 16, 2024, to connect potential EV charging station hosts and various service providers, including manufacturers and electrical contractors. On June 11, 2024, the department released a Notice of Funding Opportunity (NOFO) aimed at deploying funds for privately owned EV fast chargers along North Dakota’s alternative fuel corridors, specifically targeting 10 rural sites. Applications for phase one, rural NOFO, are due by August 9, 2024, with award announcements expected approximately 90 days later, aiming for the installation of charging stations in 2025.

A second phase, urban NOFO, is anticipated to be released by the end of 2024, focusing on eight urban locations along the alternative fuel corridors, with awards expected in late spring 2025. The notice of funding opportunities are part of a broader initiative to distribute approximately $25.9 million in federal NEVI Program funds to establish 18 EV fast charging stations no more than 50 miles apart, within 1 mile of existing exits. The federal program will cover up to 80 percent of project costs, including operations and maintenance, while ensuring ownership of the charging stations remains private.

Department of Transportation Electric Vehicle Charging Tax Report

The committee received a report from DOT regarding the department's study, including the assessment of lost revenue due to out-of-state drivers not paying a gas tax, an evaluation of the economic impact of lost revenue and implementation of an electronic charging tax equivalent to the lost gas tax revenue, and an assessment of the costs and implementation of such a tax, pursuant to Section 1 of House Bill No. 1081 (2023).

The report indicated there is no substantive harm to North Dakota for not acting on an EV tax. Instead, the report recommends North Dakota monitor the rates of EV adoption in neighboring states and provinces and recommends North Dakota wait for the adoption of EV infrastructure before adopting a first-of-its-kind tax on out-of-state EVs. Additionally, the report recommends continued participation in the Road Use Charging America multistate coalition.

Committee Considerations

The committee discussed the use of a reasonable EV fee that would include a registration fee with a tax for EV charging stations on public roadways. The committee discussed the importance of out-of-state travelers paying their fair share of roadway use, and agreed a residential charging tax would be a hardship on homeowners. Committee members recognized North Dakota's EV statistics are well below the national average while acknowledging the potential impact EVs may have on the state's motor fuel tax revenues in the future.

Conclusion

The committee makes no recommendation regarding its study of the effect of EVs in the state.

STATE ENERGY RESEARCH CENTER CRITICAL MINERALS REPORT

The committee received a report from a representative of the State Energy Research Center regarding the center's study of prospective in-state resources of economically feasible accumulations of critical minerals, pursuant to Section 14 of House Bill No. 1014 (2023). According to the report, critical minerals play a vital role in the economy and national security. More than 80 percent of United States critical minerals are imported from China, Estonia, Malysia, and Japan. The report indicated the Williston Basin possesses natural risk-mitigation attributes, including transportation and the availability of water and energy, and could be used as a business hub for accumulation of critical minerals. The report indicated the coal in the region contains concentrations of critical minerals; however, the technology used to extract the critical minerals is costly and not feasible with current technologies.

STATE ENERGY RESEARCH CENTER SALT CAVERN UNDERGROUND ENERGY STORAGE REPORT

The committee received a report from a representative of the State Energy Research Center regarding the status and results of its cavern underground energy storage and research project, pursuant to Section 15 of House Bill No. 1014 (2023). According to the report, the center received $9.5 million during the 2021-23 biennium to evaluate the feasibility of creating caverns for energy storage in the bedded salts of the state. The project was completed in June 2023, resulting in the collection and analysis of salt from two of the state's primary salt zones. Results of the core testing and modeling suggested caverns suitable for long-term hydrocarbon gas or liquid storage can be developed; however, the total cost to fully develop a salt cavern for storage likely will exceed $100 million.

STATE ENERGY RESEARCH CENTER FUTURE LIGNITE ELECTRICAL GENERATION FACILITY REPORT

The committee received a report from a representative of the State Energy Research Center regarding the center's study of future lignite electrical generation facilities, pursuant to Section 17 of House Bill No. 1014 (2023). According to the report, the center study will include several key tasks, including management and reporting, key stakeholder engagement, a review of current and emerging technology, a review of regulations and policy, and a review of strategy, ownership, and financing. The report indicated the next step for the future of the lignite-fired generation facility is expanding stakeholders and assisting future demands, economic impacts, value-added products, and financing.

STATE ENERGY RESEARCH CENTER ACTIVITIES AND ACCOMPLISHMENTS REPORT

The committee received a report from a representative of the State Energy Research Center regarding the research activities and accomplishments of the center, pursuant to Section 15-11-40. According to the report, the center has funded nearly 60 projects and strategic initiatives across all North Dakota energy platforms, including gas, oil, biomass, and coal. The center's exploration projects lead to larger research and development projects, largely funded by the federal government. The center has submitted 11 United States patent applications with 21 additional continuation, divisional, or foreign applications. The center received a $1 million and $2 million federal award to advance the compressor technology in project Polar Bear. The report indicated first demonstration model is in the field with six additional demonstration units ready by the end of 2024.

NORTH DAKOTA TRANSMISSION AUTHORITY REPORT

The committee received a report from the North Dakota Transmission Authority, pursuant to Section 17-05-13. According to the report, The North Dakota Transmission Authority was engaged in several studies to substantiate concerns the state has with EPA proposed rules that would harm or eliminate fossil fuel generation. According to the report, the studies showed both the Mercury and Air Toxics Standards rule and finalized 111d Greenhouse Gas Rule would result in premature retirement of lignite power generation facilities, reducing the reliability of the electric grid and increasing costs to the ratepayer.

The report indicated North Dakota has several 345-kilovolt-transmission projects moving toward construction from east central North Dakota to western North Dakota. One of North Dakota's HVDC lines is being modernized and momentum is building on the proposed HVDC line from Colstrip, Montana to Center, North Dakota.

The report indicated the unprecedented growth forecast for the region and country due to the domestic manufacturing movement, data center development, and industry electrification underscores the need to keep all dispatchable generation in place for years to come. The committee was informed the regional transmission organizations, industry, North American Electric Reliability Organization, and Midwest Reliability Organization are determined and aligned in purpose to retain these valuable legacy generation facilities to maintain the generation resource adequacy and capacity for a resilient power grid.

AGRICULTURE COMMISSIONER POSTPRODUCTION ROYALTY OVERSIGHT REPORT

The committee received a report from the Agriculture Commissioner regarding the implementation of services provided under the postproduction royalty oversight program, pursuant to Section 4.1-01-26. According to the report, the department is under contract with two companies for ombudsman services to provide technical education, support, and outreach on royalty payment-related matters. The report indicated information regarding case eligibility is provided to mineral owners on the department's website with contact information for the appropriate staff. Mineral owners may submit a request for assistance by completing an online form. Requests are reviewed for legal and regulatory activity in partnership with the Department of Mineral Resources and assigned to program contractors. The report indicated the program received a total of 105 cases from July 1, 2023, to May 5, 2024.

NORTH DAKOTA PIPELINE AUTHORITY REPORT

The committee received a report from the North Dakota Pipeline Authority regarding an update on its activities. During the 2023-24 fiscal year, North Dakota's petroleum industry benefited from stable West Texas Intermediate oil prices, averaging $80 per barrel, which supported about 40 drilling rigs. With an emphasis on capital efficiency, the petroleum industry increased its use of three-mile lateral drilling in the Bakken and Three Forks Formations. Roughly 25 percent of wells used the three-mile laterals by the second half of 2024. The report indicated the three-mile development patterns significantly boost productive lateral footage while maintaining a modest drilling fleet in the region. The industry is working to perfect four-mile lateral drilling to further improve rig efficiency. The average oil production remained at just over 1.2 million barrels per day and despite the production decline during the final months of the 2023-24 fiscal year, the long-term outlook of North Dakota's petroleum industry remains strong.

Over the past year, the North Dakota Pipeline Authority has engaged efforts to translate production and development data into oil and natural gas transportation solutions. According to the report, through collaborative efforts to forecast crude oil and natural gas future production levels, the North Dakota Pipeline Authority is helping pipeline companies access the timeline and scope of future infrastructure needs and providing the confidence necessary for planning future project expansion.

The pipeline authority has facilitated discussions between governmental agencies and companies interested in expanding North Dakota's midstream infrastructure and provided information to citizens and news media on issues related to pipelines.

COAL CONVERSION FACILITY CARBON DIOXIDE EMISSIONS CAPTURE REPORT

The committee did not receive a report, pursuant to Section 57-60-02.1, from a coal conversion facility that received a tax credit for achieving a 20 percent capture of carbon dioxide emissions because no facilities received the credit during the reporting period.

HIGH-LEVEL RADIOACTIVE WASTE ADVISORY COUNCIL REPORT

The committee received a report from the High-Level Radioactive Waste Advisory Council pursuant to Section 32-23-08. According to the report, the council met twice in the past year to review potential high-level radioactive waste facilities, analyze regulatory standards, and provide guidance on waste management to the Industrial Commission and Legislative Assembly. The two meetings featured speakers from the United States Nuclear Regulatory Commission, the

United States Department of Energy, and the EPA. The featured speakers provided information regarding the roles and responsibilities related to high-level radioactive waste and spent nuclear fuel, the EPA's statutory authority for high-level waste and spent fuel repositories, the current EPA standards, the process for establishing protection standards, and anticipated legislation regarding high-level radioactive waste.

According to the report, Yucca Mountain, the federal repository and only potential high-level radioactive waste disposal site under federal law, was placed on hold. The report indicated spent fuel rods are safely stored adjacent to operating or abandoned nuclear power plants and it is not viewed as an immediate safety concern by the federal government. The report indicated state experts emphasized the ongoing need for safe, centralized storage solutions.

According to the report, the council explored future possibilities in state resource management, including carbon capture, potential mining of rare earth elements, and advanced tracking of water and weather data for emergency responses. Additionally, the council reviewed federal and state energy goals, focusing on carbon reduction and new technology to repurpose coal-powered facilities.