



ADVANCED NUCLEAR ENERGY COMMITTEE

Tuesday, March 24, 2026
Roughrider Room, State Capitol
Bismarck, North Dakota

Senator Dale Patten, Chairman, called the meeting to order at 10:00 a.m.

Members present: Senators Dale Patten, Cole Conley, Claire Cory, David Hogue, Tim Mathern; Representatives Dick Anderson, Macy Bolinske, Ben Koppelman, Alisa Mitskog*, SuAnn Olson, Mike Schatz, Don Vigesaa; Citizen Members Pam Gorman Prochaska, Reice Haase, Sheri Haugen-Hoffart, Gavin McCollam

Member absent: Citizen Member Claire Vigesaa

Others present: Senators Brad Bekkedahl, Williston, and Janne Myrdal, Edinburg, members of the Legislative Management

Pablo Argenal* and William Bridge, Nucleon Energy Inc.; Benton Arnett*, Lori Brady*, and Rod McCullum, Nuclear Energy Institute; Laura Hermann*, Energy Communities Alliance; Gary Iocco, City of Red Wing, Minnesota; Julie Kozeracki*, United States Department of Energy; Christina Leggett*, Oklo, Inc.

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

**Attended remotely*

It was moved by Representative Vigesaa, seconded by Representative Bolinske, and carried on a voice vote that the minutes of the December 15, 2025, meeting be approved as distributed.

ECONOMIC IMPACTS AND FINANCING

Mr. William Bridge, Co-Founder and Chief Technology Officer, Nucleon Energy Inc., presented information ([Appendix B](#)) regarding an interim report ([Appendix C](#)) related to the committee's study of the feasibility, siting, and deployment of advanced nuclear power plants in the state. He noted:

- The interim report is the second of five the committee will receive and examines issues related to economic impacts and private sector financing for advanced nuclear energy projects.
- The economic impact analysis modeled 200-megawatt and 600-megawatt small modular reactor (SMR) options.
- A 200-megawatt SMR is expected to require a peak construction workforce of about 500 individuals over a 3-year construction cycle, and a larger facility would require roughly 1,000 workers, with exact staffing numbers dependent on detailed engineering plans.

In response to a question from a committee member, Mr. Bridge noted the report contemplates decentralized SMR siting based on existing transmission capacity.

Ms. Lori Brady, Senior Director, Human Resources and Workforce Development, Nuclear Energy Institute, presented information ([Appendix D](#)) regarding workforce issues in the nuclear energy industry. She noted:

- The United States Department of Energy (DOE) estimates that up to 376,000 new workers may be needed to support new nuclear deployment required to meet anticipated energy demand.

- The Nuclear Energy Institute, together with industry members and allied organizations, is participating in a workforce working group to develop a national strategic plan to address the nuclear industry's workforce needs through 2050.
- Advanced nuclear workforce challenges relate to the availability of skilled trade workers for construction, workforce limitations, adaptability of academic institutions, and differing staffing needs associated with various reactor technologies.

In response to a question from a committee member, Ms. Brady noted that, although there have been preliminary discussions regarding how artificial intelligence could be applied in the nuclear industry, companies have not identified an intent to reduce or replace jobs as a result of artificial intelligence and instead view artificial intelligence as a tool to streamline administrative tasks to free up existing personnel for other responsibilities.

Mr. Gary Iocco, Mayor, City of Red Wing, Minnesota, provided comments regarding the city's experience hosting a nuclear energy facility, including nuclear waste considerations and economic impacts on the community. He noted:

- The City of Red Wing hosts the Prairie Island Nuclear Plant, operated by Xcel Energy Inc., which is one of the area's largest employers, provides high-wage jobs, and pays 42 percent of the city's property taxes.
- Xcel Energy Inc., also supports the community through contributions to nonprofit organizations and service on local boards and commissions.
- The nuclear plant maintains its own fire department and police force, which coordinate with local agencies and share equipment and training resources to ensure preparedness for a range of potential incidents.
- He has no concerns regarding having a nuclear plant in his community and reported no issues with dry cask storage while awaiting a permanent, long-term waste storage solution.

In response to a question from a committee member, Mayor Iocco noted:

- The plant is pursuing relicensing and he believes the community generally supports keeping the plant in operation, though some protest is expected.
- Most negative feedback from the community relates to having a power company in general, rather than to the nuclear nature of the facility.

Mr. Benton Arnett, Senior Director, Markets and Policy, Nuclear Energy Institute, presented information ([Appendix E](#)) regarding the current financing landscape associated with advanced nuclear energy projects. He noted:

- Reactor designs vary in size and features to meet diverse market needs.
- Investors assess federal and state policy signals, including available incentives and the policy direction supported by elected officials, when making investment decisions.
- Early movers face challenges related to supply chain scaling, building a qualified workforce, navigating a new regulatory environment, and financing first-of-a-kind projects.
- Traditional nuclear project financing is challenging for early movers, and the DOE's Office of Energy Dominance Financing provides tools to support early mover investment opportunities.

In response to questions from committee members, Mr. Arnett noted:

- The industry typically targets an overnight capital cost of about \$3,500 per kilowatt to remain competitive with natural gas, though early-mover projects are expected to cost \$8,000 to \$10,000 per kilowatt, with costs projected to decline over time.
- Bipartisan and consistent federal support for nuclear energy across recent administrations has strengthened investor confidence in the nuclear industry.

Ms. Julie Kozeracki, Acting Chief Investment Officer, Office of Energy Dominance Financing, United States Department of Energy, provided comments regarding advanced nuclear energy project financing programs made available through the DOE. She noted:

- The DOE's Office of Energy Dominance Financing offers financing tools to support deployment of new nuclear projects of all types and sizes, and the use of loans from the office is a powerful lever for improving nuclear affordability.
- The office has over \$250 billion in lending authority under the Title 17 Clean Energy Financing Program to support new nuclear projects and supply chain investments, offering up to 30-year loans that can cover 80 percent of project costs at highly competitive interest rates.
- The office has supported several substantial, new nuclear projects, including providing \$11.5 billion for Vogtle Units 3 and 4 in Georgia, up to \$1.5 billion to restart the Holtec Palisades reactor in Michigan, and \$1 billion to Constellation Energy Generation, LLC to help restart the Crane Clean Energy Center, formerly known as the Three Mile Island Unit 1 reactor, in Pennsylvania.

NUCLEAR WASTE

Mr. Rod McCullum, Senior Director, Decommissioning and Used Fuel, Nuclear Energy Institute, presented information ([Appendix F](#)) regarding a general overview of the used nuclear fuel industry and the DOE's request for information for states interested in hosting Nuclear Lifecycle Innovation Campuses. He noted:

- In the United States, used nuclear fuel stored inside a nuclear plant is kept under more than 20 feet of water, and used nuclear fuel stored outside a nuclear plant is secured in robust, dry cask storage systems.
- The dry cask storage systems are designed to contain solid ceramic fuel with zirconium cladding inside an engineered interior basket, sealed within a welded stainless steel canister with walls approximately 0.5 to 0.625 inches thick, and enclosed in a concrete overpack typically 20 to 30 inches thick.
- It is prudent to consider nuclear waste management when deciding whether to pursue nuclear energy in the state and, if pursued, which reactor type is most appropriate for the state's needs.
- The DOE's request for information for states interested in hosting Nuclear Lifecycle Innovation Campuses poses 23 questions to interested states, targets potential deployment in 2027, and includes a preference for states pursuing ambitious timelines.

In response to questions from committee members, Mr. McCullum noted:

- It is important for legislators to engage with their constituents on issues related to nuclear energy.
- Research and development efforts are investigating deep borehole disposal technologies, which could enable reactors to dispose of their own waste on site using directional drilling.

Mr. Bridge presented information ([Appendix G](#)) regarding an interim report ([Appendix H](#)) related to the committee's study of the feasibility, siting, and deployment of advanced nuclear power plants in the state. He noted:

- The interim report is the third of five the committee will receive and examines issues related to nuclear waste storage.
- A 600-megawatt reactor will create approximately one canister of waste per year of operation.
- The United States Nuclear Regulatory Commission (NRC), DOE, and Environmental Protection Agency each have distinct roles and responsibilities related to nuclear waste storage.
- North Dakota law prohibits placement, storage, exploration, testing, or disposal of high-level radioactive waste in the state.

In response to questions from committee members, Mr. Bridge noted:

- There has not been a release of stored spent nuclear fuel at an existing nuclear site in North America.
- Wyoming, like North Dakota, had a broad ban on high-level radioactive waste storage, but recently amended its law to permit certain on-site storage of high-level radioactive waste or spent nuclear fuel generated by facilities operating within the state.

In response to questions from committee members, Mr. Ian Gilley, Energy Innovator Fellow, Department of Commerce, noted:

- The roots of pressurized water reactors can be traced to the United States Navy.
- Expanding the nuclear industry in the state could create opportunities for veterans from the United States Navy's nuclear programs to return to the state and apply their expertise in the civilian nuclear workforce.

Ms. Laura Hermann, Deputy Executive Director, Energy Communities Alliance, presented information ([Appendix I](#)) regarding considerations for storage of high-level radioactive waste and used nuclear fuel. She noted:

- The United States is estimated to have up to 180,000 metric tons of commercial used nuclear fuel.
- Nuclear waste classifications include spent nuclear fuel, high-level radioactive waste, transuranic waste, and low-level radioactive waste.
- States interested in nuclear development can learn from international experience, including European approaches to reprocessing and long-term waste strategies and Canadian practices related to Indigenous engagement and SMR deployment.

In response to questions from committee members, Ms. Hermann noted:

- The DOE's request for information from states interested in hosting Nuclear Lifecycle Innovation Campuses is an important step toward initiating the national discussions needed to identify long-term nuclear waste storage solutions.
- A number of decommissioned nuclear sites are considering either restarting operations or building new plants on their existing sites.
- Growing demand for new nuclear development is driven, in part, by data center development.

Dr. Christina Leggett, Director of Fuel Cycle Technologies, Oklo Inc., presented information ([Appendix J](#)) regarding advanced nuclear energy technologies for recycling used nuclear fuel. She noted:

- Oklo Inc. is developing the Aurora Powerhouse, which is a sodium fast reactor strategically designed at under 100 megawatts to primarily serve data center clients.
- More than 95 percent of the used nuclear fuel in the United States can be recovered through recycling, some of which can be used to fuel Aurora Powerhouse reactors.
- Oklo Inc. is designing and planning to license, build, and operate a commercial-scale recycling facility to produce uranium and transuranic materials, which could reduce fuel costs by up to 80 percent and generate significant new revenue streams.

In response to questions from committee members, Dr. Leggett noted that although advanced reactors and recycling facilities have distinct risk profiles, both must meet NRC licensing standards.

COMMITTEE DISCUSSION

Committee members noted:

- Future consultant reports will include an evaluation of North Dakota Century Code provisions that may limit advanced nuclear energy development.
- Potential legislation related to nuclear energy opportunities likely would involve long-term considerations, and final decisions on nuclear energy deployment may not occur for many years.
- Interest in exploring risk-assessment information related to military nuclear technologies, nuclear waste storage, and nuclear power-generation sites, recognizing that each carries a distinct risk profile requiring appropriate mitigation strategies.

No further business appearing, Chairman Patten adjourned the meeting at 3:35 p.m.

Megan J. Gordon
Code Revisor

ATTACH:10