High-Level Radioactive Waste Advisory Council
October 22, 2025
Fort Union Conference Room, State Capitol

Senator Dale Patten, Chairman, called the meeting to order at 10:01 a.m.

Advisory Council attendees:

Senator Dale Patten, District 26
House Representative Jon Nelson, District 14
Reice Haase, Dept. of Water Resources
Jana Hennessy, County Government Rep.
Sherry Adams, State Health Officer
Senator Jeff Barta, District 43
Dave Glatt, Dept. of Environmental Quality
Mirek Petrovic, Agricultural Community Rep.
Ed Murphy, State Geologist, Geological Survey

Council members not in attendance: Dan Ruby (House Representative, District 38), Chris Schilken (Dept. of Commerce), Jeb Williams (Dept. of Game and Fish), Ron Henke (Dept. of Transportation), Ken Vein (City Government Representative).

Additional people attending the meeting were: Featured Presenter Elina Caratsidou (PhD student in Physics and Nuclear Engineering, KTH Royal Institute of Technology, Stockholm, Sweden), Featured Presenter Rod McCullum (Senior Director of Decommissioning and Used Fuel, Nuclear Energy Institute, Washington D.C.), Featured Presenter Dave Stradinger (Radiation Control Program Manager, North Dakota Dept. of Environmental Quality), Bruce Kreft (Dept. of Game and Fish) , Rich Garman (Director of Economic Development and Finance), Ian Gilley (Energy Innovator Fellowship, Dept. of Commerce), and Michael Whang (Dept. of Mineral Resources).

Following roll call, Chairman Patten noted that a quorum was present.

The first order of business was to approve the July 8, 2025, meeting minutes. Chairman Patten asked for a motion to approve the November 2024 minutes. Representative Nelson made the motion; it was seconded by Jeff Barta and unanimously carried on a voice vote as written.

The second order of business was a presentation from Featured Presenter Elina Charatsidou, PhD student in Physics and Nuclear Engineering | Sunrise Project, KTH Royal Institute of Technology, Stockholm, Sweden. Charatsidou's presentation was titled *Nuclear Waste Management – From Laboratory to Public Dialogue*, and she spoke about types of nuclear waste (high level (95% radioactivity), intermediate level (4%), low level (1%)), spent fuel composition, radiotoxicity, different types of canisters and repositories for high level waste, the type of repository Sweden is currently projected to build, and outreach for the future of nuclear power.

Chairman Patten thanked Elina Charatsidou for the presentation. Questions and comments followed. Representative Jon Nelson asked what the public's acceptance level was to Sweden's repository plan. Charatsidou discussed SKB's open and transparent innovative way it handled the information campaign, e.g., using graphic signage on public transportation, sharing of scientific information with the public using technology, to reverse public opinion about the repository. SKB is the nuclear waste management company responsible for building and managing the repository. Representative Jeff Barta asked about cost. Charatsidou said the company, SKB, from the start collected money per kilowatt sold for nuclear energy

waste and set this money aside for handling nuclear waste. It was not taxpayer money but money from fees. Secretary Ed Murphy thanked Charatsidou for her presentation and asked a question regarding the composition of spent fuel after cooling (slide 5), whether plutonium was 89%, a result from a breeder reactor, or was it reprocessed fuel to have that high of a percentage. Charatsidou clarified light water reactor percentage means of the transuranic elements and does not refer to the whole spent fuel, but of the percentage of the transuranic elements, which contains something like 5%, if not mistaken, 98% of that is plutonium. Charatsidou said that is what that value means.

The third order of business was a presentation from Featured Presenter Rod McCullum, Senior Director of Decommissioning and Used Fuel, Nuclear Energy Institute. Rod McCullum presentation was titled *Used Nuclear Fuel*, and he spoke about categories of radioactive waste and -management, storage, transportation, and interim and long-term disposal as well as trends in recycling and advanced reactors in the United States.

Chairman Patten thanked Rod McCullum for the presentation. Questions and comments followed. Ian Gilley asked what the organization receiving appropriations would look like. McCullum replied the organization would be a private entity—a private corporation—accountable to the government, have a board of directors that would include the utilities that would pay or pay into the waste fund in the future, include the state and local governments, and affected tribes similar to the nuclear energy waste organization in Ontario, Canada, which is a non-government entity, has four shareholders (the three Canadian power nuclear companies and the Canadian National Nuclear Laboratory), and it operates as a private corporation authorized by the Canadian government; it's decision to move forward with its repository had to be approved by the Canadian government and its processes, and has access to the waste fund without having to rely on a government appropriations structure. Government appropriations are not a system you can rely on for any long-term project.

The fourth order of business was a presentation from Featured Presenter Dave Stradinger, Radiation Control Program Manager, North Dakota Department of Environmental Quality. Dave Stradinger presentation was titled *Advanced Waste*, and he discussed two classes of radioactive waste (high and low level), including transuranic waste (clothing, tools, and equipment exposed to radiation) and TENORM waste (produced water, scale, sludge, etc.) as well as disposal sites and regulation in the United States.

Chairman Patten thanked Dave Stradinger for the presentation. Dave Stradinger gave an overview of high-level radioactive, transuranic, low-level radioactive waste, TENORM (Technologically Enhanced Naturally Occurring Radioactive Waste (TENORM) as well as regulatory authority in the state of North Dakota, including federal and regional authority by the Southwestern Low-level Radioactive Waste Commission.

Chairman Patten thanked Dave Stradinger for the presentation. Questions and comments followed. Dave Glatt commented on the general heightened interest in small modular reactors, and along with it, an increase in sources of waste as well as the inability of the federal government to police the waste. Glatt asked Stradinger for his thoughts on how he saw the state's programs evolving with this. Glatt said they are continuing education of new processes and new types of reactors by staying informed of industry trends, e.g., mobile micro-reactors and their ability to move in and out of state. Collaborating with others (scientists, geologists, etc.) and other programs will be key in moving forward.

Chairman Patten led a discussion on future meeting dates and topics. Chairman Patten provided a summary of the Advanced Nuclear Energy Committee meeting held on September 3, 2025. The committee is comprised of 17 members (12 legislators, 3 agency representatives, and 2 industry representatives). Chairman Patten is also the chair of the Advanced Nuclear Energy Committee. Patten discussed his involvement with the state's Advanced Nuclear Energy Committee and how it will affect how the High-Level Radioactive Waste Advisory Council operates. Chairman Patten said the committee has identified several areas of interest in terms of presentations (cost, technology, fuel source, state and federal permitting regulation, waste storage, ownership, and liability). A private Canadian development company, Nucleon, will conduct a study, and Nucleon scheduled four tentative meeting dates to present findings (Dec. 15, March 24, June 16, and Aug. 11). Nucleon will be identifying criteria for general information, for example, regarding siting location information and gauging public opinion. The next Advanced Nuclear Energy Committee meeting will be December 15, 2025, at 10:00 a.m., State Capitol. Based upon the more expansive work the Advanced Nuclear Energy Committee is doing, Chairman Patten anticipated the High-Level Radioactive Waste Advisory Council will not need to meet until next year or next fall.

Chairman Patten adjourned the meeting at 2:00 p.m.