

UNAPPROVED MINUTES – TO BE APPROVED AT NEXT MEETING

Submitted by David Shulock

**Commission to Investigate the Implementation of Next Generation Nuclear Reactor
Technology in New Hampshire**

November 21, 2022

Attendance:

Commission Members: Representative Keith Ammon, Representative Michael Harrington, Bart Fromuth, Cathy Beahm, Dan Goldner, Matthew Lavender, David Shulock, Christopher McLarnon (remote). Absent: Senator Bill Gannon, Alex Fries, Marc Brown

Public: Representative Doug Thomas, Bruce Berke, Vikram Mansharamani, Douglas Maily, Alvin See, Joe Fontaine, Michele Roberge, Griffin Roberge

Meeting:

1. A quorum was established, and Rep. Ammon opened the meeting at 8:33 a.m.
2. Rep. Ammon appointed David Shulock substitute clerk.
3. The commission unanimously approved the draft minutes of the commissions October 11, 2022, meeting.
4. Rep. Harrington stated he has worked with the Nuclear Energy Institute and that it is a good resource. He also recommended the American Nuclear Society as a resource. Rep. Harrington discussed the need for nuclear generation if the region goes forward with a climate agenda, stating that approximately 3000 new MW of carbon-free generation will be required in addition to any renewable generation. Rep. Harrington stated that advanced nuclear will be more load-following than existing nuclear generation.
5. Rep. Thomas agreed with Rep. Harrington and stated that he is a member of the bipartisan Energy Supply Task Force of the National Congress of State Legislators.
6. Marc Nichol, Senior Director of New Reactors at the Nuclear Energy Institute gave a presentation of the status of nuclear technology, commercial deployments, major topics related to advanced reactors, and issues relating to interfacing with the federal government. Some key points were that it would be \$449 Billion more expensive to reach 0 net carbon emissions if nuclear technology were be constrained going forward; advanced nuclear would provide black start capability to the grid; advanced nuclear builds in inherent safety features that in may cases would limit the planned emergency response to the property boundary; that waste handling technology is mature, but requires 8-10 years of licensing work prior to construction; advanced nuclear can be located on the sites of existing coal plants to take advantage of infrastructure and trained staff; and that there is strong federal support for advanced nuclear deployment. Mr. Nichol also stated that consideration had been given to lessening delay and cost overrun by integrating energy (steam) generation into the reactor design, simplifying the design, conducting more work in the factory and

less in the field, and allowing for parallel factory and field construction timelines. He stated that currently overruns are due to increases in labor and material costs over time. He stated that “one-stop” construction and operating permitting at the federal level reduces protest and litigation. He believes that state can support advanced reactor deployment by conducting feasibility studies, providing tax incentives, providing for advanced cost recovery, and working on workforce development and infrastructure. Last, there is currently a lack of fuel with the required 5-20% enrichment that will continue until sufficient demand for that level of enrichment is established.

7. Christopher Colbert, Chief Financial Officer of NuScale Power gave a presentation of his company’s technology. NuScale Power has engineered the first small modular reactor to undergo licensing at the Nuclear Regulatory Commission at a cost of \$500 million. The company has a goal of placing the first modular reactor online by 2029. NuScale’s modular reactor would produce 77 MW of electricity. The design would allow up to 12 modules to be combined at one facility and to operate independently or in sync. NuScale’s reactor has black start capability, and inherent safety features that do not require external power or support in an emergency, resulting in an impact area of approximately 300 meters. Mr. Colbert stated that the factory design takes years off of field construction; essentially, one could build a shell structure and easily then integrate the reactor. Mr. Colbert sees the design as useful in supporting renewables, replacing coal, and creating hydrogen during a period of energy transition. NuScale has a customer that plans to bring one of its reactors online in 2029. Original forecasts for the cost of that facility were at \$58 per MWh. Inflation and the rise in interest rates has driven that cost up. Mr. Colbert stated that despite the rise in cost, the reactor is still the best alternative.
8. Rep. Ammon stated that he plans on drafting the report due December 1, and that he will send the report around electronically for sign-off.
9. Rep. Thomas described an LSR that he plans on introducing next year. The bill would define clean energy, which appears numerous times in statute without a uniform definition. Rep. Thomas suggested that this committee work on a definition, and that it be similar to the European Union’s definition, which Rep. Thomas stated includes nuclear energy. Rep. Harrington agreed that clean energy should be energy that reduces fossil fuel use to reduce greenhouse gas emissions. Rep. Ammon stated he found support for this in the state’s 10-year energy plan.
10. Rep. Harrington stated that there has never been a nuclear facility built without taxpayer or ratepayer funding. We need to understand that we are a less regulated state now, and that all generation plants are merchant plants. Investors are unlikely to build a nuclear plant here until one has been successfully built elsewhere, and everyone sees that it can work. He stated that this is not unique to nuclear plants, that offshore wind is in a similar state.
11. The meeting was adjourned at 10:38 a.m.