MINUTES

Submitted by Marc Brown

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

January 23 2023

Attendance:

Commission Members: Representative Keith Ammon, Cathy Beahm, Dan Goldner (remote), Matthew Levander (remote), David Shulock, Christopher McLarnon, Marc Brown (remote), Representative Michael Harrington

Absent: Senator Bill Gannon, Alex Fries, Bart Fromuth

Public: Paul Gunter, Sarah Abramson, Gary Woods

Meeting:

1. A physical quorum was not established. Rep. Ammon opened the meeting at 1:34pm
2. Rep. Ammon confirmed Marc Brown will function as clerk.
3. The commission will seek to approve the minutes of the commissions December 12, 2022, gathering at the next meeting.
4. Rep. Ammon invited the public to share introduce themselves and share comments.
    - Paul Gunter from Beyond Nuclear spoke first. He raised concerns about the failure of nuclear construction projects to reach completion, and the costs continuing to spiral out of control. Their group feels it a nationwide issue that is worsening over time.
    - The next speaker was Sarah Abramson C-10 Foundation. Her concerns lie with the State of New Hampshire's Radiation Monitoring Program, expressing that it does not seem nearly as robust or adequate as our real-time monitoring network can provide. She asked that the State makes sure it thinks very clearly and thoroughly about what radiation monitoring should look like with today's technology. Ms. Abramson also expressed concerns about concrete issues with Seabrook and other projects, and that rushing to select materials and contractors that may be less than desirable adds to these concerns.
    - Mr. Gary Woods was the final public commenter, noting he is just an interested citizen.

5. The first presentation was given by Michael Wentzel, Branch Chief at the US Nuclear Regulatory Commission (NRC). He first gave a historic perspective of where things have been, and then discussed where the NRC is headed next with respect to licensing, regulation, safety, and efficiency. He noted that improving the efficiency of licensing and shortening the licensing process, making these licensing a little bit more predictable are some of the key areas of focus. He examined three examples of projects already in process: Shine Technologies, a medical isotope facility currently under construction in Janesville, Wisconsin that is nearly complete, and two projects, Kairos Power and Abilene Christian University, which are both licensing applications for advanced reactor concepts. Kairos and Abilene are currently in the first phase,

getting a construction permit, and will be requesting an operating permit when the facility nears completion. Mr. Wentzel discussed Part 53, which proposes combining the two licenses into one in the appropriate situations. The intent is to modernize the licensing process and strike an optimal balance between flexibility and predictability by providing some clear and specific performance-based requirements that ensures an efficient and effective licensing process.

6. Rep. Ammon introduced the next speaker, David Durham, Westinghouse. He discussed the AP1000 projects, and the success Westinghouse has had with them so far. He also shared 3 major lessons learned from the Vogtle Project:
    - Don't start construction without a 100% complete design
    - Only work with a contractor experienced in nuclear construction
    - Only work with experienced suppliers to keep the supply chain flowing

    Mr. Durham shared other key data points and performance metrics such as safety and operating availability. In response to a question from Rep. Harrington, Mr. Durham explained the difference between availability factor and capacity factor, citing that capacity looks at what the reactor could be doing, and availability measures what it is actually doing, the percentage of time it's up and running.

    Mr. Durham also discussed the AP1000's ability to keep cool for 72 hours with zero human intervention and without boron cycles, as well as its ability to load follows with ramp rates faster than a gas plant, one megawatt per second. He also only reactor capable of station blackout cope, which is considered it is game-changing technology.

    Several questions were posed about potential supply chain issues, and Mr. Durham assured the commission that they are working with a global supply chain that they monitor carefully, and right now, there are no issues presenting themselves for expansion of this project. Mr. Durham also discussed future technology that is being developed to allow for non-diesel reactors that are capable of generating electricity for 8 years, and are then simply swapped with a new reactor, and the old one is taken off-site for refueling and storage of cement fuel. It is anticipated that this will be more cost-effective method of operation, with the flexibility to attract both full-scale power plant customers and customers who are looking just for electricity.

    Mr. Durham also touched on SMR application, and the role Westinghouse is having in its development. He stated that many more details are yet to come on these initiatives, as they are in the beginning of the application process with NRC. It was suggested that the Science Technology and Energy committee make a site visit to the Newington facility.

7. Rep. Ammon asked if there were any other agenda items or discussion from the committee members. Matt Levander had previously distributed Virginia Innovative Nuclear hub document, also available at https://nuclearnh.energy, for discussion. Mr. Levander explained that the State of Virginia has prioritized efforts to determine whether building nuclear is a good fit for their state, and this paper outlines some of their thought process.

8. No other questions or issues were presented by the commission.

9. A poll of commission members will be taken to determine the next meeting date.

10. The meeting was adjourned at 3:15pm.