MINTUES

January 27, 2021
Virtual Meeting
Meeting recording: https://www.idahoptv.org/shows/idahoinsession/archive/

Commission Members in Attendance:	
John Wagner, Co-Chair	Tom Kealey
John Chatburn, Co-Chair	Steve Laflin
Lawrence Wasden	Jess Byrne
Janice McGeachin	Fred Hughes
Mark Peters	Scott Snyder
Brady Hall	Jim Woodward
Rebecca Casper	Paul Arrington
Hootie Langseth	Mark Nye
Harold Blackman	
Doug Sayer	Staff:
Brian Wonderlich	John Revier
Wendy Horman	Elli Brown
Rick Aman	Nate Fisher Jr
Scott Snyder	

Co-Chairman John Chatburn called the meeting to order 8:04 am. Governor Little issued a new Leadership in Nuclear Energy (LINE) Executive Order (No.2021-02) with a broader focus on all missions at Idaho National Laboratory. John Wagner and John Chatburn will serve as the new co-chairs of the commission.

Lawrence Wasden moved to approve the minutes from the October 12, 2020 meeting as corrected by Rebecca Casper. Seconded by Fred Hughes. **Motion approved.**

Zach Tudor, National and Homeland Security (NHS) Associate Laboratory Director, presented on the National and Homeland Security missions at INL. See PowerPoint.

Q: The NHS portfolio has grown significantly in recent years. Can you explain the source of that growth and why at INL?
A: We have unique spaces and expertise that allow~~s~~ us to bring in partners to see how real-world scenarios can impact their work. That expertise is national and internationally recognized. The partnership with the State of Idaho (Cybercore Integration Center (Cybercore) and Collaborative Computing Center (C3)) has allowed us expanded opportunities to work with customers, Idaho universities, and students.

Q: How will the changes in D.C. alter your portfolio? Also, the commission has heard about the future of the site in terms of nuclear programs. Can you give us a sense of the future of the site from your NHS perspective and how it all fits together?
A: We are in a strong position – cybersecurity benefits from bi-partisan support. Our adversaries don't see political affiliations when they are attacking our systems. We will continue to need space for more laboratories. We also plan to see increased investments in our test beds (electrical, 5G, integrated energy systems).

Senator Risch addressed the commission about activities taking place in Washington D.C. and his interest in and support for the INL mission.

Scott Cramer, Cybercore Integration Center Director and Eleanor Taylor, University Partnerships and Workforce Development program manager for Cybercore presented on Cybercore Integration program and how they are dealing with workforce development and university partnerships. See PowerPoint.

Q: There were specific education and collaboration commitments made to the state (when they agreed to bond and build Cybercore and C3). Can you give us a sense how that's going?
A: Very pleased on the progress and collaboration. We have been able to meet each established milestone – even in the era of COVID-19.

Q: Its clear there are tremendous resources and focus being applied to building a talent pipeline for cybersecurity. However, with the increased threats and need for workers, is there more we can or should be doing?
A: We have to double down on a lot of efforts. We must continue to remove the barriers to students entering into the cybersecurity field. Providing hands on experience through the lab, colleges, universities and other partners is an avenue we need to continue to explore.

Q: Can you help us better understand the roles and responsibilities of federal agencies related to cybersecurity?
A: There is a lot of expertise in this area, but no one is specifically tasked with coordinating efforts and leading the charge. The most recent National Defense authorization mandated a National Cyber Coordinator role – so there should be better coordination in the coming years.

Q: Can you give us a sense of vulnerabilities of cities and other units of governments? What does that mean for the broader impact on a community?
A: While we work at the national scale, we also partner with a variety of agencies to get the information and research to the local level. INL has done regional risks assessments for water systems, hydro-electric facilities and others. We are assisting with providing training and resources to utility companies, cities and others to arm them with the tools to succeed against the adversaries.

Q: Its clear Idaho has the opportunity to be a national leader in cybersecurity. There is a well-established partnership with the state, universities, and the lab. Could the LINE Commission be a part of driving the conversation to take the cybersecurity leadership to the next level?
A: It's a great point that's ripe with opportunity. There is still a challenge of resources and funding. Cybersecurity is an expensive area to teach and train. Advocacy at all levels (congressional, state, local, LINE, federal agencies) for the importance of these investments will be necessary to make it a reality.

Dan Elmore, Critical Infrastructure Security and Resilience Director, presented on INL's Wireless Security Institute and 5G Capabilities. See PowerPoint.

Q: What is the driver of a shared spectrum?
A: It's a finite resource with a growing number of users. The 4 to 5 G is the sweet spot for telecommunications. It is also ideal for military communication and control systems.

Q: You mentioned the need for work experience and expertise in this area – can you talk about workforce development and collaborations with Idaho universities?
A: There has been a deliberate focus to expand within the areas of expertise with each Idaho university. There are still questions that need to be answered about who INL will need to hire within the next 5 to 10 years.

Q: We have 5G available in certain areas. We have 5G capable devices. Yet we have a significant effort focused on 5G security. Should one assume the 5G devices on a 5G network are not secure?
A: I would start with that assumption. The motivation to market was not security – it was capability.

Ron Fisher, Infrastructure Assurance and Analysis Division Director presented on INL's infrastructure analysis support for Department of Homeland Security. See PowerPoint.

Q: Can you give more specifics about what we are doing to help protect the energy grid?
A: There are sector specific agencies that are in charge of different infrastructures. Department of Energy is the agency over the energy grid. Department of Homeland Security provides support. There is a lot of complimentary work that can be applied to other infrastructure sectors. There has been a focus on supply chain security for the bulk of the energy system – investments in technology, equipment, etc.

Q: What levels of state or local government been involved in working with you and your team in developing the Idaho Infrastructure Playbook?
A: Idaho Office of Emergency Management has been a great partner throughout the project. There has been a lot of good coordination and collaboration behind the scenes to make the playbook a reality.

Connie Flohr, Idaho Cleanup Manager, presented an Idaho Cleanup Project update. See PowerPoint.

Q: In looking at your slides, it appears IWTU is bumping up against the end of the cleanup contract. Can you touch on continuity of operations aligning with the end of that current contract?
A: First, the Fluor contract was extended for four months (end of September). Second, we are aware of that timing and continue to monitor it but cannot speak beyond that.

Q: Can you tell us more about the spent fuel packaging demonstration?
A: INL started the demonstration to show they could use the 603 dry storage facility and could have road ready fuel, similar to the Navy. In addition to proving we could do it, it shows the state and other labs we could do it. Unsure on timing when the demonstration started, we are in the process of working up an MOU between NE and EM for future demonstrations. Ideally, packaged fuel would come out of the facility in 2023.

Q: What do you consider 'hot operations' of IWTU?
A: When the plant is heated up, ready to go and receiving sodium bearing waste (Phase 4).

Public Comment Period:
Richard McPherson provided comments in support of University of Idaho's nuclear engineering program. See formal statement.

Announcements:
Next Meetings: May 12th (virtual), August 20th (Idaho Falls)

Wednesday, January 27, 2021

Governor Little, Lt Governor McGeachin and LINE Commission Members

Richard McPherson
Global Humanitarian Resources Inc.
Agriculture, Water, Energy & the Environment

LINE COMMISSION STATEMENT

Thank you for holding this most important meeting as a new administration has taken over Washington DC. It has been very informative.

The United States has the best graduate level studies and research universities in the world. Since 1993 foreign governments have accelerated sending students to our graduate programs. At the same time there has been a decline in engineering associated with and American manufacturing.

Idaho is no exception.

In 2020 Idaho led the way in reversing the trend three-decade trend combining efforts of the University of Idaho (UI), Premier Technology, Inc., and the newly created Nuclear Reactor Innovation Center (NRIC) on the Idaho National Laboratory (INL).

On November 18, 2020, the University of Idaho released a press release titled:

Nuclear Reactor Testing Device Opens Doors to Safer Energy in Idaho, Nation

University of Idaho, Idaho Falls researchers have verified a new process to save communities millions of dollars and speed up development of the world's first Molten Salt Nuclear Battery (MsNB), a nuclear energy reactor to generate heat and produce electricity.

Generating energy from nuclear fuel dissolved in molten salt is known for its improved safety and efficiency, as the process does not require a solid fuel like the uranium or plutonium used in most nuclear reactors today. Research is ongoing to bring this technology to market.

"This is a monumental step in the molten salt reactor design process," said U of I, Idaho Falls Nuclear Engineering Director Rich Christensen, "So many military bases, hospitals and communities rely on secure, continuous energy from a standard grid. If that grid goes down, all these critical areas suffer. The MsNB provides a small, distributed energy source, bringing autonomy to institutions that were once dependent on one central source of power."

As a result, myself and others in Idaho supporting Dr. Christensen and his graduate students testing the Molten Salt Nuclear Battery at Premier Technology, Inc., in Blackfoot starting last June, created a ***Coalition for Engineering Education*** to gather support for the University of Idaho to further engineering studies by first focusing on the Department of Nuclear Engineering and its nationally recognized success.

In Idaho manufacturing companies can take advantage of the increased emphasis on the business of engineering. Examples in Idaho are:

- Premier Technology, Inc.
- Micron Technology, Inc.
- Yanke Energy, Inc.

The Private Sector has already invested and brought to Idaho the Molten Salt Nuclear Battery for design completion, testing, manufacturing, and sending to military bases, other federal, state, county, and city government facilities for continuity of government services in in the event of fires, severe weather, electromagnetic attacks, solar flares, or

terrorism. For carbon free, secure, & resilient electricity for government entities. There is an identified need to manufacture over 20,000 Molten Salt Nuclear Battery's in Idaho.

Governor Little, Lt Governor McGeachin we request you provide additional support for President Scott Green and Dr. Richard Christensen starting this year to continue plus expanding graduate student studies in nuclear engineering. We have already contributed funds to keep several graduate students supported this semester.

Thank you for the opportunity to speak to the LINE Commission. I will send a copy to Governor Little, and Lt Governor McGeachin for filing with the LINE Commission.

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