

MINUTES
SENATE STATE AFFAIRS COMMITTEE

DATE: Wednesday, January 31, 2018

TIME: 8:00 A.M.

PLACE: Room WW55

MEMBERS PRESENT: Chairman Siddoway, Vice Chairman Hagedorn, Senators Hill, Winder, Lodge, Vick, Anthon, and Buckner-Webb

ABSENT/ EXCUSED: Senator Stennett

NOTE: The sign-in sheet, testimonies and other related materials will be retained with the minutes in the committee's office until the end of the session and will then be located on file with the minutes in the Legislative Services Library.

CONVENED: **Chairman Siddoway** called the Senate State Affairs Committee (Committee) to order at 8:00 a.m. with a quorum present.

VOTE ON GUBERNATORIAL APPOINTMENT: **The reappointment of Sheila Olsen to the Idaho Commission on Human Rights**

MOTION: **Senator Buckner-Webb** moved to send the Gubernatorial reappointment of Sheila Olsen to the Idaho Commission on Human Rights to the Senate floor with the recommendation that she be confirmed by the Senate. **Senator Lodge** seconded the motion. The motion carried by **voice vote**. Senator Buckner-Webb will be the floor sponsor.

RS 25958 RELATING TO TOBACCO to revise the legal age regarding activities related to tobacco, tobacco products, and e-cigarettes; and other technical revisions.

Chairman Siddoway welcomed Senator Martin to present **RS 25958**.

Senator Martin stated that **RS 25958** raises the age to purchase tobacco products from 18 to 21. The change will include technical revisions to sections of Idaho Code, Title 39, Chapter 57 regarding definitions, provisions, and enforcement.

MOTION: **Senator Lodge** moved to send **RS 25958** to print. **Senator Anthon** seconded the motion. The motion carried by **voice vote**.

PRESENTATION: **Chairman Siddoway** introduced Dr. Mark Peters, Director of the Idaho National Laboratory (INL).

Dr. Peters provided a general update on Idaho National Laboratory (INL) (Attachment 1). INL is the sixth largest private employer in Idaho. In fiscal year (FY) 2017, 4,256 people were employed at INL with an average base salary of \$95,768, nearly \$140 million was spent with Idaho-based subcontractors, and INL contributed more than \$610,000 to charitable giving. INL is comprised of a Research and Education campus in Idaho Falls and 890 square miles of Idaho land. They have four reactors, a substation, and an on-site grid. INL's infrastructure includes over 400 buildings, three fire stations, and a mass transit system.

He reviewed the laboratory's performance, strategy, and focus. **Dr. Peters** stated highlights of FY 2017 included a visit from Rick Perry, United States Secretary of Energy, and for the fourth year in a row, they have received a grade of 97 on their annual

evaluation from the United States Department of Energy (DOE). Due to this sustained performance, INL's contract has been extended to 2024. While there are still challenges pertaining to an aging workforce, they expect to see continued growth in the next several years.

INL maintains an operating budget of just over \$1 billion. The DOE provides 49 percent of the total funding, the National Nuclear Security Administration contributes 15 percent, and the remaining portion is from a combination of other agencies. While a large percentage of the money received from direct programs goes to overhead, focus has shifted from general management to investing in infrastructure. They continue to diversify their portfolio and are strategic in how they operate.

Dr. Peters stated that, strategically, they were able to quickly align their priorities with the current administration. They continue to be a leader in research, development, deployment, and demonstration. He emphasized that having a grid on-site was unique to their lab and important for simulation purposes.

INL's strategic goals are transforming their infrastructure, systems, and processes to enable modern science, build stronger academic partnerships, and collaborate within the community and State. Future investments include planned campus/complex modifications and three new buildings to be constructed over the next four or five years to support science and technology. The Cybercore Integration Center and Collaborative Computing Center are two new facilities that were approved last year and are being built in partnership with the Idaho State Board of Education.

The Center for Advanced Energy Studies (CAES) is a research and education consortium that provides collaboration between INL, the DOE, and Idaho universities. CAES provides research and education on both technical and policy issues. The Idaho Regional Optical Network (IRON) works with INL and Idaho universities and colleges to help develop an educational ecosystem across Idaho. They invest their resources to meet STEM Action Center (Science, Technology, Engineering, and Math) goals, target rural and underdeveloped areas in the State of Idaho, and implement inclusion and diversity programs.

Dr. Peters discussed four critical initiatives INL is focused on to meet their goals:

1. Sustain the use of existing fleet reactors.
2. Add a national repository for secure storage of spent nuclear fuel.
3. Ongoing development of hybrid energy systems using both renewable and traditional sources.
4. Ensuring national security by involving cyber and physical security with the focus being operational technology cyber security.

Chairman Siddoway questioned the storage problems relating to spent nuclear fuel and whether research was being conducted on burner reactors.

Dr. Peters replied that both EBR1 and EBR2 were breeders that could be used to burn spent fuel. Recycling the material is an option and there is research underway on a test version of a burner reactor. Federal policy is to dispose of spent fuel directly into a repository. The question is more of a policy consideration than a technological consideration.

Senator Hill asked if INL is concentrating on cyber security as it pertains to nuclear and energy facilities or in a broader approach. **Dr. Peters** stated that it is wide-ranging because they work with many agencies. Also, the research and development work they do in cyber security helps attract and obtain graduates from universities. **Senator Hill** inquired if there is collaboration with the universities

to provide specific degrees and curriculum relative to INL. **Dr. Peters** responded they are developing programs with universities and colleges.

PRESENTATION: **Chairman Siddoway** introduced Doug Hunter, Chief Executive Officer (CEO) of Utah Associated Municipal Power Systems (UAMPS).

Mr. Hunter provided a brief overview of UAMPS. UAMPS is a nonprofit, project-based, energy services-related organization that started in 1980. They currently have 46 members in six Western states who offer reliable, clean energy at a reasonable price to their members. Energy sources used in their projects include solar, coal, wind, geothermal, natural gas, and hydro-energy. The energy services industry is changing. Governmental and environmental changes are no longer the main driving force. There has been a major shift in focus toward 100 percent clean energy portfolios; customers want to use electricity more efficiently. However, renewables, are inexpensive, varied, and inconsistent.

Mr. Hunter remarked that the Carbon Free Power Project incorporated both energy efficiency and distributed generation that customers desire. Nuclear power has the potential to provide 100 percent clean energy at a competitive cost; small modular reactors can provide a base load supply in the future. The reactors offer greater scalability, siting flexibility, and a low initial capital investment. Loads can be scaled out over time, they are small in size, competitive in price, and are a resource available for up to 80 years. The estimated upper price is 6.5 cents per kWh with a low range cost of 4.5 cents per kWh.

Vice Chairman Hagedorn asked who would be financing the project and if there was a payment plan available. **Mr. Hunter** replied that they anticipate 100 percent debt financing: 1.) tax exempt municipal bonds, and 2.) DOE's loan guarantee program. Initial financing will be at 25 percent of total cost. Repayment will begin in 2026 when they plan to go commercial. There is a rate covenant that will back the loan through the sale of kWh.

Vice Chairman Hagedorn asked if 2026 was the target year to sell commercial power. **Mr. Hunter** replied they anticipate placing the first module in January 2026 and the last in 2027.

Senator Anthon asked if more municipalities or partners would have the opportunity to buy-in as the project proceeds. **Mr. Hunter** stated that they are not presently at full subscription but anticipate - if they get to full subscription - the possibility of adding an additional facility. **Senator Anthon** commented that he could see how the project would be desirable to other communities as economic development continued into Tier 2 levels.

Vice Chairman Hagedorn asked if the long-term philosophy was to have five or six small modular reactors for different sites or regions. **Mr. Hunter** replied that would be ideal, but the use of "brownfield sites" arises. These sites already have the infrastructure of water and land and are the most likely spots to deploy the next batches.

PRESENTATION: **Chairman Siddoway** introduced John Hopkins, CEO of NuScale.

Mr. Hopkins stated that the NuScale project started 18 years ago when the DOE challenged Dr. Jose Reyes of Oregon State University (OSU) to design a new reactor with safety in mind. Seven years into the project, they saw the potential for commercial viability and set out to fund the project. In 2013, the DOE notified NuScale and INL they had been awarded \$226 million. The funds would be disbursed over a five-year period to help them progress through the nuclear regulatory licensing process. Combined investments to date total over \$700 million.

Mr. Hopkins asserted, in terms of safety, NuScale's design is revolutionary. It requires no electrical power to safely shut down. They are close to approval of an Emergency Planning Zone (EPZ) at the plant site boundary. With a reduced EPZ and the NuScale plant located on a retired coal site, existing resources can be leveraged. More importantly, there is the potential to cross-train the existing work force which would preserve jobs. One old container will hold 126 small modular reactors. Not only are the modular reactors smaller, they require no piping, are placed below ground, are independent of one another, and can be used for different processes.

NuScale is expecting to have the power plant operational by 2026. He stated they currently have 460 people in five states working on the project. They anticipate completing the technical review by the end of 2018. The remainder of the process will be primarily legal and administrative actions. Globally, the competition is Russia and China. Nationally, to remain competitive, they must keep costs down.

Senator Vick asked how the units cool down. **Mr. Hopkins** replied that the units cool themselves based on the design. The core unit is 1/20th the size of a large reactor, it is in a vacuum, has no hydrogen, and requires no operational intervention. **Senator Vick** inquired as to how they can operate more competitively and offer lower rates than gas while requiring more employees and additional construction costs. **Mr. Hopkins** stated they do not plan to put all 12 modules in at the same time. By installing a few at a time they can generate revenue to offset cost. They also plan to cross-train employees. **Senator Vick** asked how they would generate competitively priced electricity while hiring more people and paying them substantially higher wages. **Mr. Hopkins** replied that cost cutting in other areas will be involved, along with the use of production tax credits.

Vice Chairman Hagedorn inquired about the height of the model reactor. **Mr. Hopkins** answered that it was 50 megawatts electric, 160 thermal; each one capable of powering 35,000 to 40,000 homes. The height in containment is 75 feet and 15 feet in diameter. They come in phases and can be shipped by barge, rail, or hydraulic truck. **Vice Chairman Hagedorn** asked if the technology was in use today. **Mr. Hopkins** replied that it was not. They have a test facility using a one-third scale model. Exhaustive testing has been done on the components. At the current time, they have no definitive agreement with any suppliers.

Vice Chairman Hagedorn queried as to the plan for building internationally once the Nuclear Regulatory Commission (NRC) approves the technology. **Mr. Hopkins** replied that other countries could utilize the data they have provided to the NRC, without having their own regulator, which would be a considerable cost savings.

Chairman Siddoway asked if there had been any efforts to hasten the process since the new administration began. **Mr. Hopkins** stated that they received enthusiastic support from the new administration.

ADJOURNED: There being no further business, **Chairman Siddoway** adjourned the meeting at 9:19 a.m.

Senator Siddoway Chair

Twyla Melton, Secretary

Diane James, Assistant Secretary