

Leadership In Nuclear Energy Commission returns to Idaho Falls

By David Pace | Post Register | 05.04.23 (online) 05.05.23 (print edition)



Commissioners from the Leadership in Nuclear Energy Commission, which advises Gov. Brad Little on Idaho National Laboratory and the nuclear industry, stand together Wednesday at the INL Meeting Center in Idaho Falls. (Photo Credit: David Pace, Post Register)

Editor's note: This article is the first in a three-part series on the Leadership In Nuclear Energy Commission and Idaho National Laboratory.

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The Leadership In Nuclear Energy Commission, the governor's advisory group on nuclear energy, met Wednesday in Idaho Falls to discuss the future of the Idaho National Laboratory and the nuclear energy industry.

Co-chaired by Lt. Gov. Scott Bedke and Idaho National Laboratory Director John Wagner, the commission consists of leaders from the Idaho National Laboratory, state government officials, policymakers and local representatives.

According to Gov. Brad Little's executive order that renewed the commission in January 2021, the body "advises the Governor on policies and actions of the State of Idaho that support and enhance the long-term viability and mission of INL as well as associated industries in Idaho."

The commission, which was formed by former Gov. C.L. “Butch” Otter in 2012, typically meets two to three times per year. It is increasing its efforts at public awareness and outreach. This week’s LINE Commission meeting was being held in conjunction with Thursday’s inaugural Energy Days event, hosted by the College of Eastern Idaho.

Twenty-three of the commission’s 26 representatives were present Wednesday, including Battelle Executive Vice President of Laboratory Operations Mark Peters, a former INL director, Idaho Falls Mayor Rebecca Casper, state Rep. Wendy Horman and state Sen. Dave Lent, both of Idaho Falls, Fort Hall Business Council member Gaylen Edmo, Blackfoot-based Premier Technology President & CEO Doug Sayer and College of Eastern Idaho President Rick Aman.

Industry experts who presented to the commission said nuclear energy is well positioned to play a critical role in the world’s energy future.

As utilities nationwide seek to reduce or eliminate their carbon emissions, an increasing number are looking at nuclear power as a source of sustainable, low-emissions electricity, said John Kotek, senior vice president for policy development and public affairs at the Nuclear Energy Institute.

“Reactors produce about half of our carbon-free generation,” Kotek said.

Global energy demand is expected to double by 2050, according to a 2019 U.S. Energy Information Administration report. Advanced nuclear reactors and small modular reactors could play a critical role in helping the globe meet its future energy needs.

Wagner said Kotek’s presentation highlighted how interest in nuclear energy is growing both in the U.S. and abroad.

“Particularly nationally, it’s gone from relatively modest plans for the future of nuclear energy, to their most recent survey that he talked about that’s projecting more than 100 gigawatts of new nuclear by 2050,” Wagner said.

The United States has 92 nuclear reactors producing 95 gigawatts of electricity, Wagner said, totaling about 20 percent of the nation’s power. The Department of Energy forecasts that the nation’s nuclear output will more than double in the next 37 years.

“It just opens our eyes to the horizons and the possibilities. It’s one thing to say that we want to be carbon-free,” Bedke said. “This kind of puts into perspective what’s got to be in place to do that, to go carbon-free.”

As part of its cutting-edge research, INL is working to complete two new reactors by 2025 — the Microreactor Applications Research Validation and Evaluation Project (MARVEL) and Pele reactors.

“MARVEL is a 100 kilowatt, very small system funded by DOE,” Wagner said. “Pele is a Department of Defense Strategic Capabilities Office reactor where they are interested in having the capability for a mobile nuclear power system for electricity and other energy needs.”

Casper appreciated the discussion about implementing INL's nuclear research on a practical level.

Idaho Falls Power is one of 26 Utah Associated Municipal Power Systems members to have signed onto the Carbon Free Power Project. The advanced light-water small modular nuclear reactor by Oregon-based NuScale Power, is to be constructed at the Department of Energy's desert site west of Idaho Falls. The project is several years away from completion.

"With INL being primarily a research laboratory, they haven't had in the past a lot of reasons to connect with utilities," she said. "Now we're seeing that they want to take their research to the next step and be proactive about their net-zero goals and wanting to bring things to fruition with some of these demonstration projects that are happening here over the next decade. It is exciting to see that they are creating a connection between the great research and the work that the utilities do."

A delegation from Wyoming spoke about steps its state has taken to support the development of the nuclear industry as it diversifies its energy portfolio.

"Wyoming is the second largest energy producer in the country," said Rep. Don Burkhart, chairman of the Wyoming House Minerals, Business & Economic Development committee. "... While we support the traditional industries, coal, natural gas and those, we are also looking forward to the future of additional energies, including nuclear."

The state of Wyoming has signed a memorandum of understanding with INL's contractor Battelle Energy Alliance to collaborate in the research, development, demonstration and deployment of advanced energy technologies and approaches.

Currently, TerraPower is planning to build a Sodium reactor in Kemmerer, Wyoming. A team of INL researchers are consulting with TerraPower on the project.

The NRC Commission is looking to learn lessons from Wyoming's experience with its energy transition.

"We're having an honest discussion of the barriers, an honest discussion of the possibilities and of the two states (Wyoming and Idaho) and their approach," Bedke said. "All these things have got to be put on the table. We have to understand them, and then we have to communicate them to the larger public."

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