

Energy Subcommittee Ranking Member Randy Weber
Statement
Members' Day Hearing
9:30 a.m. Friday, May 17, 2019

Science Committee Colleagues, after my many years of championing this cause on the Energy Subcommittee, it should come as no surprise to you all that I am here today in support of advanced nuclear energy technology. More specifically I am here to testify on behalf of my draft bill, the Nuclear Energy Research Infrastructure Act.

Over the past four years, the Science Committee has held hearings, met with stakeholders, and worked extensively with our colleagues in the Senate to draft S. 97, the Nuclear Energy Innovation Capabilities Act (NEICA), which became law in September, 2018. I'm incredibly proud of this comprehensive, bipartisan authorization bill, and believe it sets the appropriate direction and program priorities for the Office of Nuclear Energy.

A key part of that bill was the authorization of a research reactor, known as the Versatile Test Reactor.

This facility is crucial for the development of advanced reactor designs, materials, and nuclear fuels. While modeling and simulation can accelerate R&D, nuclear energy research must be validated through a physical source, like a research reactor. This type of research requires access to fast neutrons – which are currently only available for civilian research in Russia.

The bill I am testifying on today – the Nuclear Energy Research Infrastructure Act – will build upon the bipartisan successes of NEICA by providing additional direction to DOE as they implement this law. This draft legislation authorizes specific funding from within the DOE Office of Nuclear Energy for the construction of the Versatile Neutron Source and sets a defined start date for full operation of this facility by December 31, 2025. This legislation passed the House last Congress with bipartisan support, and I look forward to introducing an update version of this legislation in the coming weeks.

Building this open-access user facility in the DOE national lab system will facilitate secure and efficient advanced nuclear energy research across the United States. The access to fast neutrons this reactor provides can support private sector development of the next generation materials and fuels needed for advanced nuclear reactor technology. The Versatile Neutron Source will also enable the Nuclear Regulatory Commission (NRC) to verify data on new fuels, materials, and designs more efficiently, expediting regulatory approval for American advanced nuclear reactors.

Without this user facility, this research simply will not take place. In order to maintain our leadership in nuclear power, the United States must continue developing cutting edge technology here at home. We cannot afford to miss the economic opportunity provided by next generation nuclear technology, and we can't let our best scientists and engineers go overseas.

The updated version of my legislation also includes new language, addressing nuclear research infrastructure at the National Institute of Standards and Technology (NIST). The Institute currently operates the NIST Center for Neutron Research (NCNR), which is one of two reactor-based neutron sources in the United States. NCNR provides both thermal energy neutron beams from the heavy water or graphite moderators, and low energy neutrons from a liquid hydrogen moderator, or cold source. This facility allows 1700 researchers per year to conduct measurements for a broad range of scientific research, including biology, materials science, chemistry, engineering, and physics.

But after 50 years, the reactor that powers this facility is aging – and any upgrade of the NCNR would require complete closure of the facility for several years, leaving the U.S. with only one reactor-based neutron source to meet the needs of the scientific community.

In a 2018 assessment, the National Academies recommended that NIST commission a detailed assessment of the existing facility and begin the conceptual design of a new reactor. This would allow NIST to determine the lifespan of their existing facility, while taking the necessary steps to plan and invest in a next generation facility. My legislation authorizes both important steps forward and will help maintain American leadership in this critical neutron science.

The Nuclear Energy Research Infrastructure Act is a commonsense bill that will maintain American leadership in nuclear science and power. By authorizing funding for the construction of these research facilities, we will fortify the U.S. commitment to safely advancing nuclear energy and discovery science.

I want to thank Chairwoman Johnson for cosponsoring this important legislation last Congress, and for her leadership in advocating for nuclear energy research and development.

It is my hope that she – and our Science Committee colleagues on both sides of the aisle – will consider cosponsoring this legislation in the 116th Congress.