

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEE ON ENERGY**

HEARING CHARTER

H.R. 4084, the Nuclear Energy Innovation Capabilities Act

**December 3, 2015
10:00 a.m. – 12:00 p.m.
2318 Rayburn House Office Building**

Purpose

The Energy Subcommittee will hold a legislative hearing on *H.R. 4084, the Nuclear Energy Innovation Capabilities Act*, on Thursday, December 3rd, at 10:00 a.m. in Room 2318 of the Rayburn House Office Building.

Witnesses

- **Mr. John Kotek**, Acting Assistant Secretary, Office of Nuclear Energy, U.S. Department of Energy
- **Dr. Dale Klein**, Associate Vice Chancellor for Research, University of Texas
- **Mr. Ray Rothrock**, Partner Emeritus, Venrock

Background

On November 19, 2015, Energy Subcommittee Chairman Randy Weber (R-TX), Ranking Member Eddie Bernice Johnson (D-TX), and Chairman Lamar Smith (R-TX), along with 18 cosponsors, introduced H.R. 4084, the Nuclear Energy Innovation Capabilities Act.¹

The Department of Energy's (DOE's) national laboratory complex originated from the Manhattan Project and since then has provided the facilities and expertise necessary to conduct research and development (R&D) for military and civilian applications of nuclear energy.² DOE carries out civilian nuclear energy R&D through the DOE labs and universities which provide research infrastructure and employ highly trained scientists to maintain the nation's critical R&D capabilities.

H.R. 4084 directs the DOE to prioritize R&D infrastructure that will enable the private sector to invest in advanced reactor technologies in the United States. This legislation also

¹ Additional list of original cosponsors for H.R. 4084, as follows: Reps. Daniel Lipinski (D-IL), Barry Loudermilk (R-GA), Ed Perlmutter (D-CO), Barbara Comstock (R-VA), Paul Tonko (D-NY), Jim Bridenstine (R-OK), Brian Babin (R-TX), Dana Rohrabacher (R-CA), Randy Hultgren (R-IL), Bruce Westerman (R-AR), David Schweikert (R-AZ), John Culberson (R-TX), Kevin Brady (R-TX), Pete Sessions (R-TX), John Carter (R-TX), Michael Conaway (R-TX), Kenny Marchant (R-TX), and Blake Farenthold (R-TX).

² See <http://energy.gov/management/office-management/operational-management/history/manhattan-project>

requires the DOE to provide a clear path forward to enable private investment for reactor prototype development at DOE labs while exploring opportunities to leverage expertise from the Nuclear Regulatory Commission (NRC). The United States' regulatory process for commercial nuclear R&D has not kept pace with technological development, in part because the NRC draws its funds from fees assessed to its licensees to review a single class of reactors.³

Section-by-Section Summary

- Section 1 provides a short title: “Nuclear Energy Innovation Capabilities Act.”
- Section 2 provides technical definitions.
- Section 3 amends DOE’s civilian nuclear energy R&D mission to ensure that the DOE enables the private sector to partner with national labs for the purpose of developing novel reactor concepts.
- Section 4 provides a sense of congress that nuclear fission and fusion represent an opportunity for high energy density, zero air-emissions technology development of national importance to scientific progress, national security, energy R&D, and space exploration.
- Section 5 provides programmatic authority for DOE to leverage its supercomputing infrastructure to accelerate nuclear energy R&D capabilities for advanced fission and fusion reactor technologies.⁴
- Section 6 provides the DOE with statutory direction for a reactor-based fast neutron source that will operate as an open-access user facility to enable academic and proprietary research in the United States.⁵
- Section 7 authorizes DOE to enable the private sector to construct and operate privately-funded reactor prototypes at DOE sites.⁶
- Section 8 requires DOE to produce a transparent, strategic, 10-year plan for prioritizing nuclear R&D programs while considering budget constraints.

³ *A Review of the Nuclear Regulatory Commission’s Licensing Process: Hearing Before the Subcomm. on Energy of the H. Comm. on Science, Space, and Technology*, 114th Cong. (2015), available here:

<https://science.house.gov/legislation/hearings/subcommittee-energy-hearing-review-nuclear-regulatory-commission-s-licensing>

⁴ *Supercomputing and American Technology Leadership: Hearing Before the Subcomm. on Energy of the H. Comm. on Science, Space, and Technology*, 114th Cong. (2015), available here:

<https://science.house.gov/legislation/hearings/subcommittee-energy-supercomputing-and-american-technology-leadership>. See also *Department of Energy Oversight: Energy Innovation Hubs: Hearing Before the Subcomm. on Energy of the H. Comm. on Science, Space, and Technology*, 114th Cong. (2015), available here

<https://science.house.gov/legislation/hearings/subcommittee-energy-hearing-department-energy-oversight-energy-innovation-hubs>

⁵ *Nuclear Energy Innovation and the National Labs: Hearing Before the Subcomm. on Energy of the H. Comm. on Science, Space, and Technology*, 114th Cong. (2015), available here:

<https://science.house.gov/legislation/hearings/subcommittee-energy-hearing-nuclear-energy-innovation-and-national-labs>

⁶ *The Future of Nuclear Energy: Hearing Before the Subcomm. on Energy of the H. Comm. on Science, Space, and Technology*, 113th Cong. (2014), available here: <https://science.house.gov/legislation/hearings/energy-subcommittee-future-nuclear-energy>