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(Original Signature of Member)

115TH CONGRESS
1ST SESSION

H. R. 4378

To direct the Secretary of Energy to carry out the construction of a versatile reactor-based fast neutron source, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. WEBER of Texas introduced the following bill; which was referred to the Committee on _____

A BILL

To direct the Secretary of Energy to carry out the construction of a versatile reactor-based fast neutron source, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Nuclear Energy Research Infrastructure Act of 2017".

SEC. 2. VERSATILE NEUTRON SOURCE.

(a) IN GENERAL.—The Secretary of Energy shall provide for a versatile reactor-based fast neutron source,

which shall operate as a national user facility. The Secretary shall consult with the private sector, universities, National Laboratories, and relevant Federal agencies to ensure that the versatile neutron source is capable of meeting Federal research needs for neutron irradiation services.

(b) FACILITY CAPABILITIES.—

(1) CAPABILITIES.—The Secretary shall ensure that the facility described in subsection (a) will provide, at a minimum, the following capabilities:

(A) Fast neutron spectrum irradiation capability.

(B) Capacity for upgrades to accommodate new or expanded research needs.

(2) CONSIDERATIONS.—In carrying out paragraph (1), the Secretary shall consider the following:

(A) Capabilities that support experimental high-temperature testing.

(B) Providing a source of fast neutrons at a neutron flux higher than that at which existing research facilities operate, sufficient to enable research for an optimal base of prospective users.

(C) Maximizing irradiation flexibility and irradiation volume to accommodate as many concurrent users as possible.

(D) Capabilities for irradiation with neutrons of a lower energy spectrum.

(E) Multiple loops for fuels and materials testing of different coolants.

(F) Capabilities that support irradiating and processing targets for isotope production.

(G) Additional pre-irradiation and post-irradiation examination capabilities.

(H) Lifetime operating costs and lifecycle costs.

(c) START OF OPERATIONS.—The Secretary shall, to the maximum extent practicable, ensure that the start of full operations of the facility under this section occurs before December 31, 2025.

(d) FUNDING.—Out of funds appropriated to the Office of Nuclear Energy, there shall be made available to the Secretary to carry out activities, including design and construction of the facility, under this section—

(1) $35,000,000 for fiscal year 2018;

(2) $100,000,000 for fiscal year 2019;

(3) $200,000,000 for fiscal year 2020;

(4) $260,000,000 for fiscal year 2021;

(5) $340,000,000 for fiscal year 2022;

(6) $350,000,000 for fiscal year 2023;

(7) $350,000,000 for fiscal year 2024; and

(8) $350,000,000 for fiscal year 2025.