117TH CONGRESS
1ST SESSION

H. R. 4819

To require the Secretary of Energy to revitalize existing university infrastructure relating to nuclear science and engineering and establish new university-based nuclear science and engineering facilities, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 29, 2021

Mr. GONZALEZ of Ohio (for himself, Mr. FOSTER, Mr. CASTEN, and Mr. MEIJER) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To require the Secretary of Energy to revitalize existing university infrastructure relating to nuclear science and engineering and establish new university-based nuclear science and engineering facilities, 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 “National Nuclear University Research Infrastructure Reinvestment Act of 2021”.

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SEC. 2. PURPOSES.

The purposes of this Act are—

(1) to upgrade the nuclear research capabilities of universities in the United States to meet the research requirements of advanced nuclear energy systems;

(2) to ensure the continued operation of university research reactors;

(3) to coordinate available resources to enable the establishment, including the start and efficient completion of construction, of new nuclear science and engineering facilities; and

(4) to support—

(A) workforce development critical to maintaining United States leadership in nuclear science and engineering and related disciplines; and

(B) the establishment or enhancement of nuclear science and engineering capabilities and other, related capabilities at historically Black colleges and universities, Tribal colleges or universities, minority-serving institutions, EPSCoR universities, junior or community colleges, and associate-degree-granting colleges.
SEC. 3. UNIVERSITY INFRASTRUCTURE COLLABORATION.

Section 954(a) of the Energy Policy Act of 2005 (42 U.S.C. 16274(a)) is amended—

(1) in paragraph (2), by amending subparagraph (D) to read as follows:

“(D) promote collaborations, partnerships, and knowledge sharing between institutions of higher education, National Laboratories, industry, and associated labor unions; and”; and

(2) by amending paragraph (4) to read as follows:

“(4) STRENGTHENING UNIVERSITY RESEARCH AND TRAINING REACTORS AND ASSOCIATED INFRASTRUCTURE.—

“(A) IN GENERAL.—In carrying out the program under this subsection, the Secretary may support—

“(i) converting research reactors from high-enrichment fuels to low-enrichment fuels and upgrading operational instrumentation;

“(ii) revitalizing and upgrading existing nuclear science and engineering infrastructure that support the development of advanced nuclear technologies and applications;
“(iii) regional or subregional university-led consortia to—

“(I) broaden access to university research reactors;

“(II) enhance existing university-based nuclear science and engineering infrastructure; and

“(III) provide project management, technical support, quality engineering and inspections, manufacturing, and nuclear material support;

“(iv) student training programs, in collaboration with the United States nuclear industry, in relicensing and upgrading reactors, including through the provision of technical assistance; and

“(v) reactor improvements that emphasize research, training, and education, including through the Innovations in Nuclear Infrastructure and Education Program or any similar program.

“(B) Authorization of Appropriations.—Of any amounts appropriated to carry out the program under this subsection, there is authorized to be appropriated to the Secretary
to carry out clauses (ii) and (iii) of subpara-
graph (A) $55,000,000 for each of fiscal years
2022 through 2026.”.

SEC. 4. ADVANCED NUCLEAR RESEARCH INFRASTRUCTURE
ENHANCEMENT SUBPROGRAM.

Section 954(a) of the Energy Policy Act of 2005 (42
U.S.C. 16274(a)), as amended by section 3, is further
amended—

(1) by redesignating paragraphs (5) through
(8) as paragraphs (6) through (9), respectively;

(2) by inserting after paragraph (4) the fol-
lowing:

“(5) ADVANCED NUCLEAR RESEARCH INFRA-
STRUCTURE ENHANCEMENT.—

“(A) IN GENERAL.—The Secretary shall
carry out a subprogram to be known as the Ad-
vanced Nuclear Research Infrastructure En-
hancement Subprogram in order to—

“(i) demonstrate various advanced nu-
clear reactor and nuclear microreactor con-
cepts;

“(ii) establish medical isotope produc-
tion reactors or other specialized applica-
tions; and
“(iii) advance other research infrastructure that, in the determination of the Secretary, is consistent with the mission of the Department.

“(B) NEW NUCLEAR SCIENCE AND ENGINEERING FACILITIES.—In carrying out the subprogram, the Secretary shall establish—

“(i) not more than 4 new research reactors; and

“(ii) new nuclear science and engineering facilities, as required to address research demand and identified infrastructure gaps.

“(C) LOCATIONS.—New research reactors and facilities established under subparagraph (B) shall be established in a manner that—

“(i) supports the regional or subregional consortia described in paragraph (4)(C); and

“(ii) encourages the participation of—

“(I) historically Black colleges and universities;

“(II) Tribal colleges or universities;
“(III) minority-serving institutions;
“(IV) EPSCoR universities;
“(V) junior or community colleges; and
“(VI) associate-degree-granting colleges.

“(D) Authorization of Appropriations.—Of any amounts appropriated to carry out the program under this subsection, there are authorized to be appropriated to the Secretary to carry out the subprogram under this paragraph—

“(i) $10,000,000 for fiscal year 2022;
“(ii) $45,000,000 for fiscal year 2023;
“(iii) $60,000,000 for fiscal year 2024;
“(iv) $65,000,000 for fiscal year 2025;
“(v) $80,000,000 for fiscal year 2026;
“(vi) $140,000,000 for fiscal year 2027;
“(vii) $120,000,000 for fiscal year 2028; and
“(viii) $80,000,000 for fiscal year 2029.”; and

(3) by amending paragraph (9), as redesignated by paragraph (1) of this subsection, to read as follows:

“(9) DEFINITIONS.—In this subsection:

“(A) ASSOCIATE-DEGREE-GRANTING COLLEGE.—The term ‘associate-degree-granting college’ means an institution of higher education (as determined under section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001)) that—

“(i) is a nonprofit institution that offers a 2-year associate-degree program or a 2-year certificate program; or

“(ii) is a proprietary institution that offers a 2-year associate degree program.

“(B) JUNIOR FACULTY.—The term ‘junior faculty’ means a faculty member who was awarded a doctorate less than 10 years before receipt of an award from the grant program described in paragraph (2)(B).

“(C) JUNIOR OR COMMUNITY COLLEGE.—The term ‘junior or community college’ has the meaning given the term in section 312 of the

“(D) EPSCoR UNIVERSITY.—The term ‘EPSCoR university’ means an institution of higher education located in a State eligible to participate in the program defined in section 502 of the America COMPETES Reauthorization Act of 2010 (42 U.S.C. 1862p note).

“(E) HISTORICALLY BLACK COLLEGE OR UNIVERSITY.—The term ‘historically Black college or university’ has the meaning given the term ‘part B institution’ in section 322 of the Higher Education Act of 1965 (20 U.S.C. 1061).

“(F) MINORITY-SERVING INSTITUTION.— The term ‘minority-serving institution’ means a Hispanic-serving institution, an Alaska Native-serving institution, a Native Hawaiian-serving institutions, a Predominantly Black Institution, an Asian American and Native American Pacific Islander-serving institution, or a Native American-serving nontribal institution as described in section 371 of the Higher Education Act of 1965 (20 U.S.C. 1067q(a)).
“(G) Tribal college or university.—

The term ‘Tribal college or university’ has the meaning given such term in section 316 of the Higher Education Act of 1965 (20 U.S.C. 1059e).”.