To extend, improve, and consolidate energy research and development programs, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 20, 2015

Mr. Alexander (for himself, Mr. Coons, Ms. Murkowski, Ms. Cantwell, Mr. Gardner, Mrs. Feinstein, and Mr. Heinrich) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To extend, improve, and consolidate energy research and development programs, 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; TABLE OF CONTENTS.

(a) Short Title.—This Act may be cited as the “Energy Title of America COMPETES Reauthorization Act of 2015”.

(b) Table of Contents.—The table of contents of this Act is as follows:

Sec. 1. Short title; table of contents.

TITLE I—ENERGY TITLE OF AMERICA COMPETES PROGRAMS
Sec. 101. Basic research.
Sec. 102. Advanced Research Projects Agency-Energy.

TITLE II—ELIMINATION AND CONSOLIDATION OF PROGRAMS

Sec. 201. Elimination of program authorities.
Sec. 203. Consolidation of duplicative program authorities.

TITLE I—ENERGY TITLE OF
AMERICA COMPETES PROGRAMS

SEC. 101. BASIC RESEARCH.

Section 971(b) of the Energy Policy Act of 2005 (42 U.S.C. 16311(b)) is amended—

(1) in paragraph (6), by striking “and” at the end;

(2) in paragraph (7), by striking the period at the end and inserting a semicolon; and

(3) by adding at the end the following:

“(8) $5,271,000,000 for fiscal year 2016;

“(9) $5,485,000,000 for fiscal year 2017;

“(10) $5,704,000,000 for fiscal year 2018;

“(11) $5,932,000,000 for fiscal year 2019; and

“(12) $6,178,000,000 for fiscal year 2020.”.

SEC. 102. ADVANCED RESEARCH PROJECTS AGENCY-ENERGY.

Section 5012 of the America COMPETES Act (42 U.S.C. 16538) is amended—

(1) in subsection (a)(3), by striking “subsection (n)(1)” and inserting “subsection (o)(1)”;

(2) in subsection (o)(1), by striking “$5,271,000,000 for fiscal year 2016;

“(8) $5,485,000,000 for fiscal year 2017;

“(9) $5,704,000,000 for fiscal year 2018;

“(10) $5,932,000,000 for fiscal year 2019; and

“(12) $6,178,000,000 for fiscal year 2020.”

(3) by adding at the end the following:

“(13) The sums provided for under subsection (a)(3) for fiscal year 2017 shall be increased by 10 percent.

“(14) The sums provided for under subsection (a)(3) for fiscal year 2018 shall be increased by 10 percent.

“(15) The sums provided for under subsection (a)(3) for fiscal year 2019 shall be increased by 10 percent.

“(16) The sums provided for under subsection (a)(3) for fiscal year 2020 shall be increased by 10 percent.”.
(2) in subsection (i), by striking paragraph (1) and inserting the following:

“(1) IN GENERAL.—To the maximum extent practicable, the Director shall ensure that—

“(A) the activities of ARPA–E are coordinated with, and do not duplicate the efforts of, programs and laboratories within the Department and other relevant research agencies; and

“(B) ARPA–E does not provide funding for a project unless the prospective grantee demonstrates sufficient attempts to secure private financing or indicates that the project is not independently commercially viable.”;

(3) by redesignating subsection (n) as subsection (o);

(4) by inserting after subsection (m) the following:

“(n) PROTECTION OF INFORMATION.—The following types of information collected by the ARPA–E from recipients of financial assistance awards shall be considered privileged and confidential and not subject to disclosure under section 552 of title 5, United States Code:

“(1) Plans for commercialization of technologies developed under the award, including business plans,
technology-to-market plans, market studies, and cost
and performance models.

“(2) Investments provided to an awardee from
third parties (such as venture capital firms, hedge
funds, and private equity firms), including amounts
and the percentage of ownership of the awardee pro-
vided in return for the investments.

“(3) Additional financial support that the
awardee—

“(A) plans to or has invested into the tech-
nology developed under the award; or

“(B) is seeking from third parties.

“(4) Revenue from the licensing or sale of new
products or services resulting from research con-
ducted under the award.”; and

(5) in subsection (o) (as redesignated by para-
graph (3))—

(A) in paragraph (2)—

(i) in the matter preceding subpara-
graph (A), by striking “paragraphs (4)
and (5)” and inserting “paragraph (4)”;

(ii) in subparagraph (D), by striking
“and” at the end;
(iii) in subparagraph (E), by striking the period at the end and inserting a semi-
colon; and

(iv) by adding at the end the follow-
ning:

“(F) $291,200,000 for fiscal year 2016;
“(G) $303,600,000 for fiscal year 2017;
“(H) $314,700,000 for fiscal year 2018;
“(I) $327,300,000 for fiscal year 2019;
and
“(J) $340,600,000 for fiscal year 2020.”;
and
(B) in paragraph (4)(B), by striking “(c)(2)(D)” and inserting “(c)(2)(C)”.

TITLE II—ELIMINATION AND CONSOLIDATION OF PROGRAMS

SEC. 201. ELIMINATION OF PROGRAM AUTHORITIES.

(a) Nuclear Science Talent Expansion Pro-
gram for Institutions of Higher Education.—Sec-
tion 5004 of the America COMPETES Act (42 U.S.C. 16532) is repealed.

(b) Hydrocarbon Systems Science Talent Ex-
pansion Program for Institutions of Higher Edu-
cation.—
(1) IN GENERAL.—Section 5005(e) of the America COMPETES Act (42 U.S.C. 16533(e)) is repealed.

(2) CONFORMING AMENDMENTS.—

(A) Section 5005(f) of the America COMPETES Act (42 U.S.C. 16533(f)) is amended—

(i) by striking paragraph (2);

(ii) by striking the subsection designation and heading and all that follows through “There are” in paragraph (1) and inserting the following:

“(f) AUTHORIZATION OF APPROPRIATIONS.—There are”; and

(iii) by redesignating subparagraphs (A) through (C) as paragraphs (1) through (3), respectively, and indenting appropriately.

(B) Section 5005 of the America COMPETES Act (42 U.S.C. 16533) is amended by redesignating subsection (f) as subsection (e).

(c) DISCOVERY SCIENCE AND ENGINEERING INNOVATION INSTITUTES.—Section 5008 of the America COMPETES Act (42 U.S.C. 16535) is repealed.
(d) **Elimination of Duplicative Authority for Education Programs.**—Sections 3181 and 3185 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381l, 42 U.S.C. 7381n) are repealed.

(e) **Mentoring Program.**—Section 3195 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381r) is repealed.

**SEC. 202. REPEAL OF AUTHORIZATIONS.**

(a) **Department of Energy Early Career Awards for Science, Engineering, and Mathematics Researchers.**—Section 5006 of the America COMPETES Act (42 U.S.C. 16534) is amended by striking subsection (h).

(b) **Distinguished Scientist Program.**—Section 5011 of the America COMPETES Act (42 U.S.C. 16537) is amended by striking subsection (j).

(c) **Protecting America’s Competitive Edge (PACE) Graduate Fellowship Program.**—Section 5009 of the America COMPETES Act (42 U.S.C. 16536) is amended by striking subsection (f).

**SEC. 203. CONSOLIDATION OF DUPLICATIVE PROGRAM AUTHORITIES.**

(a) **University Nuclear Science and Engineering Support.**—Section 954 of the Energy Policy Act of 2005 (42 U.S.C. 16274) is amended—
(1) in subsection (a), by inserting “nuclear chemistry,” after “nuclear engineering,”; and

(2) in subsection (b)—

(A) by redesignating paragraphs (3) through (5) as paragraphs (4) through (6), respectively; and

(B) by inserting after paragraph (2) the following:

“(3) award grants, not to exceed 5 years in duration, to institutions of higher education with existing academic degree programs in nuclear sciences and related fields—

“(A) to increase the number of graduates in nuclear science and related fields;

“(B) to enhance the teaching and research of advanced nuclear technologies;

“(C) to undertake collaboration with industry and National Laboratories; and

“(D) to bolster or sustain nuclear infrastructure and research facilities of institutions of higher education, such as research and training reactors and laboratories;”.

(b) CONSOLIDATION OF DEPARTMENT OF ENERGY EARLY CAREER AWARDS FOR SCIENCE, ENGINEERING,
AND MATHEMATICS RESEARCHERS PROGRAM AND DIS-

TINGUISHED SCIENTIST PROGRAM.—

(1) FUNDING.—Section 971(c) of the Energy
Policy Act of 2005 (42 U.S.C. 16311(c)) is amended
by adding at the end the following:

“(8) For the Department of Energy early ca-
reer awards for science, engineering, and mathe-
matics researchers program under section 5006 of
the America COMPETES Act (42 U.S.C. 16534)
and the distinguished scientist program under sec-
tion 5011 of that Act (42 U.S.C. 16537),
$150,000,000 for each of fiscal years 2016 through
2020, of which not more than 65 percent of the
amount made available for a fiscal year under this
paragraph may be used to carry out section 5006 or
5011 of that Act.”.

(2) DEPARTMENT OF ENERGY EARLY CAREER
AWARDS FOR SCIENCE, ENGINEERING, AND MATHE-
MATICS RESEARCHERS.—Section 5006 of the Amer-
ica COMPETES Act (42 U.S.C. 16534) is amend-
ed—

(A) in subsection (b)(1)—

(i) in the matter preceding subpara-
graph (A)—
(I) by inserting “average” before “amount”; and

(II) by inserting “for each year” before “shall”;

(ii) in subparagraph (A), by striking “$80,000” and inserting “$190,000”; and

(iii) in subparagraph (B), by striking “$125,000” and inserting “$490,000”;

(B) in subsection (e)(1)(C)—

(i) in clause (i)—

(I) by striking “assistant professor or equivalent title” and inserting “untenured assistant or associate professor”; and

(II) by inserting “or” after the semicolon at the end;

(ii) by striking clause (ii); and

(iii) by redesignating clause (iii) as clause (ii);

(C) in subsection (d), by striking “on a competitive, merit-reviewed basis” and inserting “through a competitive process using merit-based peer review.”;

(D) in subsection (e)—
(i) by striking “(e)” and all that follows through “To be eligible” and inserting the following:

“(e) SELECTION PROCESS AND CRITERIA.—To be eligible”; and

(ii) by striking paragraph (2); and

(E) in subsection (f)(1), by striking “non-profit, nondegree-granting research organizations” and inserting “National Laboratories”.

(c) SCIENCE EDUCATION PROGRAMS.—Section 3164 of the Department of Energy Science Education Enhancement Act (42 U.S.C. 7381a) is amended—

(1) in subsection (b)—

(A) by striking paragraphs (1) and (2) and inserting the following:

“(1) IN GENERAL.—The Director of the Office of Science (referred to in this subsection as the “Director”) shall provide for appropriate coordination of science, technology, engineering, and mathematics education programs across all functions of the Department.

“(2) ADMINISTRATION.—In carrying out paragraph (1), the Director shall—

“(A) consult with—
“(i) the Assistant Secretary of Energy

with responsibility for energy efficiency

and renewable energy programs; and

“(ii) the Deputy Administrator for

Defense Programs of the National Nuclear

Security Administration; and

“(B) seek to increase the participation and

advancement of women and underrepresented

minorities at every level of science, technology,

engineering, and mathematics education.”; and

(B) in paragraph (3)—

(i) in subparagraph (D), by striking

“and” at the end;

(ii) by redesignating subparagraph

(E) as subparagraph (F); and

(iii) by inserting after subparagraph

(D) the following:

“(E) represent the Department as the

principal interagency liaison for all coordination

activities under the President for science, tech-

nology, engineering, and mathematics education

programs; and”; and

(2) in subsection (d)—

(A) by striking “The Secretary” and in-

serting the following:
“(1) IN GENERAL.—The Secretary”; and

(B) by adding at the end the following:

“(2) REPORT.—Not later than 180 days after the date of enactment of this subparagraph, the Director shall submit a report describing the impact of the activities assisted with the Fund established under paragraph (1) to—

“(A) the Committee on Science, Space, and Technology of the House of Representatives; and

“(B) the Committee on Energy and Natural Resources of the Senate.”.

(d) PROTECTING AMERICA’S COMPETITIVE EDGE (PACE) GRADUATE FELLOWSHIP PROGRAM.—Section 5009 of the America COMPETES Act (42 U.S.C. 16536) is amended—

(1) in subsection (c)—

(A) in paragraph (1) by striking “, involving” and all that follows through “Secretary”; and

(B) in paragraph (2), by striking subparagraph (B) and inserting the following:

“(B) to demonstrate excellent academic performance and understanding of scientific or technical subjects; and”;
(2) in subsection (d)(1)(B)(i), by inserting “full
or partial” before “graduate tuition”; and
(3) in subsection (e), in the matter preceding
paragraph (1), by striking “Director of Science, En-
gineering, and Mathematics Education” and insert-
ing “Director of the Office of Science.”