111TH CONGRESS
2d Session
HOUSE OF REPRESENTATIVES
REPORT
111–479

PROVIDING FOR CONSIDERATION OF THE BILL (H.R. 5116) TO INVEST IN INNOVATION THROUGH RESEARCH AND DEVELOPMENT, TO IMPROVE THE COMPETITIVENESS OF THE UNITED STATES, AND FOR OTHER PURPOSES

MAY 11, 2010.—Referred to the House Calendar and ordered to be printed

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Mr. PERLMUTTER, from the Committee on Rules, submitted the following

R E P O R T

[To accompany H. Res. 1344]

The Committee on Rules, having had under consideration House Resolution 1344, by a nonrecord vote, report the same to the House with the recommendation that the resolution be adopted.

SUMMARY OF PROVISIONS OF THE RESOLUTION

The resolution provides for consideration of H.R. 5116, the "America COMPETES Reauthorization Act of 2010," under a structured rule. The resolution waives all points of order against consideration of the bill except those arising under clause 9 or 10 of rule XXI. The resolution provides 1 hour of general debate equally divided and controlled by the chair and ranking minority member of the Committee on Science and Technology. The resolution provides that the amendment in the nature of a substitute recommended by the Committee on Science and Technology modified by the amendment printed in part A of this report shall be considered as an original bill for the purpose of amendment and shall be considered as read. The resolution waives all points of order against the amendment in the nature of a substitute except those arising under clause 10 of rule XXI. This waiver does not affect the point of order available under clause 9 of rule XXI (regarding earmark disclosure).

The resolution makes in order only those amendments printed in part B of this report, and the amendments en bloc described in section 3. The amendments made in order may be offered only in the order printed in this report, may be offered only by a Member designated in this report, shall be considered as read, shall be debatable for the time specified in this report equally divided and controlled by the proponent and an opponent, shall not be subject to amendment, and shall not be subject to a demand for division of

the question. All points of order against the amendments printed in part B of this report or amendments en bloc are waived except those arising under clause 9 or 10 of rule XXI.

The resolution provides that the chair of the Committee on Committee on Science and Technology or his designee may offer amendments en bloc consisting of amendments printed in part B of this report not earlier disposed of. Amendments en bloc shall be considered as read, shall be debatable for 40 minutes equally divided and controlled by the chair and ranking minority member of the Committee on Committee on Science and Technology or their designees, shall not be subject to amendment, and shall not be subject to a demand for division of the question. The original proponent of an amendment included in such amendments en bloc may insert a statement in the Congressional Record immediately before the disposition of the amendments en bloc.

The resolution provides one motion to recommit with or without instructions. The resolution provides that the Chair may entertain a motion that the Committee rise only if offered by the chair of the Committee on Science and Technology or his designee. Finally, the resolution provides that the Chair may not entertain a motion to strike out the enacting words of the bill.

EXPLANATION OF WAIVERS

Although the resolution waives all points of order against consideration of the bill (except for clauses 9 and 10 of rule XXI) and all points of order against the amendment in the nature of a substitute (except for clause 10 of rule XXI), the Committee is not aware of any points of order. The waivers of all points of order are prophylactic.

COMMITTEE VOTES

The results of each record vote on an amendment or motion to report, together with the names of those voting for and against, are printed below:

Rules Committee record vote No. 417

Date: May 11, 2010.

Measure: H.R. 5116.

Motion by: Mr. Dreier.

Summary of motion: To make in order and provide appropriate waivers for an amendment by Rep. Hall (TX), #66, which would replace section 701–703 of the bill to ensure funding in the bill gives priority to the recommendations in the National Academy of Sciences "Rising Above the Gathering Storm Report"; by (1) giving institutions serving the disabled and disabled veterans special consideration in the activities and programs supported by the Act and requires agencies to do outreach to veterans; and (2) giving veterans and service members preference in awarding scholarships and fellowships under the Act.

Results: Defeated 3–7.

Vote by Members: McGovern—Nay; Hastings (FL)—Nay; Matsui—Nay; Cardoza—Nay; Pingree—Nay; Polis—Nay; Dreier—Yea; Diaz-Balart, L.—Yea; Foxx—Yea; Slaughter—Nay.

Rules Committee record vote No. 418

Date: May 11, 2010.
Measure: H.R. 5116.
Motion by: Mr. Lincoln Diaz-Balart.
Summary of motion: To make in order and provide appropriate waivers for an amendment by Rep. Diaz-Balart, Mario (FL), #37, which would strike the last 2 years of the authorization and make it a 3-year reauthorization.
Results: Defeated 3–7.
Vote by Members: McGovern—Nay; Hastings (FL)—Nay; Matsui—Nay; Cardoza—Nay; Pingree—Nay; Polis—Nay; Dreier—Yea; Diaz-Balart, L.—Yea; Foxx—Yea; Slaughter—Nay.

Rules Committee record vote No. 419

Date: May 11, 2010.
Measure: H.R. 5116.
Motion by: Mr. Lincoln Diaz-Balart.
Summary of motion: To make in order and provide appropriate waivers for an amendment by Rep. Sessions (TX), #21, which would maintain FY 2011 authorization levels for FY 2012–2015 instead of increasing them annually.
Results: Defeated 3–7.
Vote by Members: McGovern—Nay; Hastings (FL)—Nay; Matsui—Nay; Cardoza—Nay; Pingree—Nay; Polis—Nay; Dreier—Yea; Diaz-Balart, L.—Yea; Foxx—Yea; Slaughter—Nay.

Rules Committee record vote No. 420

Date: May 11, 2010.
Measure: H.R. 5116.
Motion by: Dr. Foxx.
Summary of motion: To make in order and provide appropriate waivers for an amendment by Rep. Broun (GA), #42, which would strike from the bill the following: section 228 (NSF Prize Awards), section 406(b)–(c) (Manufacturing Extension Partnership Innovation Services Institute and Reports), section 407 (Bioscience Research Program), section 502 (Federal loan guarantees), section 503 (Regional Innovation Program), and subtitle C of title VI (Energy Innovation Hubs).
Results: Defeated 3–9.
Vote by Members: McGovern—Nay; Hastings (FL)—Nay; Matsui—Nay; Cardoza—Nay; Arcuri—Nay; Perlmutter—Nay; Pingree—Nay; Polis—Nay; Dreier—Yea; Diaz-Balart, L.—Yea; Foxx—Yea; Slaughter—Nay.

Rules Committee record vote No. 421

Date: May 11, 2010.
Measure: H.R. 5116.
Motion by: Dr. Foxx.
Summary of motion: To make in order and provide appropriate waivers for an amendment by Rep. Bachmann (MN), #54, which would clarify only American citizens are eligible to receive the financial support in section 5004 (Energy Applied Science Talent Expansion Program).
Results: Defeated 3–9.

Vote by Members: McGovern—Nay; Hastings (FL)—Nay; Matsui—Nay; Cardoza—Nay; Arcuri—Nay; Perlmutter—Nay; Pingree—Nay; Polis—Nay; Dreier—Yea; Diaz-Balart, L.—Yea; Foxx—Yea; Slaughter—Nay.

Rules Committee record vote No. 422

Date: May 11, 2010.
Measure: H.R. 5116.
Motion by: Dr. Foxx.
Summary of motion: To make in order and provide appropriate waivers for an amendment by Rep. Bilbray (CA), #64, which would provide that only companies enrolled in a federally approved electronic employment verification system are eligible for funding under the Act.
Results: Defeated 3–9.
Vote by Members: McGovern—Nay; Hastings (FL)—Nay; Matsui—Nay; Cardoza—Nay; Arcuri—Nay; Perlmutter—Nay; Pingree—Nay; Polis—Nay; Dreier—Yea; Diaz-Balart, L.—Yea; Foxx—Yea; Slaughter—Nay.

SUMMARY OF AMENDMENT IN PART A CONSIDERED AS ADOPTED

Strikes section 407 and excludes medical research from section 609.

SUMMARY OF AMENDMENTS IN PART B MADE IN ORDER

1. Gordon (TN): Would make technical and clarifying changes to the bill. Would also amend Section 243 ("Robert Noyce Teacher Scholarship Program") and Section 702 ("Persons with Disabilities), and add new Sections 412 ("Report On the Use of Modeling and Simulation") and Section 704 ("Budgetary Effects"), Section 705 ("Limitation"), and Section 706 ("Prohibition on Lobbying"), among other changes. (40 minutes)
2. Cardoza (CA): Would instruct the NIST Director to carry out a green manufacturing and construction initiative that develops an understanding of sustainability in manufacturing and shares that information with manufacturers so that they can adopt the best sustainable manufacturing practices. (10 minutes)
3. Matsui (CA): Would ensure that Smart Grid technologies are included in the list of research, development, demonstration, and commercial application activities that may be undertaken by a DOE Energy Innovation Hub. (10 minutes)
4. Matsui (CA): Would ensure that the development of new smart grid technologies are an important part of the Office of Science's research activities as it continues to strengthen its collaborations with the rest of DOE to accelerate the advancement of new energy technologies. (10 minutes)
5. Wu (OR): Would require ARPA–E to make awards designed to overcome the long-term and high-risk barriers relating to its goals and to facilitate submission, where possible by small businesses and entrepreneurs, of funding opportunities. (10 minutes)
6. Broun (GA): Would strike title V of the bill (Innovation). (10 minutes)
7. Boswell (IA), Michaud (ME): Would ensure that biomass technology systems and related courses are included in the list of fields

that would be encompassed by the energy systems science and engineering education programs. (10 minutes)

8. Davis, Danny K. (IL), Grijalva, Raul (AZ), Honda (CA), Kildee (MI): Would ensure that students enrolled in two-year, certificate, associate, or baccalaureate programs are eligible for STEM programs. It also would call for a report of agency approaches to increase minority participation in STEM careers. (10 minutes)

9. Kanjorski (PA): Would permit a Regional Innovation Center to use funding for interacting with the general public and state and local governments in order to meet the goals of the cluster. (10 minutes)

10. Markey, Edward (MA): Would establish a program to support the development and commercial application of clean energy technologies through a Clean Energy Consortium selected competitively by the Secretary of Energy. The Consortium would be regionally based and include research universities, national labs, industry, and other state and nongovernmental organizations with research or technology transfer expertise in clean energy technology. The Consortium would have a technology focus to which at least 50 percent of support would be directed. The grant to establish and operate the Consortium is for an amount not more than $10,000,000 per year and is for a period not to exceed 3 years. (10 minutes)

11. McCarthy, Carolyn (NY): Would ensure that any assessments and studies on improving emergency communications build upon conclusions made in existing reports on the matter. (10 minutes)

12. Miller, George (CA): Would require public institutions of higher education, with respect to employees who are represented by labor organizations and who work on activities or programs supported by this Act, to maintain a policy to respond to union information requests, for information to which the union is legally entitled, on a timely basis in order to be eligible to receive facilities and administrative costs provided by any of the funding sources authorized by this Act. Failure to comply with such a policy would result in suspension of payments to the institution for facilities and administrative costs until compliance is achieved. (10 minutes)

13. Reyes (TX), Connolly (VA): Would require the STEM coordinating committee under OSTP to describe the approaches that will be taken by each agency to conduct outreach designed to promote widespread public understanding of career opportunities in the STEM fields. It also requires the establishment and maintenance of a publicly accessible online database of all federally sponsored STEM education programs. (10 minutes)

14. Sanchez, Loretta (CA): Would include the membership of elementary school and secondary school administrator associations to the President's Advisory Committee on STEM Education. (10 minutes)

15. Bishop, Tim (NY): Would direct the National Institute of Standards and Technology to develop, or assist in the development of, reference materials, standards, instruments and measurement methods for nanomaterials and derived products. The amendment also calls on NIST to develop data to support the correlation of properties of nanomaterials to any environmental, health, or safety risks. (10 minutes)

16. Barrow (GA): Would require the inclusion of manufacturing education and training in the strategic plan developed by Federal agencies. (10 minutes)

17. Carney (PA): Would require the National Science Foundation to conduct outreach encouraging rural colleges and private sector entities in rural areas to participate in the internship grant program. (10 minutes)

18. Clarke (NY): Would ensure that STEM evidence-based education programs increase participation by women and underrepresented minority students. (10 minutes)

19. Cohen (TN): Would express a Sense of Congress, encouraging the incorporation of an engineering curriculum in K–12 schools. (10 minutes)

20. Cuellar (TX): Would direct the Director of the National Science Foundation to conduct outreach efforts to encourage applications from underrepresented groups. (10 minutes)

21. Gingrey (GA): Would direct the National Science Foundation to establish the Green Chemistry Basic Research and Development program and provide merit-based grants to support green chemistry applications. Green chemistry is chemistry that involves the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances, and it focuses on preventing pollution and waste from forming in the first place. (10 minutes)

22. Herseth Sandlin (SD): Would urge NSF to respond to the recommendations of the National Academy of Sciences and National Science and Technology Council regarding investments in facilities, and to make joint investments with the Department of Energy where possible. (10 minutes)

23. Holt (NJ), Kind (WI), Murphy, Scott (NY): Would require the Director of the White House Office of Science and Technology Policy to submit to Congress a national competitiveness and innovation strategy. The strategy must include suggested legislative and executive branch actions and a proposal for metric-based evaluation of improvements in U.S. competitiveness and innovation. (10 minutes)

24. Holt (NJ), Ehlers (MI): Would express the Sense of Congress that peer review is an important part of ensuring the integrity of scientific research and that in developing public access policies, the National Science and Technology working group established under this section should take into account the role of scientific publishers in the peer review process. (10 minutes)

25. Honda (CA): Would coordinate federal STEM education programs with the work being done by state-level PR–16 and P–20 councils to coordinate, integrate, and improve education throughout all grade levels and the common core standards being developed by the states by adding facilitating improved coordination between these efforts as one of the responsibilities of the Advisory Committee on STEM Education created in the bill. (10 minutes)

26. Issa (CA): Would strike Section 124, "Fulfilling the Potential of Academic Women in Academic Science and Engineering." (10 minutes)

27. Jackson-Lee (TX): Would require the STEM Industry Internship Program report to include an economic and ethnic breakdown of the participating students. (10 minutes)

28. Marshall (GA): Would direct the Office of Innovation and Entrepreneurship to consider the needs of rural communities and small businesses when strengthening the collaboration on and coordination of policies relating to innovation and commercialization of new technologies within the Department of Commerce and between the Department of Commerce and other Federal agencies. (10 minutes)

29. Michaud (ME): Would prioritize the needs of challenges of small businesses in the Regional Innovation Program's inter-agency collaboration. (10 minutes)

30. Michaud (ME): Would direct the Secretary to prioritize communities impacted by trade when awarding Regional Innovation Cluster grants. (10 minutes)

31. Michaud (ME): Requires the Advisory Committee on STEM Education to consider the needs of rural schools. (10 minutes)

32. Ruppersberger (MD): Would clarify the eligibility of the Noyce scholarship to include retired STEM professionals. (10 minutes)

33. Ruppersberger (MD): Would direct the Director of the National Science Foundation to use cyber-enabled-learning to create an innovative STEM workforce and/or to retrain and retain our current STEM workforce to address critical national and economic issues. (10 minutes)

34. Boccieri (OH), Schauer (MI), Davis, Lincoln (TN), Donnelly (IN): Would increase the authorization level for funding for Federal Loan Guarantees for Innovative Technologies in Manufacturing from $50 million to $100 million. (10 minutes)

35. Childers (MS): Would require the NIST Director to carry out a disaster resilient buildings and infrastructure program. (10 minutes)

36. Chu (CA): Would clarify that one purpose of the Innovation through Institutional Integration grant program is to help underrepresented students in STEM fields transition from 2-year institutions to 4-year institutions of higher education. (10 minutes)

37. Ellsworth (IN): Would ensure funds would not be used to purchase gift items, knickknacks, souvenirs, trinkets, or other items without direct educational value. (10 minutes)

38. Halvorson (IL): Would require the Director of the National Science Foundation to give consideration to the goal of promoting the participation of veterans in the postdoctoral research fellowship program established by section 246 (Postdoctoral research fellowships). (10 minutes)

39. Hare (IL): Would declare that it is the sense of Congress that when more than one applicant applies for STEM education programs or activities authorized under the COMPETES Act and are considered equal in merit, that the grant making authority shall give additional consideration to the applicant who has not previously received funding and those institutions of higher education in rural areas. (10 minutes)

40. Heinrich (NM): Would add science parks and federal laboratories as eligible recipients for the "Regional Innovation Program." (10 minutes)

41. Heinrich (NM): Would allow the Secretary of Energy to establish an online database of unclassified technologies and capabilities

available at national laboratories for the purpose of commercial application. (10 minutes)

42. Kissell, Larry (NC): Would require the Secretary to consider the amount of the obligation when determining application fees for the newly established Innovative Technologies in Manufacturing Loan Guarantee Program. (10 minutes)

43. Klein, Ron (FL): Would instruct the director of the Hollings Manufacturing Extension Partnership (MEP) within NIST to evaluate obstacles unique to small manufacturers that prevent them from effectively competing in the global market, and design a comprehensive plan to support MEP centers in meeting the needs of these small manufacturers. The director shall also work to facilitate greater collaboration between centers on small manufacturers' needs. (10 minutes)

44. Kratovil (MD), Connolly (VA): Would encourage employees of Federal agencies to volunteer in STEM education activities. (10 minutes)

45. McNerney (CA): Would add marine and hydrokinetic technology systems to the list of energy efficiency and renewable energy technology systems that would be included in the Department of Energy STEM education initiatives authorized under the section. (10 minutes)

46. Minnick (ID): Would require the President's Advisory Panel on STEM Education to coordinate with state and local workforce programs to better meet their needs. (10 minutes)

47. Moore, Gwen (WI): Would expand the bill's proposed climate and environmental science research of the Earth's atmosphere and biosphere to include the Great Lakes in addition to oceans. (10 minutes)

48. Murphy, Patrick (PA), Altmire (PA): Would include in the list of STEM education programs and activities at the Department of Energy a competitive grant program for colleges and universities, including 2 year colleges, to create or expand courses and degree programs in the areas of energy systems science and engineering. (10 minutes)

49. Perriello (VA): Would provide that the President's advisory committee on STEM can provide advice to Federal agencies including through the section 301 interagency committee. (10 minutes)

50. Quigley (IL), Flake, Jeff (AZ): Would express the sense of Congress that retaining graduate-level talent trained at American universities in STEM fields is critical to enhancing the competitiveness of American businesses. (10 minutes)

51. Salazar (CO): Would provide Department of Energy with the authority to conduct training for energy auditors, field technicians, and building contractors so they can understand and promote the use of renewable energy and energy efficiency technology. (10 minutes)

52. Schock (IL): Would instruct the Secretary of Commerce to give priority to innovation clusters that partner with local Workforce Investment Area Boards. (10 minutes)

53. Space (OH): Would instruct the Director of NIST to carry out a program to support research into transformational manufacturing. (10 minutes)

54. Titus (NV): Would clarify that both pre-service and in-service teacher training and professional development shall be considered

when identifying grand challenges in pre-K–12 STEM education. (10 minutes)

PART A—TEXT OF AMENDMENT TO BE CONSIDERED AS ADOPTED

Page 166, strike line 10 and all that follows through page 171, line 17.

Page 222, line 10, strike "or other purposes" and insert ", excluding medical research".

PART B—TEXT OF AMENDMENTS TO BE MADE IN ORDER

1. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE GORDON, BART OF TENNESSEE OR HIS DESIGNEE, DEBATABLE FOR 40 MINUTES

Page 94, line 10, strike "in the research" and insert "in research on the topic".

Page 102, lines 1 through 9, section 243 is amended to read as follows:

SEC. 243. ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM.

Section 10A(h)(1) of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1a(h)(1)) is amended to read as follows:

"(1) IN GENERAL.—An eligible entity receiving a grant under this section shall provide, from non-Federal sources, to carry out the activities supported by the grant—

"(A) in the case of grants in an amount of less than $1,500,000, an amount equal to at least 30 percent of the amount of the grant, at least one half of which shall be in cash; and

"(B) in the case of grants in an amount of $1,500,000 or more, an amount equal to at least 50 percent of the amount of the grant, at least one half of which shall be in cash.".

Page 123, line 13, strike "10 or more undergraduate STEM students" and insert "6 or more undergraduate STEM students for sites designated at primarily undergraduate institutions of higher education and 10 or more undergraduate STEM students for all other sites".

Page 126, line 9, insert ", except for institutions of higher education" after "private sector entities".

Page 131, lines 17 and 18, strike "teachers, administrators, local education agencies" and insert "teachers and administrators in both public and private schools, local educational agencies".

Page 135, line 13, strike "and".

Page 135, line 14, insert "and" after the semicolon.

Page 135, after line 14, insert the following new clause:

"(ix) carbon capture and sequestration science and engineering;".

Page 174, after line 13, insert the following:

SEC. 412. REPORT ON THE USE OF MODELING AND SIMULATION.

(a) IN GENERAL.—Within 1 year after the date of enactment of this Act, the Director shall submit a report to Congress examining the use of high-performance computational modeling and simulation by small- and medium-sized manufacturers.

(b) SPECIFIC REQUIREMENTS.—Such report shall include the following:

(1) An assessment of the current utilization of high-performance computational modeling and simulation by small- and medium-sized manufacturers.

(2) An examination of any barriers or challenges to the use of high-performance computational modeling and simulation by small- and medium-sized manufacturers, including—

(A) access to high-performance computing facilities and resources;

(B) the availability of software and other applications tailored to meet the needs of such manufacturers;

(C) appropriate expertise and training; and

(D) the availability of tools and other methods to understand and manage the costs and risks associated with transitioning to the use of computational modeling and simulation.

(3) Recommendations for addressing any barriers or challenges identified in paragraph (2) and, if appropriate, suggestions for action that the Federal Government may take to foster the development and utilization of high-performance computing resources by small- and medium-sized manufacturers.

(c) CONSULTATION.—In carrying out this section, the Director shall consult with the Office of Science and Technology Policy and with other relevant Federal agencies.

Page 175, line 16, strike "and advocating".

Page 180, strike line 13 and all that follows through line 20 and insert the following:

"(3) NOTIFICATION.—If the borrower defaults on an obligation, the Secretary shall notify the Attorney General of the default.".

Page 184, line 8, strike "ANNUAL" and insert "COMPTROLLER GENERAL".

Page 184, line 8, strike "The Comptroller General" and insert "The Comptroller General of the United States".

Page 184, line 9, strike "an annual" and insert "a biennial".

Page 194, strike line 20 and all that follows through page 195, line 6, and insert the following:

"(f) DEFINITIONS.—In this section:

"(1) REGIONAL INNOVATION CLUSTER.—The term 'regional innovation cluster' means a geographically bounded network of similar, synergistic, or complementary entities that—

"(A) are engaged in or with a particular industry sector;

"(B) have active channels for business transactions and communication;

"(C) share specialized infrastructure, labor markets, and services; and

"(D) leverage the region's unique competitive strengths to stimulate innovation and create jobs.

"(2) STATE.—The term 'State' means one of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or any other territory or possession of the United States.

Page 198, lines 13 and 14, strike "Department of Energy" and insert "Office of Science".

Page 219, lines 7 and 8, strike "Director" and insert "Secretary".

Page 229, line 7, strike "shall" and insert "may".

Page 231, lines 13 through 17, amend subparagraph (F) to read as follows:

(F) in paragraph (3)(B), as so redesignated by subparagraph (A) of this paragraph, by striking "not less than 70, and not more than 120," and inserting "not more than 120"; and

Page 232, line 1, strike "managers" and insert "directors".

Page 238, line 24, insert "In selecting consortia, the Secretary shall consider the information a consortium must disclose according to subsection (b), as well as any existing facilities a consortium will provide for Hub activities." after "selection processes.".

Page 245, lines 12 through 24, amend section 702 to read as follows:

SEC. 702. PERSONS WITH DISABILITIES.

For the purposes of the activities and programs supported by this Act and the amendments made by this Act—

(1) institutions of higher education chartered to serve large numbers of students with disabilities, including Gallaudet University, Landmark College, and the National Technical Institute for the Deaf, and institutions of higher education offering science, technology, engineering, and mathematics research and education activities and programs that serve veterans with disabilities, shall receive special consideration in the review of any proposals by these institutions for funding under the research and education programs authorized in this Act to ensure that institutions of higher education chartered to or serving persons with disabilities benefit from such research and education activities and programs; and

(2) agencies with respect to which appropriations are authorized under this Act shall also conduct outreach to veterans with disabilities pursuing studies in science, technology, engineering, and mathematics to ensure that such veterans are aware of and benefit from the research and education activities and programs authorized by this Act.

Page 246, after line 8, insert the following new sections:

SEC. 704. BUDGETARY EFFECTS.

The budgetary effects of this Act, for the purpose of complying with the Statutory Pay-As-You-Go-Act of 2010, shall be determined by reference to the latest statement titled "Budgetary Effects of PAYGO Legislation" for this Act, submitted for printing in the Congressional Record by the Chairman of the House Budget Committee, provided that such statement has been submitted prior to the vote on passage.

SEC. 705. LIMITATION.

No funds authorized under this Act shall be used for the employment of, or shall be received by, any individual who has been convicted of, or pleaded guilty to, a crime of child molestation, rape, or any other form of sexual assault.

SEC. 706. PROHIBITION ON LOBBYING.

Nothing in this Act shall be construed to supercede section 1913 of title 18, United States Code.

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2. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE CARDOZA, DENNIS OF CALIFORNIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 174, after line 13, insert the following:

SEC. 412. GREEN MANUFACTURING AND CONSTRUCTION.

The Director shall carry out a green manufacturing and construction initiative to—

(1) develop accurate sustainability metrics and practices for use in manufacturing;

(2) advance the development of standards and the creation of an information infrastructure to communicate sustainability information about suppliers; and

(3) improve energy performance, service life, and indoor air quality of new and retrofitted buildings through validated measurement data.

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3. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MATSUI, DORIS OF CALIFORNIA OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 242, line 17, insert ", including through Smart Grid technologies" after "conventional technologies".

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4. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MATSUI, DORIS OF CALIFORNIA OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 215, line 11, insert ", including the development of smart grid technologies" after "efficiency programs".

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5. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE WU, DAVID OF OREGON OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 229, line 9, after "other transactions." insert "The Director shall make awards designed to overcome the long-term and high-risk barriers relating to the goals and means set forth in subsection (c) and facilitate submissions, where possible by small businesses and entrepreneurs, pursuant to announcements published not less frequently than annually, of funding opportunities for—

"(1) specific areas of technological innovation; and

"(2) broadly defined areas of science and technology,

to remain open for periods of one year.".

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6. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE BROUN, PAUL OF GEORGIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Strike title V.

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7. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE BOSWELL, LEONARD OF IOWA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 133, line 25, strike "and".
Page 134, after line 1, insert the following new clause:
"(vii) biomass technology systems; and".
Page 135, line 23, strike "and".
Page 135, after line 25, insert the following new clause:
"(vii) biomass technology systems; and".

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8. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE DAVIS, DANNY OF ILLINOIS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 69, line 18, insert ", disaggregated and cross-tabulated by race, ethnicity, and gender," after "subparagraph (B)".
Page 80, line 19, insert ", disaggregated and cross-tabulated by race, ethnicity, and gender" after "United States".
Page 86, after line 5, insert the following new subsection:
(c) REPORT.—Not later than one year after the date of enactment of this Act, the Director shall provide a report to Congress on institutional research partnerships identified in subsection (a) funded in the previous fiscal year.
Page 124, line 21, strike "undergraduate students" and insert "students enrolled in certificate, associate, or baccalaureate degree programs".
Page 128, line 21, strike "; and" and insert a semicolon.
Page 128, after line 25, insert the following new subparagraph:
(E) describe the approaches that will be taken by each agency to increase the participation of underrepresented minority groups in STEM studies and careers both for programs specifically designed to broaden participation and for all programs in general, including by providing for programs and activities that increase participation by individuals in these groups at all institutions, and by increasing the engagement of Historically Black Colleges and Universities and minority-serving institutions in the STEM education and outreach activities supported by the agencies; and
Page 149, after line 21, insert the following new section:

SEC. 305. NATIONAL ACADEMY OF SCIENCES REPORT ON STRENGTHENING THE CAPACITY OF 2-YEAR INSTITUTIONS OF HIGHER EDUCATION TO PROVIDE STEM OPPORTUNITIES.

Not later than 6 months after the date of enactment of this Act, the Office of Science and Technology Policy shall enter into a contract with the National Academy of Sciences to carry out a study evaluating the role of 2-year institutions of higher education as STEM educators, including in the preparation of students for direct entry into the STEM workforce and in preparation of students for transition into 4-year STEM degree programs, as well as the role of the Federal Government in helping 2-year institutions of higher

education build their capacity to be effective STEM educators. At a minimum, the report shall include—

(1) an evaluation of the current capacity of 2-year institutions of higher education to be effective STEM educators, including in the preparation of students for direct entry into the STEM workforce and for transition into 4-year STEM degree programs;

(2) a description of existing challenges to expanding opportunities for 2-year institutions of higher education to provide and enhance STEM learning and provide STEM degrees that prepare students well for direct entry into the STEM workforce or for transition into 4-year degree programs;

(3) identification and description of Federal programs that have successfully strengthened the capacity of 2-year institutions of higher education to provide and enhance STEM opportunities;

(4) a recommendation or recommendations regarding how Federal agencies should set priorities for supporting STEM education at 2-year institutions of higher education;

(5) a recommendation or recommendations regarding ways Federal agencies can provide increased opportunities for 2-year institutions of higher education to participate across their portfolios of STEM education and research programs, including—

(A) ways to engage 2-year institution of higher education faculty and students with research experiences;

(B) strategies for improving the curriculum and teaching of developmental mathematics given that many 2-year institutions of higher education provide remediation in mathematics and other STEM coursework; and

(C) enhancing the basic scientific laboratory infrastructure; and

(6) a recommendation or recommendations regarding the need for and appropriateness of new Federal programs in support of STEM education at 2-year institutions of higher education.

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9. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE KANJORSKI, PAUL OF PENNSYLVANIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 188, after line 25, insert the following:

"(H) Interacting with the public and State and local governments to meet the goals of the cluster.

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10. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MARKEY, EDWARD OF MASSACHUSETTS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 195, after line 11, insert the following new section:

SEC. 504. CLEAN ENERGY CONSORTIUM.

(a) PURPOSE.—The Secretary shall carry out a program to establish a Clean Energy Consortium to enhance the Nation's economic, environmental, and energy security by promoting commercial application of clean energy technology and ensuring that the United

States maintains a technological lead in the development and commercial application of state-of-the-art energy technologies. To achieve these purposes the program shall leverage the expertise and resources of the university and private research communities, industry, venture capital, national laboratories, and other participants in energy innovation to support collaborative, cross-disciplinary research and development in areas not being served by the private sector in order to develop and accelerate the commercial application of innovative clean energy technologies.

(b) DEFINITIONS.—For purposes of this section:

(1) CLEAN ENERGY TECHNOLOGY.—The term "clean energy technology" means a technology that—

(A) produces energy from solar, wind, geothermal, biomass, tidal, wave, ocean, and other renewable energy resources (as such term is defined in section 610 of the Public Utility Regulatory Policies Act of 1978);

(B) more efficiently transmits, distributes, or stores energy;

(C) enhances energy efficiency for buildings and industry, including combined heat and power;

(D) enables the development of a Smart Grid (as described in section 1301 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17381)), including integration of renewable energy resources and distributed generation, demand response, demand side management, and systems analysis;

(E) produces an advanced or sustainable material with energy or energy efficiency applications; or

(F) improves energy efficiency for transportation, including electric vehicles.

(2) CLUSTER.—The term "cluster" means a network of entities directly involved in the research, development, finance, and commercial application of clean energy technologies whose geographic proximity facilitates utilization and sharing of skilled human resources, infrastructure, research facilities, educational and training institutions, venture capital, and input suppliers.

(3) CONSORTIUM.—The term "Consortium" means a Clean Energy Consortium established in accordance with this section.

(4) PROJECT.—The term "project" means an activity with respect to which a Consortium provides support under subsection (e).

(5) QUALIFYING ENTITY.—The term "qualifying entity" means each of the following:

(A) A research university.

(B) A State or Federal institution with a focus on the advancement of clean energy technologies.

(C) A nongovernmental organization with research or technology transfer expertise in clean energy technology development.

(6) SECRETARY.—The term "Secretary" means the Secretary of Energy.

(7) TECHNOLOGY DEVELOPMENT FOCUS.—The term "technology development focus" means the unique clean energy technology or technologies in which a Consortium specializes.

(8) TRANSLATIONAL RESEARCH.—The term "translational research" means coordination of basic or applied research with technical applications to enable promising discoveries or inventions to achieve commercial application of energy technology.

(c) ROLE OF THE SECRETARY.—The Secretary shall—

(1) have ultimate responsibility for, and oversight of, all aspects of the program under this section;

(2) select a recipient of a grant for the establishment and operation of a Consortium through a competitive selection process;

(3) coordinate the innovation activities of the Consortium with those occurring through other Department of Energy entities, including the National Laboratories, the Advanced Research Projects Agency—Energy, Energy Innovation Hubs, and Energy Frontier Research Collaborations, and within industry, including by annually—

(A) issuing guidance regarding national energy research and development priorities and strategic objectives; and

(B) convening a conference of staff of the Department of Energy and representatives from such other entities to share research results, program plans, and opportunities for collaboration.

(d) ENTITIES ELIGIBLE FOR SUPPORT.—A consortium shall be eligible to receive support under this section if—

(1) it is composed of—

(A) 2 research universities with a combined annual research budget of $500,000,000; and

(B) 1 or more additional qualifying entities;

(2) its members have established a binding agreement that documents—

(A) the structure of the partnership agreement;

(B) a governance and management structure to enable cost-effective implementation of the program;

(C) a conflicts of interest policy consistent with subsection (e)(1)(B);

(D) an accounting structure that meets the requirements of the Department of Energy and can be audited under subsection (f)(4); and

(E) that it has an External Advisory Committee consistent with subsection (e)(3);

(3) it receives funding from States, consortium participants, or other non-Federal sources, to be used to support project awards pursuant to subsection (e);

(4) it is part of an existing cluster or demonstrates high potential to develop a new cluster; and

(5) it operates as a nonprofit organization.

(e) CLEAN ENERGY CONSORTIUM.—

(1) ROLE.—The Consortium shall support translational research activities leading to commercial application of clean energy technologies, in accordance with the purposes of this section, through issuance of awards to projects managed by qualifying entities and other entities meeting the Consortium's project criteria, including national laboratories. The Consortium shall—

(A) develop and make available to the public through the Department of Energy's Web site proposed plans, programs, project selection criteria, and terms for individual project awards under this subsection;

(B) establish conflict of interest procedures, consistent with those of the Department of Energy, to ensure that employees and designees for Consortium activities who are in decisionmaking capacities disclose all material conflicts of interest, including financial, organizational, and personal conflicts of interest;

(C) establish policies—

(i) to prevent resources provided to the Consortium from being used to displace private sector investment otherwise likely to occur, including investment from private sector entities that are members of the Consortium;

(ii) to facilitate the participation of private entities that invest in clean energy technologies to perform due diligence on award proposals, to participate in the award review process, and to provide guidance to projects supported by the Consortium; and

(iii) to facilitate the participation of parties with a demonstrated history of commercial application of clean energy technologies in the development of Consortium projects;

(D) oversee project solicitations, review proposed projects, and select projects for awards; and

(E) monitor project implementation.

(2) DISTRIBUTION OF AWARDS.—The Consortium, with prior approval of the Secretary, shall distribute awards under this subsection to support clean energy technology projects conducting translational research, provided that at least 50 percent of such support shall be provided to projects related to the Consortium's clean energy technology development focus. Upon approval by the Secretary, all remaining funds shall be available to support any clean energy technology projects conducting translational research.

(3) EXTERNAL ADVISORY COMMITTEE.—

(A) IN GENERAL.—The Consortium shall establish an External Advisory Committee, the members of which shall have extensive and relevant scientific, technical, industry, financial, or research management expertise. The External Advisory Committee shall review the Consortium's proposed plans, programs, project selection criteria, and projects and shall ensure that projects selected for awards meet the conflict of interest policies of the Consortium. External Advisory Committee members other than those representing Consortium members shall serve for no more than 3 years. All External Advisory Committee members shall comply with the Consortium's conflict of interest policies and procedures.

(B) MEMBERS.—The External Advisory Committee shall consist of—

(i) 5 members selected by the Consortium's research universities;

(ii) 2 members selected by the Consortium's other qualifying entities;

(iii) 2 members selected at large by other External Advisory Committee members to represent the entrepreneur and venture capital communities; and

(iv) 1 member appointed by the Secretary.

(4) CONFLICT OF INTEREST.—The Secretary may disqualify an application or revoke funds distributed to the Consortium if the Secretary discovers a failure to comply with conflict of interest procedures established under paragraph (1)(B).

(f) GRANT.—

(1) IN GENERAL.—The Secretary shall make a grant under this section in accordance with section 989 of the Energy Policy Act of 2005 (42 U.S.C. 16353). The Secretary shall award the grant, on a competitive basis, to 1 regional Consortium, for a term of 3 years.

(2) AMOUNT.—A grant under this subsection shall be in an amount not greater than $10,000,000 per fiscal year over the 3 years of the term of the grant.

(3) USE.—The grant distributed under this section shall be used exclusively to support project awards pursuant to subsection (e)(1) and (2), provided that the Consortium may use not more than 10 percent of the amount of such grant for its administrative expenses related to making such awards. The grant made under this section shall not be used for construction of new buildings or facilities, and construction of new buildings or facilities shall not be considered as part of the non-Federal share of a cost sharing agreement under this section.

(4) AUDIT.—The Consortium shall conduct, in accordance with such requirements as the Secretary may prescribe, an annual audit to determine the extent to which a grant distributed to the Consortium under this subsection, and awards under subsection (e), have been utilized in a manner consistent with this section. The auditor shall transmit a report of the results of the audit to the Secretary and to the Government Accountability Office. The Secretary shall include such report in an annual report to Congress, along with a plan to remedy any deficiencies cited in the report. The Government Accountability Office may review such audits as appropriate and shall have full access to the books, records, and personnel of the Consortium to ensure that the grant distributed to the Consortium under this subsection, and awards made under subsection (e), have been utilized in a manner consistent with this section.

(5) REVOCATION OF AWARDS.—The Secretary shall have authority to review awards made under this subsection and to revoke such awards if the Secretary determines that the Consortium has used the award in a manner not consistent with the requirements of this section.

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11. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MCCARTHY, CAROLYN OF NEW YORK OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 172, line 10, strike "and" after the semicolon.

Page 172, line 14, strike the period and insert "; and".
Page 172, after line 14, insert the following:

(3) incorporate and build upon existing reports and studies on improving emergency communications.

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12. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MILLER, GEORGE OF CALIFORNIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 246, after line 8, add the following new section:

SEC. 704. INFORMATION REQUESTS BY LABOR ORGANIZATIONS.

(a) ELIGIBILITY FOR FUNDS.—Notwithstanding any other provision of this Act, a public institution of higher education that employs employees who are represented by a labor organization and perform work on an activity or program supported by this Act or an amendment made by this Act shall be eligible to receive funding for facilities and administrative costs for any activity or program supported by this Act or the amendments made by this Act only if the institution maintains a policy that meets the requirements set forth in subsection (b).

(b) REQUIREMENTS.—A policy described under subsection (a) shall require that the institution provide, within 15 days of receipt of a request by a labor organization representing the employees of the institution described in subsection (a), any information which the labor organization has a lawful right to obtain under applicable labor laws. Such a policy shall provide that, on a case-by-case basis, such 15 days may be extended to a longer time period by mutual agreement of the labor organization and the institution.

(c) FAILURE TO COMPLY WITH POLICY.—

(1) COMPLAINT OF NONCOMPLIANCE.—In the case of an institution of higher education that does not provide information requested by a labor organization in compliance with the requirements of a policy described in subsections (a) and (b), the labor organization may file a complaint of noncompliance with the head of the agency overseeing any activity or program supported by this Act or the amendments made by this Act for which the institution is receiving funds.

(2) NOTIFICATION TO INSTITUTION.—Upon receiving such a complaint, the head of such agency shall notify the institution of the complaint and provide the institution an additional 30 days to provide the requested information to the labor organization or otherwise explain why the complaint of non-compliance is not valid.

(3) AGENCY ACTION.—If the information has not been provided by the institution at the conclusion of such 30 day period and the head of such agency determines the complaint to be valid, the head of such agency shall suspend payment of any funds for facilities and administrative costs that would otherwise be available to such institution for all activities and programs supported by this Act and the amendments made by this Act until such time as the requested information has been provided by the institution.

(d) DEFINITIONS.—For purposes of this section—

(1) the term "institution of higher education" has the meaning given such term in section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a)), except that such term does not include a private institution of higher education; and

(2) the term "facilities and administrative costs" means facilities and administrative (F&A) costs as defined in the Office of Management and Budget Revised Circular A–21 (Cost Principles for Educational Institutions, published in the Federal Register on May 10, 2004).

(e) EFFECTIVE DATE.—This section shall take effect on January 1, 2011.

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13. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE REYES, SILVESTRE OF TEXAS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 128, line 21, strike "; and" and insert a semicolon.
Page 128, after line 25, insert the following new subparagraph:

(E) describe the approaches that will be taken by each participating agency to conduct outreach designed to promote widespread public understanding of career opportunities in the STEM fields specific to the workforce needs of each agency, including outreach to women, Latinos, African-Americans, Native Americans, and other students from groups underrepresented in STEM;

Page 129, line 6, strike the period and insert "; and".
Page 129, after line 6, insert the following new paragraph:

(4) establish and maintain a publically accessible online database of all federally sponsored STEM education programs and activities at all levels and for all audiences, including students, teachers, and the general public.

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14. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE SANCHEZ, LORETTA OF CALIFORNIA OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 131, line 6, redesignate paragraph (1) as paragraph (2).
Page 131, line 7, redesignate paragraph (2) as paragraph (3).
Page 131, line 9, redesignate paragraph (3) as paragraph (4).
Page 131, line 10, redesignate paragraph (4) as paragraph (5).
Page 131, line 12, redesignate paragraph (5) as paragraph (6).
Page 131, line 13, redesignate paragraph (6) as paragraph (7).
Page 131, after line 5, insert the following:

(1) Elementary school and secondary school administrator associations.

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15. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE BISHOP, TIMOTHY OF NEW YORK OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 174, after line 13, insert the following:

SEC. 412. NANOMATERIAL INITIATIVE.

The Director shall carry out a nanomaterial research initiative to—

(1) develop reference materials for nanomaterials and derived products to be used in benchmarking toxicity, calibrating instruments, and facilitating laboratory comparisons;

(2) assist in the development of international documentary standards relating to nanomaterials;

(3) develop instruments and measurement methods to determine the physical and chemical properties of nanomaterials; and

(4) gather and develop data to support the correlation of physical and chemical properties of nanomaterials to any environmental, safety, or other risks.

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16. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE BARROW, JOHN OF GEORGIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 58, line 16, strike "and".

Page 58, line 22, strike the period and insert "; and".

Page 58, after line 22, insert the following new subparagraph:

(D) describe how the Federal agencies supporting manufacturing research and development will strengthen all levels of manufacturing education and training programs to ensure an adequate, well-trained workforce.

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17. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE CARNEY, CHRISTOPHER OF PENNSYLVANIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 125, after line 23, insert the following new subsection (and redesignate the subsequent subsections accordingly):

(c) OUTREACH TO RURAL COMMUNITIES.—The Foundation shall conduct outreach to institutions of higher education and private sector entities in rural areas to encourage those entities to participate in partnerships under this section.

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18. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE CLARK, YVETTE OF NEW YORK OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 137, line 3, insert "including by women and underrepresented minority students," after "and participation,".

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19. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE COHEN, STEVE OF TENNESSEE OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 149, after line 21, insert the following new section:

SEC. 305. SENSE OF CONGRESS.

It is the Sense of Congress that—

(1) in order to maintain our Nation's competitiveness, we must improve the quality of STEM education in the Nation;

(2) the incorporation of engineering education at the elementary and secondary levels has the potential to improve student learning and achievement in science and mathematics, and to increase the technological literacy of all students;

(3) formal and informal educational providers, including K–12 schools, should integrate engineering design principles into their curriculum; and

(4) exposing elementary and secondary students to engineering education can expand students' understanding of engineering and their awareness of career opportunities in these fields.

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20. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE CUELLAR, HENRY OF TEXAS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 101, after line 2,1 insert the following new subsection:

(e) OUTREACH.—In carrying out the program under this section, the Director shall conduct outreach efforts to encourage applications from underrepresented groups.

Page 106, after line 12, insert the following new subsection:

(g) OUTREACH.—In carrying out the program under this section, the Director shall conduct outreach efforts to encourage applications from underrepresented groups.

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21. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE GINGREY, PHIL OF GEORGIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 98, after line 4, insert the following new section:

SEC. 229. GREEN CHEMISTRY BASIC RESEARCH.

The Director shall establish a Green Chemistry Basic Research program to award competitive, merit-based grants to support research into green and sustainable chemistry which will lead to clean, safe, and economical alternatives to traditional chemical products and practices. The research program shall provide sustained support for green chemistry research, education, and technology transfer through—

(1) merit-reviewed competitive grants to individual investigators and teams of investigators, including, to the extent practicable, young investigators, for research;

(2) grants to fund collaborative research partnerships among universities, industry, and nonprofit organizations;

(3) symposia, forums, and conferences to increase outreach, collaboration, and dissemination of green chemistry advances and practices; and

(4) education, training, and retraining of undergraduate and graduate students and professional chemists and chemical engineers, including through partnerships with industry, in green chemistry science and engineering.

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22. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HERSETH SANDLIN, STEPHANIE OF SOUTH DAKOTA OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 98, after line 4, insert the following new section:

SEC. 229. COLLABORATION IN PLANNING FOR STEWARDSHIP OF LARGE-SCALE FACILITIES.

It is the sense of Congress that the Foundation should, in its planning for construction and stewardship of large facilities, coordinate and collaborate with other Federal agencies, including the De-

partment of Energy's Office of Science, to ensure that joint investments may be made when practicable. In particular, the Foundation should ensure that it responds to recommendations by the National Academy of Sciences and working groups convened by the National Science and Technology Council regarding such facilities and opportunities for partnership with other agencies in the design and construction of such facilities. For facilities in which research in multiple disciplines will be possible, the Director should include multiple units within the Foundation during the planning process.

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23. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HOLT, RUSH OF NEW JERSEY OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

At the end of subtitle C of title I, insert the following:

SEC. 125. NATIONAL COMPETITIVENESS AND INNOVATION STRATEGY.

Not later than one year after the date of the enactment of this Act, the Director of the White House Office of Science and Technology Policy shall submit to Congress and the President a national competitiveness and innovation strategy for strengthening the innovative and competitive capacity of the Federal Government, State and local governments, institutions of higher education, and the private sector that includes—

(1) proposed legislative changes and action;

(2) proposed actions to be taken collectively by executive agencies, including White House offices;

(3) proposed actions to be taken by individual executive agencies, including White House offices; and

(4) a proposal for metrics-based monitoring and oversight of the progress of the Federal Government with respect to improving conditions for the innovation occuring in and the competitiveness of the United States.

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24. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HOLT, RUSH OF NEW JERSEY OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 62, after line 2, insert the following new subsection:

(f) SENSE OF CONGRESS REGARDING PEER REVIEW.—It is the sense of Congress that peer review is an important part of the process of ensuring the integrity of the record of scientific research, and that the National Science and Technology Council working group established under this section should take into account the role that scientific publishers play in the peer review process.

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25. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HONDA, MICHAEL OF CALIFORNIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 132, line 7, strike "and".

Page 132, line 12, strike the period at the end and insert "; and".

Page 132, after line 12, insert the following:

(5) facilitating improved coordination between federally supported STEM education programs and activities and State

level activities, including the efforts of P–16 and P–20 councils in the States.

(d) DEFINITIONS.—For purposes of this section:

(1) P–16.—The term "P–16" refers to a system of education that encompasses preschool through undergraduate level education.

(2) P–20.—The term "P–20" refers to a system of education that encompasses preschool through graduate level education.

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26. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE ISSA, DARRELL OF CALIFORNIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 62, line 3, through page 69, line 21, strike section 124.

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27. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE JACKSON LEE, SHEILA OF TEXAS OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 126, line 14, strike "and".

Page 126, line 16, strike the period and insert the following: ", and an economic and ethnic breakdown of the participating students."

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28. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MARSHALL, JIM OF GEORGIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 176, line 6, strike "within" insert the following: ", including those focused on the needs of small businesses and rural communities, within".

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29. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MICHAUD, MICHAEL OF MAINE OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 194, strike lines 1 through 4 and insert the following:

"(2) COLLABORATION.—

"(A) IN GENERAL.—The Secretary shall explore and pursue collaboration with other Federal agencies, including through multiagency funding opportunities, on regional innovation strategies.

"(B) SMALL BUSINESSES.—The Secretary shall ensure that such collaboration with Federal agencies prioritizes the needs and challenges of small businesses.".

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30. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MICHAUD, MICHAEL OF MAINE OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 191, after line 5, insert the following:

"(C) SPECIAL CONSIDERATION.—The Secretary shall give special consideration to applications from regions that contain communities negatively impacted by trade.

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31. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MICHAUD, MICHAEL OF MAINE OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 131, line 22, insert before the semicolon the following: ", including the unique needs of schools in rural areas".

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32. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE RUPPERSBERGER, C. A. "DUTCH" OF MARYLAND OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 102, line 3, insert "(a) MATCHING REQUIREMENT.—" before "Section 10A".

Page 102, after line 9, insert the following new subsection:

(b) RETIRING STEM PROFESSIONALS.—Section 10A of the National Science Foundation Authorization Act of 2002 (42 U.S.C. 1862n–1a) is amended in subsection (a)(2)(A) by inserting "including retiring professionals in those fields," after "mathematics professionals,".

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33. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE RUPPERSBERGER, C. A. "DUTCH" OF MARYLAND OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 127, after line 13, insert the following new section:

SEC. 256. CYBER-ENABLED LEARNING FOR NATIONAL CHALLENGES.

The Director shall, in consultation with appropriate Federal agencies, identify ways to use cyber-enabled learning to create an innovative STEM workforce and to help retrain and retain our existing STEM workforce to address national challenges, including national security and competitiveness.

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34. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE BOCCIERI, JOHN OF OHIO OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 187, line 8, strike "$50,000,000" and insert "$100,000,000".

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35. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE CHILDERS, TRAVIS OF MISSISSIPPI OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 174, after line 13, insert the following:

SEC. 412. DISASTER RESILIENT BUILDINGS AND INFRASTRUCTURE.

(a) ESTABLISHMENT.—The Director shall carry out a disaster resilient buildings and infrastructure program.

(b) REAL-SCALE STRUCTURES.—As part of the program, the Director shall—

(1) develop the capability to test real-scale structures under realistic fire and structural loading conditions; and

(2) assist in the validation of predictive models by developing a database on the performance of large-scale structures under realistic fire and structural loading conditions.

(c) DATABASE.—As part of the program, the Director shall develop a database on the performance of the built environment during natural and man-made hazard events.

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36. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE CHU, JUDY OF CALIFORNIA OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 103, line 22, insert ", including from a 2-year to a 4-year institution" after "to another".

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37. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE ELLSWORTH, BRAD OF INDIANA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 246, after line 8, insert the following new section:

SEC. 704. LIMITATION.

No funds authorized to be appropriated by this Act or the amendments made by this Act may be used to purchase gift items, knick-knacks, souvenirs, trinkets, or other items without direct educational value.

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38. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HALVORSON, DEBORAH OF ILLINOIS OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 106, line 3, strike "CONSIDERATIONS.—In" and insert "CONSIDERATIONS.—

(1) IN GENERAL.—In".

Page 106, line 8, insert "and veterans" after "1885b)".

Page 106, after line 8, insert the following new paragraph:

(2) DEFINITION.—For purposes of this subsection, the term "veteran" means a person who—

(A) served on active duty (other than active duty for training) in the Armed Forces of the United States for a period of more than 180 consecutive days, and who was discharged or released therefrom under conditions other than dishonorable; or

(B) served on active duty (other than active duty for training) in the Armed Forces of the United States and was discharged or released from such service for a service-connected disability before serving 180 consecutive days.

For purposes of subparagraph (B), the term "service-connected" has the meaning given such term under section 101 of title 38, United States Code.

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39. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HARE, PHIL OF ILLINOIS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 149, after line 21, insert the following new section:

SEC. 305. SENSE OF CONGRESS.

For science, technology, engineering, and mathematics (STEM) education programs or activities authorized under this Act or amendments made by this Act, it is the sense of Congress that

when more than 1 applicant is competing for the same grant and the applications from each applicant are considered equal in merit by the grant-awarding authority, the grant-awarding authority shall give additional consideration to any of the following:

(1) An applicant that has not previously received funding.

(2) An applicant that is an institution of higher education in a rural area.

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40. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HEINRICH, MARTIN OF NEW MEXICO OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 189, line 11, strike "partnership" and insert "partnership, a science park, a Federal laboratory".

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41. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE HEINRICH, MARTIN OF NEW MEXICO OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 245, after line 2, insert the following:

Subtitle E—Technology Transfer Database

SEC. 651. TECHNOLOGY TRANSFER DATABASE.

To support the commercial application of new energy technologies development by the Department of Energy, the Secretary of Energy may establish an online database of technologies, capabilities, and resources available to the public at the National Laboratories.

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42. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE KISSELL, LARRY OF NORTH CAROLINA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 182, after line 18, insert the following:

"(3) LIMITATION.—In charging and collecting fees under paragraph (1), the Secretary shall take into consideration the amount of the obligation.

Page 183, after line 22, insert the following (and redesignate subsequent paragraphs accordingly):

"(2) criteria that the Secretary shall use to determine the amount of any fees charged under subsection (j), including criteria related to the amount of the obligation;

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43. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE KLEIN, RON OF FLORIDA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 166, after line 9, insert the following new subsection:

(g) EVALUATION OF OBSTACLES UNIQUE TO SMALL MANUFACTURERS.—Section 25 of such Act (15 U.S.C. 278k) is further amended by adding after subsection (i), as added by subsection (f), the following:

"(j) EVALUATION OF OBSTACLES UNIQUE TO SMALL MANUFACTURERS.—The Director shall—

"(1) evaluate obstacles that are unique to small manufacturers that prevent such manufacturers from effectively competing in the global market;

"(2) implement a comprehensive plan to train the Centers to address such obstacles; and

"(3) facilitate improved communication between the Centers to assist such manufacturers in implementing appropriate, targeted solutions to such obstacles.".

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44. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE KRATOVIL, JR., FRANK, OF MARYLAND OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 149, after line 21, insert the following new section:

SEC. 305. ENCOURAGING FEDERAL SCIENTISTS AND ENGINEERS TO PARTICIPATE IN STEM EDUCATION.

Not later than 6 months after the date of enactment of this Act, the Director of the Office of Science and Technology Policy, in consultation with the Department of Education, shall develop a policy to—

(1) increase volunteerism in STEM education activities by encouraging scientists and engineers from Federal science agencies conducting nonmilitary scientific research and development, including scientists and engineers of the federally funded research and development centers supported by those agencies, to volunteer in STEM education activities, and by providing administrative support for such scientists and engineers to engage in such volunteerism; and

(2) support increased communication and partnerships between scientists and engineers from Federal science agencies conducting nonmilitary scientific research and development, including scientists and engineers of the federally funded research and development centers supported by those agencies, and elementary and secondary schools and teachers through volunteerism in STEM education activities.

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45. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MCNERNEY, JERRY OF CALIFORNIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 133, line 25, strike "and".

Page 133, after line 25, insert the following new clause:

"(vi) marine and hydrokinetic technology systems; and

Page 135, line 23, strike "and".

Page 135, after line 23, insert the following new clause:

"(vi) marine and hydrokinetic technology systems; and

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46. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MINNICK, WALT OF IDAHO OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 132, line 7, strike "and".

Page 132, line 12, strike the period and insert "; and".

Page 132, after line 12, insert the following new paragraph:

(5) providing advice to Federal agencies on how their STEM technical training and education programs can be better aligned with the workforce needs of States and regions.

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47. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MOORE, GWEN OF WISCONSIN OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 208, line 13, insert "and the Great Lakes" after "including oceans".

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48. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE MURPHY, PATRICK OF PENNSYLVANIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 138, line 5, strike "and".

Page 138, line 9, strike the period at the end and insert "; and".

Page 138, after line 9, insert the following:

(6) competitive grants for institutions of higher education (as defined under section 101(a) of the Higher Education Act of 1965 (20 U.S.C. 1001(a))), including 2-year institutions of higher education, to establish or expand degree programs or courses in energy systems science and engineering.

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49. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE PERRIELLO, THOMAS OF VIRGINIA OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 132, line 3, insert ", including through the interagency committee established under section 301," after "Federal agencies".

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50. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE QUIGLEY, MIKE OF ILLINOIS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 127, after line 13, insert the following new section:

SEC. 256. SENSE OF CONGRESS.

It is the sense of Congress that retaining graduate-level talent trained at American universities in Science, Technology, Engineering, and Mathematics (STEM) fields is critical to enhancing the competitiveness of American businesses.

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51. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE SALAZAR, JOHN OF COLORADO OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 138, line 5, strike "and".

Page 138, line 9, strike the period and insert "; and".

Page 139, after line 9, insert the following new paragraph:

"(6) professional training for energy auditors, field technicians, and building contractors, in the areas of building energy retrofits and audits or related renewable energy technology installations.".

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52. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE SCHOCK, AARON OF ILLINOIS OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 191, after line 5, insert the following new paragraph (and redesignate subsequent paragraphs accordingly):

"(5) SPECIAL CONSIDERATION.—The Secretary shall give special consideration to an eligible recipient who agrees to collaborate with local workforce investment area boards.

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53. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE SPACE, ZACHARY OF OHIO OR HIS DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 174, after line 13, insert the following:

SEC. 412. MANUFACTURING RESEARCH.

(a) IN GENERAL.—The Director shall carry out a program to support transformational manufacturing research.

(b) ACTIVITIES.—As part of such program, the Director shall—

(1) develop and disseminate measurement tools and capabilities for new additive manufacturing and robotics technologies and methods;

(2) establish new techniques and methods to efficiently generate and assemble products integrating nanoscale materials and devices; and

(3) carry out other research with significant transformational potential for manufacturing.

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54. AN AMENDMENT TO BE OFFERED BY REPRESENTATIVE TITUS, DINA OF NEVADA OR HER DESIGNEE, DEBATABLE FOR 10 MINUTES

Page 121, beginning on line 7, strike "STEM teacher professional development" and insert "pre-service and in-service STEM teacher training and professional development".

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