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ENERGIZING TECHNOLOGY TRANSFER ACT

AUGUST 19, 2022.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Ms. JOHNSON of Texas, from the Committee on Science, Space, and Technology, submitted the following

R E P O R T

[To accompany H.R. 4606]

The Committee on Science, Space, and Technology, to whom was referred the bill (H.R. 4606) to establish programs and authorities to facilitate the commercial application of clean energy and related technologies in the United States, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

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The amendment is as follows:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the "Energizing Technology Transfer Act".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

TITLE I—NATIONAL CLEAN ENERGY TECHNOLOGY TRANSFER PROGRAMS

Sec. 101. National clean energy incubator program.
Sec. 102. Clean energy technology university prize competition.
Sec. 103. Clean energy technology transfer coordination.

TITLE II—SUPPORTING TECHNOLOGY DEVELOPMENT AT THE NATIONAL LABORATORIES

Sec. 201. Lab partnering service pilot program.
Sec. 202. Lab-embedded entrepreneurship program.
Sec. 203. Small business voucher program.
Sec. 204. Entrepreneurial leave program.
Sec. 205. National laboratory employee outside employment authority.
Sec. 206. Signature authority.

TITLE III—DEPARTMENT OF ENERGY MODERNIZATION

Sec. 301. Office of technology transitions.
Sec. 302. Management of demonstration projects.
Sec. 303. Streamlining prize competitions.
Sec. 304. Cost-share waiver extension.
Sec. 305. Special hiring authority for scientific, engineering, and project management personnel.
Sec. 306. Technology transfer reports and evaluation.

SEC. 2. DEFINITIONS.

In this Act:

(1) CLEAN ENERGY TECHNOLOGY.—The term "clean energy technology" means a technology that significantly reduces energy use, increases energy efficiency, reduces greenhouse gas emissions, reduces emissions of other pollutants, or mitigates other negative environmental consequences of energy production, transmission or use.

(2) DEPARTMENT.—The term "Department" means the Department of Energy.

(3) DIRECTOR.—The term "Director" means the Director of each National Laboratory and the Director of each Department of Energy single-purpose research facility.

(4) ECONOMICALLY DISTRESSED AREA.—The term "economically distressed area" has the meaning described in section 301(a) of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3161(a)).

(5) GRANT.—The term "grant" means a grant award, cooperative agreement award, or any other financial assistance arrangement that the Secretary of Energy determines to be appropriate.

(6) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given such term in the Higher Education Act of 1965, as amended (20 U.S.C. 1001).

(7) NATIONAL LABORATORY.—The term "National Laboratory" has the meaning given that term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

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

TITLE I—NATIONAL CLEAN ENERGY TECHNOLOGY TRANSFER PROGRAMS

SEC. 101. NATIONAL CLEAN ENERGY INCUBATOR PROGRAM.

(a) CLEAN ENERGY INCUBATOR DEFINED.—In this section, the term "clean energy incubator"—

(1) means any entity that is designed to accelerate the commercial application of clean energy technologies by providing—

(A) physical workspace, labs, and prototyping facilities to support clean energy startups or established clean energy companies; or

(B) companies developing such technologies with support, resources, and services, including—

(i) access to business education and counseling;

(ii) mentorship opportunities; and

(iii) other services rendered for the purpose of aiding the development and commercial application of a clean energy technology; and

(2) may include a program within or established by a National Laboratory, an institution of higher education or a State, local, or tribal government.

(b) PROGRAM ESTABLISHMENT.—Not later than 180 days after the enactment of this Act, the Secretary, acting through the Chief Commercialization Officer established in section 1001(a) of the Energy Policy Act of 2005 (42 U.S.C. 16391(a)), shall establish a Clean Energy Incubator Program (herein referred to as the "program") to competitively award grants to clean energy incubators.

(c) CLEAN ENERGY INCUBATOR SELECTION.—In awarding grants to clean energy incubators under subsection (b), the Secretary shall, to the maximum extent practicable, prioritize funding clean energy incubators that—

(1) partner with entities that carry out activities relevant to the activities of such incubator and that operate at the local, State, and regional levels;

(2) support the commercial application activities of startup companies focused on physical hardware, computational, or integrated hardware and software technologies;

(3) are located in geographically diverse regions of the United States;

(4) are located in, or partner with entities located in, economically-distressed areas;

(5) support the development of entities focused on expanding clean energy tools and technologies to rural, Tribal, and low-income communities;

(6) support the commercial application of technologies being developed by clean energy entrepreneurs from underrepresented backgrounds; and

(7) have a plan for sustaining activities of the incubator after grant funds received under this program have been expended.

(d) AWARD LIMITS.—The Secretary shall not award more than $4,000,000 to one or more incubators in one given State, per fiscal year.

(e) DURATION.—Each grant under subsection (b) shall be for a period of no longer than 5 years, subject to the availability of appropriations.

(f) USE OF FUNDS.—An entity receiving a grant under this section may use grant amounts for operating expenses.

(g) RENEWAL.—An award made to a clean energy incubator under this section may be renewed for a period of not more than 3 years, subject to merit review.

(h) EVALUATION.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation of the program established under this section that includes analyses of the performance of the clean energy incubators.

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section $15,000,000 for each of fiscal years 2022 through 2026.

SEC. 102. CLEAN ENERGY TECHNOLOGY UNIVERSITY PRIZE COMPETITION.

(a) DEFINITIONS.—In this section:

(1) ELIGIBLE ENTITY.—The term "eligible entity" means a nonprofit entity, an institution of higher education, or an entity working with one or more institutes of higher education.

(2) MINORITY-SERVING INSTITUTION.—The term "minority-serving institution" means an institution described in section 371(a) of the Higher Education Act of 1965 (20 U.S.C. 1067q(a)).

(b) IN GENERAL.—The Secretary shall establish a program, known as the "Clean Energy Technology University Prize", to award funding for eligible entities to carry out regional and one national clean energy technology prize competitions, under section 24 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3719). In carrying out such prize competitions, students shall compete to develop a business model for furthering the commercial application of an innovative clean energy technology.

(c) TRAINING FUNDING.—In carrying out this program, the Secretary may provide funding to train participating students in skills needed for the successful commercial application of clean energy technologies, including through virtual training sessions.

(d) PRIORITIZATION.—In awarding grants under this section, the Secretary shall prioritize awarding grants to eligible entities that work with students at minority-serving institutions.

(e) COORDINATION.—In carrying out this program, the Secretary shall coordinate and partner with other clean energy technology prize competitions. In doing so, the Secretary may develop and disseminate best practices for administering prize competitions under this section.

(f) REPORT.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the progress and implementation of the program established under section (b).

(g) EVALUATION.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation on the long-term outcomes of the program established under this section and the progress towards achieving the purposes of the program in subsection (b).

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $1,000,000 for each of fiscal years 2022 through 2026.

SEC. 103. CLEAN ENERGY TECHNOLOGY TRANSFER COORDINATION.

(a) IN GENERAL.—The Secretary, acting through the Chief Commercialization Officer established in section 1001 (a) of the Energy Policy Act of 2005 (42 U.S.C. 16391 (a)), shall support the coordination of relevant technology transfer programs that advance the commercial application of clean energy technologies nationally and across all energy sectors. In particular, the Secretary may support activities to—

(1) facilitate the sharing of information on best practices for successful operation of clean energy technology transfer programs;

(2) coordinate resources and improve cooperation among clean energy technology transfer programs;

(3) facilitate connections between entrepreneurs and start-up companies and the variety of programs related to clean energy technology transfer under the Department; and

(4) facilitate the development of metrics to measure the impact of clean energy technology transfer programs on—

(A) advancing the development, demonstration, and commercial application of clean energy technologies;

(B) increasing the competitiveness of United States in the clean energy sector, including in manufacturing; and

(C) commercial application of clean energy technologies being developed by entrepreneurs from under-represented backgrounds.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities in this section $3,000,000 for each of fiscal years 2022 through 2026.

TITLE II—SUPPORTING TECHNOLOGY DEVELOPMENT AT THE NATIONAL LABORATORIES

SEC. 201. LAB PARTNERING SERVICE PILOT PROGRAM.

Section 9002 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260) is amended by adding at the end the following:

"(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $2,000,000 for each of fiscal years 2022 through 2024 to carry out subsections (a), (b), and (c), and $1,700,000 for each of fiscal years 2022 through 2024 for National Laboratory employees to provide services under subsection (d).".

SEC. 202. LAB-EMBEDDED ENTREPRENEURSHIP PROGRAM.

(a) IN GENERAL.—The Secretary shall competitively award grants to National Laboratories for the purpose of establishing or supporting Lab-Embedded Entrepreneurship Programs.

(b) PURPOSES.—The purposes of such programs are to provide entrepreneurial fellows with access to National Laboratory research facilities, National Laboratory expertise, and mentorship to perform research and development and gain expertise that may be required or beneficial for the commercial application of research ideas.

(c) ENTREPRENEURIAL FELLOWS.—An entrepreneurial fellow participating in a program described in subsection (a) shall be provided with—

(1) opportunities for entrepreneurial training, professional development, and exposure to leaders from academia, industry, government, and finance who may serve as advisors to or partners of the fellow;

(2) financial and technical support for research, development, and commercial application activities;

(3) fellowship awards to cover costs of living, health insurance, and travel stipends for the duration of the fellowship; and

(4) any other resources determined appropriate by the Secretary.

(d) PROGRAM ACTIVITIES.—Each National Laboratory that receives funding under this section shall support entrepreneurial fellows by providing—

(1) access to facilities and expertise within the National Laboratory;

(2) engagement with external stakeholders; and
(3) market and customer development opportunities.

(e) ADMINISTRATION.—National Laboratories that receive grants under this section shall prioritize the support and success of the entrepreneurial fellow with regards to professional development and development of a relevant technology.

(f) PARTNERSHIPS.—In carrying out a Lab-Embedded Entrepreneurship Program, a National Laboratory may partner with an external entity, including—
(1) a nonprofit organization;
(2) an institution of higher education;
(3) a federally-owned corporation; or
(4) a consortium of 2 or more entities described in paragraphs (1) through (3).

(g) METRICS.—The Secretary shall support the development of short-term and long-term metrics to assess the effectiveness of programs receiving a grant under subsection (a) in achieving the purposes of the program in subsection (a).

(h) EVALUATION.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), not later than 3 years after the date of the enactment of this Act, and every 3 years thereafter, the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation of the effectiveness of the programs under subsection (a) based on the metrics developed pursuant to subsection (g).

(i) COORDINATION.—The Secretary shall oversee the planning and coordination of grants under subsection (a) and shall identify and disseminate best practices for achieving the purposes of subsection (a) to National Laboratories that receive grants under this section.

(j) INTERAGENCY COLLABORATION.—The Secretary shall collaborate with other executive branch agencies, including the Department of Defense and other agencies with Federal laboratories, regarding opportunities to partner with National Laboratories receiving a grant under subsection (a).

(k) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $25,000,000 for each of fiscal years 2022 through 2026.

SEC. 203. SMALL BUSINESS VOUCHER PROGRAM.

Section 1003 of the Energy Policy Act of 2005 (42 U.S.C. 16393) is amended—

(1) in subsection (a)—

(A) in the matter preceding paragraph (1), by striking ", and may require the Director of a single-purpose research facility," and inserting "(as defined in section 2) and the Director of each single-purpose research facility";

(B) in paragraph (1)—

(i) by striking "increase" and inserting "encourage"; and

(ii) by striking "collaborative research," and inserting "research, development, demonstration, and commercial application activities, including product development,";

(C) in paragraph (2), by striking "procurement and collaborative research" and inserting "the activities described in paragraph (1)";

(D) in paragraph (3)—

(i) by inserting "facilities," before "training"; and

(ii) by striking "procurement and collaborative research activities" and inserting "the activities described in paragraph (1)"; and

(E) in paragraph (5), by striking "for the program under subsection (b)" and inserting "and metrics for the programs under subsections (b) and (c)";

(2) by redesignating subsections (c) and (d) as subsections (d) and (e), respectively;

(3) by inserting after subsection (b) the following:

"(c) SMALL BUSINESS VOUCHER PROGRAM.—

"(1) DEFINITIONS.—In this subsection:

"(A) DIRECTOR.—The term 'Director' means—

"(i) the Director of each National Laboratory; and

"(ii) the Director of each single-purpose research facility.

"(B) NATIONAL LABORATORY.—The term 'National Laboratory' has the meaning given the term in section 2.

"(C) PROGRAM.—The term 'program' means the program established under paragraph (2).

"(D) SMALL BUSINESS CONCERN.—The term 'small business concern' has the meaning given such term in section 3 of the Small Business Act (15 U.S.C. 632).

"(2) ESTABLISHMENT.—The Secretary, acting through the Chief Commercialization Officer appointed under section 1001(a), and in consultation with the

Directors, shall establish a program to provide small business concerns with vouchers under paragraph (3)—

"(A) to achieve the goal described in subsection (a)(1); and

"(B) to improve the products, services, and capabilities of small business concerns in the mission space of the Department.

"(3) VOUCHERS.—Under the program, the Directors are authorized to provide to small business concerns vouchers to be used at National Laboratories and single-purpose research facilities for—

"(A) research, development, demonstration, technology transfer, or commercial application activities; or

"(B) any other activities that the applicable Director determines appropriate.

"(4) EXPEDITED APPROVAL.—The Secretary, working with the Directors, shall establish a stream-lined approval process for financial assistance agreements signed between—

"(A) small business concerns selected to receive a voucher under the program; and

"(B) the National Laboratories and single-purpose research facilities.

"(5) COST-SHARING REQUIREMENT.—In carrying out the program, the Secretary shall require cost-sharing in accordance with section 988.

"(6) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the progress and implementation of the small business voucher program established under this section, including the number and locations of small businesses that received grants under this program."; and

(4) in subsection (e) (as so redesignated), by striking "for activities under this section" and inserting "for activities under subsection (b)" and inserting before the period at the end "and for activities under subsection (c) $25,000,000 for each of fiscal years 2022 through 2026".

SEC. 204. ENTREPRENEURIAL LEAVE PROGRAM.

(a) IN GENERAL.—The Secretary shall delegate to Directors the authority to carry out an entrepreneurial leave program (referred to in this section as the "program") to allow National Laboratory employees to take a full leave of absence from their position, with the option to return to that or a comparable position up to 3 years later, or a partial leave of absence, to advance the commercial application of energy and related technologies relevant to the mission of the Department.

(b) TERMINATION AUTHORITY.—Directors shall retain the authority to terminate National Laboratory employees that participate in the program if such employees are found to violate terms prescribed by the National Laboratory at which such employee is employed.

(c) LICENSING.—To reduce barriers to participation in the program, the Secretary shall delegate to the Directors the requirement to establish streamlined mechanisms for facilitating the licensing of technology that is the focus of National Laboratory employees who participate in the program.

(d) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the utilization of this authority at National Laboratories, including the number of employees who participate in this program at each National Laboratory and the number of employees who take a permanent leave from their positions at National Laboratories as a result of participating in this program.

(e) FEDERAL ETHICS.—Nothing in this section shall affect existing Federal ethics rules applicable to Federal personnel.

SEC. 205. NATIONAL LABORATORY EMPLOYEE OUTSIDE EMPLOYMENT AUTHORITY.

(a) IN GENERAL.—The Secretary shall delegate to Directors of National Laboratories the authority to allow their employees—

(1) to engage in outside employment, including start-up companies based on licensing technologies developed at National Laboratories and consulting in their areas of expertise, and receive compensation from such entities; and

(2) to engage in outside activities related to their areas of expertise at the National Laboratory and may allow employees, in their employment capacity at such outside employment, to access the National Laboratories under the same contracting mechanisms as non-Laboratory employees and entities, in accordance with appropriate conflict of interest protocols.

(b) REQUIREMENTS.—If a Director elects to use the authority granted by subsection (a) of this section, the Director, or their designee, shall—

(1) require employees to disclose to and obtain approval from the Director or their designee prior to engaging in any outside employment;

(2) develop and require appropriate conflict of interest protocols for employees that engage in outside employment; and

(3) maintain the authority to terminate employees engaging in outside employment if they are found to violate terms, including conflict of interest protocols, mandated by the Director.

(c) ADDITIONAL RESTRICTIONS.—Employees engaging in outside employment may not—

(1) allow such activities to interfere with or impede their duties at the National Laboratory;

(2) engage in activities related to outside employment using National Laboratory government equipment, property, or resources, unless such activities are performed under National Laboratory contracting mechanisms, such as Cooperative Research and Development Agreements or Strategic Partnership Projects, whereby all conflicts of interest requirements apply; or

(3) use their position at a National Laboratory to provide an unfair competitive advantage to an outside employer or start-up activity.

(d) FEDERAL ETHICS.—Nothing in this section shall affect existing Federal ethics rules applicable to Federal personnel.

SEC. 206. SIGNATURE AUTHORITY.

(a) IN GENERAL.—Subject to subsections (b) and (c), the Secretary shall delegate to Directors of the National Laboratories signature authority with respect to any agreement described in subsection (b) the total cost of which, including the National Laboratory contributions and project recipient cost share, is less than $1,000,000, if such an agreement falls within the scope of—

(1) the strategic plan for the National Laboratory or a master scope of work that has been approved by the Department; or

(2) the most recent budget approved by Congress for Department activities to be carried out by the National Laboratory.

(b) AGREEMENTS.—Subsection (a) applies to—

(1) a cooperative research and development agreement;

(2) a strategic partnership project;

(3) prize competitions;

(4) an agreement for commercializing technology; or

(5) any other agreement determined to be appropriate by the Secretary, in collaboration with the Directors of the National Laboratories.

(c) ADMINISTRATION.—

(1) ACCOUNTABILITY.—The Director of the affected National Laboratory and the affected contractor shall carry out an agreement under this section in accordance with applicable policies of the Department, including by ensuring that the agreement does not compromise any national security, economic, or environmental interest of the United States.

(2) CERTIFICATION.—The Director of the affected National Laboratory and the affected contractor shall certify that each activity carried out under a project for which an agreement is entered into under this section does not present, or minimizes, any apparent conflict of interest, and avoids or neutralizes any actual conflict of interest, as a result of the agreement under this section.

(3) AVAILABILITY OF RECORDS.—Not later than 30 days after the date on which a Director of a National Laboratory enters an agreement under this section, such Director shall submit to the Secretary for monitoring and review all records of the National Laboratory relating to the agreement.

(d) APPROVAL.—Upon granting the signature authority under in subsection (a), the Secretary may not require any additional reviews or approvals of draft agreements, statements of work, or other documents for agreements that meet the criteria under subsection (a).

(e) EXCEPTION.—This section does not apply to any agreement with a foreign-controlled entity or entity under the majority control of any foreign entity.

(f) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall submit annually information on the number and types of agreements signed using the authorities granted under this section.

(g) EVALUATION.—Not later than 3 years after the enactment of this Act the Secretary shall submit to the Committee on Science, Space, and Technology Committee of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation of the efficacy of reducing administrative burden for agreements signed using the authorities granted under this section.

(h) CONFORMING AMENDMENT.—Section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a) is amended—

(1) in subsection (a)—

(A) by redesignating paragraphs (1) and (2) as subparagraphs (A) and (B), respectively, and indenting the subparagraphs appropriately;

(B) by striking "Each Federal agency" and inserting the following:

"(1) IN GENERAL.—Except as provided in paragraph (2), each Federal agency"; and

(C) by adding at the end the following:

"(2) EXCEPTION.—Notwithstanding paragraph (1), in accordance with section 206 of the Energizing Technology Transfer Act, approval by the Secretary of Energy shall not be required for any agreement proposed to be entered into by a National Laboratory of the Department of Energy, the total cost of which, including the National Laboratory contributions and project recipient cost share, is less than $1,000,000."; and

(2) in subsection (b), by striking "subsection (a)(1)" each place it appears and inserting "subsection (a)(1)(A)".

TITLE III—DEPARTMENT OF ENERGY MODERNIZATION

SEC. 301. OFFICE OF TECHNOLOGY TRANSITIONS.

Section 1001(a) of the Energy Policy Act of 2005 (42 U.S.C. 16391) is amended by adding at the end the following:

"(6) HIRING AND MANAGEMENT.—To carry out the program authorized in this section, the Under Secretary for Science may appoint personnel using the authorities in section 305 of the Energizing Technology Transfer Act.

"(7) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $20,000,000 for each of fiscal years 2022 through 2026.".

SEC. 302. MANAGEMENT OF DEMONSTRATION PROJECTS.

(a) MANAGEMENT OF DEPARTMENT OF ENERGY DEMONSTRATION PROJECTS.—The Secretary, shall establish a program to conduct project management and oversight of demonstration projects that receive or are eligible to receive funding from the Department, in coordination with relevant staff from Department program offices, including the Office of Technology Transitions, the Loan Program Office, and all applied program offices. The purposes of this program are to—

(1) conduct evaluation of demonstration project proposals prior to selection of a project for funding;

(2) conduct independent oversight of the execution of a demonstration project once funding has been awarded for such project; and

(3) ensure a balanced portfolio of investments in clean energy technology demonstration projects.

(b) DEMONSTRATION PROJECT MANAGEMENT EMPLOYEES.—

(1) AUTHORITY.—In carrying out the program under subsection (a), the Under Secretary for Science shall appoint at least 4 full time employees to achieve the purposes of the program outlined in subsection (a) in coordination with relevant staff at Department program offices.

(2) HIRING AUTHORITY.—To carry out the program authorized in this section, the Under Secretary for Science may hire personnel using the authorities in section 305 of this Act.

(c) DUTIES.—In carrying out the program in subsection (a), employees under this section shall work with relevant staff from Department program offices to—

(1) evaluate demonstration project proposals, including the scope, technical specifications, maturity of design, funding profile, estimated costs, proposed schedule, proposed technical and financial milestones, and potential for commercial success based on economic and policy projections;

(2) develop independent cost estimates of demonstration project proposals, when appropriate;

(3) recommend to the director of a program office whether to fund a demonstration project proposal;

(4) oversee the execution of the demonstration projects that receive funding from the Department under this section and conduct reviews of ongoing projects, which may include reconciling estimated costs as compared to actual costs and evaluating progress of the project based on the proposed schedule and technical and financial milestones, and provide such reviews to the Secretary; and

(5) assess lessons learned and implement improvements to evaluate and oversee demonstration projects carried out under this section.

(d) ADDITIONAL AUTHORITY.—The Secretary may carry out and manage demonstration projects directly through the program established in subsection (a).

(e) PROJECT TERMINATION.—Should an ongoing demonstration project receive an unfavorable review under subsection (c)(4), the director of a Department program office or their designee may cease funding the demonstration project and reallocate the remaining funds to new or existing demonstration projects carried out by that program office.

(f) COORDINATION.—In establishing and carrying out the program, the Secretary shall coordinate with project management and acquisition management entities within the Department, including the Office of Project Management, and relevant professional organizations in project management, construction, cost estimation, and other relevant fields.

(g) REPORTING.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the utilization of the authority granted under this section, including—

(1) a summary of any demonstration projects currently being carried out under this section; and

(2) the reviews under subsection (c)(4) of any ongoing demonstration projects carried out under this section.

(h) EVALUATION BY COMPTROLLER GENERAL.—Not later than 3 years after the date of the enactment of this Act the Comptroller General shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation on the operation of the program established under this section, including—

(1) the processes and procedures used to evaluate demonstration project proposals and oversee demonstration projects that receive funding under this section;

(2) any recommended changes to the program, including the structure and the processes and procedures used to evaluate and oversee demonstration projects that receive funding under this section; and

(3) any recommended changes to the structure of this program to improve the success in meeting the program purposes under subsection (a).

SEC. 303. STREAMLINING PRIZE COMPETITIONS.

(a) REPORTING.—Section 1008 of the Energy Policy Act of 2005 (42 U.S.C. 16396) is amended by adding at the end the following:

"(h) REPORT.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on a description of any prize competitions carried out using the authority under this section, the total amount of prizes awarded along with any private sector contributions, the methods used for solicitation and evaluation, and a description of how each prize competition advanced the mission of the Department.".

(b) TECHNICAL AMENDMENT.—Section 1008 of the Energy Policy Act of 2005 (42 U.S.C. 16396) is amended by redesignating the second subsection (e) (relating to authorization of appropriations) as subsection (f).

SEC. 304. COST-SHARE WAIVER EXTENSION.

(a) IN GENERAL.—Section 988 of the Energy Policy Act of 2005 (42 U.S.C. 16351) is amended in subsection (b)(4)(B) by striking "this paragraph" and inserting "the Energizing Technology Transfer Act".

(b) REPORT.—Section 108(b) of the Department of Energy Research and Innovation Act is amended in subsection (b) by striking "this Act" each place it appears and inserting "the Energizing Technology Transfer Act".

SEC. 305. SPECIAL HIRING AUTHORITY FOR SCIENTIFIC, ENGINEERING, AND PROJECT MANAGEMENT PERSONNEL.

(a) IN GENERAL.—The Under Secretary for Science shall have the authority to—

(1) make appointments of not more than 60 scientific, engineering, and professional personnel, without regard to civil service laws, to assist the Department in meeting specific project or research needs;

(2) fix the basic pay of any employee appointed under this section at a rate to be determined by the Under Secretary at rates not in excess of Level II of the Executive Schedule (EX–II) under section 5311 of title 5, United States Code without regard to the civil service laws; and

(3) pay any employee appointed under this section payments in addition to basic pay, except that the total amount of additional payments paid to an employee under this subsection for any 12-month period shall not exceed the lesser of the following amounts:

(A) $25,000.

(B) The amount equal to 25 percent of the annual rate of basic pay of that employee.

(C) The amount of the limitation that is applicable for a calendar year under section 5307(a)(1) of title 5, United States Code.

(b) TERM.—

(1) IN GENERAL.—The term of any employee appointed under this section shall not exceed 3 years unless otherwise authorized in law.

(2) TERMINATION.—The Under Secretary for Science shall have the authority to terminate any employee appointed under this section at any time based on performance or changing project or research needs of the Department.

SEC. 306. TECHNOLOGY TRANSFER REPORTS AND EVALUATION.

Section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260) is amended as follows:

"(a) ANNUAL REPORT.—As part of the updated technology transfer execution plan required each year under section 1001(h)(2) of the Energy Policy Act of 2005 (42 U.S.C. 16391(g)(2)), the Secretary of Energy (in this section referred to as the 'Secretary') shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report on the progress and implementation of programs established under sections 9001, 9002, 9003, 9004, and 9005 of this Act and under sections 102, 203, 204, 205, 206, and 302 of the Energizing Technology Transfer Act.

"(b) EVALUATION.—Not later than 3 years after the enactment of this Act and every 3 years thereafter the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation on the extent to which programs established under sections 9001, 9002, 9003, 9004, and 9005 of this Act and sections 101, 102, 103, and 202 of the Energizing Technology Transfer Act are achieving success based on relevant short-term and long-term metrics.".

II. PURPOSE OF THE BILL

The purpose of the Energizing Technology Transfer Act (H.R. 4606), sponsored by Rep. Deborah Ross (D–NC) and cosponsored by Rep. Peter Meijer (R–MI), is to establish programs and authorities to facilitate the commercial application of clean energy and related technologies in the United States.

III. BACKGROUND AND NEED FOR THE LEGISLATION

Investment in innovation is key to ensuring a strong economic recovery from crises like the ongoing COVID–19 pandemic. Innovation is often measured in several intersecting ways. For example, the annual Bloomberg Innovation Index relies on a combination of factors to calculate a country's level of innovation, including patent activity, manufacturing output, and density of high-tech companies. While the United States has made significant investments in all of these areas, it ranked 9th globally on the Bloomberg Innovation Index in January 2020.

Federal programs to improve U.S. innovation can take many forms. In April 2019, the National Institute on Standards and Technology published a report outlining existing barriers to and recommendations for improving American innovation and U.S. economic competitiveness. The recommendations included supporting entrepreneurship programs at federal R&D agencies, enhancing access to federal technologies, facilities, and resources, and expanding federal partnership mechanisms. These and other technology transfer activities supported by federal agencies can help further the commercialization of research investments.

While federal investments in innovation are crucial for the commercialization of technologies in a variety of sectors, energy technologies face unique obstacles to successful commercialization.

Such barriers include high up-front capital costs, long development times, and the need to displace incumbent technologies. Therefore, federal programs dedicated to furthering the development of clean energy technologies are essential to securing a clean energy future.

The DOE Office of Technology Transitions (OTT), established in 2015, is DOE's primary investment in technology transfer activities. The mission of the office is "to expand the commercial impact of the Department of Energy's research and development portfolio to advance the economic, energy, and national security interests of the Nation". In 2018, the Technology-to-Market program under the Office of Energy Efficiency and Renewable Energy was incorporated into OTT, making OTT the central office for all matters relating to technology transfer and commercialization at DOE.

DOE national laboratories are home to a wide range of innovative discoveries. OTT works with the national laboratories to support efforts to commercialize DOE RD&D investments by administering several technology transfer programs, including the Lab Partnering Service, which provides online and interpersonal services to facilitate information sharing about national laboratory resources, facilities, expertise, and Intellectual Property.

Previously administered programs under the Technology-to-Market program include: the National Incubator Initiative for Clean Energy (NIICE), which fostered coordination and collaboration amongst U.S. clean energy technology incubators and is now overseen by the Electric Power Research Institute; the Small Business Voucher Program, which enabled small businesses to have greater access to DOE national laboratory facilities and expertise; and the Clean Technology University Prize Competition, which administered a university prize competition for clean energy technology business models.

IV. Committee Hearings

Pursuant to House rule XIII, clause 3, the Committee designates the following hearings as having been used to develop or consider the legislation:

On July 17, 2020, the Subcommittee on Energy held a legislative hearing entitled *From Lab to Market: Accelerating our Progress Toward Economic Recovery and a Clean Energy Future.* The hearing examined technology transfer activities at the Department of Energy (DOE) and their potential contributions to economic recovery from the COVID–19 pandemic. It was discussed how the draft Energizing Technology Transfer Act would authorize a series of activities for DOE to support and administer programs to accelerate the commercialization of clean energy and other technologies relevant to the mission of DOE, including those developed at the national laboratories, and to modernize the management and administration of demonstration projects and prize competitions, among other activities.

WITNESSES

- Ms. Jetta Wong, President, JLW Advising and Former Director, Office of Technology Transitions, U.S. Department of Energy
- Ms. Jennifer States, Director for Blue Economy, DNV GL and Project Director, Washington Maritime Blue

• Ms. Farah Benahmed, Climate and Energy Policy Advisor, Third Way
• Dr. Emily Reichert, Chief Executive Officer, Greentown Labs
• Dr. Lee Cheatham, Director of Technology Deployment and Outreach, Pacific Northwest National Laboratory

On May 19th, 2021, in a hearing entitled *Accelerating Discovery: The Future of Scientific Computing at the Department of Energy*, the Subcommittee on Energy held a legislative hearing that examined the scientific computing capabilities stewarded by the Office of Science's Advanced Scientific Computing Research (ASCR) program. This included technology transfer activities, and how to better ensure job creation and public-private partnerships.

WITNESSES

• Dr. J. Stephen Binkley, Acting Director, Office of Science, Department of Energy
• Dr. Georgia Tourassi, Director, National Center for Computational Sciences at Oak Ridge National Laboratory
• Dr. Karen Willcox, Director, Oden Institute for Computational Engineering and Sciences at The University of Texas at Austin
• Dr. Christopher Monroe, Co-Founder and Chief Scientist, IonQ, Inc.
• Dr. Seny Kamara, Associate Professor, Brown University

V. Committee Consideration and Votes

The Committee on Science, Space, and Technology met to consider H.R. 4606 on July 27, 2021.

Chairwoman Johnson offered an amendment in the nature of a substitute to make technical corrections and conforming changes. *The amendment was agreed to by a voice vote.*

Chairwoman Johnson moved that the Committee favorably report the bill, H.R. 4606, as amended, to the House of Representatives with the recommendation that the bill be approved. *The motion was agreed to by a voice vote.*

VI. Summary of Major Provisions of the Bill

The Energizing Technology Transfer Act (H.R. 4606) would authorize a series of activities related to clean energy technology commercialization nationally and at the national laboratories, as well as reforms for DOE management and administration of demonstration projects and prize competitions, among other activities.

VII. Section-by-Section Analysis (by Title and Section)

Sec. 1. Short title; Table of Contents. "Energizing Technology Transfer Act"

Sec. 2. Definitions

Title I—National clean energy technology transfer programs

Sec. 101. National Clean Energy Incubator Program. Authorizes a program to support incubators that accelerate the commercial application of clean energy technologies by providing a physical workspace or support, such as business education and mentorship to clean energy technology startups or companies. Awards authorized

under this section are limited to $4 million per state for one or more incubators, for a period of no longer than 5 years, with the option for a renewal of not more than 3 years.

Sec. 102. Clean Energy Technology University Prize Competition. Authorizes a prize competition for university students to develop a business model for furthering the commercial application of an innovative clean energy technology to encourage student interest in clean energy technology development in diverse regions of the U.S. This prioritizes funding entities that work with students at minority-serving institutions.

Section 103. Clean Energy Technology Transfer Coordination. Authorizes the Secretary of Energy to support the coordination of relevant technology transfer programs within the Department of Energy. Coordination activities described in this Section include information sharing, connecting entrepreneurs and startup companies to the variety of programs related to clean energy technology transfer under the Department of Energy, and the development of metrics to measure the impact of clean energy technology transfer programs.

Title II—Supporting technology development at the National Laboratories

Sec. 201. Lab partnering service pilot program. Authorizes funds for the Lab Partnering Service Pilot Program as authorized in Section 9002 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260).

Sec. 202. Lab-embedded Entrepreneurship Program. Authorizes a program to provide entrepreneurial fellows with access to national laboratory research facilities, expertise, and mentorship to assist with the commercial application of research ideas.

Sec. 203. Small Business Voucher Program. This section makes technical changes to Section 1003 of the Energy Policy Act of 2005 (42 U.S.C. 16393), which authorizes a program for the Secretary of Energy, in consultation with the Directors of the National Laboratories, to provide small businesses with vouchers to perform research, development, demonstration, technology transfer, or commercial application activities at the national laboratories.

Sec. 204. Entrepreneurial Leave Program. Authorizes the Secretary of Energy to delegate to the Directors of the National Laboratories the authority to carry out an entrepreneurial leave program, allowing national laboratory employees to take a leave of absence from their employment for up to 3 years to advance the commercial application of energy and related technologies relevant to the mission of the Department of Energy. This section requires the establishment of streamlined mechanisms for facilitating the licensing of technology that is the focus of an employee who participates in this program.

Sec. 205. National Laboratory Employee Outside Employment Authority. Authorizes the Secretary of Energy to delegate to the Directors of the National Laboratories the authority to allow their employees to engage in outside employment and consulting activities.

Sec. 206. Signature Authority. Directs the Secretary of Energy to delegate to the Directors of the National Laboratories the authority

to approve any agreements signed with the national laboratory that costs less than $1 million.

Title III—Department of Energy modernization

Sec. 301. Office of Technology Transitions. Amends Section 1001(a) of the Energy Policy Act of 2005 (42 U.S.C. 16391) to give the Under Secretary for Science the authority to appoint personnel using the authorities in section 305 of the Energizing Technology Transfer Act and authorizes funds for this section and the Office of Technology Transitions as authorized in Section 9001 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260).

Sec. 302. Management of Demonstration Projects. Directs the Secretary of Energy to establish a program to conduct project management and oversight of demonstration projects that receive or are eligible to receive funding from the Department of Energy. The purposes of the program are to conduct independent oversight of the execution of demonstration projects and ensure a balanced portfolio of investments in clean energy technology demonstration projects, among others.

Sec. 303. Streamlining Prize Competitions. Amends Section 1008 of the Energy Policy Act of 2005 (42 U.S.C. 16396) to add reporting requirements for prize competitions.

Sec. 304. Cost-Share Waiver Extension. Extends the cost-share waiver pilot program for non-profit institutions and institutions of higher education granted in Section 108 of the Department of Energy Research and Innovation Act by 2 years.

Sec. 305. Special Hiring Authority for Scientific, Engineering, and Project Management Personnel. Authorizes the Under Secretary for Science to make appointments for scientific, engineering, and professional personnel for a term of not more than 3 years.

Sec. 306. Technology Transfer Reports and Evaluation. This section updates reporting requirements as authorized in Section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260).

VIII. Cost Estimate

Pursuant to clause 3(c)(2) of rule XIII of the Rules of the House of Representatives, the Committee adopts as its own the estimate of new budget authority, entitlement authority, or tax expenditures or revenues contained in the cost estimate prepared by the Director of the Congressional Budget Office pursuant to section 402 of the Congressional Budget Act of 1974.

IX. Congressional Budget Office Cost Estimate

No CBO report at time of report filing.

X. Federal Mandates Statement

H.R. 4606 contains no unfunded mandates.

XI. Committee Oversight Findings and Recommendations

The Committee's oversight findings and recommendations are reflected in the body of this report.

XII. Statement on General Performance Goals and Objectives

Pursuant to clause (3)(c) of House rule XIII, the goals of H.R. 4606 are to provide guidance for and investment in the research and development activities of the Department of Energy.

XIII. Federal Advisory Committee Statement

No Federal Advisory Committees created in H.R. 4606.

XIV. Duplication of Federal Programs

Pursuant to clause 3(c)(5) of rule XIII of the Rules of the House of Representatives, the Committee finds that no provision of H.R. 4606 establishes or reauthorizes a program of the federal government known to be duplicative of another federal program, including any program that was included in a report to Congress pursuant to section 21 of Public Law 111–139 or the most recent Catalog of Federal Domestic Assistance.

XV. Earmark Identification

Pursuant to clause 9(e), 9(f), and 9(g) of rule XXI, the Committee finds that H.R. 4606 contains no earmarks, limited tax benefits, or limited tariff benefits.

XVI. Applicability to the Legislative Branch

The Committee finds that H.R. 4606 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

XVII. Statement on Preemption of State, Local, or Tribal Law

This bill is not intended to preempt any state, local, or tribal law.

XVIII. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italics, and existing law in which no change is proposed is shown in roman):

SECTION 9002 OF DIVISION Z OF THE CONSOLIDATED APPROPRIATIONS ACT, 2021

SEC. 9002. LAB PARTNERING SERVICE PILOT PROGRAM.

(a) Pilot Program.—

(1) In general.—The Secretary of Energy (in this section referred to as the "Secretary"), acting through the Chief Commercialization Officer established in section 1001(a) of the Energy Policy Act of 2005 (42 U.S.C. 16391(a)), shall establish a Lab Partnering Service Pilot Program (hereinafter in this section referred to as the "pilot program").

(2) PURPOSES.—The purposes of the pilot program are to provide services that encourage and support partnerships between the National Laboratories and public and private sector entities, and to improve communication of research, development, demonstration, and commercial application projects and opportunities at the National Laboratories to potential partners through the development of a website and the provision of services, in collaboration with relevant external entities, and to identify and develop metrics regarding the effectiveness of such partnerships.

(3) ACTIVITIES.—In carrying out this pilot program, the Secretary shall—

(A) conduct outreach to and engage with relevant public and private entities;

(B) identify and disseminate best practices for strengthening connections between the National Laboratories and public and private sector entities; and

(C) develop a website to disseminate information on—

(i) different partnering mechanisms for working with the National Laboratories;

(ii) National Laboratory experts and research areas; and

(iii) National Laboratory facilities and user facilities.

(b) METRICS.—The Secretary shall support the development of metrics, including conversion metrics, to determine the effectiveness of the pilot program in achieving the purposes in subsection (a) and the number and types of partnerships established between public and private sector entities and the National Laboratories compared to baseline data.

(c) COORDINATION.—In carrying out the activities authorized in this section, the Secretary shall coordinate with the Directors of (and dedicated technology transfer staff at) the National Laboratories, in particular for matchmaking services for individual projects, which should be led by the National Laboratories.

(d) FUNDING EMPLOYEE PARTNERING ACTIVITIES.—The Secretary shall delegate to the Directors of each National Laboratory and single-purpose research facility of the Department the authority to compensate National Laboratory employees providing services under this section.

(e) DURATION.—Subject to the availability of appropriations, the pilot program established in this section shall operate for not less than 3 years and may be built off an existing program.

(f) EVALUATION.—Not later than 6 months after the completion of this pilot program, the Secretary shall support the evaluation of the success of the pilot program in achieving the purposes in subsection (a) and shall submit the evaluation to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate. The assessment shall include analyses of the performance of the pilot program based on the metrics developed under subsection (b).

(g) DEFINITION.—In this section, the term "National Laboratory" has the meaning given such term in section 2(3) of the Energy Policy Act of 2005 (42 U.S.C. 15801(3)).

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $2,000,000 for each of fiscal years 2022 through 2024 to carry out subsections (a), (b), and (c), and $1,700,000 for each of fiscal years 2022 through 2024 for National Laboratory employees to provide services under subsection (d).

ENERGY POLICY ACT OF 2005

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TITLE IX—RESEARCH AND DEVELOPMENT

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Subtitle I—Research Administration and Operations

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SEC. 988. COST SHARING.

(a) APPLICABILITY.—Notwithstanding any other provision of law, in carrying out a research, development, demonstration, or commercial application program or activity that is initiated after the date of enactment of this section, the Secretary shall require cost-sharing in accordance with this section.

(b) RESEARCH AND DEVELOPMENT.—

(1) IN GENERAL.—Except as provided in paragraphs (2), (3), and (4) and subsection (f), the Secretary shall require not less than 20 percent of the cost of a research or development activity described in subsection (a) to be provided by a non-Federal source.

(2) EXCLUSION.—Paragraph (1) shall not apply to a research or development activity described in subsection (a) that is of a basic or fundamental nature, as determined by the appropriate officer of the Department.

(3) REDUCTION.—The Secretary may reduce or eliminate the requirement of paragraph (1) for a research and development activity of an applied nature if the Secretary determines that the reduction is necessary and appropriate.

(4) EXEMPTION FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS.—

(A) IN GENERAL.—Paragraph (1) shall not apply to a research or development activity performed by an institution of higher education or nonprofit institution (as defined in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703)).

(B) TERMINATION DATE.—The exemption under subparagraph (A) shall apply during the 2-year period beginning on the date of enactment of ⟦this paragraph⟧ *the Energizing Technology Transfer Act*.

(c) DEMONSTRATION AND COMMERCIAL APPLICATION.—

(1) IN GENERAL.—Except as provided in paragraph (2) and subsection (f), the Secretary shall require that not less than 50 percent of the cost of a demonstration or commercial application activity described in subsection (a) to be provided by a non-Federal source.

(2) REDUCTION OF NON-FEDERAL SHARE.—The Secretary may reduce the non-Federal share required under paragraph (1) if the Secretary determines the reduction to be necessary and appropriate, taking into consideration any technological risk relating to the activity.

(d) CALCULATION OF AMOUNT.—In calculating the amount of a non-Federal contribution under this section, the Secretary—

(1) may include allowable costs in accordance with the applicable cost principles, including—

(A) cash;

(B) personnel costs;

(C) the value of a service, other resource, or third party in-kind contribution determined in accordance with the applicable circular of the Office of Management and Budget;

(D) indirect costs or facilities and administrative costs; or

(E) any funds received under the power program of the Tennessee Valley Authority (except to the extent that such funds are made available under an annual appropriation Act); and

(2) shall not include—

(A) revenues or royalties from the prospective operation of an activity beyond the time considered in the award;

(B) proceeds from the prospective sale of an asset of an activity; or

(C) other appropriated Federal funds.

(e) REPAYMENT OF FEDERAL SHARE.—The Secretary shall not require repayment of the Federal share of a cost-shared activity under this section as a condition of making an award.

(f) EXCLUSIONS.—This section shall not apply to—

(1) a cooperative research and development agreement under the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.);

(2) a fee charged for the use of a Department facility; or

(3) an award under—

(A) the small business innovation research program under section 9 of the Small Business Act (15 U.S.C. 638); or

(B) the small business technology transfer program under that section.

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TITLE X—DEPARTMENT OF ENERGY MANAGEMENT

SEC. 1001. IMPROVED TECHNOLOGY TRANSFER OF ENERGY TECHNOLOGIES.

(a) OFFICE OF TECHNOLOGY TRANSITIONS.—

(1) ESTABLISHMENT.—There is established within the Department an Office of Technology Transitions (referred to in this section as the "Office").

(2) MISSION.—The mission of the Office shall be—

(A) to expand the commercial impact of the research investments of the Department; and

(B) to focus on commercializing technologies that support the missions of the Department, including reducing greenhouse gas emissions and other pollutants.

(3) GOALS.—

(A) IN GENERAL.—In carrying out the mission and activities of the Office, the Chief Commercialization Officer appointed under paragraph (4) shall, with respect to commercialization activities, meet all of the goals described in subparagraph (B).

(B) GOALS DESCRIBED.—The goals referred to in subparagraph (A) are the following:

(i) Reduction of greenhouse gas emissions and other pollutants.

(ii) Ensuring economic competitiveness.

(iii) Enhancement of domestic energy security and national security.

(iv) Enhancement of domestic jobs.

(v) Improvement of energy efficiency.

(vi) Any other goals to support the transfer of technology developed by Department-funded programs to the private sector, as consistent with missions of the Department.

(4) CHIEF COMMERCIALIZATION OFFICER.—

(A) IN GENERAL.—The Office shall be headed by an officer, who shall be known as the "Chief Commercialization Officer", and who shall report directly to, and be appointed by, the Secretary.

(B) PRINCIPAL ADVISOR.—The Chief Commercialization Officer shall be the principal advisor to the Secretary on all matters relating to technology transfer and commercialization.

(C) QUALIFICATIONS.—The Chief Commercialization Officer shall be an individual who, by reason of professional background and experience, is specially qualified to advise the Secretary on matters pertaining to technology transfer at the Department.

(D) DUTIES.—The Chief Commercialization Officershall oversee—

(i) the activities of the Technology Transfer Working Group established under subsection (b);

(ii) the expenditure of funds allocated for technology transfer within the Department;

(iii) the activities of each technology partnership ombudsman appointed under section 11 of the Technology Transfer Commercialization Act of 2000 (42 U.S.C. 7261c); and

(iv) efforts to engage private sector entities, including venture capital companies.

(5) COORDINATION.—In carrying out the mission and activities of the Office, the Chief Commercialization Officer shall coordinate with the senior leadership of the Department, other relevant program offices of the Department, National Laboratories, the Technology Transfer Working Group established under subsection (b), the Technology Transfer Policy Board, and other stakeholders (including private industry).

(6) HIRING AND MANAGEMENT.—To carry out the program authorized in this section, the Under Secretary for Science may appoint personnel using the authorities in section 305 of the Energizing Technology Transfer Act.

(7) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $20,000,000 for each of fiscal years 2022 through 2026.

(b) TECHNOLOGY TRANSFER WORKING GROUP.—The Secretary shall establish a Technology Transfer Working Group, which shall consist of representatives of the National Laboratories and single-purpose research facilities, to—

(1) coordinate technology transfer activities occurring at National Laboratories and single-purpose research facilities;

(2) exchange information about technology transfer practices, including alternative approaches to resolution of disputes involving intellectual property rights and other technology transfer matters; and

(3) develop and disseminate to the public and prospective technology partners information about opportunities and procedures for technology transfer with the Department, including opportunities and procedures related to alternative approaches to resolution of disputes involving intellectual property rights and other technology transfer matters.

(c) TECHNOLOGY COMMERCIALIZATION FUND.—The Secretary shall establish an Energy Technology Commercialization Fund, using 0.9 percent of the amount made available to the Department for applied energy research, development, demonstration, and commercial application for each fiscal year based on future planned activities and the amount of the appropriations for the fiscal year, to be used to provide matching funds with private partners to promote promising energy technologies for commercial purposes.

(d) TECHNOLOGY TRANSFER RESPONSIBILITY.—Nothing in this section affects the technology transfer responsibilities of Federal employees under the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701 et seq.).

(e) TECHNOLOGY COMMERCIALIZATION FUND.—

(1) ESTABLISHMENT.—The Secretary, acting through the Chief Commercialization Officer established in section 1001(a) of the Energy Policy Act of 2005 (42 U.S.C. 16391(a)), shall establish a Technology Commercialization Fund (hereafter referred to as the "Fund"), using nine-tenths of one percent of the amount of appropriations made available to the Department for applied energy research, development, demonstration, and commercial application for each fiscal year, to be used to provide, in accordance with the cost-sharing requirements under section 988, funds to private partners, including national

laboratories, to promote promising energy technologies for commercial purposes.

(2) APPLICATIONS.—

(A) CONSIDERATIONS.—The Secretary shall develop criteria for evaluating applications for funding under this section, which may include—

(i) the potential that a proposed technology will result in a commercially successful product within a reasonable timeframe; and

(ii) the relative maturity of a proposed technology for commercial application.

(B) SELECTIONS.—In awarding funds under this section, the Secretary may give special consideration to applications that involve at least one applicant that has participated in an entrepreneurial or commercialization training program, such as Energy Innovation Corps.

(f) ANNUAL REPORT.—The Secretary shall include in the annual report required under section 9007(a) of the Energy Act of 2020—

(1) description of the projects carried out with awards from the Fund for that fiscal year;

(2) each project's cost-share for that fiscal year; and

(3) each project's partners for that fiscal year.

(g) TECHNOLOGY COMMERCIALIZATION FUND REPORT.—

(1) IN GENERAL.—Not later than 1 year after the date of enactment of the Energy Act of 2020, the Secretary shall submit to the Committee on Science, Space, and Technology and Committee on Appropriations of the House of Representatives and the Committee on Energy and Natural Resources and Committee on Appropriations of the Senate a report on the current and recommended implementation of the Fund.

(2) CONTENTS.—The report under subparagraph (A) shall include—

(A) a summary, with supporting data, of how much Department program offices contribute to and use the Fund each year, including a list of current funding restrictions;

(B) recommendations on how to improve implementation and administration of the Fund; and

(C) an analysis on how to spend funds optimally on technology areas that have the greatest need and opportunity for commercial application, rather than spending funds at the programmatic level or under current funding restrictions.

(f) PLANNING AND REPORTING.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall submit to Congress a technology transfer execution plan.

(2) UPDATES.—Each year after the submission of the plan under paragraph (1), the Secretary shall submit to Congress an updated execution plan and reports that describe progress toward meeting goals set forth in the execution plan and the funds expended under subsection (c).

(g) ADDITIONAL TECHNOLOGY TRANSFER PROGRAMS.—The Secretary may develop additional programs to—

(1) support regional energy innovation systems;

(2) support clean energy incubators;

(3) provide small business vouchers;

(4) provide financial and technical assistance for entrepreneurial fellowships at national laboratories;

(5) encourage students, energy researchers, and national laboratory employees to develop entrepreneurial skillsets and engage in entrepreneurial opportunities;

(6) support private companies and individuals in partnering with National Laboratories; and

(7) further support the mission and goals of the Office.

* * * * * * *

SEC. 1003. SMALL BUSINESS ADVOCACY AND ASSISTANCE.

(a) SMALL BUSINESS ADVOCATE.—The Secretary shall require the Director of each National Laboratory[, and may require the Director of a single-purpose research facility,] *(as defined in section 2) and the Director of each single-purpose research facility* to designate a small business advocate to—

(1) [increase] *encourage* the participation of small business concerns, including socially and economically disadvantaged small business concerns (as defined in section 8(a)(4) of the Small Business Act (15 U.S.C. 637(a)(4))), in procurement, [collaborative research,] *research, development, demonstration, and commercial application activities, including product development,* technology licensing, and technology transfer activities conducted by the National Laboratory or single-purpose research facility;

(2) report to the Director of the National Laboratory or single-purpose research facility on the actual participation of small business concerns in [procurement and collaborative research] *the activities described in paragraph (1)* along with recommendations, if appropriate, on how to improve participation;

(3) make available to small business concerns *facilities,* training, mentoring, and information on how to participate in [procurement and collaborative research activities] *the activities described in paragraph (1)*;

(4) increase the awareness inside the National Laboratory or single-purpose research facility of the capabilities and opportunities presented by small business concerns; and

(5) establish guidelines [for the program under subsection (b)] *and metrics for the programs under subsections (b) and (c)* and report on the effectiveness of the program to the Director of the National Laboratory or single-purpose research facility.

(b) ESTABLISHMENT OF SMALL BUSINESS ASSISTANCE PROGRAM.—The Secretary shall require the Director of each National Laboratory, and may require the Director of a single-purpose research facility, to establish a program to provide small business concerns with—

(1) assistance directed at making the small business concerns more effective and efficient subcontractors or suppliers to the National Laboratory or single-purpose research facilities; or

(2) general technical assistance, the cost of which shall not exceed $10,000 per instance of assistance, to improve the products or services of the small business concern.

(c) SMALL BUSINESS VOUCHER PROGRAM.—

(1) DEFINITIONS.—In this subsection:

(A) DIRECTOR.—The term "Director" means—

(i) the Director of each National Laboratory; and

(ii) the Director of each single-purpose research facility.

(B) NATIONAL LABORATORY.—The term "National Laboratory" has the meaning given the term in section 2.

(C) PROGRAM.—The term "program" means the program established under paragraph (2).

(D) SMALL BUSINESS CONCERN.—The term "small business concern" has the meaning given such term in section 3 of the Small Business Act (15 U.S.C. 632).

(2) ESTABLISHMENT.—The Secretary, acting through the Chief Commercialization Officer appointed under section 1001(a), and in consultation with the Directors, shall establish a program to provide small business concerns with vouchers under paragraph (3)—

(A) to achieve the goal described in subsection (a)(1); and

(B) to improve the products, services, and capabilities of small business concerns in the mission space of the Department.

(3) VOUCHERS.—Under the program, the Directors are authorized to provide to small business concerns vouchers to be used at National Laboratories and single-purpose research facilities for—

(A) research, development, demonstration, technology transfer, or commercial application activities; or

(B) any other activities that the applicable Director determines appropriate.

(4) EXPEDITED APPROVAL.—The Secretary, working with the Directors, shall establish a stream-lined approval process for financial assistance agreements signed between—

(A) small business concerns selected to receive a voucher under the program; and

(B) the National Laboratories and single-purpose research facilities.

(5) COST-SHARING REQUIREMENT.—In carrying out the program, the Secretary shall require cost-sharing in accordance with section 988.

(6) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the progress and implementation of the small business voucher program established under this section, including the number and locations of small businesses that received grants under this program.

[(c)**]** *(d)* USE OF FUNDS.—None of the funds expended under subsection (b) may be used for direct grants to small business concerns.

[(d)**]** *(e)* AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary **[**for activities under this section**]** *for activities under subsection (b)* $5,000,000 for each of fiscal years 2006 through 2008 *and for activities under subsection (c) $25,000,000 for each of fiscal years 2022 through 2026*.

* * * * * * *

SEC. 1008. PRIZES FOR ACHIEVEMENT IN GRAND CHALLENGES OF SCIENCE AND TECHNOLOGY.

(a) AUTHORITY.—The Secretary may carry out a program to award cash prizes in recognition of breakthrough achievements in research, development, demonstration, and commercial application that have the potential for application to the performance of the mission of the Department.

(b) COMPETITION REQUIREMENTS.—The program under subsection (a) may include prizes for the achievement of goals articulated by the Secretary in a specific area through a widely advertised solicitation of submission of results for research, development, demonstration, or commercial application projects.

(c) PRIZES FOR PROCESSES AND TECHNOLOGIES TO REDUCE DEPENDENCE ON IMPORTED OIL.—The Secretary, in cooperation with the Freedom Prize Foundation, shall support a program of awarding prizes, to be known as Freedom Prizes, to encourage and recognize the development and deployment of processes and technologies that serve to reduce the dependence of the United States on imported oil.

(d) RELATIONSHIP TO OTHER AUTHORITY.—The program under subsection (a) may be carried out in conjunction with or in addition to the exercise of any other authority of the Secretary to acquire, support, or stimulate research, development, demonstration, or commercial application projects.

(e) COORDINATION.—In carrying out subsection (a), and for any prize competitions under section 105 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Reauthorization Act of 2010, the Secretary shall—

(1) issue Department-wide guidance on the design, development, and implementation of prize competitions;

(2) collect and disseminate best practices on the design and administration of prize competitions;

(3) streamline contracting mechanisms for the implementation of prize competitions; and

(4) provide training and prize competition design support, as necessary, to Department staff to develop prize competitions and challenges.

[(e)] *(f)* AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated—

(1) $10,000,000 to carry out the program under subsection (a); and

(2) $5,000,000 to carry out the program under subsection (c).

(g) H-PRIZE.—

(1) PRIZE AUTHORITY.—

(A) IN GENERAL.—As part of the program under this section, the Secretary shall carry out a program to competitively award cash prizes in conformity with this subsection to advance the research, development, demonstration, and commercial application of hydrogen energy technologies.

(B) ADVERTISING AND SOLICITATION OF COMPETITORS.—

(i) ADVERTISING.—The Secretary shall widely advertise prize competitions under this subsection to encourage broad participation, including by individuals, universities (including historically Black colleges and

universities and other minority serving institutions), and large and small businesses (including businesses owned or controlled by socially and economically disadvantaged persons).

(ii) ANNOUNCEMENT THROUGH FEDERAL REGISTER NOTICE.—The Secretary shall announce each prize competition under this subsection by publishing a notice in the Federal Register. This notice shall include essential elements of the competition such as the subject of the competition, the duration of the competition, the eligibility requirements for participation in the competition, the process for participants to register for the competition, the amount of the prize, and the criteria for awarding the prize.

(C) ADMINISTERING THE COMPETITIONS.—The Secretary shall enter into an agreement with a private, nonprofit entity to administer the prize competitions under this subsection, subject to the provisions of this subsection (in this subsection referred to as the "administering entity"). The duties of the administering entity under the agreement shall include—

(i) advertising prize competitions under this subsection and their results;

(ii) raising funds from private entities and individuals to pay for administrative costs and to contribute to cash prizes, including funds provided in exchange for the right to name a prize awarded under this subsection;

(iii) developing, in consultation with and subject to the final approval of the Secretary, the criteria for selecting winners in prize competitions under this subsection, based on goals provided by the Secretary;

(iv) determining, in consultation with the Secretary, the appropriate amount and funding sources for each prize to be awarded under this subsection, subject to the final approval of the Secretary with respect to Federal funding;

(v) providing advice and consultation to the Secretary on the selection of judges in accordance with paragraph (2)(D), using criteria developed in consultation with and subject to the final approval of the Secretary; and

(vi) protecting against the administering entity's unauthorized use or disclosure of a registered participant's trade secrets and confidential business information. Any information properly identified as trade secrets or confidential business information that is submitted by a participant as part of a competitive program under this subsection may be withheld from public disclosure.

(D) FUNDING SOURCES.—Prizes under this subsection shall consist of Federal appropriated funds and any funds provided by the administering entity (including funds raised pursuant to subparagraph (C)(ii)) for such cash prize programs. The Secretary may accept funds from

other Federal agencies for such cash prizes and, notwithstanding section 3302(b) of title 31, United States Code, may use such funds for the cash prize program under this subsection. Other than publication of the names of prize sponsors, the Secretary may not give any special consideration to any private sector entity or individual in return for a donation to the Secretary or administering entity.

(E) ANNOUNCEMENT OF PRIZES.—The Secretary may not issue a notice required by subparagraph (B)(ii) until all the funds needed to pay out the announced amount of the prize have been appropriated or committed in writing by the administering entity. The Secretary may increase the amount of a prize after an initial announcement is made under subparagraph (B)(ii) if—

(i) notice of the increase is provided in the same manner as the initial notice of the prize; and

(ii) the funds needed to pay out the announced amount of the increase have been appropriated or committed in writing by the administering entity.

(F) SUNSET.—The authority to announce prize competitions under this subsection shall terminate on September 30, 2018.

(2) PRIZE CATEGORIES.—

(A) CATEGORIES.—The Secretary shall establish prizes under this subsection for—

(i) advancements in technologies, components, or systems related to—

(I) hydrogen production;

(II) hydrogen storage;

(III) hydrogen distribution; and

(IV) hydrogen utilization;

(ii) prototypes of hydrogen-powered vehicles or other hydrogen-based products that best meet or exceed objective performance criteria, such as completion of a race over a certain distance or terrain or generation of energy at certain levels of efficiency; and

(iii) transformational changes in technologies for the distribution or production of hydrogen that meet or exceed far-reaching objective criteria, which shall include minimal carbon emissions and which may include cost criteria designed to facilitate the eventual market success of a winning technology.

(B) AWARDS.—

(i) ADVANCEMENTS.—To the extent permitted under paragraph (1)(E), the prizes authorized under subparagraph (A)(i) shall be awarded biennially to the most significant advance made in each of the four subcategories described in subclauses (I) through (IV) of subparagraph (A)(i) since the submission deadline of the previous prize competition in the same category under subparagraph (A)(i) or the date of enactment of this subsection, whichever is later, unless no such advance is significant enough to merit an award. No one such prize may exceed $1,000,000. If less than $4,000,000 is available for a prize competition under

subparagraph (A)(i), the Secretary may omit one or more subcategories, reduce the amount of the prizes, or not hold a prize competition.

(ii) PROTOTYPES.—To the extent permitted under paragraph (1)(E), prizes authorized under subparagraph (A)(ii) shall be awarded biennially in alternate years from the prizes authorized under subparagraph (A)(i). The Secretary is authorized to award up to one prize in this category in each 2-year period. No such prize may exceed $4,000,000. If no registered participants meet the objective performance criteria established pursuant to subparagraph (C) for a competition under this clause, the Secretary shall not award a prize.

(iii) TRANSFORMATIONAL TECHNOLOGIES.—To the extent permitted under paragraph (1)(E), the Secretary shall announce one prize competition authorized under subparagraph (A)(iii) as soon after the date of enactment of this subsection as is practicable. A prize offered under this clause shall be not less than $10,000,000, paid to the winner in a lump sum, and an additional amount paid to the winner as a match for each dollar of private funding raised by the winner for the hydrogen technology beginning on the date the winner was named. The match shall be provided for 3 years after the date the prize winner is named or until the full amount of the prize has been paid out, whichever occurs first. A prize winner may elect to have the match amount paid to another entity that is continuing the development of the winning technology. The Secretary shall announce the rules for receiving the match in the notice required by paragraph (1)(B)(ii). The Secretary shall award a prize under this clause only when a registered participant has met the objective criteria established for the prize pursuant to subparagraph (C) and announced pursuant to paragraph (1)(B)(ii). Not more than $10,000,000 in Federal funds may be used for the prize award under this clause. The administering entity shall seek to raise $40,000,000 toward the matching award under this clause.

(C) CRITERIA.—In establishing the criteria required by this subsection, the Secretary—

(i) shall consult with the Department's Hydrogen Technical and Fuel Cell Advisory Committee;

(ii) shall consult with other Federal agencies, including the National Science Foundation; and

(iii) may consult with other experts such as private organizations, including professional societies, industry associations, and the National Academy of Sciences and the National Academy of Engineering.

(D) JUDGES.—For each prize competition under this subsection, the Secretary in consultation with the administering entity shall assemble a panel of qualified judges to select the winner or winners on the basis of the criteria es-

tablished under subparagraph (C). Judges for each prize competition shall include individuals from outside the Department, including from the private sector. A judge, spouse, minor children, and members of the judge's household may not—

(i) have personal or financial interests in, or be an employee, officer, director, or agent of, any entity that is a registered participant in the prize competition for which he or she will serve as a judge; or

(ii) have a familial or financial relationship with an individual who is a registered participant in the prize competition for which he or she will serve as a judge.

(3) ELIGIBILITY.—To be eligible to win a prize under this subsection, an individual or entity—

(A) shall have complied with all the requirements in accordance with the Federal Register notice required under paragraph (1)(B)(ii);

(B) in the case of a private entity, shall be incorporated in and maintain a primary place of business in the United States, and in the case of an individual, whether participating singly or in a group, shall be a citizen of, or an alien lawfully admitted for permanent residence in, the United States; and

(C) shall not be a Federal entity, a Federal employee acting within the scope of his employment, or an employee of a national laboratory acting within the scope of his employment.

(4) INTELLECTUAL PROPERTY.—The Federal Government shall not, by virtue of offering or awarding a prize under this subsection, be entitled to any intellectual property rights derived as a consequence of, or direct relation to, the participation by a registered participant in a competition authorized by this subsection. This paragraph shall not be construed to prevent the Federal Government from negotiating a license for the use of intellectual property developed for a prize competition under this subsection.

(5) LIABILITY.—

(A) WAIVER OF LIABILITY.—The Secretary may require registered participants to waive claims against the Federal Government and the administering entity (except claims for willful misconduct) for any injury, death, damage, or loss of property, revenue, or profits arising from the registered participants' participation in a competition under this subsection. The Secretary shall give notice of any waiver required under this subparagraph in the notice required by paragraph (1)(B)(ii). The Secretary may not require a registered participant to waive claims against the administering entity arising out of the unauthorized use or disclosure by the administering entity of the registered participant's trade secrets or confidential business information.

(B) LIABILITY INSURANCE.—

(i) REQUIREMENTS.—Registered participants in a prize competition under this subsection shall be required to obtain liability insurance or demonstrate fi-

nancial responsibility, in amounts determined by the Secretary, for claims by—

(I) a third party for death, bodily injury, or property damage or loss resulting from an activity carried out in connection with participation in a competition under this subsection; and

(II) the Federal Government for damage or loss to Government property resulting from such an activity.

(ii) FEDERAL GOVERNMENT INSURED.—The Federal Government shall be named as an additional insured under a registered participant's insurance policy required under clause (i)(I), and registered participants shall be required to agree to indemnify the Federal Government against third party claims for damages arising from or related to competition activities under this subsection.

(6) REPORT TO CONGRESS.—Not later than 60 days after the awarding of the first prize under this subsection, and annually thereafter, the Secretary shall transmit to the Congress a report that—

(A) identifies each award recipient;

(B) describes the technologies developed by each award recipient; and

(C) specifies actions being taken toward commercial application of all technologies with respect to which a prize has been awarded under this subsection.

(7) AUTHORIZATION OF APPROPRIATIONS.—

(A) IN GENERAL.—

(i) AWARDS.—There are authorized to be appropriated to the Secretary for the period encompassing fiscal years 2008 through 2017 for carrying out this subsection—

(I) $20,000,000 for awards described in paragraph (2)(A)(i);

(II) $20,000,000 for awards described in paragraph (2)(A)(ii); and

(III) $10,000,000 for the award described in paragraph (2)(A)(iii).

(ii) ADMINISTRATION.—In addition to the amounts authorized in clause (i), there are authorized to be appropriated to the Secretary for each of fiscal years 2008 and 2009 $2,000,000 for the administrative costs of carrying out this subsection.

(B) CARRYOVER OF FUNDS.—Funds appropriated for prize awards under this subsection shall remain available until expended, and may be transferred, reprogrammed, or expended for other purposes only after the expiration of 10 fiscal years after the fiscal year for which the funds were originally appropriated. No provision in this subsection permits obligation or payment of funds in violation of section 1341 of title 31 of the United States Code (commonly referred to as the Anti-Deficiency Act).

(8) NONSUBSTITUTION.—The programs created under this subsection shall not be considered a substitute for Federal research and development programs.

(h) REPORT.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on a description of any prize competitions carried out using the authority under this section, the total amount of prizes awarded along with any private sector contributions, the methods used for solicitation and evaluation, and a description of how each prize competition advanced the mission of the Department.

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STEVENSON-WYDLER TECHNOLOGY INNOVATION ACT OF 1980

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SEC. 12. COOPERATIVE RESEARCH AND DEVELOPMENT AGREEMENTS.

(a) GENERAL AUTHORITY.—[Each Federal agency]

(1) IN GENERAL.—Except as provided in paragraph (2), each Federal agency may permit the director of any of its Government-operated Federal laboratories, and, to the extent provided in an agency-approved joint work statement or, if permitted by the agency, in an agency-approved annual strategic plan, contractor-operated laboratories—

[(1)] *(A)* to enter into cooperative research and development agreements on behalf of such agency (subject to subsection (c) of this section) with other Federal agencies; units of State or local government; industrial organizations (including corporations, partnerships, and limited partnerships, and industrial development organizations); public and private foundations; nonprofit organizations (including universities); or other persons (including licensees of inventions owned by the Federal agency); and

[(2)] *(B)* to negotiate licensing agreements under section 207 of title 35, United States Code, or under other authorities (in the case of a Government-owned, contractor-operated laboratory, subject to subsection (c) of this section) for inventions made or other intellectual property developed at the laboratory and other inventions or other intellectual property that may be voluntarily assigned to the Government.

(2) EXCEPTION.—Notwithstanding paragraph (1), in accordance with section 206 of the Energizing Technology Transfer Act, approval by the Secretary of Energy shall not be required for any agreement proposed to be entered into by a National Laboratory of the Department of Energy, the total cost of which, including the National Laboratory contributions and project recipient cost share, is less than $1,000,000.

(b) ENUMERATED AUTHORITY.—(1) Under an agreement entered into pursuant to [subsection (a)(1)] *subsection (a)(1)(A)*, the laboratory may grant, or agree to grant in advance, to a collaborating party patent licenses or assignments, or options thereto, in any invention made in whole or in part by a laboratory employee under

the agreement, or, subject to section 209 of title 35, United States Code, may grant a license to an invention which is federally owned, for which a patent application was filed before the signing of the agreement, and directly within the scope of the work under the agreement, for reasonable compensation when appropriate. The laboratory shall ensure, through such agreement, that the collaborating party has the option to choose an exclusive license for a prenegotiated field of use for any such invention under the agreement or, if there is more than one collaborating party, that the collaborating parties are offered the option to hold licensing rights that collectively encompass the rights that would be held under such an exclusive license by one party. In consideration for the Government's contribution under the agreement, grants under this paragraph shall be subject to the following explicit conditions:

(A) A nonexclusive, nontransferable, irrevocable, paid-up license from the collaborating party to the laboratory to practice the invention or have the invention practiced throughout the world by or on behalf of the Government. In the exercise of such license, the Government shall not publicly disclose trade secrets or commercial or financial information that is privileged or confidential within the meaning of section 552(b)(4) of title 5, United States Code, or which would be considered as such if it had been obtained from a non-Federal party.

(B) If a laboratory assigns title or grants an exclusive license to such an invention, the Government shall retain the right—

(i) to require the collaborating party to grant to a responsible applicant a nonexclusive, partially exclusive, or exclusive license to use the invention in the applicant's licensed field of use, on terms that are reasonable under the circumstances; or

(ii) if the collaborating party fails to grant such a license, to grant the license itself.

(C) The Government may exercise its right retained under subparagraph (B) only in exceptional circumstances and only if the Government determines that—

(i) the action is necessary to meet health or safety needs that are not reasonably satisfied by the collaborating party;

(ii) the action is necessary to meet requirements for public use specified by Federal regulations, and such requirements are not reasonably satisfied by the collaborating party; or

(iii) the collaborating party has failed to comply with an agreement containing provisions described in subsection (c)(4)(B).

This determination is subject to administrative appeal and judicial review under section 203(2) of title 35, United States Code.

(2) Under agreements entered into pursuant to ⟦subsection (a)(1)⟧ *subsection (a)(1)(A)*, the laboratory shall ensure that a collaborating party may retain title to any invention made solely by its employee in exchange for normally granting the Government a nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the

world by or on behalf of the Government for research or other Government purposes.

(3) Under an agreement entered into pursuant to [subsection (a)(1)] *subsection (a)(1)(A)*, a laboratory may—

(A) accept, retain, and use funds, personnel, services, and property from a collaborating party and provide personnel, services, and property to a collaborating party;

(B) use funds received from a collaborating party in accordance with subparagraph (A) to hire personnel to carry out the agreement who will not be subject to full-time-equivalent restrictions of the agency;

(C) to the extent consistent with any applicable agency requirements or standards of conduct, permit an employee or former employee of the laboratory to participate in an effort to commercialize an invention made by the employee or former employee while in the employment or service of the Government; and

(D) waive, subject to reservation by the Government of a nonexclusive, irrevocable, paid-up license to practice the invention or have the invention practiced throughout the world by or on behalf of the Government, in advance, in whole or in part, any right of ownership which the Federal Government may have to any subject invention made under the agreement by a collaborating party or employee of a collaborating party.

(4) A collaborating party in an exclusive license in any invention made under an agreement entered into pursuant to [subsection (a)(1)] *subsection (a)(1)(A)* shall have the right of enforcement under chapter 29 of title 35, United States Code.

(5) A Government-owned, contractor-operated laboratory that enters into a cooperative research and development agreement pursuant to [subsection (a)(1)] *subsection (a)(1)(A)* may use or obligate royalties or other income accruing to the laboratory under such agreement with respect to any invention only—

(A) for payments to inventors;

(B) for purposes described in clauses (i), (ii), (iii), and (iv) of section 14(a)(1)(B); and

(C) for scientific research and development consistent with the research and development missions and objectives of the laboratory.

(6)(A) In the case of a laboratory that is part of the National Nuclear Security Administration, a designated official of that Administration may waive any license retained by the Government under paragraph (1)(A), (2), or (3)(D), in whole or in part and according to negotiated terms and conditions, if the designated official finds that the retention of the license by the Government would substantially inhibit the commercialization of an invention that would otherwise serve an important national security mission.

(B) The authority to grant a waiver under subparagraph (A) shall expire on the date that is five years after the date of the enactment of the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001. The expiration under the preceding sentence of authority to grant a waiver under subparagraph (A) shall not affect any waiver granted under that subparagraph before the expiration of such authority.

(C) Not later than February 15 of each year, the Administrator for Nuclear Security shall submit to Congress a report on any waivers granted under this paragraph during the preceding year.

(c) CONTRACT CONSIDERATIONS.—(1) A Federal agency may issue regulations on suitable procedures for implementing the provisions of this section; however, implementation of this section shall not be delayed until issuance of such regulations.

(2) The agency in permitting a Federal laboratory to enter into agreements under this section shall be guided by the purposes of this Act.

(3)(A) Any agency using the authority given it under subsection (a) shall review standards of conduct for its employees for resolving potential conflicts of interest to make sure they adequately establish guidelines for situations likely to arise through the use of this authority, including but not limited to cases where present or former employees or their partners negotiate licenses or assignments of titles to inventions or negotiate cooperative research and development agreements with federal agencies (including the agency with which the employee involved is or was formerly employed).

(B) If, in implementing subparagraph (A), an agency is unable to resolve potential conflicts of interest within its current statutory framework, it shall propose necessary statutory changes to be forwarded to its authorizing committees in Congress.

(4) The laboratory director in deciding what cooperative research and development agreements to enter into shall—

(A) give special consideration to small business firms, and consortia involving small business firms; and

(B) give preference to business units located in the United States which agree that products embodying inventions made under the cooperative research and development agreement or produced through the use of such inventions will be manufactured substantially in the United States and, in the case of any industrial organization or other person subject to the control of a foreign company or government, as appropriate, take into consideration whether or not such foreign government permits United States agencies, organizations, or other persons to enter into cooperative research and development agreements and licensing agreements.

(5)(A) If the head of the agency or his designee desires an opportunity to disapprove or require the modification of any such agreement presented by the director of a Government-operated laboratory, the agreement shall provide a 30-day period within which such action must be taken beginning on the date the agreement is presented to him or her by the head of the laboratory concerned.

(B) In any case in which the head of an agency or his designee disapproves or requires the modification of an agreement presented by the director of a Government-operated laboratory under this section, the head of the agency or such designee shall transmit a written explanation of such disapproval or modification to the head of the laboratory concerned.

(C)(i) Any non-Federal entity that operates a laboratory pursuant to a contract with a Federal agency shall submit to the agency any cooperative research and development agreement that the entity proposes to enter into and the joint work statement if required with respect to that agreement.

(ii) A Federal agency that receives a proposed agreement and joint work statement under clause (i) shall review and approve, request specific modifications to, or disapprove the proposed agreement and joint work statement within 30 days after such submission. No agreement may be entered into by a Government-owned, contractor-operated laboratory under this section before both approval of the agreement and approval of a joint work statement under this clause.

(iii) In any case in which an agency which has contracted with an entity referred to in clause (i) disapproves or requests the modification of a cooperative research and development agreement or joint work statement submitted under that clause, the agency shall transmit a written explanation of such disapproval or modification to the head of the laboratory concerned.

(iv) Any agency that has contracted with a non-Federal entity to operate a laboratory may develop and provide to such laboratory one or more model cooperative research and development agreements for purposes of standardizing practices and procedures, resolving common legal issues, and enabling review of cooperative research and development agreements to be carried out in a routine and prompt manner.

(v) A Federal agency may waive the requirements of clause (i) or (ii) under such circumstances as the agency considers appropriate.

(6) Each agency shall maintain a record of all agreements entered into under this section.

(7)(A) No trade secrets or commercial or financial information that is privileged or confidential, under the meaning of section 552(b)(4) of title 5, United States Code, which is obtained in the conduct of research or as a result of activities under this Act from a non-Federal party participating in a cooperative research and development agreement shall be disclosed.

(B) The director, or in the case of a contractor-operated laboratory, the agency, for a period of up to 5 years after development of information that results from research and development activities conducted under this Act and that would be a trade secret or commercial or financial information that is privileged or confidential if the information had been obtained from a non-Federal party participating in a cooperative research and development agreement, may provide appropriate protections against the dissemination of such information, including exemption from subchapter II of chapter 5 of title 5, United States Code.

(d) DEFINITION.—As used in this section—

(1) the term "cooperative research and development agreement" means any agreement between one or more Federal laboratories and one or more non-Federal parties under which the Government, through its laboratories, provides personnel, services, facilities, equipment, intellectual property, or other resources with or without reimbursement (but not funds to non-Federal parties) and the non-Federal parties provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research or development efforts which are consistent with the missions of the laboratory; except that such term does not include a procurement contract or cooperative agreement as those terms are

used in sections 6303, 6304, and 6305 of title 31, United States Code;

(2) the term "laboratory" means—

(A) a facility or group of facilities owned, leased, or otherwise used by a Federal agency, a substantial purpose of which is the performance of research, development, or engineering by employees of the Federal Government;

(B) a group of Government-owned, contractor-operated facilities (including a weapon production facility of the Department of Energy) under a common contract, when a substantial purpose of the contract is the performance of research and development, or the production, maintenance, testing, or dismantlement of a nuclear weapon or its components, for the Federal Government; and

(C) a Government-owned, contractor-operated facility (including a weapon production facility of the Department of Energy) that is not under a common contract described in subparagraph (B), and the primary purpose of which is the performance of research and development, or the production, maintenance, testing, or dismantlement of a nuclear weapon or its components, for the Federal Government,

but such term does not include any facility covered by Executive Order No. 12344, dated February 1, 1982, pertaining to the naval nuclear propulsion program;

(3) the term "joint work statement" means a proposal prepared for a Federal agency by the director of a Government-owned, contractor-operated laboratory describing the purpose and scope of a proposed cooperative research and development agreement, and assigning rights and responsibilities among the agency, the laboratory, and any other party or parties to the proposed agreement; and

(4) the term "weapon production facility of the Department of Energy" means a facility under the control or jurisdiction of the Secretary of Energy that is operated for national security purposes and is engaged in the production, maintenance, testing, or dismantlement of a nuclear weapon or its components.

(e) DETERMINATION OF LABORATORY MISSIONS.—For purposes of this section, an agency shall make separate determinations of the mission or missions of each of its laboratories.

(f) RELATIONSHIP TO OTHER LAWS.—Nothing in this section is intended to limit or diminish existing authorities of any agency.

(g) PRINCIPLES.—In implementing this section, each agency which has contracted with a non-Federal entity to operate a laboratory shall be guided by the following principles:

(1) The implementation shall advance program missions at the laboratory, including any national security mission.

(2) Classified information and unclassified sensitive information protected by law, regulation, or Executive order shall be appropriately safeguarded.

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DEPARTMENT OF ENERGY RESEARCH AND INNOVATION ACT

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TITLE I—LABORATORY MODERNIZATION AND TECHNOLOGY TRANSFER

* * * * * * *

SEC. 108. SHORT-TERM COST-SHARE PILOT PROGRAM.

(a) IN GENERAL.—Section 988(b) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)) is amended—

(1) in paragraph (1), by striking "Except as provided in paragraphs (2) and (3)" and inserting "Except as provided in paragraphs (2), (3), and (4)"; and

(2) by adding at the end the following:

"(4) EXEMPTION FOR INSTITUTIONS OF HIGHER EDUCATION AND OTHER NONPROFIT INSTITUTIONS.—

"(A) IN GENERAL.—Paragraph (1) shall not apply to a research or development activity performed by an institution of higher education or nonprofit institution (as defined in section 4 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3703)).

"(B) TERMINATION DATE.—The exemption under subparagraph (A) shall apply during the 2-year period beginning on the date of enactment of this paragraph.".

(b) REPORTS.—

(1) INITIAL REPORT.—As soon as practicable after the date of enactment of ⟦this Act⟧ *the Energizing Technology Transfer Act*, the Secretary shall submit to the appropriate committees of Congress a report that describes the use of cost-sharing waivers by the Department under section 988(b) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)) during the 2-year period ending on the date of enactment of ⟦this Act⟧ *the Energizing Technology Transfer Act*.

(2) ANNUAL REPORTS.—Annually during the 2-year period beginning on the date of enactment of ⟦this Act⟧ *the Energizing Technology Transfer Act*, the Secretary shall submit to the appropriate committees of Congress a report that describes the use of cost-sharing waivers by the Department under section 988(b) of the Energy Policy Act of 2005 (42 U.S.C. 16352(b)) during the period covered by the report.

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XIX. PROCEEDINGS OF THE FULL COMMITTEE MARKUP

MARKUPS: H.R. 4609, THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY FOR THE FUTURE ACT OF 2021; H.R. 3858, THE NATIONAL SCIENCE AND TECHNOLOGY STRATEGY ACT OF 2021; H.R. 4588; THE REGIONAL INNOVATION ACT OF 2021; H.R. 4606, THE ENERGIZING TECHNOLOGY TRANSFER ACT, AND H.R. 4599, THE STEEL UPGRADING PARTNERSHIPS AND EMISSIONS REDUCTION ACT OR SUPER ACT OF 2021

MARKUP

BEFORE THE

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

JULY 27, 2021

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PAUL TONKO, New York
BILL FOSTER, Illinois
DONALD NORCROSS, New Jersey
DON BEYER, Virginia
CHARLIE CRIST, Florida
SEAN CASTEN, Illinois
CONOR LAMB, Pennsylvania
DEBORAH ROSS, North Carolina
GWEN MOORE, Wisconsin
DAN KILDEE, Michigan
SUSAN WILD, Pennsylvania
LIZZIE FLETCHER, Texas

FRANK LUCAS, Oklahoma,
Ranking Member
MO BROOKS, Alabama
BILL POSEY, Florida
RANDY WEBER, Texas
BRIAN BABIN, Texas
ANTHONY GONZALEZ, Ohio
MICHAEL WALTZ, Florida
JAMES R. BAIRD, Indiana
DANIEL WEBSTER, Florida
MIKE GARCIA, California
STEPHANIE I. BICE, Oklahoma
YOUNG KIM, California
RANDY FEENSTRA, Iowa
JAKE LaTURNER, Kansas
CARLOS A. GIMENEZ, Florida
JAY OBERNOLTE, California
PETER MEIJER, Michigan
VACANCY
VACANCY

H.R. 4609, THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY FOR THE FUTURE ACT OF 2021

H.R. 3858, THE NATIONAL SCIENCE AND TECHNOLOGY STRATEGY ACT OF 2021

H.R. 4588, THE REGIONAL INNOVATION ACT OF 2021

H.R. 4606, THE ENERGIZING TECHNOLOGY TRANSFER ACT

H.R. 4599, THE STEEL UPGRADING PARTNERSHIPS AND EMISSIONS REDUCTION ACT OR SUPER ACT OF 2021

TUESDAY, JULY 27, 2021

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY,
Washington, D.C.

The Committee met, pursuant to notice, at 10:01 a.m., in room 2318 of the Rayburn House Office Building, Hon. Eddie Bernice Johnson [Chairwoman of the Committee] presiding.

Chairwoman JOHNSON. Good morning. The Committee will come to order, and, without objection, the Chair is authorized to declare recess at any time. Pursuant to Committee Rules and House Rule 11, the Chair now set—to postpone roll call votes at any time. Today the Committee is meeting virtually and in person. I want to announce a couple of reminders to the Members about the conduct of the meeting. First, Members attending remotely should keep their video feed on as long as they're present in the meeting, and Members are responsible for their own microphones. Please also keep your microphones muted until you are speaking. And, finally, if Members have documents they wish to submit to the record, please e-mail them to the Committee Clerk, whose e-mail address was circulated prior to the meeting. Pursuant to notice, the Com-

mittee meets to consider the following measures. H.R. 4609, the *National Institute of Standards and Technology for the Future Act of 2021*, H.R. 3858, the *National Science and Technology Strategy Act of 2021*, H.R. 4588, the *Regional Innovation Act of 2021*, and H.R. 4606, the *Emerging Technology Transfer Act*, and finally, H.R. 4599, the *Steel Upgrading Partnerships and Emissions Reduction Act*, or *SUPER Act, of 2021*.

Good morning, and welcome to today's markup of five excellent bipartisan bills. All of these bills will help to ensure that our Nation remains a leader in innovation. Importantly, these bills also help to ensure that the whole Nation participates in the innovation economy, and that the whole Nation reaps the economic fruits of that participation. The first bill we will take up today is Representative Stevens and Waltz's *National Institute of Standards and Technology for the Future Act*, and I'm proud to co-sponsor this bill, and I want to thank my colleagues on both sides of the aisle for their thoughtful engagement and enthusiastic support for this critical agency.

The *NIST for the Future Act* is a comprehensive 5 year reauthorization for the agency. These accounts fund important measures, measurements, and technology research, as well as NIST's (National Institute of Standards and Technology's) instrumental manufacturing programs. The bill would also support NIST's infrastructure needs at a time when many of its buildings are in poor to critical condition. In total, the legislation authorizes $7.9 billion over 5 years, allowing for growth that is both ambitious and sustainable. These investments are necessary to support a critical Federal agency charged with helping to advance U.S. competitiveness and innovation.

The next bill that we will consider is H.R. 3858, the *National Science and Technology Strategy Act of 2021*. I want to thank Representative Waltz and Ross for their work on this legislation. This bill directs the White House Office of Science and Technology Policy, or OSTP, to undertake a comprehensive review of the Nation's innovation landscape. The bill also directs OSTP to use this analysis to develop a national science and technology strategy.

The next bill that we will be considering is H.R. 4588, the *Regional Innovation Act of 2021*. I want to thank my colleagues, Representative Wild and Baird, for their important work on this legislation. Over the last 2 decades, much of the science and technology funding and capacity in this country has been concentrated in a few cities and regions. This bill would establish programs at both the Commerce and Energy Departments to address this imbalance. It would create more shared prosperity from our Federal R&D (research and development) dollars by creating regional technology and innovation hubs across the country.

And next we will consider H.R. 4606, the *Emerging Technology Transfer Act*. This bill is an updated version of a bipartisan bill that I and Representative Fleischmann introduced last year. It authorizes programs and funding to support the Department of Energy (DOE) technology transfer activities. These activities are critical to bringing the fruits of our public investment in clean energy research, development, and demonstration projects into the hands of America's communities. The bill also includes provisions to sup-

port the next generation of innovators, inventors, and entrepreneurs, and I want to thank Congresswoman Ross and Congressman Meijer for leading this important piece of legislation.

The last bill on the roster today is the *Steel Upgrading Partnerships and Emissions Reduction Act*, which is sponsored by Representative Gonzalez and Representative Lamb. This bill authorizes a program at the Department of Energy to advance technologies that will help reduce emissions from the steel manufacturing sector, allowing American steel manufacturers access to advanced and innovative technologies will ensure that the domestic steel manufacturing industry will remain competitive through the 21st century.

I look forward to a productive markup today, and I now recognize our Ranking Member, Mr. Lucas, for his opening remarks.

[The prepared statement of Chairwoman Johnson follows:]

Good morning, and welcome to today's markup of 5 excellent bipartisan bills. All of these bills will help to ensure that our Nation remains a leader in innovation. Importantly, these bills also help to ensure that the whole Nation participates in that innovation economy, and that the whole Nation reaps the economic fruits of that participation.

The first bill we will take up today is Representatives Stevens' and Waltz's *National Institute of Standards and Technology for the Future Act*. I am proud to cosponsor this bill, and I want to thank my colleagues on both sides of the aisle for their thoughtful engagement and enthusiastic support for this critical agency. The *NIST for the Future Act* is a comprehensive 5 year reauthorization for the agency.

These accounts fund important measurement and technology research, as well as NIST's extramural manufacturing programs. The bill would also support NIST's infrastructure needs at a time when many of its buildings are in poor to critical condition. In total, the legislation authorizes $7.9 billion over 5 years, allowing for growth that is both ambitious and sustainable. These investments are necessary to support a critical federal agency charged with helping to advance U.S. competitiveness and innovation.

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The next bill that we will be considering is H.R. 4588, the *Regional Innovation Act of 2021*. I want to thank my colleagues, Representatives Wild and Baird, for their important work on this legislation. Over the last few decades, much of the science and technology funding and capacity in this country has been concentrated in a few cities and regions. This bill would establish programs at both the Commerce and Energy Departments to address this imbalance. It will create more shared prosperity from our federal R&D dollars by creating regional technology and innovation hubs across the country.

Next we will consider H.R. 4606, the *Energizing Technology Transfer Act*. This bill is an updated version of a bipartisan bill that I and Representative Fleischmann introduced last year.It authorizes programs and funding to support Department of Energy technology transfer activities. These activities are critical to bringing the fruits of our public investments in clean energy research, development, and demonstration projects into the hands of America's communities. The bill also includes provisions to support the next generation of inventors and entrepreneurs, and I want to thank Congresswoman Ross and Congressman Meijer for leading this important piece of legislation.

The last bill on the roster today is the *Steel Upgrading Partnerships and Emissions Reduction Act* which is sponsored by Representative Gonzalez and Representative Lamb. This bill authorizes a program at the Department of Energy to advance technologies that will help reduce emissions from the steel manufacturing sector.

Allowing American steel manufacturers access to advanced and innovative technologies will ensure that the domestic steel manufacturing industry will remain competitive through the 21st Century.

I look forward to a productive markup today.

Mr. LUCAS. Thank you, Chairwoman Johnson, for holding today's markup. The bills we're considering today are a continuation of the important and bipartisan work we've been doing on American scientific competitiveness. Last month the House overwhelmingly passed our legislation to redouble our investments in the National Science Foundation and the Department of Energy Office of Science. These bills are the cornerstones of our blueprint to buildup America's research and technology enterprise. Today we're filling out the blueprint with the rest of the elements needed to shore up the Nation's technological success. First among those is reauthorizing the National Institute of Standard and Technology.

NIST is the most important government agency that most Americans have never heard of. As industry's laboratory, NIST's work to promote U.S. innovation supports roughly half of our gross domestic product. NIST gives businesses the measurement science, standards, and guidance they need to produce exceptional products that can be globally competitive. The *NIST for the Future Act* invests in the emerging technologies needed to drive progress, including cybersecurity, quantum sciences, artificial intelligence (AI), and advanced manufacturing. It also prioritizes scientific and technical research services, expands our support for American manufacturers, and upgrades outdated NIST facilities. Finally, it prioritizes our participation and leadership in international standard-setting bodies. As new technologies grow and spread, it's critical that we are able to influence the standards and specifications that guide their development. This investment in NIST will go far to support American competitiveness, and expand the resources available to American businesses. I want to thank Chairwoman Johnson, Chairwoman Stevens, and Ranking Member Walsh for working with me on this important bill.

Next we'll consider the *National Science and Technology Strategic Act* by Representative Waltz. This bill creates a strategic whole of government approach to research and development, ensuring better coordination between Federal agencies, and a more strategic plan for achieving U.S. research and development goals. Additionally, the bill requires the President to submit an annual report to Congress on national research priorities and activities, as well as global trends in science and technology, including potential threats to U.S. scientific leadership. A competitive, strategic approach to American research and development is more important now than ever, especially as we pass legislation to increase our investments in our Federal scientific enterprise. This bill ensures we are regularly reviewing and updating our research priorities so we're maximizing taxpayer dollars, and investing in the most critical areas of technological advancement.

Following that, we'll debate H.R. 4588, the *Regional Innovation Act*. This bill establishes innovation hubs across the country, ensuring technological development isn't limited solely to the coasts. I talk a lot about the value of taking advantage of talent across America, and giving diverse communities a chance to contribute to

important scientific work. This bill guarantees that we build out our technological capacity as we are driving innovation in geographically diverse areas, with at least 1/3 of the newly created regional innovation hubs in rural or underserved areas.

Next up is H.R. 4606, the *Energizing Technology Transfer Act*. This legislation is an important complement to the *DOE Science for the Future Act* because it helps turn the discoveries we make from basic research into useful technologies that private—the private sector can commercialize. Finally, we'll consider H.R. 4599, the *Steel Upgrading Partnerships and Emissions Reduction Act*, or the *SUPER Act*, for short. This bill is from Representatives Anthony Gonzalez and Conor Lamb, will support R&D into clean steel production use. This will help reduce carbon emissions, while supporting American manufacturing and production.

Together, these five bills address key components of American competitiveness. They were all developed with extensive stakeholder input through a bipartisan process. They're all intended to catalyze our scientific growth. The threat we face from China is real, and growing every day. It threatens American jobs, cybersecurity, and national security. But our plan to ensure our competitiveness is not about top-down planning, like the Communist Chinese Party (CCP). It's about coordinating our own strengths, bringing together all Federal agencies, and all sectors of the U.S. innovation economy together, to coordinate and ensure that the oxen are pulling the cart in the same direction.

The bills we're considering today, along with the *NSF for the Future Act*, and *DOE Science for the Future Act*, represent a thoughtful vision for American science and technology development that is strategic, comprehensive, and, importantly, workable. I'm very proud of the work this Committee and our staff has done, and I'd like to thank all my colleagues, particularly Chairwoman Johnson, for the work that went into these bills. I'm eager to mark them up today and pass them out of Committee. I believe we have a strong starting point for a competitive legislative package on American competitiveness, and I look forward to finalizing our policies into law. And with that, I yield back, Madam Chair.

[The prepared statement of Mr. Lucas follows:]

Thank you, Chairwoman Johnson, for holding today's markup. The bills we're considering today are a continuation of the important and bipartisan work we've been doing on American scientific competitiveness.

Last month, the House overwhelmingly passed our legislation to redouble our investment in the National Science Foundation and the Department of Energy Office of Science. These bills are the cornerstones of our blueprint to build up America's research and technology enterprise. Today we're filling out that blueprint with the rest of the elements needed to shore up our nation's technological success. First among those is reauthorizing the National Institute of Standards and Technology (NIST).

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The *NIST for the Future Act* invests in the emerging technologies needed to drive progress, including cybersecurity, quantum sciences, artificial intelligence, and advanced manufacturing. It also prioritizes scientific and technical research services, expands our support for American manufacturers, and upgrades outdated NIST facilities. Finally, it prioritizes our participation and leadership in international standards-setting bodies. As new technologies grow and spread, it's critical that we

are able to influence the standards and specifications that guide their development. This investment in NIST will go far to support American competitiveness and expand the resources available to American businesses. I want to thank Chairwoman Johnson, Chairwoman Stevens, and Ranking Member Waltz for working with me on this important bill.

Next up we'll consider the *National Science and Technology Strategy Act* led by Ranking Member Waltz. This bill creates a strategic, whole-of-government approach to research and development, ensuring better coordination between federal agencies and a more strategic plan for achieving U.S. research and development goals. Additionally, the bill requires the President to submit an annual report to Congress on national research priorities and activities, as well as global trends in science and technology, including potential threats to U.S. scientific leadership. A comprehensive, strategic approach to American research and development is more important now than ever, especially as we pass legislation to increase our investments in our federal scientific enterprise. This bill ensures we are regularly reviewing and updating our research priorities so we're maximizing taxpayer dollars and investing in the most critical areas for technological advancement.

Following that, we'll debate H.R. 4588, the *Regional Innovation Act*. This bill establishes innovation hubs across the country, ensuring technological development isn't limited solely to the coasts. I talk a lot about the value of taking advantage of talent across America and giving diverse communities a chance to contribute to important scientific work. This bill guarantees that as we build out our technical capacity, we are driving innovation in geographically diverse areas, with at least one-third of the newly created regional innovation hubs in rural or under-served areas.

Next up is H.R. 4606, the *Energizing Technology Transfer Act*. This legislation is an important complement to the *DOE Science for the Future Act* because it helps turn the discoveries we make from basic research into useful technologies that the private sector can commercialize.

Finally, we'll consider H.R. 4599, the *Steel Upgrading Partnerships and Emissions Reduction Act*, or the SUPER Act for short. This bill, from Representatives Anthony Gonzalez and Conor Lamb, will support R&D into clean steel production and use. This will help reduce carbon emissions while supporting American manufacturing and production.

Together, these five bills address key components of American competitiveness. They were all developed with extensive stakeholder input through a bipartisan process, and they're all intended to catalyze our scientific growth.

The threat we face from China is real and growing every day. It threatens American jobs, cybersecurity, and national security. But our plan to ensure our competitiveness is not about top-down planning, like the Chinese Community Party. It's about coordinating our own strengths—bringing together all federal agencies, and all sectors of the U.S. innovation economy together to coordinate and ensure the oxen are pulling the cart in the same direction. The bills we are considering today, along with the *NSF for the Future Act* and *DOE Science for the Future Act*, represent a thoughtful vision for American science and technology development that is strategic, comprehensive, and—importantly—workable.

I'm very proud of the work this Committee and our staff have done. I'd like to thank all of my colleagues—particularly Chairwoman Johnson—for the work that went into these bills. I'm eager to mark them up today and pass them out of Committee. I believe we have a strong starting point for a comprehensive legislative package on American competitiveness, and I look forward to finalizing our policies into law.

We now have H.R. 4606, the *Emerging Technology Transfer Act*. The Clerk will report the bill.

The CLERK. H.R. 4606, a bill to establish programs and authorities to facilitate the commercial application of clean energy and related technologies in the United States.

[The bill follows:]

(Original Signature of Member)

117TH CONGRESS
1ST SESSION

H. R. _____

To establish programs and authorities to facilitate the commercial application of clean energy and related technologies in the United States.

IN THE HOUSE OF REPRESENTATIVES

M__. _____ introduced the following bill; which was referred to the Committee on _____

A BILL

To establish programs and authorities to facilitate the commercial application of clean energy and related technologies in the United States.

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 "Energizing Technology Transfer Act".

(b) TABLE OF CONTENTS.—The table of contents for this Act is as follows:

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

TITLE I—NATIONAL CLEAN ENERGY TECHNOLOGY TRANSFER PROGRAMS

Sec. 101. National clean energy incubator program.
Sec. 102. Clean energy technology university prize competition.
Sec. 103. Clean energy technology transfer coordination.

TITLE II—SUPPORTING TECHNOLOGY DEVELOPMENT AT THE NATIONAL LABORATORIES

Sec. 201. Lab partnering service pilot program.
Sec. 202. Lab-embedded entrepreneurship program.
Sec. 203. Small business voucher program.
Sec. 204. Entrepreneurial leave program.
Sec. 205. National laboratory employee outside employment authority.
Sec. 206. Signature authority.

TITLE III—DEPARTMENT OF ENERGY MODERNIZATION

Sec. 301. Office of technology transitions.
Sec. 302. Management of demonstration projects.
Sec. 303. Streamlining prize competitions.
Sec. 304. Cost-share waiver extension.
Sec. 305. Special hiring authority for scientific, engineering, and project management personnel.
Sec. 306. Technology transfer reports and evaluation.

SEC. 2. DEFINITIONS.

In this Act:

(1) CLEAN ENERGY TECHNOLOGY.—The term "clean energy technology" means a technology that significantly reduces energy use, increases energy efficiency, reduces greenhouse gas emissions, reduces emissions of other pollutants, or mitigates other negative environmental consequences of energy production, transmission or use.

(2) DEPARTMENT.—The term "Department" means the Department of Energy.

(3) DIRECTOR.—The term "Director" means the Director of each National Laboratory and the

Director of each Department of Energy single-purpose research facility.

(4) ECONOMICALLY DISTRESSED AREA.—The term "economically distressed area" has the meaning described in section 301(a) of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3161(a)).

(5) GRANT.—The term "grant" means a grant award, cooperative agreement award, or any other financial assistance arrangement that the Secretary of Energy determines to be appropriate.

(6) INSTITUTION OF HIGHER EDUCATION.—The term "institution of higher education" has the meaning given such term in the Higher Education Act of 1965, as amended (20 U.S.C. 1001).

(7) NATIONAL LABORATORY.—The term "National Laboratory" has the meaning given that term in section 2 of the Energy Policy Act of 2005 (42 U.S.C. 15801).

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

TITLE I—NATIONAL CLEAN ENERGY TECHNOLOGY TRANSFER PROGRAMS

SEC. 101. NATIONAL CLEAN ENERGY INCUBATOR PROGRAM.

(a) CLEAN ENERGY INCUBATOR DEFINED.—In this section, the term "clean energy incubator"—

(1) means any entity that is designed to accelerate the commercial application of clean energy technologies by providing—

(A) physical workspace, labs, and prototyping facilities to support clean energy startups or established clean energy companies; or

(B) companies developing such technologies with support, resources, and services, including—

(i) access to business education and counseling;

(ii) mentorship opportunities; and

(iii) other services rendered for the purpose of aiding the development and commercial application of a clean energy technology; and

(2) may include a program within or established by a National Laboratory, an institution of higher education or a State, local, or tribal government.

(b) PROGRAM ESTABLISHMENT.—Not later than 180 days after the enactment of this Act, the Secretary, acting through the Chief Commercialization Officer established in section 1001(a) of the Energy Policy Act of 2005 (U.S.C. 16391(a)), shall establish a Clean Energy Incubator Program (herein referred to as the "program") to competitively award grants to clean energy incubators.

(c) CLEAN ENERGY INCUBATOR SELECTION.—In awarding grants to clean energy incubators under subsection (b), the Secretary shall, to the maximum extent practicable, prioritize funding clean energy incubators that—

(1) partner with entities that carry out activities relevant to the activities of such incubator and that operate at the local, State, and regional levels;

(2) support the commercial application activities of startup companies focused on physical hardware, computational, or integrated hardware and software technologies;

(3) are located in geographically diverse regions of the United States;

(4) are located in, or partner with entities located in, economically-distressed areas and

(5) support the development of entities focused on expanding clean energy tools and technologies to rural, Tribal, and low-income communities; and

(6) support the commercial application of technologies being developed by clean energy entrepreneurs from underrepresented backgrounds; and

(7) have a plan for sustaining activities of the incubator after grant funds received under this program have been expended.

(d) AWARD LIMITS.—The Secretary shall not award more than $4,000,000 to one or more incubators in one given State, per fiscal year.

(e) DURATION.—Each grant under subsection (b) shall be for a period of no longer than 5 years, subject to the availability of appropriations.

(f) USE OF FUNDS.—An entity receiving a grant under this section may use grant amounts for operating expenses.

(g) RENEWAL.—An award made to a clean energy incubator under this section may be renewed for a period of not more than 3 years, subject to merit review.

(h) EVALUATION.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act,

2021 (Public Law 116–260), the Secretary shall submit 3 years after the enactment of this Act and every 3 years thereafter to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation of the program established under this section that includes analyses of the performance of the clean energy incubators.

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section $15,000,000 for each of fiscal years 2022 through 2026.

SEC. 102. CLEAN ENERGY TECHNOLOGY UNIVERSITY PRIZE COMPETITION.

(a) DEFINITIONS.—In this section:

(1) ELIGIBLE ENTITY.—The term "eligible entity" means a nonprofit entity, an institution of higher education, or an entity working with one or more institutes of higher education.

(2) MINORITY-SERVING INSTITUTION.—The term "minority-serving institution" means an institution described in section 371(a) of the Higher Education Act of 1965 (20 U.S.C. 1067q(a)).

(b) IN GENERAL.—The Secretary shall establish a program, known as the "Clean Energy Technology Uni-

versity Prize", to award funding for eligible entities to carry out regional and one national clean energy technology prize competitions, under section 24 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3719). In carrying out such prize competitions, students shall compete to develop a business model for furthering the commercial application of an innovative clean energy technology.

(c) TRAINING FUNDING.—In carrying out this program, the Secretary may provide funding to train participating students in skills needed for the successful commercial application of clean energy technologies, including through virtual training sessions.

(d) PRIORITIZATION.—In awarding grants under this section, the Secretary shall prioritize awarding grants to eligible entities that work with students at minority-serving institutions.

(e) COORDINATION.—In carrying out this program, the Secretary shall coordinate and partner with other clean energy technology prize competitions. In doing so, the Secretary may develop and disseminate best practices for administering prize competitions under this section.

(f) REPORT.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually

on the progress and implementation of the program established under section (b).

(g) EVALUATION.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall submit 3 years after the enactment of this Act and every 3 years thereafter to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation on the long-term outcomes of the program established under this section and the progress towards achieving the purposes of the program in subsection (b).

(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $1,000,000 for each of fiscal years 2022 through 2026.

SEC. 103. CLEAN ENERGY TECHNOLOGY TRANSFER COORDINATION.

(a) IN GENERAL.—The Secretary, acting through the Chief Commercialization Officer established in section 1001 (a) of the Energy Policy Act of 2005 (42 U.S.C. 16391 (a)), shall support the coordination of relevant technology transfer programs that advance the commercial application of clean energy technologies nationally and

across all energy sectors. In particular, the Secretary may support activities to—

(1) facilitate the sharing of information on best practices for successful operation of clean energy technology transfer programs;

(2) coordinate resources and improve cooperation among clean energy technology transfer programs;

(3) facilitate connections between entrepreneurs and start-up companies and the variety of programs related to clean energy technology transfer under the Department; and

(4) facilitate the development of metrics to measure the impact of clean energy technology transfer programs on—

(A) advancing the development, demonstration, and commercial application of clean energy technologies;

(B) increasing the competitiveness of United States in the clean energy sector, including in manufacturing; and

(C) commercial application of clean energy technologies being developed by entrepreneurs from under-represented backgrounds.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities in this section $3,000,000 for each of fiscal years 2022 through 2026.

TITLE II—SUPPORTING TECHNOLOGY DEVELOPMENT AT THE NATIONAL LABORATORIES

SEC. 201. LAB PARTNERING SERVICE PILOT PROGRAM.

(a) AUTHORIZATION OF APPROPRIATIONS.—Section 9002 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260) is amended by adding at the end the following:

"(h) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $2,000,000 for each of fiscal years 2022 through 2024 to carry out subsections (a), (b), and (c), and $1,700,000 for each of fiscal years 2022 through 2024 for national laboratory employees to provide services under subsection (d).".

SEC. 202. LAB-EMBEDDED ENTREPRENEURSHIP PROGRAM.

(a) IN GENERAL.—The Secretary shall competitively award grants to National Laboratories for the purpose of establishing or supporting Lab-Embedded Entrepreneurship Programs.

(b) PURPOSES.—The purposes of such programs are to provide entrepreneurial fellows with access to National Laboratory research facilities, National Laboratory expertise, and mentorship to perform research and development and gain expertise that may be required or beneficial for the commercial application of research ideas.

(c) ENTREPRENEURIAL FELLOWS.—An entrepreneurial fellow participating in a program described in subsection (a) shall be provided with—

(1) opportunities for entrepreneurial training, professional development, and exposure to leaders from academia, industry, government, and finance who may serve as advisors to or partners of the fellow;

(2) financial and technical support for research, development, and commercial application activities;

(3) fellowship awards to cover costs of living, health insurance, and travel stipends for the duration of the fellowship; and

(4) any other resources determined appropriate by the Secretary.

(d) PROGRAM ACTIVITIES.—Each National Laboratory that receives funding under this section shall support entrepreneurial fellows by providing—

(1) access to facilities and expertise within the National Laboratory;

(2) engagement with external stakeholders; and

(3) market and customer development opportunities.

(e) ADMINISTRATION.—National Laboratories that receive grants under this section shall prioritize the support and success of the entrepreneurial fellow with regards to professional development and development of a relevant technology.

(f) PARTNERSHIPS.—In carrying out a Lab-Embedded Entrepreneurship Program, a National Laboratory may partner with an external entity, including—

(1) a nonprofit organization;

(2) an institution of higher education;

(3) a federally-owned corporation; or

(4) a consortium of 2 or more entities described in paragraphs (1) through (3).

(g) METRICS.—The Secretary shall support the development of short-term and long-term metrics to assess the effectiveness of programs receiving a grant under subsection (a) in achieving the purposes of the program in subsection (a).

(h) EVALUATION.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act,

2021 (Public Law 116–260), not later than 3 years after the date of the enactment of this Act, and every 3 years thereafter, the Secretary shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation of the effectiveness of the programs under subsection (a) based on the metrics developed pursuant to subsection (g).

(i) COORDINATION.—The Secretary shall oversee the planning and coordination of grants under subsection (a) and shall identify and disseminate best practices for achieving the purposes of subsection (a) to National Laboratories that receive grants under this section.

(j) INTERAGENCY COLLABORATION.—The Secretary shall collaborate with other executive branch agencies, including the Department of Defense and other agencies with Federal laboratories, regarding opportunities to partner with National Laboratories receiving a grant under subsection (a).

(i) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $25,000,000 for each of fiscal years 2022 through 2026.

SEC. 203. SMALL BUSINESS VOUCHER PROGRAM.

Section 1003 of the Energy Policy Act of 2005 (42 U.S.C. 16393) is amended—

(1) in subsection (a)—

(A) in the matter preceding paragraph (1), by striking ", and may require the Director of a single-purpose research facility," and inserting "(as defined in section 2) and the Director of each single-purpose research facility";

(B) in paragraph (1)—

(i) by striking "increase" and inserting "encourage"; and

(ii) by striking "collaborative research," and inserting "research, development, demonstration, and commercial application activities, including product development,";

(C) in paragraph (2), by striking "procurement and collaborative research" and inserting "the activities described in paragraph (1)";

(D) in paragraph (3)—

(i) by inserting "facilities," before "training"; and

(ii) by striking "procurement and collaborative research activities" and insert-

ing "the activities described in paragraph (1)"; and

(E) in paragraph (5), by striking "for the program under subsection (b)" and inserting "and metrics for the programs under subsections (b) and (c)";

(2) by redesignating subsections (c) and (d) as subsections (d) and (e), respectively;

(3) by inserting after subsection (b) the following:

"(c) SMALL BUSINESS VOUCHER PROGRAM.—

"(1) DEFINITIONS.—In this subsection:

"(A) DIRECTOR.—The term 'Director' means—

"(i) the Director of each National Laboratory; and

"(ii) the Director of each single-purpose research facility.

"(B) NATIONAL LABORATORY.—The term 'National Laboratory' has the meaning given the term in section 2.

"(C) PROGRAM.—The term 'program' means the program established under paragraph (2).

"(D) SMALL BUSINESS CONCERN.—The term 'small business concern' has the meaning given such term in section 3 of the Small Business Act (15 U.S.C. 632).

"(2) ESTABLISHMENT.—The Secretary, acting through the Chief Commercialization Officer appointed under section 1001(a), and in consultation with the Directors, shall establish a program to provide small business concerns with vouchers under paragraph (3)—

"(A) to achieve the goal described in subsection (a)(1); and

"(B) to improve the products, services, and capabilities of small business concerns in the mission space of the Department.

"(3) VOUCHERS.—Under the program, the Directors are authorized to provide to small business concerns vouchers to be used at National Laboratories and single-purpose research facilities for—

"(A) research, development, demonstration, technology transfer, or commercial application activities; or

"(B) any other activities that the applicable Director determines appropriate.

"(4) EXPEDITED APPROVAL.—The Secretary, working with the Directors, shall establish a streamlined approval process for financial assistance agreements signed between—

"(A) small business concerns selected to receive a voucher under the program; and

"(B) the National Laboratories and single-purpose research facilities.

"(5) COST-SHARING REQUIREMENT.—In carrying out the program, the Secretary shall require cost-sharing in accordance with section 988.

"(6) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the progress and implementation of the small business voucher program established under this section, including the number and locations of small businesses that received grants under this program."; and

(4) in subsection (e) (as so redesignated), by striking "for activities under this section" and inserting "for activities under subsection (b)" and inserting at the end "and for activities under subsection (c) $25,000,000 for each of fiscal years 2022 through 2026".

SEC. 204. ENTREPRENEURIAL LEAVE PROGRAM.

(a) IN GENERAL.—The Secretary shall delegate to Directors the authority to carry out an entrepreneurial leave program (referred to in this section as the "program") to allow National Laboratory employees to take a full leave of absence from their position, with the option to return to that or a comparable position up to 3 years later, or a partial leave of absence, to advance the commercial application of energy and related technologies relevant to the mission of the Department.

(b) TERMINATION AUTHORITY.—Directors shall retain the authority to terminate National Laboratory employees that participate in the program if such employees are found to violate terms prescribed by the National Laboratory at which such employee is employed.

(c) LICENSING.—To reduce barriers to participation in the program, the Secretary shall delegate to the Directors the requirement to establish streamlined mechanisms for facilitating the licensing of technology that is the focus of National Laboratory employees who participate in the program.

(d) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the utilization of this authority at national laboratories, including the number of employees who participate in this

program at each national laboratory and the number of employees who take a permanent leave from their positions at national laboratories as a result of participating in this program.

(e) FEDERAL ETHICS.—Nothing in this section shall affect existing Federal ethics rules applicable to Federal personnel.

SEC. 205. NATIONAL LABORATORY EMPLOYEE OUTSIDE EMPLOYMENT AUTHORITY.

(a) IN GENERAL.—The Secretary shall delegate to Directors of National Laboratories the authority to allow their employees—

(1) to engage in outside employment, including start-up companies based on licensing technologies developed at National Laboratories and consulting in their areas of expertise, and receive compensation from such entities; and

(2) to engage in outside activities related to their areas of expertise at the National Laboratory and may allow employees, in their employment capacity at such outside employment, to access the National Laboratories under the same contracting mechanisms as non-laboratory employees and entities, in accordance with appropriate conflict of interest protocols.

(b) REQUIREMENTS.—If a Director elects to use the authority granted by subsection (a) of this section, the Director, or their designee, shall—

(1) require employees to disclose to and obtain approval from the Director or their designee prior to engaging in any outside employment;

(2) develop and require appropriate conflict of interest protocols for employees that engage in outside employment; and

(3) maintain the authority to terminate employees engaging in outside employment if they are found to violate terms, including conflict of interest protocols, mandated by the Director.

(c) ADDITIONAL RESTRICTIONS.—Employees engaging in outside employment may not—

(1) allow such activities to interfere with or impede their duties at the National Laboratory;

(2) engage in activities related to outside employment using National Laboratory government equipment, property, or resources, unless such activities are performed under National Laboratory contracting mechanisms, such as Cooperative Research and Development Agreement or Strategic Partnership Projects, whereby all conflicts of interest requirements apply; or

(3) use their position at a National Laboratory to provide an unfair competitive advantage to an outside employer or start-up activity.

(d) FEDERAL ETHICS.—Nothing in this section shall affect existing Federal ethics rules applicable to Federal personnel.

SEC. 206. SIGNATURE AUTHORITY.

(a) IN GENERAL.—Subject to subsections (b) and (c), the Secretary shall delegate to Directors of the National Laboratories signature authority with respect to any agreement described in subsection (b) the total cost of which, including the National Laboratory contributions and project recipient cost share, is less than $1,000,000, if such an agreement falls within the scope of—

(1) the strategic plan for the National Laboratory or a master scope of work that has been approved by the Department; or

(2) the most recent budget approved by Congress for Department activities to be carried out by the National Laboratory.

(b) AGREEMENTS.—Subsection (a) applies to—

(1) a cooperative research and development agreement;

(2) a strategic partnership project;

(3) prize competitions;

(4) an agreement for commercializing technology; or

(5) any other agreement determined to be appropriate by the Secretary, in collaboration with the Directors.

(c) ADMINISTRATION.—

(1) ACCOUNTABILITY.—The Director of the affected National Laboratory and the affected contractor shall carry out an agreement under this section in accordance with applicable policies of the Department, including by ensuring that the agreement does not compromise any national security, economic, or environmental interest of the United States.

(2) CERTIFICATION.—The Director of the affected National Laboratory and the affected contractor shall certify that each activity carried out under a project for which an agreement is entered into under this section does not present, or minimizes, any apparent conflict of interest, and avoids or neutralizes any actual conflict of interest, as a result of the agreement under this section.

(3) AVAILABILITY OF RECORDS.—Not later than 30 days after the date on which a Director enters an agreement under this section, such Director

shall submit to the Secretary for monitoring and review all records of the National Laboratory relating to the agreement.

(d) APPROVAL.—Upon granting the signature authority under in subsection (a), the Secretary may not require any additional reviews or approvals of draft agreements, statements of work, or other documents for agreements that meet the criteria under subsection (a).

(e) EXCEPTION.—This section does not apply to any agreement with a foreign-controlled entity or entity under the majority control of any foreign entity.

(f) REPORT.—In accordance with section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall submit annually information on the number and types of agreements signed using the authorities granted under this section.

(g) EVALUATION.—Not later than 3 years after the enactment of this Act the Secretary shall submit to the Committee on Science, Space, and Technology Committee of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation of the efficacy of reducing administrative burden for agreements signed using the authorities granted under this section.

(h) CONFORMING AMENDMENT.—Section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a) is amended—

(1) in subsection (a)—

(A) by redesignating paragraphs (1) and (2) as subparagraphs (A) and (B), respectively, and indenting the subparagraphs appropriately;

(B) by striking "Each Federal agency" and inserting the following:

"(1) IN GENERAL.—Except as provided in paragraph (2), each Federal agency"; and

(C) by adding at the end the following:

"(2) EXCEPTION.—Notwithstanding paragraph (1), in accordance with section 206 of the Energizing Technology Transfer Act, approval by the Secretary of Energy shall not be required for any agreement proposed to be entered into by a National Laboratory of the Department of Energy, the total cost of which, including the National Laboratory contributions and project recipient cost share, is less than $1,000,000."; and

(2) in subsection (b), by striking "subsection (a)(1)" each place it appears and inserting "subsection (a)(1)(A)".

TITLE III—DEPARTMENT OF ENERGY MODERNIZATION

SEC. 301. OFFICE OF TECHNOLOGY TRANSITIONS.

(a) HIRING AND MANAGEMENT; AUTHORIZATION OF APPROPRIATIONS.—Section 1001(a) of the Energy Policy Act of 2005 (42 U.S.C. 16391) is amended by adding at the end the following:

"(6) HIRING AND MANAGEMENT.—To carry out the program authorized in this section, the Under Secretary for Science may appoint personnel using the authorities in section 305 of the Energizing Technology Transfer Act.

"(7) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out the activities authorized in this section $20,000,000 for each of fiscal years 2022 through 2026.".

SEC. 302. MANAGEMENT OF DEMONSTRATION PROJECTS.

(a) MANAGEMENT OF DEPARTMENT OF ENERGY DEMONSTRATION PROJECTS.—The Secretary, shall establish a program to conduct project management and oversight of demonstration projects that receives or is eligible to receive funding from the Department, in coordination with relevant staff from Department program offices, including the Office of Technology Transitions, the Loan

Program Office, and all applied program offices. The purposes of this program are to—

(1) conduct evaluation of demonstration project proposals prior to selection of a project for funding;

(2) conduct independent oversight of the execution of a demonstration project once funding has been awarded for such project; and

(3) ensure a balanced portfolio of investments in clean energy technology demonstration projects.

(b) DEMONSTRATION PROJECT MANAGEMENT EMPLOYEES.—

(1) AUTHORITY.—In carrying out the program under subsection (a), the Under Secretary for Science shall appoint at least 4 full time employees to achieve the purposes of the program outlined in subsection (a) in coordination with relevant staff at Department program offices.

(2) HIRING AUTHORITY.—To carry out the program authorized in this section, the Under Secretary for Science may hire personnel using the authorities in section 305 of this Act.

(c) DUTIES.—In carrying out the program in subsection (a), employees under this section shall work with relevant staff from Department program offices to—

(1) evaluate demonstration project proposals, including the scope, technical specifications, maturity of design, funding profile, estimated costs, proposed schedule, proposed technical and financial milestones, and potential for commercial success based on economic and policy projections;

(2) develop independent cost estimates of demonstration project proposals, when appropriate;

(3) recommend to the director of a program office whether to fund a demonstration project proposal;

(4) oversee the execution of the demonstration projects that receive funding from the Department under this section and conduct reviews of ongoing projects, which may include reconciling estimated costs as compared to actual costs and evaluating progress of the project based on the proposed schedule and technical and financial milestones, and provide such reviews to the Secretary; and

(5) assess lessons learned and implement improvements to evaluate and oversee demonstration projects carried out under this section.

(d) ADDITIONAL AUTHORITY.—The Secretary may carry out and manage demonstration projects directly through the program established in subsection (a).

(e) PROJECT TERMINATION.—Should an ongoing demonstration project receive an unfavorable review under subsection (c)(4), the director of a Department program office or their designee may cease funding the demonstration project and reallocate the remaining funds to new or existing demonstration projects carried out by that program office.

(f) COORDINATION.—In establishing and carrying out the program, the Secretary shall coordinate with project management and acquisition management entities within the Department, including the Office of Project Management, and relevant professional organizations in project management, construction, cost estimation, and other relevant fields.

(g) REPORTING.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260), the Secretary shall report annually on the utilization of the authority granted under this section, including—

(1) a summary of any demonstration projects currently being carried out under this section; and

(2) the reviews under subsection (c)(4) of any ongoing demonstration projects carried out under this section.

(h) EVALUATION BY COMPTROLLER GENERAL.—Not later than 3 years after the date of the enactment of this Act the Comptroller General shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation on the operation of the program established under this section, including—

(1) the processes and procedures used to evaluate demonstration project proposals and oversee demonstration projects that receive funding under this section;

(2) any recommended changes to the program, including the structure and the processes and procedures used to evaluate and oversee demonstration projects that receive funding under this section; and

(3) any recommended changes to the structure of this program to improve the success in meeting the program purposes under subsection (a).

SEC. 303. STREAMLINING PRIZE COMPETITIONS.

(a) REPORTING.—Section 1008 of the Energy Policy Act of 2005 (42 U.S.C. 16396) is amended by adding at the end the following:

"(h) REPORT.—In accordance with section 9007 of Division Z of the Consolidated Appropriations Act, 2021

(Public Law 116–260), the Secretary shall report annually on a description of any prize competitions carried out using this authority, the total amount of prizes awarded along with any private sector contributions, the methods used for solicitation and evaluation, and a description of how each prize competition advanced the mission of the Department.".

SEC. 304. COST-SHARE WAIVER EXTENSION.

(a) IN GENERAL.—Section 988 of the Energy Policy Act of 2005 (42 U.S.C. 16351) is amended in subsection (b)(4)(B) by striking "this paragraph" and inserting "the Energizing Technology Transfer Act".

(b) REPORT.—Section 108 of the Department of Energy Research and Innovation Act is amended in subparagraph (b) by striking "this Act" everywhere it appears and replacing with "the Energizing Technology Transfer Act".

SEC. 305. SPECIAL HIRING AUTHORITY FOR SCIENTIFIC, ENGINEERING, AND PROJECT MANAGEMENT PERSONNEL.

(a) IN GENERAL.—The Under Secretary for Science shall have the authority to—

(1) make appointments of not more than 60 scientific, engineering, and professional personnel, without regard to civil service laws, to assist the De-

partment in meeting specific project or research needs;

(2) fix the basic pay of any employee appointed under this section at a rate to be determined by the Under Secretary at rates not in excess of Level II of the Executive Schedule (EX–II) under section 5311 of title 5, United States Code without regard to the civil service laws; and

(3) pay any employee appointed under this section payments in addition to basic pay, except that the total amount of additional payments paid to an employee under this subsection for any 12-month period shall not exceed the lesser of the following amounts:

(A) $25,000.

(B) The amount equal to 25 percent of the annual rate of basic pay of that employee.

(C) The amount of the limitation that is applicable for a calendar year under section 5307(a)(1) of title 5, United States Code.

(b) TERM.—

(1) IN GENERAL.—The term of any employee appointed under this section shall not exceed 3 years unless otherwise authorized in law.

(2) TERMINATION.—The Under Secretary for Science shall have the authority to terminate any employee appointed under this section at any time based on performance or changing project or research needs of the Department.

SEC. 306. TECHNOLOGY TRANSFER REPORTS AND EVALUATION.

(a) REPORTING.—Section 9007 of division Z of the Consolidated Appropriations Act, 2021 (Public Law 116–260) is amended as follows:

"(a) ANNUAL REPORT.—As part of the updated technology transfer execution plan required each year under section 1001(h)(2) of the Energy Policy Act of 2005 (42 U.S.C. 16391(g)(2)), the Secretary of Energy (in this section referred to as the 'Secretary') shall submit to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate a report on the progress and implementation of programs established under sections 9001, 9002, 9003, 9004, and 9005 of this Act and under sections 102, 203, 204, 205, 206, and 302 of the Energizing Technology Transfer Act.

"(b) EVALUATION.—Not later than 3 years after the enactment of this Act and every 3 years thereafter the Secretary shall submit to the Committee on Science,

Space, and Technology of the House of Representatives and the Committee on Energy and Natural Resources of the Senate an evaluation on the extent to which programs established under sections 9001, 9002, 9003, 9004, and 9005 of this Act and sections 101, 102, 103, and 202 of the Energizing Technology Transfer Act are achieving success based on relevant short-term and long-term metrics.".

Chairwoman JOHNSON. Without objection, the bill is considered as read, and open to amendment at any time. Does anyone wish to be recognized to speak on the underlying bill?

Ms. ROSS. Madam Chair, I'd like to move to strike the last word.

Chairwoman JOHNSON. Ms. Ross is recognized.

Ms. ROSS. Thank you so much, Madam Chair. H.R. 4606, the *Energizing Technology Transfer Act*, is a bipartisan bill I introduced with Congressman Meijer, and this bill will allow universities and private sector companies to capitalize on the Department of Energy's research to accelerate the commercial application of clean energy technologies.

U.S. universities and small businesses, like North Carolina State's Clean Energy Technology Center in my district, lead the world in clean energy research and innovation, yet too often they do not receive the Federal support, financial or otherwise, they need to thrive. This bill will go a long way toward boosting that support. I urge my colleagues to support this bill, and I yield back.

Chairwoman JOHNSON. Thank you. Anyone else wishing to be recognized?

Mr. MEIJER. Madam Chair, move to strike the last word.

Chairwoman JOHNSON. Mr. Baird. Mr. Meijer, I'm sorry.

Mr. MEIJER. Thank you, Madam—thank you, Chairwoman Johnson, for holding this markup today, and for providing us with another opportunity to work together on legislation to harness our country's incredible innovation potential, and boost our global competitiveness. I was honored to be part of this Committee's successful effort to support and modernize the Department of Energy's Office of Science Research Activities through the passage of the *Department of Energy Science for the Future Act* in the House last month. But to fully maximize a return on investment in the Department's programs and facilities, we need to take the next step of ensuring that critical new technologies reach the marketplace. Only in the hands of the private sector can new innovations and discoveries truly fulfill their promise to ensure our energy security, protect our environment, and meaningfully impact the lives of our constituents.

As we face unprecedented challenges, such as threats to our energy independence from foreign adversaries and climate change, we cannot miss this opportunity to merge our tremendous Federal resources with the incredible power of the private sector and the energy innovation community. Congress took a huge step with the passage of the *Energy Act of 2020* at the end of the last Congress, authorizing the Department's Office of Technology transitions, and a lab partnering services pilot program, among other things. Yet there's still more work to be done, and we cannot leave the job unfinished.

As such, I was proud to join my colleague, Representative Ross, in introducing this bipartisan piece of legislation. The *Energizing Technology Transfer Act* authorizes programs to connect our energy innovation community with the resources needed to commercialize new energy technologies. For example, the legislation recognizes the incredible potential of our small businesses, authorizing a voucher program that facilitates their access to National Laboratories and user facilities.

Colleges and universities across my home State of Michigan are also crucial players in our vibrant technology development and innovation community, and this bill supports a number of opportunities for these institutions of higher education to collaborate with the Department. The Lab Embedded Entrepreneurship Program, which connects entrepreneurial fellows with National Laboratory expertise and facilities, authorizes National Laboratories to partner with an institution of higher education, and it also fosters development of the next generation of innovators through the authorization of the Clean Energy Technology University Prize Competition Program.

Red tape and bureaucracy are especially stifling for our Federal agencies operating in cutting edge spaces, such as the energy technology commercialization ecosystem, and I'm proud to help lead this bill, as it includes a number of common sense fixes and flexibility to empower the DOE and our National Laboratories to benefit from the knowledge of experts with experience in the private sector and forge new strategic partnerships.

This bill will ensure better coordination and talent sharing between our Federal resources and the private sector, setting us up for future generations for success and endless opportunities. At the same time, accountability and safeguards must accompany technology transfer activities to ensure our taxpayers get the most out of their contributions for our country's energy future. Our legislation requires the Secretary of Energy to coordinate technology transfer programs across all energy sectors, and encourage information sharing in the development of best practices to promote efficiency among all of the Department's energy transfer technology programs. Robust reporting requirements ensure congressional scrutiny and oversight of these technology programs, and I look forward to advancing this effort to secure our country's leadership in today's international energy economy, and I encourage my colleagues to support this bill.

Thank you, Madam Chairwoman. I yield back the balance of my time.

Chairwoman JOHNSON. Thank you very much. Any further requests? Hearing none, then we will now proceed with the amendments in the order on the roster. The only amendment on the roster is a manager's amendment offered by myself, and the Clerk will report the amendment.

The CLERK. Amendment No. 1, amendment to H.R. 4606 offered by Ms. Johnson.

[The amendment of Chairwoman Johnson follows:]

AMENDMENT TO H.R. 4606

OFFERED BY Ms . Johnson

Page 5, lines 7 and 8, strike "Energy Policy Act of 2005 (U.S.C. 16391(a))" and insert "Energy Policy Act of 2005 (U.S.C. 16391(a))".

Page 6, line 2, strike "areas and" and insert "areas;".

Page 6, at the end of line 5, strike "and".

Page 7, lines 2 and 3, strike "3 years after the enactment of this Act and every 3 years thereafter".

Page 9, lines 6 and 7, strike "3 years after the enactment of this Act and every 3 years thereafter".

Page 14, lines 1 through 3, strike "not later than 3 years after the date of the enactment of this Act, and every 3 years thereafter,".

Page 20, line 1, strike "national laboratory" and insert "National Laboratory".

Page 20, line 3, strike "national laboratories" and insert "National Laboratories".

Page 20, line 23, strike "non-laboratory" and insert "non-Laboratory".

Page 21, line 23, strike "Agreement" and insert "Agreements".

Page 23, line 5, insert "of the National Laboratories" after "Directors".

Page 23, line 24, insert "of a National Laboratory" after "Director".

Page 26, lines 22 and 23, strike "that receives or is eligible to receive" and insert "that receive or are eligible to receive".

Page 31, line 3, strike "this authority," and insert "the authority under this section".

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Chairwoman JOHNSON. I ask unanimous consent to dispense with the reading. Without objection, so ordered, and I recognize myself for 5 minutes.

The amendment includes only small technical and conforming changes. I urge all of my colleagues on both sides of the aisle to support this amendment. However, before I yield back, I want to recognize a Committee staffer who is leaving us this week. It is with some sadness that I announce that our Clerk, Kendra Wood, is leaving. Kendra has been a familiar presence at our work—markups and hearings, and I'm sure all of us are sorry to see her go. Fortunately, she is not going far. She will be soon moving across the street to take a new position with the House Clerk. Kendra, I wish you the best, and I look forward to seeing you on the floor.

The CLERK. Thank you.

Chairwoman JOHNSON. We might hold it against you. I yield the balance of my time. Is there discussion on this amendment? Ms. Bonamici.

Ms. BONAMICI. Thank you, Chairwoman Johnson. I move to strike the last word.

Chairwoman JOHNSON. You are recognized for 5 minutes.

Ms. BONAMICI. Thank you. I want to speak in favor of the manager's amendment, and the underlying bill. The climate crisis affects our entire economy, and it will take our entire economy to address it. Our transition to a clean energy economy can drive new innovative industries and create good-paying, high quality jobs for workers. Historically Federal investments have focused on the conceptual and early research stages, leaving valuable projects facing a commercialization valley of death. Transferring clean energy innovation from National Laboratories to the marketplace is essential in our transition to a clean energy economy.

Last year I joined my colleagues on the Select Committee on the Climate Crisis in releasing a comprehensive, bold, science-based climate action plan to reach net zero emissions no later than mid-century, and net negative thereafter. Our plan includes provisions on the coordination of technology transfer programs and activities, and I'm pleased to support the *Energizing Technology Transfer Act* to advance these provisions today.

I'd like to thank Representatives Ross and Meijer, Chairwoman Johnson, and Ranking Member Lucas for their leadership. I urge my colleagues to support the bill, and I yield back the balance of my time.

Chairwoman JOHNSON. Thank you. Any further discussion? If no further discussion, a vote occurs on the amendment. All in favor say aye. Those opposed say no. The ayes have it, and the amendment is agreed to.

If there's no further amendment, a reporting quorum being present, I move that the Committee on Science, Space, and Technology report H.R. 4606, as amended, to the House, with the recommendation that the bill be approved. Those in favor of the motion will signify by saying aye. Those opposed, no. The ayes have it, and the bill is favorably reported.

Without objection, a motion to reconsider is laid on the table, and I ask unanimous consent that staff be authorized to make any nec-

essary technical and conforming changes to the bill. Without objection, so ordered. Members will have two subsequent calendar days in which to submit supplementary, minority, or additional views on the measure.

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