I

116TH CONGRESS
2D SESSION

H. R. 8273

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

SEPTEMBER 16, 2020

Ms. JOHNSON of Texas introduced the following bill; which was referred to the Committee on Science, Space, and Technology

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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. 2. FINDINGS.

Congress finds the following:

(1) In order to achieve domestic and international net-zero greenhouse gas emissions targets, a rapid and substantial investment in clean energy innovation is needed.

(2) Clean energy technologies face unique obstacles to successful commercial application, including high up-front capital costs, long development times, and the need to displace incumbent technologies in highly regulated markets.

(3) Multiple technology development and financing gaps exist in the clean energy innovation and commercial application landscape that are not currently met by private sector investment alone.

(4) Federal investments in technology transfer and demonstration programs help fill existing gaps in the innovation cycle and improve the likelihood of successful and timely commercial application of clean energy technologies.

(5) To maximize clean energy innovation's positive impact on United States economic competitiveness and reach net-zero greenhouse gas emissions, the Department of Energy must show significant leadership in enabling the transfer of new technologies to the private sector, particularly through the Office of Technology Transitions.

SEC. 3. 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.

(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. REGIONAL CLEAN ENERGY INNOVATION PROGRAM.

(a) DEFINITIONS.—In this section:

(1) REGIONAL CLEAN ENERGY INNOVATION PARTNERSHIP.—The term ''regional clean energy innovation partnership'' means a group of one or more persons, including a covered consortium, who perform a collection of activities that are coordinated by such covered consortium to carry out the purposes of the program under subsection (c) in a region of the United States.

(2) COVERED CONSORTIUM.—The term ''covered consortium'' means an individual or group of individuals in partnership with a government entity, including a State, local, or tribal government or unit of such government, and at least 2 or more of the following additional entities—

(A) an institution of higher education or higher education consortium;

(B) a workforce training provider, including vocational schools and community colleges;

(C) a private sector entity;

(D) a nonprofit organization;

(E) a community group;

(F) a labor group;

(G) a National Laboratory;

(H) a venture development organization;

(I) an organization focused on clean energy technology innovation or entrepreneurship;

(J) a business accelerator or incubator;

(K) a private sector entity or group of entities, including a trade or industry association;

(L) an economic development organization;

(M) a manufacturing facility or organization;

(N) a clean energy incubator or accelerator; or

(O) any other entity that the Secretary determines to be relevant.

(3) PROGRAM.—The term ''program'' means the Regional Clean Energy Innovation Program authorized in subsection (b).

(4) FRONTLINE COMMUNITY.—The term ''frontline community'' means a community with significant representation of communities of color, low-income communities, or Tribal and indigenous communities, that experiences, or is at risk of experi-

encing higher or more adverse human health or environmental effects.

(b) IN GENERAL.—The Secretary shall establish a Regional Clean Energy Innovation Program, a research, development, demonstration, and commercial application program designed to accelerate the pace of innovation of clean energy technologies through the formation or support of regional clean energy innovation partnerships that—

(1) are responsive to the energy resources, needs of industry, workforce, policy landscape, and clean energy innovation capabilities of the region of the country in which such partnership is located;

(2) enhance and accelerate clean energy innovation; and

(3) are located in diverse geographic regions of the United States, including United States territories.

(c) PURPOSES OF THE PROGRAM.—The purposes of the program established under subsection (a) are to—

(1) improve the competitiveness of United States clean energy technology research, development, demonstration, and commercial application; and

(2) support the development of tools and technologies best suited for use in low-income and frontline communities.

(d) REGIONAL CLEAN ENERGY INNOVATION PARTNERSHIPS.—

(1) IN GENERAL.—The Secretary shall competitively award grants to covered consortia to establish or support regional clean energy innovation partnerships that achieve the purposes of the program in subsection (c).

(2) PERMISSIBLE ACTIVITIES.—Grants awarded under this subsection shall be used for activities determined appropriate by the Secretary to achieve the purposes of the program in subsection (c), including—

(A) facilitating the commercial application of clean energy products, processes, and services, including through research, development, demonstration, technology transfer, or support of clean energy companies;

(B) planning among participants of a regional clean energy innovation partnership to improve the strategic coordination of the partnership;

(C) improving stakeholder involvement in the development of goals and activities of a regional clean energy innovation partnership;

(D) assessing different incentive mechanisms for clean energy development and commercial application in the region;

(E) hosting events and conferences; and

(F) establishing and updating roadmaps to measure progress on relevant goals, such as those relevant to metrics developed under subsection (h).

(3) APPLICATIONS.—Each application submitted to the Secretary under paragraph (1) may include—

(A) a list of members and roles of members of the covered consortia, as well as any other stakeholders supporting the activities of the regional clean energy innovation partnership;

(B) a description of the proposed outcomes of the regional clean energy innovation partnership;

(C) an assessment of the relevant clean energy innovation assets needed in a region to achieve proposed outcomes, such as education

and training programs, research facilities, infrastructure or site development, access to capital, manufacturing capabilities, or other assets;

(D) a description of proposed activities that the regional clean energy innovation partnership plans to undertake and how the proposed activities will achieve the purposes described in subsection (c) and the proposed outcomes in subparagraph (B);

(E) a description of the geographical region that will engage in the partnership;

(F) a plan for attracting additional funds and identification of funding sources from non-Federal sources to deliver the proposed outcomes of the regional clean energy innovation partnership; and

(G) a plan for sustaining activities of the regional clean energy innovation partnership after funds received under this program have been expended.

(4) CONSIDERATIONS.—In selecting covered consortia for funding under the program, the Secretary shall—

(A) give special consideration to applications from entities located in an economically distressed area; and

(B) ensure that there is geographic diversity among the covered consortia selected to receive funding.

(5) AWARD AMOUNT.—Grants given out under this Program shall be in an amount not greater than $10,000,000, with the total grant award in any year less than that in the previous year.

(6) COST SHARE.—For grants that are disbursed over the course of three or more years, the Secretary shall require, as a condition of receipt of funds under this section, that a covered consortium provide not less than 50 percent of the funding for the activities of the regional clean energy partnership under this section for years 3, 4, and 5.

(7) DURATION.—Each grant under paragraph (1) shall be for a period of not longer than 5 years.

(8) RENEWAL.—A grant award made to a regional clean energy innovation partnership under this section may be renewed for a period of not more than 5 years, subject to a rigorous merit review based on the progress of a regional clean energy innovation partnership towards achieving the purposes

of the program in section (c) and the metrics developed under section (h).

(9) ADMINISTRATIVE COSTS.—The Secretary may allow a covered consortium that receives funds under this section to allocate a portion of the funding received to be used for administrative or indirect costs.

(10) FUNDING.—The Secretary may accept funds from other Federal agencies to support funding and activities under this section.

(e) PLANNING FUNDS.—The Secretary may competitively award grants in an amount no greater than $2,000,000 for a period not longer than 2 years to an entity consisting of a government entity, including a State, local, or tribal government or unit of such government or any entity listed under subsection (a)(2) to plan a regional clean energy innovation partnership or establish a covered consortium for the purpose of applying for funds under subsection (b).

(f) INFORMATION SHARING.—As part of the program, the Secretary shall support the gathering, analysis, and dissemination of information on best practices for developing and operating successful regional clean energy innovation partnerships.

(g) METRICS.—In evaluating a grant renewals under section (d)(8), the Secretary shall work with program evaluation experts to develop and make publicly available metrics to assess the progress of a regional clean energy innovation partnership towards achieving the purposes of the program in section (c). Such metrics may include—

(1) the number and quality of—

(A) new clean energy companies created in the region as a result of activities carried out under the regional clean energy innovation partnership;

(B) new or expanded workforce development or training programs; and

(C) support services provided to clean energy technology developers in the region;

(2) changes in clean energy employment in the region as a result of activities carried out under the regional clean energy innovation partnership; and

(3) the amount of capital investment in clean energy companies in the region as a result of activities carried out under the regional clean energy innovation partnership grant.

(h) COORDINATION.—In carrying out the program, the Secretary may coordinate with relevant programs at other Federal agencies, including—

(1) the Office of Innovation and Entrepreneurship under the Economic Development Administration, including the Regional Innovation Program under section 27 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3722);

(2) the Hollings Manufacturing Extension Partnership Program under section 25(a) of the National Institute of Standards and Technology Act (15 U.S.C. 278k);

(3) the Manufacturing USA Program under section 34(a) of the National Institute of Standards and Technology Act (15 U.S.C. 278s);

(4) the Defense Manufacturing Communities Support Program under section 846 of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (10 U.S.C. 2501 note); and

(5) the Office of Economic Adjustment at the Department of Defense.

(i) EVALUATION BY COMPTROLLER GENERAL.—Not later than 3 years after the date of the enactment of this Act, and every 3 years thereafter, 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 during the most recent 3-year period, including—

(1) an assessment of the progress made towards achieving the purposes specified in subsection (c) based on the metrics developed under subsection (h);

(2) the short-term and long-term metrics used to determine the success of the program under subsection (h), and any changes recommended to the metrics used;

(3) the regional clean energy innovation partnerships that have received grants under subsection (d); and

(4) any recommendations on how the program may be improved.

(j) NATIONAL LABORATORIES.—In supporting technology transfer activities at the National Laboratories, the Secretary shall encourage partnerships with entities that are located in the same region or State as the National Laboratory.

(k) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary to carry out this section $50,000,000 for each of fiscal years 2021 through 2025.

SEC. 102. 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 Technology Transfer Coordinator 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 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 low-income and frontline 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 307(b) of this Act, 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 2021 through 2025.

SEC. 103. 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. The purpose of this program is to encourage student interest in clean energy technology development and to help students solve challenges in clean energy technology commercial application, with participation from diverse geographical regions of the United States.

(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 existing 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 307(a) of this Act, the Secretary shall report annually on the progress and implementation of the program established under section (b).

(g) EVALUATION.—In accordance with section 307(b) of this Act, 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 2021 through 2025.

SEC. 104. CLEAN ENERGY TECHNOLOGY TRANSFER COORDINATION.

(a) IN GENERAL.—The Secretary, acting through the Technology Transfer Coordinator 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, including those authorized in sections 101, 102, 103, 202, and 206 of this Act, 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 2021 through 2025.

TITLE II—SUPPORTING TECHNOLOGY DEVELOPMENT AT THE NATIONAL LABORATORIES

SEC. 201. LAB PARTNERING SERVICE PILOT PROGRAM.

(a) PILOT PROGRAM.—

(1) IN GENERAL.—The Secretary, acting through the Technology Transfer Coordinator 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.

(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 and dedicated technology transfer staff at the National Laboratories, in particular for match-making services for individual projects, which should be led by the National Laboratories.

(d) FUNDING EMPLOYEE PARTNERING ACTIVITIES.—The Secretary shall delegate to the Directors 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) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary $2,000,000 for each of fiscal years 2021 through 2023 to carry out subsections (a), (b), (c), (e), and (f) and $1,700,000 for each of fiscal years 2021 through 2023 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 eligible entity 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.—Eligible entities 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; or

(3) a federally owned corporation.

(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 307(b) of this Act, 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 eligible entities 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 programs 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 2021 through 2025.

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

''procurement and 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 ''procurement and 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 Technology Transfer Coordinator 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 307(a) of the Energizing Technology Transfer Act, 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 in-

serting ''for activities under subsection (b)'' and inserting at the end ''and for activities under subsection (c) $25,000,000 for each of fiscal years 2021 through 2025''.

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 307(a) of this Act, 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) sacrifice, hamper, 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. TECHNOLOGY COMMERCIALIZATION FUND.

Section 1001(e) of the Energy Policy Act of 2005 (42 U.S.C. 16391(e)) is amended to read as follows:

''(a) TECHNOLOGY COMMERCIALIZATION FUND.—

''(1) ESTABLISHMENT.—The Secretary, acting through the Technology Transfer Coordinator 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 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.

''(3) ANNUAL REPORT.—The Secretary shall include in the annual report required under subsection (h)(2)—

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

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

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

"(4) EVALUATION.—In accordance with section 307(b) of the Energizing Technology Transfer Act, the Secretary shall submit 3 years after the enactment of that Act and every 3 years thereafter 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 on the long-term commercial success of projects that received awards from the Fund.

"(5) TECHNOLOGY COMMERCIALIZATION FUND REPORT.—

"(A) IN GENERAL.—Not later than 1 year after the date of enactment of the Energizing Technology Transfer Act, 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.

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

''(i) 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;

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

''(iii) 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.''.

SEC. 207. 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 307(a) of this Act, 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 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 207 of the Ener-

gizing 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. TECHNOLOGY TRANSFER PROGRAM.

Title X of the Energy Policy Act of 2005 (42 U.S.C. 16391 et seq.) is amended by adding at the end the following:

''SEC. 1012. TECHNOLOGY TRANSFER PROGRAM.

''(a) ESTABLISHMENT.—The Secretary shall carry out a program, to be led by the Technology Transfer Coordinator appointed in section 1001(a) who shall report directly to, and be appointed by, the Secretary, and shall be the principal advisor to the Secretary on all matters relating to technology transfer and commercial application.

''(b) MISSION.—The mission of the program shall be—

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

''(2) to advance the commercial application of technologies that reduce energy use, reduce greenhouse gas emissions and other pollutants, improve energy efficiency, mitigate other negative environmental consequences, or support other missions of the Department.

''(c) GOALS.—

''(1) IN GENERAL.—In carrying out the program, the Technology Transfer Coordinator shall, with respect to commercial application activities, meet all of the goals described in paragraph (2).

''(2) GOALS DESCRIBED.—The goals referred to in paragraph (1) are the following:

''(A) Reduction of greenhouse gas emissions or other pollutants.

''(B) Improvement of energy efficiency.

''(C) Improvement of economic competitiveness.

''(D) Enhancement of domestic energy security and national security.

''(E) Enhancement of the domestic workforce relevant to energy and other sectors relevant to the mission of the Department.

''(d) 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 306 of this Act.

''(e) COLLABORATION.—In carrying out the mission and activities of the program, the Technology Transfer Coordinator shall coordinate with the senior leadership of the Department, other relevant offices of the Department, the Directors, the National Laboratories, the Technology Transfer Working Group established under section 1001(d), the Technology Transfer Policy Board, and other stakeholders, including private industry.

''(f) REPORT.—In accordance with section 307(a) of this Act, the Secretary shall report annually on the activities carried out by this program pertaining to the mission of the program in subsection (b) and the goals in subsection (c).

''(g) 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 2021 through 2025.''.

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 more than $50,000,000 in funding from the Department, in coordination with relevant staff from Department 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 2 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 306 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) 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.

(e) 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.

(f) REPORTING.—In accordance with section 307(a), the Secretary shall report annually on the utilization of the authority granted under this section, including a summary of—

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

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

(g) 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.

Section 1008 of the Energy Policy Act of 2005 (42 U.S.C. 16396) is amended by inserting after subsection

(d) the following (and redesignating subsections (f) and (g) as subsections (g) and (h), respectively):

''(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) designate at least one full time employee to serve as a Department-wide point of contact on prize competitions;

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

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

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

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

''(f) REPORT.—In accordance with section 307(a) of the Energizing Technology Transfer Act, 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 contribu-

tions, the methods used for solicitation and evaluation, and a description of how each prize competition advanced the mission of the Department.''.

SEC. 304. MILESTONE-BASED DEMONSTRATION PROJECTS.

(a) IN GENERAL.—Acting under section 646(g) of the Department of Energy Organization Act (42 U.S.C. 7256(g)), notwithstanding paragraph (10) of such section, the Secretary may carry out demonstration projects as a milestone-based demonstration project that requires particular technical and financial milestones to be met before a participant is awarded grants by the Department through a competitive award process.

(b) REQUIREMENTS.—In carrying out milestone-based demonstration projects under the authority in paragraph (1), the Secretary shall, for each relevant project—

(1) request proposals from eligible entities, as determined by the Secretary, including—

(A) a business plan, that may include a plan for scalable manufacturing and a plan for addressing supply chain gaps;

(B) a plan for raising private sector investment; and

(C) proposed technical and financial milestones, including estimated project timelines and total costs; and

(2) award funding of a predetermined amount to projects that successfully meet proposed milestones under paragraph (1)(C) or for expenses deemed reimbursable by the Secretary, in accordance with terms negotiated for an individual award;

(3) require cost sharing in accordance with section 988 of the Energy Policy Act of 2005; and

(4) communicate regularly with selected eligible entities and, if the Secretary deems appropriate, exercise small amounts of flexibility for technical and financial milestones as projects mature.

(c) AWARDS.—For the program established under subsection (a)—

(1) an award recipient shall be responsible for all costs until milestones are achieved, or reimbursable expenses are reviewed and verified by the Department; and

(2) should an awardee not meet the milestones described in subsection (a), the Secretary or their designee may end the partnership with an award recipient and use the remaining funds in the ended agreement for new or existing projects carried out under this section.

(d) PROJECT MANAGEMENT.—In carrying out projects under this program and assessing the completion

of their milestones in accordance with subsection (b), the Secretary shall consult with experts that represent diverse perspectives and professional experiences, including those from the private sector, to ensure a complete and thorough review.

(e) REPORT.—In accordance with section 307(a), the Secretary shall report annually on any demonstration projects carried out using the authorities under this section.

SEC. 305. COST-SHARE WAIVER EXTENSION.

(a) Section 988 of the Energy Policy Act of 2005 is amended in subsection (b)(4)(B) by striking ''this paragraph'' and inserting ''the Energizing Technology Transfer Act''.

(b) 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. 306. 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 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 the Executive Schedule (EX–II) 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. 307. TECHNOLOGY TRANSFER REPORTS AND EVALUATION.

(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 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 103, 203, 204, 205, 207, 301, 302, 303, and 304 of this Act and section 1001(e) of the Energy Policy Act of 2005 (42 U.S.C. 16391(e)).

(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 102, 103, 104, and 202 of this Act and section 1001(e) of the Energy Policy Act of 2005

(42 U.S.C. 16391(e)) are achieving success based on relevant short-term and long-term metrics.

(c) REPORT ON TECHNOLOGY TRANSFER GAPS.—Not later than 3 years after the enactment of this Act, the Secretary shall enter into an agreement with the National Academies of Science, Engineering, and Medicine to 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 programmatic gaps that exist to advance the commercial application of technologies developed at the National Laboratories.

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