(g) Open data initiative

(1) In general

The Secretary, in collaboration with key stakeholders and the Director of the Office of Management and Budget, shall establish an open data initiative relating to energy usage at federally owned and operated data centers, with the purpose of making the data available and accessible in a manner that encourages further data center innovation, optimization, and consolidation.

(2) Consideration

In establishing the initiative under paragraph (1), the Secretary shall consider using the online Data Center Maturity Model.

(h) International specifications and metrics

The Secretary, in collaboration with key stakeholders, shall actively participate in efforts to harmonize global specifications and metrics for data center energy and water efficiency.

(i) Data center utilization metric

The Secretary, in collaboration with key stakeholders, shall facilitate in the development of an efficiency metric that measures the energy efficiency of a data center (including equipment and facilities).

(j) Protection of proprietary information

The Secretary and the Administrator shall not disclose any proprietary information or trade secrets provided by any individual or company for the purposes of carrying out this section or the programs and initiatives established under this section.

(Pub. L. 110–140, title IV, § 453, Dec. 19, 2007, 121 Stat. 1637; Pub. L. 116–260, div. Z, title I, § 1003, Dec. 27, 2020, 134 Stat. 2426.)

Editorial Notes

REFERENCES IN TEXT

The Energy Policy and Conservation Act, referred to in subsec. (b)(2)(D)(ii), is Pub. L. 94–163, Dec. 22, 1975, 89 Stat. 871, which is classified principally to chapter 77 (§ 6201 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 6201 of this title and Tables.

Section 1 of Public Law 109–431 (120 Stat. 2920), referred to in subsec. (e)(1), is section 1 of Pub. L. 109–431, Dec. 20, 2006, 120 Stat. 2920, which is not classified to the Code.

AMENDMENTS

2020—Subsec. (b)(2)(D)(iv). Pub. L. 116–260, § 1003(1)(A), substituted ''proposed by the stakeholders'' for ''determined by the organization''.

Subsec. (b)(3). Pub. L. 116–260, § 1003(1)(B), struck out par. (3). Text read as follows: ''The program described in paragraph (1) shall be developed in consultation with and coordinated by the organization described in subsection (c) according to commonly accepted procedures for the development of specifications, measurements, and benchmarks.''

Subsecs. (c) to (j). Pub. L. 116–260, § 1003(2), added subsecs. (c) to (j) and struck out former subsecs. (c) to (g) which related to consultation with a data center efficiency organization to coordinate the voluntary national information program, including the requirements of such coordination, measurements and specifications, monitoring, alternate systems, and protection of propriety information.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as a note under section 1824 of Title 2, The Congress.

§ 17113. Industrial emissions reduction technology development program

(a) Definitions

In this section:

(1) Director

The term ''Director'' means the Director of the Office of Science and Technology Policy.

(2) Eligible entity

The term ''eligible entity'' means—

(A) a scientist or other individual with knowledge and expertise in emissions reduction;

(B) an institution of higher education;

(C) a nongovernmental organization;

(D) a National Laboratory;

(E) a private entity; and

(F) a partnership or consortium of 2 or more entities described in subparagraphs (B) through (E).

(3) Emissions reduction

(A) In general

The term ''emissions reduction'' means the reduction, to the maximum extent practicable, of net nonwater greenhouse gas emissions to the atmosphere by energy services and industrial processes.

(B) Exclusion

The term ''emissions reduction'' does not include the elimination of carbon embodied in the principal products of industrial manufacturing.

(4) Program

The term ''program'' means the program established under subsection (b)(1).

(5) Critical material or mineral

The term ''critical material or mineral'' means a material or mineral that serves an essential function in the manufacturing of a product and has a high risk of a supply disruption, such that a shortage of such a material or mineral would have significant consequences for United States economic or national security.

(b) Industrial emissions reduction technology development program

(1) In general

Not later than 1 year after December 27, 2020, the Secretary, in consultation with the Director, the heads of relevant Federal agencies, National Laboratories, industry, and institutions of higher education, shall establish a crosscutting industrial emissions reduction technology development program of research, development, demonstration, and commercial application to advance innovative technologies that—

(A) increase the technological and economic competitiveness of industry and manufacturing in the United States;

(B) increase the viability and competitiveness of United States industrial technology exports; and

(C) achieve emissions reduction in nonpower industrial sectors.

(2) Coordination

In carrying out the program, the Secretary shall—

(A) coordinate with each relevant office in the Department and any other Federal agency;

(B) coordinate and collaborate with the Industrial Technology Innovation Advisory Committee established under section 17115 of this title; and

(C) coordinate and seek to avoid duplication with the Future of Industry[1] program established under section 17111 of this title.

(3) Leverage of existing resources

In carrying out the program, the Secretary shall leverage, to the maximum extent practicable—

(A) existing resources and programs of the Department and other relevant Federal agencies; and

(B) public-private partnerships.

(c) Focus areas

The program shall focus on—

(1) industrial production processes, including technologies and processes that—

(A) achieve emissions reduction in high emissions industrial materials production processes, including production processes for iron, steel, steel mill products, aluminum, cement, concrete, glass, pulp, paper, and industrial ceramics;

(B) achieve emissions reduction in medium- and high-temperature heat generation, including—

(i) through electrification of heating processes;

(ii) through renewable heat generation technology;

(iii) through combined heat and power; and

(iv) by switching to alternative fuels, including hydrogen and nuclear energy;

(C) achieve emissions reduction in chemical production processes, including by incorporating, if appropriate and practicable, principles, practices, and methodologies of sustainable chemistry and engineering;

(D) leverage smart manufacturing technologies and principles, digital manufacturing technologies, and advanced data analytics to develop advanced technologies and practices in information, automation, monitoring, computation, sensing, modeling, and networking to—

(i) model and simulate manufacturing production lines;

(ii) monitor and communicate production line status;

(iii) manage and optimize energy productivity and cost throughout production; and

(iv) model, simulate, and optimize the energy efficiency of manufacturing processes;

(E) leverage the principles of sustainable manufacturing to minimize the potential negative environmental impacts of manufacturing while conserving energy and resources, including—

(i) by designing products that enable reuse, refurbishment, remanufacturing, and recycling;

(ii) by minimizing waste from industrial processes, including through the reuse of waste as other resources in other industrial processes for mutual benefit; and

(iii) by increasing resource efficiency; and

(F) increase the energy efficiency of industrial processes;

(2) alternative materials that produce fewer emissions during production and result in fewer emissions during use, including—

(A) high-performance lightweight materials; and

(B) substitutions for critical materials and minerals;

(3) development of net-zero emissions liquid and gaseous fuels;

(4) emissions reduction in shipping, aviation, and long distance transportation;

(5) carbon capture technologies for industrial processes;

(6) other technologies that achieve net-zero emissions in nonpower industrial sectors, as determined by the Secretary, in consultation with the Director; and

(7) high-performance computing to develop advanced materials and manufacturing processes contributing to the focus areas described in paragraphs (1) through (6), including—

(A) modeling, simulation, and optimization of the design of energy efficient and sustainable products; and

(B) the use of digital prototyping and additive manufacturing to enhance product design.

(8) incorporation of sustainable chemistry and engineering principles, practices, and methodologies, as the Secretary determines appropriate; and

(9) other research or technology areas identified in the Strategic Plan authorized in section 17114 of this title.

(d) Grants, contracts, cooperative agreements, and demonstration projects

(1) Grants

In carrying out the program, the Secretary shall award grants on a competitive basis to eligible entities for projects that the Secretary determines would best achieve the goals of the program.

(2) Contracts and cooperative agreements

In carrying out the program, the Secretary may enter into contracts and cooperative agreements with eligible entities and Federal agencies for projects that the Secretary determines would further the purposes of the program.

(3) Demonstration projects

In supporting technologies developed under this section, the Secretary shall fund dem-

[1] So in original.

onstration projects that test and validate technologies described in subsection (c).

(4) Application

An entity seeking funding or a contract or agreement under this subsection shall submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require.

(5) Cost sharing

In awarding funds under this section, the Secretary shall require cost sharing in accordance with section 16352 of this title.

(e) Authorization of appropriations

There are authorized to be appropriated to the Secretary to carry out the demonstration projects authorized in subsection (d)(3)—

(1) $20,000,000 for fiscal year 2021;
(2) $80,000,000 for fiscal year 2022;
(3) $100,000,000 for fiscal year 2023;
(4) $150,000,000 for fiscal year 2024; and
(5) $150,000,000 for fiscal year 2025.

(f) Coordination

The Secretary shall carry out the activities authorized in this section in accordance with section 18631 of this title.

(Pub. L. 110–140, title IV, § 454, as added Pub. L. 116–260, div. Z, title VI, § 6003(a), Dec. 27, 2020, 134 Stat. 2553; amended Pub. L. 117–58, div. D, title V, § 40521(a)(2), Nov. 15, 2021, 135 Stat. 1062.)

Editorial Notes

AMENDMENTS

2021—Subsec. (b)(2)(C). Pub. L. 117–58 substituted ''Future of Industry'' for ''energy-intensive industries''.

Statutory Notes and Related Subsidiaries

WAGE RATE REQUIREMENTS

For provisions relating to rates of wages to be paid to laborers and mechanics on projects for construction, alteration, or repair work funded under div. D or an amendment by div. D of Pub. L. 117–58, including authority of Secretary of Labor, see section 18851 of this title.

PURPOSE

Pub. L. 116–260, div. Z, title VI, § 6001, Dec. 27, 2020, 134 Stat. 2552, provided that: ''The purpose of this title [enacting this section and sections 17114 to 17115a of this title and amending section 6351 of this title] and the amendments made by this title is to encourage the development and evaluation of innovative technologies aimed at increasing—

''(1) the technological and economic competitiveness of industry and manufacturing in the United States; and

''(2) the emissions reduction of nonpower industrial sectors.''

§ 17114. Industrial Technology Innovation Advisory Committee

(a) Definitions

In this section:

(1) Committee

The term ''Committee'' means the Industrial Technology Innovation Advisory Committee established under subsection (b).

(2) Director

The term ''Director'' means the Director of the Office of Science and Technology Policy.

(3) Emissions reduction

The term ''emissions reduction'' has the meaning given the term in section 17113(a) of this title.

(4) Program

The term ''program'' means the industrial emissions reduction technology development program established under section 17113(b)(1) of this title.

(b) Establishment

Not later than 180 days after December 27, 2020, the Secretary, in consultation with the Director, shall establish an advisory committee, to be known as the ''Industrial Technology Innovation Advisory Committee''.

(c) Membership

(1) Appointment

The Committee shall be comprised of not fewer than 16 members and not more than 20 members, who shall be appointed by the Secretary, in consultation with the Director.

(2) Representation

Members appointed pursuant to paragraph (1) shall include—

(A) not less than 1 representative of each relevant Federal agency, as determined by the Secretary;

(B) the Chair of the Secretary of Energy Advisory Board, if that position is filled;

(C) not less than 2 representatives of labor groups;

(D) not less than 3 representatives of the research community, which shall include academia and National Laboratories;

(E) not less than 2 representatives of nongovernmental organizations;

(F)[1] not less than 6 representatives of small- and large-scale industry, the collective expertise of which shall cover every focus area described in section 17113(c) of this title; and[2]

(F)[1] not less than 1 representative of a State government; and

(G) any other individuals the Secretary, in coordination with the Director, determines to be necessary to ensure that the Committee is comprised of a diverse group of representatives of industry, academia, independent researchers, and public and private entities.

(3) Chair

The Secretary shall designate a member of the Committee to serve as Chair.

(d) Duties

(1) In general

The Committee shall—

(A) in consultation with the Secretary and the Director, propose missions and goals for the program, which shall be consistent with the purposes of the program described in section 17113(b)(1) of this title; and

(B) advise the Secretary with respect to the program—

[1] So in original. There are two subpars. (F).

[2] So in original. The word ''and'' probably should not appear.