

(A) is a nonprofit organization, an institution of higher education, a public-private partnership, a science or research park, a Federal laboratory, or an economic development organization or similar entity; and

(B) has an application that is supported by a State, a political subdivision of a State, or a native organization; or

(5) a consortium of any of the entities described in paragraphs (1) through (5).

(c) Needs assessment grants

The Secretary of Commerce may provide a grant to an eligible recipient to conduct a needs assessment to identify—

(1) the unmet need of a region's employer base for skilled STEM workers;

(2) the potential of STEM apprenticeships to address the unmet need described in paragraph (1); and

(3) any barriers to addressing the unmet need described in paragraph (1).

(d) Apprenticeship expansion grants

The Secretary of Commerce may provide a grant to an eligible recipient that has conducted a needs assessment as described in subsection (c)(1) to develop infrastructure to expand STEM apprenticeship programs.

(Pub. L. 96-480, § 30, formerly § 28, as added Pub. L. 114-329, title III, § 312(e), Jan. 6, 2017, 130 Stat. 3014; renumbered § 30, Pub. L. 117-167, div. B, title VI, § 10621(a)(1), Aug. 9, 2022, 136 Stat. 1642.)

Statutory Notes and Related Subsidiaries

DEVELOPING STEM APPRENTICESHIPS

Pub. L. 114-329, title III, § 312(a)-(d), Jan. 6, 2017, 130 Stat. 3013, 3014, provided that:

“(a) FINDINGS.—Congress makes the following findings:

“(1) The lack of data on the return on investment for United States employers using registered apprenticeships makes it difficult—

“(A) to communicate the value of these programs to businesses; and

“(B) to expand registered apprenticeships.

“(2) The lack of data on the value and impact of employer-provided worker training, which is likely substantial, hinders the ability of the Federal Government to formulate policy related to workforce training.

“(3) The Secretary of Commerce has initiated—

“(A) the first study on the return on investment for United States employers using registered apprenticeships through case studies of firms in various sectors, occupations, and geographic locations to provide the business community with data on employer benefits and costs; and

“(B) discussions with officials at relevant Federal agencies about the need to collect comprehensive data on—

“(i) employer-provided worker training; and

“(ii) existing tools that could be used to collect such data.

“(b) DEVELOPMENT OF APPRENTICESHIP INFORMATION.—The Secretary of Commerce shall continue to research the value to businesses of utilizing apprenticeship programs, including—

“(1) evidence of return on investment of apprenticeships, including estimates for the average time it takes a business to recover the costs associated with training apprentices; and

“(2) data from the United States Census Bureau and other statistical surveys on employer-provided train-

ing, including apprenticeships and other on-the-job training and industry-recognized certification programs.

“(c) DISSEMINATION OF APPRENTICESHIP INFORMATION.—The Secretary of Commerce shall disseminate findings from research on apprenticeships to businesses and other relevant stakeholders, including—

“(1) institutions of higher education;

“(2) State and local chambers of commerce; and

“(3) workforce training organizations.

“(d) NEW APPRENTICESHIP PROGRAM STUDY.—The Secretary of Commerce may collaborate with the Secretary of Labor to study approaches for reducing the cost of creating new apprenticeship programs and hosting apprentices for businesses, particularly small businesses, including—

“(1) training sharing agreements;

“(2) group training models; and

“(3) pooling resources and best practices.”

[For definitions of “STEM” and “institution of higher education” as used in section 312(a)-(d) of Pub. L. 114-329, set out above, see section 2 of Pub. L. 114-329, set out as a note under section 1862s of Title 42, The Public Health and Welfare.]

§ 3724. Crowdsourcing and citizen science

(a) Short title

This section may be cited as the “Crowdsourcing and Citizen Science Act”.

(b) Sense of Congress

It is the sense of Congress that—

(1) the authority granted to Federal agencies under the America COMPETES Reauthorization Act of 2010 (Public Law 111-358; 124 Stat. 3982) to pursue the use of incentive prizes and challenges has yielded numerous benefits;

(2) crowdsourcing and citizen science projects have a number of additional unique benefits, including accelerating scientific research, increasing cost effectiveness to maximize the return on taxpayer dollars, addressing societal needs, providing hands-on learning in STEM, and connecting members of the public directly to Federal science agency missions and to each other; and

(3) granting Federal science agencies the direct, explicit authority to use crowdsourcing and citizen science will encourage its appropriate use to advance Federal science agency missions and stimulate and facilitate broader public participation in the innovation process, yielding numerous benefits to the Federal Government and citizens who participate in such projects.

(c) Definitions

In this section:

(1) Citizen science

The term “citizen science” means a form of open collaboration in which individuals or organizations participate voluntarily in the scientific process in various ways, including—

(A) enabling the formulation of research questions;

(B) creating and refining project design;

(C) conducting scientific experiments;

(D) collecting and analyzing data;

(E) interpreting the results of data;

(F) developing technologies and applications;

(G) making discoveries; and

(H) solving problems.

(2) Crowdsourcing

The term “crowdsourcing” means a method to obtain needed services, ideas, or content by soliciting voluntary contributions from a group of individuals or organizations, especially from an online community.

(3) Participant

The term “participant” means any individual or other entity that has volunteered in a crowdsourcing or citizen science project under this section.

(d) Crowdsourcing and citizen science**(1) In general**

The head of each Federal science agency, or the heads of multiple Federal science agencies working cooperatively, may utilize crowdsourcing and citizen science to conduct projects designed to advance the mission of the respective Federal science agency or the joint mission of Federal science agencies, as applicable.

(2) Voluntary services

Notwithstanding section 1342 of title 31, the head of a Federal science agency may accept, subject to regulations issued by the Director of the Office of Personnel Management, in coordination with the Director of the Office of Science and Technology Policy, services from participants under this section if such services—

(A) are performed voluntarily as a part of a crowdsourcing or citizen science project authorized under paragraph (1);

(B) are not financially compensated for their time; and

(C) will not be used to displace any employee of the Federal Government.

(3) Outreach

The head of each Federal science agency engaged in a crowdsourcing or citizen science project under this section shall make public and promote such project to encourage broad participation.

(4) Consent, registration, and terms of use**(A) In general**

Each Federal science agency shall determine the appropriate level of consent, registration, or acknowledgment of the terms of use that are required from participants in crowdsourcing or citizen science projects under this section on a per-project basis.

(B) Disclosures

In seeking consent, conducting registration, or developing terms of use for a project under this subsection, a Federal science agency shall disclose the privacy, intellectual property, data ownership, compensation, service, program, and other terms of use to the participant in a clear and reasonable manner.

(C) Mode of consent

A Federal agency or Federal science agencies, as applicable, may obtain consent electronically or in written form from participants under this section.

(5) Protections for human subjects

Any crowdsourcing or citizen science project under this section that involves research involving human subjects shall be subject to part 46 of title 28, Code of Federal Regulations (or any successor regulation).

(6) Data**(A) In general**

A Federal science agency shall, where appropriate and to the extent practicable, make data collected through a crowdsourcing or citizen science project under this section available to the public, in a machine readable format, unless prohibited by law.

(B) Notice

As part of the consent process, the Federal science agency shall notify all participants—

(i) of the expected uses of the data compiled through the project;

(ii) if the Federal science agency will retain ownership of such data;

(iii) if and how the data and results from the project would be made available for public or third party use; and

(iv) if participants are authorized to publish such data.

(7) Technologies and applications

Federal science agencies shall endeavor to make technologies, applications, code, and derivations of such intellectual property developed through a crowdsourcing or citizen science project under this section available to the public.

(8) Liability

Each participant in a crowdsourcing or citizen science project under this section shall agree—

(A) to assume any and all risks associated with such participation; and

(B) to waive all claims against the Federal Government and its related entities, except for claims based on willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits (whether direct, indirect, or consequential) arising from participation in the project.

(9) Research misconduct

Federal science agencies coordinating crowdsourcing or citizen science projects under this section shall make all practicable efforts to ensure that participants adhere to all relevant Federal research misconduct policies and other applicable ethics policies.

(10) Multi-sector partnerships

The head of each Federal science agency engaged in crowdsourcing or citizen science under this section, or the heads of multiple Federal science agencies working cooperatively, may enter into a contract or other agreement to share administrative duties for such projects with—

(A) a for profit or nonprofit private sector entity, including a private institution of higher education;

(B) a State, tribal, local, or foreign government agency, including a public institution of higher education; or

(C) a public-private partnership.

(11) Funding

In carrying out crowdsourcing and citizen science projects under this section, the head of a Federal science agency, or the heads of multiple Federal science agencies working cooperatively—

(A) may use funds appropriated by Congress;

(B) may publicize projects and solicit and accept funds or in-kind support for such projects, to be available to the extent provided by appropriations Acts, from—

- (i) other Federal agencies;
- (ii) for profit or nonprofit private sector entities, including private institutions of higher education; or
- (iii) State, tribal, local, or foreign government agencies, including public institutions of higher education; and

(C) may not give any special consideration to any entity described in subparagraph (B) in return for such funds or in-kind support.

(12) Facilitation

(A) General Services Administration assistance

The Administrator of the General Services Administration, in coordination with the Director of the Office of Personnel Management and the Director of the Office of Science and Technology Policy, shall, at no cost to Federal science agencies, identify and develop relevant products, training, and services to facilitate the use of crowdsourcing and citizen science projects under this section, including by specifying the appropriate contract vehicles and technology and organizational platforms to enhance the ability of Federal science agencies to carry out the projects under this section.

(B) Additional guidance

The head of each Federal science agency engaged in crowdsourcing or citizen science under this section may—

- (i) consult any guidance provided by the Director of the Office of Science and Technology Policy, including the Federal Crowdsourcing and Citizen Science Toolkit;
- (ii) designate a coordinator for that Federal science agency's crowdsourcing and citizen science projects; and
- (iii) share best practices with other Federal agencies, including participation of staff in the Federal Community of Practice for Crowdsourcing and Citizen Science.

(e) Report

(1) In general

Not later than 2 years after January 6, 2017, the Director of the Office of Science and Technology Policy shall include, as a component of an annual¹ report required under section

3719(p) of this title, a report on the projects and activities carried out under this section.

(2) Information included

The report required under paragraph (1) shall include—

(A) a summary of each crowdsourcing and citizen science project conducted by a Federal science agency during the most recently completed 2 fiscal years, including a description of the proposed goals of each crowdsourcing and citizen science project;

(B) an analysis of why the utilization of a crowdsourcing or citizen science project summarized in subparagraph (A) was the preferable method of achieving the goals described in subparagraph (A) as opposed to other authorities available to the Federal science agency, such as contracts, grants, cooperative agreements, and prize competitions;

(C) the participation rates, submission levels, number of consents, and any other statistic that might be considered relevant in each crowdsourcing and citizen science project;

(D) a detailed description of—

(i) the resources, including personnel and funding, that were used in the execution of each crowdsourcing and citizen science project;

(ii) the project activities for which such resources were used; and

(iii) how the obligations and expenditures relating to the project's execution were allocated among the accounts of the Federal science agency, including a description of the amount and source of all funds, private, public, and in-kind, contributed to each crowdsourcing and citizen science project;

(E) a summary of the use of crowdsourcing and citizen science by all Federal science agencies, including interagency and multi-sector partnerships;

(F) a description of how each crowdsourcing and citizen science project advanced the mission of each participating Federal science agency;

(G) an identification of each crowdsourcing or citizen science project where data collected through such project was not made available to the public, including the reasons for such action; and

(H) any other information that the Director of the Office of Science and Technology Policy considers relevant.

(f) Savings provision

Nothing in this section may be construed—

(1) to affect the authority to conduct crowdsourcing and citizen science authorized by any other provision of law; or

(2) to displace Federal Government resources allocated to the Federal science agencies that use crowdsourcing or citizen science authorized under this section to carry out a project.

(Pub. L. 114-329, title IV, §402, Jan. 6, 2017, 130 Stat. 3019.)

¹ So in original. As amended by Pub. L. 114-329, section 3719(p) of this title requires biennial reports.

Editorial Notes

REFERENCES IN TEXT

The America COMPETES Reauthorization Act of 2010, referred to in subsec. (b)(1), is Pub. L. 111-358, Jan. 4, 2011, 124 Stat. 3982, also known as the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science Reauthorization Act of 2010. For complete classification of this Act to the Code, see Short Title of 2011 Amendment note set out under section 1861 of Title 42, The Public Health and Welfare, and Tables.

CODIFICATION

Section was enacted as part of the American Innovation and Competitiveness Act, and not as part of the Stevenson-Wydler Technology Innovation Act of 1980 which comprises this chapter.

Statutory Notes and Related Subsidiaries

DEFINITIONS

For definitions of terms used in this section, see section 2 of Pub. L. 114-329, set out as a note under section 1862s of Title 42, The Public Health and Welfare.

CHAPTER 64—METHANE TRANSPORTATION RESEARCH, DEVELOPMENT, AND DEMONSTRATION

Sec.	
3801.	Congressional statement of findings and declaration of policy.
3802.	Definitions.
3803.	Duties of Secretary of Energy.
3804.	Coordination with other Federal departments and agencies.
3805.	Research and development activities.
3806.	Demonstrations.
3807.	Use of methane-fueled vehicles by Federal agencies and departments.
3808.	Repealed.
3809.	Authorization of appropriations; required funding.
3810.	Relationship to other laws.

§ 3801. Congressional statement of findings and declaration of policy

(a) The Congress finds and declares that—

(1) gasoline and diesel fuel for vehicular use are in short supply and constitute a sizable portion of domestic petroleum consumption;

(2) methane use in fleet-operated vehicles would result in substantial reduction in oil imports;

(3) methane is in more abundant domestic supply than petroleum products, is the primary component of natural gas and can be derived in increased quantities from coal, biomass, waste products, and other renewable resources;

(4) recoverable methane presently available in the United States is not fully utilized;

(5) test results to date indicate that methane use as a substitute for gasoline as a motor fuel can result in emission reductions;

(6) experience to date has shown methane to be a safe motor fuel in properly modified vehicles and is therefore particularly suitable as fuel for fleet vehicles; and

(7) the introduction into commerce of methane-fueled vehicles would be expedited and facilitated by the establishment of a Federal program of research, development, and demonstration to explore and refine technologies related to methane use as a vehicular fuel.

(b) It is therefore declared to be the policy of the Congress in this chapter to—

(1) provide for and support advanced and accelerated research into, and development of, methane vehicle design, and related technologies;

(2) demonstrate the economic and technological practicalities of methane-fueled vehicles for fleet use and of methane-fueled farm equipment;

(3) facilitate, and remove barriers to, the use of methane-fueled vehicles in lieu of gasoline- or diesel-powered motor vehicles where practicable;

(4) promote the substitution of methane-fueled vehicles for gasoline- and diesel-powered vehicles currently used on farms and in fleet operations, particularly in areas where such substitution would facilitate plans to meet air quality standards set under the Clean Air Act, as amended [42 U.S.C. 7401 et seq.]; and

(5) supplement, but neither supplant nor duplicate, the automotive propulsion system research and development efforts of private industry.

(Pub. L. 96-512, § 2, Dec. 12, 1980, 94 Stat. 2827.)

Editorial Notes

REFERENCES IN TEXT

The Clean Air Act, as amended, referred to in subsec. (b)(4), is act July 14, 1955, ch. 360, 69 Stat. 322, which is classified generally to chapter 85 (§7401 et seq.) of Title 42, The Public Health and Welfare. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of Title 42 and Tables.

Statutory Notes and Related Subsidiaries

SHORT TITLE

Pub. L. 96-512, § 1, Dec. 12, 1980, 94 Stat. 2827, provided: "That this Act [enacting this chapter] may be cited as the 'Methane Transportation Research, Development, and Demonstration Act of 1980'."

§ 3802. Definitions

For purposes of this chapter—

(a) the term "methane" means either natural gas (as defined in section 3301(1) of this title), gas derived from coal, liquefied natural gas, or any gaseous transportation fuel produced from biomass, waste products, and other renewable resources;

(b) the term "Secretary" means the Secretary of Energy;

(c) the term "public entities" means any unit or units of State and/or local governments;

(d) the term "private entities" means any person, such as any organization incorporated under State law, for profit or not-for-profit, or a consortium of such organizations, but does not include public entities;

(e) the term "vehicle" means any truck, van, station wagon, bus, or car used on public roads or highways as well as off-road agricultural equipment, such as tractors, harvesters, and so forth, which presently burn gasoline or diesel fuel; and

(f) the terms "facilities for the transmission and storage of methane", "methane trans-