

(2) Electric vehicle competition

The program established under paragraph (1) shall include a plug-in hybrid electric vehicle competition for institutions of higher education, which shall be known as the “Dr. Andrew Frank Plug-In Electric Vehicle Competition”.

(3) Engineers

In carrying out the program established under paragraph (1), the Secretary shall provide financial assistance to institutions of higher education to create new, or support existing, degree programs to ensure the availability of trained electrical and mechanical engineers with the skills necessary for the advancement of—

(A) plug-in electric drive vehicles; and

(B) other forms of electric drive transportation technology vehicles.

(4) Authorization of appropriations

There are authorized to be appropriated such sums as may be necessary to carry out this subsection.

(Pub. L. 110-140, title I, §131, Dec. 19, 2007, 121 Stat. 1508.)

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.

§ 17012. Advanced battery loan guarantee program**(a) Establishment of program**

The Secretary shall establish a program to provide guarantees of loans by private institutions for the construction of facilities for the manufacture of advanced vehicle batteries and battery systems that are developed and produced in the United States, including advanced lithium ion batteries and hybrid electrical system and component manufacturers and software designers.

(b) Requirements

The Secretary may provide a loan guarantee under subsection (a) to an applicant if—

(1) without a loan guarantee, credit is not available to the applicant under reasonable terms or conditions sufficient to finance the construction of a facility described in subsection (a);

(2) the prospective earning power of the applicant and the character and value of the security pledged provide a reasonable assurance of repayment of the loan to be guaranteed in accordance with the terms of the loan; and

(3) the loan bears interest at a rate determined by the Secretary to be reasonable, taking into account the current average yield on outstanding obligations of the United States with remaining periods of maturity comparable to the maturity of the loan.

(c) Criteria

In selecting recipients of loan guarantees from among applicants, the Secretary shall give preference to proposals that—

(1) meet all applicable Federal and State permitting requirements;

(2) are most likely to be successful; and

(3) are located in local markets that have the greatest need for the facility.

(d) Maturity

A loan guaranteed under subsection (a) shall have a maturity of not more than 20 years.

(e) Terms and conditions

The loan agreement for a loan guaranteed under subsection (a) shall provide that no provision of the loan agreement may be amended or waived without the consent of the Secretary.

(f) Assurance of repayment

The Secretary shall require that an applicant for a loan guarantee under subsection (a) provide an assurance of repayment in the form of a performance bond, insurance, collateral, or other means acceptable to the Secretary in an amount equal to not less than 20 percent of the amount of the loan.

(g) Guarantee fee

The recipient of a loan guarantee under subsection (a) shall pay the Secretary an amount determined by the Secretary to be sufficient to cover the administrative costs of the Secretary relating to the loan guarantee.

(h) Full faith and credit

The full faith and credit of the United States is pledged to the payment of all guarantees made under this section. Any such guarantee made by the Secretary shall be conclusive evidence of the eligibility of the loan for the guarantee with respect to principal and interest. The validity of the guarantee shall be incontestable in the hands of a holder of the guaranteed loan.

(i) Reports

Until each guaranteed loan under this section has been repaid in full, the Secretary shall annually submit to Congress a report on the activities of the Secretary under this section.

(j) Authorization of appropriations

There are authorized to be appropriated such sums as are necessary to carry out this section.

(k) Termination of authority

The authority of the Secretary to issue a loan guarantee under subsection (a) terminates on the date that is 10 years after December 19, 2007.

(Pub. L. 110-140, title I, §135, Dec. 19, 2007, 121 Stat. 1513.)

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.

§ 17013. Advanced technology vehicles manufacturing incentive program**(a) Definitions**

In this section:

(1) Advanced technology vehicle

The term “advanced technology vehicle” means—

(A) an ultra efficient vehicle or a light duty vehicle that meets—

- (i) the Bin 5 Tier II emission standard established in regulations issued by the Administrator of the Environmental Protection Agency under section 202(i) of the Clean Air Act (42 U.S.C. 7521(i)), or a lower-numbered Bin emission standard;
- (ii) any new emission standard in effect for fine particulate matter prescribed by the Administrator under that Act (42 U.S.C. 7401 et seq.); and
- (iii) at least 125 percent of the average base year combined fuel economy for vehicles with substantially similar attributes;

(B) a medium duty vehicle or a heavy duty vehicle that exceeds 125 percent of the greenhouse gas emissions and fuel efficiency standards established by the final rule of the Environmental Protection Agency entitled “Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2” (81 Fed. Reg. 73478 (October 25, 2016));

- (C) a train or locomotive;
- (D) a maritime vessel;
- (E) an aircraft; and
- (F) hyperloop technology.

(2) Combined fuel economy

The term “combined fuel economy” means—

- (A) the combined city/highway miles per gallon values, as reported in accordance with section 32904 of title 49; and
- (B) in the case of an electric drive vehicle with the ability to recharge from an off-board source, the reported mileage, as determined in a manner consistent with the Society of Automotive Engineers recommended practice for that configuration or a similar practice recommended by the Secretary.

(3) Engineering integration costs

The term “engineering integration costs” includes the cost of engineering tasks relating to—

- (A) incorporating qualifying components into the design of advanced technology vehicles; and
- (B) designing tooling and equipment and developing manufacturing processes and material suppliers for production facilities that produce qualifying components or advanced technology vehicles.

(4) Qualifying components

The term “qualifying components” means components that the Secretary determines to be—

- (A) designed for advanced technology vehicles; and
- (B) installed for the purpose of meeting the performance requirements of advanced technology vehicles.

(5) Ultra efficient vehicle

The term “ultra efficient vehicle” means a fully closed compartment vehicle designed to carry at least 2 adult passengers that achieves—

- (A) at least 75 miles per gallon while operating on gasoline or diesel fuel;

(B) at least 75 miles per gallon equivalent while operating as a hybrid electric-gasoline or electric-diesel vehicle; or

(C) at least 75 miles per gallon equivalent while operating as a fully electric vehicle.

(b) Advanced vehicles manufacturing facility

The Secretary shall provide facility funding awards under this section to automobile manufacturers, ultra efficient vehicle manufacturers, advanced technology vehicle manufacturers, and component suppliers to pay not more than 30 percent of the cost of—

(1) reequipping, expanding, or establishing a manufacturing facility in the United States to produce—

- (A) qualifying advanced technology vehicles;
- (B) qualifying components; or
- (C) ultra efficient vehicles; and

(2) engineering integration performed in the United States of qualifying vehicles, ultra efficient vehicles, and qualifying components.

(c) Period of availability

An award under subsection (b) shall apply to—

- (1) facilities and equipment placed in service before December 30, 2020; and
- (2) engineering integration costs incurred during the period beginning on December 19, 2007, and ending on December 30, 2020.

(d) Direct loan program

(1) In general

Not later than 1 year after December 19, 2007, and subject to the availability of appropriated funds, the Secretary shall carry out a program to provide loans to eligible individuals and entities (as determined by the Secretary) for the costs of activities described in subsection (b). The loans shall be made through the Federal Financing Bank, with the full faith and credit of the United States Government on the principal and interest. The full credit subsidy shall be paid by the Secretary using appropriated funds.

(2) Application

An applicant for a loan 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, including a written assurance that—

(A) all laborers and mechanics employed by contractors or subcontractors during construction, alteration, or repair that is financed, in whole or in part, by a loan under this section shall be paid wages at rates not less than those prevailing on similar construction in the locality, as determined by the Secretary of Labor in accordance with sections 3141-3144, 3146, and 3147 of title 40; and

(B) the Secretary of Labor shall, with respect to the labor standards described in this paragraph, have the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (5 U.S.C. App.) and section 3145 of title 40.

(3) Selection of eligible projects**(A) In general**

The Secretary shall select eligible projects to receive loans under this subsection if the Secretary determines that—

- (i) the loan recipient—
 - (I) has a reasonable prospect of repaying the principal and interest on the loan;
 - (II) will provide sufficient information to the Secretary for the Secretary to ensure that the qualified investment is expended efficiently and effectively; and
 - (III) has met such other criteria as may be established and published by the Secretary; and
- (ii) the amount of the loan (when combined with amounts available to the loan recipient from other sources) will be sufficient to carry out the project.

(B) Reasonable prospect of repayment

The Secretary shall base a determination of whether there is a reasonable prospect of repayment of the principal and interest on a loan under subparagraph (A)(i)(I) on a comprehensive evaluation of whether the loan recipient has a reasonable prospect of repaying the principal and interest, including, as applicable, an evaluation of—

- (i) the strength of the contractual terms of the eligible project (if commercially reasonably available);
- (ii) the forecast of noncontractual cash flows supported by market projections from reputable sources, as determined by the Secretary;
- (iii) cash sweeps and other structure enhancements;
- (iv) the projected financial strength of the loan recipient—
 - (I) at the time of loan close; and
 - (II) throughout the loan term after the project is completed;
- (v) the financial strength of the investors and strategic partners of the loan recipient, if applicable; and
- (vi) other financial metrics and analyses that are relied on by the private lending community and nationally recognized credit rating agencies, as determined appropriate by the Secretary.

(4) Rates, terms, and repayment of loans

A loan provided under this subsection—

- (A) shall have an interest rate that, as of the date on which the loan is made, is equal to the cost of funds to the Department of the Treasury for obligations of comparable maturity;
- (B) shall have a term equal to the lesser of—
 - (i) the projected life, in years, of the eligible project to be carried out using funds from the loan, as determined by the Secretary; and¹
 - (ii) 25 years;
- (C) may be subject to a deferral in repayment for not more than 5 years after the

date on which the eligible project carried out using funds from the loan first begins operations, as determined by the Secretary;

(D) shall be made by the Federal Financing Bank; and

(E) shall be subject to the condition that the loan is not subordinate to other financing.

(5) Conflicts of interest

For each eligible project selected to receive a loan under this subsection, the Secretary shall certify that political influence did not impact the selection of the eligible project.

(e) Improvement

Not later than 60 days after September 30, 2008, the Secretary shall promulgate an interim final rule establishing regulations that the Secretary deems necessary to administer this section and any loans made by the Secretary pursuant to this section. Such interim final rule shall require that, in order for an automobile manufacturer to be eligible for an award or loan under this section during a particular year, the adjusted average fuel economy of the manufacturer for light duty vehicles produced by the manufacturer during the most recent year for which data are available shall be not less than the average fuel economy for all light duty vehicles of the manufacturer for model year 2005. In order to determine fuel economy baselines for eligibility of a new manufacturer or a manufacturer that has not produced previously produced equivalent vehicles, the Secretary may substitute industry averages.

(f) Fees

Administrative costs shall be no more than \$100,000 or 10 basis point² of the loan.

(g) Priority

The Secretary shall, in making awards or loans to those manufacturers that have existing facilities, give priority to those facilities that are oldest or have been in existence for at least 20 years or are utilized primarily for the manufacture of ultra efficient vehicles. Such facilities can currently be sitting idle.

(h) Set aside for small advanced technology vehicle manufacturers and component suppliers**(1) Definition of covered firm**

In this subsection, the term “covered firm” means a firm that—

- (A) employs less than 500 individuals; and
- (B) manufactures ultra efficient vehicles, advanced technology vehicles, or components of advanced technology vehicles.

(2) Set aside

Of the amount of funds that are used to provide awards for each fiscal year under subsection (b), the Secretary shall use not less than 10 percent to provide awards to covered firms or consortia led by a covered firm.

(i) Appointment and pay of personnel

(1) The Secretary may use direct hiring authority pursuant to section 3304(b)(3) of title 5 to appoint such professional and administrative

¹ So in original. Probably should be “or”.

² So in original. Probably should be “points”.

personnel as the Secretary deems necessary to the discharge of the Secretary's functions under this section.

(2) The rate of pay for a person appointed pursuant to paragraph (1) shall not exceed the maximum rate payable for GS-15 of the General Schedule under chapter 53 such³ title 5.

(3) The Secretary may retain such consultants as the Secretary deems necessary to the discharge of the functions required by this section, pursuant to section 1901 of title 41.

(j) Coordination

In carrying out this section, the Secretary shall coordinate with relevant vehicle, bio-energy, and hydrogen and fuel cell demonstration project activities supported by the Department.

(k) Outreach

In carrying out this section, the Secretary shall—

(1) provide assistance with the completion of applications for awards or loans under this section; and

(2) conduct outreach, including through conferences and online programs, to disseminate information on awards and loans under this section to potential applicants.

(l) Repealed. Pub. L. 117-328, div. D, title III, § 308, Dec. 29, 2022, 136 Stat. 4645

(m) Report

Not later than 2 years after November 15, 2021, and every 3 years thereafter, the Secretary shall submit to Congress a report on the status of projects supported by a loan under this section, including—

(1) a list of projects receiving a loan under this section, including the loan amount and construction status of each project;

(2) the status of the loan repayment for each project, including future repayment projections;

(3) data regarding the number of direct and indirect jobs retained, restored, or created by financed projects;

(4) the number of new projects projected to receive a loan under this section in the next 2 years, including the projected aggregate loan amount over the next 2 years;

(5) evaluation of ongoing compliance with the assurances and commitments, and of the predictions, made by applicants pursuant to paragraphs (2) and (3) of subsection (d);

(6) the total number of applications received by the Department each year; and

(7) any other metrics the Secretary determines appropriate.

(Pub. L. 110-140, title I, § 136, Dec. 19, 2007, 121 Stat. 1514; Pub. L. 110-329, div. A, § 129(c), Sept. 30, 2008, 122 Stat. 3578; Pub. L. 111-85, title III, § 312(a), Oct. 28, 2009, 123 Stat. 2874; Pub. L. 117-58, div. D, title IV, § 40401(b), Nov. 15, 2021, 135 Stat. 1034; Pub. L. 117-169, title V, § 50142(c), Aug. 16, 2022, 136 Stat. 2044; Pub. L. 117-328, div. D, title III, § 308, Dec. 29, 2022, 136 Stat. 4645; Pub. L. 118-188, § 2(a)(2)(D), Dec. 23, 2024, 138 Stat. 2645.)

³ So in original. Probably should be “of such”.

Editorial Notes

REFERENCES IN TEXT

The Clean Air Act, referred to in subsec. (a)(1)(A), is act July 14, 1955, ch. 360, 69 Stat. 322, which is classified generally to chapter 85 (§ 7401 et seq.) of this title. For complete classification of this Act to the Code, see Short Title note set out under section 7401 of this title and Tables.

Reorganization Plan Numbered 14 of 1950, referred to in subsec. (d)(2)(B), is set out in the Appendix to Title 5, Government Organization and Employees.

CODIFICATION

In subsec. (i)(3), “section 1901 of title 41” substituted for “section 31 of the Office of Federal Procurement Policy Act (41 U.S.C. 427)” on authority of Pub. L. 111-350, § 6(c), Jan. 4, 2011, 124 Stat. 3854, which Act enacted Title 41, Public Contracts.

AMENDMENTS

2024—Subsec. (i)(1). Pub. L. 118-188 substituted “3304(b)(3)” for “3304(a)(3)”.

2022—Subsec. (d)(1). Pub. L. 117-169 struck out “a total of not more than \$25,000,000,000 in” after “to provide”.

Subsec. (l). Pub. L. 117-328 struck out subsec. (l). Text read as follows: “Amounts appropriated to the Secretary before November 15, 2021, shall not be available to the Secretary to provide awards under subsection (b) or loans under subsection (d) for the costs of activities that were not eligible for those awards or loans on the day before that date.”

2021—Subsec. (a)(1). Pub. L. 117-58, § 40401(b)(1), substituted “means—” for “means”, inserted subpar. (A) designation before “an ultra”, redesignated former subpars. (A) to (C) as cls. (i) to (iii) of subpar. (A), respectively, and added subpars. (B) to (F).

Subsec. (b). Pub. L. 117-58, § 40401(b)(3)(A), substituted “ultra efficient vehicle manufacturers, advanced technology vehicle manufacturers, and component suppliers” for “ultra efficient vehicle manufacturers, and component suppliers” in introductory provisions.

Subsec. (d)(3). Pub. L. 117-58, § 40401(b)(2)(A), added par. (3) and struck out former par. (3). Prior to amendment, text read as follows: “The Secretary shall select eligible projects to receive loans under this subsection in cases in which, as determined by the Secretary, the award recipient—

“(A) is financially viable without the receipt of additional Federal funding associated with the proposed project;

“(B) will provide sufficient information to the Secretary for the Secretary to ensure that the qualified investment is expended efficiently and effectively; and

“(C) has met such other criteria as may be established and published by the Secretary.”

Subsec. (d)(4)(E). Pub. L. 117-58, § 40401(b)(2)(B), added subpar. (E).

Subsec. (d)(5). Pub. L. 117-58, § 40401(b)(4), added par. (5).

Subsec. (h). Pub. L. 117-58, § 40401(b)(3)(B)(i), substituted “advanced technology vehicle” for “automobile” in heading.

Subsec. (h)(1)(B). Pub. L. 117-58, § 40401(b)(3)(B)(ii), substituted “advanced technology vehicles, or components of advanced technology vehicles” for “automobiles, or components of automobiles”.

Subsecs. (i) to (m). Pub. L. 117-58, § 40401(b)(3)(C)–(E), added subsecs. (j) to (m), redesignated former subsec. (j) as (i), and struck out former subsec. (i). Prior to amendment, text of subsec. (i) read as follows: “There are authorized to be appropriated such sums as are necessary to carry out this section for each of fiscal years 2008 through 2012.”

2009—Subsec. (a)(1). Pub. L. 111-85, § 312(a)(1)(A), inserted “an ultra efficient vehicle or” after “means” in introductory provisions.

Subsec. (a)(5). Pub. L. 111-85, §312(a)(1)(B), added par. (5).

Subsec. (b). Pub. L. 111-85, §312(a)(2)(A), inserted “, ultra efficient vehicle manufacturers,” after “automobile manufacturers” in introductory provisions.

Subsec. (b)(1)(C). Pub. L. 111-85, §312(a)(2)(B), added subpar. (C).

Subsec. (b)(2). Pub. L. 111-85, §312(a)(2)(C), inserted “, ultra efficient vehicles,” after “qualifying vehicles”.

Subsec. (g). Pub. L. 111-85, §312(a)(3), inserted “or are utilized primarily for the manufacture of ultra efficient vehicles” after “20 years”.

Subsec. (h)(1)(B). Pub. L. 111-85, §312(a)(4), substituted “ultra efficient vehicles, automobiles,” for “automobiles”.

2008—Subsec. (d)(1). Pub. L. 110-329, §129(c)(1), inserted at end “The loans shall be made through the Federal Financing Bank, with the full faith and credit of the United States Government on the principal and interest. The full credit subsidy shall be paid by the Secretary using appropriated funds.”

Subsec. (e). Pub. L. 110-329, §129(c)(2), substituted “Not later than 60 days after September 30, 2008, the Secretary shall promulgate an interim final rule establishing regulations that the Secretary deems necessary to administer this section and any loans made by the Secretary pursuant to this section. Such interim final rule shall require that,” for “The Secretary shall issue regulations that require that,”.

Subsec. (j). Pub. L. 110-329, §129(c)(3), added subsec. (j).

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.

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.

RECONSIDERATION OF PRIOR APPLICATIONS

Pub. L. 111-85, title III, §312(b), Oct. 28, 2009, 123 Stat. 2875, provided that: “The Secretary of Energy shall reconsider applications for assistance under section 136 of the Energy Independence and Security Act of 2007 (42 U.S.C. 17013) that were—

“(1) timely filed under that section before January 1, 2009;

“(2) rejected on the basis that the vehicles to which the proposal related were not advanced technology vehicles; and

“(3) related to ultra efficient vehicles.”

§ 17014. Research and development into integrating electric vehicles onto the electric grid

(a) In general

The Secretary shall establish a research, development, and demonstration program to advance the integration of electric vehicles, including plug-in hybrid electric vehicles, onto the electric grid.

(b) Vehicles-to-grid integration assessment report

Not later than 1 year after December 27, 2020, 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 results of a study that examines the research, development, and demonstration opportunities, challenges, and standards needed for integrating electric vehicles onto the electric grid.

(1) Report requirements

The report shall include—

(A) an evaluation of the use of electric vehicles to maintain the reliability of the electric grid, including—

(i) the use of electric vehicles for demand response, load shaping, emergency power, and frequency regulation; and

(ii) the potential for the reuse of spent electric vehicle batteries for stationary grid storage;

(B) the impact of grid integration on electric vehicles, including—

(i) the impact of bi-directional electricity flow on battery degradation; and

(ii) the implications of the use of electric vehicles for grid services on original equipment manufacturer warranties;

(C) the impacts to the electric grid of increased penetration of electric vehicles, including—

(i) the distribution grid infrastructure needed to support an increase in charging capacity;

(ii) strategies for integrating electric vehicles onto the distribution grid while limiting infrastructure upgrades;

(iii) the changes in electricity demand over a 24-hour cycle due to electric vehicle charging behavior;

(iv) the load increases expected from electrifying the transportation sector;

(v) the potential for customer incentives and other managed charging stations strategies to shift charging off-peak;

(vi) the technology needed to achieve bi-directional power flow on the distribution grid; and

(vii) the implementation of smart charging techniques;

(D) research on the standards needed to integrate electric vehicles with the grid, including communications systems, protocols, and charging stations, in collaboration with the National Institute for Standards and Technology;

(E) the cybersecurity challenges and needs associated with electrifying the transportation sector; and

(F) an assessment of the feasibility of adopting technologies developed under the program established under subsection (a) at Department facilities.

(2) Recommendations

As part of the Vehicles-to-Grid Integration Assessment Report, the Secretary shall develop a 10-year roadmap to guide the research, development, and demonstration program to integrate electric vehicles onto the electric grid.

(3) Consultation

In developing this report, the Secretary shall consult with relevant stakeholders, including—