I

112TH CONGRESS
1ST SESSION

H. R. 1875

To lower gas prices by making investments in cleaner vehicle technologies and infrastructure.

IN THE HOUSE OF REPRESENTATIVES

MAY 12, 2011

Mr. CICILLINE (for himself, Mr. LARSON of Connecticut, Mr. BISHOP of New York, and Mr. CONNOLLY of Virginia) introduced the following bill; which was referred to the Committee on Ways and Means, and in addition to the Committees on Transportation and Infrastructure, Energy and Commerce, and Science, Space, and Technology, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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A BILL

To lower gas prices by making investments in cleaner vehicle technologies and infrastructure.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

(a) SHORT TITLE.—This Act may be cited as the ''Building Our Clean Energy Future Now Act of 2011''.

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

TITLE I—PUBLIC TRANSPORTATION

SEC. 101. SHORT TITLE.

This title may be cited as the ''Providing Gas Price Relief Through Public Transportation Act of 2011''.

SEC. 102. FINDINGS.

Congress finds the following:

(1) In 2008, during a year of record-high gas prices, people in the United States took more than 10,500,000,000 trips using public transportation, the highest level in 50 years.

(2) Public transportation use in the United States is up 31 percent since 1995, a figure that is more than double the growth rate of the Nation's population and is substantially greater than the growth rate for vehicle miles traveled on the Nation's highways for that same period.

(3) High gas prices in 2011 are expected to drive the demand for transit services even higher, with some estimates showing that $5-per-gallon gas could result in a nearly 15 percent jump in transit ridership.

(4) Based on the price of gas in March 2011, riding public transportation saves households an average of $825 per month, or nearly $10,000 per year.

(5) Despite increasing demand for transit services, widespread cuts in State and local funding have caused 59 percent of public transit systems in the United States to raise fares or cut service since January 2009.

(6) Although under existing laws Federal employees in the National Capital Region receive transit benefits, transit benefits should be available to all Federal employees in the United States so that the

Federal Government sets a leading example of greater public transportation use.

(7) Public transportation stakeholders should engage and involve local communities in the education and promotion of the importance of utilizing public transportation.

(8) Increasing public transportation use is a national priority.

SEC. 103. GRANTS TO IMPROVE PUBLIC TRANSPORTATION SERVICES.

(a) AUTHORIZATIONS OF APPROPRIATIONS.—

(1) URBANIZED AREA FORMULA GRANTS.—In addition to amounts allocated under section 5338(b)(2)(B) of title 49, United States Code, to carry out section 5307 of such title, there is authorized to be appropriated $750,000,000 for each of fiscal years 2011 and 2012 to carry out such section. Such funds shall be apportioned not later than 7 days after the date on which the funds are appropriated, in accordance with section 5336 (other than subsections (i)(1) and (j)) of such section but may not be combined or commingled with any other funds apportioned under such section 5336.

(2) FORMULA GRANTS FOR OTHER THAN URBANIZED AREAS.—In addition to amounts allocated

under section 5338(b)(2)(G) of title 49, United States Code, to carry out section 5311 of such title, there is authorized to be appropriated $100,000,000 for each of fiscal years 2011 and 2012 to carry out such section 5311. Such funds shall be apportioned not later than 7 days after the date on which the funds are appropriated, in accordance with such section 5311 but may not be combined or commingled with any other funds apportioned under such section 5311.

(b) USE OF FUNDS.—Notwithstanding sections 5307 and 5311 of title 49, United States Code, the Secretary of Transportation may make grants under such sections from amounts appropriated under subsection (a) only for one or more of the following:

(1) If the recipient of the grant is reducing, or certifies to the Secretary within the time the Secretary prescribes that, during the term of the grant, the recipient will reduce one or more fares the recipient charges for public transportation, or in the case of subsection (f) of such section 5311, intercity bus service, those operating costs of equipment and facilities being used to provide the public transportation, or in the case of subsection (f) of such section 5311, intercity bus service, that the recipient is

no longer able to pay from the revenues derived from such fare or fares as a result of such reduction.

(2) To avoid increases in fares for public transportation, or in the case of subsection (f) of such section 5311, intercity bus service, or decreases in current public transportation service, or in the case of subsection (f) of such section 5311, intercity bus service, that would otherwise result from an increase in costs to the public transportation or intercity bus agency for transportation-related fuel or meeting additional transportation-related equipment or facility maintenance needs, if the recipient of the grant certifies to the Secretary within the time the Secretary prescribes that, during the term of the grant, the recipient will not increase the fares that the recipient charges for public transportation, or in the case of subsection (f) of such section 5311, intercity bus service, or, will not decrease the public transportation service, or in the case of subsection (f) of such section 5311, intercity bus service, that the recipient provides.

(3) If the recipient of the grant is expanding, or certifies to the Secretary within the time the Secretary prescribes that, during the term of the grant, the recipient will expand public transportation serv-

ice, or in the case of subsection (f) of such section 5311, intercity bus service, those operating and capital costs of equipment and facilities being used to provide the public transportation service, or in the case of subsection (f) of such section 5311, intercity bus service, that the recipient incurs as a result of the expansion of such service.

(4) If the recipient of the grant is acquiring, or certifies to the Secretary within the time the Secretary prescribes that, during the term of the grant, the recipient will acquire, clean fuel or alternative fuel vehicle-related equipment or facilities for the purpose of improving fuel efficiency, the costs of acquiring the equipment or facilities.

(5) If the recipient of the grant is establishing or expanding, or certifies to the Secretary within the time the Secretary prescribes that, during the term of the grant, the recipient will establish or expand commuter matching services to provide commuters with information and assistance about alternatives to single occupancy vehicle use, those administrative costs in establishing or expanding such services.

(c) FEDERAL SHARE.—Notwithstanding any other provision of law, the Federal share of the costs for which a grant is made under this section shall be 100 percent.

(d) PERIOD OF AVAILABILITY.—Funds appropriated under this section shall remain available for a period of 2 fiscal years.

SEC. 104. INCREASED FEDERAL SHARE FOR CLEAN AIR ACT COMPLIANCE.

Notwithstanding section 5323(i)(1) of title 49, United States Code, a grant for a project to be assisted under chapter 53 of such title during fiscal years 2011 and 2012 that involves acquiring clean fuel or alternative fuel vehicle-related equipment or facilities for the purposes of complying with or maintaining compliance with the Clean Air Act (42 U.S.C. 7401 et seq.) shall be for 100 percent of the net project cost of the equipment or facility attributable to compliance with that Act unless the grant recipient requests a lower grant percentage.

SEC. 105. TRANSPORTATION FRINGE BENEFITS.

(a) REQUIREMENT THAT AGENCIES OFFER TRANSIT PASS TRANSPORTATION FRINGE BENEFITS TO THEIR EMPLOYEES NATIONWIDE.—

(1) IN GENERAL.—Section 3049(a)(1) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (5 U.S.C. 7905 note; 119 Stat. 1711) is amended—

(A) by striking ''Effective'' and all that follows through ''each covered agency'' and inserting ''Each agency''; and

(B) by inserting ''at a location in an urbanized area of the United States that is served by fixed route public transportation'' before ''shall be offered''.

(2) CONFORMING AMENDMENTS.—Section 3049(a) of such Act (5 U.S.C. 7905 note; 119 Stat. 1711) is amended—

(A) in paragraph (3)—

(i) by striking subparagraph (A); and

(ii) by redesignating subparagraphs (B) through (F) as subparagraphs (A) through (E), respectively; and

(B) in paragraph (4) by striking ''a covered agency'' and inserting ''an agency''.

(b) BENEFITS DESCRIBED.—Section 3049(a)(2) of such Act (5 U.S.C. 7905 note; 119 Stat. 1711) is amended by striking the period at the end and inserting the following: '', except that the maximum level of such benefits shall be the maximum amount which may be excluded from gross income for qualified parking as in effect for a month under section 132(f)(2)(B) of the Internal Revenue Code of 1986.''.

(c) GUIDANCE.—Section 3049(a) of such Act (5 U.S.C. 7905 note; 119 Stat. 1711) is amended by adding at the end the following:

"(5) GUIDANCE.—

"(A) ISSUANCE.—Not later than 60 days after the date of enactment of this paragraph, the Secretary of Transportation shall issue guidance on nationwide implementation of the transit pass transportation fringe benefits program under this subsection.

"(B) UNIFORM APPLICATION.—

"(i) IN GENERAL.—The guidance to be issued under subparagraph (A) shall contain a uniform application for use by all Federal employees applying for benefits from an agency under the program.

"(ii) REQUIRED INFORMATION.—As part of such an application, an employee shall provide, at a minimum, the employee's home and work addresses, a breakdown of the employee's commuting costs, and a certification of the employee's eligibility for benefits under the program.

"(iii) WARNING AGAINST FALSE STATEMENTS.—Such an application shall

contain a warning against making false statements in the application.

''(C) INDEPENDENT VERIFICATION REQUIREMENTS.—The guidance to be issued under subparagraph (A) shall contain independent verification requirements to ensure that, with respect to an employee of an agency—

''(i) the eligibility of the employee for benefits under the program is verified by an official of the agency;

''(ii) employee commuting costs are verified by an official of the agency; and

''(iii) records of the agency are checked to ensure that the employee is not receiving parking benefits from the agency.

''(D) PROGRAM IMPLEMENTATION REQUIREMENTS.—The guidance to be issued under subparagraph (A) shall contain program implementation requirements applicable to each agency to ensure that—

''(i) benefits provided by the agency under the program are adjusted in cases of employee travel, leave, or change of address;

"(ii) removal from the program is included in the procedures of the agency relating to an employee separating from employment with the agency; and

"(iii) benefits provided by the agency under the program are made available using an electronic format (rather than using paper fare media) where such a format is available for use.

"(E) ENFORCEMENT AND PENALTIES.—The guidance to be issued under subparagraph (A) shall contain a uniform administrative policy on enforcement and penalties. Such policy shall be implemented by each agency to ensure compliance with program requirements, to prevent fraud and abuse, and, as appropriate, to penalize employees who have abused or misused the benefits provided under the program.

"(F) PERIODIC REVIEWS.—The guidance to be issued under subparagraph (A) shall require each agency, not later than September 1 of the first fiscal year beginning after the date of enactment of this paragraph, and every 3 years thereafter, to develop and submit to the Secretary a review of the agency's implementa-

tion of the program. Each such review shall contain, at a minimum, the following:

''(i) An assessment of the agency's implementation of the guidance, including a summary of the audits and investigations, if any, of the program conducted by the Inspector General of the agency.

''(ii) Information on the total number of employees of the agency that are participating in the program.

''(iii) Information on the total number of single occupancy vehicles removed from the roadway network as a result of participation by employees of the agency in the program.

''(iv) Information on energy savings and emissions reductions, including reductions in greenhouse gas emissions, resulting from reductions in single occupancy vehicle use by employees of the agency that are participating in the program.

''(v) Information on reduced congestion and improved air quality resulting from reductions in single occupancy vehicle

use by employees of the agency that are participating in the program.

"(vi) Recommendations to increase program participation and thereby reduce single occupancy vehicle use by Federal employees nationwide.

"(6) REPORTING REQUIREMENTS.—Not later than September 30 of the first fiscal year beginning after the date of enactment of this paragraph, and every 3 years thereafter, the Secretary shall submit to the Committee on Transportation and Infrastructure and the Committee on Oversight and Government Reform of the House of Representatives and the Committee on Banking, Housing, and Urban Affairs of the Senate a report on nationwide implementation of the transit pass transportation fringe benefits program under this subsection, including a summary of the information submitted by agencies pursuant to paragraph (5)(F).".

(d) EFFECTIVE DATE.—Except as otherwise specifically provided, the amendments made by this section shall become effective on the first day of the first fiscal year beginning after the date of enactment of this Act.

SEC. 106. CAPITAL COST OF CONTRACTING VANPOOL PILOT PROGRAM.

(a) ESTABLISHMENT.—The Secretary of Transportation shall establish and implement a pilot program to carry out vanpool demonstration projects in not more than 3 urbanized areas and not more than 2 other than urbanized areas.

(b) PILOT PROGRAM.—

(1) IN GENERAL.—Notwithstanding section 5323(i) of title 49, United States Code, for each project selected for participation in the pilot program, the Secretary shall allow the non-Federal share provided by a recipient of assistance for a capital project under chapter 53 of such title to include the amounts described in paragraph (2).

(2) CONDITIONS ON ACQUISITION OF VANS.—The amounts referred to in paragraph (1) are any amounts expended by a private provider of public transportation by vanpool for the acquisition of vans to be used by such private provider in the recipient's service area, excluding any amounts the provider may have received in Federal, State, or local government assistance for such acquisition, if the private provider enters into a legally binding agreement with the recipient that requires the private provider to use all revenues it receives in providing public trans-

portation in such service area, in excess of its operating costs, for the purpose of acquiring vans to be used by the private provider in such service area.

(c) PROGRAM TERM.—The Secretary may approve an application for a vanpool demonstration project for fiscal years 2011 through 2012.

(d) REPORT TO CONGRESS.—Not later than one year after the date of enactment of this Act, the Secretary shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Banking, Housing, and Urban Affairs of the Senate a report containing an assessment of the costs, benefits, and efficiencies of the vanpool demonstration projects.

TITLE II—DENIAL OF CERTAIN TAX BENEFITS TO MAJOR INTEGRATED OIL COMPANIES AND INVESTMENT IN CLEAN ENERGY AND TRANSPORTATION

SEC. 201. LIMITATION ON DEDUCTION FOR INTANGIBLE DRILLING AND DEVELOPMENT COSTS OF MAJOR INTEGRATED OIL COMPANIES IN THE CASE OF OIL AND GAS WELLS.

(a) IN GENERAL.—Subsection (c) of section 263 of the Internal Revenue Code of 1986 is amended by adding at the end the following new sentence: ''This subsection shall not apply to intangible drilling and development costs paid or incurred by any major integrated oil company (as defined in section 167(h)(5)) in the case of oil and gas wells.''.

(b) CONFORMING AMENDMENT.—Subsection (c) of section 263 of such Code is amended by inserting ''(determined without regard to the last sentence of this subsection)'' after ''in the same manner as such expenses are deductible in the case of oil and gas wells''.

(c) EFFECTIVE DATE.—The amendment made by this section shall apply to amounts paid or incurred in tax-

able years beginning after the date of the enactment of this Act.

SEC. 202. DEDUCTION FOR INCOME ATTRIBUTABLE TO DOMESTIC PRODUCTION ACTIVITIES NOT ALLOWED WITH RESPECT TO OIL AND GAS ACTIVITIES OF MAJOR INTEGRATED OIL COMPANIES.

(a) IN GENERAL.—Subparagraph (B) of section 199(c)(4) of the Internal Revenue Code of 1986 is amended by striking ''and'' at the end of clause (ii), by striking the period at the end of clause (iii) and inserting '', and'', and by inserting after clause (iii) the following new clause:

''(iv) in the case of a major integrated oil company (as defined in section 167(h)(5)), the production, refining, processing, transportation, or distribution of oil, gas, or any primary product thereof.''.

(b) EFFECTIVE DATE.—The amendment made by subsection (a) shall apply to taxable years beginning after the date of the enactment of this Act.

SEC. 203. MAJOR INTEGRATED OIL COMPANIES INELIGIBLE FOR LAST-IN, FIRST-OUT METHOD OF INVENTORY.

(a) IN GENERAL.—Section 471 of the Internal Revenue Code of 1986 is amended by redesignating subsection

(c) as subsection (d) and by inserting after subsection (b) the following new subsection:

''(c) MAJOR INTEGRATED OIL COMPANIES INELIGIBLE FOR LAST-IN, FIRST-OUT METHOD.—In the case of a major integrated oil company (as defined in section 167(h)(5)(B))—

''(1) the last-in, first-out method of determining inventories shall in no event be treated as clearly reflecting income, and

''(2) sections 472 and 473 shall not apply.''.

(b) EFFECTIVE DATE.—

(1) IN GENERAL.—The amendments made by this section shall apply to taxable years beginning after the date of the enactment of this Act.

(2) CHANGE IN METHOD OF ACCOUNTING.—In the case of any taxpayer required by the amendments made by this section to change its method of accounting for its first taxable year beginning after the date of the enactment of this Act—

(A) such change shall be treated as initiated by the taxpayer,

(B) such change shall be treated as made with the consent of the Secretary of the Treasury, and

(C) if the net amount of the adjustments required to be taken into account by the taxpayer under section 481 of the Internal Revenue Code of 1986 is positive, such amount shall be taken into account over a period of 8 years beginning with such first taxable year.

SEC. 204. CREDIT FOR HEAVY NATURAL GAS AND HYBRID VEHICLES.

(a) IN GENERAL.—Subpart B of part IV of subchapter A of chapter 1 of the Internal Revenue Code of 1986 is amended by adding at the end the following new section:

"SEC. 30E. HEAVY NATURAL GAS AND HEAVY HYBRID VEHICLE CREDIT.

"(a) ALLOWANCE OF CREDIT.—There shall be allowed as a credit against the tax imposed by this chapter for the taxable year an amount equal to the sum of—

"(1) the new qualified heavy natural gas motor vehicle credit determined under subsection (b), and

"(2) the new qualified heavy hybrid motor vehicle credit determined under subsection (c).

"(b) NEW QUALIFIED HEAVY NATURAL GAS MOTOR VEHICLE CREDIT.—

"(1) IN GENERAL.—The new qualified heavy natural gas motor vehicle credit determined under

this subsection is an amount equal to 80 percent of the incremental cost of any new qualified heavy natural gas motor vehicle placed in service by the taxpayer during the taxable year.

''(2) NEW QUALIFIED HEAVY NATURAL GAS MOTOR VEHICLE.—For purposes of this subsection, the term 'new qualified heavy natural gas motor vehicle' means any motor vehicle—

''(A) which is only capable of operating on compressed or liquified natural gas,

''(B) which has a gross vehicle weight rating of more than 8,500 pounds,

''(C) the original use of which commences with the taxpayer,

''(D) which is acquired by the taxpayer for use or lease, but not for resale, and

''(E) which is made by a manufacturer.

''(3) CREDIT FOR MIXED-FUEL VEHICLES.—

''(A) IN GENERAL.—In the case of a mixed-fuel vehicle placed in service by the taxpayer during the taxable year, the credit determined under this subsection is an amount equal to—

''(i) in the case of a 65/35 mixed-fuel vehicle, 65 percent of the credit which

would have been allowed under this subsection if such vehicle was a new qualified heavy natural gas motor vehicle, and

''(ii) in the case of a 90/10 mixed-fuel vehicle, 90 percent of the credit which would have been allowed under this subsection if such vehicle was a new qualified heavy natural gas motor vehicle.

''(B) MIXED-FUEL VEHICLE.—For purposes of this paragraph, the term 'mixed-fuel vehicle' means any motor vehicle which—

''(i) would be a new qualified heavy natural gas motor vehicle but for the requirement of paragraph (2)(A),

''(ii) is certified by the manufacturer as being able to perform efficiently in normal operation on a combination of compressed or liquified natural gas and another petroleum-based fuel, and

''(iii) either—

''(I) has received a certificate of conformity under the Clean Air Act, or

''(II) has received an order certifying the vehicle as meeting the same

requirements as vehicles which may be sold or leased in California and meets or exceeds the low emission vehicle standard under section 88.105-94 of title 40, Code of Federal Regulations, for that make and model year vehicle.

''(C) 65/35 MIXED-FUEL VEHICLE.—For purposes of this paragraph, the term '65/35 mixed-fuel vehicle' means a mixed-fuel vehicle which operates using at least 65 percent compressed or liquified natural gas and not more than 35 percent petroleum-based fuel.

''(D) 90/10 MIXED-FUEL VEHICLE.—For purposes of this paragraph, the term '90/10 mixed-fuel vehicle' means a mixed-fuel vehicle which operates using at least 90 percent compressed or liquified natural gas and not more than 10 percent petroleum-based fuel.

''(c) NEW QUALIFIED HEAVY HYBRID MOTOR VEHICLE CREDIT.—

''(1) IN GENERAL.—The new qualified heavy natural gas motor vehicle credit determined under this subsection is an amount equal to 80 percent of the incremental cost of any new qualified heavy hy-

brid motor vehicle placed in service by the taxpayer during the taxable year.

''(2) NEW QUALIFIED HEAVY HYBRID MOTOR VEHICLE.—For purposes of this subsection—

''(A) IN GENERAL.—The term 'new qualified heavy hybrid motor vehicle' means a motor vehicle—

''(i) which draws propulsion energy from an onboard rechargeable energy storage system,

''(ii) which, in the case of a vehicle which has an internal combustion or heat engine which uses consumable fuel, has received, with respect to such engine, a certificate of conformity under the Clean Air Act as meeting the emission standards set in the regulations prescribed by the Administrator of the Environmental Protection Agency for 2004 through 2007 model year diesel heavy duty engines or ottocycle heavy duty engines, as applicable,

''(iii) which has a gross vehicle weight rating of more than 8,500 pounds,

''(iv) which has a maximum available power of at least—

"(I) 10 percent in the case of a vehicle which has a gross vehicle weight rating of not more than 14,000 pounds, and

"(II) 15 percent in the case of a vehicle which has a gross vehicle weight rating of more than 14,000 pounds,

"(v) the original use of which commences with the taxpayer,

"(vi) which is acquired by the taxpayer for use or lease, but not for resale, and

"(vii) which is made by a manufacturer.

"(B) CONSUMABLE FUEL.—For purposes of subparagraph (A)(ii)(I), the term 'consumable fuel' means any solid, liquid, or gaseous matter which releases energy when consumed by an auxiliary power unit.

"(C) MAXIMUM AVAILABLE POWER.—For purposes of subparagraph (A)(iii), the term 'maximum available power' means the maximum power available from the rechargeable energy storage system during a standard 10 sec-

ond pulse power or equivalent test, divided by the vehicle's total traction power. For purposes of the preceding sentence, the term 'total traction power' means the sum of the peak power from the rechargeable energy storage system and the heat engine peak power of the vehicle, except that if such storage system is the sole means by which the vehicle can be driven, the total traction power is the peak power of such storage system.

''(d) APPLICATION WITH OTHER CREDITS.—

''(1) BUSINESS CREDIT TREATED AS PART OF GENERAL BUSINESS CREDIT.—So much of the credit which would be allowed under subsection (a) for any taxable year (determined without regard to this subsection) that is attributable to property of a character subject to an allowance for depreciation shall be treated as a credit listed in section 38(b) for such taxable year (and not allowed under subsection (a)).

''(2) PERSONAL CREDIT.—

''(A) IN GENERAL.—For purposes of this title, the credit allowed under subsection (a) for any taxable year (determined after application of paragraph (1)) shall be treated as a credit

allowable under subpart A for such taxable year.

"(B) LIMITATION BASED ON AMOUNT OF TAX.—In the case of a taxable year to which section 26(a)(2) does not apply, the credit allowed under subsection (a) for any taxable year (determined after application of paragraph (1)) shall not exceed the excess of—

"(i) the sum of the regular tax liability (as defined in section 26(b)) plus the tax imposed by section 55, over

"(ii) the sum of the credits allowable under subpart A (other than this section and sections 23 and 25D) and section 27 for the taxable year.

"(e) OTHER DEFINITIONS AND SPECIAL RULES.—For purposes of this section—

"(1) INCREMENTAL COST.—The term 'incremental cost' means, with respect to any motor vehicle, the excess of the manufacturer's suggested retail price for such vehicle over such price for a gasoline or diesel fuel motor vehicle of the same model (or, if there is no such gasoline or diesel fuel motor vehicle of the same model, a gasoline or diesel fuel motor vehicle which is comparable in weight, size, and use

to such vehicle), to the extent such amount does not exceed—

"(A) $20,000, if such vehicle has a gross vehicle weight rating of not more than 14,000 pounds,

"(B) $50,000, if such vehicle has a gross vehicle weight rating of more than 14,000 pounds but not more than 26,000 pounds,

"(C) $80,000, if such vehicle has a gross vehicle weight rating of more than 26,000 pounds but not more than 33,000 pounds, and

"(D) $100,000, if such vehicle has a gross vehicle weight rating of more than 33,000 pounds.

The amount described in the preceding sentence shall be certified by the manufacturer and shall be determined in accordance with guidance prescribed by the Secretary.

"(2) MOTOR VEHICLE.—The term 'motor vehicle' means any vehicle which is manufactured primarily for use on public streets, roads, and highways (not including a vehicle operated exclusively on a rail or rails) and which has at least 4 wheels.

"(3) MANUFACTURER.—The term 'manufacturer' has the meaning given such term in regula-

tions prescribed by the Administrator of the Environmental Protection Agency for purposes of the administration of title II of the Clean Air Act (42 U.S.C. 7521 et seq.).

''(4) REDUCTION IN BASIS.—For purposes of this subtitle, the basis of any property for which a credit is allowable under subsection (a) shall be reduced by the amount of such credit so allowed (determined without regard to subsection (d)).

''(5) NO DOUBLE BENEFIT.—The amount of any deduction or other credit allowable under this chapter with respect to any motor vehicle shall be reduced by the amount of the credit allowed under subsection (a) for such vehicle (determined without regard to subsection (d)).

''(6) PROPERTY USED BY TAX-EXEMPT ENTITY.—In the case of a vehicle whose use is described in paragraph (3) or (4) of section 50(b) and which is not subject to a lease, the person who sold such vehicle to the person or entity using such vehicle shall be treated as the taxpayer that placed such vehicle in service, but only if such person clearly discloses to such person or entity in a document the amount of any credit allowable under subsection (a) with respect to such vehicle (determined without re-

gard to subsection (d)). For purposes of subsection (d), property to which this paragraph applies shall be treated as of a character subject to an allowance for depreciation.

''(7) PROPERTY USED OUTSIDE UNITED STATES, ETC., NOT QUALIFIED.—No credit shall be allowable under subsection (a) with respect to any property referred to in section 50(b)(1) or with respect to the portion of the cost of any property taken into account under section 179.

''(8) RECAPTURE.—The Secretary shall, by regulations, provide for recapturing the benefit of any credit allowable under subsection (a) with respect to any property which ceases to be property eligible for such credit (including recapture in the case of a lease period of less than the economic life of a vehicle).

''(9) ELECTION TO NOT TAKE CREDIT.—No credit shall be allowed under subsection (a) for any vehicle if the taxpayer elects to not have this section apply to such vehicle.

''(10) INTERACTION WITH AIR QUALITY AND MOTOR VEHICLE SAFETY STANDARDS.—Unless otherwise provided in this section, a motor vehicle shall

not be considered eligible for a credit under this section unless such vehicle is in compliance with—

''(A) the applicable provisions of the Clean Air Act for the applicable make and model year of the vehicle (or applicable air quality provisions of State law in the case of a State which has adopted such provision under a waiver under section 209(b) of the Clean Air Act), and

''(B) the motor vehicle safety provisions of sections 30101 through 30169 of title 49, United States Code.

''(f) TERMINATION.—This section shall not apply to motor vehicles acquired after December 31, 2016.''.

(b) COORDINATION WITH NEW QUALIFIED PLUG-IN ELECTRIC DRIVE MOTOR VEHICLE CREDIT.—Subparagraph (E) of section 30D(d)(1) of such Code is amended by striking ''less than 14,000 pounds'' and inserting ''not more than 8,500 pounds''.

(c) CONFORMING AMENDMENTS.—

(1) Section 38(b) of such Code is amended by striking ''plus'' at the end of paragraph (35), by striking the period at the end of paragraph 36 and inserting '', plus'', and by adding at the end the following new paragraph:

''(37) the portion of the new qualified heavy natural gas motor vehicle credit and the new qualified heavy hybrid motor vehicle credit to which section 30E(d)(1) applies.''.

(2) Section 24(b)(3)(B) of such Code is amended by striking ''and 30D'' and inserting ''30D, and 30E''.

(3) Section 25(e)(1)(C)(ii) of such Code is amended by inserting ''30E,'' after ''30D,''.

(4) Section 26(a)(1) of such Code is amended by striking ''and 30D'' and inserting ''30D, and 30E''.

(5) Section 30(c)(2) of such Code is amended by striking ''and 30D'' and inserting ''30D, and 30E''.

(6) Section 30B(g)(2)(B)(ii) of such Code is amended by striking ''and 30D'' and inserting ''30D, and 30E''.

(7) Section 30D(c)(2)(B)(ii) of such Code is amended by striking ''and 25D'' and inserting ''25D, and 30E''.

(8) Section 904(i) of such Code is amended by striking ''and 30D'' and inserting ''30D, and 30E''.

(9) Section 1400C(d)(2) of such Code is amended by striking ''and 30D'' and inserting ''30D, and 30E''.

(10) Section 30E(e)(2)(B)(ii) of such Code, as added by this section, is amended by striking ''sections 23 and 25D'' and inserting ''section 25D''.

(11) Section 1016(a) of such Code is amended by striking ''and'' at the end of paragraph (36), by striking the period at the end of paragraph (37) and inserting '', and'', and by adding at the end the following new paragraph:

''(38) to the extent provided in section 30E(e)(4).''.

(12) Section 6501(m) of such Code is amended by inserting ''30E(e)(9),'' after ''30D(e)(4),''.

(13) The table of sections for subpart B of part IV of subchapter A of chapter 1 of such Code is amended by adding at the end the following new item:

''Sec. 30E. Heavy natural gas and heavy hybrid vehicle credit.''.

(d) EFFECTIVE DATE.—

(1) IN GENERAL.—The amendments made by this section shall apply to vehicles acquired after December 31, 2010.

(2) APPLICATION OF EGTRRA SUNSET.—

(A) The amendment made by subsection (c)(2) shall be subject to title IX of the Economic Growth and Tax Relief Reconciliation Act of 2001 in the same manner as the provision of such Act to which such amendment relates.

(B) The amendment made by subsection (c)(10) shall be subject to title IX of the Economic Growth and Tax Relief Reconciliation Act of 2001 in the same manner as the amendments made by section 10909 of the Patient Protection and Affordable Care Act.

SEC. 205. ALTERNATIVE FUEL VEHICLE REFUELING PROPERTY.

(a) EXTENSION OF CREDIT.—Subsection (g) of section 30C of the Internal Revenue Code of 1986 is amended by striking ''placed in service'' and all that follows and inserting ''placed in service after December 31, 2014.''.

(b) EXTENSION OF INCREASED CREDIT LIMITATIONS.—Paragraph (6) of section 30C(e) of such Code is amended—

(1) by striking ''January 1, 2011'' and inserting ''January 1, 2014'', and

(2) by striking ''AND 2010'' in the heading and inserting ''THRU 2013''.

(c) EXTENSION OF CREDIT TO REFUELING OF NON-HIGHWAY HYDROGEN FUEL CELL VEHICLES.—Subsection (c) of section 30C of such Code is amended by striking ''and'' at the end of paragraph (1), by redesignating paragraph (2) as paragraph (3), and by inserting after paragraph (1) the following new paragraph:

''(2) in the case of a vehicle propelled by a fuel cell power plant (as defined in section 48(c)(1)(C)) which converts hydrogen into electricity, the term 'motor vehicle' includes any vehicle which is not operated exclusively on rails and the primary purpose of which is other than the transport of passengers, and''.

(d) CLARIFICATION OF DEFINITION OF ELECTRIC REFUELING PROPERTY.—Subparagraph (B) of section 179A(d)(3) of such Code is amended to read as follows:

''(B) exclusively used for the recharging of motor vehicles propelled by electricity (other than property used for the generation of electricity).''.

(e) EFFECTIVE DATE.—The amendments made by this section shall apply to property placed in service after the date of the enactment of this Act.

SEC. 206. CLEAN ENERGY FUND AND DEFICIT REDUCTION.

(a) CLEAN ENERGY FUND.—Subchapter A of chapter 98 of such Code is amended by adding at the end the following new section:

"SEC. 9512. CLEAN ENERGY FUND.

"(a) CREATION OF TRUST FUND.—There is established in the Treasury of the United States a trust fund to be known as the 'Clean Energy Fund', consisting of such amounts as may be appropriated or credited to such fund as provided in this section or section 9602(b).

"(b) TRANSFERS TO TRUST FUND.—There are hereby appropriated annually to the Clean Energy Fund for each of fiscal years 2011 through 2020 the lesser of—

"(1) $1,000,000,000 ($1,850,000,000 in the case of fiscal years 2011 and 2012), or

"(2) amounts equivalent (as determined by the Secretary) to the increase in Federal revenue with respect to such fiscal year by reason of the amendments made by sections 201, 202, and 203 of the Building Our Clean Energy Future Now Act of 2011.

"(c) EXPENDITURES.—Amounts in the Clean Energy Fund shall be available, without the need of further appropriation, for purposes of carrying out titles I and III of the Building Our Clean Energy Future Now Act of 2011 (and the amendments made by such titles). Amounts ap-

propriated to the Clean Energy Fund shall remain available without fiscal year limitation.''.

(b) DEFICIT REDUCTION.—The excess Federal revenue under this title shall be deposited in the Treasury and used for Federal budget deficit reduction or, if there is no Federal budget deficit, for reducing the Federal debt in such manner as the Secretary of the Treasury considers appropriate. For purposes of the preceding sentence, the term ''excess Federal revenue under this title'' means so much of the increase in Federal revenue by reason of the amendments made by sections 201, 202, and 203 of this Act as exceeds the sum of the amounts appropriated to the Clean Energy Fund under section 9512(b) of the Internal Revenue Code of 1986 (as added by this section) plus any reductions in Federal revenue by reason of the amendments made by sections 204 and 205 of this Act.

(c) CLERICAL AMENDMENT.—The table of sections for subchapter A of chapter 98 of such Code is amended by adding at the end the following new item:

''Sec. 9512. Clean Energy Fund.''.

TITLE III—ADVANCED AND ELECTRIC VEHICLES

SEC. 301. PLUG-IN HYBRID ELECTRIC VEHICLE AND ELECTRIC VEHICLE INFRASTRUCTURE.

(a) AMENDMENT OF PURPA.—Section 111(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2621(d)) is amended by adding at the end the following:

"(20) PLUG-IN HYBRID ELECTRIC VEHICLE AND ELECTRIC VEHICLE INFRASTRUCTURE.—

"(A) UTILITY PLAN FOR INFRASTRUCTURE.—Each electric utility shall develop a plan to support the use of plug-in hybrid electric vehicles and electric vehicles, including heavy-duty hybrid electric vehicles. The plan may provide for deployment of electrical charging stations in public or private locations, including street parking, parking garages, parking lots, homes, gas stations, and highway rest stops. Any such plan may also include—

"(i) battery exchange, fast charging infrastructure, and other services;

"(ii) triggers for infrastructure deployment based upon market penetration of plug-in hybrid electric vehicles and electric vehicles; and

"(iii) such other elements as the State determines necessary to support electric vehicles and plug-in hybrid electric vehicles.

Each plan under this paragraph shall provide for the deployment of the charging infrastructure or other infrastructure necessary to adequately support the use of plug-in hybrid electric vehicles and electric vehicles.

"(B) SUPPORT REQUIREMENTS.—Each State regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall—

"(i) require that charging infrastructure deployed is interoperable with products of all auto manufacturers to the extent possible; and

"(ii) consider adopting minimum requirements for deployment of electrical charging infrastructure and other appropriate requirements necessary to support the use of plug-in hybrid electric vehicles and electric vehicles.

''(C) COST RECOVERY.—Each State regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall consider whether, and to what extent, to allow cost recovery for plans and implementation of plans.

''(D) SMART GRID INTEGRATION.—Each State regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall—

''(i) establish any appropriate protocols and standards for integrating plug-in hybrid electric vehicles and electric vehicles into an electrical distribution system, including smart grid systems and devices;

''(ii) include the ability for each plug-in hybrid electric vehicle and electric vehicle to be identified individually and to be associated with its owner's electric utility account, regardless of the location that the vehicle is plugged in, for purposes of appropriate billing for any electricity required to charge the vehicle's batteries as well as any crediting for electricity provided to the

electric utility from the vehicle's batteries; and

"(iii) review the determination made in response to paragraph (14) in light of this paragraph, including whether time-of-use pricing should be employed to enable the use of plug-in hybrid electric vehicles and electric vehicles to contribute to meeting peak-load power needs.".

(b) COMPLIANCE.—

(1) TIME LIMITATIONS.—Section 112(b) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(b)) is amended by adding the following at the end thereof:

"(7)(A) Not later than 1 year after the enactment of this paragraph, each State regulatory authority (with respect to each electric utility for which it has ratemaking authority) and each nonregulated electric utility shall commence the consideration referred to in section 111, or set a hearing date for consideration, with respect to the standard established by paragraph (20) of section 111(d).

"(B) Not later than 2 years after the date of the enactment of this paragraph, each State regulatory authority (with respect to each elec-

tric utility for which it has ratemaking authority), and each nonregulated electric utility, shall complete the consideration, and shall make the determination, referred to in section 111 with respect to the standard established by paragraph (20) of section 111(d).''.

(2) FAILURE TO COMPLY.—Section 112(c) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(c)) is amended by adding the following at the end:

''In the case of the standards established by paragraph (20) of section 111(d), the reference contained in this subsection to the date of enactment of this Act shall be deemed to be a reference to the date of enactment of such paragraph.''.

(3) PRIOR STATE ACTIONS.—Section 112(d) of the Public Utility Regulatory Policies Act of 1978 (16 U.S.C. 2622(d)) is amended by inserting ''and paragraph (20)'' before ''of section 111(d)''.

SEC. 302. LARGE-SCALE VEHICLE ELECTRIFICATION PROGRAM.

(a) DEPLOYMENT PROGRAM.—The Secretary of Energy shall establish a program to deploy and integrate plug-in electric drive vehicles in multiple regions. In carrying out the program, the Secretary may provide finan-

cial assistance described under subsection (d), consistent with the goals under subsection (b). The Secretary shall select regions based upon applications for assistance received pursuant to subsection (c).

(b) GOALS.—The goals of the program established pursuant to subsection (a) shall be—

(1) to demonstrate the viability of a vehicle-based transportation system that is not overly dependent on petroleum as a fuel and contributes to lower carbon emissions than a system based on conventional vehicles;

(2) to facilitate the integration of advanced vehicle technologies into electricity distribution areas to improve system performance and reliability;

(3) to demonstrate the potential benefits of coordinated investments in vehicle electrification on personal mobility and a regional grid;

(4) to demonstrate protocols and standards that facilitate vehicle integration into the grid; and

(5) to investigate differences in each region and regulatory environment regarding best practices in implementing vehicle electrification.

(c) APPLICATIONS.—Any State or local government (or group of State or local governments) may apply to the Secretary of Energy for financial assistance in furthering

the regional deployment of plug-in electric drive vehicles. Such applications may be jointly sponsored by electric utilities, automobile manufacturers, technology providers, car sharing companies or organizations, or other persons or entities.

(d) USE OF FUNDS.—Pursuant to applications received under subsection (c), the Secretary of Energy may make financial assistance available to any applicant or joint sponsor of the application to be used for any of the following:

(1) Assisting persons located in the regional deployment area, including fleet owners, in the purchase of new plug-in electric drive vehicles by offsetting in whole or in part the incremental cost of such vehicles above the cost of comparable conventionally fueled vehicles.

(2) Supporting the use of plug-in electric drive vehicles by funding projects for the deployment of any of the following:

(A) Electrical charging stations for plug-in electric drive vehicles, including battery exchange, fast charging infrastructure, and other services, in public or private locations, including street parking, parking garages, parking lots, homes, gas stations, and highway rest stops.

(B) Smart grid equipment and infrastructure to facilitate the charging and integration of plug-in electric drive vehicles.

(3) Such other projects as the Secretary determines appropriate to support the large-scale deployment of plug-in electric drive vehicles in regional deployment areas.

(e) PROGRAM REQUIREMENTS.—The Secretary of Energy shall determine design elements and requirements of the program established pursuant to subsection (a), including—

(1) the type of financial mechanism with which to provide financial assistance;

(2) criteria for evaluating applications submitted under subsection (c), including the anticipated ability to promote deployment and market penetration of vehicles that are less dependent on petroleum as fuel source; and

(3) reporting requirements for entities that receive financial assistance under this section, including a comprehensive set of performance data characterizing the results of the deployment program.

(f) INFORMATION CLEARINGHOUSE.—The Secretary of Energy shall, as part of the program established pursuant to subsection (a), collect and make available to the

public information regarding the cost, performance, and other technical data regarding the deployment and integration of plug-in electric drive vehicles.

(g) AUTHORIZATION.—There are authorized to be appropriated to carry out this section, $450,000,000 for each of fiscal years 2012 through 2016.

SEC. 303. ADVANCED VEHICLE TECHNOLOGY.

(a) SHORT TITLE.—This section may be cited as the ''Advanced Vehicle Technology Act of 2011''.

(b) FINDINGS.—Congress finds the following:

(1) According to the Energy Information Administration, the transportation sector accounts for approximately 28 percent of the United States primary energy demand and greenhouse gas emissions, and 24 percent of global oil demand.

(2) The United States transportation sector is over 95 percent dependent on petroleum, and over 60 percent of petroleum demand is met by imported supplies.

(3) United States heavy truck fuel consumption will increase 23 percent by 2030, while overall transportation energy use will decline by 1 percent.

(4) The domestic automotive and commercial vehicle manufacturing sectors have increasingly lim-

ited resources for research, development, and engineering of advanced technologies.

(5) Vehicle, engine, and component manufacturers are playing a more important role in vehicle technology development, and should be better integrated into Federal research efforts.

(6) Priorities for the Department of Energy's vehicle technologies research have shifted drastically in recent years among diesel hybrids, hydrogen fuel cell vehicles, and plug-in electric hybrids, with little continuity among them.

(7) The integration of vehicle, communication, and infrastructure technologies has great potential for efficiency gains through better management of the total transportation system.

(8) The Federal Government should balance its role in researching longer-term exploratory concepts and developing nearer-term transformational technologies for vehicles.

(c) OBJECTIVES.—The objectives of this section are to—

(1) develop United States technologies and practices that—

(A) improve the fuel efficiency and emissions of all vehicles produced in the United States; and

(B) reduce vehicle reliance on petroleum-based fuels;

(2) support domestic research, development, engineering, demonstration, and commercial application and manufacturing of advanced vehicles, engines, and components;

(3) enable vehicles to move larger volumes of goods and more passengers with less energy and emissions;

(4) develop cost-effective advanced technologies for wide-scale utilization throughout the passenger, commercial, government, and transit vehicle sectors;

(5) allow for greater consumer choice of vehicle technologies and fuels;

(6) shorten technology development and integration cycles in the vehicle industry;

(7) ensure a proper balance and diversity of Federal investment in vehicle technologies; and

(8) strengthen partnerships between Federal and State governmental agencies and the private and academic sectors.

(d) DEFINITIONS.—For the purposes of this section:

(1) DEPARTMENT.—The term ''Department'' means the Department of Energy.

(2) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(e) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated to the Secretary for United States research, development, engineering, demonstration, and commercial application of vehicles and related technologies, including activities authorized under this section, $550,000,000 for each of fiscal years 2012 through 2016.

(f) VEHICLE RESEARCH AND DEVELOPMENT.—

(1) PROGRAM.—

(A) ACTIVITIES.—The Secretary shall conduct a program of basic and applied research, development, engineering, demonstration, and commercial application activities on materials, technologies, and processes with the potential to substantially reduce or eliminate petroleum use and the emissions of the Nation's passenger and commercial vehicles, including activities in the areas of—

(i) hybridization or full electrification of vehicle systems;

(ii) batteries and other energy storage devices;

(iii) power electronics;

(iv) vehicle, component, and subsystem manufacturing technologies and processes;

(v) engine efficiency and combustion optimization;

(vi) waste heat recovery;

(vii) transmission and drivetrains;

(viii) hydrogen vehicle technologies, including fuel cells and internal combustion engines, and hydrogen infrastructure;

(ix) compressed natural gas vehicle technologies;

(x) aerodynamics, rolling resistance, and accessory power loads of vehicles and associated equipment;

(xi) vehicle weight reduction, including lightweighting materials;

(xii) friction and wear reduction;

(xiii) engine and component durability;

(xiv) innovative propulsion systems;

(xv) advanced boosting systems;

(xvi) hydraulic hybrid technologies;

(xvii) engine compatibility with and optimization for a variety of transportation fuels including natural gas and other liquid and gaseous fuels;

(xviii) predictive engineering, modeling, and simulation of vehicle and transportation systems;

(xix) refueling and charging infrastructure for alternative fueled and electric or plug-in electric hybrid vehicles, including the unique challenges facing rural areas;

(xx) gaseous fuels storage systems and system integration and optimization;

(xxi) sensing, communications, and actuation technologies for vehicle, electrical grid, and infrastructure;

(xxii) efficient use, substitution, and recycling of potentially critical materials in vehicles, including rare earth elements and precious metals, at risk of supply disruption;

(xxiii) aftertreatment technologies;

(xxiv) thermal management of battery systems;

(xxv) retrofitting advanced vehicle technologies to existing vehicles;

(xxvi) development of common standards, specifications, and architectures for both transportation and stationary battery applications;

(xxvii) advanced internal combustion engines; and

(xxviii) other research areas as determined by the Secretary.

(B) TRANSFORMATIONAL TECHNOLOGY.—The Secretary shall ensure that the Department continues to support research, development, engineering, demonstration, and commercial application activities and maintains competency in mid- to long-term transformational vehicle technologies with potential to achieve deep reductions in petroleum use and emissions, including activities in the areas of—

(i) hydrogen vehicle technologies, including fuel cells, internal combustion engines, hydrogen storage, infrastructure,

and activities in hydrogen technology validation and safety codes and standards;

(ii) multiple battery chemistries and novel energy storage devices, including nonchemical batteries and electromechanical storage technologies such as hydraulics, flywheels, and compressed air storage;

(iii) communication and connectivity among vehicles, infrastructure, and the electrical grid; and

(iv) other innovative technologies research and development, as determined by the Secretary.

(C) INDUSTRY PARTICIPATION.—To the maximum extent practicable, activities under this section shall be carried out in partnership or collaboration with automotive manufacturers, heavy commercial, vocational, and transit vehicle manufacturers, qualified plug-in electric vehicle manufacturers, compressed natural gas vehicle manufacturers, vehicle and engine equipment and component manufacturers, manufacturing equipment manufacturers, advanced vehicle service providers, fuel producers and en-

ergy suppliers, electric utilities, universities, national laboratories, and independent research laboratories. In carrying out this section the Secretary shall—

(i) determine whether a wide range of companies that manufacture or assemble vehicles or components in the United States are represented in ongoing public private partnership activities, including firms that have not traditionally participated in federally sponsored research and development activities, and where possible, partner with such firms that conduct significant and relevant research and development activities in the United States;

(ii) leverage the capabilities and resources of, and formalize partnerships with, industry-led stakeholder organizations, nonprofit organizations, industry consortia, and trade associations with expertise in the research and development of, and education and outreach activities in, advanced automotive and commercial vehicle technologies;

(iii) develop more efficient processes for transferring research findings and technologies to industry;

(iv) give consideration to conversion of existing or former vehicle technology development or manufacturing facilities for the purposes of this section;

(v) establish and support public-private partnerships, dedicated to overcoming barriers in commercial application of transformational vehicle technologies, that utilize such industry-led technology development facilities of entities with demonstrated expertise in successfully designing and engineering pre-commercial generations of such transformational technology; and

(vi) promote efforts to ensure that technology research, development, engineering, and commercial application activities funded under this section are carried out in the United States.

(D) INTERAGENCY AND INTRAAGENCY COORDINATION.—To the maximum extent practicable, the Secretary shall coordinate research,

development, demonstration, and commercial application activities among—

(i) relevant programs within the Department, including—

(I) the Office of Energy Efficiency and Renewable Energy;

(II) the Office of Science;

(III) the Office of Electricity Delivery and Energy Reliability;

(IV) the Office of Fossil Energy;

(V) the Advanced Research Projects Agency—Energy; and

(VI) other offices as determined by the Secretary; and

(ii) relevant technology research and development programs within other Federal agencies, as determined by the Secretary.

(E) COORDINATION AND NONDUPLICATION.—In coordinating activities the Secretary shall ensure, to the maximum extent practicable, that activities do not duplicate those of other programs within the Department or other relevant research agencies.

(F) FEDERAL DEMONSTRATION OF TECHNOLOGIES.—The Secretary shall make information available to procurement programs of Federal agencies regarding the potential to demonstrate technologies resulting from activities funded through programs under this section.

(G) INTERGOVERNMENTAL COORDINATION.—The Secretary shall seek opportunities to leverage resources and support initiatives of State and local governments in developing and promoting advanced vehicle technologies, manufacturing, and infrastructure.

(H) CRITERIA.—When awarding grants under this program, the Secretary shall give priority to those technologies (either individually or as part of a system) that—

(i) provide the greatest aggregate fuel savings based on the reasonable projected sales volumes of the technology; and

(ii) provide the greatest increase in United States employment.

(2) SENSING AND COMMUNICATIONS TECHNOLOGIES.—The Secretary, in coordination with the relevant research programs of other Federal agencies, shall conduct research, development, engineer-

ing, and demonstration activities on connectivity of vehicle and transportation systems, including on sensing, computation, communication, and actuation technologies that allow for reduced fuel use, optimized traffic flow, and vehicle electrification, including technologies for—

(A) onboard vehicle, engine, and component sensing and actuation;

(B) vehicle-to-vehicle sensing and communication;

(C) vehicle-to-infrastructure sensing and communication; and

(D) vehicle integration with the electrical grid.

(3) MANUFACTURING.—The Secretary shall carry out a research, development, engineering, demonstration, and commercial application program of advanced vehicle manufacturing technologies and practices, including innovative processes to—

(A) increase the production rate and decrease the cost of advanced battery manufacturing;

(B) vary the capability of individual manufacturing facilities to accommodate different battery chemistries and configurations;

(C) reduce waste streams, emissions, and energy intensity of vehicle, engine, advanced battery and component manufacturing processes;

(D) recycle and remanufacture used batteries and other vehicle components for reuse in vehicles or stationary applications;

(E) produce cost-effective lightweight materials such as advanced metal alloys, polymeric composites, and carbon fiber;

(F) produce lightweight high pressure storage systems for gaseous fuels;

(G) design and manufacture purpose-built hydrogen and fuel cell vehicles and components;

(H) improve the calendar life and cycle life of advanced batteries; and

(I) produce permanent magnets for advanced vehicles.

(4) USER TESTING FACILITIES.—Activities under this section may include construction, expansion, or modification of new and existing vehicle, engine, and component research and testing facilities for—

(A) testing or simulating interoperability of a variety of vehicle components and systems;

(B) subjecting whole or partial vehicle platforms to fully representative duty cycles and operating conditions;

(C) developing and demonstrating a range of chemistries and configurations for advanced vehicle battery manufacturing; and

(D) developing and demonstrating test cycles for new and alternative fuels, and other advanced vehicle technologies.

(5) REPORTING.—

(A) TECHNOLOGIES DEVELOPED.—Not later than 18 months after the date of enactment of this Act and annually thereafter through 2017, the Secretary of Energy shall transmit to Congress a report regarding the technologies developed as a result of the activities authorized by this subsection, with a particular emphasis on whether the technologies were successfully adopted for commercial applications, and if so, whether products relying on those technologies are manufactured in the United States.

(B) ADDITIONAL MATTERS.—At the end of each fiscal year through 2017 the Secretary shall submit to the relevant congressional com-

mittees of jurisdiction an annual report describing activities undertaken in the previous year under this subsection, active industry participants, efforts to recruit new participants committed to design, engineering, and manufacturing of advanced vehicle technologies in the United States, progress of the program in meeting goals and timelines, and a strategic plan for funding of activities across agencies.

(g) MEDIUM- AND HEAVY-DUTY COMMERCIAL AND TRANSIT VEHICLES.—

(1) PROGRAM.—

(A) IN GENERAL.—The Secretary, in partnership with relevant research and development programs in other Federal agencies, and a range of appropriate industry stakeholders, shall carry out a program of cooperative research, development, demonstration, and commercial application activities on advanced technologies for medium- to heavy-duty commercial, vocational, recreational, and transit vehicles, including activities in the areas of—

(i) engine efficiency and combustion research;

(ii) on board storage technologies for compressed and liquefied natural gas;

(iii) development and integration of engine technologies designed for natural gas operation of a variety of vehicle platforms;

(iv) waste heat recovery and conversion;

(v) improved aerodynamics and tire rolling resistance;

(vi) energy and space-efficient emissions control systems;

(vii) heavy hybrid, hybrid hydraulic, plug-in hybrid, and electric platforms, and energy storage technologies;

(viii) drivetrain optimization;

(ix) friction and wear reduction;

(x) engine idle and parasitic energy loss reduction;

(xi) electrification of accessory loads;

(xii) onboard sensing and communications technologies;

(xiii) advanced lightweighting materials and vehicle designs;

(xiv) increasing load capacity per vehicle;

(xv) thermal management of battery systems;

(xvi) recharging infrastructure;

(xvii) compressed natural gas infrastructure;

(xviii) advanced internal combustion engines;

(xix) complete vehicle modeling and simulation;

(xx) hydrogen vehicle technologies, including fuel cells and internal combustion engines, and hydrogen infrastructure;

(xxi) retrofitting advanced technologies onto existing truck fleets; and

(xxii) integration of these and other advanced systems onto a single truck and trailer platform.

(B) LEADERSHIP.—The Secretary shall appoint a full-time Director to coordinate research, development, demonstration, and commercial application activities in medium- to heavy-duty commercial, recreational, and transit

vehicle technologies. Responsibilities of the Director shall be to—

(i) improve coordination and develop consensus between government agency and industry partners, and propose new processes for program management and priority setting to better align activities and budgets among partners;

(ii) regularly convene workshops, site visits, demonstrations, conferences, investor forums, and other events in which information and research findings are shared among program participants and interested stakeholders;

(iii) develop a budget for the Department's activities with regard to the interagency program, and provide consultation and guidance on vehicle technology funding priorities across agencies;

(iv) determine a process for reviewing program technical goals, targets, and timetables and, where applicable, aided by lifecycle impact and cost analysis, propose revisions or elimination based on program

progress, available funding, and rate of technology adoption;

(v) evaluate ongoing activities of the program and recommend project modifications, including the termination of projects, where applicable;

(vi) recruit new industry participants to the interagency program, including truck, trailer, and component manufacturers who have not traditionally participated in federally sponsored research and technology development activities; and

(vii) other responsibilities as determined by the Secretary, in consultation with interagency and industry partners.

(C) REPORTING.—At the end of each fiscal year, the Secretary shall submit to the Congress an annual report describing activities undertaken in the previous year, active industry participants, efforts to recruit new participants, progress of the program in meeting goals and timelines, and a strategic plan for funding of activities across agencies.

(2) CLASS 8 TRUCK AND TRAILER SYSTEMS DEMONSTRATION.—The Secretary shall conduct a

competitive grant program to demonstrate the integration of multiple advanced technologies on Class 8 truck and trailer platforms with a goal of improving overall freight efficiency, as measured in tons and volume of freight hauled or other work performance-based metrics, by 50 percent, including a combination of technologies listed in paragraph (1)(A). Applicant teams may be comprised of truck and trailer manufacturers, engine and component manufacturers, fleet customers, university researchers, and other applicants as appropriate for the development and demonstration of integrated Class 8 truck and trailer systems.

(3) TECHNOLOGY TESTING AND METRICS.—The Secretary, in coordination with the partners of the interagency research program described in paragraph (1)(A)—

(A) shall develop standard testing procedures and technologies for evaluating the performance of advanced heavy vehicle technologies under a range of representative duty cycles and operating conditions, including for heavy hybrid propulsion systems;

(B) shall evaluate heavy vehicle performance using work performance-based metrics

other than those based on miles per gallon, including those based on units of volume and weight transported for freight applications, and appropriate metrics based on the work performed by nonroad systems; and

(C) may construct heavy duty truck and bus testing facilities.

(4) NONROAD SYSTEMS PILOT PROGRAM.—The Secretary shall undertake a pilot program of research, development, demonstration, and commercial applications of technologies to improve total machine or system efficiency for nonroad mobile equipment including agricultural and construction equipment, and shall seek opportunities to transfer relevant research findings and technologies between the nonroad and on-highway equipment and vehicle sectors.

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