

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

A BILL

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

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

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

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

Sec. 1. Short title.

TITLE I—PUBLIC TRANSPORTATION

- Sec. 101. Short title.
- Sec. 102. Findings.
- Sec. 103. Grants to improve public transportation services.
- Sec. 104. Increased Federal share for Clean Air Act compliance.
- Sec. 105. Transportation fringe benefits.
- Sec. 106. Capital cost of contracting vanpool pilot program.

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.
- Sec. 202. Deduction for income attributable to domestic production activities not allowed with respect to oil and gas activities of major integrated oil companies.
- Sec. 203. Major integrated oil companies ineligible for last-in, first-out method of inventory.
- Sec. 204. Credit for heavy natural gas and hybrid vehicles.
- Sec. 205. Alternative fuel vehicle refueling property.
- Sec. 206. Clean Energy Fund and deficit reduction.

TITLE III—ADVANCED AND ELECTRIC VEHICLES

- Sec. 301. Plug-in hybrid electric vehicle and electric vehicle infrastructure.
- Sec. 302. Large-scale vehicle electrification program.
- Sec. 303. Advanced vehicle technology.

1 **TITLE I—PUBLIC**
2 **TRANSPORTATION**

3 **SEC. 101. SHORT TITLE.**

4 This title may be cited as the “Providing Gas Price
5 Relief Through Public Transportation Act of 2011”.

6 **SEC. 102. FINDINGS.**

7 Congress finds the following:

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

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

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

12 (4) Based on the price of gas in March 2011,
13 riding public transportation saves households an av-
14 erage of \$825 per month, or nearly \$10,000 per
15 year.

16 (5) Despite increasing demand for transit serv-
17 ices, widespread cuts in State and local funding have
18 caused 59 percent of public transit systems in the
19 United States to raise fares or cut service since Jan-
20 uary 2009.

21 (6) Although under existing laws Federal em-
22 ployees in the National Capital Region receive tran-
23 sit benefits, transit benefits should be available to all
24 Federal employees in the United States so that the

1 Federal Government sets a leading example of great-
2 er public transportation use.

3 (7) Public transportation stakeholders should
4 engage and involve local communities in the edu-
5 cation and promotion of the importance of utilizing
6 public transportation.

7 (8) Increasing public transportation use is a na-
8 tional priority.

9 **SEC. 103. GRANTS TO IMPROVE PUBLIC TRANSPORTATION**
10 **SERVICES.**

11 (a) AUTHORIZATIONS OF APPROPRIATIONS.—

12 (1) URBANIZED AREA FORMULA GRANTS.—In
13 addition to amounts allocated under section
14 5338(b)(2)(B) of title 49, United States Code, to
15 carry out section 5307 of such title, there is author-
16 ized to be appropriated \$750,000,000 for each of fis-
17 cal years 2011 and 2012 to carry out such section.
18 Such funds shall be apportioned not later than 7
19 days after the date on which the funds are appro-
20 priated, in accordance with section 5336 (other than
21 subsections (i)(1) and (j)) of such section but may
22 not be combined or commingled with any other
23 funds apportioned under such section 5336.

24 (2) FORMULA GRANTS FOR OTHER THAN UR-
25 BANIZED AREAS.—In addition to amounts allocated

1 under section 5338(b)(2)(G) of title 49, United
2 States Code, to carry out section 5311 of such title,
3 there is authorized to be appropriated \$100,000,000
4 for each of fiscal years 2011 and 2012 to carry out
5 such section 5311. Such funds shall be apportioned
6 not later than 7 days after the date on which the
7 funds are appropriated, in accordance with such sec-
8 tion 5311 but may not be combined or commingled
9 with any other funds apportioned under such section
10 5311.

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

16 (1) If the recipient of the grant is reducing, or
17 certifies to the Secretary within the time the Sec-
18 retary prescribes that, during the term of the grant,
19 the recipient will reduce one or more fares the re-
20 cipient charges for public transportation, or in the
21 case of subsection (f) of such section 5311, intercity
22 bus service, those operating costs of equipment and
23 facilities being used to provide the public transpor-
24 tation, or in the case of subsection (f) of such sec-
25 tion 5311, intercity bus service, that the recipient is

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

3 (2) To avoid increases in fares for public trans-
4 portation, or in the case of subsection (f) of such
5 section 5311, intercity bus service, or decreases in
6 current public transportation service, or in the case
7 of subsection (f) of such section 5311, intercity bus
8 service, that would otherwise result from an increase
9 in costs to the public transportation or intercity bus
10 agency for transportation-related fuel or meeting ad-
11 ditional transportation-related equipment or facility
12 maintenance needs, if the recipient of the grant cer-
13 tifies to the Secretary within the time the Secretary
14 prescribes that, during the term of the grant, the re-
15 cipient will not increase the fares that the recipient
16 charges for public transportation, or in the case of
17 subsection (f) of such section 5311, intercity bus
18 service, or, will not decrease the public transpor-
19 tation service, or in the case of subsection (f) of
20 such section 5311, intercity bus service, that the re-
21 cipient provides.

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

1 ice, or in the case of subsection (f) of such section
2 5311, intercity bus service, those operating and cap-
3 ital costs of equipment and facilities being used to
4 provide the public transportation service, or in the
5 case of subsection (f) of such section 5311, intercity
6 bus service, that the recipient incurs as a result of
7 the expansion of such service.

8 (4) If the recipient of the grant is acquiring, or
9 certifies to the Secretary within the time the Sec-
10 retary prescribes that, during the term of the grant,
11 the recipient will acquire, clean fuel or alternative
12 fuel vehicle-related equipment or facilities for the
13 purpose of improving fuel efficiency, the costs of ac-
14 quiring the equipment or facilities.

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

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

1 (d) PERIOD OF AVAILABILITY.—Funds appropriated
2 under this section shall remain available for a period of
3 2 fiscal years.

4 **SEC. 104. INCREASED FEDERAL SHARE FOR CLEAN AIR ACT**
5 **COMPLIANCE.**

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

16 **SEC. 105. TRANSPORTATION FRINGE BENEFITS.**

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

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

1 (A) by striking “Effective” and all that
 2 follows through “each covered agency” and in-
 3 serting “Each agency”; and

4 (B) by inserting “at a location in an ur-
 5 banized area of the United States that is served
 6 by fixed route public transportation” before
 7 “shall be offered”.

8 (2) CONFORMING AMENDMENTS.—Section
 9 3049(a) of such Act (5 U.S.C. 7905 note; 119 Stat.
 10 1711) is amended—

11 (A) in paragraph (3)—

12 (i) by striking subparagraph (A); and

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

16 (B) in paragraph (4) by striking “a cov-
 17 ered agency” and inserting “an agency”.

18 (b) BENEFITS DESCRIBED.—Section 3049(a)(2) of
 19 such Act (5 U.S.C. 7905 note; 119 Stat. 1711) is amended
 20 by striking the period at the end and inserting the fol-
 21 lowing: “, except that the maximum level of such benefits
 22 shall be the maximum amount which may be excluded
 23 from gross income for qualified parking as in effect for
 24 a month under section 132(f)(2)(B) of the Internal Rev-
 25 enue Code of 1986.”.

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

4 “(5) GUIDANCE.—

5 “(A) ISSUANCE.—Not later than 60 days
6 after the date of enactment of this paragraph,
7 the Secretary of Transportation shall issue
8 guidance on nationwide implementation of the
9 transit pass transportation fringe benefits pro-
10 gram under this subsection.

11 “(B) UNIFORM APPLICATION.—

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

17 “(ii) REQUIRED INFORMATION.—As
18 part of such an application, an employee
19 shall provide, at a minimum, the employ-
20 ee’s home and work addresses, a break-
21 down of the employee’s commuting costs,
22 and a certification of the employee’s eligi-
23 bility for benefits under the program.

24 “(iii) WARNING AGAINST FALSE
25 STATEMENTS.—Such an application shall

1 contain a warning against making false
2 statements in the application.

3 “(C) INDEPENDENT VERIFICATION RE-
4 QUIREMENTS.—The guidance to be issued
5 under subparagraph (A) shall contain inde-
6 pendent verification requirements to ensure
7 that, with respect to an employee of an agen-
8 cy—

9 “(i) the eligibility of the employee for
10 benefits under the program is verified by
11 an official of the agency;

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

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

17 “(D) PROGRAM IMPLEMENTATION RE-
18 QUIREMENTS.—The guidance to be issued
19 under subparagraph (A) shall contain program
20 implementation requirements applicable to each
21 agency to ensure that—

22 “(i) benefits provided by the agency
23 under the program are adjusted in cases of
24 employee travel, leave, or change of ad-
25 dress;

1 “(ii) removal from the program is in-
2 cluded in the procedures of the agency re-
3 lating to an employee separating from em-
4 ployment with the agency; and

5 “(iii) benefits provided by the agency
6 under the program are made available
7 using an electronic format (rather than
8 using paper fare media) where such a for-
9 mat is available for use.

10 “(E) ENFORCEMENT AND PENALTIES.—

11 The guidance to be issued under subparagraph
12 (A) shall contain a uniform administrative pol-
13 icy on enforcement and penalties. Such policy
14 shall be implemented by each agency to ensure
15 compliance with program requirements, to pre-
16 vent fraud and abuse, and, as appropriate, to
17 penalize employees who have abused or misused
18 the benefits provided under the program.

19 “(F) PERIODIC REVIEWS.—The guidance
20 to be issued under subparagraph (A) shall re-
21 quire each agency, not later than September 1
22 of the first fiscal year beginning after the date
23 of enactment of this paragraph, and every 3
24 years thereafter, to develop and submit to the
25 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

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

3 “(vi) Recommendations to increase
4 program participation and thereby reduce
5 single occupancy vehicle use by Federal
6 employees nationwide.

7 “(6) REPORTING REQUIREMENTS.—Not later
8 than September 30 of the first fiscal year beginning
9 after the date of enactment of this paragraph, and
10 every 3 years thereafter, the Secretary shall submit
11 to the Committee on Transportation and Infrastruc-
12 ture and the Committee on Oversight and Govern-
13 ment Reform of the House of Representatives and
14 the Committee on Banking, Housing, and Urban Af-
15 fairs of the Senate a report on nationwide implemen-
16 tation of the transit pass transportation fringe bene-
17 fits program under this subsection, including a sum-
18 mary of the information submitted by agencies pur-
19 suant to paragraph (5)(F).”.

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

1 **SEC. 106. CAPITAL COST OF CONTRACTING VANPOOL**
2 **PILOT PROGRAM.**

3 (a) **ESTABLISHMENT.**—The Secretary of Transpor-
4 tation shall establish and implement a pilot program to
5 carry out vanpool demonstration projects in not more than
6 3 urbanized areas and not more than 2 other than urban-
7 ized areas.

8 (b) **PILOT PROGRAM.**—

9 (1) **IN GENERAL.**—Notwithstanding section
10 5323(i) of title 49, United States Code, for each
11 project selected for participation in the pilot pro-
12 gram, the Secretary shall allow the non-Federal
13 share provided by a recipient of assistance for a cap-
14 ital project under chapter 53 of such title to include
15 the amounts described in paragraph (2).

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

1 portation in such service area, in excess of its oper-
2 ating costs, for the purpose of acquiring vans to be
3 used by the private provider in such service area.

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

7 (d) REPORT TO CONGRESS.—Not later than one year
8 after the date of enactment of this Act, the Secretary shall
9 submit to the Committee on Transportation and Infra-
10 structure of the House of Representatives and the Com-
11 mittee on Banking, Housing, and Urban Affairs of the
12 Senate a report containing an assessment of the costs,
13 benefits, and efficiencies of the vanpool demonstration
14 projects.

1 **TITLE II—DENIAL OF CERTAIN**
2 **TAX BENEFITS TO MAJOR IN-**
3 **TEGRATED OIL COMPANIES**
4 **AND INVESTMENT IN CLEAN**
5 **ENERGY AND TRANSPOR-**
6 **TATION**

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

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

18 (b) CONFORMING AMENDMENT.—Subsection (c) of
19 section 263 of such Code is amended by inserting “(deter-
20 mined without regard to the last sentence of this sub-
21 section)” after “in the same manner as such expenses are
22 deductible in the case of oil and gas wells”.

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

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

3 **SEC. 202. DEDUCTION FOR INCOME ATTRIBUTABLE TO DO-**
4 **MESTIC PRODUCTION ACTIVITIES NOT AL-**
5 **LOWED WITH RESPECT TO OIL AND GAS AC-**
6 **TIVITIES OF MAJOR INTEGRATED OIL COM-**
7 **PANIES.**

8 (a) IN GENERAL.—Subparagraph (B) of section
9 199(c)(4) of the Internal Revenue Code of 1986 is amend-
10 ed by striking “and” at the end of clause (ii), by striking
11 the period at the end of clause (iii) and inserting “, and”,
12 and by inserting after clause (iii) the following new clause:

13 “(iv) in the case of a major integrated
14 oil company (as defined in section
15 167(h)(5)), the production, refining, proc-
16 essing, transportation, or distribution of
17 oil, gas, or any primary product thereof.”.

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

21 **SEC. 203. MAJOR INTEGRATED OIL COMPANIES INELIGIBLE**
22 **FOR LAST-IN, FIRST-OUT METHOD OF INVEN-**
23 **TORY.**

24 (a) IN GENERAL.—Section 471 of the Internal Rev-
25 enue Code of 1986 is amended by redesignating subsection

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

3 “(c) MAJOR INTEGRATED OIL COMPANIES INELI-
 4 GIBLE FOR LAST-IN, FIRST-OUT METHOD.—In the case
 5 of a major integrated oil company (as defined in section
 6 167(h)(5)(B))—

7 “(1) the last-in, first-out method of determining
 8 inventories shall in no event be treated as clearly re-
 9 flecting income, and

10 “(2) sections 472 and 473 shall not apply.”.

11 (b) EFFECTIVE DATE.—

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

15 (2) CHANGE IN METHOD OF ACCOUNTING.—In
 16 the case of any taxpayer required by the amend-
 17 ments made by this section to change its method of
 18 accounting for its first taxable year beginning after
 19 the date of the enactment of this Act—

20 (A) such change shall be treated as initi-
 21 ated by the taxpayer,

22 (B) such change shall be treated as made
 23 with the consent of the Secretary of the Treas-
 24 ury, and

1 (C) if the net amount of the adjustments
 2 required to be taken into account by the tax-
 3 payer under section 481 of the Internal Rev-
 4 enue Code of 1986 is positive, such amount
 5 shall be taken into account over a period of 8
 6 years beginning with such first taxable year.

7 **SEC. 204. CREDIT FOR HEAVY NATURAL GAS AND HYBRID**
 8 **VEHICLES.**

9 (a) IN GENERAL.—Subpart B of part IV of sub-
 10 chapter A of chapter 1 of the Internal Revenue Code of
 11 1986 is amended by adding at the end the following new
 12 section:

13 **“SEC. 30E. HEAVY NATURAL GAS AND HEAVY HYBRID VEHI-**
 14 **CLE CREDIT.**

15 “(a) ALLOWANCE OF CREDIT.—There shall be al-
 16 lowed as a credit against the tax imposed by this chapter
 17 for the taxable year an amount equal to the sum of—

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

20 “(2) the new qualified heavy hybrid motor vehi-
 21 cle credit determined under subsection (c).

22 “(b) NEW QUALIFIED HEAVY NATURAL GAS MOTOR
 23 VEHICLE CREDIT.—

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

1 this subsection is an amount equal to 80 percent of
2 the incremental cost of any new qualified heavy nat-
3 ural gas motor vehicle placed in service by the tax-
4 payer during the taxable year.

5 “(2) NEW QUALIFIED HEAVY NATURAL GAS
6 MOTOR VEHICLE.—For purposes of this subsection,
7 the term ‘new qualified heavy natural gas motor ve-
8 hicle’ means any motor vehicle—

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

11 “(B) which has a gross vehicle weight rat-
12 ing of more than 8,500 pounds,

13 “(C) the original use of which commences
14 with the taxpayer,

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

17 “(E) which is made by a manufacturer.

18 “(3) CREDIT FOR MIXED-FUEL VEHICLES.—

19 “(A) IN GENERAL.—In the case of a
20 mixed-fuel vehicle placed in service by the tax-
21 payer during the taxable year, the credit deter-
22 mined under this subsection is an amount equal
23 to—

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

1 would have been allowed under this sub-
2 section if such vehicle was a new qualified
3 heavy natural gas motor vehicle, and

4 “(ii) in the case of a 90/10 mixed-fuel
5 vehicle, 90 percent of the credit which
6 would have been allowed under this sub-
7 section if such vehicle was a new qualified
8 heavy natural gas motor vehicle.

9 “(B) MIXED-FUEL VEHICLE.—For pur-
10 poses of this paragraph, the term ‘mixed-fuel
11 vehicle’ means any motor vehicle which—

12 “(i) would be a new qualified heavy
13 natural gas motor vehicle but for the re-
14 quirement of paragraph (2)(A),

15 “(ii) is certified by the manufacturer
16 as being able to perform efficiently in nor-
17 mal operation on a combination of com-
18 pressed or liquified natural gas and an-
19 other petroleum-based fuel, and

20 “(iii) either—

21 “(I) has received a certificate of
22 conformity under the Clean Air Act,
23 or

24 “(II) has received an order certi-
25 fying the vehicle as meeting the same

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

7 “(C) 65/35 MIXED-FUEL VEHICLE.—For
8 purposes of this paragraph, the term ‘65/35
9 mixed-fuel vehicle’ means a mixed-fuel vehicle
10 which operates using at least 65 percent com-
11 pressed or liquified natural gas and not more
12 than 35 percent petroleum-based fuel.

13 “(D) 90/10 MIXED-FUEL VEHICLE.—For
14 purposes of this paragraph, the term ‘90/10
15 mixed-fuel vehicle’ means a mixed-fuel vehicle
16 which operates using at least 90 percent com-
17 pressed or liquified natural gas and not more
18 than 10 percent petroleum-based fuel.

19 “(c) NEW QUALIFIED HEAVY HYBRID MOTOR VEHI-
20 CLE CREDIT.—

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

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

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

5 “(A) IN GENERAL.—The term ‘new quali-
6 fied heavy hybrid motor vehicle’ means a motor
7 vehicle—

8 “(i) which draws propulsion energy
9 from an onboard rechargeable energy stor-
10 age system,

11 “(ii) which, in the case of a vehicle
12 which has an internal combustion or heat
13 engine which uses consumable fuel, has re-
14 ceived, with respect to such engine, a cer-
15 tificate of conformity under the Clean Air
16 Act as meeting the emission standards set
17 in the regulations prescribed by the Ad-
18 ministrator of the Environmental Protec-
19 tion Agency for 2004 through 2007 model
20 year diesel heavy duty engines or ottocycle
21 heavy duty engines, as applicable,

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

24 “(iv) which has a maximum available
25 power of at least—

1 “(I) 10 percent in the case of a
2 vehicle which has a gross vehicle
3 weight rating of not more than
4 14,000 pounds, and

5 “(II) 15 percent in the case of a
6 vehicle which has a gross vehicle
7 weight rating of more than 14,000
8 pounds,

9 “(v) the original use of which com-
10 mences with the taxpayer,

11 “(vi) which is acquired by the tax-
12 payer for use or lease, but not for resale,
13 and

14 “(vii) which is made by a manufac-
15 turer.

16 “(B) CONSUMABLE FUEL.—For purposes
17 of subparagraph (A)(ii)(I), the term
18 ‘consumable fuel’ means any solid, liquid, or
19 gaseous matter which releases energy when con-
20 sumed by an auxiliary power unit.

21 “(C) MAXIMUM AVAILABLE POWER.—For
22 purposes of subparagraph (A)(iii), the term
23 ‘maximum available power’ means the max-
24 imum power available from the rechargeable en-
25 ergy storage system during a standard 10 sec-

1 ond pulse power or equivalent test, divided by
2 the vehicle’s total traction power. For purposes
3 of the preceding sentence, the term ‘total trac-
4 tion power’ means the sum of the peak power
5 from the rechargeable energy storage system
6 and the heat engine peak power of the vehicle,
7 except that if such storage system is the sole
8 means by which the vehicle can be driven, the
9 total traction power is the peak power of such
10 storage system.

11 “(d) APPLICATION WITH OTHER CREDITS.—

12 “(1) BUSINESS CREDIT TREATED AS PART OF
13 GENERAL BUSINESS CREDIT.—So much of the credit
14 which would be allowed under subsection (a) for any
15 taxable year (determined without regard to this sub-
16 section) that is attributable to property of a char-
17 acter subject to an allowance for depreciation shall
18 be treated as a credit listed in section 38(b) for such
19 taxable year (and not allowed under subsection (a)).

20 “(2) PERSONAL CREDIT.—

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

1 allowable under subpart A for such taxable
2 year.

3 “(B) LIMITATION BASED ON AMOUNT OF
4 TAX.—In the case of a taxable year to which
5 section 26(a)(2) does not apply, the credit al-
6 lowed under subsection (a) for any taxable year
7 (determined after application of paragraph (1))
8 shall not exceed the excess of—

9 “(i) the sum of the regular tax liabil-
10 ity (as defined in section 26(b)) plus the
11 tax imposed by section 55, over

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

16 “(e) OTHER DEFINITIONS AND SPECIAL RULES.—
17 For purposes of this section—

18 “(1) INCREMENTAL COST.—The term ‘incre-
19 mental cost’ means, with respect to any motor vehi-
20 cle, the excess of the manufacturer’s suggested retail
21 price for such vehicle over such price for a gasoline
22 or diesel fuel motor vehicle of the same model (or,
23 if there is no such gasoline or diesel fuel motor vehi-
24 cle of the same model, a gasoline or diesel fuel motor
25 vehicle which is comparable in weight, size, and use

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

3 “(A) \$20,000, if such vehicle has a gross
4 vehicle weight rating of not more than 14,000
5 pounds,

6 “(B) \$50,000, if such vehicle has a gross
7 vehicle weight rating of more than 14,000
8 pounds but not more than 26,000 pounds,

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

12 “(D) \$100,000, if such vehicle has a gross
13 vehicle weight rating of more than 33,000
14 pounds.

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

19 “(2) MOTOR VEHICLE.—The term ‘motor vehi-
20 cle’ means any vehicle which is manufactured pri-
21 marily for use on public streets, roads, and highways
22 (not including a vehicle operated exclusively on a rail
23 or rails) and which has at least 4 wheels.

24 “(3) MANUFACTURER.—The term ‘manufac-
25 turer’ has the meaning given such term in regula-

1 tions prescribed by the Administrator of the Envi-
2 ronmental Protection Agency for purposes of the ad-
3 ministration of title II of the Clean Air Act (42
4 U.S.C. 7521 et seq.).

5 “(4) REDUCTION IN BASIS.—For purposes of
6 this subtitle, the basis of any property for which a
7 credit is allowable under subsection (a) shall be re-
8 duced by the amount of such credit so allowed (de-
9 termined without regard to subsection (d)).

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

16 “(6) PROPERTY USED BY TAX-EXEMPT ENTI-
17 TY.—In the case of a vehicle whose use is described
18 in paragraph (3) or (4) of section 50(b) and which
19 is not subject to a lease, the person who sold such
20 vehicle to the person or entity using such vehicle
21 shall be treated as the taxpayer that placed such ve-
22 hicle in service, but only if such person clearly dis-
23 closes to such person or entity in a document the
24 amount of any credit allowable under subsection (a)
25 with respect to such vehicle (determined without re-

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

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

11 “(8) RECAPTURE.—The Secretary shall, by reg-
12 ulations, provide for recapturing the benefit of any
13 credit allowable under subsection (a) with respect to
14 any property which ceases to be property eligible for
15 such credit (including recapture in the case of a
16 lease period of less than the economic life of a vehi-
17 cle).

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

22 “(10) INTERACTION WITH AIR QUALITY AND
23 MOTOR VEHICLE SAFETY STANDARDS.—Unless oth-
24 erwise provided in this section, a motor vehicle shall

1 not be considered eligible for a credit under this sec-
2 tion unless such vehicle is in compliance with—

3 “(A) the applicable provisions of the Clean
4 Air Act for the applicable make and model year
5 of the vehicle (or applicable air quality provi-
6 sions of State law in the case of a State which
7 has adopted such provision under a waiver
8 under section 209(b) of the Clean Air Act), and

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

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

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

19 (c) CONFORMING AMENDMENTS.—

20 (1) Section 38(b) of such Code is amended by
21 striking “plus” at the end of paragraph (35), by
22 striking the period at the end of paragraph 36 and
23 inserting “, plus”, and by adding at the end the fol-
24 lowing new paragraph:

1 “(37) the portion of the new qualified heavy
2 natural gas motor vehicle credit and the new quali-
3 fied heavy hybrid motor vehicle credit to which sec-
4 tion 30E(d)(1) applies.”.

5 (2) Section 24(b)(3)(B) of such Code is amend-
6 ed by striking “and 30D” and inserting “30D, and
7 30E”.

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

10 (4) Section 26(a)(1) of such Code is amended
11 by striking “and 30D” and inserting “30D, and
12 30E”.

13 (5) Section 30(c)(2) of such Code is amended
14 by striking “and 30D” and inserting “30D, and
15 30E”.

16 (6) Section 30B(g)(2)(B)(ii) of such Code is
17 amended by striking “and 30D” and inserting
18 “30D, and 30E”.

19 (7) Section 30D(c)(2)(B)(ii) of such Code is
20 amended by striking “and 25D” and inserting
21 “25D, and 30E”.

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

1 (9) Section 1400C(d)(2) of such Code is
 2 amended by striking “and 30D” and inserting
 3 “30D, and 30E”.

4 (10) Section 30E(e)(2)(B)(ii) of such Code, as
 5 added by this section, is amended by striking “sec-
 6 tions 23 and 25D” and inserting “section 25D”.

7 (11) Section 1016(a) of such Code is amended
 8 by striking “and” at the end of paragraph (36), by
 9 striking the period at the end of paragraph (37) and
 10 inserting “, and”, and by adding at the end the fol-
 11 lowing new paragraph:

12 “(38) to the extent provided in section
 13 30E(e)(4).”.

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

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

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

20 (d) EFFECTIVE DATE.—

21 (1) IN GENERAL.—The amendments made by
 22 this section shall apply to vehicles acquired after De-
 23 cember 31, 2010.

24 (2) APPLICATION OF EGTRRA SUNSET.—

1 (A) The amendment made by subsection
 2 (c)(2) shall be subject to title IX of the Eco-
 3 nomic Growth and Tax Relief Reconciliation
 4 Act of 2001 in the same manner as the provi-
 5 sion of such Act to which such amendment re-
 6 lates.

7 (B) The amendment made by subsection
 8 (c)(10) shall be subject to title IX of the Eco-
 9 nomic Growth and Tax Relief Reconciliation
 10 Act of 2001 in the same manner as the amend-
 11 ments made by section 10909 of the Patient
 12 Protection and Affordable Care Act.

13 **SEC. 205. ALTERNATIVE FUEL VEHICLE REFUELING PROP-**
 14 **ERTY.**

15 (a) EXTENSION OF CREDIT.—Subsection (g) of sec-
 16 tion 30C of the Internal Revenue Code of 1986 is amended
 17 by striking “placed in service” and all that follows and
 18 inserting “placed in service after December 31, 2014.”.

19 (b) EXTENSION OF INCREASED CREDIT LIMITA-
 20 TIONS.—Paragraph (6) of section 30C(e) of such Code is
 21 amended—

22 (1) by striking “January 1, 2011” and insert-
 23 ing “January 1, 2014”, and

24 (2) by striking “AND 2010” in the heading and
 25 inserting “THRU 2013”.

1 (c) EXTENSION OF CREDIT TO REFUELING OF NON-
2 HIGHWAY HYDROGEN FUEL CELL VEHICLES.—Sub-
3 section (c) of section 30C of such Code is amended by
4 striking “and” at the end of paragraph (1), by redesignig-
5 nating paragraph (2) as paragraph (3), and by inserting
6 after paragraph (1) the following new paragraph:

7 “(2) in the case of a vehicle propelled by a fuel
8 cell power plant (as defined in section 48(c)(1)(C))
9 which converts hydrogen into electricity, the term
10 ‘motor vehicle’ includes any vehicle which is not op-
11 erated exclusively on rails and the primary purpose
12 of which is other than the transport of passengers,
13 and”.

14 (d) CLARIFICATION OF DEFINITION OF ELECTRIC
15 REFUELING PROPERTY.—Subparagraph (B) of section
16 179A(d)(3) of such Code is amended to read as follows:

17 “(B) exclusively used for the recharging of
18 motor vehicles propelled by electricity (other
19 than property used for the generation of elec-
20 tricity).”.

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

1 **SEC. 206. CLEAN ENERGY FUND AND DEFICIT REDUCTION.**

2 (a) CLEAN ENERGY FUND.—Subchapter A of chap-
3 ter 98 of such Code is amended by adding at the end the
4 following new section:

5 **“SEC. 9512. CLEAN ENERGY FUND.**

6 “(a) CREATION OF TRUST FUND.—There is estab-
7 lished in the Treasury of the United States a trust fund
8 to be known as the ‘Clean Energy Fund’, consisting of
9 such amounts as may be appropriated or credited to such
10 fund as provided in this section or section 9602(b).

11 “(b) TRANSFERS TO TRUST FUND.—There are here-
12 by appropriated annually to the Clean Energy Fund for
13 each of fiscal years 2011 through 2020 the lesser of—

14 “(1) \$1,000,000,000 (\$1,850,000,000 in the
15 case of fiscal years 2011 and 2012), or

16 “(2) amounts equivalent (as determined by the
17 Secretary) to the increase in Federal revenue with
18 respect to such fiscal year by reason of the amend-
19 ments made by sections 201, 202, and 203 of the
20 Building Our Clean Energy Future Now Act of
21 2011.

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

1 appropriated to the Clean Energy Fund shall remain avail-
2 able without fiscal year limitation.”.

3 (b) DEFICIT REDUCTION.—The excess Federal rev-
4 enue under this title shall be deposited in the Treasury
5 and used for Federal budget deficit reduction or, if there
6 is no Federal budget deficit, for reducing the Federal debt
7 in such manner as the Secretary of the Treasury considers
8 appropriate. For purposes of the preceding sentence, the
9 term “excess Federal revenue under this title” means so
10 much of the increase in Federal revenue by reason of the
11 amendments made by sections 201, 202, and 203 of this
12 Act as exceeds the sum of the amounts appropriated to
13 the Clean Energy Fund under section 9512(b) of the In-
14 ternal Revenue Code of 1986 (as added by this section)
15 plus any reductions in Federal revenue by reason of the
16 amendments made by sections 204 and 205 of this Act.

17 (c) CLERICAL AMENDMENT.—The table of sections
18 for subchapter A of chapter 98 of such Code is amended
19 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

1 “(iii) such other elements as the State
2 determines necessary to support electric
3 vehicles and plug-in hybrid electric vehi-
4 cles.

5 Each plan under this paragraph shall provide
6 for the deployment of the charging infrastruc-
7 ture or other infrastructure necessary to ade-
8 quately support the use of plug-in hybrid elec-
9 tric vehicles and electric vehicles.

10 “(B) SUPPORT REQUIREMENTS.—Each
11 State regulatory authority (with respect to each
12 electric utility for which it has ratemaking au-
13 thority) and each nonregulated electric utility
14 shall—

15 “(i) require that charging infrastruc-
16 ture deployed is interoperable with prod-
17 ucts of all auto manufacturers to the ex-
18 tent possible; and

19 “(ii) consider adopting minimum re-
20 quirements for deployment of electrical
21 charging infrastructure and other appro-
22 priate requirements necessary to support
23 the use of plug-in hybrid electric vehicles
24 and electric vehicles.

1 “(C) COST RECOVERY.—Each State regu-
2 latory authority (with respect to each electric
3 utility for which it has ratemaking authority)
4 and each nonregulated electric utility shall con-
5 sider whether, and to what extent, to allow cost
6 recovery for plans and implementation of plans.

7 “(D) SMART GRID INTEGRATION.—Each
8 State regulatory authority (with respect to each
9 electric utility for which it has ratemaking au-
10 thority) and each nonregulated electric utility
11 shall—

12 “(i) establish any appropriate proto-
13 cols and standards for integrating plug-in
14 hybrid electric vehicles and electric vehicles
15 into an electrical distribution system, in-
16 cluding smart grid systems and devices;

17 “(ii) include the ability for each plug-
18 in hybrid electric vehicle and electric vehi-
19 cle to be identified individually and to be
20 associated with its owner’s electric utility
21 account, regardless of the location that the
22 vehicle is plugged in, for purposes of ap-
23 propriate billing for any electricity required
24 to charge the vehicle’s batteries as well as
25 any crediting for electricity provided to the

1 electric utility from the vehicle's batteries;
2 and
3 “(iii) review the determination made
4 in response to paragraph (14) in light of
5 this paragraph, including whether time-of-
6 use pricing should be employed to enable
7 the use of plug-in hybrid electric vehicles
8 and electric vehicles to contribute to meet-
9 ing peak-load power needs.”.

10 (b) COMPLIANCE.—

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

15 “(7)(A) Not later than 1 year after the enact-
16 ment of this paragraph, each State regulatory au-
17 thority (with respect to each electric utility for which
18 it has ratemaking authority) and each nonregulated
19 electric utility shall commence the consideration re-
20 ferred to in section 111, or set a hearing date for
21 consideration, with respect to the standard estab-
22 lished by paragraph (20) of section 111(d).

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

1 tric utility for which it has ratemaking author-
 2 ity), and each nonregulated electric utility, shall
 3 complete the consideration, and shall make the
 4 determination, referred to in section 111 with
 5 respect to the standard established by para-
 6 graph (20) of section 111(d).”.

7 (2) FAILURE TO COMPLY.—Section 112(c) of
 8 the Public Utility Regulatory Policies Act of 1978
 9 (16 U.S.C. 2622(c)) is amended by adding the fol-
 10 lowing at the end:

11 “In the case of the standards established by para-
 12 graph (20) of section 111(d), the reference contained in
 13 this subsection to the date of enactment of this Act shall
 14 be deemed to be a reference to the date of enactment of
 15 such paragraph.”.

16 (3) PRIOR STATE ACTIONS.—Section 112(d) of
 17 the Public Utility Regulatory Policies Act of 1978
 18 (16 U.S.C. 2622(d)) is amended by inserting “and
 19 paragraph (20)” before “of section 111(d)”.

20 **SEC. 302. LARGE-SCALE VEHICLE ELECTRIFICATION PRO-**
 21 **GRAM.**

22 (a) DEPLOYMENT PROGRAM.—The Secretary of En-
 23 ergy shall establish a program to deploy and integrate
 24 plug-in electric drive vehicles in multiple regions. In car-
 25 rying out the program, the Secretary may provide finan-

1 cial assistance described under subsection (d), consistent
2 with the goals under subsection (b). The Secretary shall
3 select regions based upon applications for assistance re-
4 ceived pursuant to subsection (c).

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

7 (1) to demonstrate the viability of a vehicle-
8 based transportation system that is not overly de-
9 pendent on petroleum as a fuel and contributes to
10 lower carbon emissions than a system based on con-
11 ventional vehicles;

12 (2) to facilitate the integration of advanced ve-
13 hicle technologies into electricity distribution areas
14 to improve system performance and reliability;

15 (3) to demonstrate the potential benefits of co-
16 ordinated investments in vehicle electrification on
17 personal mobility and a regional grid;

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

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

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

1 the regional deployment of plug-in electric drive vehicles.
2 Such applications may be jointly sponsored by electric util-
3 ities, automobile manufacturers, technology providers, car
4 sharing companies or organizations, or other persons or
5 entities.

6 (d) USE OF FUNDS.—Pursuant to applications re-
7 ceived under subsection (c), the Secretary of Energy may
8 make financial assistance available to any applicant or
9 joint sponsor of the application to be used for any of the
10 following:

11 (1) Assisting persons located in the regional de-
12 ployment area, including fleet owners, in the pur-
13 chase of new plug-in electric drive vehicles by offset-
14 ting in whole or in part the incremental cost of such
15 vehicles above the cost of comparable conventionally
16 fueled vehicles.

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

20 (A) Electrical charging stations for plug-in
21 electric drive vehicles, including battery ex-
22 change, fast charging infrastructure, and other
23 services, in public or private locations, including
24 street parking, parking garages, parking lots,
25 homes, gas stations, and highway rest stops.

1 (B) Smart grid equipment and infrastruc-
2 ture to facilitate the charging and integration of
3 plug-in electric drive vehicles.

4 (3) Such other projects as the Secretary deter-
5 mines appropriate to support the large-scale deploy-
6 ment of plug-in electric drive vehicles in regional de-
7 ployment areas.

8 (e) PROGRAM REQUIREMENTS.—The Secretary of
9 Energy shall determine design elements and requirements
10 of the program established pursuant to subsection (a), in-
11 cluding—

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

14 (2) criteria for evaluating applications sub-
15 mitted under subsection (c), including the antici-
16 pated ability to promote deployment and market
17 penetration of vehicles that are less dependent on
18 petroleum as fuel source; and

19 (3) reporting requirements for entities that re-
20 ceive financial assistance under this section, includ-
21 ing a comprehensive set of performance data charac-
22 terizing the results of the deployment program.

23 (f) INFORMATION CLEARINGHOUSE.—The Secretary
24 of Energy shall, as part of the program established pursu-
25 ant to subsection (a), collect and make available to the

1 public information regarding the cost, performance, and
2 other technical data regarding the deployment and inte-
3 gration of plug-in electric drive vehicles.

4 (g) AUTHORIZATION.—There are authorized to be ap-
5 propriated to carry out this section, \$450,000,000 for
6 each of fiscal years 2012 through 2016.

7 **SEC. 303. ADVANCED VEHICLE TECHNOLOGY.**

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

10 (b) FINDINGS.—Congress finds the following:

11 (1) According to the Energy Information Ad-
12 ministration, the transportation sector accounts for
13 approximately 28 percent of the United States pri-
14 mary energy demand and greenhouse gas emissions,
15 and 24 percent of global oil demand.

16 (2) The United States transportation sector is
17 over 95 percent dependent on petroleum, and over
18 60 percent of petroleum demand is met by imported
19 supplies.

20 (3) United States heavy truck fuel consumption
21 will increase 23 percent by 2030, while overall trans-
22 portation energy use will decline by 1 percent.

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

1 ited resources for research, development, and engi-
2 neering of advanced technologies.

3 (5) Vehicle, engine, and component manufactur-
4 ers are playing a more important role in vehicle
5 technology development, and should be better inte-
6 grated into Federal research efforts.

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

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

16 (8) The Federal Government should balance its
17 role in researching longer-term exploratory concepts
18 and developing nearer-term transformational tech-
19 nologies for vehicles.

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

22 (1) develop United States technologies and
23 practices that—

1 (A) improve the fuel efficiency and emis-
2 sions of all vehicles produced in the United
3 States; and

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

6 (2) support domestic research, development, en-
7 gineering, demonstration, and commercial applica-
8 tion and manufacturing of advanced vehicles, en-
9 gines, and components;

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

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

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

18 (6) shorten technology development and inte-
19 gration cycles in the vehicle industry;

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

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

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

1 (1) DEPARTMENT.—The term “Department”
2 means the Department of Energy.

3 (2) SECRETARY.—The term “Secretary” means
4 the Secretary of Energy.

5 (e) AUTHORIZATION OF APPROPRIATIONS.—There
6 are authorized to be appropriated to the Secretary for
7 United States research, development, engineering, dem-
8 onstration, and commercial application of vehicles and re-
9 lated technologies, including activities authorized under
10 this section, \$550,000,000 for each of fiscal years 2012
11 through 2016.

12 (f) VEHICLE RESEARCH AND DEVELOPMENT.—

13 (1) PROGRAM.—

14 (A) ACTIVITIES.—The Secretary shall con-
15 duct a program of basic and applied research,
16 development, engineering, demonstration, and
17 commercial application activities on materials,
18 technologies, and processes with the potential to
19 substantially reduce or eliminate petroleum use
20 and the emissions of the Nation’s passenger
21 and commercial vehicles, including activities in
22 the areas of—

23 (i) hybridization or full electrification
24 of vehicle systems;

- 1 (ii) batteries and other energy storage
- 2 devices;
- 3 (iii) power electronics;
- 4 (iv) vehicle, component, and sub-
- 5 system manufacturing technologies and
- 6 processes;
- 7 (v) engine efficiency and combustion
- 8 optimization;
- 9 (vi) waste heat recovery;
- 10 (vii) transmission and drivetrains;
- 11 (viii) hydrogen vehicle technologies,
- 12 including fuel cells and internal combus-
- 13 tion engines, and hydrogen infrastructure;
- 14 (ix) compressed natural gas vehicle
- 15 technologies;
- 16 (x) aerodynamics, rolling resistance,
- 17 and accessory power loads of vehicles and
- 18 associated equipment;
- 19 (xi) vehicle weight reduction, including
- 20 lightweighting materials;
- 21 (xii) friction and wear reduction;
- 22 (xiii) engine and component dura-
- 23 bility;
- 24 (xiv) innovative propulsion systems;
- 25 (xv) advanced boosting systems;

- 1 (xvi) hydraulic hybrid technologies;
- 2 (xvii) engine compatibility with and
- 3 optimization for a variety of transportation
- 4 fuels including natural gas and other liquid
- 5 and gaseous fuels;
- 6 (xviii) predictive engineering, mod-
- 7 eling, and simulation of vehicle and trans-
- 8 portation systems;
- 9 (xix) refueling and charging infra-
- 10 structure for alternative fueled and electric
- 11 or plug-in electric hybrid vehicles, includ-
- 12 ing the unique challenges facing rural
- 13 areas;
- 14 (xx) gaseous fuels storage systems
- 15 and system integration and optimization;
- 16 (xxi) sensing, communications, and
- 17 actuation technologies for vehicle, electrical
- 18 grid, and infrastructure;
- 19 (xxii) efficient use, substitution, and
- 20 recycling of potentially critical materials in
- 21 vehicles, including rare earth elements and
- 22 precious metals, at risk of supply disrup-
- 23 tion;
- 24 (xxiii) aftertreatment technologies;

1 (xxiv) thermal management of battery
2 systems;

3 (xxv) retrofitting advanced vehicle
4 technologies to existing vehicles;

5 (xxvi) development of common stand-
6 ards, specifications, and architectures for
7 both transportation and stationary battery
8 applications;

9 (xxvii) advanced internal combustion
10 engines; and

11 (xxviii) other research areas as deter-
12 mined by the Secretary.

13 (B) TRANSFORMATIONAL TECHNOLOGY.—

14 The Secretary shall ensure that the Department
15 continues to support research, development, en-
16 gineering, demonstration, and commercial appli-
17 cation activities and maintains competency in
18 mid- to long-term transformational vehicle tech-
19 nologies with potential to achieve deep reduc-
20 tions in petroleum use and emissions, including
21 activities in the areas of—

22 (i) hydrogen vehicle technologies, in-
23 cluding fuel cells, internal combustion en-
24 gines, hydrogen storage, infrastructure,

1 and activities in hydrogen technology vali-
2 dation and safety codes and standards;

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

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

12 (iv) other innovative technologies re-
13 search and development, as determined by
14 the Secretary.

15 (C) INDUSTRY PARTICIPATION.—To the
16 maximum extent practicable, activities under
17 this section shall be carried out in partnership
18 or collaboration with automotive manufacturers,
19 heavy commercial, vocational, and transit vehi-
20 cle manufacturers, qualified plug-in electric ve-
21 hicle manufacturers, compressed natural gas ve-
22 hicle manufacturers, vehicle and engine equip-
23 ment and component manufacturers, manufac-
24 turing equipment manufacturers, advanced ve-
25 hicle service providers, fuel producers and en-

1 ergy suppliers, electric utilities, universities, na-
2 tional laboratories, and independent research
3 laboratories. In carrying out this section the
4 Secretary shall—

5 (i) determine whether a wide range of
6 companies that manufacture or assemble
7 vehicles or components in the United
8 States are represented in ongoing public
9 private partnership activities, including
10 firms that have not traditionally partici-
11 pated in federally sponsored research and
12 development activities, and where possible,
13 partner with such firms that conduct sig-
14 nificant and relevant research and develop-
15 ment activities in the United States;

16 (ii) leverage the capabilities and re-
17 sources of, and formalize partnerships
18 with, industry-led stakeholder organiza-
19 tions, nonprofit organizations, industry
20 consortia, and trade associations with ex-
21 pertise in the research and development of,
22 and education and outreach activities in,
23 advanced automotive and commercial vehi-
24 cle technologies;

1 (iii) develop more efficient processes
2 for transferring research findings and tech-
3 nologies to industry;

4 (iv) give consideration to conversion of
5 existing or former vehicle technology devel-
6 opment or manufacturing facilities for the
7 purposes of this section;

8 (v) establish and support public-pri-
9 vate partnerships, dedicated to overcoming
10 barriers in commercial application of trans-
11 formational vehicle technologies, that uti-
12 lize such industry-led technology develop-
13 ment facilities of entities with dem-
14 onstrated expertise in successfully design-
15 ing and engineering pre-commercial gen-
16 erations of such transformational tech-
17 nology; and

18 (vi) promote efforts to ensure that
19 technology research, development, engi-
20 neering, and commercial application activi-
21 ties funded under this section are carried
22 out in the United States.

23 (D) INTERAGENCY AND INTRAAGENCY CO-
24 ORDINATION.—To the maximum extent prac-
25 ticable, 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.

1 (F) FEDERAL DEMONSTRATION OF TECH-
2 NOLOGIES.—The Secretary shall make informa-
3 tion available to procurement programs of Fed-
4 eral agencies regarding the potential to dem-
5 onstrate technologies resulting from activities
6 funded through programs under this section.

7 (G) INTERGOVERNMENTAL COORDINA-
8 TION.—The Secretary shall seek opportunities
9 to leverage resources and support initiatives of
10 State and local governments in developing and
11 promoting advanced vehicle technologies, manu-
12 facturing, and infrastructure.

13 (H) CRITERIA.—When awarding grants
14 under this program, the Secretary shall give
15 priority to those technologies (either individ-
16 ually or as part of a system) that—

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

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

22 (2) SENSING AND COMMUNICATIONS TECH-
23 NOLOGIES.—The Secretary, in coordination with the
24 relevant research programs of other Federal agen-
25 cies, shall conduct research, development, engineer-

1 ing, and demonstration activities on connectivity of
2 vehicle and transportation systems, including on
3 sensing, computation, communication, and actuation
4 technologies that allow for reduced fuel use, opti-
5 mized traffic flow, and vehicle electrification, includ-
6 ing technologies for—

7 (A) onboard vehicle, engine, and compo-
8 nent sensing and actuation;

9 (B) vehicle-to-vehicle sensing and commu-
10 nication;

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

13 (D) vehicle integration with the electrical
14 grid.

15 (3) MANUFACTURING.—The Secretary shall
16 carry out a research, development, engineering, dem-
17 onstration, and commercial application program of
18 advanced vehicle manufacturing technologies and
19 practices, including innovative processes to—

20 (A) increase the production rate and de-
21 crease the cost of advanced battery manufac-
22 turing;

23 (B) vary the capability of individual manu-
24 facturing facilities to accommodate different
25 battery chemistries and configurations;

1 (C) reduce waste streams, emissions, and
2 energy intensity of vehicle, engine, advanced
3 battery and component manufacturing proc-
4 esses;

5 (D) recycle and remanufacture used bat-
6 teries and other vehicle components for reuse in
7 vehicles or stationary applications;

8 (E) produce cost-effective lightweight ma-
9 terials such as advanced metal alloys, polymeric
10 composites, and carbon fiber;

11 (F) produce lightweight high pressure stor-
12 age systems for gaseous fuels;

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

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

17 (I) produce permanent magnets for ad-
18 vanced vehicles.

19 (4) USER TESTING FACILITIES.—Activities
20 under this section may include construction, expan-
21 sion, or modification of new and existing vehicle, en-
22 gine, and component research and testing facilities
23 for—

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

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

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

7 (D) developing and demonstrating test cy-
8 cles for new and alternative fuels, and other ad-
9 vanced vehicle technologies.

10 (5) REPORTING.—

11 (A) TECHNOLOGIES DEVELOPED.—Not
12 later than 18 months after the date of enact-
13 ment of this Act and annually thereafter
14 through 2017, the Secretary of Energy shall
15 transmit to Congress a report regarding the
16 technologies developed as a result of the activi-
17 ties authorized by this subsection, with a par-
18 ticular emphasis on whether the technologies
19 were successfully adopted for commercial appli-
20 cations, and if so, whether products relying on
21 those technologies are manufactured in the
22 United States.

23 (B) ADDITIONAL MATTERS.—At the end of
24 each fiscal year through 2017 the Secretary
25 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;

- 1 (ii) on board storage technologies for
- 2 compressed and liquefied natural gas;
- 3 (iii) development and integration of
- 4 engine technologies designed for natural
- 5 gas operation of a variety of vehicle plat-
- 6 forms;
- 7 (iv) waste heat recovery and conver-
- 8 sion;
- 9 (v) improved aerodynamics and tire
- 10 rolling resistance;
- 11 (vi) energy and space-efficient emis-
- 12 sions control systems;
- 13 (vii) heavy hybrid, hybrid hydraulic,
- 14 plug-in hybrid, and electric platforms, and
- 15 energy storage technologies;
- 16 (viii) drivetrain optimization;
- 17 (ix) friction and wear reduction;
- 18 (x) engine idle and parasitic energy
- 19 loss reduction;
- 20 (xi) electrification of accessory loads;
- 21 (xii) onboard sensing and communica-
- 22 tions technologies;
- 23 (xiii) advanced lightweighting mate-
- 24 rials and vehicle designs;

- 1 (xiv) increasing load capacity per vehi-
- 2 cle;
- 3 (xv) thermal management of battery
- 4 systems;
- 5 (xvi) recharging infrastructure;
- 6 (xvii) compressed natural gas infra-
- 7 structure;
- 8 (xviii) advanced internal combustion
- 9 engines;
- 10 (xix) complete vehicle modeling and
- 11 simulation;
- 12 (xx) hydrogen vehicle technologies, in-
- 13 cluding fuel cells and internal combustion
- 14 engines, and hydrogen infrastructure;
- 15 (xxi) retrofitting advanced tech-
- 16 nologies onto existing truck fleets; and
- 17 (xxii) integration of these and other
- 18 advanced systems onto a single truck and
- 19 trailer platform.

20 (B) LEADERSHIP.—The Secretary shall
21 appoint a full-time Director to coordinate re-
22 search, development, demonstration, and com-
23 mercial application activities in medium- to
24 heavy-duty commercial, recreational, and transit

1 vehicle technologies. Responsibilities of the Di-
2 rector shall be to—

3 (i) improve coordination and develop
4 consensus between government agency and
5 industry partners, and propose new proc-
6 esses for program management and pri-
7 ority setting to better align activities and
8 budgets among partners;

9 (ii) regularly convene workshops, site
10 visits, demonstrations, conferences, inves-
11 tor forums, and other events in which in-
12 formation and research findings are shared
13 among program participants and interested
14 stakeholders;

15 (iii) develop a budget for the Depart-
16 ment's activities with regard to the inter-
17 agency program, and provide consultation
18 and guidance on vehicle technology funding
19 priorities across agencies;

20 (iv) determine a process for reviewing
21 program technical goals, targets, and time-
22 tables and, where applicable, aided by life-
23 cycle impact and cost analysis, propose re-
24 visions or elimination based on program

1 progress, available funding, and rate of
2 technology adoption;

3 (v) evaluate ongoing activities of the
4 program and recommend project modifica-
5 tions, including the termination of projects,
6 where applicable;

7 (vi) recruit new industry participants
8 to the interagency program, including
9 truck, trailer, and component manufactur-
10 ers who have not traditionally participated
11 in federally sponsored research and tech-
12 nology development activities; and

13 (vii) other responsibilities as deter-
14 mined by the Secretary, in consultation
15 with interagency and industry partners.

16 (C) REPORTING.—At the end of each fiscal
17 year, the Secretary shall submit to the Congress
18 an annual report describing activities under-
19 taken in the previous year, active industry par-
20 ticipants, efforts to recruit new participants,
21 progress of the program in meeting goals and
22 timelines, and a strategic plan for funding of
23 activities across agencies.

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

1 competitive grant program to demonstrate the inte-
2 gration of multiple advanced technologies on Class 8
3 truck and trailer platforms with a goal of improving
4 overall freight efficiency, as measured in tons and
5 volume of freight hauled or other work performance-
6 based metrics, by 50 percent, including a combina-
7 tion of technologies listed in paragraph (1)(A). Ap-
8 plicant teams may be comprised of truck and trailer
9 manufacturers, engine and component manufactur-
10 ers, fleet customers, university researchers, and
11 other applicants as appropriate for the development
12 and demonstration of integrated Class 8 truck and
13 trailer systems.

14 (3) TECHNOLOGY TESTING AND METRICS.—The
15 Secretary, in coordination with the partners of the
16 interagency research program described in para-
17 graph (1)(A)—

18 (A) shall develop standard testing proce-
19 dures and technologies for evaluating the per-
20 formance of advanced heavy vehicle technologies
21 under a range of representative duty cycles and
22 operating conditions, including for heavy hybrid
23 propulsion systems;

24 (B) shall evaluate heavy vehicle perform-
25 ance using work performance-based metrics

1 other than those based on miles per gallon, in-
2 cluding those based on units of volume and
3 weight transported for freight applications, and
4 appropriate metrics based on the work per-
5 formed by nonroad systems; and

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

8 (4) NONROAD SYSTEMS PILOT PROGRAM.—The
9 Secretary shall undertake a pilot program of re-
10 search, development, demonstration, and commercial
11 applications of technologies to improve total machine
12 or system efficiency for nonroad mobile equipment
13 including agricultural and construction equipment,
14 and shall seek opportunities to transfer relevant re-
15 search findings and technologies between the
16 nonroad and on-highway equipment and vehicle sec-
17 tors.

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