

110TH CONGRESS
1ST SESSION

S. 987

To enhance the energy security of the United States by promoting biofuels,
and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 26, 2007

Mr. BINGAMAN (for himself and Mr. DOMENICI) introduced the following bill;
which was read twice and referred to the Committee on Energy and Nat-
ural Resources

A BILL

To enhance the energy security of the United States by
promoting biofuels, and for other purposes.

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; TABLE OF CONTENTS.**

4 (a) **SHORT TITLE.**—This Act may be cited as the
5 “Biofuels for Energy Security and Transportation Act of
6 2007”.

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

Sec. 1. Short title; table of contents.
Sec. 2. Definitions.

TITLE I—RENEWABLE FUEL STANDARD

Sec. 101. Renewable fuel standard.

TITLE II—RENEWABLE FUELS INFRASTRUCTURE

Sec. 201. Infrastructure pilot program for renewable fuels.

Sec. 202. Bioenergy research and development.

Sec. 203. Bioresearch centers for systems biology program.

Sec. 204. Loan guarantees for renewable fuel facilities.

Sec. 205. Grants for renewable fuel production research and development in certain States.

Sec. 206. Grants for infrastructure for transportation of biomass to local biorefineries.

Sec. 207. Biorefinery information center.

Sec. 208. Conversion assistance for cellulosic biomass, waste-derived ethanol, approved renewable fuels.

Sec. 209. Alternative fuel database and materials.

Sec. 210. Fuel tank cap labeling requirement.

TITLE III—STUDIES

Sec. 301. Study of advanced biofuels technologies.

Sec. 302. Study of increased consumption of ethanol-blended gasoline with higher levels of ethanol.

Sec. 303. Pipeline feasibility study.

Sec. 304. Study of optimization of alternative fueled vehicles to use E-85 fuel.

Sec. 305. Study of credits for use of renewable electricity in electric vehicles.

1 **SEC. 2. DEFINITIONS.**

2 In this Act:

3 (1) **ADVANCED BIOFUEL.**—

4 (A) **IN GENERAL.**—The term “advanced
5 biofuel” means fuel derived from renewable bio-
6 mass other than corn kernels.

7 (B) **INCLUSIONS.**—The term “advanced
8 biofuel” includes—

9 (i) ethanol derived from cellulose,
10 hemicellulose, or lignin;

11 (ii) ethanol derived from sugar or
12 starch, other than ethanol derived from
13 corn kernels;

1 (iii) ethanol derived from waste mate-
2 rial, including crop residue, other vegeta-
3 tive waste material, animal waste, and mu-
4 nicipal solid waste;

5 (iv) diesel-equivalent fuel derived from
6 renewable biomass, including vegetable oil
7 and animal fat;

8 (v) biogas produced by the anaerobic
9 digestion or fermentation of organic matter
10 from renewable biomass; and

11 (vi) butanol produced by the fer-
12 mentation of renewable biomass.

13 (2) CELLULOSIC BIOMASS ETHANOL.—The
14 term “cellulosic biomass ethanol” means ethanol de-
15 rived from any cellulose, hemicellulose, or lignin that
16 is derived from renewable biomass.

17 (3) CONVENTIONAL BIOFUEL.—The term “con-
18 ventional biofuel” means ethanol derived from corn
19 kernels.

20 (4) RENEWABLE BIOMASS.—

21 (A) IN GENERAL.—The term “renewable
22 biomass” means any organic matter that is
23 available on a renewable or recurring basis.

24 (B) INCLUSIONS.—The term “renewable
25 biomass” includes—

1 (i) renewable plant material, includ-
2 ing—

3 (I) feed grains;

4 (II) other agricultural commod-
5 ities;

6 (III) other plants and trees
7 grown for energy production; and

8 (IV) algae; and

9 (ii) waste material, including—

10 (I) crop residue;

11 (II) other vegetative waste mate-
12 rial (including wood waste and wood
13 residues);

14 (III) animal waste and byprod-
15 ucts (including fats, oils, greases, and
16 manure); and

17 (IV) municipal solid waste.

18 (C) EXCLUSIONS.—The term “renewable
19 biomass” does not include old-growth timber of
20 a forest from the late successional stage of for-
21 est development.

22 (5) RENEWABLE FUEL.—

23 (A) IN GENERAL.—The term “renewable
24 fuel” means motor vehicle fuel, boiler fuel, or
25 home heating fuel that is—

1 (i) produced from renewable biomass;

2 and

3 (ii) used to replace or reduce the
4 quantity of fossil fuel present in a fuel
5 mixture used to operate a motor vehicle,
6 boiler, or furnace that would otherwise op-
7 erate using fossil fuel.

8 (B) INCLUSION.—The term “renewable
9 fuel” includes—

10 (i) conventional biofuel; and

11 (ii) advanced biofuel.

12 (6) SECRETARY.—The term “Secretary” means
13 the Secretary of Energy.

14 (7) SMALL REFINERY.—The term “small refin-
15 ery” means a refinery for which the average aggre-
16 gate daily crude oil throughput for a calendar year
17 (as determined by dividing the aggregate throughput
18 for the calendar year by the number of days in the
19 calendar year) does not exceed 75,000 barrels.

20 **TITLE I—RENEWABLE FUEL**
21 **STANDARD**

22 **SEC. 101. RENEWABLE FUEL STANDARD.**

23 (a) RENEWABLE FUEL PROGRAM.—

24 (1) REGULATIONS.—

1 (A) IN GENERAL.—Not later than 1 year
2 after the date of enactment of this Act, the
3 President shall promulgate regulations to en-
4 sure that motor vehicle fuel, home heating oil,
5 and boiler fuel sold or introduced into com-
6 merce in the United States (except in non-
7 contiguous States or territories), on an annual
8 average basis, contains the applicable volume of
9 renewable fuel determined in accordance with
10 paragraph (2).

11 (B) PROVISIONS OF REGULATIONS.—Re-
12 gardless of the date of promulgation, the regu-
13 lations promulgated under subparagraph (A)—

14 (i) shall contain compliance provisions
15 applicable to refineries, blenders, distribu-
16 tors, and importers, as appropriate, to en-
17 sure that the requirements of this sub-
18 section are met; but

19 (ii) shall not—

20 (I) restrict geographic areas in
21 the contiguous United States in which
22 renewable fuel may be used; or

23 (II) impose any per-gallon obliga-
24 tion for the use of renewable fuel.

1 (C) RELATIONSHIP TO OTHER REGULA-
 2 TIONS.—Regulations promulgated under this
 3 paragraph shall, to the maximum extent prac-
 4 ticable, incorporate the program structure, com-
 5 pliance, and reporting requirements established
 6 under the final regulations promulgated to im-
 7 plement the renewable fuel program established
 8 by the amendment made by section 1501(a)(2)
 9 of the Energy Policy Act of 2005 (Public Law
 10 109–58; 119 Stat. 1067).

11 (2) APPLICABLE VOLUME.—

12 (A) CALENDAR YEARS 2008 THROUGH
 13 2022.—

14 (i) RENEWABLE FUEL.—For the pur-
 15 pose of paragraph (1), subject to clause
 16 (ii), the applicable volume for any of cal-
 17 endar years 2008 through 2022 shall be
 18 determined in accordance with the fol-
 19 lowing table:

Calendar year:	Applicable volume of renewable fuel (in billions of gallons):
2008	8.5
2009	10.5
2010	12.0
2011	12.6
2012	13.2
2013	13.8
2014	14.4
2015	15.0
2016	18.0
2017	21.0
2018	24.0

Calendar year:	Applicable volume of renewable fuel (in billions of gallons):
2019	27.0
2020	30.0
2021	33.0
2022	36.0

1 (ii) **ADVANCED BIOFUELS.**—For the
2 purpose of paragraph (1), of the volume of
3 renewable fuel required under clause (i),
4 the applicable volume for any of calendar
5 years 2016 through 2022 for advanced
6 biofuels shall be determined in accordance
7 with the following table:

Calendar year:	Applicable volume of advanced biofuels (in billions of gallons):
2016	3.0
2017	6.0
2018	9.0
2019	12.0
2020	15.0
2021	18.0
2022	21.0

8 **(B) CALENDAR YEAR 2023 AND THERE-**
9 **AFTER.**—Subject to subparagraph (C), for the
10 purposes of paragraph (1), the applicable vol-
11 ume for calendar year 2023 and each calendar
12 year thereafter shall be determined by the
13 President, in coordination with the Secretary of
14 Energy, the Secretary of Agriculture, and the
15 Administrator of the Environmental Protection
16 Agency, based on a review of the implementa-

1 tion of the program during calendar years 2007
2 through 2022, including a review of—

3 (i) the impact of renewable fuels on
4 the energy security of the United States;

5 (ii) the expected annual rate of future
6 production of renewable fuels, including
7 advanced biofuels; and

8 (iii) the impact of the use of renew-
9 able fuels on other factors, including job
10 creation, the price and supply of agricul-
11 tural commodities, rural economic develop-
12 ment, and the environment.

13 (C) MINIMUM APPLICABLE VOLUME.—Sub-
14 ject to subparagraph (D), for the purpose of
15 paragraph (1), the applicable volume for cal-
16 endar year 2023 and each calendar year there-
17 after shall be equal to the product obtained by
18 multiplying—

19 (i) the number of gallons of gasoline
20 that the President estimates will be sold or
21 introduced into commerce in the calendar
22 year; and

23 (ii) the ratio that—

24 (I) 36,000,000,000 gallons of re-
25 newable fuel; bears to

1 (II) the number of gallons of gas-
2 oline sold or introduced into com-
3 merce in calendar year 2022.

4 (D) MAXIMUM QUANTITY DERIVED FROM
5 CONVENTIONAL BIOFUEL FEEDSTOCKS.—For
6 the purpose of paragraph (1), the applicable
7 volume for calendar year 2023 and each cal-
8 endar year thereafter shall not exceed
9 15,000,000,000 gallons of conventional biofuel.

10 (b) APPLICABLE PERCENTAGES.—

11 (1) PROVISION OF ESTIMATE OF VOLUMES OF
12 GASOLINE SALES.—Not later than October 31 of
13 each of calendar years 2008 through 2021, the Ad-
14 ministrator of the Energy Information Administra-
15 tion shall provide to the President an estimate, with
16 respect to the following calendar year, of the vol-
17 umes of gasoline projected to be sold or introduced
18 into commerce in the United States.

19 (2) DETERMINATION OF APPLICABLE PERCENT-
20 AGES.—

21 (A) IN GENERAL.—Not later than Novem-
22 ber 30 of each of calendar years 2008 through
23 2022, based on the estimate provided under
24 paragraph (1), the President shall determine
25 and publish in the Federal Register, with re-

1 spect to the following calendar year, the renew-
2 able fuel obligation that ensures that the re-
3 quirements of subsection (a) are met.

4 (B) REQUIRED ELEMENTS.—The renew-
5 able fuel obligation determined for a calendar
6 year under subparagraph (A) shall—

7 (i) be applicable to refineries, blend-
8 ers, and importers, as appropriate;

9 (ii) be expressed in terms of a volume
10 percentage of gasoline sold or introduced
11 into commerce in the United States; and

12 (iii) subject to paragraph (3)(A), con-
13 sist of a single applicable percentage that
14 applies to all categories of persons speci-
15 fied in clause (i).

16 (3) ADJUSTMENTS.—In determining the appli-
17 cable percentage for a calendar year, the President
18 shall make adjustments—

19 (A) to prevent the imposition of redundant
20 obligations on any person specified in para-
21 graph (2)(B)(i); and

22 (B) to account for the use of renewable
23 fuel during the previous calendar year by small
24 refineries that are exempt under subsection (g).

1 (c) VOLUME CONVERSION FACTORS FOR RENEW-
2 ABLE FUELS BASED ON ENERGY CONTENT OR REQUIRE-
3 MENTS.—

4 (1) IN GENERAL.—For the purpose of sub-
5 section (a), the President shall assign values to spe-
6 cific types of advanced biofuels for the purpose of
7 satisfying the fuel volume requirements of subsection
8 (a)(2) in accordance with this subsection.

9 (2) ENERGY CONTENT RELATIVE TO ETH-
10 ANOL.—For advanced biofuel, 1 gallon of the ad-
11 vanced biofuel shall be considered to be the equiva-
12 lent of 1 gallon of renewable fuel multiplied by the
13 ratio that—

14 (A) the number of British thermal units of
15 energy produced by the combustion of 1 gallon
16 of the advanced biofuel (as measured under
17 conditions determined by the Secretary); bears
18 to

19 (B) the number of British thermal units of
20 energy produced by the combustion of 1 gallon
21 of pure ethanol (as measured under conditions
22 determined by the Secretary to be comparable
23 to conditions described in subparagraph (A)).

24 (3) TRANSITIONAL ENERGY-RELATED CONVER-
25 SION FACTORS FOR CELLULOSIC BIOMASS ETH-

1 ANOL.—For any of calendar years 2008 through
2 2015, 1 gallon of cellulosic biomass ethanol shall be
3 considered to be the equivalent of 2.5 gallons of re-
4 newable fuel.

5 (d) CREDIT PROGRAM.—

6 (1) IN GENERAL.—The President, in consulta-
7 tion with the Secretary and the Administrator of the
8 Environmental Protection Agency, shall implement a
9 credit program to manage the renewable fuel re-
10 quirement of this section in a manner consistent
11 with the credit program established by the amend-
12 ment made by section 1501(a)(2) of the Energy Pol-
13 icy Act of 2005 (Public Law 109–58; 119 Stat.
14 1067).

15 (2) MARKET TRANSPARENCY.—In carrying out
16 the credit program under this subsection, the Presi-
17 dent shall facilitate price transparency in markets
18 for the sale and trade of credits, with due regard for
19 the public interest, the integrity of those markets,
20 fair competition, and the protection of consumers
21 and agricultural producers.

22 (e) SEASONAL VARIATIONS IN RENEWABLE FUEL
23 USE.—

24 (1) STUDY.—For each of calendar years 2007
25 through 2020, the Administrator of the Energy In-

1 formation Administration shall conduct a study of
2 renewable fuel blending to determine whether there
3 are excessive seasonal variations in the use of renew-
4 able fuel.

5 (2) REGULATION OF EXCESSIVE SEASONAL
6 VARIATIONS.—If, for any calendar year, the Admin-
7 istrator of the Energy Information Administration,
8 based on the study under paragraph (1), makes the
9 determinations specified in paragraph (3), the Presi-
10 dent shall promulgate regulations to ensure that 25
11 percent or more of the quantity of renewable fuel
12 necessary to meet the requirements of subsection (a)
13 is used during each of the 2 periods specified in
14 paragraph (4) of each subsequent calendar year.

15 (3) DETERMINATIONS.—The determinations re-
16 ferred to in paragraph (2) are that—

17 (A) less than 25 percent of the quantity of
18 renewable fuel necessary to meet the require-
19 ments of subsection (a) has been used during 1
20 of the 2 periods specified in paragraph (4) of
21 the calendar year;

22 (B) a pattern of excessive seasonal vari-
23 ation described in subparagraph (A) will con-
24 tinue in subsequent calendar years; and

1 (C) promulgating regulations or other re-
2 quirements to impose a 25 percent or more sea-
3 sonal use of renewable fuels will not signifi-
4 cantly—

5 (i) increase the price of motor fuels to
6 the consumer; or

7 (ii) prevent or interfere with the at-
8 tainment of national ambient air quality
9 standards.

10 (4) PERIODS.—The 2 periods referred to in this
11 subsection are—

12 (A) April through September; and

13 (B) January through March and October
14 through December.

15 (f) WAIVERS.—

16 (1) IN GENERAL.—The President, in consulta-
17 tion with the Secretary of Energy, the Secretary of
18 Agriculture, and the Administrator of the Environ-
19 mental Protection Agency, may waive the require-
20 ments of subsection (a) in whole or in part on peti-
21 tion by one or more States by reducing the national
22 quantity of renewable fuel required under subsection
23 (a), based on a determination by the President
24 (after public notice and opportunity for comment),
25 that—

1 (A) implementation of the requirement
2 would severely harm the economy or environ-
3 ment of a State, a region, or the United States;
4 or

5 (B) extreme and unusual circumstances
6 exist that prevent distribution of an adequate
7 supply of domestically-produced renewable fuel
8 to consumers in the United States.

9 (2) PETITIONS FOR WAIVERS.—The President,
10 in consultation with the Secretary of Energy, the
11 Secretary of Agriculture, and the Administrator of
12 the Environmental Protection Agency, shall approve
13 or disapprove a State petition for a waiver of the re-
14 quirements of subsection (a) within 90 days after
15 the date on which the petition is received by the
16 President.

17 (3) TERMINATION OF WAIVERS.—A waiver
18 granted under paragraph (1) shall terminate after 1
19 year, but may be renewed by the President after
20 consultation with the Secretary of Energy, the Sec-
21 retary of Agriculture, and the Administrator of the
22 Environmental Protection Agency.

23 (g) SMALL REFINERIES.—

24 (1) TEMPORARY EXEMPTION.—

1 (A) IN GENERAL.—The requirements of
2 subsection (a) shall not apply to small refineries
3 until calendar year 2013.

4 (B) EXTENSION OF EXEMPTION.—

5 (i) STUDY BY SECRETARY.—Not later
6 than December 31, 2008, the Secretary
7 shall submit to the President and Congress
8 a report describing the results of a study
9 to determine whether compliance with the
10 requirements of subsection (a) would im-
11 pose a disproportionate economic hardship
12 on small refineries.

13 (ii) EXTENSION OF EXEMPTION.—In
14 the case of a small refinery that the Sec-
15 retary determines under clause (i) would
16 be subject to a disproportionate economic
17 hardship if required to comply with sub-
18 section (a), the President shall extend the
19 exemption under subparagraph (A) for the
20 small refinery for a period of not less than
21 2 additional years.

22 (2) PETITIONS BASED ON DISPROPORTIONATE
23 ECONOMIC HARDSHIP.—

24 (A) EXTENSION OF EXEMPTION.—A small
25 refinery may at any time petition the President

1 for an extension of the exemption under para-
2 graph (1) for the reason of disproportionate
3 economic hardship.

4 (B) EVALUATION OF PETITIONS.—In eval-
5 uating a petition under subparagraph (A), the
6 President, in consultation with the Secretary,
7 shall consider the findings of the study under
8 paragraph (1)(B) and other economic factors.

9 (C) DEADLINE FOR ACTION ON PETI-
10 TIONS.—The President shall act on any petition
11 submitted by a small refinery for a hardship ex-
12 emption not later than 90 days after the date
13 of receipt of the petition.

14 (3) OPT-IN FOR SMALL REFINERIES.—A small
15 refinery shall be subject to the requirements of sub-
16 section (a) if the small refinery notifies the Presi-
17 dent that the small refinery waives the exemption
18 under paragraph (1).

19 (h) PENALTIES AND ENFORCEMENT.—

20 (1) CIVIL PENALTIES.—

21 (A) IN GENERAL.—Any person that vio-
22 lates a regulation promulgated under subsection
23 (a), or that fails to furnish any information re-
24 quired under such a regulation, shall be liable

1 to the United States for a civil penalty of not
2 more than the total of—

3 (i) \$25,000 for each day of the viola-
4 tion; and

5 (ii) the amount of economic benefit or
6 savings received by the person resulting
7 from the violation, as determined by the
8 President.

9 (B) COLLECTION.—Civil penalties under
10 subparagraph (A) shall be assessed by, and col-
11 lected in a civil action brought by, the Secretary
12 or such other officer of the United States as is
13 designated by the President.

14 (2) INJUNCTIVE AUTHORITY.—

15 (A) IN GENERAL.—The district courts of
16 the United States shall have jurisdiction to—

17 (i) restrain a violation of a regulation
18 promulgated under subsection (a);

19 (ii) award other appropriate relief;
20 and

21 (iii) compel the furnishing of informa-
22 tion required under the regulation.

23 (B) ACTIONS.—An action to restrain such
24 violations and compel such actions shall be

1 brought by and in the name of the United
2 States.

3 (C) SUBPOENAS.—In the action, a sub-
4 poena for a witness who is required to attend
5 a district court in any district may apply in any
6 other district.

7 (i) EFFECTIVE DATE.—Except as otherwise specifi-
8 cally provided in this section, this section takes effect on
9 January 1, 2008.

10 **TITLE II—RENEWABLE FUELS** 11 **INFRASTRUCTURE**

12 **SEC. 201. INFRASTRUCTURE PILOT PROGRAM FOR RENEW-** 13 **ABLE FUELS.**

14 (a) IN GENERAL.—The Secretary, in consultation
15 with the Secretary of Transportation and the Adminis-
16 trator of the Environmental Protection Agency, shall es-
17 tablish a competitive grant pilot program (referred to in
18 this section as the “pilot program”), to be administered
19 through the Vehicle Technology Deployment Program of
20 the Department of Energy, to provide not more than 10
21 geographically-dispersed project grants to State govern-
22 ments, local governments, metropolitan transportation au-
23 thorities, or partnerships of those entities to carry out 1
24 or more projects for the purposes described in subsection
25 (b).

1 (b) GRANT PURPOSES.—A grant under this section
2 shall be used for the establishment of refueling infrastruc-
3 ture corridors, as designated by the Secretary, for gasoline
4 blends that contain at least 85 percent renewable fuel or
5 diesel fuel that contains at least 10 percent renewable fuel,
6 including—

7 (1) installation of infrastructure and equipment
8 necessary to ensure adequate distribution of renew-
9 able fuels within the corridor;

10 (2) installation of infrastructure and equipment
11 necessary to directly support vehicles powered by re-
12 newable fuels; and

13 (3) operation and maintenance of infrastructure
14 and equipment installed as part of a project funded
15 by the grant.

16 (c) APPLICATIONS.—

17 (1) REQUIREMENTS.—

18 (A) IN GENERAL.—Subject to subpara-
19 graph (B), not later than 90 days after the date
20 of enactment of this Act, the Secretary shall
21 issue requirements for use in applying for
22 grants under the pilot program.

23 (B) MINIMUM REQUIREMENTS.—At a min-
24 imum, the Secretary shall require that an appli-
25 cation for a grant under this section—

1 (i) be submitted by—

2 (I) the head of a State or local
3 government or a metropolitan trans-
4 portation authority, or any combina-
5 tion of those entities; and

6 (II) a registered participant in
7 the Vehicle Technology Deployment
8 Program of the Department of En-
9 ergy; and

10 (ii) include—

11 (I) a description of the project
12 proposed in the application, including
13 the ways in which the project meets
14 the requirements of this section;

15 (II) an estimate of the degree of
16 use of the project, including the esti-
17 mated size of fleet of vehicles operated
18 with renewable fuel available within
19 the geographic region of the corridor;

20 (III) an estimate of the potential
21 petroleum displaced as a result of the
22 project, and a plan to collect and dis-
23 seminate petroleum displacement and
24 other relevant data relating to the

1 project to be funded under the grant,
2 over the expected life of the project;

3 (IV) a description of the means
4 by which the project will be sustain-
5 able without Federal assistance after
6 the completion of the term of the
7 grant;

8 (V) a complete description of the
9 costs of the project, including acquisi-
10 tion, construction, operation, and
11 maintenance costs over the expected
12 life of the project; and

13 (VI) a description of which costs
14 of the project will be supported by
15 Federal assistance under this sub-
16 section.

17 (2) PARTNERS.—An applicant under paragraph
18 (1) may carry out a project under the pilot program
19 in partnership with public and private entities.

20 (d) SELECTION CRITERIA.—In evaluating applica-
21 tions under the pilot program, the Secretary shall—

22 (1) consider the experience of each applicant
23 with previous, similar projects; and

24 (2) give priority consideration to applications
25 that—

1 (A) are most likely to maximize displace-
2 ment of petroleum consumption;

3 (B) demonstrate the greatest commitment
4 on the part of the applicant to ensure funding
5 for the proposed project and the greatest likeli-
6 hood that the project will be maintained or ex-
7 panded after Federal assistance under this sub-
8 section is completed;

9 (C) represent a partnership of public and
10 private entities; and

11 (D) exceed the minimum requirements of
12 subsection (c)(1)(B).

13 (e) PILOT PROJECT REQUIREMENTS.—

14 (1) MAXIMUM AMOUNT.—The Secretary shall
15 provide not more than \$20,000,000 in Federal as-
16 sistance under the pilot program to any applicant.

17 (2) COST SHARING.—The non-Federal share of
18 the cost of any activity relating to renewable fuel in-
19 frastructure development carried out using funds
20 from a grant under this section shall be not less
21 than 20 percent.

22 (3) MAXIMUM PERIOD OF GRANTS.—The Sec-
23 retary shall not provide funds to any applicant under
24 the pilot program for more than 2 years.

1 (4) DEPLOYMENT AND DISTRIBUTION.—The
2 Secretary shall seek, to the maximum extent prac-
3 ticable, to ensure a broad geographic distribution of
4 project sites funded by grants under this section.

5 (5) TRANSFER OF INFORMATION AND KNOWL-
6 EDGE.—The Secretary shall establish mechanisms to
7 ensure that the information and knowledge gained
8 by participants in the pilot program are transferred
9 among the pilot program participants and to other
10 interested parties, including other applicants that
11 submitted applications.

12 (f) SCHEDULE.—

13 (1) INITIAL GRANTS.—

14 (A) IN GENERAL.—Not later than 90 days
15 after the date of enactment of this Act, the Sec-
16 retary shall publish in the Federal Register,
17 Commerce Business Daily, and such other pub-
18 lications as the Secretary considers to be appro-
19 priate, a notice and request for applications to
20 carry out projects under the pilot program.

21 (B) DEADLINE.—An application described
22 in subparagraph (A) shall be submitted to the
23 Secretary by not later than 180 days after the
24 date of publication of the notice under that sub-
25 paragraph.

1 (C) INITIAL SELECTION.—Not later than
2 90 days after the date by which applications for
3 grants are due under subparagraph (B), the
4 Secretary shall select by competitive, peer-re-
5 viewed proposal up to 5 applications for
6 projects to be awarded a grant under the pilot
7 program.

8 (2) ADDITIONAL GRANTS.—

9 (A) IN GENERAL.—Not later than 2 years
10 after the date of enactment of this Act, the Sec-
11 retary shall publish in the Federal Register,
12 Commerce Business Daily, and such other pub-
13 lications as the Secretary considers to be appro-
14 priate, a notice and request for additional appli-
15 cations to carry out projects under the pilot
16 program that incorporate the information and
17 knowledge obtained through the implementation
18 of the first round of projects authorized under
19 the pilot program.

20 (B) DEADLINE.—An application described
21 in subparagraph (A) shall be submitted to the
22 Secretary by not later than 180 days after the
23 date of publication of the notice under that sub-
24 paragraph.

1 (C) INITIAL SELECTION.—Not later than
2 90 days after the date by which applications for
3 grants are due under subparagraph (B), the
4 Secretary shall select by competitive, peer-re-
5 viewed proposal such additional applications for
6 projects to be awarded a grant under the pilot
7 program as the Secretary determines to be ap-
8 propriate.

9 (g) REPORTS TO CONGRESS.—

10 (1) INITIAL REPORT.—Not later than 60 days
11 after the date on which grants are awarded under
12 this section, the Secretary shall submit to Congress
13 a report containing—

14 (A) an identification of the grant recipients
15 and a description of the projects to be funded
16 under the pilot program;

17 (B) an identification of other applicants
18 that submitted applications for the pilot pro-
19 gram but to which funding was not provided;
20 and

21 (C) a description of the mechanisms used
22 by the Secretary to ensure that the information
23 and knowledge gained by participants in the
24 pilot program are transferred among the pilot
25 program participants and to other interested

1 parties, including other applicants that sub-
2 mitted applications.

3 (2) EVALUATION.—Not later than 2 years after
4 the date of enactment of this Act, and annually
5 thereafter until the termination of the pilot program,
6 the Secretary shall submit to Congress a report con-
7 taining an evaluation of the effectiveness of the pilot
8 program, including an assessment of the petroleum
9 displacement and benefits to the environment de-
10 rived from the projects included in the pilot pro-
11 gram.

12 (h) AUTHORIZATION OF APPROPRIATIONS.—There is
13 authorized to be appropriated to the Secretary to carry
14 out this section \$200,000,000, to remain available until
15 expended.

16 **SEC. 202. BIOENERGY RESEARCH AND DEVELOPMENT.**

17 Section 931(c) of the Energy Policy Act of 2005 (42
18 U.S.C. 16231(c)) is amended—

19 (1) in paragraph (1), by striking
20 “\$213,000,000” and inserting “\$326,000,000”;

21 (2) in paragraph (2), by striking
22 “\$251,000,000” and inserting “\$377,000,000”; and

23 (3) in paragraph (3), by striking
24 “\$274,000,000” and inserting “\$398,000,000”.

1 **SEC. 203. BIORESEARCH CENTERS FOR SYSTEMS BIOLOGY**
2 **PROGRAM.**

3 Section 977(a)(1) of the Energy Policy Act of 2005
4 (42 U.S.C. 16317(a)(1)) is amended by inserting before
5 the period at the end the following: “, including the estab-
6 lishment of at least 7 bioresearch centers that focus on
7 biofuels, of which at least 1 center shall be located in each
8 of the 4 Petroleum Administration for Defense Districts
9 with no subdistricts and 1 center shall be located in each
10 of the subdistricts of the Petroleum Administration for
11 Defense District with subdistricts”.

12 **SEC. 204. LOAN GUARANTEES FOR RENEWABLE FUEL FA-**
13 **CILITIES.**

14 (a) IN GENERAL.—Section 1703 of the Energy Policy
15 Act of 2005 (42 U.S.C. 16513) is amended by adding at
16 the end the following:

17 “(f) RENEWABLE FUEL FACILITIES.—

18 “(1) IN GENERAL.—The Secretary may make
19 guarantees under this title for projects that produce
20 advanced biofuel (as defined in section 2 of the
21 Biofuels for Energy Security and Transportation
22 Act of 2007).

23 “(2) REQUIREMENTS.—A project under this
24 subsection shall employ new or significantly im-
25 proved technologies for the production of renewable
26 fuels as compared to commercial technologies in

1 service in the United States at the time that the
2 guarantee is issued.

3 “(3) ISSUANCE OF FIRST LOAN GUARANTEES.—
4 The requirement of section 20320(b) of division B
5 of the Continuing Appropriations Resolution, 2007
6 (Public Law 109–289, Public Law 110–5), relating
7 to the issuance of final regulations, shall not apply
8 to the first 6 guarantees issued under this sub-
9 section.

10 “(4) PROJECT DESIGN.—A project for which a
11 guarantee is made under this subsection shall have
12 a project design that has been validated through the
13 operation of a continuous process pilot facility with
14 an annual output of at least 50,000 gallons of eth-
15 anol.

16 “(5) MAXIMUM GUARANTEED PRINCIPAL.—The
17 total principal amount of a loan guaranteed under
18 this subsection may not exceed \$250,000,000 for a
19 single facility.

20 “(6) AMOUNT OF GUARANTEE.—The Secretary
21 shall guarantee 100 percent of the principal and in-
22 terest due on 1 or more loans made for a facility
23 that is the subject of the guarantee under paragraph
24 (3).

1 “(7) DEADLINE.—The Secretary shall approve
2 or disapprove an application for a guarantee under
3 this subsection not later than 90 days after the date
4 of receipt of the application.

5 “(8) REPORT.—Not later than 30 days after
6 approving or disapproving an application under
7 paragraph (7), the Secretary shall submit to Con-
8 gress a report on the approval or disapproval (in-
9 cluding the reasons for the action).”.

10 (b) IMPROVEMENTS TO UNDERLYING LOAN GUAR-
11 ANTEE AUTHORITY.—

12 (1) DEFINITION OF COMMERCIAL TECH-
13 NOLOGY.—Section 1701(1) of the Energy Policy Act
14 of 2005 (42 U.S.C. 16511(1)) is amended by strik-
15 ing subparagraph (B) and inserting the following:

16 “(B) EXCLUSION.—The term ‘commercial
17 technology’ does not include a technology if the
18 sole use of the technology is in connection
19 with—

20 “(i) a demonstration plant; or

21 “(ii) a project for which the Secretary
22 approved a loan guarantee.”.

23 (2) SPECIFIC APPROPRIATION OR CONTRIBU-
24 TION.—Section 1702 of the Energy Policy Act of

1 2005 (42 U.S.C. 16512) is amended by striking sub-
2 section (b) and inserting the following:

3 “(b) SPECIFIC APPROPRIATION OR CONTRIBU-
4 TION.—

5 “(1) IN GENERAL.—No guarantee shall be
6 made unless—

7 “(A) an appropriation for the cost has
8 been made; or

9 “(B) the Secretary has received from the
10 borrower a payment in full for the cost of the
11 obligation and deposited the payment into the
12 Treasury.

13 “(2) LIMITATION.—The source of payments re-
14 ceived from a borrower under paragraph (1)(B) shall
15 not be a loan or other debt obligation that is made
16 or guaranteed by the Federal Government.

17 “(3) RELATION TO OTHER LAWS.—Section
18 504(b) of the Federal Credit Reform Act of 1990 (2
19 U.S.C. 661c(b)) shall not apply to a loan or loan
20 guarantee made in accordance with paragraph
21 (1)(B).”.

22 (3) AMOUNT.—Section 1702 of the Energy Pol-
23 icy Act of 2005 (42 U.S.C. 16512) is amended by
24 striking subsection (c) and inserting the following:

25 “(c) AMOUNT.—

1 “(1) IN GENERAL.—Subject to paragraph (2),
2 the Secretary shall guarantee up to 100 percent of
3 the principal and interest due on 1 or more loans for
4 a facility that are the subject of the guarantee.

5 “(2) LIMITATION.—The total amount of loans
6 guaranteed for a facility by the Secretary shall not
7 exceed 80 percent of the total cost of the facility, as
8 estimated at the time at which the guarantee is
9 issued.”.

10 (4) SUBROGATION.—Section 1702(g)(2) of the
11 Energy Policy Act of 2005 (42 U.S.C. 16512(g)(2))
12 is amended—

13 (A) by striking subparagraph (B); and

14 (B) by redesignating subparagraph (C) as
15 subparagraph (B).

16 **SEC. 205. GRANTS FOR RENEWABLE FUEL PRODUCTION RE-**
17 **SEARCH AND DEVELOPMENT IN CERTAIN**
18 **STATES.**

19 (a) IN GENERAL.—The Secretary shall provide
20 grants to eligible entities to conduct research into, and de-
21 velop and implement, renewable fuel production tech-
22 nologies in States with low rates of ethanol production,
23 including low rates of production of cellulosic biomass eth-
24 anol.

1 (b) ELIGIBILITY.—To be eligible to receive a grant
2 under the section, an entity shall—

3 (1)(A) be an institution of higher education (as
4 defined in section 2 of the Energy Policy Act of
5 2005 (42 U.S.C. 15801)) located in a State de-
6 scribed in subsection (a); or

7 (B) be a consortium of such institutions of
8 higher education, industry, State agencies, or local
9 government agencies located in the State; and

10 (2) have proven experience and capabilities with
11 relevant technologies.

12 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
13 authorized to be appropriated to carry out this section
14 \$25,000,000 for each of fiscal years 2008 through 2010.

15 **SEC. 206. GRANTS FOR INFRASTRUCTURE FOR TRANSPOR-**
16 **TATION OF BIOMASS TO LOCAL BIOREFIN-**
17 **ERIES.**

18 (a) IN GENERAL.—The Secretary shall conduct a
19 program under which the Secretary shall provide grants
20 to local governments and other eligible entities (as deter-
21 mined by the Secretary) (referred to in this section as “eli-
22 gible entities”) to promote the development of infrastruc-
23 ture to support the transportation of biomass to local bio-
24 refineries, including by portable processing equipment.

1 (b) PHASES.—The Secretary shall conduct the pro-
2 gram in the following phases:

3 (1) DEVELOPMENT.—In the first phase of the
4 program, the Secretary shall make grants to eligible
5 entities to assist the eligible entities in the develop-
6 ment of local projects to promote the development of
7 infrastructure to support the transportation of bio-
8 mass to local biorefineries, including by portable
9 processing equipment.

10 (2) IMPLEMENTATION.—In the second phase of
11 the program, the Secretary shall make competitive
12 grants to eligible entities to implement projects de-
13 veloped under paragraph (1).

14 (c) AUTHORIZATION OF APPROPRIATIONS.—There
15 are authorized to be appropriated such sums as are nec-
16 essary to carry out this section.

17 **SEC. 207. BIOREFINERY INFORMATION CENTER.**

18 (a) IN GENERAL.—The Secretary, in cooperation
19 with the Secretary of Agriculture, shall establish a bio-
20 refinery information center to make available to interested
21 parties information on—

22 (1) renewable fuel resources, including informa-
23 tion on programs and incentives for renewable fuels;

24 (2) renewable fuel producers;

25 (3) renewable fuel users; and

1 (4) potential renewable fuel users.

2 (b) ADMINISTRATION.—In administering the bio-
3 refinery information center, the Secretary shall—

4 (1) continually update information provided by
5 the center;

6 (2) make information available to interested
7 parties on the process for establishing a biorefinery;
8 and

9 (3) make information and assistance provided
10 by the center available through a toll-free telephone
11 number and website.

12 (c) AUTHORIZATION OF APPROPRIATIONS.—There
13 are authorized to be appropriated such sums as are nec-
14 essary to carry out this section.

15 **SEC. 208. CONVERSION ASSISTANCE FOR CELLULOSIC BIO-**
16 **MASS, WASTE-DERIVED ETHANOL, APPROVED**
17 **RENEWABLE FUELS.**

18 (a) DEFINITIONS.—In this section:

19 (1) APPROVED RENEWABLE FUEL.—The term
20 “approved renewable fuels” means an alternative or
21 replacement fuel that—

22 (A) has been approved under title III of
23 the Energy Policy Act of 1992 (42 U.S.C.
24 13211 et seq.); and

25 (B) is made from renewable biomass.

1 (2) PRODUCER.—The term “producer”
2 means—

3 (A) a merchant producer;

4 (B) a farm or dairy cooperative; or

5 (C) an association of agricultural pro-
6 ducers.

7 (3) WASTE-DERIVED ETHANOL.—The term
8 “waste-derived ethanol” means ethanol derived
9 from—

10 (A) animal waste (including poultry fat
11 and poultry waste) and other waste material; or

12 (B) municipal solid waste.

13 (b) CONVERSION ASSISTANCE.—The Secretary may
14 provide grants to producers of cellulosic biomass ethanol,
15 waste-derived ethanol, and approved renewable fuels in the
16 United States to assist the producers in building eligible
17 production facilities described in subsection (c) for the
18 production of ethanol or approved renewable fuels.

19 (c) ELIGIBLE PRODUCTION FACILITIES.—A produc-
20 tion facility shall be eligible to receive a grant under this
21 section if the production facility—

22 (1) is located in the United States; and

23 (2) uses renewable biomass.

1 (d) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to carry out this sec-
3 tion—

4 (1) \$400,000,000 for fiscal year 2008;

5 (2) \$500,000,000 for fiscal year 2009; and

6 (3) \$600,000,000 for fiscal year 2010.

7 **SEC. 209. ALTERNATIVE FUEL DATABASE AND MATERIALS.**

8 The Secretary and the Director of the National Insti-
9 tute of Standards and Technology shall jointly establish
10 and make available to the public—

11 (1) a database that describes the physical prop-
12 erties of different types of alternative fuel; and

13 (2) standard reference materials for different
14 types of alternative fuel.

15 **SEC. 210. FUEL TANK CAP LABELING REQUIREMENT.**

16 Section 406(a) of the Energy Policy Act of 1992 (42
17 U.S.C. 13232(a)) is amended—

18 (1) by striking “The Federal Trade Commis-
19 sion” and inserting the following:

20 “(1) IN GENERAL.—The Federal Trade Com-
21 mission”; and

22 (2) by adding at the end the following:

23 “(2) FUEL TANK CAP LABELING REQUIRE-
24 MENT.—Beginning with model year 2010, the fuel
25 tank cap of each alternative fueled vehicle manufac-

1 tured for sale in the United States shall be clearly
2 labeled to inform consumers that such vehicle can
3 operate on alternative fuel.”.

4 **TITLE III—STUDIES**

5 **SEC. 301. STUDY OF ADVANCED BIOFUELS TECHNOLOGIES.**

6 (a) IN GENERAL.—Not later than October 1, 2012,
7 the Secretary shall offer to enter into a contract with the
8 National Academy of Sciences under which the Academy
9 shall conduct a study of technologies relating to the pro-
10 duction, transportation, and distribution of advanced
11 biofuels.

12 (b) SCOPE.—In conducting the study, the Academy
13 shall—

14 (1) include an assessment of the maturity of
15 advanced biofuels technologies;

16 (2) consider whether the rate of development of
17 those technologies will be sufficient to meet the ad-
18 vanced biofuel standards required under section 101;

19 (3) consider the effectiveness of the research
20 and development programs and activities of the De-
21 partment of Energy relating to advanced biofuel
22 technologies; and

23 (4) make policy recommendations to accelerate
24 the development of those technologies to commercial
25 viability, as appropriate.

1 (c) REPORT.—Not later than November 30, 2014,
2 the Secretary shall submit to the Committee on Energy
3 and Natural Resources of the Senate and the Committee
4 on Energy and Commerce of the House of Representatives
5 a report describing the results of the study conducted
6 under this section.

7 **SEC. 302. STUDY OF INCREASED CONSUMPTION OF ETH-**
8 **ANOL-BLENDED GASOLINE WITH HIGHER**
9 **LEVELS OF ETHANOL.**

10 (a) IN GENERAL.—The Secretary (in cooperation
11 with the Secretary of Agriculture, the Administrator of the
12 Environmental Protection Agency, and the Secretary of
13 Transportation) shall conduct a study of the feasibility of
14 increasing consumption in the United States of ethanol-
15 blended gasoline with levels of ethanol that are not less
16 than 10 percent and not more than 25 percent, including
17 a study of production and infrastructure constraints on
18 increasing the consumption.

19 (b) REPORT.—Not later than 1 year after the date
20 of enactment of this Act, the Secretary shall submit to
21 Congress a report describing the results of the study con-
22 ducted under this section.

23 **SEC. 303. PIPELINE FEASIBILITY STUDY.**

24 (a) IN GENERAL.—The Secretary, in coordination
25 with the Secretary of Agriculture and the Secretary of

1 Transportation, shall conduct a study of the feasibility of
2 the construction of dedicated ethanol pipelines.

3 (b) FACTORS.—In conducting the study, the Sec-
4 retary shall consider—

5 (1) the quantity of ethanol production that
6 would make dedicated pipelines economically viable;

7 (2) existing or potential barriers to dedicated
8 ethanol pipelines, including technical, siting, financ-
9 ing, and regulatory barriers;

10 (3) market risk (including throughput risk) and
11 means of mitigating the risk;

12 (4) regulatory, financing, and siting options
13 that would mitigate risk in those areas and help en-
14 sure the construction of 1 or more dedicated ethanol
15 pipelines;

16 (5) financial incentives that may be necessary
17 for the construction of dedicated ethanol pipelines,
18 including the return on equity that sponsors of the
19 initial dedicated ethanol pipelines will require to in-
20 vest in the pipelines;

21 (6) technical factors that may compromise the
22 safe transportation of ethanol in pipelines, identi-
23 fying remedial and preventative measures to ensure
24 pipeline integrity; and

1 (7) such other factors as the Secretary con-
2 siders appropriate.

3 (c) REPORT.—Not later than 15 months after the
4 date of enactment of this Act, the Secretary shall submit
5 to Congress a report describing the results of the study
6 conducted under this section.

7 **SEC. 304. STUDY OF OPTIMIZATION OF ALTERNATIVE**
8 **FUELED VEHICLES TO USE E-85 FUEL.**

9 (a) IN GENERAL.—The Secretary shall conduct a
10 study of methods of increasing the fuel efficiency of alter-
11 native fueled vehicles by optimizing alternative fueled vehi-
12 cles to operate using E-85 fuel.

13 (b) REPORT.—Not later than 180 days after the date
14 of enactment of this Act, the Secretary shall submit to
15 the Committee on Energy and Natural Resources of the
16 Senate and the Committee on Natural Resources of the
17 House of Representatives a report that describes the re-
18 sults of the study, including any recommendations of the
19 Secretary.

20 **SEC. 305. STUDY OF CREDITS FOR USE OF RENEWABLE**
21 **ELECTRICITY IN ELECTRIC VEHICLES.**

22 (a) DEFINITION OF ELECTRIC VEHICLE.—In this
23 section, the term “electric vehicle” means an electric
24 motor vehicle (as defined in section 601 of the Energy Pol-

1 icy Act of 1992 (42 U.S.C. 13271)) for which the re-
2 chargeable storage battery—

- 3 (1) receives a charge directly from a source of
4 electric current that is external to the vehicle; and
5 (2) provides a minimum of 80 percent of the
6 motive power of the vehicle.

7 (b) STUDY.—The Secretary shall conduct a study on
8 the feasibility of issuing credits under the program estab-
9 lished under section 101(d) to electric vehicles powered by
10 electricity produced from renewable energy sources.

11 (c) REPORT.—Not later than 18 months after the
12 date of enactment of this Act, the Secretary shall submit
13 to the Committee on Energy and Natural Resources of
14 the Senate and the Committee on Energy and Commerce
15 of the House of Representatives a report that describes
16 the results of the study, including a description of—

- 17 (1) existing programs and studies on the use of
18 renewable electricity as a means of powering electric
19 vehicles; and

20 (2) alternatives for—

- 21 (A) designing a pilot program to determine
22 the feasibility of using renewable electricity to
23 power electric vehicles as an adjunct to a re-
24 newable fuels mandate;

1 (B) allowing the use, under the pilot pro-
2 gram designed under subparagraph (A), of elec-
3 tricity generated from nuclear energy as an ad-
4 ditional source of supply;

5 (C) identifying the source of electricity
6 used to power electric vehicles; and

7 (D) equating specific quantities of elec-
8 tricity to quantities of renewable fuel under sec-
9 tion 101(d).

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