

110TH CONGRESS
1ST SESSION

S. 485

To amend the Clean Air Act to establish an economy-wide global warming pollution emission cap-and-trade program to assist the economy in transitioning to new clean energy technologies, to protect employees and affected communities, to protect companies and consumers from significant increases in energy costs, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 1, 2007

Mr. KERRY (for himself and Ms. SNOWE) introduced the following bill; which was read twice and referred to the Committee on Finance

A BILL

To amend the Clean Air Act to establish an economy-wide global warming pollution emission cap-and-trade program to assist the economy in transitioning to new clean energy technologies, to protect employees and affected communities, to protect companies and consumers from significant increases in energy costs, 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 “Global Warming Reduction Act of 2007”.

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

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

TITLE I—COMPREHENSIVE GLOBAL WARMING POLLUTION
 REDUCTIONS

Sec. 101. Global warming pollution emission reductions.
 Sec. 102. Biofuels infrastructure.

TITLE II—TAX INCENTIVES FOR ADVANCED TECHNOLOGY
 VEHICLES

Subtitle A—Providing Consumers With Additional Advanced Technology
 Vehicle Purchase Incentives

Sec. 201. Expansion and extension of alternative motor vehicle credit.
 Sec. 202. Plug-in hybrid motor vehicle tax credit.

Subtitle B—Advanced Technology Motor Vehicles Manufacturing Credit

Sec. 211. Advanced technology motor vehicles manufacturing credit.

TITLE III—INTERNATIONAL AND CORPORATE OBLIGATIONS

Sec. 301. International negotiations and trade restrictions.
 Sec. 302. Corporate environmental disclosure of climate change risks.

TITLE IV—NATIONAL CLIMATE CHANGE VULNERABILITY AND
 RESILIENCE PROGRAM

Sec. 401. Definitions.
 Sec. 402. National Climate Change Vulnerability and Resilience Program.

3 **SEC. 2. FINDINGS.**

4 Congress finds that—

5 (1) the United States is a party to the United
 6 Nations Framework Convention on Climate Change,
 7 done at New York on May 9, 1992, which has the
 8 objective of stabilizing global warming pollution con-
 9 centrations in the atmosphere at a level that would
 10 prevent dangerous anthropogenic interference with
 11 the climate system;

1 (2) to achieve this objective, the increase in
2 global mean surface temperature should not exceed
3 2 degrees Celsius (3.6 degrees Fahrenheit) above
4 preindustrial temperatures;

5 (3) the risks associated with a temperature in-
6 crease above 2 degrees Celsius (3.6 degrees Fahr-
7 enheit) are grave, including the disintegration of the
8 Greenland ice sheet, which, if melted completely,
9 would raise the global average sea level by approxi-
10 mately 23 feet, devastating many of the coastal
11 areas and population centers of the world;

12 (4) the Intergovernmental Panel on Climate
13 Change projects that, under a range of expected
14 emissions trends, temperatures will rise between 1.4
15 degrees Celsius to 5.8 degrees Celsius (2.5 degrees
16 Fahrenheit to 10.4 degrees Fahrenheit) by the end
17 of the century;

18 (5) serious global warming impacts have al-
19 ready been observed in the United States and world-
20 wide, including—

21 (A) increases in heat waves and other ex-
22 treme weather events;

23 (B) a rise in sea levels;

24 (C) a retreat of glaciers and polar ice;

25 (D) a decline in mountain snowpacks;

1 (E) increased drought and wildfires;

2 (F) stronger hurricanes;

3 (G) ocean acidification;

4 (H) extensive coral bleaching;

5 (I) migrations and shifts in the yearly cy-
6 cles of plants and animals; and

7 (J) the spread of infectious diseases;

8 (6) by 2050, scientists project that, under a
9 mid-range estimate of global warming, approxi-
10 mately 25 percent of animal and plant species would
11 be doomed to extinction;

12 (7) decisive action is—

13 (A) needed to minimize the many dangers
14 posed by global warming; and

15 (B) critical since global warming pollutants
16 can persist in the atmosphere for more than a
17 century;

18 (8) reductions in emissions from current levels
19 should begin within a decade of the date of enact-
20 ment of this Act to preserve the ability to stabilize
21 atmospheric global warming pollution concentrations
22 at levels likely to protect against a temperature rise
23 above 2 degrees Celsius (3.6 degrees Fahrenheit);

24 (9) while the United States has only 5 percent
25 of the world population, the United States—

1 (A) emits at least 20 percent of the total
 2 global warming pollution emissions of the world;
 3 and

4 (B) needs to be a leader in addressing
 5 global warming; and

6 (10) existing energy efficiency and clean, renew-
 7 able energy technologies would reduce global warm-
 8 ing pollution, while—

9 (A) saving consumers money;

10 (B) reducing the dependence of the United
 11 States on oil;

12 (C) enhancing national security;

13 (D) cleaning the air; and

14 (E) protecting pristine places from drilling
 15 and mining.

16 **TITLE I—COMPREHENSIVE**
 17 **GLOBAL WARMING POLLU-**
 18 **TION REDUCTIONS**

19 **SEC. 101. GLOBAL WARMING POLLUTION EMISSION REDUC-**
 20 **TIONS.**

21 The Clean Air Act (42 U.S.C. 7401 et seq.) is amend-
 22 ed by adding at the end the following:

1 **“TITLE VII—COMPREHENSIVE**
 2 **GLOBAL WARMING POLLU-**
 3 **TION REDUCTIONS**

“Sec. 701. Definitions.

“Sec. 702. Global warming pollution emission reductions.

“Sec. 703. Market-based cap on emissions.

“Sec. 704. Global warming pollution emission standards for passenger vehicles.

“Sec. 705. Research and development.

“Sec. 706. Energy efficiency performance standard.

“Sec. 707. Renewable portfolio standard.

“Sec. 708. Standards to account for biological sequestration of carbon.

“Sec. 709. Global warming pollution reporting.

“Sec. 710. National Academy of Sciences report.

“Sec. 711. Additional authority to regulate emissions of global warming pollutants.

4 **“SEC. 701. DEFINITIONS.**

5 “In this title:

6 “(1) **ACADEMY.**—The term ‘Academy’ means
 7 the National Academy of Sciences.

8 “(2) **ALLOWANCE.**—The term ‘allowance’
 9 means an authorization by the Administrator to
 10 emit—

11 “(A) 1 metric ton of carbon dioxide; or

12 “(B) in the case of a global warming pol-
 13 lutant other than carbon dioxide, a carbon diox-
 14 ide equivalent.

15 “(3) **CARBON DIOXIDE EQUIVALENT.**—The
 16 term ‘carbon dioxide equivalent’ means, for each
 17 global warming pollutant, the quantity of the global
 18 warming pollutant that makes the same contribution

1 to global warming as 1 metric ton of carbon dioxide,
2 as determined by the Administrator.

3 “(4) COVERED ENTITY.—The term ‘covered en-
4 tity’ means any individual or entity subject to the
5 cap on emissions of global warming pollutants im-
6 posed under section 703(a)(1), as determined by the
7 Administrator.

8 “(5) FACILITY.—The term ‘facility’ means all
9 buildings, structures, or installations that are—

10 “(A) located on 1 or more contiguous or
11 adjacent properties under common control of
12 the same persons; and

13 “(B) located in the United States.

14 “(6) FUND.—The term ‘Fund’ means the Cli-
15 mate Reinvestment Fund established by section
16 703(g)(1).

17 “(7) GLOBAL WARMING POLLUTANT.—The
18 term ‘global warming pollutant’ means each of—

19 “(A) carbon dioxide;

20 “(B) methane;

21 “(C) nitrous oxide;

22 “(D) hydrofluorocarbons;

23 “(E) perfluorocarbons;

24 “(F) sulfur hexafluoride; and

1 “(G) any other anthropogenically-emitted
2 gas that the Administrator, after notice and
3 comment, determines to contribute to global
4 warming.

5 “(8) GLOBAL WARMING POLLUTION.—The term
6 ‘global warming pollution’ means any combination of
7 1 or more global warming pollutants emitted into
8 the ambient air or atmosphere.

9 “(9) PROGRAM.—The term ‘program’ means
10 the cap-and-trade program established by the Ad-
11 ministrators under section 703(a).

12 **“SEC. 702. GLOBAL WARMING POLLUTION EMISSION RE-**
13 **DUCTIONS.**

14 “(a) GOALS.—

15 “(1) EMISSION REDUCTION GOAL.—Congress
16 declares that it shall be the goal of the United
17 States, acting in concert with other countries that
18 emit global warming pollutants, to achieve a reduc-
19 tion in global warming pollutant emissions—

20 “(A) to facilitate the achievement of an av-
21 erage global atmospheric concentration of global
22 warming pollution that does not exceed 450
23 parts per million; and

24 “(B) beginning not later than calendar
25 year 2010, to reverse increases in global warm-

1 ing pollution emissions so as to achieve, by not
2 later than calendar year 2050, a 65-percent re-
3 duction in global warming pollution emissions
4 in the United States (as compared to those
5 global warming pollution emissions for calendar
6 year 2000).

7 “(2) ADDITIONAL GOAL.—In addition to the
8 emission reduction goal described in paragraph (1),
9 Congress declares that, in implementing this title, it
10 shall be the goal of the United States—

11 “(A) to maximize public benefits and pro-
12 mote economic growth;

13 “(B) to mitigate the effect of any energy
14 cost increases to consumers, particularly low-in-
15 come consumers;

16 “(C) to provide equitable transition assist-
17 ance to any employees and regions affected by
18 a transition away from the use of high carbon-
19 emitting energy sources;

20 “(D) to encourage research, development,
21 and commercial deployment of innovative tech-
22 nologies for avoiding, reducing, or sequestering
23 emissions of global warming pollutants;

1 “(E) to encourage reduced carbon emis-
2 sions from, and enhanced sequestration of, car-
3 bon in the forest and agricultural sectors;

4 “(F) to recognize and reward early reduc-
5 tions of greenhouse gases; and

6 “(G) to support activities, including pro-
7 viding support for State activities, to protect
8 against and mitigate the impacts of climate
9 change, including—

10 “(i) the depletion of snowpack and
11 water supplies;

12 “(ii) droughts;

13 “(iii) wildfires;

14 “(iv) enhanced coastal erosion;

15 “(v) increases in sea levels;

16 “(vi) higher storm surges;

17 “(vii) more intense precipitation
18 events and hurricanes;

19 “(viii) the spread of disease;

20 “(ix) damage to fish and wildlife habi-
21 tat;

22 “(x) negative commercial effects (such
23 as damage to the maple syrup and fishing
24 industries); and

1 “(xi) agricultural and forestry losses
2 resulting from drought, disease, and insect
3 infestations.

4 “(b) REGULATIONS.—

5 “(1) EMISSION REDUCTION TARGETS.—In order
6 to achieve the goals described in subsection (a), not
7 later than 2 years after the date of enactment of
8 this title, the Administrator shall promulgate any
9 regulations that are necessary to reduce the aggre-
10 gate net level of global warming pollution emissions
11 of the United States—

12 “(A) by calendar year 2020, through ap-
13 propriate measures taken during the period of
14 calendar years 2010 through 2019, to the ag-
15 gregate net level of global warming pollution
16 emissions of the United States for calendar
17 year 1990;

18 “(B) for each of calendar years 2021
19 through 2030, by at least an additional 2.5 per-
20 cent below the level achieved for the preceding
21 calendar year in accordance with this para-
22 graph; and

23 “(C) for each of calendar years 2031
24 through 2050, by at least an additional 3.5 per-
25 cent below the level achieved for the preceding

1 calendar year in accordance with this para-
2 graph.

3 “(2) ADDITIONAL REGULATIONS.—The regula-
4 tions promulgated under this subsection may in-
5 clude—

6 “(A) requirements to reduce emissions of
7 greenhouse gases from any source or sector, re-
8 gardless of whether the source or sector is de-
9 scribed in section 703(b)(1);

10 “(B) emissions performance standards;

11 “(C) efficiency performance standards;

12 “(D) best management practices;

13 “(E) technology-based requirements; and

14 “(F) such other requirements as the Ad-
15 ministrator determines to be appropriate.

16 **“SEC. 703. MARKET-BASED CAP ON EMISSIONS.**

17 “(a) IN GENERAL.—In carrying out section 702, the
18 Administrator shall establish a program that—

19 “(1) imposes a cap on the emissions of global
20 warming pollutants from sources and sectors de-
21 scribed in subsection (b)(1); and

22 “(2) allows trading of allowances among cov-
23 ered entities.

24 “(b) SCOPE.—The program established under sub-
25 section (a) shall—

1 “(1) apply the cap required by subsection (a)(1)
2 to the sources or sectors of the United States econ-
3 omy with—

4 “(A) the greatest global warming pollutant
5 emissions;

6 “(B) the most cost-effective opportunities
7 to reduce global warming pollutant emissions;
8 or

9 “(C) other characteristics that the Admin-
10 istrator determines make the source or sector
11 appropriate for inclusion in the program; and

12 “(2) cover a sufficient proportion of total
13 United States emissions of global warming pollut-
14 ants, such that, in combination with other measures
15 adopted under this title, and under the Global
16 Warming Reduction Act of 2007 and the amend-
17 ments made by that Act, the program will ensure, to
18 the maximum extent practicable, that the aggregate
19 United States emissions of global warming pollut-
20 ants will not exceed the emission reduction targets
21 promulgated pursuant to section 702(b)(1).

22 “(c) ALLOWANCES.—

23 “(1) ISSUANCE.—

24 “(A) IN GENERAL.—The regulations pro-
25 mulgated under section 702(b) shall provide for

1 the Administrator to issue, for each calendar
2 year, a quantity of allowances equal to the ag-
3 gregate emissions allowed under the cap im-
4 posed under subsection (a)(1) for the calendar
5 year.

6 “(B) TREATMENT AS PROPERTY.—An al-
7 lowance issued under subparagraph (A) shall
8 not constitute a property right.

9 “(C) NO EFFECT ON AUTHORITY.—Noth-
10 ing in this title or any other provision of law
11 limits or otherwise affects the authority of the
12 United States to terminate or limit an allow-
13 ance issued under subparagraph (A).

14 “(2) TRADING.—An allowance issued under this
15 subsection may be held and traded by any person.

16 “(3) FLEXIBILITY.—An allowance issued under
17 this subsection may be—

18 “(A) used for the calendar year in which
19 the allowance was issued; or

20 “(B) banked for use in a calendar year
21 subsequent to the calendar year of issuance.

22 “(d) DISTRIBUTION OF ALLOWANCES.—

23 “(1) SUBMISSION OF PLAN BY PRESIDENT.—

24 “(A) IN GENERAL.—Not later than 1 year
25 after the date of enactment of this title, the

1 President, in consultation with the Adminis-
2 trator and heads of other appropriate Federal
3 agencies, shall develop and submit to Congress
4 a plan—

5 “(i) to distribute the allowances issued
6 under this section through—

7 “(I) auctions; and

8 “(II) at the discretion of the
9 President and subject to subpara-
10 graph (B)(iii), allocations without
11 charge to covered entities or entities
12 that are not covered by the cap im-
13 posed under subsection (a)(1);

14 “(ii) to deposit the proceeds of those
15 auctions in the Fund; and

16 “(iii) to ensure, to the maximum ex-
17 tent practicable, that those allowances are
18 distributed, and those proceeds are used,
19 in a manner consistent with achieving the
20 goals described in section 702(a).

21 “(B) CONTENTS.—The plan submitted
22 under subparagraph (A) shall—

23 “(i) identify each Federal department
24 or agency responsible for implementing
25 each action required;

1 “(ii) require that allowances be dis-
2 tributed not later than January 1, 2010,
3 for calendar year 2010; and

4 “(iii) in no case allow any distribution
5 of allowances without charge, resulting in
6 the creation of windfall profits for covered
7 entities.

8 “(2) PLAN IMPLEMENTATION.—If, after the 1-
9 year period beginning on the date of submission of
10 the plan under paragraph (1)(A), Congress has not
11 enacted a law that implements the plan (or an alter-
12 native to the plan), the Administrator and the head
13 of each Federal department or agency identified in
14 paragraph (1)(B)(i) shall implement the actions
15 identified in the plan.

16 “(e) MONITORING.—The Administrator shall ensure,
17 to the maximum extent practicable, that—

18 “(1) the emissions of global warming pollutants
19 and the use of allowances issued under this section
20 are accurately tracked, reported, and verified; and

21 “(2) the cap-and-trade system established pur-
22 suant to this section is robust and enforceable.

23 “(f) ENFORCEMENT.—

24 “(1) IN GENERAL.—In the case of excess emis-
25 sions of global warming pollutants under this section

1 by an covered entity during any calendar year, the
2 regulations promulgated under section 702(b) shall
3 require the covered entity—

4 “(A) to submit allowances for the emis-
5 sions during the following calendar year; and

6 “(B) to pay a civil penalty in an amount
7 determined under paragraph (2).

8 “(2) AMOUNT OF CIVIL PENALTY.—

9 “(A) IN GENERAL.—The amount of a civil
10 penalty for each quantity of excess emissions of
11 global warming pollutants constituting 1 carbon
12 dioxide equivalent shall be an amount equal to
13 twice the market price for an allowance as of
14 December 31 of the calendar year in which the
15 excess emissions occurred.

16 “(B) DETERMINATION OF MARKET
17 PRICE.—The Administrator shall, by regulation,
18 establish a method of determining the market
19 price of allowances for the purpose of subpara-
20 graph (A).

21 “(3) NO DEMAND REQUIRED.—A civil penalty
22 under this subsection shall be due and payable to
23 the Administrator without demand.

1 “(4) DEPOSIT AND USE OF AMOUNTS.—A civil
2 penalty paid to the Administrator under this sub-
3 section shall be—

4 “(A) deposited in the Fund; and

5 “(B) available for use by the President, in
6 accordance with subsection (g), without further
7 appropriation.

8 “(g) CLIMATE REINVESTMENT FUND.—

9 “(1) ESTABLISHMENT.—There is established in
10 the Treasury of the United States a fund, to be
11 known as the ‘Climate Reinvestment Fund’, con-
12 sisting of—

13 “(A) amounts collected pursuant to auc-
14 tions of allowances issued under this section;

15 “(B) amounts received as civil penalties
16 and deposited in the Fund under subsection
17 (f)(4)(A); and

18 “(C) any interest earned on investment of
19 amounts in the Fund under paragraph (3).

20 “(2) EXPENDITURES FROM FUND.—On request
21 by the President, the Secretary of the Treasury shall
22 transfer from the Fund to the President such
23 amounts as the President determines to be necessary
24 to carry out projects and activities to achieve the
25 goals described in section 702(a).

1 “(3) INVESTMENT OF AMOUNTS.—

2 “(A) IN GENERAL.—The Secretary of the
3 Treasury shall invest such portion of the Fund
4 as is not, in the judgment of the Secretary of
5 the Treasury, required to meet current with-
6 drawals.

7 “(B) INTEREST-BEARING OBLIGATIONS.—
8 Investments may be made only in interest-bear-
9 ing obligations of the United States.

10 “(C) ACQUISITION OF OBLIGATIONS.—For
11 the purpose of investments under subparagraph
12 (A), obligations may be acquired—

13 “(i) on original issue at the issue
14 price; or

15 “(ii) by purchase of outstanding obli-
16 gations at the market price.

17 “(D) SALE OF OBLIGATIONS.—Any obliga-
18 tion acquired by the Fund may be sold by the
19 Secretary of the Treasury at the market price.

20 “(E) CREDITS TO FUND.—The interest on,
21 and the proceeds from the sale or redemption
22 of, any obligations held in the Fund shall be
23 credited to, and form a part of, the Fund.

24 “(4) FUNDING.—For each fiscal year, there are
25 appropriated to the Fund, to remain available until

1 expended, an amount equal to the sum of, with re-
 2 spect to the preceding fiscal year—

3 “(A) amounts collected pursuant to auc-
 4 tions of allowances issued under this section;
 5 and

6 “(B) the amount of civil penalties depos-
 7 ited in the Fund under subsection (f)(4)(A).

8 **“SEC. 704. GLOBAL WARMING POLLUTION EMISSION**
 9 **STANDARDS FOR PASSENGER VEHICLES.**

10 “(a) DEFINITION OF PASSENGER VEHICLE.—In this
 11 section, the term ‘passenger vehicle’ means—

12 “(1) a passenger automobile (as that term is
 13 defined in section 32901 of title 49, United States
 14 Code);

15 “(2) a light truck; and

16 “(3) any other vehicle that the Administrator
 17 determines is a vehicle the primary use of which is
 18 noncommercial personal transportation.

19 “(b) STANDARDS.—

20 “(1) IN GENERAL.—In carrying out section
 21 702(b), the Administrator shall promulgate regula-
 22 tions that establish standards for global warming
 23 pollution emissions from passenger vehicles.

24 “(2) REQUIREMENTS.—The standards estab-
 25 lished under paragraph (1) shall provide for the re-

1 duction of global warming pollution emissions from
2 passenger vehicles, on an average-vehicle basis, at a
3 rate and in quantities that are equal to or greater
4 than the rate and quantity reductions in those emis-
5 sions achieved under standards adopted by the Cali-
6 fornia Air Resources Board at the September 23–24,
7 2004 hearing of that Board (California Code of Reg-
8 ulations, title 13, sec. 1961.1).

9 “(3) REVISIONS.—Not later than January 1,
10 2014, and every 5 years thereafter, the Adminis-
11 trator shall promulgate regulations revising the
12 standards described in paragraph (1) to further re-
13 duce global warming pollution emissions from pas-
14 senger vehicles, taking into account—

15 “(A) the reductions necessary to achieve
16 the emission reduction targets promulgated
17 pursuant to section 702(b)(1); and

18 “(B) the technological feasibility of further
19 reducing those emissions.

20 **“SEC. 705. RESEARCH AND DEVELOPMENT.**

21 “(a) IN GENERAL.—The Administrator shall carry
22 out a program to perform and support research on global
23 climate change standards and processes, with the goals of
24 providing scientific and technical knowledge applicable to
25 the reduction of global warming pollutants.

1 “(b) RESEARCH PROGRAM.—

2 “(1) IN GENERAL.—The Administrator shall
3 carry out, directly or through the use of contracts or
4 grants, a global climate change standards and pro-
5 cesses research program.

6 “(2) RESEARCH.—

7 “(A) CONTENTS AND PRIORITIES.—The
8 specific contents and priorities of the research
9 program shall be determined in consultation
10 with appropriate Federal agencies, including—

11 “(i) the National Oceanic and Atmos-
12 pheric Administration;

13 “(ii) the National Aeronautics and
14 Space Administration; and

15 “(iii) the Department of Energy.

16 “(B) TYPES OF RESEARCH.—The research
17 program shall include the conduct of basic and
18 applied research—

19 “(i) to develop and provide the en-
20 hanced measurements, calibrations, data,
21 models, and reference material standards
22 necessary to enable the monitoring of glob-
23 al warming pollution;

24 “(ii) to assist in establishing a base-
25 line reference point for future trading in

1 global warming pollutants (including the
2 measurement of progress in emission re-
3 ductions);

4 “(iii) for international exchange as
5 scientific or technical information for the
6 stated purpose of developing mutually-rec-
7 ognized measurements, standards, and pro-
8 cedures for reducing global warming pollu-
9 tion;

10 “(iv) to assist in developing improved
11 industrial processes designed to reduce or
12 eliminate global warming pollution; and

13 “(v) to assist in understanding the
14 acidification of the oceans and the ways in
15 which that process affects ocean eco-
16 systems and fisheries of the United States.

17 “(3) ABRUPT CLIMATE CHANGE RESEARCH.—

18 “(A) DEFINITION OF ABRUPT CLIMATE
19 CHANGE.—In this paragraph, the term ‘abrupt
20 climate change’ means a change in climate that
21 occurs so rapidly or unexpectedly that humans
22 or natural systems may have difficulty adapting
23 to the change.

24 “(B) RESEARCH.—The Administrator shall
25 carry out a program of scientific research on

1 potential abrupt climate change that is de-
2 signed—

3 “(i) to develop a global array of ter-
4 restrial and oceanographic indicators of
5 paleoclimate in order to identify and de-
6 scribe past instances of abrupt climate
7 change;

8 “(ii) to improve understanding of
9 thresholds and nonlinearities in geophysical
10 systems relating to the mechanisms of ab-
11 rupt climate change;

12 “(iii) to incorporate those mechanisms
13 into advanced geophysical models of cli-
14 mate change; and

15 “(iv) to test the output of those mod-
16 els against an improved global array of
17 records of past abrupt climate changes.

18 “(c) SENSE OF THE SENATE.—It is the sense of the
19 Senate that Federal funds for clean, low-carbon energy re-
20 search, development, and deployment should be increased
21 by at least 100 percent for each year during the 10-year
22 period beginning on the date of enactment of this title.

23 **“SEC. 706. ENERGY EFFICIENCY PERFORMANCE STAND-**
24 **ARD.**

25 “(a) DEFINITIONS.—In this section:

1 “(1) ELECTRICITY SAVINGS.—

2 “(A) IN GENERAL.—The term ‘electricity
3 savings’ means reductions in end-use electricity
4 consumption relative to consumption by the
5 same customer or at the same new or existing
6 facility in a given year, as defined in regula-
7 tions promulgated by the Administrator under
8 subsection (e).

9 “(B) INCLUSIONS.—The term ‘savings’ in-
10 cludes savings achieved as a result of—

11 “(i) installation of energy-saving tech-
12 nologies and devices; and

13 “(ii) the use of combined heat and
14 power systems, fuel cells, or any other
15 technology identified by the Administrator
16 that recaptures or generates energy solely
17 for onsite customer use.

18 “(C) EXCLUSION.—The term ‘savings’
19 does not include savings from measures that
20 would likely be adopted in the absence of en-
21 ergy-efficiency programs, as determined by the
22 Administrator.

23 “(2) RETAIL ELECTRICITY SALES.—The term
24 ‘retail electricity sales’ means the total quantity of
25 electric energy sold by a retail electricity supplier to

1 retail customers during the most recent calendar
 2 year for which that information is available.

3 “(3) RETAIL ELECTRICITY SUPPLIER.—The
 4 term ‘retail electricity supplier’ means a distribution
 5 or integrated utility, or an independent company or
 6 entity, that sells electric energy to consumers.

7 “(b) ENERGY EFFICIENCY PERFORMANCE STAND-
 8 ARD.—Each retail electricity supplier shall implement pro-
 9 grams and measures to achieve improvements in energy
 10 efficiency and peak load reduction, as verified by the Ad-
 11 ministrator.

12 “(c) TARGETS.—For calendar year 2009 and each
 13 calendar year thereafter, the Administrator shall ensure,
 14 to the maximum extent practicable, that retail electric
 15 suppliers annually achieve electricity savings and reduce
 16 peak power demand and electricity use by retail customers
 17 by a percentage that is not less than the applicable target
 18 percentage specified in the following table:

| Calendar Year | Reduction in peak demand | Reduction in electricity use |
|--|--------------------------|------------------------------|
| 2009 | .25 percent | .25 percent |
| 2010 | .75 percent | .75 percent |
| 2011 | 1.75 percent | 1.5 percent |
| 2012 | 2.75 percent | 2.25 percent |
| 2013 | 3.75 percent | 3.0 percent |
| 2014 | 4.75 percent | 3.75 percent |
| 2015 | 5.75 percent | 4.5 percent |
| 2016 | 6.75 percent | 5.25 percent |
| 2017 | 7.75 percent | 6.0 percent |
| 2018 | 8.75 percent | 6.75 percent |
| 2019 | 9.75 percent | 7.5 percent |
| 2020 | 10.75 percent | 8.25 percent |
| 2021 and each calendar year thereafter. | 11.75 percent | 9.0 percent |

1 “(d) BEGINNING DATE.—For the purpose of meeting
2 the targets established under subsection (c), electricity
3 savings shall be calculated based on the sum of—

4 “(1) savings realized as a result of actions
5 taken by the retail electric supplier during the speci-
6 fied calendar year; and

7 “(2) cumulative savings realized as a result of
8 electricity savings achieved in all previous calendar
9 years (beginning with calendar year 2007).

10 “(e) IMPLEMENTING REGULATIONS.—

11 “(1) IN GENERAL.—Not later than 1 year after
12 the date of enactment of this title, the Administrator
13 shall promulgate regulations to implement the tar-
14 gets established under subsection (c).

15 “(2) REQUIREMENTS.—The regulations shall
16 establish—

17 “(A) a national credit system permitting
18 credits to be awarded, bought, sold, or traded
19 by and among retail electricity suppliers;

20 “(B) a fee equivalent to not less than 4
21 cents per kilowatt hour for retail energy sup-
22 pliers that do not meet the targets established
23 under subsection (c); and

1 “(C) standards for monitoring and
2 verification of electricity use and demand sav-
3 ings reported by the retail electricity suppliers.

4 “(3) CONSIDERATION OF TRANSMISSION AND
5 DISTRIBUTION EFFICIENCY.—In developing regula-
6 tions under this subsection, the Administrator shall
7 consider whether savings, in whole or part, achieved
8 by retail electricity suppliers by improving the effi-
9 ciency of electric distribution and use should be eligi-
10 ble for credits established under this section.

11 “(f) COMPLIANCE WITH STATE LAW.—Nothing in
12 this section shall supersede or otherwise affect any State
13 or local law requiring or otherwise relating to reductions
14 in total annual electricity consumption, or peak power con-
15 sumption, by electric consumers to the extent that the
16 State or local law requires more stringent reductions than
17 those required under this section.

18 “(g) VOLUNTARY PARTICIPATION.—The Adminis-
19 trator may—

20 “(1) pursuant to the regulations promulgated
21 under subsection (e)(1), issue a credit to any entity
22 that is not a retail electric supplier if the entity im-
23 plements electricity savings; and

24 “(2) in a case in which an entity described in
25 paragraph (1) is a nonprofit or educational organi-

1 zation, provide to the entity 1 or more grants in lieu
2 of a credit.

3 **“SEC. 707. RENEWABLE PORTFOLIO STANDARD.**

4 “(a) RENEWABLE ENERGY.—

5 “(1) IN GENERAL.—The Administrator, in con-
6 sultation with the Secretary of Energy, shall promul-
7 gate regulations defining the types and sources of
8 renewable energy generation that may be carried out
9 in accordance with this section.

10 “(2) INCLUSIONS.—In promulgating regulations
11 under paragraph (1), the Administrator shall include
12 of all types of renewable energy (as defined in sec-
13 tion 203(b) of the Energy Policy Act of 2005 (42
14 U.S.C. 15852(b))) other than energy generated
15 from—

16 “(A) municipal solid waste;

17 “(B) wood contaminated with plastics or
18 metals; or

19 “(C) tires.

20 “(b) RENEWABLE ENERGY REQUIREMENT.—Of the
21 base quantity of electricity sold by each retail electric sup-
22 plier to electric consumers during a calendar year, the
23 quantity generated by renewable energy sources shall be
24 not less than the following percentages:

| “Calendar year: | Minimum annual percentage: |
|-------------------------|---------------------------------------|
| 2009 through 2010 | 5 |

| “Calendar year: | Minimum annual percentage: |
|---------------------------------|---------------------------------------|
| 2011 through 2015 | 10 |
| 2016 through 2020 | 15 |
| 2021 and subsequent years | 20. |

1 “(c) RENEWABLE ENERGY CREDIT PROGRAM.—Not
 2 later than 1 year after the date of enactment of this title,
 3 the Administrator shall establish—

4 “(1) a program to issue, establish the value of,
 5 monitor the sale or exchange of, and track renewable
 6 energy credits; and

7 “(2) penalties for any retail electric supplier
 8 that does not comply with this section.

9 “(d) PROHIBITION ON DOUBLE COUNTING.—A re-
 10 newable energy credit issued under subsection (c)—

11 “(1) may be counted toward meeting the re-
 12 quirements of subsection (b) only once; and

13 “(2) shall vest with the owner of the system or
 14 facility that generates the renewable energy that is
 15 covered by the renewable energy credit, unless the
 16 owner explicitly transfers the renewable energy cred-
 17 it.

18 “(e) SALE UNDER PURPA CONTRACT.—If the Ad-
 19 ministrator, after consultation with the Secretary of En-
 20 ergy, determines that a renewable energy generator is sell-
 21 ing electricity to comply with this section to a retail elec-
 22 tric supplier under a contract subject to section 210 of
 23 the Public Utilities Regulatory Policies Act of 1978 (16

1 U.S.C. 824a–3), the retail electric supplier shall be treated
2 as the generator of the electric energy for the purposes
3 of this title for the duration of the contract.

4 “(f) STATE PROGRAMS.—Nothing in this section pre-
5 cludes any State from requiring additional renewable en-
6 ergy generation under any State renewable energy pro-
7 gram.

8 “(g) VOLUNTARY PARTICIPATION.—The Adminis-
9 trator may issue a renewable energy credit pursuant to
10 subsection (c) to any entity that is not subject to this sec-
11 tion only if the entity applying for the renewable energy
12 credit meets the terms and conditions of this section to
13 the same extent as retail electric suppliers subject to this
14 section.

15 **“SEC. 708. STANDARDS TO ACCOUNT FOR BIOLOGICAL SE-**
16 **QUESTRATION OF CARBON.**

17 “(a) IN GENERAL.—Not later than 2 years after the
18 date of enactment of title, the Secretary of Agriculture,
19 with the concurrence of the Administrator, shall establish
20 standards for accrediting certified reductions in the emis-
21 sion of carbon dioxide through above-ground and below-
22 ground biological sequestration activities.

23 “(b) REQUIREMENTS.—The standards shall in-
24 clude—

1 “(1) a national biological carbon storage base-
2 line or inventory; and

3 “(2) measurement, monitoring, and verification
4 guidelines based on—

5 “(A) measurement of increases in carbon
6 storage in excess of the carbon storage that
7 would have occurred in the absence of a new
8 management practice designed to achieve bio-
9 logical sequestration of carbon;

10 “(B) comprehensive carbon accounting
11 that—

12 “(i) reflects sustained net increases in
13 carbon reservoirs; and

14 “(ii) takes into account any carbon
15 emissions resulting from disturbance of
16 carbon reservoirs in existence as of the
17 date of commencement of any new man-
18 agement practice designed to achieve bio-
19 logical sequestration of carbon;

20 “(C) adjustments to account for—

21 “(i) emissions of carbon that may re-
22 sult at other locations as a result of the
23 impact of the new biological sequestration
24 management practice on timber supplies;
25 or

1 “(ii) potential displacement of carbon
2 emissions to other land owned by the enti-
3 ty that carries out the new biological se-
4 questration management practice; and

5 “(D) adjustments to reflect the expected
6 carbon storage over various time periods, taking
7 into account the likely duration of the storage
8 of carbon in a biological reservoir.

9 “(c) UPDATING OF STANDARDS.—Not later than 3
10 years after the date of establishment of the standards
11 under subsection (a), and every 3 years thereafter, the
12 Secretary of Agriculture shall update the standards to
13 take into account the most recent scientific information.

14 **“SEC. 709. GLOBAL WARMING POLLUTION REPORTING.**

15 “(a) IN GENERAL.—Not later than 2 years after the
16 date of enactment of this title, and annually thereafter,
17 any entity considered to be a major stationary source (as
18 defined in section 169A(g)) shall submit to the Adminis-
19 trator a report describing the emissions of global warming
20 pollutants from the entity for the preceding calendar year.

21 “(b) VOLUNTARY REPORTING.—An entity that is not
22 described in subsection (a) may voluntarily report the
23 emissions of global warming pollutants from the entity to
24 the Administrator.

25 “(c) REQUIREMENTS FOR REPORTS.—

1 “(1) EXPRESSION OF MEASUREMENTS.—Each
2 global warming pollution report submitted under this
3 section shall express global warming pollution emis-
4 sions in—

5 “(A) metric tons of each global warming
6 pollutant; and

7 “(B) metric tons of the carbon dioxide
8 equivalent of each global warming pollutant.

9 “(2) ELECTRONIC FORMAT.—The information
10 contained in a report submitted under this section
11 shall be reported electronically to the Administrator
12 in such form and to such extent as may be required
13 by the Administrator.

14 “(3) DE MINIMIS EXEMPTION.—The Adminis-
15 trator may specify the level of global warming pollu-
16 tion emissions from a source within a facility that
17 shall be considered to be a de minimis exemption
18 from the requirement to comply with this section.

19 “(d) PUBLIC AVAILABILITY OF INFORMATION.—Not
20 later than March 1 of the year after which the Adminis-
21 trator receives a report under this subsection from an enti-
22 ty, and annually thereafter, the Administrator shall make
23 the information reported under this section available to
24 the public through the Internet.

1 “(e) PROTOCOLS AND METHODS.—The Adminis-
2 trator shall, by regulation, establish protocols and methods
3 to ensure completeness, consistency, transparency, and ac-
4 curacy of data on global warming pollution emissions sub-
5 mitted under this section.

6 “(f) ENFORCEMENT.—Regulations promulgated
7 under this section may be enforced pursuant to section
8 113 with respect to any person that—

9 “(1) fails to submit a report under this section;

10 or

11 “(2) otherwise fails to comply with those regu-
12 lations.

13 **“SEC. 710. NATIONAL ACADEMY OF SCIENCES REPORT.**

14 “(a) IN GENERAL.—Not later than 2 years after the
15 date of enactment of this title, and every 2 years there-
16 after, the Academy, acting in coordination with the Na-
17 tional Research Council, shall submit to the Administrator
18 and Congress a report that assesses—

19 “(1) the probability of avoiding dangerous an-
20 thropogenic interference with the climate system;
21 and

22 “(2) the progress made by the United States as
23 of the date of the report to avoid that interference.

24 “(b) CONTENTS.—A report submitted under sub-
25 section (a) shall—

1 “(1) evaluate whether the emission reduction
2 targets promulgated pursuant to section 702(b)(1)
3 are, after taking into account the actions of the
4 international community, likely to be sufficient to
5 avoid dangerous climate change;

6 “(2) include an assessment of the occurrence,
7 or probability of occurrence, of—

8 “(A) a concentration of atmospheric global
9 warming pollution of greater than 450 carbon
10 dioxide equivalent parts per million;

11 “(B) a global mean surface temperature
12 increase of greater than 2 degrees Celsius (3.6
13 degrees Fahrenheit) from preindustrial levels;

14 “(C) a substantial slowing of the Atlantic
15 thermohaline circulation;

16 “(D) a sea level rise of more than 8 inches;

17 “(E) an ice-free Arctic Ocean in the sum-
18 mer;

19 “(F) a decrease in the area of permafrost
20 to a level less than 50 percent of the area of
21 permafrost in existence in 2000;

22 “(G) a loss of more than 40 percent of the
23 coverage of coral reefs in the world because of
24 increased ocean temperature or acidity; and

1 “(H) any other indicator of significant
2 global warming, as determined by the Academy;

3 “(3) if the Academy concludes that the emission
4 reduction targets promulgated pursuant to section
5 702(b)(1) are not likely to be sufficient to avoid
6 dangerous climate change, or that any event speci-
7 fied in paragraph (2) has occurred or is likely to
8 occur—

9 “(A) identify the necessary level of further
10 reductions in atmospheric global warming pollu-
11 tion concentrations; and

12 “(B) recommend additional actions by the
13 United States and the international community
14 to further reduce atmospheric concentrations of
15 global warming pollution; and

16 “(4) if the Academy concludes that an emission
17 reduction target described in section 702(b)(1) can-
18 not be achieved due to technological infeasibility, in-
19 clude a notification of that determination.

20 **“SEC. 711. ADDITIONAL AUTHORITY TO REGULATE EMIS-**
21 **SIONS OF GLOBAL WARMING POLLUTANTS.**

22 “‘The authority of the Administrator under this title
23 shall be in addition to the authority of the Administrator
24 to regulate emissions of global warming pollutants pursu-

1 ant to any other provision of law in effect as of the date
2 of enactment of this title.”.

3 **SEC. 102. BIOFUELS INFRASTRUCTURE.**

4 (a) RENEWABLE FUEL PROGRAM.—Section
5 211(o)(2) of the Clean Air Act (42 U.S.C. 7545(o)(2)) is
6 amended by striking subparagraph (B) and inserting the
7 following:

8 “(B) APPLICABLE VOLUME.—

9 “(i) IN GENERAL.—For the purpose
10 of subparagraph (A), the applicable volume
11 for calendar year 2010 and each calendar
12 year thereafter shall be determined, by
13 rule, by the Administrator, in consultation
14 with the Secretary of Agriculture and the
15 Secretary of Energy, in a manner that en-
16 sures, to the maximum extent practicable,
17 that—

18 “(I) the requirements described
19 in clause (ii) for specified calendar
20 years are met; and

21 “(II) the applicable volume for
22 each calendar year not specified in
23 clause (ii) is determined on an annual
24 basis.

1 “(ii) REQUIREMENTS.—The require-
2 ments referred to in clause (i) are—

3 “(I) for calendar year 2010, at
4 least 10,000,000,000 gallons of re-
5 newable fuel;

6 “(II) for calendar year 2020, at
7 least 30,000,000,000 gallons of re-
8 newable fuel; and

9 “(III) for calendar year 2030, at
10 least 60,000,000,000 gallons of re-
11 newable fuel.”.

12 (b) INSTALLATION OF E-85 FUEL PUMPS BY MAJOR
13 OIL COMPANIES AT OWNED STATIONS AND BRANDED
14 STATIONS.—Section 211(o) of the Clean Air Act (42
15 U.S.C. 7545(o)) is amended by adding at the end the fol-
16 lowing:

17 “(11) INSTALLATION OF E-85 FUEL PUMPS BY
18 MAJOR OIL COMPANIES AT OWNED STATIONS AND
19 BRANDED STATIONS.—

20 “(A) DEFINITIONS.—In this paragraph:

21 “(i) E-85 FUEL.—The term ‘E-85
22 fuel’ means a blend of gasoline approxi-
23 mately 85 percent of the content of which
24 is derived from ethanol produced in the
25 United States.

1 “(ii) MAJOR OIL COMPANY.—The
2 term ‘major oil company’ means any per-
3 son that, individually or together with any
4 other person with respect to which the per-
5 son has an affiliate relationship or signifi-
6 cant ownership interest, has not less than
7 4,500 retail station outlets according to
8 the latest publication of the Petroleum
9 News Annual Factbook.

10 “(iii) SECRETARY.—The term ‘Sec-
11 retary’ means the Secretary of Energy,
12 acting in consultation with the Adminis-
13 trator and the Secretary of Agriculture.

14 “(B) REGULATIONS.—The Secretary shall
15 promulgate regulations to ensure, to the max-
16 imum extent practicable, that each major oil
17 company that sells or introduces gasoline into
18 commerce in the United States through wholly-
19 owned stations or branded stations installs or
20 otherwise makes available 1 or more pumps
21 that dispense E-85 fuel (including any other
22 equipment necessary, such as including tanks,
23 to ensure that the pumps function properly) at
24 not less than the applicable percentage of the
25 wholly-owned stations and the branded stations

1 of the major oil company specified in subpara-
 2 graph (C).

3 “(C) APPLICABLE PERCENTAGE.—For the
 4 purpose of subparagraph (B), the applicable
 5 percentage of the wholly-owned stations and the
 6 branded stations shall be determined in accord-
 7 ance with the following table:

| “Calendar year: | Applicable percentage of wholly-owned stations and branded stations (percent): |
|--|---|
| 2008 | 5 |
| 2009 | 10 |
| 2010 | 15 |
| 2011 | 20 |
| 2012 | 25 |
| 2013 | 30 |
| 2014 | 35 |
| 2015 | 40 |
| 2016 | 45 |
| 2017 and each calendar year thereafter | 50. |

8 “(D) GEOGRAPHIC DISTRIBUTION.—

9 “(i) IN GENERAL.—Subject to clause
 10 (ii), in promulgating regulations under
 11 subparagraph (B), the Secretary shall en-
 12 sure that each major oil company described
 13 in subparagraph (B) installs or otherwise
 14 makes available 1 or more pumps that dis-
 15 pense E-85 fuel at not less than a min-
 16 imum percentage (specified in the regula-
 17 tions) of the wholly-owned stations and the
 18 branded stations of the major oil company
 19 in each State.

1 “(ii) REQUIREMENT.—In specifying
2 the minimum percentage under clause (i),
3 the Secretary shall ensure that each major
4 oil company installs or otherwise makes
5 available 1 or more pumps described in
6 that clause in each State in which the
7 major oil company operates.

8 “(E) FINANCIAL RESPONSIBILITY.—In
9 promulgating regulations under subparagraph
10 (B), the Secretary shall ensure that each major
11 oil company described in that subparagraph as-
12 sumes full financial responsibility for the costs
13 of installing or otherwise making available the
14 pumps described in that subparagraph and any
15 other equipment necessary (including tanks) to
16 ensure that the pumps function properly.

17 “(F) PRODUCTION CREDITS FOR EXCEED-
18 ING E-85 FUEL PUMPS INSTALLATION REQUIRE-
19 MENT.—

20 “(i) EARNING AND PERIOD FOR AP-
21 PLYING CREDITS.—If the percentage of the
22 wholly-owned stations and the branded sta-
23 tions of a major oil company at which the
24 major oil company installs E-85 fuel
25 pumps in a particular calendar year ex-

1 ceeds the percentage required under sub-
2 paragraph (C), the major oil company
3 earns credits under this paragraph, which
4 may be applied to any of the 3 consecutive
5 calendar years immediately after the cal-
6 endar year for which the credits are
7 earned.

8 “(ii) TRADING CREDITS.—Subject to
9 clause (iii), a major oil company that has
10 earned credits under clause (i) may sell
11 credits to another major oil company to en-
12 able the purchaser to meet the requirement
13 under subparagraph (C).

14 “(iii) EXCEPTION.—A major oil com-
15 pany may not use credits purchased under
16 clause (ii) to fulfill the geographic distribu-
17 tion requirement in subparagraph (D).”

1 **TITLE II—TAX INCENTIVES FOR**
2 **ADVANCED TECHNOLOGY VE-**
3 **HICLES**

4 **Subtitle A—Providing Consumers**
5 **With Additional Advanced Tech-**
6 **nology Vehicle Purchase Incen-**
7 **tives**

8 **SEC. 201. EXPANSION AND EXTENSION OF ALTERNATIVE**
9 **MOTOR VEHICLE CREDIT.**

10 (a) INCREASES IN CREDIT.—

11 (1) NEW QUALIFIED FUEL CELL MOTOR VEHI-
12 CLE.—Subsection (b) of section 30B of the Internal
13 Revenue Code of 1986 (relating to new qualified fuel
14 cell motor vehicle credit) is amended—

15 (A) in paragraph (1)—

16 (i) by striking “\$8,000 (\$4,000” in
17 subparagraph (A) and inserting “\$16,000
18 (\$8,000”;

19 (ii) by striking “\$10,000” in subpara-
20 graph (B) and inserting “\$20,000”;

21 (iii) by striking “\$20,000” in sub-
22 paragraph (C) and inserting “\$40,000”;

23 and

24 (iv) by striking “\$40,000” in subpara-
25 graph (D) and inserting “\$80,000”; and

- 1 (B) in paragraph (2)(A)—
2 (i) by striking “\$1,000” in clause (i)
3 and inserting “\$2,000”;
4 (ii) by striking “\$1,500” in clause (ii)
5 and inserting “\$3,000”;
6 (iii) by striking “\$2,000” in clause
7 (iii) and inserting “\$4,000”;
8 (iv) by striking “\$2,500” in clause
9 (iv) and inserting “\$5,000”;
10 (v) by striking “\$3,000” in clause (v)
11 and inserting “\$6,000”;
12 (vi) by striking “\$3,500” in clause
13 (vi) and inserting “\$7,000”; and
14 (vii) by striking “\$4,000” in clause
15 (vii) and inserting “\$8,000”.

16 (2) NEW ADVANCED LEAN BURN TECHNOLOGY
17 MOTOR VEHICLE.—

- 18 (A) FUEL ECONOMY.—The table in clause
19 (i) of section 30B(c)(2)(A) of such Code (relat-
20 ing to fuel economy) is amended—
21 (i) by striking “\$400” and inserting
22 “\$800”;
23 (ii) by striking “\$800” and inserting
24 “\$1,600”;

1 (iii) by striking “\$1,200” and insert-
2 ing “\$2,400”;

3 (iv) by striking “\$1,600” and insert-
4 ing “\$3,200”;

5 (v) by striking “\$2,000” and inserting
6 “\$4,000”; and

7 (vi) by striking “\$2,400” and insert-
8 ing “\$4,800”.

9 (B) CONSERVATION.—The table in sub-
10 paragraph (B) of section 30B(c)(2) of such
11 Code (relating to conservation credit) is amend-
12 ed—

13 (i) by striking “\$250” and inserting
14 “\$500”;

15 (ii) by striking “\$500” and inserting
16 “\$1,000”;

17 (iii) by striking “\$750” and inserting
18 “\$1,500”; and

19 (iv) by striking “\$1,000” and insert-
20 ing “\$2,000”.

21 (b) EXPANSION OF NUMBER OF NEW QUALIFIED
22 HYBRID AND ADVANCED LEAN BURN TECHNOLOGY VE-
23 HICLES ELIGIBLE FOR CREDIT.—Paragraph (2) of section
24 30B(f) of the Internal Revenue Code of 1986 (relating to
25 phaseout) is amended—

1 (1) by striking “the period” and inserting “any
2 period”,

3 (2) by striking “United States after December
4 31, 2005, is at least 60,000” and inserting “United
5 States is—

6 “(A) after December 31, 2005, at least
7 60,000, and

8 “(B) after December 31, 2008, and before
9 January 1, 2013, 60,000.”, and

10 (3) by adding at the end the following new sen-
11 tence: “For purposes of the preceding sentence, the
12 Secretary may extend the time period through 2014
13 if the Secretary determines that market conditions
14 merit such action.”.

15 (c) EXTENSION.—Section 30B(j) of the Internal Rev-
16 enue Code of 1986 (relating to termination) is amended—

17 (1) by striking “December 31, 2010” both
18 places it appears and inserting “December 31,
19 2014”, and

20 (2) by striking “December 31, 2009” in para-
21 graph (3) and inserting “December 31, 2014”.

22 (d) EFFECTIVE DATE.—The amendments made by
23 this section shall apply to property placed in service after
24 the date of the enactment of this Act, in taxable years
25 ending after such date.

1 **SEC. 202. PLUG-IN HYBRID MOTOR VEHICLE TAX CREDIT.**

2 (a) IN GENERAL.—Section 30B of the Internal Rev-
 3 enue Code of 1986 is amended by redesignating sub-
 4 sections (i) and (j) as subsections (j) and (k), respectively,
 5 and by inserting after subsection (h) the following new
 6 subsection:

7 “(i) NEW PLUG-IN HYBRID MOTOR VEHICLE CRED-
 8 IT.—

9 “(1) IN GENERAL.—For purposes of subsection
 10 (a), the new plug-in hybrid motor vehicle credit de-
 11 termined under this subsection with respect to a new
 12 qualified plug-in hybrid motor vehicle or new quali-
 13 fied flexible-fuel plug-in hybrid motor vehicle placed
 14 in service by the taxpayer during the taxable year
 15 is—

16 “(A) \$3,000, if such vehicle is a new quali-
 17 fied plug-in hybrid motor vehicle with a gross
 18 vehicle weight rating of not more than 8,500
 19 pounds, and

20 “(B) \$3,150, if such vehicle is a new quali-
 21 fied flexible-fuel plug-in hybrid motor vehicle
 22 with a gross vehicle weight rating of not more
 23 than 8,500 pounds.

24 “(2) INCREASE FOR FUEL EFFICIENCY.—

25 “(A) IN GENERAL.—The amount deter-
 26 mined under paragraph (1)(A) with respect to

1 a new qualified plug-in hybrid motor vehicle or
2 new qualified flexible-fuel plug-in hybrid motor
3 vehicle which is a passenger automobile or light
4 truck shall be increased by—

5 “(i) \$1,000 if such vehicle achieves at
6 least 250 percent but less than 250 per-
7 cent of the 2002 model year city fuel econ-
8 omy,

9 “(ii) \$1,500 if such vehicle achieves at
10 least 250 percent but less than 275 per-
11 cent of the 2002 model year city fuel econ-
12 omy,

13 “(iii) \$2,000 if such vehicle achieves
14 at least 275 percent but less than 300 per-
15 cent of the 2002 model year city fuel econ-
16 omy,

17 “(iv) \$2,500 if such vehicle achieves
18 at least 300 percent but less than 325 per-
19 cent of the 2002 model year city fuel econ-
20 omy, and

21 “(v) \$3,000 if such vehicle achieves at
22 least 325 percent of the 2002 model year
23 city fuel economy,

24 “(B) 2002 MODEL YEAR CITY FUEL ECON-
25 OMY.—For purposes of subparagraph (A), the

1 2002 model year city fuel economy with respect
2 to a vehicle shall be determined using the tables
3 provided in subsection (b)(2)(B).

4 “(3) NEW QUALIFIED PLUG-IN HYBRID MOTOR
5 VEHICLE.—For purposes of this subsection, the term
6 ‘new qualified plug-in hybrid motor vehicle’ means a
7 motor vehicle—

8 “(A) which is propelled by an internal
9 combustion engine or heat engine using —

10 “(i) any combustible fuel,

11 “(ii) an on-board, rechargeable stor-
12 age device, and

13 “(iii) a means of using an off-board
14 source of electricity,

15 “(B) which, in the case of a passenger
16 automobile or light truck, has received on or
17 after the date of the enactment of this section
18 a certificate that such vehicle meets or exceeds
19 the Bin 5 Tier II emission level established in
20 regulations prescribed by the Administrator of
21 the Environmental Protection Agency under
22 section 202(i) of the Clean Air Act for that
23 make and model year vehicle,

24 “(C) the original use of which commences
25 with the taxpayer,

1 “(D) which is acquired for use or lease by
2 the taxpayer and not for resale, and

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

4 “(4) NEW QUALIFIED FLEXIBLE-FUEL PLUG-IN
5 HYBRID MOTOR VEHICLE.—For purposes of this
6 subsection, the term ‘new qualified flexible-fuel plug-
7 in hybrid motor vehicle’ means a motor vehicle—

8 “(A) which is propelled by an internal
9 combustion engine or heat engine using—

10 “(i) an on-board, rechargeable storage
11 device, and

12 “(ii) a means of using an off-board
13 source of electricity,

14 “(B) which is warranted by its manufac-
15 turer to operate on any combination of gasoline
16 and a fuel blend containing up to 85 percent
17 ethanol and 15 percent gasoline by volume
18 (E85),

19 “(C) which, in the case of a passenger
20 automobile or light truck, has received on or
21 after the date of the enactment of this section
22 a certificate that such vehicle meets or exceeds
23 the Bin 5 Tier II emission level established in
24 regulations prescribed by the Administrator of
25 the Environmental Protection Agency under

1 section 202(i) of the Clean Air Act for that
2 make and model year vehicle,

3 “(D) the original use of which commences
4 with the taxpayer,

5 “(E) which is acquired for use or lease by
6 the taxpayer and not for resale, and

7 “(F) which is made by a manufacturer.”.

8 (b) CONFORMING AMENDMENTS.—

9 (1) Section 30B(a) of the Internal Revenue
10 Code of 1986 is amended by striking “and” at the
11 end of paragraph (3), by striking the period at the
12 end of paragraph (4) and inserting “, and”, and by
13 adding at the end the following new paragraph:

14 “(5) the new plug-in hybrid motor vehicle credit
15 determined under subsection (i).”.

16 (2) Section 30B(k)(2) of such Code, as redesign-
17 nated by subsection (a), is amended by striking “or”
18 and inserting a comma and by inserting “, a new
19 qualified plug-in hybrid motor vehicle (as described
20 in subsection (i)(3)), or a new qualified flexible-fuel
21 plug-in hybrid motor vehicle (as described in sub-
22 section (i)(4))” after “subsection (d)(2)(A)”.

23 (c) EFFECTIVE DATE.—The amendments made by
24 this section shall apply to property placed in service after

1 the date of the enactment of this Act, in taxable years
 2 ending after such date.

3 **Subtitle B—Advanced Technology**
 4 **Motor Vehicles Manufacturing**
 5 **Credit**

6 **SEC. 211. ADVANCED TECHNOLOGY MOTOR VEHICLES MAN-**
 7 **UFACTURING CREDIT.**

8 (a) IN GENERAL.—Subpart B of part IV of sub-
 9 chapter A of chapter 1 of the Internal Revenue Code of
 10 1986 (relating to foreign tax credit, etc.) is amended by
 11 adding at the end the following new section:

12 **“SEC. 30D. ADVANCED TECHNOLOGY MOTOR VEHICLES**
 13 **MANUFACTURING CREDIT.**

14 “(a) CREDIT ALLOWED.—There shall be allowed as
 15 a credit against the tax imposed by this chapter for the
 16 taxable year an amount equal to 35 percent of the quali-
 17 fied investment of an eligible taxpayer for such taxable
 18 year.

19 “(b) QUALIFIED INVESTMENT.—For purposes of this
 20 section—

21 “(1) IN GENERAL.—The term ‘qualified invest-
 22 ment’ means, with respect to any taxable year, the
 23 sum of—

24 “(A) the costs paid or incurred by the eli-
 25 gible taxpayer during such taxable year—

1 “(i) to re-equip, expand, or establish
2 any manufacturing facility of the eligible
3 taxpayer to produce advanced technology
4 motor vehicles or to produce eligible com-
5 ponents, and

6 “(ii) for qualified research (as defined
7 in section 41(d)) related to advanced tech-
8 nology motor vehicles and eligible compo-
9 nents, and

10 “(B) qualified engineering integration
11 costs.

12 “(2) CONTRIBUTION RULES.—For purposes of
13 paragraph (1)(A)(i), in the case of a manufacturing
14 facility of the eligible taxpayer which produces both
15 advanced technology motor vehicles and other motor
16 vehicles, or eligible components and other compo-
17 nents, only the amount paid or incurred for the pro-
18 duction of advanced technology motor vehicles and
19 eligible components shall be taken into account.

20 “(c) ELIGIBLE TAXPAYER.—For purposes of this sec-
21 tion, the term ‘eligible taxpayer’ means any taxpayer if
22 more than 50 percent of its gross receipts for the taxable
23 year is derived from the manufacture of motor vehicles
24 or any component parts of such vehicles.

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

1 “(1) ADVANCED TECHNOLOGY MOTOR VEHI-
2 CLE.—The term ‘advanced technology motor vehicle’
3 means—

4 “(A) any new qualified fuel cell motor vehi-
5 cle (as defined in section 30B(b)(3)),

6 “(B) any new advanced lean burn tech-
7 nology motor vehicle (as defined in section
8 30B(c)(3)),

9 “(C) any new qualified hybrid motor vehi-
10 cle (as defined in section 30B(d)(3)(A) and de-
11 termined without regard to any gross vehicle
12 weight rating),

13 “(D) any new qualified alternative motor
14 fuel vehicle (as defined in section 30B(e)(4)),
15 and

16 “(E) any new qualified plug-in hybrid
17 motor vehicle (as defined in section 30B(i)(3))
18 or any new qualified flexible-fuel plug-in hybrid
19 motor vehicle (as defined in section 30B(i)(4)).

20 “(2) ELIGIBLE COMPONENTS.—The term ‘eligi-
21 ble component’ means any component inherent to
22 any advanced technology motor vehicle but not in-
23 herent to a motor vehicle which is not an advanced
24 technology motor vehicle, including—

1 “(A) with respect to any gasoline or diesel-
2 electric new qualified hybrid motor vehicle,
3 any—

4 “(i) electric motor or generator,

5 “(ii) power split device,

6 “(iii) power control unit,

7 “(iv) power controls,

8 “(v) integrated starter generator, or

9 “(vi) battery,

10 “(B) with respect to any hydraulic new
11 qualified hybrid motor vehicle, any—

12 “(i) hydraulic accumulator vessel,

13 “(ii) hydraulic pump, or

14 “(iii) hydraulic pump-motor assembly,

15 “(C) with respect to any new advanced
16 lean burn technology motor vehicle, any—

17 “(i) diesel engine,

18 “(ii) turbocharger,

19 “(iii) fuel injection system, or

20 “(iv) after-treatment system, such as
21 a particle filter or NO_x absorber, and

22 “(D) with respect to any advanced tech-
23 nology motor vehicle, any other component sub-
24 mitted for approval by the Secretary.

1 “(3) QUALIFIED ENGINEERING INTEGRATION
2 COSTS.—For purposes of subsection (b)(1)(B), the
3 term ‘qualified engineering integration costs’ means,
4 with respect to any advanced technology motor vehi-
5 cle, costs incurred prior to the market introduction
6 of such motor vehicle for engineering tasks related
7 to—

8 “(A) establishing functional, structural,
9 and performance requirements for components
10 and subsystems to meet overall vehicle objec-
11 tives for a specific application,

12 “(B) designing interfaces for components
13 and subsystems with mating systems within a
14 specific vehicle application,

15 “(C) designing cost effective, efficient, and
16 reliable manufacturing processes to produce
17 components and subsystems for a specific vehi-
18 cle application, and

19 “(D) validating functionality and perform-
20 ance of components and subsystems for a spe-
21 cific vehicle application.

22 “(4) MOTOR VEHICLE.—The term ‘motor vehi-
23 cle’ has the meaning given such term by section
24 30(c)(2).

25 “(e) LIMITATION BASED ON AMOUNT OF TAX.—

1 “(1) IN GENERAL.—The credit allowed under
2 subsection (a) for any taxable year shall not exceed
3 the sum of—

4 “(A) the taxpayer’s regular tax liability (as
5 defined in section 26(b)) for the taxable year,
6 plus

7 “(B) the tax imposed under section 55 for
8 the taxable year.

9 “(2) CARRYOVER OF UNUSED CREDIT
10 AMOUNTS.—

11 “(A) IN GENERAL.—If the credit allowable
12 under subsection (a) for a taxable year exceeds
13 the limitation under paragraph (1) for such tax-
14 able year, such excess shall be allowed—

15 “(i) as a credit carryback to each of
16 the 13 taxable years preceding such year,
17 and

18 “(ii) as a credit carryforward to each
19 of the 20 taxable years following such year.

20 “(B) AMOUNT CARRIED TO EACH YEAR.—

21 For purposes of this paragraph, rules similar to
22 the rules of section 39(a)(2) shall apply.

23 “(f) SPECIAL RULES.—

24 “(1) REDUCTION IN BASIS.—For purposes of
25 this subtitle, if a credit is allowed under this section

1 for any expenditure with respect to any property, the
2 increase in the basis of such property which would
3 (but for this paragraph) result from such expendi-
4 ture shall be reduced by the amount of the credit so
5 allowed.

6 “(2) INVESTMENTS AND PROPERTY OUTSIDE
7 THE UNITED STATES.—No credit shall be allowed
8 under subsection (a) with respect to—

9 “(A) any manufacturing facility which is
10 located outside the United States, and

11 “(B) any engineering integration or re-
12 search and development conducted outside the
13 United States.

14 “(3) AGGREGATION OF EXPENDITURES; ALLO-
15 CATIONS.—For purposes of this section, rules simi-
16 lar to the rules of paragraphs (1) and (2) of section
17 41(f) shall apply.

18 “(4) RECAPTURE.—The Secretary shall, by reg-
19 ulation, provide for recapturing the benefit of any
20 credit allowable under subsection (a) with respect to
21 any manufacturing facility which ceases to produce
22 advanced technology motor vehicles or eligible com-
23 ponents.

24 “(5) PUBLIC STATEMENT.—

1 “(A) IN GENERAL.—No credit shall be al-
2 lowed under subsection (a) for any taxable year
3 unless the eligible taxpayer makes publicly
4 available a statement describing the activities of
5 the eligible taxpayer for which the credit is al-
6 lowed and the public benefits of such activities,
7 including the estimated amount of any reduc-
8 tion in national oil consumption in future years
9 as a result of such activities.

10 “(B) TIME FOR PUBLICATION.—The state-
11 ment required under subparagraph (A) shall be
12 made available not later than 90 days after the
13 end of the taxable year for which the credit
14 under subsection (a) is allowed and shall be in
15 such form as the Secretary shall prescribe.

16 “(6) NO DOUBLE BENEFIT.—

17 “(A) COORDINATION WITH OTHER DEDUC-
18 TIONS AND CREDITS.—Except as provided in
19 subparagraph (B), the amount of any deduction
20 or other credit allowable under this chapter for
21 any cost taken into account in determining the
22 amount of the credit under subsection (a) shall
23 be reduced by the amount of such credit attrib-
24 utable to such cost.

1 “(B) RESEARCH AND DEVELOPMENT
2 COSTS.—

3 “(i) IN GENERAL.—Except as pro-
4 vided in clause (ii), any amount described
5 in subsection (b)(1)(A)(ii) taken into ac-
6 count in determining the amount of the
7 credit under subsection (a) for any taxable
8 year shall not be taken into account for
9 purposes of determining the credit under
10 section 41 for such taxable year.

11 “(ii) COSTS TAKEN INTO ACCOUNT IN
12 DETERMINING BASE PERIOD RESEARCH
13 EXPENSES.—Any amounts described in
14 subsection (b)(1)(A)(ii) taken into account
15 in determining the amount of the credit
16 under subsection (a) for any taxable year
17 which are qualified research expenses
18 (within the meaning of section 41(b)) shall
19 be taken into account in determining base
20 period research expenses for purposes of
21 applying section 41 to subsequent taxable
22 years.

23 “(g) ELECTION NOT TO TAKE CREDIT.—No credit
24 shall be allowed under subsection (a) for any property if

1 the taxpayer elects not to have this section apply to such
2 property.

3 “(h) REGULATIONS.—The Secretary shall prescribe
4 such regulations as necessary to carry out the provisions
5 of this section.”.

6 (b) CONFORMING AMENDMENTS.—

7 (1) Section 1016(a) of the Internal Revenue
8 Code of 1986 is amended by striking “and” at the
9 end of paragraph (36), by striking the period at the
10 end of paragraph (37) and inserting “, and”, and by
11 adding at the end the following new paragraph:

12 “(38) to the extent provided in section
13 30D(f)(1).”.

14 (2) Section 6501(m) of such Code is amended
15 by inserting “30D(g),” after “30C(e)(5),”.

16 (3) The table of sections for subpart B of part
17 IV of subchapter A of chapter 1 of such Code is
18 amended by inserting after the item relating to sec-
19 tion 30C the following new item:

“Sec. 30D. Advanced technology motor vehicles manufacturing credit.”.

20 (c) EFFECTIVE DATE.—The amendments made by
21 this section shall apply to amounts incurred in taxable
22 years beginning after December 31, 1993.

1 **TITLE III—INTERNATIONAL AND**
2 **CORPORATE OBLIGATIONS**

3 **SEC. 301. INTERNATIONAL NEGOTIATIONS AND TRADE RE-**
4 **STRICTIONS.**

5 It is the sense of the Senate that the United States
6 should act to reduce the health, environmental, economic,
7 and national security risks posed by global climate change,
8 and foster sustained economic growth through a new gen-
9 eration of technologies, by—

10 (1) participating in negotiations under the
11 United Nations Framework Convention on Climate
12 Change, done at New York May 9, 1992, and lead-
13 ing efforts in other international forums, with the
14 objective of securing participation of the United
15 States in agreements that—

16 (A) advance and protect the economic and
17 national security interests of the United States;

18 (B) establish mitigation commitments by
19 all countries that are major emitters of global
20 warming pollution, in accordance with the prin-
21 ciple of “common but differentiated responsibil-
22 ities”;

23 (C) establish flexible international mecha-
24 nisms to minimize the cost of efforts by partici-
25 pating countries; and

1 (D) achieve a significant long-term reduc-
2 tion in global warming pollution emissions; and
3 (2) establishing a bipartisan Senate observation
4 group, the members of which should be designated
5 by the Chairman and Ranking Member of the Com-
6 mittee on Foreign Relations of the Senate, and
7 which should include the Chairman and Ranking
8 Member of the Committee on Environment and Pub-
9 lic Works of the Senate—

10 (A) to monitor any international negotia-
11 tions on climate change; and

12 (B) to ensure that the advice and consent
13 function of the Senate is exercised in a manner
14 to facilitate timely consideration of any applica-
15 ble treaty submitted to the Senate.

16 **SEC. 302. CORPORATE ENVIRONMENTAL DISCLOSURE OF**
17 **CLIMATE CHANGE RISKS.**

18 (a) REGULATIONS.—Not later than 2 years after the
19 date of enactment of this Act, the Securities and Ex-
20 change Commission (referred to in this section as the
21 “Commission”) shall promulgate regulations in accord-
22 ance with section 13 of the Securities Exchange Act of
23 1934 (15 U.S.C. 78m) directing each issuer of securities
24 under that Act with a market capitalization of more than
25 \$1,000,000,000, regardless of whether the issuer is

1 publicly- or privately-held, to inform securities investors
2 of the risks relating to—

3 (1) the financial exposure of the issuer because
4 of the net global warming pollution emissions of the
5 issuer; and

6 (2) the potential economic impacts of global
7 warming on the interests of the issuer.

8 (b) UNIFORM FORMAT FOR DISCLOSURE.—In car-
9 rying out subsection (a), the Commission shall enter into
10 an agreement with the Financial Accounting Standards
11 Board, or another appropriate organization that estab-
12 lishes voluntary standards, to develop a uniform format
13 for disclosing to securities investors information on the
14 risks described in subsection (a).

15 (c) INTERIM INTERPRETIVE RELEASE.—

16 (1) IN GENERAL.—As soon as practicable after
17 the date of enactment of this Act, the Commission
18 shall issue an interpretive release clarifying that
19 under items 101 and 303 of Regulation S–K of the
20 Commission under part 229 of title 17, Code of Fed-
21 eral Regulations (as in effect on the date of enact-
22 ment of this Act)—

23 (A) the commitments of the United States
24 to reduce emissions of global warming pollution
25 under the United Nations Framework Conven-

1 tion on Climate Change, done at New York on
 2 May 9, 1992, are considered to be a material
 3 effect; and

4 (B) global warming constitutes a known
 5 trend.

6 (2) PERIOD OF EFFECTIVENESS.—The inter-
 7 pretive release issued under paragraph (1) shall re-
 8 main in effect until the effective date of the final
 9 regulations promulgated under subsection (a).

10 **TITLE IV—NATIONAL CLIMATE**
 11 **CHANGE VULNERABILITY**
 12 **AND RESILIENCE PROGRAM**

13 **SEC. 401. DEFINITIONS.**

14 In this title:

15 (1) OFFICE.—The term “Office” means the Of-
 16 fice of Climate Change Vulnerability and Resilience
 17 Research established under section 402(c).

18 (2) PROGRAM.—The term “Program” means
 19 the National Climate Change Vulnerability and Re-
 20 silience Program established under section 402(a).

21 (3) SECRETARY.—The term “Secretary” means
 22 the Secretary of Commerce.

1 **SEC. 402. NATIONAL CLIMATE CHANGE VULNERABILITY**
2 **AND RESILIENCE PROGRAM.**

3 (a) ESTABLISHMENT.—The Secretary shall establish
4 a National Climate Change Vulnerability and Resilience
5 Program to evaluate and make recommendations about
6 local, regional, and national vulnerability and resilience to
7 impacts relating to longer-term climatic changes and
8 shorter-term climatic variations, including changes and
9 variations resulting from human activities.

10 (b) CONSULTATION.—In designing the Program, the
11 Secretary shall consult with Federal agencies participating
12 in the United States Global Change Research Program es-
13 tablished under section 103 of the Global Change Re-
14 search Act of 1990 (15 U.S.C. 2933) and any other appro-
15 priate Federal, State, or local agency.

16 (c) OFFICE OF CLIMATE CHANGE VULNERABILITY
17 AND RESILIENCE RESEARCH.—The Secretary shall estab-
18 lish an Office of Climate Change Vulnerability and Resil-
19 ience Research within the Department of Commerce,
20 which shall—

21 (1) be responsible for managing the Program;

22 and

23 (2) in accordance with the design of the Pro-
24 gram, coordinate climatic change and climatic vari-
25 ation vulnerability and resilience research in the
26 United States.

1 (d) VULNERABILITY ASSESSMENTS.—The Program
2 shall include—

3 (1) evaluations, based on historical data, cur-
4 rent observational data, and, where appropriate,
5 available predictions, of local, State, regional, and
6 national vulnerability to phenomena associated with
7 climatic change and climatic variation, including—

8 (A) severe weather events, such as severe
9 thunderstorms, tornadoes, and hurricanes;

10 (B) annual and interannual climate events,
11 such as the El Niño Southern Oscillation and
12 the North Atlantic Oscillation;

13 (C) changes in sea level and shifts in the
14 hydrological cycle;

15 (D) natural hazards, including tsunamis,
16 droughts, floods, and wildfires; and

17 (E) alterations of ecological communities
18 as a result of climatic change and climatic vari-
19 ation; and

20 (2) the production of a vulnerability scorecard,
21 in cooperation with State and local institutions in-
22 cluding university researchers and programs, that
23 assesses the vulnerability and capacity of each State
24 to respond to climatic change and climatic variation
25 hazards.

1 (e) PREPAREDNESS RECOMMENDATIONS.—Not later
2 than 2 years after the date of enactment of this Act, the
3 Office shall submit to Congress a report that—

4 (1) includes the vulnerability scorecards pro-
5 duced under subsection (d)(2); and

6 (2) identifies, and recommends implementation
7 and funding strategies for, short-term and long-term
8 actions that may be taken at the local, State, re-
9 gional, or national level—

10 (A) to minimize climatic change and cli-
11 matic variation threats to human life and prop-
12 erty;

13 (B) to minimize negative economic impacts
14 of climatic change and climatic variation; and

15 (C) to improve resilience to climatic change
16 and climatic variation hazards.

17 (f) VULNERABILITY RESEARCH.—In addition to
18 other responsibilities under this section, the Office shall—

19 (1) apply the results of available vulnerability
20 research to develop and improve criteria that meas-
21 ure resilience to climatic change and climatic vari-
22 ation hazards at the local, State, regional, and na-
23 tional levels;

1 (2) coordinate the implementation of short-term
2 and long-term research programs based on the rec-
3 ommendations made under subsection (e)(2);

4 (3) measure progress in increasing the capacity
5 of each State to respond to climatic change and cli-
6 matic variation hazards, using the vulnerability
7 scorecards produced under subsection (d)(2) as a
8 benchmark; and

9 (4) not less than annually, review and, if appro-
10 prium due to the availability of additional informa-
11 tion, update the vulnerability scorecards and the rec-
12 ommendations made under subsection (e)(2).

13 (g) INFORMATION AND TECHNOLOGY DISSEMINA-
14 TION.—The Secretary shall—

15 (1) make widely available appropriate informa-
16 tion, technologies, and products to assist local,
17 State, regional, and national efforts to reduce loss of
18 life and property due to climatic change and climatic
19 variation; and

20 (2) coordinate the dissemination of the informa-
21 tion, technologies, and products through all appro-
22 prium channels.

1 (h) AUTHORIZATION OF APPROPRIATIONS.—There is
2 authorized to be appropriated to the Secretary to carry
3 out this section \$10,000,000.

○