

110TH CONGRESS
1ST SESSION

H. R. 4226

To accelerate the reduction of greenhouse gas emissions in the United States by establishing a market-driven system of greenhouse gas tradeable allowances that will limit greenhouse gas emissions in the United States, reduce dependence upon foreign oil, and ensure benefits to consumers from the trading in such allowances, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

NOVEMBER 15, 2007

Mr. GILCHREST (for himself and Mr. OLVER) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Science and Technology, Natural Resources, Foreign Affairs, Agriculture, and Ways and Means, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To accelerate the reduction of greenhouse gas emissions in the United States by establishing a market-driven system of greenhouse gas tradeable allowances that will limit greenhouse gas emissions in the United States, reduce dependence upon foreign oil, and ensure benefits to consumers from the trading in such allowances, 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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Climate Stewardship
3 and Economic Security Act of 2007”.

4 **SEC. 2. TABLE OF CONTENTS.**

5 The table of contents for this Act is as follows:

- Sec. 1. Short title.
- Sec. 2. Table of contents.
- Sec. 3. Definitions.

TITLE I—MARKET TO REDUCE GREENHOUSE GAS EMISSIONS

Subtitle A—Tracking Emissions

- Sec. 101. National Greenhouse Gas Database and registry established.
- Sec. 102. Inventory of greenhouse gas emissions for covered entities.
- Sec. 103. Greenhouse gas reduction registration.
- Sec. 104. Measurement and verification.

Subtitle B—Mandating Emission Reductions

- Sec. 121. Covered entities must submit allowances for emissions.
- Sec. 122. Compliance.
- Sec. 123. Exemption of source categories.
- Sec. 124. Establishment of tradeable allowances.
- Sec. 125. International reserve allowance program.
- Sec. 126. Penalties.

Subtitle C—Controlling Compliance Costs

PART 1—USE OF ALLOWANCES

- Sec. 141. Trading.
- Sec. 142. Banking.
- Sec. 143. Borrowing against future reductions.
- Sec. 144. Domestic offsets.
- Sec. 145. International credits plan.
- Sec. 146. Outreach initiative on revenue enhancement for agricultural producers.

PART 2—CARBON MARKET EFFICIENCY BOARD

- Sec. 151. Establishment of Board.
- Sec. 152. Duties.
- Sec. 153. Powers.
- Sec. 154. Estimate of costs to economy of limiting greenhouse gas emissions.

Subtitle D—Allocation of Tradeable Allowances

- Sec. 161. Determination of tradeable allowance allocations.
- Sec. 162. Provision of tradeable allowances.
- Sec. 163. Ensuring target adequacy.
- Sec. 164. Initial allocations for early participation and accelerated participation.

Sec. 165. Bonus for accelerated participation.

TITLE II—CLIMATE CHANGE CREDIT CORPORATION

Sec. 201. Establishment.

Sec. 202. Purposes and functions.

TITLE III—MISCELLANEOUS

Sec. 301. NOAA report on climate change effects; preparation assistance.

Sec. 302. Adaptation technologies.

Sec. 303. Mitigating climate change's impacts on the poor.

Sec. 304. Wildlife conservation.

1 **SEC. 3. DEFINITIONS.**

2 In this Act:

3 (1) ADMINISTRATOR.—The term “Adminis-
4 trator” means the Administrator of the Environ-
5 mental Protection Agency.

6 (2) BASELINE.—The term “baseline” means
7 the historic greenhouse gas emission levels of an en-
8 tity, as adjusted upward by the Administrator to re-
9 flect actual reductions that are verified in accord-
10 ance with—

11 (A) regulations promulgated under section
12 101(c)(1); and

13 (B) relevant standards and methods devel-
14 oped under this Act.

15 (3) BOARD.—The term “Board” means the
16 Carbon Market Efficiency Board established under
17 section 151.

18 (4) CARBON DIOXIDE EQUIVALENTS.—The term
19 “carbon dioxide equivalents” means, for each green-
20 house gas, the amount of each such greenhouse gas

1 that makes the same contribution to global warming
2 as one metric ton of carbon dioxide, as determined
3 by the Administrator.

4 (5) COVERED SECTORS.—The term “covered
5 sectors” means the electric power, transportation,
6 industrial, and commercial sectors, as such terms
7 are used in the Inventory.

8 (6) COVERED ENTITY.—The term “covered en-
9 tity” means an entity (including a branch, depart-
10 ment, agency, or instrumentality of Federal, State,
11 or local government) that—

12 (A) owns or controls a source of green-
13 house gas emissions in the electric power, in-
14 dustrial, or commercial sector of the United
15 States economy (as defined in the Inventory),
16 refines or imports refined petroleum products
17 for use in transportation, or produces or im-
18 ports hydrofluorocarbons, perfluorocarbons, or
19 sulfur hexafluoride; and

20 (B) emits, from any single facility owned
21 by the entity, over 10,000 metric tons of green-
22 house gas per year, measured in units of carbon
23 dioxide equivalents, or—

1 (i) refines or imports refined petro-
2 leum products that, when combusted, will
3 emit;

4 (ii) produces or imports
5 hydrofluorocarbons, perfluorocarbons, or
6 sulfur hexafluoride that, when used, will
7 emit; or

8 (iii) produces or imports other green-
9 house gases that, when used, will emit,
10 over 10,000 metric tons of greenhouse gas per
11 year, measured in units of carbon dioxide
12 equivalents.

13 (7) DATABASE.—The term “database” means
14 the National Greenhouse Gas Database established
15 under section 101.

16 (8) DIRECT EMISSIONS.—The term “direct
17 emissions” means greenhouse gas emissions by an
18 entity from a facility that is owned or controlled by
19 that entity.

20 (9) FACILITY.—The term “facility” means a
21 building, structure, or installation located on any 1
22 or more contiguous or adjacent properties of an enti-
23 ty in the United States.

24 (10) GREENHOUSE GAS.—The term “green-
25 house gas” means—

- 1 (A) carbon dioxide;
- 2 (B) methane;
- 3 (C) nitrous oxide;
- 4 (D) hydrofluorocarbons;
- 5 (E) perfluorocarbons; or
- 6 (F) sulfur hexafluoride.

7 (11) INDIRECT EMISSIONS.—The term “indirect
8 emissions” means greenhouse gas emissions that
9 are—

- 10 (A) a result of the activities of an entity;
- 11 but
- 12 (B) emitted from a facility owned or con-
13 trolled by another entity.

14 (12) INVENTORY.—The term “Inventory”
15 means the Inventory of U.S. Greenhouse Gas Emis-
16 sions and Sinks, prepared in compliance with the
17 United Nations Framework Convention on Climate
18 Change Decision 3/CP.5.

- 19 (13) LEAKAGE.—The term “leakage” means—
- 20 (A) a potentially unaccounted increase in
21 greenhouse gas emissions by a facility or entity
22 caused by an offset project that produces an ac-
23 counted reduction in greenhouse gas emissions;
 - 24 or

1 (B) a potentially unaccounted decrease in
2 sequestration that is caused by an offset project
3 that results in an accounted increase in seques-
4 tration.

5 (14) PERMANENCE.—The term “permanence”
6 means the extent to which greenhouse gases that are
7 sequestered will not later be returned to the atmos-
8 phere.

9 (15) REGISTRY.—The term “registry” means
10 the registry of greenhouse gas emission reductions
11 and increases in sequestration established under sec-
12 tion 101(b)(2).

13 (16) SECRETARY.—The term “Secretary”
14 means the Secretary of Commerce.

15 (17) SEQUESTRATION.—

16 (A) IN GENERAL.—The term “sequestra-
17 tion” means the long-term capture, separation,
18 isolation, or removal of greenhouse gases from
19 the atmosphere.

20 (B) INCLUSIONS.—The term “sequestra-
21 tion” includes, as the Administrator determines
22 appropriate for carrying out this Act—

23 (i) agricultural and conservation prac-
24 tices;

25 (ii) reforestation;

- 1 (iii) forest preservation;
2 (iv) production of cellulosic biomass
3 crops; and
4 (v) any other method of long-term
5 capture, separation, isolation, or removal
6 of greenhouse gases from the atmosphere.

7 (C) EXCLUSIONS.—The term “sequestra-
8 tion” does not include—

- 9 (i) any conversion of, or negative im-
10 pact on, a native ecosystem; or
11 (ii) any introduction of non-native
12 species.

13 (18) SOURCE CATEGORY.—The term “source
14 category” means a process or activity that leads to
15 direct emissions of greenhouse gases, as listed in the
16 Inventory.

17 (19) STATIONARY SOURCE.—The term “sta-
18 tionary source” means any source of greenhouse gas
19 emissions except those emissions resulting directly
20 from an engine for transportation purposes.

1 **TITLE I—MARKET TO REDUCE**
2 **GREENHOUSE GAS EMISSIONS**
3 **Subtitle A—Tracking Emissions**

4 **SEC. 101. NATIONAL GREENHOUSE GAS DATABASE AND**
5 **REGISTRY ESTABLISHED.**

6 (a) ESTABLISHMENT.—As soon as practicable after
7 the date of enactment of this Act, the Administrator, in
8 coordination with the Secretary, the Secretary of Energy,
9 the Secretary of Agriculture, State governments, and pri-
10 vate sector and nongovernmental organizations, shall es-
11 tablish, operate, and maintain a database, to be known
12 as the “National Greenhouse Gas Database”, to collect,
13 verify, and analyze data on greenhouse gas emissions by
14 entities.

15 (b) NATIONAL GREENHOUSE GAS DATABASE COM-
16 PONENTS.—The database shall consist of—

17 (1) an inventory of greenhouse gas emissions;
18 and

19 (2) a registry of greenhouse gas emission reduc-
20 tions and increases in sequestrations.

21 (c) COMPREHENSIVE SYSTEM.—

22 (1) IN GENERAL.—Not later than 2 years after
23 the date of enactment of this Act, the Administrator
24 shall promulgate regulations to implement a com-
25 prehensive system for greenhouse gas emissions re-

1 reporting, inventorying, and reduction and sequestra-
2 tion registration.

3 (2) REQUIREMENTS.—The Administrator shall
4 ensure, to the maximum extent practicable, that—

5 (A) the comprehensive system described in
6 paragraph (1) is designed to—

7 (i) maximize completeness, trans-
8 parency, and accuracy of data reported;
9 and

10 (ii) minimize costs incurred by entities
11 in measuring and reporting greenhouse gas
12 emissions, emission reductions, and seques-
13 trations; and

14 (B) the regulations promulgated under
15 paragraph (1) establish procedures and proto-
16 cols necessary—

17 (i) to prevent the double-counting of
18 greenhouse gas emissions, emission reduc-
19 tions, or sequestrations reported by more
20 than 1 reporting entity;

21 (ii) to provide for corrections to errors
22 in data submitted to the database;

23 (iii) to provide for adjustment to data
24 by reporting entities that have had a sig-
25 nificant organizational change (including

1 mergers, acquisitions, and divestiture), in
2 order to maintain comparability among
3 data in the database over time;

4 (iv) to provide for adjustments to re-
5 flect new technologies or methods for
6 measuring or calculating greenhouse gas
7 emissions, emission reductions, or seques-
8 trations;

9 (v) to account for changes in registra-
10 tion of ownership of emission reductions or
11 increases in sequestration resulting from a
12 voluntary private transaction between re-
13 porting entities;

14 (vi) to prevent a covered entity from
15 avoiding the requirements of this Act by
16 reorganization into multiple entities that
17 are under common control; and

18 (vii) to clarify the responsibility for
19 reporting in the case of any facility owned
20 or controlled by more than 1 entity.

21 (3) SERIAL NUMBERS.—Through regulations
22 promulgated under paragraph (1), the Administrator
23 shall develop and implement a system that pro-
24 vides—

1 (A) for the provision of unique serial num-
2 bers to identify the registered emission reduc-
3 tions or increases in sequestration made by an
4 entity;

5 (B) for the tracking of the registered re-
6 ductions or sequestrations associated with the
7 serial numbers; and

8 (C) for such action as may be necessary to
9 prevent counterfeiting of the registered reduc-
10 tions or sequestrations.

11 **SEC. 102. INVENTORY OF GREENHOUSE GAS EMISSIONS**
12 **FOR COVERED ENTITIES.**

13 (a) IN GENERAL.—Not later than July 1st of each
14 calendar year after 2011, each covered entity shall submit
15 to the Administrator a report that states, for the pre-
16 ceding calendar year, the entity-wide greenhouse gas emis-
17 sions in the United States (as reported at the facility
18 level), including—

19 (1) the total quantity of direct emissions from
20 stationary sources, including process and fugitive
21 emissions, expressed in units of carbon dioxide
22 equivalents, except those reported under paragraph
23 (3);

24 (2) the amount of petroleum products refined
25 or refined petroleum products imported by the entity

1 for use in transportation and the amount of green-
2 house gases, expressed in units of carbon dioxide
3 equivalents, that would be emitted when these prod-
4 ucts are used for transportation, as determined by
5 the Administrator under section 121(b);

6 (3) the amount of hydrofluorocarbons,
7 perfluorocarbons, or sulfur hexafluoride, expressed
8 in units of carbon dioxide equivalents, that are pro-
9 duced or imported by the entity and will ultimately
10 be emitted in the United States, as determined by
11 the Administrator under section 121(d); and

12 (4) such other categories of greenhouse gas
13 emissions in the United States as the Administrator
14 determines in the regulations promulgated under
15 section 101(c)(1) may be practicable and useful for
16 the purposes of this Act, such as indirect emissions.

17 (b) COLLECTION AND ANALYSIS OF DATA.—The Ad-
18 ministrator shall collect and analyze data reported under
19 subsection (a) for use under this title.

20 **SEC. 103. GREENHOUSE GAS REDUCTION REGISTRATION.**

21 (a) IN GENERAL.—Subject to the requirements de-
22 scribed in subsection (b)—

23 (1) a covered entity may register greenhouse
24 gas emission reductions and increases in sequestra-

1 tion achieved after 1990 and before 2012 under this
2 section; and

3 (2) an entity that is not a covered entity may
4 register greenhouse gas emission reductions and in-
5 creases in sequestration achieved at any time since
6 1990 under this section.

7 (b) REQUIREMENTS.—

8 (1) IN GENERAL.—The requirements referred
9 to in subsection (a) are that an entity (other than
10 an entity described in paragraph (2)) shall—

11 (A) establish a baseline; and

12 (B) submit the report described in section
13 102(a)(1).

14 (2) REQUIREMENTS NOT APPLICABLE TO ENTI-
15 TIES ENTERING INTO CERTAIN AGREEMENTS.—An
16 entity that enters into an agreement with a partici-
17 pant in the registry for the purpose of a carbon se-
18 questration project may register greenhouse gas
19 emission reductions or sequestrations without being
20 required to comply with the requirements specified
21 in paragraph (1), unless that entity is required to
22 comply with those requirements by reason of an ac-
23 tivity other than the agreement.

24 (c) PROCEDURE.—

1 (1) VOLUNTARY REPORTING.—An entity de-
2 scribed in subsection (a) may submit to the Adminis-
3 trator for inclusion in the registry—

4 (A) before January 1, 2012, data that re-
5 lates to any activity that resulted in the net re-
6 duction of the greenhouse gas emissions of the
7 entity or an increase in sequestration by the en-
8 tity that were carried out during or after 1990
9 and before the establishment of the database;
10 and

11 (B) with respect to the calendar year pre-
12 ceding the calendar year in which the data is
13 submitted, data that relates to any project or
14 activity that resulted in the net reduction of the
15 greenhouse gas emissions of the entity or a net
16 increase in net sequestration by the entity.

17 (2) PROVISION OF VERIFICATION INFORMATION
18 BY REPORTING ENTITIES.—Each entity that submits
19 a report under section 102(a) or this subsection
20 shall provide information sufficient for the Adminis-
21 trator to verify, in accordance with measurement
22 and verification methods and standards developed
23 under section 104, that the report—

24 (A) has been accurately reported; and

1 (B) in the case of each voluntary report
2 under paragraph (1), represents—

3 (i) actual reductions in greenhouse
4 gas emissions relative to historic emission
5 levels of the entity; or

6 (ii) actual increases in net sequestra-
7 tion.

8 (3) FAILURE TO SUBMIT REPORT.—An entity
9 that submits data for registration of emission reduc-
10 tions or increases in sequestration in the registry
11 and that fails to submit a report required under this
12 subsection shall be prohibited from using, or allow-
13 ing another entity to use, its registered emissions re-
14 ductions or increases in sequestration to satisfy the
15 requirements of section 121.

16 (4) INDEPENDENT THIRD-PARTY
17 VERIFICATION.—To meet the requirements of this
18 section and section 104, an entity that submits a re-
19 port under this section may—

20 (A) obtain independent third-party
21 verification; and

22 (B) present the results of the third-party
23 verification to the Administrator.

24 (5) AVAILABILITY OF DATA.—

1 (A) IN GENERAL.—The Administrator
2 shall ensure that information in the database
3 is—

- 4 (i) published; and
5 (ii) accessible to the public, including
6 in electronic format on the Internet.

7 (B) EXCEPTION.—Subparagraph (A) shall
8 not apply in any case in which the Adminis-
9 trator determines that publishing or otherwise
10 making available information described in that
11 subparagraph—

- 12 (i) poses a risk to national security; or
13 (ii) discloses confidential business in-
14 formation that can not be derived from in-
15 formation that is otherwise publicly avail-
16 able and that would cause competitive
17 harm if published.

18 (6) DATA INFRASTRUCTURE.—The Adminis-
19 trator shall ensure, to the maximum extent prac-
20 ticable, that the database uses, and is integrated
21 with, Federal, State, and regional greenhouse gas
22 data collection and reporting systems.

23 (7) ADDITIONAL ISSUES TO BE CONSIDERED.—
24 In promulgating the regulations under section
25 101(c)(1) and implementing the database, the Ad-

1 administrator shall take into consideration a broad
2 range of issues involved in establishing an effective
3 database, including—

4 (A) the data and information systems and
5 measures necessary to identify, track, and
6 verify greenhouse gas emissions in a manner
7 that will encourage private sector trading and
8 exchanges;

9 (B) the greenhouse gas reduction and se-
10 questration measurement and estimation meth-
11 ods and standards applied in other countries, as
12 applicable or relevant;

13 (C) the extent to which available data on
14 fossil fuels, greenhouse gas emissions, and
15 greenhouse gas production, refining, and impor-
16 tation are adequate to implement the database;
17 and

18 (D) the differences in, and potential
19 uniqueness of, the facilities, operations, and
20 business and other relevant practices of persons
21 and entities in the private and public sectors
22 that may be expected to participate in the data-
23 base.

24 (d) ANNUAL REPORT.—The Administrator shall pub-
25 lish an annual report that—

1 (1) describes the total greenhouse gas emis-
2 sions, emission reductions, and increases in seques-
3 tration reported to the database during the year cov-
4 ered by the report;

5 (2) provides entity-by-entity and sector-by-sec-
6 tor analyses of the emissions, emission reductions,
7 and increases in sequestration reported;

8 (3) describes the atmospheric concentrations of
9 greenhouse gases;

10 (4) provides a comparison of current and past
11 atmospheric concentrations of greenhouse gases; and

12 (5) describes the activity during the year cov-
13 ered by the report in the trading of greenhouse gas
14 emission allowances.

15 **SEC. 104. MEASUREMENT AND VERIFICATION.**

16 (a) METHODS AND STANDARDS.—

17 (1) IN GENERAL.—Not later than 1 year after
18 the date of enactment of this Act, the Administrator
19 shall establish by rule, in coordination with the Sec-
20 retary, the Secretary of Energy, and the Secretary
21 of Agriculture, comprehensive measurement and
22 verification methods and standards to ensure a con-
23 sistent and technically accurate record of greenhouse
24 gas emissions, emission reductions, sequestration,

1 and atmospheric concentrations for use in the reg-
2 istry.

3 (2) REQUIREMENTS.—The methods and stand-
4 ards established under paragraph (1) shall include—

5 (A) a requirement that an entity submit-
6 ting data for the database use a continuous
7 emissions monitoring system, or another system
8 of measuring emissions, emission reductions, or
9 increases in sequestration that is determined by
10 the Administrator to provide information with
11 precision, reliability, accessibility, and timeli-
12 ness similar to that provided by a continuous
13 emissions monitoring system where techno-
14 logically feasible;

15 (B) establishment of standardized meas-
16 urement and verification practices for reports
17 made by all entities participating in the reg-
18 istry, taking into account—

19 (i) protocols and standards in use by
20 entities requiring or desiring to participate
21 in the registry as of the date of develop-
22 ment of the methods and standards under
23 paragraph (1);

24 (ii) boundary issues, such as leakage;

1 (iii) avoidance of double counting of
2 greenhouse gas emissions, emission reduc-
3 tions, and increases in sequestration; and

4 (iv) such other factors as the Admin-
5 istrator, in consultation with the Secretary,
6 the Secretary of Energy, and the Secretary
7 of Agriculture, determines to be appro-
8 priate;

9 (C) establishment of methods of—

10 (i) estimating greenhouse gas emis-
11 sions, for those cases in which the Admin-
12 istrator determines that methods of moni-
13 toring or measuring such emissions with
14 precision, reliability, accessibility, and
15 timeliness similar to that provided by a
16 continuous emissions monitoring system
17 are not technologically feasible at present;
18 and

19 (ii) reporting the accuracy of such es-
20 timations;

21 (D) establishment of measurement and
22 verification standards applicable to actions
23 taken to reduce or sequester greenhouse gas
24 emissions;

1 (E) in coordination with the Secretary of
2 Agriculture, standards to measure the results of
3 the use of carbon sequestration, including—

4 (i) soil carbon sequestration practices;

5 (ii) forest preservation and reforest-
6 ation activities that adequately address the
7 issues of permanence, leakage, and
8 verification; and

9 (iii) production of cellulosic biomass
10 crops;

11 (F) establishment of standards for obtain-
12 ing the Administrator's approval of the suit-
13 ability of geological storage sites that include
14 evaluation of both the geology of the site and
15 the entity's capacity to manage the site;

16 (G) establishment of other features that,
17 as determined by the Administrator, will allow
18 entities to adequately establish a fair and reli-
19 able measurement and reporting system; and

20 (H) establishment of such other measure-
21 ment and verification standards as the Adminis-
22 trator, in consultation with the Secretary of Ag-
23 riculture, the Secretary, and the Secretary of
24 Energy, determines to be appropriate.

1 (b) PUBLIC PARTICIPATION.—The Administrator
2 shall make available to the public for comment, in draft
3 form and for a period of at least 90 days, the methods
4 and standards developed under subsection (a) before
5 issuing final regulations under this section.

6 (c) EXPERTS AND CONSULTANTS.—

7 (1) IN GENERAL.—The Administrator may ob-
8 tain the services of experts and consultants in the
9 private and nonprofit sectors for the purpose of car-
10 rying out this section in accordance with section
11 3109 of title 5, United States Code, in the areas of
12 greenhouse gas measurement, certification, and
13 emission trading.

14 (2) AVAILABLE ARRANGEMENTS.—In obtaining
15 any service described in paragraph (1), the Adminis-
16 trator may use any available grant, contract, cooper-
17 ative agreement, or other arrangement authorized by
18 law.

19 (d) REVIEW AND REVISION.—The Administrator
20 shall periodically review, and revise as necessary, the
21 methods and standards developed under subsection (a).

1 **Subtitle B—Mandating Emission**
2 **Reductions**

3 **SEC. 121. COVERED ENTITIES MUST SUBMIT ALLOWANCES**
4 **FOR EMISSIONS.**

5 (a) IN GENERAL.—Beginning with calendar year
6 2012—

7 (1) each covered entity in the electric power, in-
8 dustrial, and commercial sectors shall submit to the
9 Administrator one tradeable allowance for every
10 metric ton of greenhouse gases, measured in units of
11 carbon dioxide equivalents, that it emits from sta-
12 tionary sources, except those described in paragraph
13 (2);

14 (2) each producer or importer of
15 hydrofluorocarbons, perfluorocarbons, or sulfur
16 hexafluoride that is a covered entity shall submit to
17 the Administrator one tradeable allowance for every
18 metric ton of hydrofluorocarbons, perfluorocarbons,
19 or sulfur hexafluoride, measured in units of carbon
20 dioxide equivalents, that it produces or imports and
21 that are deemed under subsection (d) to be emitted
22 in the United States; and

23 (3) each petroleum product refiner or importer
24 that is a covered entity shall submit one tradeable
25 allowance for every unit of petroleum product it sells

1 that will produce one metric ton of greenhouse gases
2 when used for transportation, measured in units of
3 carbon dioxide equivalents, as determined by the Ad-
4 ministrator under subsection (b).

5 (b) DETERMINATION OF TRANSPORTATION SECTOR
6 AMOUNT.—For the transportation sector, the Adminis-
7 trator shall determine the amount of greenhouse gases,
8 measured in units of carbon dioxide equivalents, that will
9 be deemed to be emitted when petroleum products are
10 used for transportation.

11 (c) EXCEPTION FOR CERTAIN DEPOSITED EMIS-
12 SIONS.—Notwithstanding subsection (a), a covered entity
13 is not required to submit a tradeable allowance for any
14 amount of greenhouse gas that would otherwise have been
15 emitted from a facility under the ownership or control of
16 that entity if—

17 (1) the emission is deposited in a geological
18 storage facility approved by the Administrator de-
19 scribed in section 104(a)(2)(F); and

20 (2) the entity agrees to submit tradeable allow-
21 ances for any portion of the deposited emission that
22 is subsequently emitted from that facility.

23 (d) DETERMINATION OF HYDROFLUOROCARBON,
24 PERFLUOROCARBON, AND SULFUR HEXAFLUORIDE
25 AMOUNT.—The Administrator shall determine the

1 amounts of hydrofluorocarbons, perfluorocarbons, or sul-
2 fur hexafluoride, measured in units of carbon dioxide
3 equivalents, that will be deemed to be emitted for purposes
4 of this Act.

5 (e) ALLOWANCES RETIRED.—Upon receiving a
6 tradeable allowance pursuant to a requirement under this
7 subtitle, the Administrator shall retire the serial number
8 assigned to that allowance.

9 **SEC. 122. COMPLIANCE.**

10 (a) SOURCE OF TRADEABLE ALLOWANCES USED.—
11 A covered entity may use a tradeable allowance to meet
12 the requirements of this subtitle without regard to whether
13 the tradeable allowance was allocated to it under subtitle
14 D or acquired from another entity or the Climate Change
15 Credit Corporation established under section 201.

16 (b) VERIFICATION BY ADMINISTRATOR.—At various
17 times during each year, the Administrator shall determine
18 whether each covered entity has met the requirements of
19 this subtitle. In making that determination, the Adminis-
20 trator shall take into account the tradeable allowances
21 submitted by the covered entity to the Administrator.

22 **SEC. 123. EXEMPTION OF SOURCE CATEGORIES.**

23 (a) IN GENERAL.—The Administrator may grant an
24 exemption from the requirements of this subtitle to a
25 source category if the Administrator determines, after

1 public notice and comment, that it is not feasible to meas-
2 ure or estimate emissions from that source category, until
3 such time as measurement or estimation becomes feasible.

4 (b) REDUCTION OF LIMITATIONS.—If the Adminis-
5 trator exempts a source category under subsection (a), the
6 Administrator shall also reduce the total tradeable allow-
7 ances under section 124(a)(1), (2), (3), or (4), as applica-
8 ble, by the amount of greenhouse gas emissions that the
9 exempted source category emitted in calendar year 2000,
10 as identified in the 2000 Inventory.

11 (c) LIMITATION ON EXEMPTION.—The Administrator
12 may not grant an exemption under subsection (a) to car-
13 bon dioxide produced from fossil fuel.

14 **SEC. 124. ESTABLISHMENT OF TRADEABLE ALLOWANCES.**

15 (a) IN GENERAL.—The Administrator shall promul-
16 gate regulations to establish tradeable allowances, denomi-
17 nated in units of carbon dioxide equivalents, as follows:

18 (1) For the first 8 calendar years beginning
19 after 2011, the number of tradeable allowances shall
20 be equal to the number of metric tons of greenhouse
21 gases emitted in 2006, measured in units of carbon
22 dioxide equivalents, reduced by the amount of emis-
23 sions of greenhouse gases in calendar year 2012
24 from noncovered entities, as calculated by the Ad-
25 ministrator.

1 (2) For the first 10 calendar years beginning
2 after 2019, the number of tradeable allowances shall
3 be equal to 85 percent of the number of metric tons
4 of greenhouse gases emitted in 2006, measured in
5 units of carbon dioxide equivalents, reduced by the
6 amount of emissions of greenhouse gases in calendar
7 year 2020 from noncovered entities, as calculated by
8 the Administrator.

9 (3) For the first 10 calendar years beginning
10 after 2029, the number of tradeable allowances shall
11 be equal to 63 percent of the number of metric tons
12 of greenhouse gases emitted in 2006, measured in
13 units of carbon dioxide equivalents, reduced by the
14 amount of emissions of greenhouse gases in calendar
15 year 2030 from noncovered entities, as calculated by
16 the Administrator.

17 (4) For calendar years beginning after 2049,
18 the number of tradeable allowances shall be equal to
19 25 percent of the number of metric tons of green-
20 house gases emitted in 2006, measured in units of
21 carbon dioxide equivalents, reduced by the amount
22 of emissions of greenhouse gases in each such cal-
23 endar year from noncovered entities, as calculated
24 by the Administrator.

1 (b) SERIAL NUMBERS.—The Administrator shall as-
2 sign a unique serial number to each tradeable allowance
3 established under subsection (a), and shall take such ac-
4 tion as may be necessary to prevent counterfeiting of
5 tradeable allowances.

6 (c) NATURE OF TRADEABLE ALLOWANCES.—A
7 tradeable allowance is not a property right, and nothing
8 in this title or any other provision of law limits the author-
9 ity of the United States to terminate or limit a tradeable
10 allowance.

11 (d) NONCOVERED ENTITY.—For purposes of this
12 section only, the term “noncovered entity” means an enti-
13 ty that—

14 (1) owns or controls a source of greenhouse gas
15 emissions in the electric power, industrial, or com-
16 mercial sector of the United States economy (as de-
17 fined in the Inventory), refines or imports refined
18 petroleum products for use in transportation, or pro-
19 duces or imports hydrofluorocarbons,
20 perfluorocarbons, or sulfur hexafluoride; and

21 (2) is not a covered entity.

22 **SEC. 125. INTERNATIONAL RESERVE ALLOWANCE PRO-**
23 **GRAM.**

24 (a) PURPOSES.—The purposes of this section are—

1 (1) to ensure that greenhouse gas emissions oc-
2 curring outside the United States do not undermine
3 the objectives of the United States to reduce green-
4 house gas emissions and to stabilize greenhouse gas
5 concentrations in the atmosphere at a level that
6 would prevent dangerous anthropogenic interference
7 with the climate system;

8 (2) to ensure that manufactured products pro-
9 duced in the United States remain competitive, in
10 international and domestic markets, with comparable
11 products produced in foreign nations that do not
12 have restrictions on greenhouse gas emissions com-
13 parable to those described in section 124; and

14 (3) to encourage effective international action
15 to achieve the purposes stated in paragraphs (1) and
16 (2) through procedures negotiated between the
17 United States and other countries or through meas-
18 ures taken by the United States that comply with
19 applicable international agreements.

20 (b) INTERNATIONAL NEGOTIATIONS.—

21 (1) FINDING.—Congress finds that the pur-
22 poses described in subsection (a) can be most effec-
23 tively addressed and achieved through procedures
24 negotiated between the United States and other
25 countries.

1 (2) NEGOTIATING OBJECTIVE.—To the extent
2 that the procedures described in paragraph (1) in-
3 volve measures affecting international trade in goods
4 or services, the climate change negotiating objective
5 of the United States shall be to conclude agreements
6 on the reduction of greenhouse gas emissions that
7 will help to achieve the purposes described in sub-
8 section (a).

9 (c) INTERNATIONAL EQUITY PROGRAM.—

10 (1) ESTABLISHMENT.—The President may es-
11 tablish a program to require importers to pay the
12 value of greenhouse gases (based on the market
13 price of tradeable allowances issued under this Act)
14 emitted during the production of goods or services
15 imported into the United States from any foreign
16 nation other than those described in paragraph (2).

17 (2) NATIONS NOT SUBJECT TO PROGRAM.—The
18 foreign nations referred to in paragraph (1) are
19 those that—

20 (A) are a party to an agreement with the
21 United States that achieves the purposes of this
22 section; or

23 (B) impose restrictions on greenhouse gas
24 emissions that are comparable to such restric-
25 tions imposed in the United States.

1 (3) NEGOTIATIONS.—The President shall not
2 impose the requirements of a program established
3 under paragraph (1) on imports from any foreign
4 nation unless negotiations to achieve an agreement
5 described in paragraph (2)(A) have been attempted
6 by the United States with that foreign nation.

7 (d) CONSISTENCY WITH INTERNATIONAL AGREE-
8 MENTS.—A program established under subsection (c) shall
9 be designed to ensure that the United States complies with
10 all applicable international agreements.

11 **SEC. 126. PENALTIES.**

12 Any covered entity that fails to meet the require-
13 ments of this subtitle for a year shall be liable for a civil
14 penalty, payable to the Administrator, equal to thrice the
15 market value (determined as of the last day of the year
16 at issue) of the tradeable allowances that would be nec-
17 essary for that covered entity to meet those requirements
18 on the date that the tradeable allowances were due.

19 **Subtitle C—Controlling**
20 **Compliance Costs**

21 **PART 1—USE OF ALLOWANCES**

22 **SEC. 141. TRADING.**

23 (a) IN GENERAL.—Tradeable allowances may be sold,
24 exchanged, purchased, retired, or used as provided in this
25 Act.

1 (b) INTERSECTOR TRADING.—Covered entities may
2 purchase or otherwise acquire tradeable allowances from
3 other covered sectors to satisfy the requirements of this
4 title, in addition to those from within their own sector.

5 **SEC. 142. BANKING.**

6 Tradeable allowances not used to satisfy the require-
7 ments of this title in a year may be used to satisfy the
8 requirements in a later year.

9 **SEC. 143. BORROWING AGAINST FUTURE REDUCTIONS.**

10 (a) IN GENERAL.—The Administrator shall establish
11 a program under which a covered entity may—

12 (1) receive a credit in the current calendar year
13 for anticipated reductions in emissions in a future
14 calendar year; and

15 (2) use the credit in lieu of a tradeable allow-
16 ance to meet the requirements of this title for the
17 current calendar year, subject to the limitation im-
18 posed by subsection (b).

19 (b) DETERMINATION OF TRADEABLE ALLOWANCE
20 CREDITS.—

21 (1) IN GENERAL.—Except as provided in para-
22 graph (2), the Administrator may make credits
23 available under subsection (a) only for anticipated
24 reductions in emissions that—

1 (A) are attributable to the realization of
2 capital investments in equipment, the construc-
3 tion, reconstruction, or acquisition of facilities,
4 or the deployment of new technologies—

5 (i) for which the covered entity has
6 executed a binding contract and secured,
7 or applied for, all necessary permits and
8 operating or implementation authority;

9 (ii) that will not become operational
10 within the current calendar year; and

11 (iii) that will become operational and
12 begin to reduce emissions from the covered
13 entity within 5 years after the year in
14 which the credit is used; and

15 (B) will be realized within 5 years after the
16 year in which the credit is used.

17 (2) BOARD.—The Administrator shall make
18 credits available under subsection (a) as instructed
19 by the Board under section 153(a)(1) or (2)(A).

20 (c) CARRYING COST.—If a covered entity uses a cred-
21 it under this section to meet the requirements of this title
22 for a calendar year (in this subsection referred to as the
23 use year), the tradeable allowance requirement for the
24 year from which the credit was taken (in this subsection

1 referred to as the source year) shall be increased by an
2 amount equal to—

3 (1) 10 percent for each credit borrowed from
4 the source year; multiplied by

5 (2) the number of years after the use year that
6 the source year occurs.

7 (d) MAXIMUM BORROWING PERIOD.—A credit from
8 a year beginning more than 5 years after the current year
9 may not be used to meet the requirements of this title
10 for the current year.

11 (e) FAILURE TO ACHIEVE REDUCTIONS GENER-
12 ATING CREDIT.—If a covered entity that uses a credit
13 under this section fails to achieve the anticipated reduc-
14 tion for which the credit was granted for the year from
15 which the credit was taken, then—

16 (1) the covered entity's requirements under this
17 Act for that year shall be increased by the amount
18 of the credit, plus the amount determined under
19 subsection (c);

20 (2) any tradeable allowances submitted by the
21 covered entity for that year shall be counted first
22 against the increase in those requirements; and

23 (3) the covered entity may not use credits
24 under this section to meet the increased require-
25 ments.

1 **SEC. 144. DOMESTIC OFFSETS.**

2 (a) ALTERNATIVE MEANS OF COMPLIANCE.—A cov-
3 ered entity may satisfy up to 15 percent of its total allow-
4 ance submission requirement under section 121 by any
5 combination of the following:

6 (1) Submitting tradeable allowances from an-
7 other nation's market in greenhouse gas emissions
8 if—

9 (A) the Administrator determines that the
10 other nation's system for trading in greenhouse
11 gas emissions is complete, accurate, and trans-
12 parent and reviews that determination at least
13 once every 5 years;

14 (B) the other nation has adopted enforce-
15 able limits on its greenhouse gas emissions
16 which the tradeable allowances were issued to
17 implement; and

18 (C) the covered entity certifies that the
19 tradeable allowance has been retired unused in
20 the other nation's market.

21 (2) Submitting a registered net increase in se-
22 questration, as registered in the database, adjusted,
23 if necessary, to comply with the accounting stand-
24 ards and methods described in subsection (c). An in-
25 crease in sequestration submitted under this para-

1 graph need not have been registered by the covered
2 entity submitting it.

3 (3) Submitting a greenhouse gas emissions re-
4 duction (other than a registered net increase in se-
5 questration) that was registered in the database by
6 a person that is not a covered entity.

7 (4) Submitting credits obtained by the submit-
8 ting covered entity from the Administrator under
9 section 143 or section 145.

10 (b) DEDICATED PROGRAM FOR SEQUESTRATION IN
11 AGRICULTURAL SOILS.—If a covered entity satisfies a full
12 15 percent of its total allowance submission requirements
13 pursuant to subsection (a), it shall satisfy up to 1.5 per-
14 cent of its total allowance submission requirement by sub-
15 mitting registered net increases in sequestration in agri-
16 cultural soils, as registered in the database, adjusted, if
17 necessary, to comply with the accounting standards and
18 methods described in subsection (c).

19 (c) SEQUESTRATION ACCOUNTING.—

20 (1) SEQUESTRATION ACCOUNTING.—If a cov-
21 ered entity uses a registered net increase in seques-
22 tration to satisfy the requirements of section 121 for
23 any year, that covered entity shall submit informa-
24 tion to the Administrator every 5 years thereafter
25 sufficient to allow the Administrator to determine,

1 using the methods and standards created under sec-
2 tion 104, whether that net increase in sequestration
3 still exists. The covered entity shall offset any loss
4 of sequestration by submitting additional tradeable
5 allowances of equivalent amount in the calendar year
6 following that determination.

7 (2) REGULATIONS REQUIRED.—The Adminis-
8 trator, in coordination with the Secretary of Agri-
9 culture, the Secretary of Energy, and the Secretary,
10 shall issue regulations establishing the sequestration
11 accounting rules for all classes of sequestration
12 projects.

13 (3) CRITERIA FOR REGULATIONS.—In issuing
14 regulations under this subsection, the Administrator
15 shall use the following criteria:

16 (A) If the range of possible amounts of net
17 increase in sequestration for a particular class
18 of sequestration project is not more than 10
19 percent of the median of that range, the
20 amount of sequestration credited shall be equal
21 to the median value of that range.

22 (B) If the range of possible amounts of net
23 increase in sequestration for a particular class
24 of sequestration project is more than 10 percent
25 of the median of that range, the amount of se-

1 sequestration awarded shall be equal to the fifth
2 percentile of that range.

3 (C) The regulations shall include proce-
4 dures for accounting for potential leakage from
5 sequestration projects and for ensuring that
6 any registered increase in sequestration is in
7 addition that which would have occurred if this
8 Act had not been enacted.

9 (4) UPDATES.—The Administrator shall update
10 the sequestration accounting rules for every class of
11 sequestration project at least once every 5 years.

12 **SEC. 145. INTERNATIONAL CREDITS PLAN.**

13 (a) ESTABLISHMENT.—The Administrator shall es-
14 tablish a program the purposes of which are—

15 (1) to assist developing countries in achieving
16 sustainable development and in contributing to the
17 objective of reducing the greenhouse gas emissions;
18 and

19 (2) to assist covered entities in achieving com-
20 pliance with the requirements of section 121.

21 (b) PROGRAM COMPONENTS.—

22 (1) IN GENERAL.—The program shall provide
23 for the earning of tradable allowances by covered en-
24 tities from project activities in developing countries
25 resulting in certified emission reductions. The Ad-

1 administrator shall ensure tradability of emission re-
2 ductions earned under this program with reductions
3 earned under other similar international programs.

4 (2) APPROVAL CRITERIA AND REVIEW PROC-
5 ESS.—By no later than 2011, the Administrator
6 shall—

7 (A) develop criteria for the approval of
8 projects submitted for review; and

9 (B) establish a review process for sub-
10 mitted projects that includes a procedure for
11 providing the results of the review, together
12 with an explanation of the reasons for approv-
13 ing or denying approval of a submitted project,
14 to the entity that submitted the project.

15 (3) FEES.—The Administrator may charge an
16 application fee for the review of project proposals to
17 cover the administrative costs of the program.

18 (4) CERTIFICATION OF RESULTS REQUIRED.—
19 The Administrator shall require entities partici-
20 pating in this program to obtain independent third-
21 party verification that—

22 (A) participation by all parties involved in
23 the project is voluntary; and

24 (B) the project produces—

1 (i) real, measurable, and long-term
2 benefits related to the mitigation of climate
3 change; and

4 (ii) reductions in emissions that are
5 additional to any that would occur in the
6 absence of the certified project activity.

7 (c) USE OF ALLOWANCES.—Subject to the limitation
8 in section 144(a), tradable allowances earned under the
9 program may be used to meet the requirements of section
10 121.

11 (d) STUDY.—Within 3 years after the date of enact-
12 ment of this Act, the Administrator, in coordination with
13 the Secretary, shall conduct a study of the impacts of the
14 compliance cost reduction measures of this section and
15 section 144 on achieving the purposes of this Act. The
16 Administrator shall submit the results of the study to the
17 Congress along with any recommendations the Adminis-
18 trator considers appropriate.

19 **SEC. 146. OUTREACH INITIATIVE ON REVENUE ENHANCE-**
20 **MENT FOR AGRICULTURAL PRODUCERS.**

21 (a) ESTABLISHMENT.—The Secretary of Agriculture,
22 acting through the Chief of the Natural Resources Con-
23 servation Service, the Chief of the Forest Service, the Ad-
24 ministrator of the Cooperative State Research, Education,
25 and Extension Service, and land-grant colleges and univer-

1 sities, in consultation with the Administrator and the
2 heads of other appropriate departments and agencies,
3 shall establish an outreach initiative to provide informa-
4 tion to agricultural producers, agricultural organizations,
5 foresters, and other landowners about opportunities under
6 sections 144 and 145 to earn new revenue.

7 (b) COMPONENTS.—The initiative under this sec-
8 tion—

9 (1) shall be designed to ensure that, to the
10 maximum extent practicable, agricultural organiza-
11 tions and individual agricultural producers, for-
12 esters, and other landowners receive detailed prac-
13 tical information about—

14 (A) opportunities to earn new revenue
15 under sections 144 and 145;

16 (B) measurement protocols, monitoring,
17 verifying, inventorying, registering, insuring,
18 and marketing offsets under this title;

19 (C) emerging domestic and international
20 markets for energy crops, allowances, and off-
21 sets; and

22 (D) local, regional, and national databases
23 and aggregation networks to facilitate achieve-
24 ment, measurement, registration, and sales of
25 offsets;

1 (2) shall provide—

2 (A) outreach materials, including the hand-
3 book published under subsection (c), to inter-
4 ested parties;

5 (B) workshops; and

6 (C) technical assistance; and

7 (3) may include the creation and development
8 of regional marketing centers or coordination with
9 existing centers (including centers within the Nat-
10 ural Resources Conservation Service or the Coopera-
11 tive State Research, Education, and Extension Serv-
12 ice or at land-grant colleges and universities).

13 (c) HANDBOOK.—

14 (1) IN GENERAL.—Not later than 2 years after
15 the date of enactment of this Act, the Secretary of
16 Agriculture, in consultation with the Administrator
17 and after an opportunity for public input, shall pub-
18 lish a handbook for use by agricultural producers,
19 agricultural cooperatives, foresters, other land-
20 owners, offset buyers, and other stakeholders that
21 provides easy-to-use guidance on achieving, report-
22 ing, registering, and marketing offsets.

23 (2) DISTRIBUTION.—The Secretary of Agri-
24 culture shall ensure, to the maximum extent prac-
25 ticable, that the handbook is distributed widely

1 through land-grant colleges and universities and
2 other appropriate institutions.

3 **PART 2—CARBON MARKET EFFICIENCY BOARD**

4 **SEC. 151. ESTABLISHMENT OF BOARD.**

5 (a) ESTABLISHMENT.—There is established a board,
6 to be known as the “Carbon Market Efficiency Board”.

7 (b) PURPOSES.—The purposes of the Board are—

8 (1) to promote the achievement of the environ-
9 mental objectives of the United States, including na-
10 tional mandatory greenhouse gas emissions cap and
11 reduction targets in this or any other Act;

12 (2) to observe the national greenhouse gas
13 tradeable allowance market and evaluate periods
14 during which the cost of tradeable allowances pro-
15 vided under this Act or any other Federal law might
16 pose significant harm to the economy;

17 (3) to provide temporary, short-term relief at
18 any time at which a market program for tradeable
19 allowances under this Act or other Federal law is de-
20 termined to pose a significant harm to the economy,
21 by using the cost relief measures prescribed under
22 section 153; and

23 (4) to submit to the President and Congress
24 quarterly reports under section 152(c).

25 (c) MEMBERSHIP.—

1 (1) COMPOSITION.—The Board shall be com-
2 posed of 7 members, who are citizens of the United
3 States, to be appointed by the President, by and
4 with the advice and consent of the Senate.

5 (2) REQUIREMENTS.—In appointing members
6 of the Board under paragraph (1), the President
7 shall—

8 (A) ensure fair representation of the finan-
9 cial, agricultural, industrial, and commercial
10 sectors, and the geographical regions, of the
11 United States and include a representative of
12 consumer interests; and

13 (B) appoint not more than 1 member from
14 each such geographical region.

15 (3) COMPENSATION.—

16 (A) IN GENERAL.—A member of the Board
17 shall be compensated at a rate equal to the
18 daily equivalent of the annual rate of basic pay
19 prescribed for level II of the Executive Schedule
20 under section 5313 of title 5, United States
21 Code, for each day (including travel time) dur-
22 ing which the member is engaged in the per-
23 formance of the duties of the Board.

24 (B) CHAIRPERSON.—The Chairperson of
25 the Board shall be compensated at a rate equal

1 to the daily equivalent of the annual rate of
2 basic pay prescribed for level I of the Executive
3 Schedule under section 5312 of title 5, United
4 States Code, for each day (including travel
5 time) during which the member is engaged in
6 the performance of the duties of the Board.

7 (4) PROHIBITIONS.—

8 (A) CONFLICTS OF INTEREST.—An indi-
9 vidual employed by, or holding any official rela-
10 tionship (including any shareholder) with, any
11 entity engaged in the generation, transmission,
12 distribution, or sale of energy, or an individual
13 who has any pecuniary interest in the genera-
14 tion, transmission, distribution, or sale of en-
15 ergy, shall not be appointed to the Board under
16 this subsection.

17 (B) NO OTHER EMPLOYMENT.—A member
18 of the Board shall not hold any other employ-
19 ment during the term of service of the member.

20 (d) TERM; VACANCIES.—

21 (1) TERM.—

22 (A) IN GENERAL.—The term of a member
23 of the Board shall be 14 years, except that the
24 members first appointed to the Board shall be

1 appointed for terms in a manner that ensures
2 that—

3 (i) the term of not more than 1 mem-
4 ber shall expire during any 2-year period;
5 and

6 (ii) no member serves a term of more
7 than 14 years.

8 (B) OATH OF OFFICE.—A member shall
9 take the oath of office of the Board by not later
10 than 15 days after the date on which the mem-
11 ber is appointed under subsection (c)(1).

12 (C) REMOVAL.—

13 (i) IN GENERAL.—A member may be
14 removed from the Board on determination
15 of the President for cause.

16 (ii) NOTIFICATION.—The President
17 shall submit to Congress a notification of
18 any determination by the President to re-
19 move a member of the Board for cause
20 under clause (i).

21 (2) VACANCIES.—

22 (A) IN GENERAL.—A vacancy on the
23 Board—

24 (i) shall not affect the powers of the
25 Board; and

1 (ii) shall be filled in the same manner
2 as the original appointment was made.

3 (B) SERVICE UNTIL NEW APPOINTMENT.—

4 A member of the Board the term of whom has
5 expired or otherwise been terminated shall con-
6 tinue to serve until the date on which a replace-
7 ment is appointed under subparagraph (A)(ii),
8 as the President determines to be appropriate.

9 (e) CHAIRPERSON AND VICE-CHAIRPERSON.—Of
10 members of the Board, the President shall appoint—

11 (1) 1 member to serve as Chairperson of the
12 Board for a term of 4 years; and

13 (2) 1 member to serve as Vice-Chairperson of
14 the Board for a term of 4 years.

15 (f) MEETINGS.—

16 (1) INITIAL MEETING.—The Board shall hold
17 the initial meeting of the Board as soon as prac-
18 ticable after the date on which all members have
19 been appointed to the Board under subsection
20 (e)(1).

21 (2) PRESIDING OFFICER.—A meeting of the
22 Board shall be presided over by—

23 (A) the Chairperson;

24 (B) in any case in which the Chairperson
25 is absent, the Vice-Chairperson; or

1 (C) in any case in which the Chairperson
2 and Vice-Chairperson are absent, a chairperson
3 pro tempore, to be elected by the members of
4 the Board.

5 (3) QUORUM.—Four members of the Board
6 shall constitute a quorum for a meeting of the
7 Board.

8 (4) OPEN MEETINGS.—The Board shall be sub-
9 ject to section 552b of title 5, United States Code
10 (commonly known as the “Government in the Sun-
11 shine Act”).

12 **SEC. 152. DUTIES.**

13 (a) INFORMATION GATHERING.—

14 (1) AUTHORITY.—The Board shall collect and
15 analyze relevant market information to promote a
16 full understanding of the dynamics of the green-
17 house gas emission tradeable allowance market.

18 (2) INFORMATION.—The Board shall gather
19 such information as the Board determines to be ap-
20 propriate regarding the status of the market de-
21 scribed in paragraph (1), including information re-
22 lating to—

23 (A) tradeable allowance allocation and
24 availability;

25 (B) the price of tradeable allowances;

1 (C) macroeconomic and microeconomic ef-
2 fects of unexpected significant increases in
3 emission allowance prices, or shifts in the emis-
4 sion allowance market, should those increases
5 or shifts occur;

6 (D) economic effect thresholds that could
7 warrant implementation of cost relief measures
8 described in section 153(a) after the initial 2-
9 year period described in section 153(a)(1);

10 (E) in the event any cost relief measures
11 described in section 153(a) are taken, the ef-
12 fects of those measures on the market;

13 (F) maximum levels of cost relief measures
14 that are necessary to achieve avoidance of eco-
15 nomic harm and preserve achievement of the
16 purposes of this Act; and

17 (G) the success of the market in promoting
18 achievement of the purposes of this Act and any
19 other laws of the United States.

20 (b) STUDY.—Not later than January 1, 2014, the
21 Board shall submit to Congress a report describing the
22 status of the initial market for tradeable allowances to
23 emit greenhouse gases in the United States, specifically
24 with respect to volatility within the market and the aver-

1 age price of tradeable allowances during the 90-day period
2 immediately preceding such report.

3 (c) REPORTS.—The Board shall submit to the Presi-
4 dent and Congress quarterly reports—

5 (1) describing—

6 (A) the status of markets for tradeable al-
7 lowances provided under this Act or other Fed-
8 eral law;

9 (B) the economic effects of the markets;

10 (C) regional, industrial, consumer, and en-
11 ergy investment responses to the markets;

12 (D) any corrective measures that should be
13 carried out to relieve excessive costs of the mar-
14 kets; and

15 (E) plans to compensate for those meas-
16 ures;

17 (2) describing any cost relief measures carried
18 out under section 153;

19 (3) that are timely and succinct to ensure reg-
20 ular monitoring of market trends; and

21 (4) that are prepared independently by the
22 Board, and not in partnership with Federal agen-
23 cies.

24 **SEC. 153. POWERS.**

25 (a) COST RELIEF MEASURES.—

1 (1) INITIAL PERIOD.—During 2012 and 2013,
2 if the Board determines that the average daily clos-
3 ing price of tradeable allowances during any 90-day
4 period exceeds the upper range of the estimate pro-
5 vided under section 154, the Board shall instruct the
6 Administrator to increase the quantity of credits
7 under section 143 that covered entities may receive.

8 (2) PERMANENT AUTHORITY.—Beginning on
9 January 1, 2014, if the Board determines that the
10 tradeable allowance market poses a significant harm
11 to the economy of the United States, the Board may
12 carry out 1 or more of the following cost relief meas-
13 ures to ensure a functioning, stable, and efficient
14 market for tradeable allowances to emit greenhouse
15 gases:

16 (A) Instruct the Administrator to increase
17 the quantity of credits under section 143 that
18 covered entities may receive.

19 (B) Expand the period during which a cov-
20 ered entity may repay the allocating agency for
21 a tradeable allowance provided under subpara-
22 graph (A).

23 (C) Lower the percentage of carrying costs
24 required under section 143(c)(1) with respect to
25 tradeable allowances provided under subpara-

1 graph (A), to a level not less than the percent-
2 age of the Moody's seasoned Aaa corporate
3 bond rate most recently published in the Fed-
4 eral Reserve Statistical Release on selected in-
5 terest rates, commonly referred to as the H.15
6 release.

7 (3) SUBSEQUENT ACTIONS.—On determination
8 by the Board to carry out a cost relief measure pur-
9 suant to paragraph (1) or (2), the Board shall—

10 (A) allow the cost relief measure to be
11 used only during the applicable allocation year;

12 (B) exercise the cost relief measure incre-
13 mentally, and only as needed to avoid signifi-
14 cant economic harm during the applicable allo-
15 cation year; and

16 (C) evaluate, at the end of the applicable
17 allocation year, actions that need to be carried
18 out during subsequent years to compensate for
19 any cost relief measure carried out during the
20 applicable allocation year.

21 (4) INCREASE IN QUANTITY OF ALLOWANCES.—

22 (A) IN GENERAL.—If the Board carries
23 out a cost relief measure pursuant to paragraph
24 (1) or (2) that results in the expansion of bor-
25 rowing of tradeable allowances under Federal

1 law, and if the Board determines that the aver-
2 age daily closing price of tradeable allowances
3 for the 90-day period beginning on the date on
4 which borrowing is so expanded exceeds the
5 upper limit of the range of the estimate pro-
6 vided under section 154, the Board shall in-
7 struct the Administrator to—

8 (i) increase the total quantity of
9 tradeable allowances provided to all cov-
10 ered entities in accordance with this para-
11 graph; and

12 (ii) reduce the quantity of tradeable
13 allowances to be provided for a subsequent
14 year or years by the same amount.

15 (B) REQUIREMENTS.—An increase in the
16 quantity of tradeable allowances under subpara-
17 graph (A) shall—

18 (i) apply to all covered entities;

19 (ii) be allocated in accordance with
20 the applicable formulas and procedures es-
21 tablished under this Act;

22 (iii) be equal to not more than 5 per-
23 cent of the total quantity of tradeable al-
24 lowances otherwise available for the appli-
25 cable allocation year under this Act;

1 (iv) be provided only during the 6-
2 month period immediately following a de-
3 termination of the Board under subpara-
4 graph (A); and

5 (v) specify the subsequent year or
6 years in which the quantity of tradeable al-
7 lowances will be reduced in accordance
8 with subparagraph (A), which shall be not
9 more than 15 years after the year in which
10 the increase in the quantity of tradeable al-
11 lowances is provided.

12 (b) LIMITATIONS.—Nothing in this section gives the
13 Board the authority—

14 (1) to consider or prescribe entity-level petitions
15 for relief from the costs of a tradeable allowance al-
16 location or trading program established under this
17 Act or other Federal law;

18 (2) to carry out any investigative or punitive
19 process under the jurisdiction of any Federal or
20 State court;

21 (3) to interfere with, modify, or adjust any
22 tradeable allowance allocation scheme established
23 under this Act or other Federal law; or

24 (4) to modify the goals of any limit on green-
25 house gas emissions.

1 **SEC. 154. ESTIMATE OF COSTS TO ECONOMY OF LIMITING**
2 **GREENHOUSE GAS EMISSIONS.**

3 (a) INITIAL REPORT.—The Administrator shall enter
4 into an arrangement with the National Academy of
5 Sciences for a report, to be submitted to Congress not
6 later than December 31, 2011. Such report shall, using
7 economic and scientific analyses, describe the projected
8 price range at which tradeable allowances are expected to
9 trade during the period with respect to which this Act ap-
10 plies.

11 (b) REASSESSMENTS.—The Board may instruct the
12 Administrator to arrange for a reassessment and new re-
13 port under subsection (a) as necessary.

14 **Subtitle D—Allocation of Tradeable**
15 **Allowances**

16 **SEC. 161. DETERMINATION OF TRADEABLE ALLOWANCE**
17 **ALLOCATIONS.**

18 (a) IN GENERAL.—The Administrator shall annually
19 determine—

20 (1) the amount of tradeable allowances to be al-
21 located to each covered sector; and

22 (2) the amount of tradeable allowances to be al-
23 located to the Climate Change Credit Corporation
24 established under section 201.

1 (b) ALLOCATION FACTORS.—In making the deter-
2 mination required by subsection (a), the Administrator
3 shall consider—

4 (1) the distributive effect of the allocations on
5 household income and net worth of individuals;

6 (2) the impact of the allocations on corporate
7 income, taxes, and asset value;

8 (3) the impact of the allocations on income lev-
9 els of consumers and on their energy consumption;

10 (4) the effects of the allocations in terms of eco-
11 nomic efficiency;

12 (5) the ability of covered entities to pass
13 through compliance costs to their customers;

14 (6) the degree to which the amount of alloca-
15 tions to the covered sectors should decrease over
16 time;

17 (7) the need to maintain the international com-
18 petitiveness of United States manufacturing and
19 avoid the additional loss of United States manufac-
20 turing jobs; and

21 (8) the necessary funding levels for the initia-
22 tives and programs described in section 202.

23 (c) ALLOCATION RECOMMENDATIONS AND IMPLE-
24 MENTATION.—Not later than 24 months after the date of
25 enactment of this Act, and annually thereafter, the Ad-

1 administrator shall submit the determinations under sub-
2 section (a) to the Committee on Commerce, Science, and
3 Transportation and the Committee on Environment and
4 Public Works of the Senate, and to the Committee on
5 Science and Technology and the Committee on Energy
6 and Commerce of the House of Representatives. The Ad-
7 ministrator's determinations under subsection (a)(1), and
8 the allocations and provision of tradeable allowances pur-
9 suant to that determination, are deemed to be a major
10 rule (as defined in section 804(2) of title 5, United States
11 Code), and subject to the provisions of chapter 8 of that
12 title.

13 **SEC. 162. PROVISION OF TRADEABLE ALLOWANCES.**

14 (a) IN GENERAL.—The Administrator shall, by regu-
15 lation, establish a process for providing tradeable allow-
16 ances without cost to covered entities described in sub-
17 paragraphs (A) and (B)(i) and (ii) of section 3(5) that
18 will—

19 (1) encourage investments that increase the ef-
20 ficiency of the processes that produce greenhouse
21 gas emissions;

22 (2) minimize the costs to the Government of
23 providing the tradeable allowances;

1 (3) give credit to covered entities for emissions
2 reductions made before 2012 and registered with the
3 database; and

4 (4) provide sufficient tradeable allowances for
5 new entrants into the sector.

6 (b) ALLOCATION TO COVERED ENTITIES IN STATES
7 ADOPTING MANDATORY GREENHOUSE GAS EMISSIONS
8 REDUCTION PROGRAMS.—For a covered entity operating
9 in any State that has adopted a legally binding and en-
10 forceable program to achieve and maintain greenhouse gas
11 emission reductions that are consistent with, or more
12 stringent than, reductions mandated by this Act, and
13 which requirements are effective prior to 2012, the Ad-
14 ministrators shall consider such binding State actions in
15 making the final determination of allocation to such cov-
16 ered entities.

17 **SEC. 163. ENSURING TARGET ADEQUACY.**

18 (a) IN GENERAL.—Beginning 2 years after the date
19 of enactment of this Act, the Under Secretary of Com-
20 merce for Oceans and Atmosphere shall review the amount
21 of allowances established under section 124 no less fre-
22 quently than biennially—

23 (1) to re-evaluate the levels established by that
24 section, after taking into account the best available
25 science and the most currently available data; and

1 (1) to any covered entity an amount of
2 tradeable allowances equivalent to the amount of
3 greenhouse gas emission reductions registered by
4 that covered entity in the database if—

5 (A) the covered entity has requested to use
6 the registered reduction in the year of alloca-
7 tion;

8 (B) the reduction was registered prior to
9 2012; and

10 (C) the Administrator retires the unique
11 serial number assigned to the reduction under
12 section 101(c)(3); and

13 (2) to any covered entity that has entered into
14 an accelerated participation agreement under section
15 165, such tradeable allowances as the Administrator
16 has determined to be appropriate under that section.

17 **SEC. 165. BONUS FOR ACCELERATED PARTICIPATION.**

18 (a) IN GENERAL.—If a covered entity executes an
19 agreement with the Administrator under which it agrees
20 to reduce its level of greenhouse gas emissions to a level
21 no greater than the level of its greenhouse gas emissions
22 for calendar year 1990 by the year 2012, then, for the
23 6-year period beginning with calendar year 2012, the Ad-
24 ministrator shall—

1 (1) provide additional tradeable allowances to
2 that entity when allocating allowances under section
3 164 in order to recognize the additional emission re-
4 ductions that will be required of the covered entity;

5 (2) allow that entity to satisfy 20 percent (in
6 addition to the amount authorized under section
7 144(a)) of its requirements under section 121 by
8 any combination of—

9 (A) submitting tradeable allowances from
10 another nation’s market in greenhouse gas
11 emissions under the conditions described in sec-
12 tion 144(a)(1);

13 (B) submitting a registered net increase in
14 sequestration, as registered in the database, ad-
15 justed, if necessary, to comply with the account-
16 ing standards and methods described in section
17 144(c); and

18 (C) submitting a greenhouse gas emission
19 reduction (other than a registered net increase
20 in sequestration) that was registered in the
21 database by a person that is not a covered enti-
22 ty.

23 (b) TERMINATION.—An entity that executes an
24 agreement described in subsection (a) may terminate the
25 agreement at any time.

1 (c) FAILURE TO MEET COMMITMENT.—If an entity
2 that executes an agreement described in subsection (a)
3 fails to achieve the level of emissions to which it committed
4 by calendar year 2012, including through termination
5 under subsection (b)—

6 (1) its requirements under section 121 shall be
7 increased by the amount of any tradeable allowances
8 provided to it under subsection (a)(1) of this section;
9 and

10 (2) any tradeable allowances submitted there-
11 after shall be counted first against the increase in
12 those requirements.

13 **TITLE II—CLIMATE CHANGE** 14 **CREDIT CORPORATION**

15 **SEC. 201. ESTABLISHMENT.**

16 (a) IN GENERAL.—The Climate Change Credit Cor-
17 poration (in this title referred to as the “Corporation”)
18 is established as a nonprofit corporation without stock.
19 The Corporation shall not be considered to be an agency
20 or establishment of the United States Government.

21 (b) APPLICABLE LAWS.—The Corporation shall be
22 subject to the provisions of this Act and, to the extent
23 consistent with this Act, to the District of Columbia Busi-
24 ness Corporation Act.

1 (c) BOARD OF DIRECTORS.—The Corporation shall
2 have a board of directors of 5 individuals who are citizens
3 of the United States, of whom 1 shall be elected annually
4 by the board to serve as chairman. No more than 3 mem-
5 bers of the board serving at any time may be affiliated
6 with the same political party. The members of the board
7 shall be appointed by the President of the United States,
8 by and with the advice and consent of the Senate, and
9 shall serve for terms of 5 years.

10 **SEC. 202. PURPOSES AND FUNCTIONS.**

11 (a) TRADING.—The Corporation—

12 (1) shall receive and manage tradeable allow-
13 ances allocated to it under section 161(a)(2);

14 (2) shall buy and sell tradeable allowances,
15 whether allocated to it under that section or ob-
16 tained by purchase, trade, or donation from other
17 entities; and

18 (3) may not retire tradeable allowances unused.

19 (b) USE OF TRADEABLE ALLOWANCES AND PRO-
20 CEEDS.—

21 (1) IN GENERAL.—The Corporation shall use
22 the tradeable allowances, and proceeds derived from
23 its trading activities in tradeable allowances, to re-
24 duce costs borne by consumers as a result of the

1 greenhouse gas reduction requirements of this Act.

2 The reductions—

3 (A) may be obtained by buy-down, subsidy
4 (including through the Low-Income Home En-
5 ergy Assistance Act of 1981, part A of title IV
6 of the Energy Conservation and Production
7 Act, or the provision of financial assistance to
8 promote the availability of reasonably-priced
9 electricity in off-grid rural regions in which
10 electricity prices exceed 150 percent of the na-
11 tional average), negotiation of discounts, con-
12 sumer rebates, or otherwise;

13 (B) shall be, as nearly as possible, equi-
14 tably distributed across all regions of the
15 United States; and

16 (C) may include arrangements for pref-
17 erential treatment to consumers who can least
18 afford any such increased costs.

19 (2) **TRANSITION ASSISTANCE TO DISLOCATED**
20 **WORKERS AND COMMUNITIES.**—The Corporation
21 shall allocate a percentage of the proceeds derived
22 from its trading activities in tradeable allowances to
23 provide transition assistance to dislocated workers
24 and communities. Transition assistance may take
25 the form of—

1 (A) grants to employers, employer associa-
2 tions, and representatives of employees—

3 (i) to provide training, adjustment as-
4 sistance, and employment services to dis-
5 located workers; and

6 (ii) to make income-maintenance and
7 needs-related payments to dislocated work-
8 ers; and

9 (B) grants to State and local governments
10 to assist communities in attracting new employ-
11 ers or providing essential local government serv-
12 ices.

13 (3) PHASE-OUT OF TRANSITION ASSISTANCE.—

14 The percentage allocated by the Corporation under
15 paragraph (2)—

16 (A) shall be 20 percent for 2012; and

17 (B) shall be reduced by 2 percentage
18 points each of the next 10 years thereafter.

19 (4) TECHNOLOGY DEPLOYMENT PROGRAMS.—

20 The Corporation shall establish and carry out a pro-
21 gram, through direct grants, revolving loan pro-
22 grams, or other financial measures, to provide sup-
23 port for the deployment of technology to assist in
24 compliance with this Act by distributing the pro-
25 ceeds from no less than 10 percent of the total al-

1 lowances allocated to it for each year. The support
2 shall include the following:

3 (A) COAL GASIFICATION COMBINED-CYCLE
4 AND GEOLOGICAL CARBON STORAGE PRO-
5 GRAM.—The Corporation shall establish and
6 carry out a program, through direct grants, to
7 provide incentives for the repowering of existing
8 facilities or construction of new facilities pro-
9 ducing electricity or other products from coal
10 gasification combined-cycle plants that capture
11 and geologically store at least 90 percent of the
12 carbon dioxide produced at the facility in ac-
13 cordance with requirements established by the
14 Administrator to ensure the permanence of the
15 storage and that such storage will not cause or
16 contribute to significant adverse effects on pub-
17 lic health or the environment. The Corporation
18 shall ensure that no less than 20 percent of the
19 funding under this program is distributed to
20 rural electric cooperatives.

21 (B) AGRICULTURAL PROGRAMS.—The Cor-
22 poration shall establish and carry out a pro-
23 gram, through direct grants, revolving loan pro-
24 grams, or other financial measures, to provide
25 incentives for greenhouse gas emissions reduc-

1 tions or net increases in sequestration on agri-
2 cultural lands. The program shall include incen-
3 tives for—

4 (i) production of wind energy on agri-
5 cultural lands;

6 (ii) agricultural management practices
7 that achieve verified, incremental increases
8 in net carbon sequestration, in accordance
9 with the requirements established by the
10 Administrator under section 144(c); and

11 (iii) production of renewable fuels
12 that, after consideration of the energy
13 needed to produce such fuels, result in a
14 net reduction in greenhouse gas emissions.

15 (5) ADAPTATION ASSISTANCE FOR FISH AND
16 WILDLIFE HABITAT.—The Corporation shall fund ef-
17 forts to strengthen and restore habitat that improve
18 the ability of fish and wildlife to adapt successfully
19 to climate change. The Corporation shall deposit the
20 proceeds from no less than 10 percent of the total
21 allowances allocated to it in the wildlife restoration
22 fund subaccount known as the Wildlife Conservation
23 and Restoration Account established under section 3
24 of the Pittman-Robertson Wildlife Restoration Act
25 (16 U.S.C. 669b). Amounts deposited in the sub-

1 account under this paragraph shall be available
2 without further appropriation for obligation and ex-
3 penditure under that Act.

4 (6) LARGE-SCALE AQUATIC ECOSYSTEMS.—The
5 Corporation shall use 25 percent of the total allow-
6 ances allocated to it for each fiscal year for projects
7 to restore—

8 (A) large-scale freshwater aquatic eco-
9 systems, such as the Great Lakes and the Ever-
10 glades; and

11 (B) large-scale estuarine ecosystems, such
12 as Chesapeake Bay, California Bay Delta,
13 Coastal Louisiana, Long Island Sound, and
14 Puget Sound.

15 (7) OPERATIONS OF BOARD.—The Corporation
16 shall provide funding for the operations of the
17 Board.

18 **TITLE III—MISCELLANEOUS**

19 **SEC. 301. NOAA REPORT ON CLIMATE CHANGE EFFECTS;** 20 **PREPARATION ASSISTANCE.**

21 The Coastal Zone Management Act of 1972 (16
22 U.S.C. 1451 et seq.) is amended by adding at the end
23 the following:

24 “REPORT ON EFFECTS OF CLIMATE CHANGE

25 “SEC. 320. (a) IN GENERAL.—The Secretary shall
26 report to the Congress not later than 2 years after the

1 date of enactment of this section, and every 5 years there-
2 after, on the possible and projected impacts of climate
3 change on—

4 “(1) oceanic and coastal ecosystems, including
5 marine fish and wildlife and their habitat, and the
6 commercial and recreational fisheries and tourism
7 industries associated with them; and

8 “(2) coastal communities, including private resi-
9 dential and commercial development and public in-
10 frastructure in the coastal zone.

11 “(b) CONTENTS.—Each report under this section
12 shall include information regarding—

13 “(1) the impacts that may be due to climate
14 change that have occurred as of the date of the sub-
15 mission of the report; and

16 “(2) the projected future impacts of climate
17 change.

18 “(c) IMPACTS.—The impacts reported on under sub-
19 section (b) shall include any—

20 “(1) increases in sea level;

21 “(2) increases in storm activity and intensity;

22 “(3) increases in floods, droughts, and other ex-
23 tremes of weather;

24 “(4) increases in the temperature of the air and
25 the water on oceanic and coastal ecosystems, with a

1 particular focus on vulnerable fisheries and eco-
2 systems; and

3 “(5) changes in the acidity of the ocean surface
4 associated with an increase in concentration of car-
5 bon dioxide in the atmosphere.

6 “CLIMATE CHANGE PREPARATION ASSISTANCE

7 “SEC. 321. (a) IN GENERAL.—The Secretary shall
8 provide technical assistance to each coastal State that has
9 an approved coastal zone management plan under this
10 title, to assist such States in preparing persons living with-
11 in their coastal zones to adapt to climate change.

12 “(b) IDENTIFICATION OF AFFECTED AREAS AND AD-
13 APTATIONS.—In carrying out this section, the Secretary
14 shall—

15 “(1) identify the projected impacts of climate
16 change to which persons located in coastal zones
17 may need to adapt, including—

18 “(A) increases in sea level;

19 “(B) increases in storm activity and inten-
20 sity; and

21 “(C) increases in floods, droughts, and
22 other extremes of weather;

23 “(2) identify the specific coastal areas of the
24 United States, and the public and private develop-
25 ment in coastal communities and the natural re-

1 sources of the coastal zone, that are vulnerable to
2 the impacts identified under paragraph (1);

3 “(3) identify the various adaptation measures
4 that may be used to protect the areas and resources
5 identified under paragraph (2) from the impacts
6 identified under paragraph (1); and

7 “(4) estimate the costs of the adaptation meas-
8 ures identified under paragraph (3).”.

9 **SEC. 302. ADAPTATION TECHNOLOGIES.**

10 (a) IN GENERAL.—The Director of the Office of
11 Science and Technology Policy shall establish a program
12 on adaptation technologies as part of the Climate Tech-
13 nology Challenge Program. The Director shall perform an
14 assessment of the climate change technological needs of
15 various regions of the country. This assessment shall be
16 provided to the Committee on Commerce, Science, and
17 Transportation of the Senate and the Committee on
18 Science and Technology of the House of Representatives
19 within 6 months after the date of enactment of this Act.

20 (b) REGIONAL ESTIMATES.—The Director of the Of-
21 fice of Science and Technology Policy, in consultation with
22 the Secretaries of Transportation, Homeland Security,
23 Agriculture, Housing and Urban Development, Health
24 and Human Services, Defense, Interior, Energy, and Com-
25 merce, the Administrator of the Environmental Protection

1 Agency, the Director of United States Geological Survey,
2 and other such Federal offices as the Director considers
3 necessary, along with relevant State agencies, shall per-
4 form 6 regional infrastructure cost assessments covering
5 the United States, and a national cost assessment, to pro-
6 vide estimates of the range of costs that should be antici-
7 pated for adaptation to the impacts of climate change. The
8 Director shall develop those estimates for low, medium,
9 and high probabilities of climate change and its potential
10 impacts. The assessments shall be provided to the Com-
11 mittee on Commerce, Science, and Transportation of the
12 Senate and the Committee on Science and Technology of
13 the House of Representatives within 1 year after the date
14 of enactment of this Act.

15 (c) ADAPTATION PLAN.—

16 (1) IN GENERAL.—Within 6 months after the
17 date of enactment of this Act, the Secretary of Com-
18 merce shall submit a climate change adaptation plan
19 for the United States to the Congress. The adapta-
20 tion plan shall be based upon assessments performed
21 by the United Nations Intergovernmental Panel on
22 Climate Change, those as required by the 1990
23 Global Change Research Act, and any other sci-
24 entific peer-reviewed regional assessments.

1 (2) REQUIRED COMPONENTS.—The adaptation
2 plan shall include—

3 (A) a prioritized list of vulnerable systems
4 and regions;

5 (B) coordination requirements between
6 Federal, State, and local governments to ensure
7 that key public infrastructure, safety, health,
8 and land use planning and control issues are
9 addressed;

10 (C) coordination requirements among the
11 Federal Government, industry, and commu-
12 nities;

13 (D) an assessment of climate change
14 science research needs including probabilistic
15 assessments as an aid to planning;

16 (E) an assessment of climate change tech-
17 nology needs; and

18 (F) regional and national costs assess-
19 ments for the range of costs that should be an-
20 ticipated for adapting to the impacts of climate
21 change.

1 **SEC. 303. MITIGATING CLIMATE CHANGE'S IMPACTS ON**
2 **THE POOR.**

3 (a) IN GENERAL.—The Secretary shall conduct re-
4 search on the impact of climate change on low-income pop-
5 ulations everywhere in the world. The research shall—

6 (1) include an assessment of the adverse impact
7 of climate change on low-income populations in the
8 United States and on developing countries;

9 (2) identify appropriate climate change adapta-
10 tion measures and programs for developing countries
11 and low-income populations and assess the impact of
12 those measures and programs on low-income popu-
13 lations;

14 (3) identify appropriate climate change mitiga-
15 tion strategies and programs for developing coun-
16 tries and low-income populations and assess the im-
17 pact of those strategies and programs on developing
18 countries and on low-income populations in the
19 United States; and

20 (4) include an estimate of the costs of devel-
21 oping and implementing those climate change adap-
22 tation and mitigation programs.

23 (b) REPORT.—Within 1 year after the date of enact-
24 ment of this Act, the Secretary shall transmit a report
25 on the research conducted under subsection (a) to the
26 Committee on Commerce, Science, and Transportation

1 and the Committee on Environment and Public Works of
2 the Senate, and to the Committee on Science and Tech-
3 nology and the Committee on Energy and Commerce of
4 the House of Representatives.

5 (c) AUTHORIZATION OF APPROPRIATIONS.—There
6 are authorized to be appropriated to the Secretary
7 \$2,000,000 to carry out the research required by sub-
8 section (a).

9 **SEC. 304. WILDLIFE CONSERVATION.**

10 (a) FUNDING FOR CLIMATE CHANGE IMPACT MITI-
11 GATION PLANNING.—Section 3(c) of the Pittman-Robert-
12 son Wildlife Restoration Act (16 U.S.C. 669b(c)) is
13 amended by adding at the end the following:

14 “(4) CLIMATE CHANGE IMPACT MITIGATION
15 PLANS.—Amounts deposited in the Wildlife Con-
16 servation and Restoration Account under section
17 202(b)(5) of the Climate Stewardship and Economic
18 Security Act of 2007—

19 “(A) may be used by States to provide rel-
20 evant information, training, monitoring, and
21 other assistance to develop climate change im-
22 pact mitigation plans and integrate them into
23 State Comprehensive Wildlife Conservation
24 Strategies; and

1 “(B) shall be used by States to implement
2 climate change impact mitigation plans inte-
3 grated into Comprehensive Wildlife Conserva-
4 tion Strategies.”.

5 (b) CONFORMING AMENDMENT.—Section 3(a)(2) of
6 the Pittman-Robertson Wildlife Restoration Act (16
7 U.S.C. 669b(a)(2)) is amended in the second sentence by
8 inserting “(in addition to amounts deposited under section
9 202(b)(5) of the Climate Stewardship and Economic Secu-
10 rity Act of 2007)” after “Wildlife Conservation and Res-
11 toration Account”.

○