

110TH CONGRESS
1ST SESSION

H. R. 620

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

JANUARY 22, 2007

Mr. OLVER (for himself, Mr. GILCHREST, Mr. INSLEE, Mr. WALSH of New York, Mr. CUMMINGS, Mr. KIRK, Ms. SOLIS, Mr. CASTLE, Mr. HINCHEY, Mr. SHAYS, Ms. HARMAN, Mr. SAXTON, Mr. DICKS, Ms. MCCOLLUM of Minnesota, Ms. DEGETTE, Mr. THOMPSON of California, Mr. CARDOZA, and Mr. HARE) introduced the following bill; which was referred to the Committee on Energy and Commerce, and in addition to the Committees on Science and Technology and Natural Resources, 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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Climate Stewardship
 5 Act of 2007”.

6 **SEC. 2. TABLE OF CONTENTS.**

7 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. Penalties.

Subtitle C—Controlling Compliance Costs

- Sec. 141. Trading.
- Sec. 142. Banking.
- Sec. 143. Borrowing against future reductions.
- Sec. 144. Domestic offsets.
- Sec. 145. International credits plan.

Subtitle D—Establishment and 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) CARBON DIOXIDE EQUIVALENTS.—The term
 16 “carbon dioxide equivalents” means, for each green-
 17 house gas, the amount of each such greenhouse gas
 18 that makes the same contribution to global warming
 19 as one metric ton of carbon dioxide, as determined
 20 by the Administrator.

21 (4) COVERED SECTORS.—The term “covered
 22 sectors” means the electric power, transportation,

1 industrial, and commercial sectors, as such terms
2 are used in the Inventory.

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

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

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

19 (i) refines or imports refined petro-
20 leum products that, when combusted, will
21 emit;

22 (ii) produces or imports hydrofluoro-
23 carbons, perfluorocarbons, or sulfur
24 hexafluoride that, when used, will emit; or

1 (iii) produces or imports other green-
2 house gases that, when used, will emit,
3 over 10,000 metric tons of greenhouse gas per
4 year, measured in units of carbon dioxide
5 equivalents.

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

9 (7) DIRECT EMISSIONS.—The term “direct
10 emissions” means greenhouse gas emissions by an
11 entity from a facility that is owned or controlled by
12 that entity.

13 (8) FACILITY.—The term “facility” means a
14 building, structure, or installation located on any 1
15 or more contiguous or adjacent properties of an enti-
16 ty in the United States.

17 (9) GREENHOUSE GAS.—The term “greenhouse
18 gas” means—

- 19 (A) carbon dioxide;
- 20 (B) methane;
- 21 (C) nitrous oxide;
- 22 (D) hydrofluorocarbons;
- 23 (E) perfluorocarbons; or
- 24 (F) sulfur hexafluoride.

1 (10) INDIRECT EMISSIONS.—The term “indirect
2 emissions” means greenhouse gas emissions that
3 are—

4 (A) a result of the activities of an entity;
5 but

6 (B) emitted from a facility owned or con-
7 trolled by another entity.

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

13 (12) LEAKAGE.—The term “leakage” means—

14 (A) an increase in greenhouse gas emis-
15 sions by one facility or entity caused by a re-
16 duction in greenhouse gas emissions by another
17 facility or entity; or

18 (B) a decrease in sequestration that is
19 caused by an increase in sequestration at an-
20 other location.

21 (13) PERMANENCE.—The term “permanence”
22 means the extent to which greenhouse gases that are
23 sequestered will not later be returned to the atmos-
24 phere.

1 (14) REGISTRY.—The term “registry” means
2 the registry of greenhouse gas emission reductions
3 and increases in sequestration established under sec-
4 tion 101(b)(2).

5 (15) SECRETARY.—The term “Secretary”
6 means the Secretary of Commerce.

7 (16) SEQUESTRATION.—

8 (A) IN GENERAL.—The term “sequestra-
9 tion” means the long-term capture, separation,
10 isolation, or removal of greenhouse gases from
11 the atmosphere.

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

15 (i) agricultural and conservation prac-
16 tices;

17 (ii) reforestation;

18 (iii) forest preservation;

19 (iv) production of cellulosic biomass
20 crops; and

21 (v) any other method of long-term
22 capture, separation, isolation, or removal
23 of greenhouse gases from the atmosphere.

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

- 1 (i) any conversion of, or negative im-
 2 pact on, a native ecosystem; or
 3 (ii) any introduction of non-native
 4 species.

5 (17) SOURCE CATEGORY.—The term “source
 6 category” means a process or activity that leads to
 7 direct emissions of greenhouse gases, as listed in the
 8 Inventory.

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

13 **TITLE I—MARKET TO REDUCE**
 14 **GREENHOUSE GAS EMISSIONS**
 15 **Subtitle A—Tracking Emissions**

16 **SEC. 101. NATIONAL GREENHOUSE GAS DATABASE AND**
 17 **REGISTRY ESTABLISHED.**

18 (a) ESTABLISHMENT.—As soon as practicable after
 19 the date of enactment of this Act, the Administrator, in
 20 coordination with the Secretary, the Secretary of Energy,
 21 the Secretary of Agriculture, State governments, and pri-
 22 vate sector and nongovernmental organizations, shall es-
 23 tablish, operate, and maintain a database, to be known
 24 as the “National Greenhouse Gas Database”, to collect,

1 verify, and analyze data on greenhouse gas emissions by
2 entities.

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

5 (1) an inventory of greenhouse gas emissions;
6 and

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

9 (c) COMPREHENSIVE SYSTEM.—

10 (1) IN GENERAL.—Not later than 2 years after
11 the date of enactment of this Act, the Administrator
12 shall promulgate regulations to implement a com-
13 prehensive system for greenhouse gas emissions re-
14 porting, inventorying, and reduction and sequestra-
15 tion registration.

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

18 (A) the comprehensive system described in
19 paragraph (1) is designed to—

20 (i) maximize completeness, trans-
21 parency, and accuracy of data reported;
22 and

23 (ii) minimize costs incurred by entities
24 in measuring and reporting greenhouse gas

emissions, emission reductions, and sequestrations; and

(B) the regulations promulgated under paragraph (1) establish procedures and protocols necessary—

(i) to prevent the double-counting of greenhouse gas emissions, emission reductions, or sequestrations reported by more than 1 reporting entity;

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

(iii) to provide for adjustment to data by reporting entities that have had a significant organizational change (including mergers, acquisitions, and divestiture), in order to maintain comparability among data in the database over time;

(iv) to provide for adjustments to reflect new technologies or methods for measuring or calculating greenhouse gas emissions, emission reductions, or sequestrations;

(v) to account for changes in registration of ownership of emission reductions or increases in sequestration resulting from a

1 voluntary private transaction between re-
2 porting entities;

3 (vi) to prevent a covered entity from
4 avoiding the requirements of this Act by
5 reorganization into multiple entities that
6 are under common control; and

7 (vii) to clarify the responsibility for
8 reporting in the case of any facility owned
9 or controlled by more than 1 entity.

10 (3) SERIAL NUMBERS.—Through regulations
11 promulgated under paragraph (1), the Administrator
12 shall develop and implement a system that pro-
13 vides—

14 (A) for the provision of unique serial num-
15 bers to identify the registered emission reduc-
16 tions or increases in sequestration made by an
17 entity;

18 (B) for the tracking of the registered re-
19 ductions or sequestrations associated with the
20 serial numbers; and

21 (C) for such action as may be necessary to
22 prevent counterfeiting of the registered reduc-
23 tions or sequestrations.

1 **SEC. 102. INVENTORY OF GREENHOUSE GAS EMISSIONS**
2 **FOR COVERED ENTITIES.**

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

9 (1) the total quantity of direct emissions from
10 stationary sources, including process and fugitive
11 emissions, expressed in units of carbon dioxide
12 equivalents, except those reported under paragraph
13 (3);

14 (2) the amount of petroleum products refined
15 or refined petroleum products imported by the entity
16 for use in transportation and the amount of green-
17 house gases, expressed in units of carbon dioxide
18 equivalents, that would be emitted when these prod-
19 ucts are used for transportation, as determined by
20 the Administrator under section 121(b);

21 (3) the amount of hydrofluorocarbons,
22 perfluorocarbons, or sulfur hexafluoride, expressed
23 in units of carbon dioxide equivalents, that are pro-
24 duced or imported by the entity and will ultimately
25 be emitted in the United States, as determined by
26 the Administrator under section 121(d); and

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

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

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

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

12 (1) a covered entity may register greenhouse
13 gas emission reductions and increases in sequestra-
14 tion achieved after 1990 and before 2012 under this
15 section; and

16 (2) an entity that is not a covered entity may
17 register greenhouse gas emission reductions and in-
18 creases in sequestration achieved at any time since
19 1990 under this section.

20 (b) REQUIREMENTS.—

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

24 (A) establish a baseline; and

1 (B) submit the report described in section
2 102(a)(1).

3 (2) REQUIREMENTS NOT APPLICABLE TO ENTI-
4 TIES ENTERING INTO CERTAIN AGREEMENTS.—An
5 entity that enters into an agreement with a partici-
6 pant in the registry for the purpose of a carbon se-
7 questration project may register greenhouse gas
8 emission reductions or sequestrations without being
9 required to comply with the requirements specified
10 in paragraph (1), unless that entity is required to
11 comply with those requirements by reason of an ac-
12 tivity other than the agreement.

13 (c) PROCEDURE.—

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

17 (A) before January 1, 2012, data that re-
18 lates to any activity that resulted in the net re-
19 duction of the greenhouse gas emissions of the
20 entity or an increase in sequestration by the en-
21 tity that were carried out during or after 1990
22 and before the establishment of the database;
23 and

24 (B) with respect to the calendar year pre-
25 ceding the calendar year in which the data is

submitted, data that relates to any project or activity that resulted in the net reduction of the greenhouse gas emissions of the entity or a net increase in net sequestration by the entity.

(2) PROVISION OF VERIFICATION INFORMATION BY REPORTING ENTITIES.—Each entity that submits a report under section 102(a) or this subsection shall provide information sufficient for the Administrator to verify, in accordance with measurement and verification methods and standards developed under section 104, that the report—

(A) has been accurately reported; and

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

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

(ii) actual increases in net sequestration.

(3) FAILURE TO SUBMIT REPORT.—An entity that submits data for registration of emission reductions or increases in sequestration in the registry and that fails to submit a report required under this subsection shall be prohibited from using, or allowing another entity to use, its registered emissions re-

ductions or increases in sequestration to satisfy the requirements of section 121.

(4) INDEPENDENT THIRD-PARTY VERIFICATION.—To meet the requirements of this section and section 104, an entity that submits a report under this section may—

(A) obtain independent third-party verification; and

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

(5) AVAILABILITY OF DATA.—

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

(i) published; and

(ii) accessible to the public, including in electronic format on the Internet.

(B) EXCEPTION.—Subparagraph (A) shall not apply in any case in which the Administrator determines that publishing or otherwise making available information described in that subparagraph—

(i) poses a risk to national security; or

(ii) discloses confidential business information that can not be derived from in-

1 formation that is otherwise publicly avail-
2 able and that would cause competitive
3 harm if published.

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

9 (7) ADDITIONAL ISSUES TO BE CONSIDERED.—
10 In promulgating the regulations under section
11 101(c)(1) and implementing the database, the Ad-
12 ministrators shall take into consideration a broad
13 range of issues involved in establishing an effective
14 database, including—

15 (A) the data and information systems and
16 measures necessary to identify, track, and
17 verify greenhouse gas emissions in a manner
18 that will encourage private sector trading and
19 exchanges;

20 (B) the greenhouse gas reduction and se-
21 questration measurement and estimation meth-
22 ods and standards applied in other countries, as
23 applicable or relevant;

24 (C) the extent to which available data on
25 fossil fuels, greenhouse gas emissions, and

1 greenhouse gas production, refining, and impor-
2 tation are adequate to implement the database;
3 and

4 (D) the differences in, and potential
5 uniqueness of, the facilities, operations, and
6 business and other relevant practices of persons
7 and entities in the private and public sectors
8 that may be expected to participate in the data-
9 base.

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

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

16 (2) provides entity-by-entity and sector-by-sec-
17 tor analyses of the emissions, emission reductions,
18 and increases in sequestration reported;

19 (3) describes the atmospheric concentrations of
20 greenhouse gases;

21 (4) provides a comparison of current and past
22 atmospheric concentrations of greenhouse gases; and

23 (5) describes the activity during the year cov-
24 ered by the report in the trading of greenhouse gas
25 emission allowances.

1 **SEC. 104. MEASUREMENT AND VERIFICATION.**

2 (a) METHODS AND STANDARDS.—

3 (1) IN GENERAL.—Not later than 1 year after
4 the date of enactment of this Act, the Administrator
5 shall establish by rule, in coordination with the Sec-
6 retary, the Secretary of Energy, and the Secretary
7 of Agriculture, comprehensive measurement and
8 verification methods and standards to ensure a con-
9 sistent and technically accurate record of greenhouse
10 gas emissions, emission reductions, sequestration,
11 and atmospheric concentrations for use in the reg-
12 istry.

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

15 (A) a requirement that an entity submit-
16 ting data for the database use a continuous
17 emissions monitoring system, or another system
18 of measuring emissions, emission reductions, or
19 increases in sequestration that is determined by
20 the Administrator to provide information with
21 precision, reliability, accessibility, and timeli-
22 ness similar to that provided by a continuous
23 emissions monitoring system where techno-
24 logically feasible;

25 (B) establishment of standardized meas-
26 urement and verification practices for reports

made by all entities participating in the registry, taking into account—

(i) protocols and standards in use by entities requiring or desiring to participate in the registry as of the date of development of the methods and standards under paragraph (1);

(ii) boundary issues, such as leakage;

(iii) avoidance of double counting of greenhouse gas emissions, emission reductions, and increases in sequestration; and

(iv) such other factors as the Administrator, in consultation with the Secretary, the Secretary of Energy, and the Secretary of Agriculture, determines to be appropriate;

(C) establishment of methods of—

(i) estimating greenhouse gas emissions, for those cases in which the Administrator determines that methods of monitoring or measuring such emissions with precision, reliability, accessibility, and timeliness similar to that provided by a continuous emissions monitoring system

1 are not technologically feasible at present;
2 and

3 (ii) reporting the accuracy of such es-
4 timations;

5 (D) establishment of measurement and
6 verification standards applicable to actions
7 taken to reduce or sequester greenhouse gas
8 emissions;

9 (E) in coordination with the Secretary of
10 Agriculture, standards to measure the results of
11 the use of carbon sequestration, including—

12 (i) soil carbon sequestration practices;

13 (ii) forest preservation and reforest-
14 ation activities that adequately address the
15 issues of permanence, leakage, and
16 verification; and

17 (iii) production of cellulosic biomass
18 crops;

19 (F) establishment of standards for obtain-
20 ing the Administrator's approval of the suit-
21 ability of geological storage sites that include
22 evaluation of both the geology of the site and
23 the entity's capacity to manage the site;

24 (G) establishment of other features that,
25 as determined by the Administrator, will allow

1 entities to adequately establish a fair and reli-
2 able measurement and reporting system; and

3 (H) establishment of such other measure-
4 ment and verification standards as the Adminis-
5 trator, in consultation with the Secretary of Ag-
6 riculture, the Secretary, and the Secretary of
7 Energy, determines to be appropriate.

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

13 (c) EXPERTS AND CONSULTANTS.—

14 (1) IN GENERAL.—The Administrator may ob-
15 tain the services of experts and consultants in the
16 private and nonprofit sectors for the purpose of car-
17 rying out this section in accordance with section
18 3109 of title 5, United States Code, in the areas of
19 greenhouse gas measurement, certification, and
20 emission trading.

21 (2) AVAILABLE ARRANGEMENTS.—In obtaining
22 any service described in paragraph (1), the Adminis-
23 trator may use any available grant, contract, cooper-
24 ative agreement, or other arrangement authorized by
25 law.

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

4 **Subtitle B—Mandating Emission**
5 **Reductions**

6 **SEC. 121. COVERED ENTITIES MUST SUBMIT ALLOWANCES**
7 **FOR EMISSIONS.**

8 (a) IN GENERAL.—Beginning with calendar year
9 2012—

10 (1) each covered entity in the electric power, in-
11 dustrial, and commercial sectors shall submit to the
12 Administrator one tradeable allowance for every
13 metric ton of greenhouse gases, measured in units of
14 carbon dioxide equivalents, that it emits from sta-
15 tionary sources, except those described in paragraph
16 (2);

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

1 (3) each petroleum product refiner or importer
 2 that is a covered entity shall submit one tradeable
 3 allowance for every unit of petroleum product it sells
 4 that will produce one metric ton of greenhouse gases
 5 when used for transportation, measured in units of
 6 carbon dioxide equivalents, as determined by the Ad-
 7 ministrator under subsection (b).

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

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

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

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

1 (d) DETERMINATION OF HYDROFLUOROCARBON,
2 PERFLUOROCARBON, AND SULFUR HEXAFLUORIDE
3 AMOUNT.—The Administrator shall determine the
4 amounts of hydrofluorocarbons, perfluorocarbons, or sul-
5 fur hexafluoride, measured in units of carbon dioxide
6 equivalents, that will be deemed to be emitted for purposes
7 of this Act.

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

12 **SEC. 122. COMPLIANCE.**

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

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

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

2 (a) IN GENERAL.—The Administrator may grant an
3 exemption from the requirements of this subtitle to a
4 source category if the Administrator determines, after
5 public notice and comment, that it is not feasible to meas-
6 ure or estimate emissions from that source category, until
7 such time as measurement or estimation becomes feasible.

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

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

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

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

22 (1) For the first 8 calendar years beginning
23 after 2011, the number of tradeable allowances shall
24 be equal to 6,150 million metric tons, measured in
25 units of carbon dioxide equivalents, reduced by the
26 amount of emissions of greenhouse gases in calendar

1 year 2012 from non-covered entities, as calculated
2 by the Administrator.

3 (2) For the first 10 calendar years beginning
4 after 2019, the number of tradeable allowances shall
5 be equal to 5,232 million metric tons, measured in
6 units of carbon dioxide equivalents, reduced by the
7 amount of emissions of greenhouse gases in calendar
8 year 2020 from non-covered entities, as calculated
9 by the Administrator.

10 (3) For the first 10 calendar years beginning
11 after 2029, the number of tradeable allowances shall
12 be equal to 3,858 million metric tons, measured in
13 units of carbon dioxide equivalents, reduced by the
14 amount of emissions of greenhouse gases in calendar
15 year 2030 from non-covered entities, as calculated
16 by the Administrator.

17 (4) For calendar years beginning after 2049,
18 the number of tradeable allowances shall be equal to
19 1,504 million metric tons, measured in units of car-
20 bon dioxide equivalents, reduced by the amount of
21 emissions of greenhouse gases in each such calendar
22 year from non-covered entities, as calculated by the
23 Administrator.

24 (b) SERIAL NUMBERS.—The Administrator shall as-
25 sign a unique serial number to each tradeable allowance

1 established under subsection (a), and shall take such ac-
2 tion as may be necessary to prevent counterfeiting of
3 tradeable allowances.

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

9 (d) NON-COVERED ENTITY.—For purposes of this
10 section only, the term “non-covered entity” means an enti-
11 ty that—

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

19 (2) is not a covered entity.

20 **SEC. 125. PENALTIES.**

21 Any covered entity that fails to meet the require-
22 ments of this subtitle for a year shall be liable for a civil
23 penalty, payable to the Administrator, equal to thrice the
24 market value (determined as of the last day of the year
25 at issue) of the tradeable allowances that would be nec-

1 essary for that covered entity to meet those requirements
2 on the date that the tradeable allowances were due.

3 **Subtitle C—Controlling** 4 **Compliance Costs**

5 **SEC. 141. TRADING.**

6 (a) IN GENERAL.—Tradeable allowances may be sold,
7 exchanged, purchased, retired, or used as provided in this
8 Act.

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

13 **SEC. 142. BANKING.**

14 Tradeable allowances not used to satisfy the require-
15 ments of this title in a year may be used to satisfy the
16 requirements in a later year.

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

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

20 (1) receive a credit in the current calendar year
21 for anticipated reductions in emissions in a future
22 calendar year; and

23 (2) use the credit in lieu of a tradeable allow-
24 ance to meet the requirements of this title for the

1 current calendar year, subject to the limitation im-
2 posed by subsection (b).

3 (b) DETERMINATION OF TRADEABLE ALLOWANCE
4 CREDITS.—The Administrator may make credits available
5 under subsection (a) only for anticipated reductions in
6 emissions that—

7 (1) are attributable to the realization of capital
8 investments in equipment, the construction, recon-
9 struction, or acquisition of facilities, or the deploy-
10 ment of new technologies—

11 (A) for which the covered entity has exe-
12 cuted a binding contract and secured, or ap-
13 plied for, all necessary permits and operating or
14 implementation authority;

15 (B) that will not become operational within
16 the current calendar year; and

17 (C) that will become operational and begin
18 to reduce emissions from the covered entity
19 within 5 years after the year in which the credit
20 is used; and

21 (2) will be realized within 5 years after the year
22 in which the credit is used.

23 (c) CARRYING COST.—If a covered entity uses a cred-
24 it under this section to meet the requirements of this title
25 for a calendar year (in this subsection referred to as the

1 use year), the tradeable allowance requirement for the
2 year from which the credit was taken (in this subsection
3 referred to as the source year) shall be increased by an
4 amount equal to—

5 (1) 10 percent for each credit borrowed from
6 the source year; multiplied by

7 (2) the number of years after the use year that
8 the source year occurs.

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

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

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

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

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

4 **SEC. 144. DOMESTIC OFFSETS.**

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

9 (1) Submitting tradeable allowances from an-
10 other nation’s market in greenhouse gas emissions
11 if—

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

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

21 (C) the covered entity certifies that the
22 tradeable allowance has been retired unused in
23 the other nation’s market.

24 (2) Submitting a registered net increase in se-
25 questration, as registered in the database, adjusted,

1 if necessary, to comply with the accounting stand-
2 ards and methods described in subsection (c). An in-
3 crease in sequestration submitted under this para-
4 graph need not have been registered by the covered
5 entity submitting it.

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

10 (4) Submitting credits obtained by the submit-
11 ting covered entity from the Administrator under
12 section 143 or section 145.

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

22 (c) SEQUESTRATION ACCOUNTING.—

23 (1) SEQUESTRATION ACCOUNTING.—If a cov-
24 ered entity uses a registered net increase in seques-
25 tration to satisfy the requirements of section 121 for

1 any year, that covered entity shall submit informa-
2 tion to the Administrator every 5 years thereafter
3 sufficient to allow the Administrator to determine,
4 using the methods and standards created under sec-
5 tion 104, whether that net increase in sequestration
6 still exists. The covered entity shall offset any loss
7 of sequestration by submitting additional tradeable
8 allowances of equivalent amount in the calendar year
9 following that determination.

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

16 (3) CRITERIA FOR REGULATIONS.—In issuing
17 regulations under this subsection, the Administrator
18 shall use the following criteria:

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

1 (B) If the range of possible amounts of net
2 increase in sequestration for a particular class
3 of sequestration project is more than 10 percent
4 of the median of that range, the amount of se-
5 questration awarded shall be equal to the fifth
6 percentile of that range.

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

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

16 **SEC. 145. INTERNATIONAL CREDITS PLAN.**

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

19 (1) to assist developing countries in achieving
20 sustainable development and in contributing to the
21 objective of reducing the greenhouse gas emissions;
22 and

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

25 (b) PROGRAM COMPONENTS.—

1 (1) IN GENERAL.—The program shall provide
2 for the earning of tradable allowances by covered en-
3 tities from project activities in developing countries
4 resulting in certified emission reductions. The Ad-
5 ministrator shall ensure tradability of emission re-
6 ductions earned under this program with reductions
7 earned under other similar international programs.

8 (2) APPROVAL CRITERIA AND REVIEW PROC-
9 ESS.—By no later than 2011, the Administrator
10 shall—

11 (A) develop criteria for the approval of
12 projects submitted for review; and

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

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

22 (4) CERTIFICATION OF RESULTS REQUIRED.—
23 The Administrator shall require entities partici-
24 pating in this program to obtain independent third-
25 party verification that—

1 (A) participation by all parties involved in
2 the project is voluntary; and

3 (B) the project produces—

4 (i) real, measurable, and long-term
5 benefits related to the mitigation of climate
6 change; and

7 (ii) reductions in emissions that are
8 additional to any that would occur in the
9 absence of the certified project activity.

10 (c) USE OF ALLOWANCES.—Subject to the limitation
11 in section 144(a), tradable allowances earned under the
12 program may be used to meet the requirements of section
13 121.

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

1 **Subtitle D—Establishment and**
2 **Allocation of Tradeable Allowances**

3 **SEC. 161. DETERMINATION OF TRADEABLE ALLOWANCE**
4 **ALLOCATIONS.**

5 (a) IN GENERAL.—The Administrator shall annually
6 determine—

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

9 (2) the amount of tradeable allowances to be al-
10 located to the Climate Change Credit Corporation
11 established under section 201.

12 (b) ALLOCATION FACTORS.—In making the deter-
13 mination required by subsection (a), the Administrator
14 shall consider—

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

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

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

21 (4) the effects of the allocations in terms of eco-
22 nomic efficiency;

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

1 (6) the degree to which the amount of alloca-
2 tions to the covered sectors should decrease over
3 time;

4 (7) the need to maintain the international com-
5 petitiveness of United States manufacturing and
6 avoid the additional loss of United States manufac-
7 turing jobs; and

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

10 (c) ALLOCATION RECOMMENDATIONS AND IMPLE-
11 MENTATION.—Not later than 24 months after the date of
12 enactment of this Act, and annually thereafter, the Ad-
13 ministrators shall submit the determinations under sub-
14 section (a) to the Committee on Commerce, Science, and
15 Transportation and the Committee on Environment and
16 Public Works of the Senate, and to the Committee on
17 Science and Technology and the Committee on Energy
18 and Commerce of the House of Representatives. The Ad-
19 ministrators' determinations under subsection (a)(1), and
20 the allocations and provision of tradeable allowances pur-
21 suant to that determination, are deemed to be a major
22 rule (as defined in section 804(2) of title 5, United States
23 Code), and subject to the provisions of chapter 8 of that
24 title.

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

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

7 (1) encourage investments that increase the ef-
8 ficiency of the processes that produce greenhouse
9 gas emissions;

10 (2) minimize the costs to the Government of
11 providing the tradeable allowances;

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

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

17 (b) ALLOCATION TO COVERED ENTITIES IN STATES
18 ADOPTING MANDATORY GREENHOUSE GAS EMISSIONS
19 REDUCTION PROGRAMS.—For a covered entity operating
20 in any State that has adopted a legally binding and en-
21 forceable program to achieve and maintain greenhouse gas
22 emission reductions that are consistent with, or more
23 stringent than, reductions mandated by this Act, and
24 which requirements are effective prior to 2012, the Ad-
25 ministrator shall consider such binding State actions in

1 making the final determination of allocation to such cov-
2 ered entities.

3 **SEC. 163. ENSURING TARGET ADEQUACY.**

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

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

12 (2) to re-evaluate the environmental and public
13 health impacts of specific concentration levels of
14 greenhouse gases,

15 to determine whether the amount of those allowances con-
16 tinues to be consistent with the objective of the United
17 Nations' Framework Convention on Climate Change of
18 stabilizing levels of greenhouse gas emissions at a level
19 that will prevent dangerous anthropogenic interference
20 with the climate system.

21 (b) REVIEW OF 2012 LEVELS.—The Under Secretary
22 shall specifically review in 2010 the level established under
23 section 124(a)(1), and transmit a report on his reviews,
24 together with any recommendations, including legislative
25 recommendations, for modification of the levels, to the

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

6 **SEC. 164. INITIAL ALLOCATIONS FOR EARLY PARTICIPA-**
7 **TION AND ACCELERATED PARTICIPATION.**

8 Before providing any tradeable allowances under sec-
9 tion 162, the Administrator shall allocate—

10 (1) to any covered entity an amount of
11 tradeable allowances equivalent to the amount of
12 greenhouse gas emission reductions registered by
13 that covered entity in the database if—

14 (A) the covered entity has requested to use
15 the registered reduction in the year of alloca-
16 tion;

17 (B) the reduction was registered prior to
18 2012; and

19 (C) the Administrator retires the unique
20 serial number assigned to the reduction under
21 section 101(c)(3); and

22 (2) to any covered entity that has entered into
23 an accelerated participation agreement under section
24 165, such tradeable allowances as the Administrator
25 has determined to be appropriate under that section.

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

2 (a) IN GENERAL.—If a covered entity executes an
3 agreement with the Administrator under which it agrees
4 to reduce its level of greenhouse gas emissions to a level
5 no greater than the level of its greenhouse gas emissions
6 for calendar year 1990 by the year 2012, then, for the
7 6-year period beginning with calendar year 2012, the Ad-
8 ministrator shall—

9 (1) provide additional tradeable allowances to
10 that entity when allocating allowances under section
11 164 in order to recognize the additional emission re-
12 ductions that will be required of the covered entity;

13 (2) allow that entity to satisfy 20 percent (in
14 addition to the amount authorized under section
15 144(a)) of its requirements under section 121 by
16 any combination of—

17 (A) submitting tradeable allowances from
18 another nation's market in greenhouse gas
19 emissions under the conditions described in sec-
20 tion 144(a)(1);

21 (B) submitting a registered net increase in
22 sequestration, as registered in the database, ad-
23 justed, if necessary, to comply with the account-
24 ing standards and methods described in section
25 144(c); and

1 (C) submitting a greenhouse gas emission
 2 reduction (other than a registered net increase
 3 in sequestration) that was registered in the
 4 database by a person that is not a covered enti-
 5 ty.

6 (b) TERMINATION.—An entity that executes an
 7 agreement described in subsection (a) may terminate the
 8 agreement at any time.

9 (c) FAILURE TO MEET COMMITMENT.—If an entity
 10 that executes an agreement described in subsection (a)
 11 fails to achieve the level of emissions to which it committed
 12 by calendar year 2012, including through termination
 13 under subsection (b)—

14 (1) its requirements under section 121 shall be
 15 increased by the amount of any tradeable allowances
 16 provided to it under subsection (a)(1) of this section;
 17 and

18 (2) any tradeable allowances submitted there-
 19 after shall be counted first against the increase in
 20 those requirements.

21 **TITLE II—CLIMATE CHANGE**

22 **CREDIT CORPORATION**

23 **SEC. 201. ESTABLISHMENT.**

24 (a) IN GENERAL.—The Climate Change Credit Cor-
 25 poration (in this title referred to as the “Corporation”)

1 is established as a nonprofit corporation without stock.
2 The Corporation shall not be considered to be an agency
3 or establishment of the United States Government.

4 (b) APPLICABLE LAWS.—The Corporation shall be
5 subject to the provisions of this Act and, to the extent
6 consistent with this Act, to the District of Columbia Busi-
7 ness Corporation Act.

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

17 **SEC. 202. PURPOSES AND FUNCTIONS.**

18 (a) TRADING.—The Corporation—

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

21 (2) shall buy and sell tradeable allowances,
22 whether allocated to it under that section or ob-
23 tained by purchase, trade, or donation from other
24 entities; and

25 (3) may not retire tradeable allowances unused.

1 (b) USE OF TRADEABLE ALLOWANCES AND PRO-
2 CEEDS.—

3 (1) IN GENERAL.—The Corporation shall use
4 the tradeable allowances, and proceeds derived from
5 its trading activities in tradeable allowances, to re-
6 duce costs borne by consumers as a result of the
7 greenhouse gas reduction requirements of this Act.
8 The reductions—

9 (A) may be obtained by buy-down, subsidy,
10 negotiation of discounts, consumer rebates, or
11 otherwise;

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

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

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

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

(A) COAL GASIFICATION COMBINED-CYCLE AND GEOLOGICAL CARBON STORAGE PROGRAM.—The Corporation shall establish and carry out a program, through direct grants, to provide incentives for the repowering of existing facilities or construction of new facilities producing electricity or other products from coal gasification combined-cycle plants that capture and geologically store at least 90 percent of the carbon dioxide produced at the facility in accordance with requirements established by the Administrator to ensure the permanence of the storage and that such storage will not cause or contribute to significant adverse effects on public health or the environment. The Corporation shall ensure that no less than 20 percent of the funding under this program is distributed to rural electric cooperatives.

(B) AGRICULTURAL PROGRAMS.—The Corporation shall establish and carry out a program, through direct grants, revolving loan programs, or other financial measures, to provide incentives for greenhouse gas emissions reduc-

tions or net increases in sequestration on agricultural lands. The program shall include incentives for—

(i) production of wind energy on agricultural lands;

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

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

(5) ADAPTATION ASSISTANCE FOR FISH AND WILDLIFE HABITAT.—The Corporation shall fund efforts to strengthen and restore habitat that improve the ability of fish and wildlife to adapt successfully to climate change. The Corporation shall deposit the proceeds from no less than 10 percent of the total allowances allocated to it in the wildlife restoration fund subaccount known as the Wildlife Conservation and Restoration Account established under section 3 of the Pittman-Robertson Wildlife Restoration Act (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 **TITLE III—MISCELLANEOUS**

5 **SEC. 301. NOAA REPORT ON CLIMATE CHANGE EFFECTS;** 6 **PREPARATION ASSISTANCE.**

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

10 “REPORT ON EFFECTS OF CLIMATE CHANGE

11 “SEC. 320. (a) IN GENERAL.—The Secretary shall
 12 report to the Congress not later than 2 years after the
 13 date of enactment of this section, and every 5 years there-
 14 after, on the possible and projected impacts of climate
 15 change on—

16 “(1) oceanic and coastal ecosystems, including
 17 marine fish and wildlife and their habitat, and the
 18 commercial and recreational fisheries and tourism
 19 industries associated with them; and

20 “(2) coastal communities, including private resi-
 21 dential and commercial development and public in-
 22 frastructure in the coastal zone.

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

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

4 “(2) the projected future impacts of climate
5 change.

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

8 “(1) increases in sea level;

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

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

12 “(4) increases in the temperature of the air and
13 the water on oceanic and coastal ecosystems, with a
14 particular focus on vulnerable fisheries and eco-
15 systems; and

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

19 “CLIMATE CHANGE PREPARATION ASSISTANCE

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

1 “(b) IDENTIFICATION OF AFFECTED AREAS AND AD-
 2 APTATIONS.—In carrying out this section, the Secretary
 3 shall—

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

7 “(A) increases in sea level;

8 “(B) increases in storm activity and inten-
 9 sity; and

10 “(C) increases in floods, droughts, and
 11 other extremes of weather;

12 “(2) identify the specific coastal areas of the
 13 United States, and the public and private develop-
 14 ment in coastal communities and the natural re-
 15 sources of the coastal zone, that are vulnerable to
 16 the impacts identified under paragraph (1);

17 “(3) identify the various adaptation measures
 18 that may be used to protect the areas and resources
 19 identified under paragraph (2) from the impacts
 20 identified under paragraph (1); and

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

23 **SEC. 302. ADAPTATION TECHNOLOGIES.**

24 (a) IN GENERAL.—The Director of the Office of
 25 Science and Technology Policy shall establish a program

1 on adaptation technologies as part of the Climate Tech-
2 nology Challenge Program. The Director shall perform an
3 assessment of the climate change technological needs of
4 various regions of the country. This assessment shall be
5 provided to the Committee on Commerce, Science, and
6 Transportation of the Senate and the Committee on
7 Science and Technology of the House of Representatives
8 within 6 months after the date of enactment of this Act.

9 (b) REGIONAL ESTIMATES.—The Director of the Of-
10 fice of Science and Technology Policy, in consultation with
11 the Secretaries of Transportation, Homeland Security,
12 Agriculture, Housing and Urban Development, Health
13 and Human Services, Defense, Interior, Energy, and Com-
14 merce, the Administrator of the Environmental Protection
15 Agency, the Director of United States Geological Survey,
16 and other such Federal offices as the Director considers
17 necessary, along with relevant State agencies, shall per-
18 form 6 regional infrastructure cost assessments covering
19 the United States, and a national cost assessment, to pro-
20 vide estimates of the range of costs that should be antici-
21 pated for adaptation to the impacts of climate change. The
22 Director shall develop those estimates for low, medium,
23 and high probabilities of climate change and its potential
24 impacts. The assessments shall be provided to the Com-
25 mittee on Commerce, Science, and Transportation of the

1 Senate and the Committee on Science and Technology of
2 the House of Representatives within 1 year after the date
3 of enactment of this Act.

4 (c) ADAPTATION PLAN.—

5 (1) IN GENERAL.—Within 6 months after the
6 date of enactment of this Act, the Secretary of Com-
7 merce shall submit a climate change adaptation plan
8 for the United States to the Congress. The adapta-
9 tion plan shall be based upon assessments performed
10 by the United Nations Intergovernmental Panel on
11 Climate Change, those as required by the 1990
12 Global Change Research Act, and any other sci-
13 entific peer-reviewed regional assessments.

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

16 (A) a prioritized list of vulnerable systems
17 and regions;

18 (B) coordination requirements between
19 Federal, State, and local governments to ensure
20 that key public infrastructure, safety, health,
21 and land use planning and control issues are
22 addressed;

23 (C) coordination requirements among the
24 Federal Government, industry, and commu-
25 nities;

1 (D) an assessment of climate change
2 science research needs including probabilistic
3 assessments as an aid to planning;

4 (E) an assessment of climate change tech-
5 nology needs; and

6 (F) regional and national costs assess-
7 ments for the range of costs that should be an-
8 ticipated for adapting to the impacts of climate
9 change.

10 **SEC. 303. MITIGATING CLIMATE CHANGE'S IMPACTS ON**
11 **THE POOR.**

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

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

18 (2) identify appropriate climate change adapta-
19 tion measures and programs for developing countries
20 and low-income populations and assess the impact of
21 those measures and programs on low-income popu-
22 lations;

23 (3) identify appropriate climate change mitiga-
24 tion strategies and programs for developing coun-
25 tries and low-income populations and assess the im-

1 pact of those strategies and programs on developing
2 countries and on low-income populations in the
3 United States; and

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

7 (b) REPORT.—Within 1 year after the date of enact-
8 ment of this Act, the Secretary shall transmit a report
9 on the research conducted under subsection (a) to the
10 Committee on Commerce, Science, and Transportation
11 and the Committee on Environment and Public Works of
12 the Senate, and to the Committee on Science and Tech-
13 nology and the Committee on Energy and Commerce of
14 the House of Representatives.

15 (c) AUTHORIZATION OF APPROPRIATIONS.—There
16 are authorized to be appropriated to the Secretary
17 \$2,000,000 to carry out the research required by sub-
18 section (a).

19 **SEC. 304. WILDLIFE CONSERVATION.**

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

24 “(4) CLIMATE CHANGE IMPACT MITIGATION
25 PLANS.—Amounts deposited in the Wildlife Con-

1 servation and Restoration Account under section
2 202(b)(5) of the Climate Stewardship Act of 2007—

3 “(A) may be used by States to provide rel-
4 evant information, training, monitoring, and
5 other assistance to develop climate change im-
6 pact mitigation plans and integrate them into
7 State Comprehensive Wildlife Conservation
8 Strategies; and

9 “(B) shall be used by States to implement
10 climate change impact mitigation plans inte-
11 grated into Comprehensive Wildlife Conserva-
12 tion Strategies.”.

13 (b) CONFORMING AMENDMENT.—Section 3(a)(2) of
14 the Pittman-Robertson Wildlife Restoration Act (16
15 U.S.C. 669b(a)(2)) is amended in the second sentence by
16 inserting “(in addition to amounts deposited under section
17 202(b)(5) of the Climate Stewardship Act of 2007)” after
18 “Wildlife Conservation and Restoration Account”.

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