

108<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 4067

To provide for a program of scientific research on abrupt climate change, 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.

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## IN THE HOUSE OF REPRESENTATIVES

MARCH 30, 2004

Mr. GILCHREST (for himself, Mr. OLVER, Mr. SHAYS, Mr. VAN HOLLEN, Mr. BOEHLERT, Mr. INSLEE, Mrs. JOHNSON of Connecticut, Mr. MENENDEZ, Mr. SIMMONS, Mr. WAXMAN, Mr. GREENWOOD, Ms. DEGETTE, Mr. HOUGHTON, Ms. LOFGREN, Mr. EHLERS, Mr. FORD, Mr. WALSH, Mr. UDALL of Colorado, Mrs. KELLY, and Ms. SOLIS) introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Energy and Commerce, 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

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## A BILL

To provide for a program of scientific research on abrupt climate change, 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 2004”.

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—FEDERAL CLIMATE CHANGE RESEARCH AND RELATED  
 ACTIVITIES**

- Sec. 101. National Science Foundation fellowships.
- Sec. 102. Research grants.
- Sec. 103. Abrupt climate change research.
- Sec. 104. NIST greenhouse gas functions.
- Sec. 105. Development of new measurement technologies.
- Sec. 106. Enhanced environmental measurements and standards.
- Sec. 107. Technology development and diffusion.
- Sec. 108. Agricultural outreach program.
- Sec. 109. NOAA Report on climate change effects; preparation assistance.

**TITLE II—NATIONAL GREENHOUSE GAS DATABASE**

- Sec. 201. National greenhouse gas database and registry established.
- Sec. 202. Inventory of greenhouse gas emissions for covered entities.
- Sec. 203. Greenhouse gas reduction reporting.
- Sec. 204. Measurement and verification.

**TITLE III—MARKET-DRIVEN GREENHOUSE GAS REDUCTIONS**

**SUBTITLE A—EMISSION REDUCTION REQUIREMENTS; USE OF TRADEABLE  
 ALLOWANCES**

- Sec. 301. Covered entities must submit allowances for emissions.
- Sec. 302. Compliance.
- Sec. 303. Borrowing against future reductions.
- Sec. 304. Other uses of tradeable allowances.
- Sec. 305. Exemption of source categories.

**SUBTITLE B—ESTABLISHMENT AND ALLOCATION OF TRADEABLE  
 ALLOWANCES**

- Sec. 331. Establishment of tradeable allowances.
- Sec. 332. Determination of tradeable allowance allocations.
- Sec. 333. Allocation of tradeable allowances.
- Sec. 334. Ensuring target adequacy.

Sec. 335. Initial allocations for early participation and accelerated participation.

Sec. 336. Bonus for accelerated participation.

SUBTITLE C—CLIMATE CHANGE CREDIT CORPORATION

Sec. 351. Establishment.

Sec. 352. Purposes and functions.

SUBTITLE D—SEQUESTRATION ACCOUNTING; PENALTIES

Sec. 371. Sequestration accounting.

Sec. 372. Penalties.

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  
12 201(c)(1); and

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

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.

1           (4) COVERED SECTORS.—The term “covered  
2 sectors” means the electricity, transportation, indus-  
3 try, and commercial sectors, as such terms are used  
4 in the Inventory.

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

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

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

21           (i) petroleum products that, when  
22 combusted, will emit,

23           (ii) hydrofluorocarbons, perfluoro-  
24 carbons, or sulfur hexafluoride that, when  
25 used, will emit, or

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

6 (6) DATABASE.—The term “database” means  
7 the national greenhouse gas database established  
8 under section 201.

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 established under section 201(b)(2).

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

6           (16) SEQUESTRATION.—

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

11           (B) INCLUSIONS.—The term “sequestra-  
12 tion” includes—

13                   (i) agricultural and conservation prac-  
14 tices;

15                   (ii) reforestation;

16                   (iii) forest preservation; and

17                   (iv) any other appropriate method of  
18 capture, long-term separation, isolation, or  
19 removal of greenhouse gases from the at-  
20 mosphere, as determined by the Adminis-  
21 trator.

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

24                   (i) any conversion of, or negative im-  
25 pact on, a native ecosystem; or

1 (ii) any introduction of non-native  
2 species.

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

7 (18) STATIONARY SOURCE.—The term “sta-  
8 tionary source” means generally any source of  
9 greenhouse gases except those emissions resulting di-  
10 rectly from an engine for transportation purposes.

11 **TITLE I—FEDERAL CLIMATE**  
12 **CHANGE RESEARCH AND RE-**  
13 **LATED ACTIVITIES**

14 **SEC. 101. NATIONAL SCIENCE FOUNDATION FELLOWSHIPS.**

15 The Director of the National Science Foundation  
16 shall establish a fellowship program for students pursuing  
17 graduate studies in global climate change, including capa-  
18 bility in observation, analysis, modeling, paleoclimatology,  
19 consequences, and adaptation.

20 **SEC. 102. RESEARCH GRANTS.**

21 Section 105 of the Global Change Research Act of  
22 1990 (15 U.S.C. 2935) is amended—

23 (1) by redesignating subsection (c) as sub-  
24 section (d); and



1           (2) by inserting after subsection (b) the fol-  
2           lowing:

3           “(c) RESEARCH GRANTS.—

4           “(1) COMMITTEE TO DEVELOP LIST OF PRI-  
5           ORITY RESEARCH AREAS.—The Committee shall de-  
6           velop a list of priority areas for research and devel-  
7           opment on climate change that are not being ad-  
8           dressed by Federal agencies.

9           “(2) DIRECTOR OF OSTP TO TRANSMIT LIST TO  
10          NSF.—The Director of the Office of Science and  
11          Technology Policy shall transmit the list to the Na-  
12          tional Science Foundation.

13          “(3) FUNDING THROUGH NSF.—

14          “(A) BUDGET REQUEST.—The National  
15          Science Foundation shall include, as part of the  
16          annual request for appropriations for the  
17          Science and Technology Policy Institute, a re-  
18          quest for appropriations to fund research in the  
19          priority areas on the list developed under para-  
20          graph (1).

21          “(B) AUTHORIZATION.—For fiscal year  
22          2005 and each fiscal year thereafter, there are  
23          authorized to be appropriated to the National  
24          Science Foundation not less than \$25,000,000,  
25          to be made available through the Science and

1 Technology Policy Institute, for research in  
2 those priority areas.”.

3 **SEC. 103. ABRUPT CLIMATE CHANGE RESEARCH.**

4 (a) IN GENERAL.—The Secretary, through the Na-  
5 tional Oceanic and Atmospheric Administration, shall  
6 carry out a program of scientific research on potential ab-  
7 rupt climate change designed—

8 (1) to develop a global array of terrestrial and  
9 oceanographic indicators of paleoclimate in order  
10 sufficiently to identify and describe past instances of  
11 abrupt climate change;

12 (2) to improve understanding of thresholds and  
13 nonlinearities in geophysical systems related to the  
14 mechanisms of abrupt climate change;

15 (3) to incorporate these mechanisms into ad-  
16 vanced geophysical models of climate change; and

17 (4) to test the output of these models against  
18 an improved global array of records of past abrupt  
19 climate changes.

20 (b) ABRUPT CLIMATE CHANGE DEFINED.—In this  
21 section, the term “abrupt climate change” means a change  
22 in climate that occurs so rapidly or unexpectedly that  
23 human or natural systems may have difficulty adapting  
24 to it.

1 (c) AUTHORIZATION OF APPROPRIATIONS.—There  
2 are authorized to be appropriated to the Secretary for fis-  
3 cal year 2005 \$60,000,000 to carry out this section, such  
4 sum to remain available until expended.

5 **SEC. 104. NIST GREENHOUSE GAS FUNCTIONS.**

6 Section 2(c) of the National Institute of Standards  
7 and Technology Act (15 U.S.C. 272(c)) is amended—

8 (1) by striking “and” after the semicolon in  
9 paragraph (21);

10 (2) by redesignating paragraph (22) as para-  
11 graph (23); and

12 (3) by inserting after paragraph (21) the fol-  
13 lowing:

14 “(22) perform research to develop enhanced  
15 measurements, calibrations, standards, and tech-  
16 nologies which will facilitate activities that reduce  
17 emissions of greenhouse gases or increase sequestra-  
18 tion of greenhouse gases, including carbon dioxide,  
19 methane, nitrous oxide, ozone, perfluorocarbons,  
20 hydrofluorocarbons, and sulfur hexafluoride; and”.

21 **SEC. 105. DEVELOPMENT OF NEW MEASUREMENT TECH-**  
22 **NOLOGIES.**

23 To facilitate implementation of section 204, the Sec-  
24 retary shall initiate a program to develop, with technical  
25 assistance from appropriate Federal agencies, innovative

1 standards and measurement technologies to calculate  
2 greenhouse gas emissions or reductions for which no accu-  
3 rate or reliable measurement technology exists. The pro-  
4 gram shall include—

5           (1) technologies (including remote sensing tech-  
6 nologies) to measure carbon changes and other  
7 greenhouse gas emissions and reductions from agri-  
8 culture, forestry, and other land use practices; and

9           (2) technologies to calculate non-carbon dioxide  
10 greenhouse gas emissions from transportation.

11 **SEC. 106. ENHANCED ENVIRONMENTAL MEASUREMENTS**  
12 **AND STANDARDS.**

13       The National Institute of Standards and Technology  
14 Act (15 U.S.C. 271 et seq.) is amended—

15           (1) by redesignating sections 17 through 32 as  
16 sections 18 through 33, respectively; and

17           (2) by inserting after section 16 the following:

18 **“SEC. 17. CLIMATE CHANGE STANDARDS AND PROCESSES.**

19       “(a) IN GENERAL.—The Director shall establish  
20 within the Institute a program to perform and support re-  
21 search on global climate change standards and processes,  
22 with the goal of providing scientific and technical knowl-  
23 edge applicable to the reduction of greenhouse gases (as  
24 defined in section 3 of the Climate Stewardship Act of

1 2004) and of facilitating implementation of section 204  
2 of that Act.

3 “(b) RESEARCH PROGRAM.—

4 “(1) IN GENERAL.—The Director is authorized  
5 to conduct, directly or through contracts or grants,  
6 a global climate change standards and processes re-  
7 search program.

8 “(2) RESEARCH PROJECTS.—The specific con-  
9 tents and priorities of the research program shall be  
10 determined in consultation with appropriate Federal  
11 agencies, including the Environmental Protection  
12 Agency, the National Oceanic and Atmospheric Ad-  
13 ministration, and the National Aeronautics and  
14 Space Administration. The program generally shall  
15 include basic and applied research—

16 “(A) to develop and provide the enhanced  
17 measurements, calibrations, data, models, and  
18 reference material standards which will enable  
19 the monitoring of greenhouse gases;

20 “(B) to assist in establishing a baseline  
21 reference point for future trading in greenhouse  
22 gases and the measurement of progress in emis-  
23 sions reduction;

24 “(C) that will be exchanged internationally  
25 as scientific or technical information which has

1 the stated purpose of developing mutually rec-  
2 ognized measurements, standards, and proce-  
3 dures for reducing greenhouse gases; and

4 “(D) to assist in developing improved in-  
5 dustrial processes designed to reduce or elimi-  
6 nate greenhouse gases.

7 “(c) NATIONAL MEASUREMENT LABORATORIES.—

8 “(1) IN GENERAL.—In carrying out this sec-  
9 tion, the Director shall utilize the collective skills of  
10 the National Measurement Laboratories of the Na-  
11 tional Institute of Standards and Technology to im-  
12 prove the accuracy of measurements that will permit  
13 better understanding and control of industrial chem-  
14 ical processes and result in the reduction or elimi-  
15 nation of greenhouse gases.

16 “(2) MATERIAL, PROCESS, AND BUILDING RE-  
17 SEARCH.—The National Measurement Laboratories  
18 shall conduct research under this subsection that in-  
19 cludes—

20 “(A) developing material and manufac-  
21 turing processes which are designed for energy  
22 efficiency and reduced greenhouse gas emissions  
23 into the environment;

24 “(B) developing chemical processes to be  
25 used by industry that, compared to similar

1 processes in commercial use, result in reduced  
2 emissions of greenhouse gases or increased se-  
3 questration of greenhouse gases; and

4 “(C) enhancing building performance with  
5 a focus in developing standards or tools which  
6 will help incorporate low- or no-emission tech-  
7 nologies into building designs.

8 “(3) STANDARDS AND TOOLS.—The National  
9 Measurement Laboratories shall develop standards  
10 and tools under this subsection that include software  
11 to assist designers in selecting alternate building  
12 materials, performance data on materials, artificial  
13 intelligence-aided design procedures for building sub-  
14 systems and ‘smart buildings’, and improved test  
15 methods and rating procedures for evaluating the  
16 energy performance of residential and commercial  
17 appliances and products.

18 “(d) NATIONAL VOLUNTARY LABORATORY ACCREDI-  
19 TATION PROGRAM.—The Director shall utilize the Na-  
20 tional Voluntary Laboratory Accreditation Program under  
21 this section to establish a program to include specific cali-  
22 bration or test standards and related methods and proto-  
23 cols assembled to satisfy the unique needs for accredita-  
24 tion in measuring the production of greenhouse gases. In  
25 carrying out this subsection the Director may cooperate

1 with other departments and agencies of the Federal Gov-  
2 ernment, State and local governments, and private organi-  
3 zations.”.

4 **SEC. 107. TECHNOLOGY DEVELOPMENT AND DIFFUSION.**

5 The Director of the National Institute of Standards  
6 and Technology, through the Manufacturing Extension  
7 Partnership Program, may develop a program to promote  
8 the use, by the more than 380,000 small manufacturers,  
9 of technologies and techniques that result in reduced emis-  
10 sions of greenhouse gases or increased sequestration of  
11 greenhouse gases.

12 **SEC. 108. AGRICULTURAL OUTREACH PROGRAM.**

13 (a) IN GENERAL.—The Secretary of Agriculture, act-  
14 ing through the Global Change Program Office and in  
15 consultation with the heads of other appropriate depart-  
16 ments and agencies, shall establish the Climate Change  
17 Education and Outreach Initiative Program to educate,  
18 and reach out to, agricultural organizations and individual  
19 farmers on global climate change.

20 (b) PROGRAM COMPONENTS.—The program—

21 (1) shall be designed to ensure that agricultural  
22 organizations and individual farmers receive detailed  
23 information about—

24 (A) the potential impact of climate change  
25 on their operations and well-being;



1 (B) market-driven economic opportunities  
2 that may come from storing carbon in soils and  
3 vegetation, including emerging private sector  
4 markets for carbon storage; and

5 (C) techniques for measuring, monitoring,  
6 verifying, and inventorying such carbon capture  
7 efforts;

8 (2) may incorporate existing efforts in any area  
9 of activity referenced in paragraph (1) or in related  
10 areas of activity;

11 (3) shall provide—

12 (A) outreach materials to interested par-  
13 ties;

14 (B) workshops; and

15 (C) technical assistance; and

16 (4) may include the creation and development  
17 of regional centers on climate change or coordination  
18 with existing centers (including such centers within  
19 NRCS and the Cooperative State Research Edu-  
20 cation and Extension Service).

21 **SEC. 109. NOAA REPORT ON CLIMATE CHANGE EFFECTS;**

22 **PREPARATION ASSISTANCE.**

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

1 “REPORT ON EFFECTS OF CLIMATE CHANGE

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

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

11 “(2) coastal communities, including private resi-  
12 dential and commercial development and public in-  
13 frastructure in the coastal zone.

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

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

19 “(2) the projected future impacts of climate  
20 change.

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

23 “(1) increases in sea level;

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

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

3           “(4) increases in the temperature of the air and  
4           the water on oceanic and coastal ecosystems, with a  
5           particular focus on vulnerable fisheries and eco-  
6           systems; and

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

10          “CLIMATE CHANGE PREPARATION ASSISTANCE

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

16          “(b) IDENTIFICATION OF AFFECTED AREAS AND AD-  
17          APTATIONS.—In carrying out this section, the Secretary  
18          shall—

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

22                         “(A) increases in sea level;

23                         “(B) increases in storm activity and inten-  
24                         sity; and

25                         “(C) increases in floods, droughts, and  
26                         other extremes of weather;

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

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

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

## 12           **TITLE II—NATIONAL** 13           **GREENHOUSE GAS DATABASE**

### 14           **SEC. 201. NATIONAL GREENHOUSE GAS DATABASE AND** 15           **REGISTRY ESTABLISHED.**

16           (a) ESTABLISHMENT.—As soon as practicable after  
17           the date of enactment of this Act, the Administrator, in  
18           coordination with the Secretary, the Secretary of Energy,  
19           the Secretary of Agriculture, and private sector and non-  
20           governmental organizations, shall establish, operate, and  
21           maintain a database, to be known as the “National Green-  
22           house Gas Database”, to collect, verify, and analyze infor-  
23           mation on greenhouse gas emissions by entities.

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

1           (1) an inventory of greenhouse gas emissions;  
2           and

3           (2) a registry of greenhouse gas emission reduc-  
4           tions and increases in greenhouse gas sequestra-  
5           tions.

6           (c) COMPREHENSIVE SYSTEM.—

7           (1) IN GENERAL.—Not later than 2 years after  
8           the date of enactment of this Act, the Administrator  
9           shall promulgate regulations to implement a com-  
10          prehensive system for greenhouse gas emissions re-  
11          porting, inventorying, and reductions registration.

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

14                (A) the comprehensive system described in  
15                paragraph (1) is designed to—

16                    (i) maximize completeness, trans-  
17                    parency, and accuracy of information re-  
18                    ported; and

19                    (ii) minimize costs incurred by entities  
20                    in measuring and reporting greenhouse gas  
21                    emissions; and

22                (B) the regulations promulgated under  
23                paragraph (1) establish procedures and proto-  
24                cols necessary—

- 1 (i) to prevent the double-counting of  
2 greenhouse gas emissions or emission re-  
3 ductions reported by more than 1 reporting  
4 entity;
- 5 (ii) to provide for corrections to errors  
6 in data submitted to the database;
- 7 (iii) to provide for adjustment to data  
8 by reporting entities that have had a sig-  
9 nificant organizational change (including  
10 mergers, acquisitions, and divestiture), in  
11 order to maintain comparability among  
12 data in the database over time;
- 13 (iv) to provide for adjustments to re-  
14 flect new technologies or methods for  
15 measuring or calculating greenhouse gas  
16 emissions;
- 17 (v) to account for changes in registra-  
18 tion of ownership of emission reductions  
19 resulting from a voluntary private trans-  
20 action between reporting entities; and
- 21 (vi) to clarify the responsibility for re-  
22 porting in the case of any facility owned or  
23 controlled by more than 1 entity.
- 24 (3) SERIAL NUMBERS.—Through regulations  
25 promulgated under paragraph (1), the Administrator

1 shall develop and implement a system that pro-  
2 vides—

3 (A) for the verification of submitted emis-  
4 sions reductions registered under section 203;

5 (B) for the provision of unique serial num-  
6 bers to identify the registered emission reduc-  
7 tions made by an entity relative to the baseline  
8 of the entity;

9 (C) for the tracking of the registered re-  
10 ductions associated with the serial numbers;  
11 and

12 (D) for such action as may be necessary to  
13 prevent counterfeiting of the registered reduc-  
14 tions.

15 **SEC. 202. INVENTORY OF GREENHOUSE GAS EMISSIONS**  
16 **FOR COVERED ENTITIES.**

17 (a) IN GENERAL.—Not later than July 1st of each  
18 calendar year after 2008, each covered entity shall submit  
19 to the Administrator a report that states, for the pre-  
20 ceding calendar year, the entity-wide greenhouse gas emis-  
21 sions (as reported at the facility level), including—

22 (1) the total quantity of direct greenhouse gas  
23 emissions from stationary sources, expressed in units  
24 of carbon dioxide equivalents, except those reported  
25 under paragraph (3);

1           (2) the amount of petroleum products sold or  
2 imported by the entity and the amount of green-  
3 house gases, expressed in units of carbon dioxide  
4 equivalents, that would be emitted when these prod-  
5 ucts are used for transportation in the United  
6 States, as determined by the Administrator under  
7 section 301(b);

8           (3) the amount of hydrofluorocarbons,  
9 perfluorocarbons, or sulfur hexafluoride, expressed  
10 in units of carbon dioxide equivalents, that are sold  
11 or imported by the entity and will ultimately be  
12 emitted in the United States, as determined by the  
13 Administrator under section 301(d); and

14           (4) such other categories of emissions as the  
15 Administrator determines in the regulations promul-  
16 gated under section 201(c)(1) may be practicable  
17 and useful for the purposes of this Act, such as—

18                   (A) indirect emissions from imported elec-  
19 tricity, heat, and steam;

20                   (B) process and fugitive emissions; and

21                   (C) production or importation of green-  
22 house gases.

23           (b) COLLECTION AND ANALYSIS OF DATA.—The Ad-  
24 ministrator shall collect and analyze information reported  
25 under subsection (a) for use under title III.



1 **SEC. 203. GREENHOUSE GAS REDUCTION REPORTING.**

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

4 (1) a covered entity may register greenhouse  
5 gas emission reductions achieved after 1990 and be-  
6 fore 2010 under this section; and

7 (2) an entity that is not a covered entity may  
8 register greenhouse gas emission reductions achieved  
9 at any time since 1990 under this section.

10 (b) REQUIREMENTS.—

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

14 (A) establish a baseline; and

15 (B) submit the report described in sub-  
16 section (c)(1).

17 (2) REQUIREMENTS APPLICABLE TO ENTITIES  
18 ENTERING INTO CERTAIN AGREEMENTS.—An entity  
19 that enters into an agreement with a participant in  
20 the registry for the purpose of a carbon sequestra-  
21 tion project shall not be required to comply with the  
22 requirements specified in paragraph (1) unless that  
23 entity is required to comply with the requirements  
24 by reason of an activity other than the agreement.

25 (c) REPORTS.—

1           (1) REQUIRED REPORT.—Not later than July  
2 1st of each calendar year beginning more than 2  
3 years after the date of enactment of this Act, but  
4 subject to paragraph (3), an entity described in sub-  
5 section (a) shall submit to the Administrator a re-  
6 port that states, for the preceding calendar year, the  
7 entity-wide greenhouse gas emissions (as reported at  
8 the facility level), including—

9           (A) the total quantity of direct greenhouse  
10 gas emissions from stationary sources, ex-  
11 pressed in units of carbon dioxide equivalents;

12           (B) the amount of petroleum products sold  
13 or imported by the entity and the amount of  
14 greenhouse gases, expressed in units of carbon  
15 dioxide equivalents, that would be emitted when  
16 these products are used for transportation in  
17 the United States, as determined by the Admin-  
18 istrator under section 301(b);

19           (C) the amount of hydrofluorocarbons,  
20 perfluorocarbons, or sulfur hexafluoride, ex-  
21 pressed in units of carbon dioxide equivalents,  
22 that are sold or imported by the entity and will  
23 ultimately be emitted in the United States, as  
24 determined by the Administrator under section  
25 301(d); and

1 (D) such other categories of emissions as  
2 the Administrator determines in the regulations  
3 promulgated under section 201(c)(1) may be  
4 practicable and useful for the purposes of this  
5 Act, such as—

6 (i) indirect emissions from imported  
7 electricity, heat, and steam;

8 (ii) process and fugitive emissions;  
9 and

10 (iii) production or importation of  
11 greenhouse gases.

12 (2) VOLUNTARY REPORTING.—An entity de-  
13 scribed in subsection (a) may (along with estab-  
14 lishing a baseline and reporting emissions under this  
15 section)—

16 (A) submit a report described in paragraph  
17 (1) before the date specified in that paragraph  
18 for the purposes of achieving and  
19 commoditizing greenhouse gas reductions  
20 through use of the registry and for other pur-  
21 poses; and

22 (B) submit to the Administrator, for inclu-  
23 sion in the registry, information that has been  
24 verified in accordance with regulations promul-

1 gated under section 201(c)(1) and that relates  
2 to—

3 (i) any activity that resulted in the  
4 net reduction of the greenhouse gas emis-  
5 sions of the entity or a net increase in se-  
6 questration by the entity that were carried  
7 out during or after 1990 and before the es-  
8 tablishment of the database, verified in ac-  
9 cordance with regulations promulgated  
10 under section 201(c)(1), and submitted to  
11 the Administrator before the date that is 4  
12 years after the date of enactment of this  
13 Act; and

14 (ii) with respect to the calendar year  
15 preceding the calendar year in which the  
16 information is submitted, any project or  
17 activity that resulted in the net reduction  
18 of the greenhouse gas emissions of the en-  
19 tity or a net increase in net sequestration  
20 by the entity.

21 (3) PROVISION OF VERIFICATION INFORMATION  
22 BY REPORTING ENTITIES.—Each entity that submits  
23 a report under this subsection shall provide informa-  
24 tion sufficient for the Administrator to verify, in ac-  
25 cordance with measurement and verification methods

1 and standards developed under section 204, that the  
2 greenhouse gas report of the reporting entity—

3 (A) has been accurately reported; and

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

6 (i) actual reductions in direct green-  
7 house gas emissions—

8 (I) relative to historic emission  
9 levels of the entity; and

10 (II) after accounting for any in-  
11 creases in indirect emissions described  
12 in paragraph (1)(D)(i); or

13 (ii) actual increases in net sequestra-  
14 tion.

15 (4) FAILURE TO SUBMIT REPORT.—An entity  
16 that participates or has participated in the registry  
17 and that fails to submit a report required under this  
18 subsection shall be prohibited from using, or allow-  
19 ing another entity to use, its registered emissions re-  
20 ductions or increases in sequestration to satisfy the  
21 requirements of section 301.

22 (5) INDEPENDENT THIRD-PARTY VERIFICA-  
23 TION.—To meet the requirements of this section and  
24 section 204, an entity that is required to submit a  
25 report under this section may—

1 (A) obtain independent third-party  
2 verification; and

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

5 (6) AVAILABILITY OF DATA.—

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

9 (i) published; and

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

12 (B) EXCEPTION.—Subparagraph (A) shall  
13 not apply in any case in which the Adminis-  
14 trator determines that publishing or otherwise  
15 making available information described in that  
16 subparagraph poses a risk to national security  
17 or discloses confidential business information  
18 that cannot be derived from information that is  
19 otherwise publicly available and that would  
20 cause competitive harm if published.

21 (7) DATA INFRASTRUCTURE.—The Adminis-  
22 trator shall ensure, to the maximum extent prac-  
23 ticable, that the database uses, and is integrated  
24 with, Federal, State, and regional greenhouse gas

1 data collection and reporting systems in effect as of  
2 the date of enactment of this Act.

3 (8) ADDITIONAL ISSUES TO BE CONSIDERED.—

4 In promulgating the regulations under section  
5 201(c)(1) and implementing the database, the Ad-  
6 ministrator shall take into consideration a broad  
7 range of issues involved in establishing an effective  
8 database, including—

9 (A) the data and information systems and  
10 measures necessary to identify, track, and  
11 verify greenhouse gas emissions in a manner  
12 that will encourage private sector trading and  
13 exchanges;

14 (B) the greenhouse gas reduction and se-  
15 questration measurement and estimation meth-  
16 ods and standards applied in other countries, as  
17 applicable or relevant;

18 (C) the extent to which available fossil  
19 fuels, greenhouse gas emissions, and greenhouse  
20 gas production and importation data are ade-  
21 quate to implement the database; and

22 (D) the differences in, and potential  
23 uniqueness of, the facilities, operations, and  
24 business and other relevant practices of persons  
25 and entities in the private and public sectors

1           that may be expected to participate in the data-  
2           base.

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

5           (1) describes the total greenhouse gas emissions  
6           and emission reductions reported to the database  
7           during the year covered by the report;

8           (2) provides entity-by-entity and sector-by-sec-  
9           tor analyses of the emissions and emission reduc-  
10          tions reported;

11          (3) describes the atmospheric concentrations of  
12          greenhouse gases;

13          (4) provides a comparison of current and past  
14          atmospheric concentrations of greenhouse gases; and

15          (5) describes the activity during the year cov-  
16          ered by the period in the trading of greenhouse gas  
17          emission allowances.

18 **SEC. 204. MEASUREMENT AND VERIFICATION.**

19          (a) STANDARDS.—

20          (1) IN GENERAL.—Not later than 1 year after  
21          the date of enactment of this Act, the Secretary  
22          shall establish by rule, in coordination with the Ad-  
23          ministrator, the Secretary of Energy, and the Sec-  
24          retary of Agriculture, comprehensive measurement  
25          and verification methods and standards to ensure a



1 consistent and technically accurate record of green-  
2 house gas emissions, emission reductions, sequestra-  
3 tion, and atmospheric concentrations for use in the  
4 registry.

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

7 (A) a requirement that a covered entity  
8 use a continuous emissions monitoring system,  
9 or another system of measuring or estimating  
10 emissions that is determined by the Secretary  
11 to provide information with precision, reli-  
12 ability, accessibility, and timeliness similar to  
13 that provided by a continuous emissions moni-  
14 toring system where technologically 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 and emission re-  
3 ductions;

4 (iv) protocols to prevent a covered en-  
5 tity from avoiding the requirements of this  
6 Act by reorganization into multiple entities  
7 that are under common control; and

8 (v) such other factors as the Sec-  
9 retary, in consultation with the Adminis-  
10 trator, determines to be appropriate;

11 (C) establishment of methods of—

12 (i) estimating greenhouse gas emis-  
13 sions, for those cases in which the Sec-  
14 retary determines that methods of moni-  
15 toring, measuring or estimating such emis-  
16 sions with precision, reliability, accessi-  
17 bility, and timeliness similar to that pro-  
18 vided by a continuous emissions monitoring  
19 system are not technologically feasible at  
20 present; and

21 (ii) reporting the accuracy of such es-  
22 timations;

23 (D) establishment of measurement and  
24 verification standards applicable to actions

1 taken to reduce, avoid, or sequester greenhouse  
2 gas emissions;

3 (E) in coordination with the Secretary of  
4 Agriculture, standards to measure the results of  
5 the use of carbon sequestration and carbon re-  
6 capture technologies, including—

7 (i) soil carbon sequestration practices;

8 and

9 (ii) forest preservation and reforest-  
10 ation activities that adequately address the  
11 issues of permanence, leakage, and  
12 verification;

13 (F) establishment of such other measure-  
14 ment and verification standards as the Sec-  
15 retary, in consultation with the Secretary of Ag-  
16 riculture, the Administrator, and the Secretary  
17 of Energy, determines to be appropriate;

18 (G) establishment of standards for obtain-  
19 ing the Secretary's approval of the suitability of  
20 geological storage sites that include evaluation  
21 of both the geology of the site and the entity's  
22 capacity to manage the site; and

23 (H) establishment of other features that,  
24 as determined by the Secretary, will allow enti-

1           ties to adequately establish a fair and reliable  
2           measurement and reporting system.

3           (b) REVIEW AND REVISION.—The Secretary shall pe-  
4 riodically review, and revise as necessary, the methods and  
5 standards developed under subsection (a).

6           (c) PUBLIC PARTICIPATION.—The Secretary shall—

7           (1) make available to the public for comment,  
8           in draft form and for a period of at least 90 days,  
9           the methods and standards developed under sub-  
10          section (a); and

11          (2) after the 90-day period referred to in para-  
12          graph (1), in coordination with the Secretary of En-  
13          ergy, the Secretary of Agriculture, and the Adminis-  
14          trator, adopt the methods and standards developed  
15          under subsection (a) for use in implementing the  
16          database.

17          (d) EXPERTS AND CONSULTANTS.—

18          (1) IN GENERAL.—The Secretary may obtain  
19          the services of experts and consultants in the private  
20          and nonprofit sectors in accordance with section  
21          3109 of title 5, United States Code, in the areas of  
22          greenhouse gas measurement, certification, and  
23          emission trading.

24          (2) AVAILABLE ARRANGEMENTS.—In obtaining  
25          any service described in paragraph (1), the Sec-

1       retary may use any available grant, contract, cooper-  
2       ative agreement, or other arrangement authorized by  
3       law.

4       **TITLE III—MARKET-DRIVEN**  
5       **GREENHOUSE GAS REDUCTIONS**  
6       **Subtitle A—Emission Reduction**  
7       **Requirements; Use of Tradeable**  
8       **Allowances**

9       **SEC. 301. COVERED ENTITIES MUST SUBMIT ALLOWANCES**  
10       **FOR EMISSIONS.**

11       (a) IN GENERAL.—Beginning with calendar year  
12 2010—

13             (1) each covered entity in the electric genera-  
14       tion, industrial, and commercial sectors shall submit  
15       to the Administrator one tradeable allowance for  
16       every metric ton of greenhouse gases, measured in  
17       units of carbon dioxide equivalents, that it emits  
18       from stationary sources, except those described in  
19       paragraph (2);

20             (2) each producer or importer of  
21       hydrofluorocarbons, perfluorocarbons, or sulfur  
22       hexafluoride that is a covered entity shall submit to  
23       the Administrator one tradeable allowance for every  
24       metric ton of hydrofluorocarbons, perfluorocarbons,  
25       or sulfur hexafluoride, measured in units of carbon

1 dioxide equivalents, that it produces or imports and  
2 that will ultimately be emitted in the United States,  
3 as determined by the Administrator under sub-  
4 section (d) and

5 (3) each petroleum refiner or importer that is  
6 a covered entity shall submit one tradeable allowance  
7 for every unit of petroleum product it sells that will  
8 produce one metric ton of greenhouse gases, meas-  
9 ured in units of carbon dioxide equivalents, as deter-  
10 mined by the Administrator under subsection (b),  
11 when used for transportation.

12 (b) DETERMINATION OF TRANSPORTATION SECTOR  
13 AMOUNT.—For the transportation sector, the Adminis-  
14 trator shall determine the amount of greenhouse gases,  
15 measured in units of carbon dioxide equivalents, that will  
16 be emitted when petroleum products are used for trans-  
17 portation.

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

1           (1) the emission is deposited in a geological  
2 storage facility approved by the Administrator de-  
3 scribed in section 204(a)(2)(G); and

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

7           (d) DETERMINATION OF HYDROFLUOROCARBON,  
8 PERFLUOROCARBON, AND SULFUR HEXAFLUORIDE  
9 AMOUNT.—The Administrator shall determine the  
10 amounts of hydrofluorocarbons, perfluorocarbons, or sul-  
11 fur hexafluoride, measured in units of carbon dioxide  
12 equivalents, that will be deemed to be emitted for purposes  
13 of this Act.

14 **SEC. 302. COMPLIANCE.**

15           (a) IN GENERAL.—

16           (1) SOURCE OF TRADEABLE ALLOWANCES  
17 USED.—A covered entity may use a tradeable allow-  
18 ance to meet the requirements of this section with-  
19 out regard to whether the tradeable allowance was  
20 allocated to it under subtitle B or acquired from an-  
21 other entity or the Climate Change Credit Corpora-  
22 tion established under section 351.

23           (2) VERIFICATION BY ADMINISTRATOR.—At  
24 various times during each year, the Administrator  
25 shall determine whether each covered entity has met

1 the requirements of this section. In making that de-  
2 termination, the Administrator shall—

3 (A) take into account the tradeable allow-  
4 ances submitted by the covered entity to the  
5 Administrator; and

6 (B) retire the serial number assigned to  
7 each such tradeable allowance.

8 (b) ALTERNATIVE MEANS OF COMPLIANCE.—For the  
9 years after 2010, a covered entity may satisfy up to 15  
10 percent of its total allowance submission requirement  
11 under this section by—

12 (1) submitting tradeable allowances from an-  
13 other nation’s market in greenhouse gas emissions  
14 if—

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

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



1 (C) the covered entity certifies that the  
2 tradeable allowance has been retired unused in  
3 the other nation's market;

4 (2) submitting a registered net increase in se-  
5 questration, as registered in the database, adjusted,  
6 if necessary, to comply with the accounting stand-  
7 ards and methods established under section 371;

8 (3) submitting a greenhouse gas emissions re-  
9 duction (other than a registered net increase in se-  
10 questration) that was registered in the database by  
11 a person that is not a covered entity; or

12 (4) submitting credits obtained from the Ad-  
13 ministrator under section 303.

14 (c) DEDICATED PROGRAM FOR SEQUESTRATION IN  
15 AGRICULTURAL SOILS.—If a covered entity chooses to  
16 satisfy 15 percent of its total allowance submission re-  
17 quirements under the provisions of subsection (b), it shall  
18 satisfy up to 1.5 percent of its total allowance submission  
19 requirement by submitting registered net increases in se-  
20 questration in agricultural soils, as registered in the data-  
21 base, adjusted, if necessary, to comply with the accounting  
22 standards and methods established under section 371.

23 **SEC. 303. BORROWING AGAINST FUTURE REDUCTIONS.**

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

1           (1) receive a credit in the current calendar year  
2           for anticipated reductions in emissions in a future  
3           calendar year; and

4           (2) use the credit in lieu of a tradeable allow-  
5           ance to meet the requirements of this Act for the  
6           current calendar year, subject to the limitation im-  
7           posed by section 302(b).

8           (b) DETERMINATION OF TRADEABLE ALLOWANCE  
9           CREDITS.—The Administrator may make credits available  
10          under subsection (a) only for anticipated reductions in  
11          emissions that—

12           (1) are attributable to the realization of capital  
13           investments in equipment, the construction, recon-  
14           struction, or acquisition of facilities, or the deploy-  
15           ment of new technologies—

16           (A) for which the covered entity has exe-  
17           cuted a binding contract and secured, or ap-  
18           plied for, all necessary permits and operating or  
19           implementation authority;

20           (B) that will not become operational within  
21           the current calendar year; and

22           (C) that will become operational and begin  
23           to reduce emissions from the covered entity  
24           within 5 years after the year in which the credit  
25           is used; and

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

3           (c) CARRYING COST.—If a covered entity uses a cred-  
4           it under this section to meet the requirements of this Act  
5           for a calendar year (referred to as the use year), the  
6           tradeable allowance requirement for the year from which  
7           the credit was taken (referred to as the source year) shall  
8           be increased by an amount equal to—

9           (1) 10 percent for each credit borrowed from  
10          the source year; multiplied by

11          (2) the number of years beginning after the use  
12          year and before the source year.

13          (d) MAXIMUM BORROWING PERIOD.—A credit from  
14          a year beginning more than 5 years after the current year  
15          may not be used to meet the requirements of this Act for  
16          the current year.

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

22          (1) the covered entity's requirements under this  
23          Act for that year shall be increased by the amount  
24          of the credit, plus the amount determined under  
25          subsection (c);

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

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

7 **SEC. 304. OTHER USES OF TRADEABLE ALLOWANCES.**

8           (a) IN GENERAL.—Tradeable allowances may be sold,  
9 exchanged, purchased, retired, or used as provided in this  
10 section.

11          (b) INTERSECTOR TRADING.—Covered entities may  
12 purchase or otherwise acquire tradeable allowances from  
13 other covered sectors to satisfy the requirements of section  
14 301.

15          (c) CLIMATE CHANGE CREDIT ORGANIZATION.—The  
16 Climate Change Credit Corporation established under sec-  
17 tion 351 may sell tradeable allowances allocated to it  
18 under section 332(a)(2) to any covered entity or to any  
19 investor, broker, or dealer in such tradeable allowances.  
20 The Climate Change Credit Corporation shall use all pro-  
21 ceeds from such sales in accordance with the provisions  
22 of section 352.

23          (d) BANKING OF TRADEABLE ALLOWANCES.—Not-  
24 withstanding the requirements of section 301, a covered  
25 entity that has more than a sufficient amount of tradeable

1 allowances to satisfy the requirements of section 301, may  
2 refrain from submitting a tradeable allowance to satisfy  
3 the requirements in order to sell, exchange, or use the  
4 tradeable allowance in the future.

5 **SEC. 305. EXEMPTION OF SOURCE CATEGORIES.**

6 (a) IN GENERAL.—The Administrator may grant an  
7 exemption from the requirements of this Act to a source  
8 category if the Administrator determines, after public no-  
9 tice and comment, that it is not feasible to measure or  
10 estimate emissions from that source category, until such  
11 time as measurement or estimation becomes feasible.

12 (b) REDUCTION OF LIMITATIONS.—If the Adminis-  
13 trator exempts a source category under subsection (a), the  
14 Administrator shall also reduce the total tradeable allow-  
15 ances under section 331(a)(1) by the amount of green-  
16 house gas emissions that the exempted source category  
17 emitted in calendar year 2000, as identified in the 2000  
18 Inventory.

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

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

3       **SEC. 331. ESTABLISHMENT OF TRADEABLE ALLOWANCES.**

4           (a) IN GENERAL.—The Administrator shall promul-  
5       gate regulations to establish tradeable allowances, denomi-  
6       nated in units of carbon dioxide equivalents, for calendar  
7       years beginning after 2009, equal to—

8           (1) 5896 million metric tons, measured in units  
9       of carbon dioxide equivalents, reduced by

10          (2) the amount of emissions of greenhouse  
11       gases in calendar year 2000 from non-covered enti-  
12       ties.

13          (b) SERIAL NUMBERS.—The Administrator shall as-  
14       sign a unique serial number to each tradeable allowance  
15       established under subsection (a), and shall take such ac-  
16       tion as may be necessary to prevent counterfeiting of  
17       tradeable allowances.

18          (c) NATURE OF TRADEABLE ALLOWANCES.—A  
19       tradeable allowance is not a property right, and nothing  
20       in this title or any other provision of law limits the author-  
21       ity of the United States to terminate or limit a tradeable  
22       allowance.

23          (d) NON-COVERED ENTITY.—In this section:

24           (1) IN GENERAL.—The term ‘non-covered enti-  
25       ty’ means an entity that—

1 (A) owns or controls a source of green-  
2 house gas emissions in the electric power, in-  
3 dustrial, or commercial sector of the United  
4 States economy (as defined in the Inventory),  
5 refines or imports petroleum products for use in  
6 transportation, or produces or imports  
7 hydrofluorocarbons, perfluorocarbons, or sulfur  
8 hexafluoride; and

9 (B) is not a covered entity.

10 (2) EXCEPTION.—Notwithstanding paragraph  
11 (1), an entity that is a covered entity for any cal-  
12 endar year beginning after 2009 shall not be consid-  
13 ered to be a non-covered entity for purposes of sub-  
14 section (a) only because it emitted, or its products  
15 would have emitted, 10,000 metric tons or less of  
16 greenhouse gas, measured in units of carbon dioxide  
17 equivalents, in the year 2000.

18 **SEC. 332. DETERMINATION OF TRADEABLE ALLOWANCE**

19 **ALLOCATIONS.**

20 (a) IN GENERAL.—The Secretary shall determine—

21 (1) the amount of tradeable allowances to be al-  
22 located to each covered sector of that sector's allot-  
23 ments; and

1           (2) the amount of tradeable allowances to be al-  
2           located to the Climate Change Credit Corporation  
3           established under section 351.

4           (b) ALLOCATION FACTORS.—In making the deter-  
5           mination required by subsection (a), the Secretary shall  
6           consider—

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

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

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

13          (4) the effects of the allocations in terms of eco-  
14          nomic efficiency;

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

17          (6) the degree to which the amount of alloca-  
18          tions to the covered sectors should decrease over  
19          time; and

20          (7) the need to maintain the international com-  
21          petitiveness of United States manufacturing and  
22          avoid the additional loss of United States manufac-  
23          turing jobs.

24          (c) ALLOCATION RECOMMENDATIONS AND IMPLE-  
25          MENTATION.—Before allocating or providing tradeable al-



1 allowances under subsection (a) and within 24 months after  
2 the date of enactment of this Act, the Secretary shall sub-  
3 mit the determinations under subsection (a) to the Senate  
4 Committee on Commerce, Science, and Transportation,  
5 the Senate Committee on Environment and Public Works,  
6 the House of Representatives Committee on Science, and  
7 the House of Representatives Committee on Energy and  
8 Commerce. The Secretary's determinations under sub-  
9 section (a)(1), including the allocations and provision of  
10 tradeable allowances pursuant to that determination, are  
11 deemed to be a major rule (as defined in section 804(2)  
12 of title 5, United States Code), and subject to the provi-  
13 sions of chapter 8 of that title.

14 **SEC. 333. ALLOCATION OF TRADEABLE ALLOWANCES.**

15 (a) IN GENERAL.—Beginning with calendar year  
16 2010 and after taking into account any initial allocations  
17 under section 334, the Administrator shall—

18 (1) allocate to each covered sector that sector's  
19 allotments determined by the Administrator under  
20 section 332 (adjusted for any such initial allocations  
21 and the allocation to the Climate Change Credit  
22 Corporation established under section 351); and

23 (2) allocate to the Climate Change Credit Cor-  
24 poration established under section 351 the tradeable  
25 allowances allocable to that Corporation.

1 (b) INTRASECTORIAL ALLOTMENTS.—The Adminis-  
2 trator shall, by regulation, establish a process for the allo-  
3 cation of tradeable allowances under this section, without  
4 cost to covered entities, that will—

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

8 (2) minimize the costs to the Government of al-  
9 locating the tradeable allowances;

10 (3) not penalize a covered entity for emissions  
11 reductions made before 2010 and registered with the  
12 database; and

13 (4) provide sufficient allocation for new en-  
14 trants into the sector.

15 (c) POINT SOURCE ALLOCATION.—The Adminis-  
16 trator shall allocate the tradeable allowances for the elec-  
17 tricity generation, industrial, and commercial sectors to  
18 the entities owning or controlling the point sources of  
19 greenhouse gas emissions within that sector.

20 (d) HYDROFLUOROCARBONS, PERFLUOROCARBONS,  
21 AND SULFUR HEXAFLUORIDE.—The Administrator shall  
22 allocate the tradeable allowances for producers or import-  
23 ers of hydrofluorocarbons, perfluorocarbons, or sulfur  
24 hexafluoride to such producers or importers.

1 (e) SPECIAL RULE FOR ALLOCATION WITHIN THE  
2 TRANSPORTATION SECTOR.—The Administrator shall al-  
3 locate the tradeable allowances for the transportation sec-  
4 tor to petroleum refiners or importers that produce or im-  
5 port petroleum products that will be used as fuel for trans-  
6 portation.

7 (f) ALLOCATIONS TO RURAL ELECTRIC COOPERA-  
8 TIVES.—

9 (1) IN GENERAL.—The Administrator shall  
10 make the allocations described in paragraph (2) each  
11 year at no cost. The allocations shall be offset from  
12 the allowances allocated to the Climate Change  
13 Credit Corporation.

14 (2) RURAL ELECTRIC COOPERATIVES.—For  
15 each electric generating unit that is owned or oper-  
16 ated by a rural electric cooperative, the Adminis-  
17 trator shall allocate allowances in an amount equal  
18 to the greenhouse gas emissions of each such unit in  
19 2000, plus an amount equal to the average emis-  
20 sions growth expected for all such units.

21 **SEC. 334. ENSURING TARGET ADEQUACY.**

22 (a) IN GENERAL.—Beginning 2 years after the date  
23 of enactment of this Act, the Under Secretary of Com-  
24 merce for Oceans and Atmosphere shall review the allow-

1 ances established by section 331 no less frequently than  
2 biennially—

3           (1) to re-evaluate the levels established by that  
4           section, after taking into account the best available  
5           science and the most currently available data, and

6           (2) to re-evaluate the environmental and public  
7           health impacts of specific concentration levels of  
8           greenhouse gases,

9 to determine whether the allowances established by sub-  
10 section (a) continue to be consistent with the objective of  
11 the United Nations' Framework Convention on Climate  
12 Change of stabilizing levels of greenhouse gas emissions  
13 at a level that will prevent dangerous anthropogenic inter-  
14 ference with the climate system.

15           (b) REVIEW OF 2010 LEVELS.—The Under Secretary  
16 shall specifically review in 2008 the level established under  
17 section 331(a)(1), and transmit a report on his reviews,  
18 together with any recommendations, including legislative  
19 recommendations, for modification of the levels, to the  
20 Senate Committee on Commerce, Science, and Transpor-  
21 tation, the Senate Committee on Environment and Public  
22 Works, the House of Representatives Committee on  
23 Science, and the House of Representatives Committee on  
24 Energy and Commerce.

1 **SEC. 335. INITIAL ALLOCATIONS FOR EARLY PARTICIPA-**  
2 **TION AND ACCELERATED PARTICIPATION.**

3 Before making any allocations under section 333, the  
4 Administrator shall allocate—

5 (1) to any covered entity an amount of  
6 tradeable allowances equivalent to the amount of  
7 greenhouse gas emissions reductions registered by  
8 that covered entity in the national greenhouse gas  
9 database if—

10 (A) the covered entity has requested to use  
11 the registered reduction in the year of alloca-  
12 tion;

13 (B) the reduction was registered prior to  
14 2010; and

15 (C) the Administrator retires the unique  
16 serial number assigned to the reduction under  
17 section 201(c)(3); and

18 (2) to any covered entity that has entered into  
19 an accelerated participation agreement under section  
20 336, such tradeable allowances as the Administrator  
21 has determined to be appropriate under that section.

22 **SEC. 336. BONUS FOR ACCELERATED PARTICIPATION.**

23 (a) IN GENERAL.—If a covered entity executes an  
24 agreement with the Administrator under which it agrees  
25 to reduce its level of greenhouse gas emissions to a level  
26 no greater than the level of its greenhouse gas emissions

1 for calendar year 1990 by the year 2010, then, for the  
2 6-year period beginning with calendar year 2010, the Ad-  
3 ministrator shall—

4 (1) provide additional tradeable allowances to  
5 that entity when allocating allowances under section  
6 334 in order to recognize the additional emissions  
7 reductions that will be required of the covered entity;

8 (2) allow that entity to satisfy 20 percent of its  
9 requirements under section 301 by—

10 (A) submitting tradeable allowances from  
11 another nation's market in greenhouse gas  
12 emissions under the conditions described in sec-  
13 tion 302(b)(1);

14 (B) submitting a registered net increase in  
15 sequestration, as registered in the National  
16 Greenhouse Gas Database established under  
17 section 201, and as adjusted by the appropriate  
18 sequestration discount rate established under  
19 section 371; or

20 (C) submitting a greenhouse gas emission  
21 reduction (other than a registered net increase  
22 in sequestration) that was registered in the Na-  
23 tional Greenhouse Gas Database by a person  
24 that is not a covered entity.

1 (b) TERMINATION.—An entity that executes an  
2 agreement described in subsection (a) may terminate the  
3 agreement at any time.

4 (c) FAILURE TO MEET COMMITMENT.—If an entity  
5 that executes an agreement described in subsection (a)  
6 fails to achieve the level of emissions to which it committed  
7 by calendar year 2010—

8 (1) its requirements under section 301 shall be  
9 increased by the amount of any tradeable allowances  
10 provided to it under subsection (a)(1); and

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

14 **Subtitle C—Climate Change Credit**  
15 **Corporation**

16 **SEC. 351. ESTABLISHMENT.**

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

21 (b) APPLICABLE LAWS.—The Corporation shall be  
22 subject to the provisions of this title and, to the extent  
23 consistent with this title, 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 shall  
9 serve for terms of 5 years.

10 **SEC. 352. PURPOSES AND FUNCTIONS.**

11           (a) TRADING.—The Corporation—

12                   (1) shall receive and manage tradeable allow-  
13                   ances allocated to it under section 333(a)(2); and

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; but

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 negotiation of discounts, consumer rebates, or  
5 otherwise;

6 (B) shall be, as nearly as possible, equi-  
7 tably distributed across all regions of the  
8 United States; and

9 (C) may include arrangements for pref-  
10 erential treatment to consumers who can least  
11 afford any such increased costs.

12 (2) TRANSITION ASSISTANCE TO DISLOCATED  
13 WORKERS AND COMMUNITIES.—The Corporation  
14 shall allocate a percentage of the proceeds derived  
15 from its trading activities in tradeable allowances to  
16 provide transition assistance to dislocated workers  
17 and communities. Transition assistance may take  
18 the form of—

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

21 (i) to provide training, adjustment as-  
22 sistance, and employment services to dis-  
23 located workers; and

1 (ii) to make income-maintenance and  
2 needs-related payments to dislocated work-  
3 ers; and

4 (B) grants to State and local governments  
5 to assist communities in attracting new employ-  
6 ers or providing essential local government serv-  
7 ices.

8 (3) PHASE-OUT OF TRANSITION ASSISTANCE.—  
9 The percentage allocated by the Corporation under  
10 paragraph (2)—

11 (A) shall be 20 percent for 2010;

12 (B) shall be reduced by 2 percentage  
13 points each year thereafter; and

14 (C) may not be reduced below zero.

15 (4) TECHNOLOGY DEPLOYMENT PROGRAMS.—

16 The Corporation shall establish and carry out a pro-  
17 gram, through direct grants, revolving loan pro-  
18 grams, or other financial measures, to provide sup-  
19 port for the deployment of technology to assist in  
20 compliance with this Act by distributing the pro-  
21 ceeds from no less than 10 percent of the total al-  
22 lowances allocated to it. The support shall include  
23 the following:

24 (A) COAL GASIFICATION COMBINED-CYCLE  
25 AND GEOLOGICAL CARBON STORAGE PRO-

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

17                 (B) AGRICULTURAL PROGRAMS.—The Cor-  
18          poration shall establish and carry out a pro-  
19          gram, through direct grants, revolving loan pro-  
20          grams, or other financial measures, to provide  
21          incentives for greenhouse gas emissions reduc-  
22          tions or net increases in greenhouse gas seques-  
23          tration on agricultural lands. The program shall  
24          include incentives for—

- 1 (i) production of wind energy on agri-  
2 cultural lands;
- 3 (ii) agricultural management practices  
4 that achieve verified, incremental increases  
5 in net carbon sequestration, in accordance  
6 with the requirements established by the  
7 Administrator under section 371; and
- 8 (iii) production of renewable fuels  
9 that, after consideration of the energy  
10 needed to produce such fuels, result in a  
11 net reduction in greenhouse gas emissions.

## 12 **Subtitle D—Sequestration**

### 13 **Accounting; Penalties**

#### 14 **SEC. 371. SEQUESTRATION ACCOUNTING.**

15 (a) SEQUESTRATION ACCOUNTING.—If a covered en-  
16 tity uses a registered net increase in sequestration to sat-  
17 isfy the requirements of section 301 for any year, that  
18 covered entity shall submit information to the Adminis-  
19 trator every 5 years thereafter sufficient to allow the Ad-  
20 ministrator to determine, using the methods and stand-  
21 ards created under section 204, whether that net increase  
22 in sequestration still exists. Unless the Administrator de-  
23 termines that the net increase in sequestration continues  
24 to exist, the covered entity shall offset any loss of seques-  
25 tration by submitting additional tradeable allowances of

1 equivalent amount in the calendar year following that de-  
2 termination.

3 (b) REGULATIONS REQUIRED.—The Secretary, act-  
4 ing through the Under Secretary of Commerce for Science  
5 and Technology, in coordination with the Secretary of Ag-  
6 riculture, the Secretary of Energy, and the Administrator,  
7 shall issue regulations establishing the sequestration ac-  
8 counting rules for all classes of sequestration projects.

9 (c) CRITERIA FOR REGULATIONS.—In issuing regula-  
10 tions under this section, the Secretary shall use the fol-  
11 lowing criteria:

12 (1) If the range of possible amounts of net in-  
13 crease in sequestration for a particular class of se-  
14 questration project is not more than 10 percent of  
15 the median of that range, the amount of sequestra-  
16 tion awarded shall be equal to the median value of  
17 that range.

18 (2) If the range of possible amounts of net in-  
19 crease in sequestration for a particular class of se-  
20 questration project is more than 10 percent of the  
21 median of that range, the amount of sequestration  
22 awarded shall be equal to the fifth percentile of that  
23 range.

24 (3) The regulations shall include procedures for  
25 accounting for potential leakage from sequestration

1 projects and for ensuring that any registered in-  
2 crease in sequestration is in addition to that which  
3 would have occurred if this Act had not been en-  
4 acted.

5 (d) UPDATES.—The Secretary shall update the se-  
6 questration accounting rules for every class of sequestra-  
7 tion project at least once every 5 years.

8 **SEC. 372. PENALTIES.**

9 Any covered entity that fails to meet the require-  
10 ments of section 301 for a year shall be liable for a civil  
11 penalty, payable to the Administrator, equal to thrice the  
12 market value (determined as of the last day of the year  
13 at issue) of the tradeable allowances that would be nec-  
14 essary for that covered entity to meet those requirements  
15 on the date of the emission that resulted in the violation.

○