

109<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

# S. 342

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, to limit greenhouse gas emissions in the United States and reduce dependence upon foreign oil, and ensure benefits to consumers from the trading in such allowances.

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## IN THE SENATE OF THE UNITED STATES

FEBRUARY 10, 2005

Mr. MCCAIN (for himself, Mr. LIEBERMAN, Ms. SNOWE, Mrs. FEINSTEIN, Mr. CHAFEE, Mr. DURBIN, Mr. LAUTENBERG, Mrs. MURRAY, Mr. NELSON of Florida, Mr. CORZINE, Ms. CANTWELL, Mr. KERRY, and Mr. DAYTON) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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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, to limit greenhouse gas emissions in the United States and reduce dependence upon foreign oil, and ensure benefits to consumers from the trading in such allowances.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Climate Stewardship  
3 Act of 2005”.

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

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

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

TITLE I—FEDERAL CLIMATE CHANGE RESEARCH AND RELATED  
ACTIVITIES

- Sec. 101. National Science Foundation fellowships.
- Sec. 102. Commerce Department study of technology transfer barriers.
- Sec. 103. Report on United States impact of Kyoto Protocol.
- Sec. 104. Research grants.
- Sec. 105. Abrupt climate change research.
- Sec. 106. Impact on low-income populations research.
- Sec. 107. NIST greenhouse gas functions.
- Sec. 108. Development of new measurement technologies.
- Sec. 109. Enhanced environmental measurements and standards.
- Sec. 110. Technology development and diffusion.
- Sec. 111. Agricultural outreach program.

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.

21 (4) COVERED SECTORS.—The term “covered  
22 sectors” means the electricity, transportation, indus-

1 try, and commercial sectors, as such terms are used  
2 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 sectors of the United  
10 States economy (as defined in the Inventory),  
11 refines or imports petroleum products for use in  
12 transportation, or produces or imports  
13 hydrofluorocarbons, perfluorocarbons, or sulfur  
14 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 produces or imports—

19 (i) petroleum products that, when  
20 combusted, will emit,

21 (ii) hydrofluorocarbons, perfluorocar-  
22 bons, or sulfur hexafluoride that, when  
23 used, will emit, or

24 (iii) other greenhouse gases that,  
25 when used, will emit,

1 over 10,000 metric tons of greenhouse gas per  
2 year, measured in units of carbon dioxide  
3 equivalentents.

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

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

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

15 (9) GREENHOUSE GAS.—The term “greenhouse  
16 gas” means—

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

23 (10) INDIRECT EMISSIONS.—The term “indirect  
24 emissions” means greenhouse gas emissions that  
25 are—

1 (A) a result of the activities of an entity;  
2 but

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

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

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

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

15 (B) a decrease in sequestration that is  
16 caused by an increase in sequestration at an-  
17 other location.

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

22 (14) REGISTRY.—The term “registry” means  
23 the registry of greenhouse gas emission reductions  
24 established under section 201(b)(2).

1           (15) SECRETARY.—The term “Secretary”  
2 means the Secretary of Commerce.

3           (16) SEQUESTRATION.—

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

8           (B) INCLUSIONS.—The term “sequestra-  
9 tion” includes—

10           (i) agricultural and conservation prac-  
11 tices;

12           (ii) reforestation;

13           (iii) forest preservation; and

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

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

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

23           (ii) any introduction of non-native  
24 species.

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

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

9       **TITLE I—FEDERAL CLIMATE**  
10       **CHANGE RESEARCH AND RE-**  
11       **LATED ACTIVITIES**

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

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

18       **SEC. 102. COMMERCE DEPARTMENT STUDY OF TECH-**  
19       **NOLOGY TRANSFER BARRIERS.**

20       (a) STUDY.—The Assistant Secretary of Technology  
21 Policy at Department of Commerce shall conduct a study  
22 of technology transfer barriers, best practices, and out-  
23 comes of technology transfer activities at Federal labora-  
24 tories related to the licensing and commercialization of en-  
25 ergy efficient technologies, and other technologies that,



1 compared to similar technology in commercial use, result  
2 in reduced emissions of greenhouse gases or increased se-  
3 questration of greenhouse gases. The study shall be sub-  
4 mitted to the Senate Committee on Commerce, Science,  
5 and Transportation and the House of Representatives  
6 Committee on Science within 6 months after the date of  
7 enactment of this Act. The Assistant Secretary shall work  
8 with the existing interagency working group to address  
9 identified barriers.

10 (b) AGENCY REPORT TO INCLUDE INFORMATION ON  
11 TECHNOLOGY TRANSFER INCOME AND ROYALTIES.—  
12 Paragraph (2)(B) of section 11(f) of the Stevenson-  
13 Wydler Technology Innovation Act of 1980 (15 U.S.C.  
14 3710(f)) is amended—

15 (1) by striking “and” after the semicolon in  
16 clause (vi);

17 (2) by redesignating clause (vii) as clause (ix);  
18 and

19 (3) by inserting after clause (vi) the following:

20 “(vii) the number of fully-executed li-  
21 censes which received royalty income in the  
22 preceding fiscal year for climate-change or  
23 energy-efficient technology;

1                   “(viii) the total earned royalty income  
2                   for climate-change or energy-efficient tech-  
3                   nology; and”.

4           (c) INCREASED INCENTIVES FOR DEVELOPMENT OF  
5 CLIMATE-CHANGE OR ENERGY-EFFICIENT TECH-  
6 NOLOGY.—Section 14(a) of the Stevenson-Wydler Tech-  
7 nology Innovation Act of 1980 (15 U.S.C. 3710c(a)) is  
8 amended—

9           (1) by striking “15 percent,” in paragraph  
10           (1)(A) and inserting “15 percent (25 percent for cli-  
11           mate change-related technologies),”; and

12           (2) by inserting “(\$250,000 for climate change-  
13           related technologies)” after “\$150,000” each place  
14           it appears in paragraph (3).

15 **SEC. 103. REPORT ON UNITED STATES IMPACT OF KYOTO**  
16 **PROTOCOL.**

17           Within 6 months after the date of enactment of this  
18 Act, the Secretary shall execute a contract with the Na-  
19 tional Academy of Science for a report to the Senate Com-  
20 mittee on Commerce, Science, and Transportation and the  
21 House of Representatives Committee on Science on the ef-  
22 fects that the entry into force of the Kyoto Protocol with-  
23 out United States participation will have on—

24           (1) United States industry and its ability to  
25           compete globally;

1           (2) international cooperation on scientific re-  
2           search and development; and

3           (3) United States participation in international  
4           environmental climate change mitigation efforts and  
5           technology deployment.

6 **SEC. 104. RESEARCH GRANTS.**

7           Section 105 of the Global Change Research Act of  
8           1990 (15 U.S.C. 2935) is amended—

9           (1) by redesignating subsection (c) as sub-  
10          subsection (d); and

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

13          “(c) RESEARCH GRANTS.—

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

19                 “(2) DIRECTOR OF OSTP TO TRANSMIT LIST TO  
20                 NSF.—The Director of the Office of Science and  
21                 Technology Policy shall transmit the list to the Na-  
22                 tional Science Foundation.

23                 “(3) FUNDING THROUGH NSF.—

24                         “(A) BUDGET REQUEST.—The National  
25                         Science Foundation shall include, as part of the

1 annual request for appropriations for the  
2 Science and Technology Policy Institute, a re-  
3 quest for appropriations to fund research in the  
4 priority areas on the list developed under para-  
5 graph (1).

6 “(B) AUTHORIZATION.—For fiscal year  
7 2005 and each fiscal year thereafter, there are  
8 authorized to be appropriated to the National  
9 Science Foundation not less than \$25,000,000,  
10 to be made available through the Science and  
11 Technology Policy Institute, for research in  
12 those priority areas.”.

13 **SEC. 105. ABRUPT CLIMATE CHANGE RESEARCH.**

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

18 (1) to develop a global array of terrestrial and  
19 oceanographic indicators of paleoclimate in order  
20 sufficiently to identify and describe past instances of  
21 abrupt climate change;

22 (2) to improve understanding of thresholds and  
23 nonlinearities in geophysical systems related to the  
24 mechanisms of abrupt climate change;

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

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

6 (b) **ABRUPT CLIMATE CHANGE DEFINED.**—In this  
7 section, the term “abrupt climate change” means a change  
8 in climate that occurs so rapidly or unexpectedly that  
9 human or natural systems may have difficulty adapting  
10 to it.

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

15 **SEC. 106. IMPACT ON LOW-INCOME POPULATIONS RE-**  
16 **SEARCH.**

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

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

23 (2) identify appropriate climate change adapta-  
24 tion measures and programs for developing countries  
25 and low-income populations and assess the impact of

1 those measures and programs on low-income popu-  
2 lations;

3 (3) identify appropriate climate change mitiga-  
4 tion strategies and programs for developing coun-  
5 tries and low-income populations and assess the im-  
6 pact of those strategies and programs on developing  
7 countries and on low-income populations in the  
8 United States; and

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

12 (b) REPORT.—Within 1 year after the date of enact-  
13 ment of this Act, the Secretary shall transmit a report  
14 on the research conducted under subsection (a) to the Sen-  
15 ate Committee on Commerce, Science, and Transpor-  
16 tation, the Senate Committee on Environment and Public  
17 Works, the House of Representatives Committee on  
18 Science, and the House of Representatives Committee on  
19 Energy and Commerce.

20 (c) AUTHORIZATION OF APPROPRIATIONS.—There  
21 are authorized to be appropriated to the Secretary  
22 \$2,000,000 to carry out the research required by sub-  
23 section (a).

1 **SEC. 107. NIST GREENHOUSE GAS FUNCTIONS.**

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

4 (1) by striking “and” after the semicolon in  
5 paragraph (21);

6 (2) by redesignating paragraph (22) as para-  
7 graph (23); and

8 (3) by inserting after paragraph (21) the fol-  
9 lowing:

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

17 **SEC. 108. DEVELOPMENT OF NEW MEASUREMENT TECH-**  
18 **NOLOGIES.**

19 To facilitate implementation of section 204, the Sec-  
20 retary shall initiate a program to develop, with technical  
21 assistance from appropriate Federal agencies, innovative  
22 standards and measurement technologies to calculate  
23 greenhouse gas emissions or reductions for which no accu-  
24 rate or reliable measurement technology exists. The pro-  
25 gram shall include—

- 1           (1) technologies (including remote sensing tech-  
2           nologies) to measure carbon changes and other  
3           greenhouse gas emissions and reductions from agri-  
4           culture, forestry, and other land use practices; and  
5           (2) technologies to calculate non-carbon dioxide  
6           greenhouse gas emissions from transportation.

7 **SEC. 109. ENHANCED ENVIRONMENTAL MEASUREMENTS**  
8 **AND STANDARDS.**

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

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

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

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

15           “(a) IN GENERAL.—The Director shall establish  
16 within the Institute a program to perform and support re-  
17 search on global climate change standards and processes,  
18 with the goal of providing scientific and technical knowl-  
19 edge applicable to the reduction of greenhouse gases (as  
20 defined in section 3(8) of the Climate Stewardship Act of  
21 2005) and of facilitating implementation of section 204  
22 of that Act.

23           “(b) RESEARCH PROGRAM.—

24           “(1) IN GENERAL.—The Director is authorized  
25           to conduct, directly or through contracts or grants,



1 a global climate change standards and processes re-  
2 search program.

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

11 “(A) to develop and provide the enhanced  
12 measurements, calibrations, data, models, and  
13 reference material standards which will enable  
14 the monitoring of greenhouse gases;

15 “(B) to assist in establishing a baseline  
16 reference point for future trading in greenhouse  
17 gases and the measurement of progress in emis-  
18 sions reduction;

19 “(C) that will be exchanged internationally  
20 as scientific or technical information which has  
21 the stated purpose of developing mutually rec-  
22 ognized measurements, standards, and proce-  
23 dures for reducing greenhouse gases; and

1           “(D) to assist in developing improved in-  
2           dustrial processes designed to reduce or elimi-  
3           nate greenhouse gases.

4           “(c) NATIONAL MEASUREMENT LABORATORIES.—

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

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

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

21                 “(B) developing chemical processes to be  
22                 used by industry that, compared to similar  
23                 processes in commercial use, result in reduced  
24                 emissions of greenhouse gases or increased se-  
25                 questration of greenhouse gases; and

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

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

15          “(d) NATIONAL VOLUNTARY LABORATORY ACCREDI-  
16          TATION PROGRAM.—The Director shall utilize the Na-  
17          tional Voluntary Laboratory Accreditation Program under  
18          this section to establish a program to include specific cali-  
19          bration or test standards and related methods and proto-  
20          cols assembled to satisfy the unique needs for accredita-  
21          tion in measuring the production of greenhouse gases. In  
22          carrying out this subsection the Director may cooperate  
23          with other departments and agencies of the Federal Gov-  
24          ernment, State and local governments, and private organi-  
25          zations.”.

1 **SEC. 110. TECHNOLOGY DEVELOPMENT AND DIFFUSION.**

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

9 **SEC. 111. AGRICULTURAL OUTREACH PROGRAM.**

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

17       (b) PROGRAM COMPONENTS.—The program—

18               (1) shall be designed to ensure that agricultural  
19 organizations and individual farmers receive detailed  
20 information about—

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

23                       (B) market-driven economic opportunities  
24 that may come from storing carbon in soils and  
25 vegetation, including emerging private sector  
26 markets for carbon storage; and

1 (C) techniques for measuring, monitoring,  
2 verifying, and inventorying such carbon capture  
3 efforts;

4 (2) may incorporate existing efforts in any area  
5 of activity referenced in paragraph (1) or in related  
6 areas of activity;

7 (3) shall provide—

8 (A) outreach materials to interested par-  
9 ties;

10 (B) workshops; and

11 (C) technical assistance; and

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

17 **TITLE II—NATIONAL**  
18 **GREENHOUSE GAS DATABASE**

19 **SEC. 201. NATIONAL GREENHOUSE GAS DATABASE AND**  
20 **REGISTRY ESTABLISHED.**

21 (a) ESTABLISHMENT.—As soon as practicable after  
22 the date of enactment of this Act, the Administrator, in  
23 coordination with the Secretary, the Secretary of Energy,  
24 the Secretary of Agriculture, and private sector and non-  
25 governmental organizations, shall establish, operate, and

1 maintain a database, to be known as the “National Green-  
2 house Gas Database”, to collect, verify, and analyze infor-  
3 mation on greenhouse gas emissions by entities.

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

6 (1) an inventory of greenhouse gas emissions;

7 and

8 (2) a registry of greenhouse gas emission reduc-  
9 tions and increases in greenhouse gas sequestra-  
10 tions.

11 (c) COMPREHENSIVE SYSTEM.—

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

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

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

21 (i) maximize completeness, trans-  
22 parency, and accuracy of information re-  
23 ported; and

1 (ii) minimize costs incurred by entities  
2 in measuring and reporting greenhouse gas  
3 emissions; and

4 (B) the regulations promulgated under  
5 paragraph (1) establish procedures and proto-  
6 cols necessary—

7 (i) to prevent the double-counting of  
8 greenhouse gas emissions or emission re-  
9 ductions reported by more than 1 reporting  
10 entity;

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

13 (iii) to provide for adjustment to data  
14 by reporting entities that have had a sig-  
15 nificant organizational change (including  
16 mergers, acquisitions, and divestiture), in  
17 order to maintain comparability among  
18 data in the database over time;

19 (iv) to provide for adjustments to re-  
20 flect new technologies or methods for  
21 measuring or calculating greenhouse gas  
22 emissions;

23 (v) to account for changes in registra-  
24 tion of ownership of emission reductions

1 resulting from a voluntary private trans-  
2 action between reporting entities; and

3 (vi) to clarify the responsibility for re-  
4 porting in the case of any facility owned or  
5 controlled by more than 1 entity.

6 (3) SERIAL NUMBERS.—Through regulations  
7 promulgated under paragraph (1), the Administrator  
8 shall develop and implement a system that pro-  
9 vides—

10 (A) for the verification of submitted emis-  
11 sions reductions registered under section 204;

12 (B) for the provision of unique serial num-  
13 bers to identify the registered emission reduc-  
14 tions made by an entity relative to the baseline  
15 of the entity;

16 (C) for the tracking of the registered re-  
17 ductions associated with the serial numbers;  
18 and

19 (D) for such action as may be necessary to  
20 prevent counterfeiting of the registered reduc-  
21 tions.

22 **SEC. 202. INVENTORY OF GREENHOUSE GAS EMISSIONS**  
23 **FOR COVERED ENTITIES.**

24 (a) IN GENERAL.—Not later than July 1st of each  
25 calendar year after 2008, each covered entity shall submit



1 to the Administrator a report that states, for the pre-  
2 ceding calendar year, the entity-wide greenhouse gas emis-  
3 sions (as reported at the facility level), including—

4 (1) the total quantity of direct greenhouse gas  
5 emissions from stationary sources, expressed in units  
6 of carbon dioxide equivalents, except those reported  
7 under paragraph (3);

8 (2) the amount of petroleum products sold or  
9 imported by the entity and the amount of green-  
10 house gases, expressed in units of carbon dioxide  
11 equivalents, that would be emitted when these prod-  
12 ucts are used for transportation in the United  
13 States, as determined by the Administrator under  
14 section 301(b);

15 (3) the amount of hydrofluorocarbons,  
16 perfluorocarbons, or sulfur hexafluoride, expressed  
17 in units of carbon dioxide equivalents, that are sold  
18 or imported by the entity and will ultimately be  
19 emitted in the United States, as determined by the  
20 Administrator under section 301(d); and

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

1 (A) indirect emissions from imported elec-  
2 tricity, heat, and steam;

3 (B) process and fugitive emissions; and

4 (C) production or importation of green-  
5 house gases.

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

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

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 achieved after 1990 and be-  
14 fore 2010 under this section; and

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

18 (b) REQUIREMENTS.—

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

22 (A) establish a baseline; and

23 (B) submit the report described in sub-  
24 section (c)(1).

1           (2) REQUIREMENTS APPLICABLE TO ENTITIES  
2 ENTERING INTO CERTAIN AGREEMENTS.—An entity  
3 that enters into an agreement with a participant in  
4 the registry for the purpose of a carbon sequestra-  
5 tion project shall not be required to comply with the  
6 requirements specified in paragraph (1) unless that  
7 entity is required to comply with the requirements  
8 by reason of an activity other than the agreement.

9           (c) REPORTS.—

10           (1) REQUIRED REPORT.—Not later than July  
11 1st of the each calendar year beginning more than  
12 2 years after the date of enactment of this Act, but  
13 subject to paragraph (3), an entity described in sub-  
14 section (a) shall submit to the Administrator a re-  
15 port that states, for the preceding calendar year, the  
16 entity-wide greenhouse gas emissions (as reported at  
17 the facility level), including—

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

21           (B) the amount of petroleum products sold  
22 or imported by the entity and the amount of  
23 greenhouse gases, expressed in units of carbon  
24 dioxide equivalents, that would be emitted when  
25 these products are used for transportation in

1 the United States, as determined by the Admin-  
2 istrator under section 301(b);

3 (C) the amount of hydrofluorocarbons,  
4 perfluorocarbons, or sulfur hexafluoride, ex-  
5 pressed in units of carbon dioxide equivalents,  
6 that are sold or imported by the entity and will  
7 ultimately be emitted in the United States, as  
8 determined by the Administrator under section  
9 301(d); and

10 (D) such other categories of emissions as  
11 the Administrator determines in the regulations  
12 promulgated under section 201(c)(1) may be  
13 practicable and useful for the purposes of this  
14 Act, such as—

15 (i) indirect emissions from imported  
16 electricity, heat, and steam;

17 (ii) process and fugitive emissions;  
18 and

19 (iii) production or importation of  
20 greenhouse gases.

21 (2) VOLUNTARY REPORTING.—An entity de-  
22 scribed in subsection (a) may (along with estab-  
23 lishing a baseline and reporting emissions under this  
24 section)—

1 (A) submit a report described in paragraph  
2 (1) before the date specified in that paragraph  
3 for the purposes of achieving and  
4 commoditizing greenhouse gas reductions  
5 through use of the registry and for other pur-  
6 poses; and

7 (B) submit to the Administrator, for inclu-  
8 sion in the registry, information that has been  
9 verified in accordance with regulations promul-  
10 gated under section 201(c)(1) and that relates  
11 to—

12 (i) any activity that resulted in the  
13 net reduction of the greenhouse gas emis-  
14 sions of the entity or a net increase in se-  
15 questration by the entity that were carried  
16 out during or after 1990 and before the es-  
17 tablishment of the database, verified in ac-  
18 cordance with regulations promulgated  
19 under section 201(c)(1), and submitted to  
20 the Administrator before the date that is 4  
21 years after the date of enactment of this  
22 Act; and

23 (ii) with respect to the calendar year  
24 preceding the calendar year in which the  
25 information is submitted, any project or

1 activity that resulted in the net reduction  
2 of the greenhouse gas emissions of the en-  
3 tity or a net increase in net sequestration  
4 by the entity.

5 (3) PROVISION OF VERIFICATION INFORMATION  
6 BY REPORTING ENTITIES.—Each entity that submits  
7 a report under this subsection shall provide informa-  
8 tion sufficient for the Administrator to verify, in ac-  
9 cordance with measurement and verification methods  
10 and standards developed under section 204, that the  
11 greenhouse gas report of the reporting entity—

12 (A) has been accurately reported; and

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

15 (i) actual reductions in direct green-  
16 house gas emissions—

17 (I) relative to historic emission  
18 levels of the entity; and

19 (II) after accounting for any in-  
20 creases in indirect emissions described  
21 in paragraph (1)(C)(i); or

22 (ii) actual increases in net sequestra-  
23 tion.

24 (4) FAILURE TO SUBMIT REPORT.—An entity  
25 that participates or has participated in the registry

1 and that fails to submit a report required under this  
2 subsection shall be prohibited from using, or allow-  
3 ing another entity to use, its registered emissions re-  
4 ductions or increases in sequestration to satisfy the  
5 requirements of section 301.

6 (5) INDEPENDENT THIRD-PARTY VERIFICA-  
7 TION.—To meet the requirements of this section and  
8 section 203, an entity that is required to submit a  
9 report under this section may—

10 (A) obtain independent third-party  
11 verification; and

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

14 (6) AVAILABILITY OF DATA.—

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

18 (i) published; and

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

21 (B) EXCEPTION.—Subparagraph (A) shall  
22 not apply in any case in which the Adminis-  
23 trator determines that publishing or otherwise  
24 making available information described in that  
25 subparagraph poses a risk to national security

1 or discloses confidential business information  
2 that can not be derived from information that  
3 is otherwise publicly available and that would  
4 cause competitive harm if published.

5 (7) DATA INFRASTRUCTURE.—The Adminis-  
6 trator shall ensure, to the maximum extent prac-  
7 ticable, that the database uses, and is integrated  
8 with, Federal, State, and regional greenhouse gas  
9 data collection and reporting systems in effect as of  
10 the date of enactment of this Act.

11 (8) ADDITIONAL ISSUES TO BE CONSIDERED.—  
12 In promulgating the regulations under section  
13 201(c)(1) and implementing the database, the Ad-  
14 ministrator shall take into consideration a broad  
15 range of issues involved in establishing an effective  
16 database, including—

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

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



1 (C) the extent to which available fossil  
2 fuels, greenhouse gas emissions, and greenhouse  
3 gas production and importation data are ade-  
4 quate to implement the database; and

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

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

13 (1) describes the total greenhouse gas emissions  
14 and emission reductions reported to the database  
15 during the year covered by the report;

16 (2) provides entity-by-entity and sector-by-sec-  
17 tor analyses of the emissions and emission reduc-  
18 tions 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 period in the trading of greenhouse gas  
25 emission allowances.

1 **SEC. 204. MEASUREMENT AND VERIFICATION.**

2 (a) STANDARDS.—

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

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

15 (A) a requirement that a covered entity  
16 use a continuous emissions monitoring system,  
17 or another system of measuring or estimating  
18 emissions that is determined by the Secretary  
19 to provide information with precision, reli-  
20 ability, accessibility, and timeliness similar to  
21 that provided by a continuous emissions moni-  
22 toring system where technologically feasible;

23 (B) establishment of standardized meas-  
24 urement and verification practices for reports  
25 made by all entities participating in the reg-  
26 istry, taking into account—

- 1 (i) protocols and standards in use by  
2 entities requiring or desiring to participate  
3 in the registry as of the date of develop-  
4 ment of the methods and standards under  
5 paragraph (1);
- 6 (ii) boundary issues, such as leakage;
- 7 (iii) avoidance of double counting of  
8 greenhouse gas emissions and emission re-  
9 ductions;
- 10 (iv) protocols to prevent a covered en-  
11 tity from avoiding the requirements of this  
12 Act by reorganization into multiple entities  
13 that are under common control; and
- 14 (v) such other factors as the Sec-  
15 retary, in consultation with the Adminis-  
16 trator, determines to be appropriate;
- 17 (C) establishment of methods of—
- 18 (i) estimating greenhouse gas emis-  
19 sions, for those cases in which the Sec-  
20 retary determines that methods of moni-  
21 toring, measuring or estimating such emis-  
22 sions with precision, reliability, accessi-  
23 bility, and timeliness similar to that pro-  
24 vided by a continuous emissions monitoring

1 system are not technologically feasible at  
2 present; 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, avoid, or sequester greenhouse  
8 gas emissions;

9 (E) in coordination with the Secretary of  
10 Agriculture, standards to measure the results of  
11 the use of carbon sequestration and carbon re-  
12 capture technologies, including—

13 (i) soil carbon sequestration practices;

14 and

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

19 (E) establishment of such other measure-  
20 ment and verification standards as the Sec-  
21 retary, in consultation with the Secretary of Ag-  
22 riculture, the Administrator, and the Secretary  
23 of Energy, determines to be appropriate;

24 (F) establishment of standards for obtain-  
25 ing the Secretary's approval of the suitability of

1 geological storage sites that include evaluation  
2 of both the geology of the site and the entity's  
3 capacity to manage the site; and

4 (G) establishment of other features that,  
5 as determined by the Secretary, will allow enti-  
6 ties to adequately establish a fair and reliable  
7 measurement and reporting system.

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

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

12 (1) make available to the public for comment,  
13 in draft form and for a period of at least 90 days,  
14 the methods and standards developed under sub-  
15 section (a); and

16 (2) after the 90-day period referred to in para-  
17 graph (1), in coordination with the Secretary of En-  
18 ergy, the Secretary of Agriculture, and the Adminis-  
19 trator, adopt the methods and standards developed  
20 under subsection (a) for use in implementing the  
21 database.

22 (d) EXPERTS AND CONSULTANTS.—

23 (1) IN GENERAL.—The Secretary may obtain  
24 the services of experts and consultants in the private  
25 and nonprofit sectors in accordance with section

1 3109 of title 5, United States Code, in the areas of  
2 greenhouse gas measurement, certification, and  
3 emission trading.

4 (2) AVAILABLE ARRANGEMENTS.—In obtaining  
5 any service described in paragraph (1), the Sec-  
6 retary may use any available grant, contract, cooper-  
7 ative agreement, or other arrangement authorized by  
8 law.

9 **TITLE III—MARKET-DRIVEN**  
10 **GREENHOUSE GAS REDUCTIONS**  
11 **Subtitle A—Emission Reduction**  
12 **Requirements; Use of Tradeable**  
13 **Allowances**

14 **SEC. 301. COVERED ENTITIES MUST SUBMIT ALLOWANCES**  
15 **FOR EMISSIONS.**

16 (a) IN GENERAL.—Beginning with calendar year  
17 2010—

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

1           (2) each producer or importer of  
2 hydrofluorocarbons, perfluorocarbons, or sulfur  
3 hexafluoride that is a covered entity shall submit to  
4 the Administrator one tradeable allowance for every  
5 metric ton of hydrofluorocarbons, perfluorocarbons,  
6 or sulfur hexafluoride, measured in units of carbon  
7 dioxide equivalents; that it produces or imports and  
8 that will ultimately be emitted in the United States,  
9 as determined by the Administrator under sub-  
10 section (d) and

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

18           (b) DETERMINATION OF TRANSPORTATION SECTOR  
19 AMOUNT.—For the transportation sector, the Adminis-  
20 trator shall determine the amount of greenhouse gases,  
21 measured in units of carbon dioxide equivalents, that will  
22 be emitted when petroleum products are used for trans-  
23 portation.

24           (c) EXCEPTION FOR CERTAIN DEPOSITED EMIS-  
25 SIONS.—Notwithstanding subsection (a), a covered entity

1 is not required to submit a tradeable allowance for any  
2 amount of greenhouse gas that would otherwise have been  
3 emitted from a facility under the ownership or control of  
4 that entity if—

5 (1) the emission is deposited in a geological  
6 storage facility approved by the Administrator under  
7 section 204(a)(2)(F); and

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

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

18 **SEC. 302. COMPLIANCE.**

19 (a) IN GENERAL.—

20 (1) SOURCE OF TRADEABLE ALLOWANCES  
21 USED.—A covered entity may use a tradeable allow-  
22 ance to meet the requirements of this section with-  
23 out regard to whether the tradeable allowance was  
24 allocated to it under subtitle B or acquired from an-



1 other entity or the Climate Change Credit Corpora-  
2 tion established under section 351.

3 (2) VERIFICATION BY ADMINISTRATOR.—At  
4 various times during each year, the Administrator  
5 shall determine whether each covered entity has met  
6 the requirements of this section. In making that de-  
7 termination, the Administrator shall—

8 (A) take into account the tradeable allow-  
9 ances submitted by the covered entity to the  
10 Administrator; and

11 (B) retire the serial number assigned to  
12 each such tradeable allowance.

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

17 (1) submitting tradeable allowances from an-  
18 other nation's market in greenhouse gas emissions  
19 if—

20 (A) the Secretary determines that the  
21 other nation's system for trading in greenhouse  
22 gas emissions is complete, accurate, and trans-  
23 parent and reviews that determination at least  
24 once every 5 years;

1           (B) the other nation has adopted enforce-  
2           able limits on its greenhouse gas emissions  
3           which the tradeable allowances were issued to  
4           implement; and

5           (C) the covered entity certifies that the  
6           tradeable allowance has been retired unused in  
7           the other nation's market;

8           (2) submitting a registered net increase in se-  
9           questration, as registered in the database, adjusted,  
10          if necessary, to comply with the accounting stand-  
11          ards and methods established under section 372;

12          (3) submitting a greenhouse gas emissions re-  
13          duction (other than a registered net increase in se-  
14          questration) that was registered in the database by  
15          a person that is not a covered entity; or

16          (4) submitting credits obtained from the Ad-  
17          ministrator under section 303.

18          (c) DEDICATED PROGRAM FOR SEQUESTRATION IN  
19          AGRICULTURAL SOILS.—If a covered entity chooses to  
20          satisfy 15 percent of its total allowance submission re-  
21          quirements under the provisions of subsection (b), it shall  
22          satisfy up to 1.5 percent of its total allowance submission  
23          requirement by submitting registered net increases in se-  
24          questration in agricultural soils, as registered in the data-

1 base, adjusted, if necessary, to comply with the accounting  
2 standards and methods established under section 371.

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

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

6 (1) receive a credit in the current calendar year  
7 for anticipated reductions in emissions in a future  
8 calendar year; and

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

13 (b) DETERMINATION OF TRADEABLE ALLOWANCE  
14 CREDITS.—The Administrator may make credits available  
15 under subsection (a) only for anticipated reductions in  
16 emissions that—

17 (1) are attributable to the realization of capital  
18 investments in equipment, the construction, recon-  
19 struction, or acquisition of facilities, or the deploy-  
20 ment of new technologies—

21 (A) for which the covered entity has exe-  
22 cuted a binding contract and secured, or ap-  
23 plied for, all necessary permits and operating or  
24 implementation authority;

1 (B) that will not become operational within  
2 the current calendar year; and

3 (C) that will become operational and begin  
4 to reduce emissions from the covered entity  
5 within 5 years after the year in which the credit  
6 is used; and

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

9 (c) CARRYING COST.—If a covered entity uses a cred-  
10 it under this section to meet the requirements of this Act  
11 for a calendar year (referred to as the use year), the  
12 tradeable allowance requirement for the year from which  
13 the credit was taken (referred to as the source year) shall  
14 be increased by an amount equal to—

15 (1) 10 percent for each credit borrowed from  
16 the source year; multiplied by

17 (2) the number of years beginning after the use  
18 year and before the source year.

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

23 (e) FAILURE TO ACHIEVE REDUCTIONS GENER-  
24 ATING CREDIT.—If a covered entity that uses a credit  
25 under this section fails to achieve the anticipated reduc-

1 tion for which the credit was granted for the year from  
2 which the credit was taken, then—

3 (1) the covered entity's requirements under this  
4 Act for that year shall be increased by the amount  
5 of the credit, plus the amount determined under  
6 subsection (c);

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

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

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

14 (a) IN GENERAL.—Tradeable allowances may be sold,  
15 exchanged, purchased, retired, or used as provided in this  
16 section.

17 (b) INTERSECTOR TRADING.—Covered entities may  
18 purchase or otherwise acquire tradeable allowances from  
19 other covered sectors to satisfy the requirements of section  
20 301.

21 (c) CLIMATE CHANGE CREDIT ORGANIZATION.—The  
22 Climate Change Credit Corporation established under sec-  
23 tion 351 may sell tradeable allowances allocated to it  
24 under section 332(a)(2) to any covered entity or to any  
25 investor, broker, or dealer in such tradeable allowances.

1 The Climate Change Credit Corporation shall use all pro-  
2 ceeds from such sales in accordance with the provisions  
3 of section 352.

4 (d) BANKING OF TRADEABLE ALLOWANCES.—Not-  
5 withstanding the requirements of section 301, a covered  
6 entity that has more than a sufficient amount of tradeable  
7 allowances to satisfy the requirements of section 301, may  
8 refrain from submitting a tradeable allowance to satisfy  
9 the requirements in order to sell, exchange, or use the  
10 tradeable allowance in the future.

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

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

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

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

## 4 **Subtitle B—Establishment and** 5 **Allocation of Tradeable Allowances**

### 6 **SEC. 331. ESTABLISHMENT OF TRADEABLE ALLOWANCES.**

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

11 (1) 5896 million metric tons, measured in units  
12 of carbon dioxide equivalents, reduced by

13 (2) the amount of emissions of greenhouse  
14 gases in calendar year 2000 from non-covered enti-  
15 ties.

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

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

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

2 (1) IN GENERAL.—The term “non-covered enti-  
3 ty” means an entity that—

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

12 (B) is not a covered entity.

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

21 **SEC. 332. DETERMINATION OF TRADEABLE ALLOWANCE**  
22 **ALLOCATIONS.**

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



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

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

7           (b) ALLOCATION FACTORS.—In making the deter-  
8           mination required by subsection (a), the Secretary shall  
9           consider—

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

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

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

16           (4) the effects of the allocations in terms of eco-  
17           nomic efficiency;

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

20           (6) the degree to which the amount of alloca-  
21           tions to the covered sectors should decrease over  
22           time; and

23           (7) the need to maintain the international com-  
24           petitiveness of United States manufacturing and

1       avoid the additional loss of United States manufac-  
2       turing jobs.

3       (c) **ALLOCATION RECOMMENDATIONS AND IMPLE-**  
4 **MENTATION.**—Before allocating or providing tradeable al-  
5 lowances under subsection (a) and within 24 months after  
6 the date of enactment of this Act, the Secretary shall sub-  
7 mit the determinations under subsection (a) to the Senate  
8 Committee on Commerce, Science, and Transportation,  
9 the Senate Committee on Environment and Public Works,  
10 the House of Representatives Committee on Science, and  
11 the House of Representatives Committee on Energy and  
12 Commerce. The Secretary’s determinations under para-  
13 graph (1), including the allocations and provision of  
14 tradeable allowances pursuant to that determination, are  
15 deemed to be a major rule (as defined in section 804(2)  
16 of title 5, United States Code), and subject to the provi-  
17 sions of chapter 8 of that title.

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

19       (a) **IN GENERAL.**—Beginning with calendar year  
20 2010 and after taking into account any initial allocations  
21 under section 334, the Administrator shall—

22               (1) allocate to each covered sector that sector’s  
23 allotments determined by the Administrator under  
24 section 332 (adjusted for any such initial allocations

1 and the allocation to the Climate Change Credit  
2 Corporation established under section 351); and

3 (2) allocate to the Climate Change Credit Cor-  
4 poration established under section 351 the tradeable  
5 allowances allocable to that Corporation.

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

10 (1) encourage investments that increase the ef-  
11 ficiency of the processes that produce greenhouse  
12 gas emissions;

13 (2) minimize the costs to the government of al-  
14 locating the tradeable allowances;

15 (3) not penalize a covered entity for emissions  
16 reductions made before 2010 and registered with the  
17 database; and

18 (4) provide sufficient allocation for new en-  
19 trants into the sector.

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

1 (d) HYDROFLUOROCARBONS, PERFLUOROCARBONS,  
2 AND SULFUR HEXAFLUORIDE.—The Administrator shall  
3 allocate the tradeable allowances for producers or import-  
4 ers of hydrofluorocarbons, perfluorocarbons, or sulfur  
5 hexafluoride to such producers or importers.

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

12 (f) ALLOCATIONS TO RURAL ELECTRIC COOPERA-  
13 TIVES.—For each electric generating unit that is owned  
14 or operated by a rural electric cooperative, the Adminis-  
15 trator shall allocate each year, at no cost, allowances in  
16 an amount equal to the greenhouse gas emissions of each  
17 such unit in 2000, plus an amount equal to the average  
18 emissions growth expected for all such units. The alloca-  
19 tions shall be offset from the allowances allocated to the  
20 Climate Change Credit Corporation.

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 subsection, after taking into account the best avail-  
5 able science and the most currently available data,  
6 and

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

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

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

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

11 (A) submitting tradeable allowances from  
12 another nation's market in greenhouse gas  
13 emissions under the conditions described in sec-  
14 tion 312(b)(1);

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

21 (C) submitting a greenhouse gas emission  
22 reduction (other than a registered net increase  
23 in sequestration) that was registered in the Na-  
24 tional Greenhouse Gas Database by a person  
25 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) ADAPTATION AND MITIGATION ASSISTANCE  
16 FOR LOW-INCOME PERSONS AND COMMUNITIES.—

17 The Corporation shall allocate a portion of the pro-  
18 ceeds derived from its trading activities to funding  
19 climate change adaptation and mitigation programs  
20 to assist low-income populations identified in the re-  
21 port submitted under section 106(b) as having par-  
22 ticular needs in addressing the impact of climate  
23 change.

24 (5) TECHNOLOGY DEPLOYMENT PROGRAMS.—

25 The Corporation shall establish and carry out a pro-

1       gram, through direct grants, revolving loan pro-  
2       grams, or other financial measures, to provide sup-  
3       port for the deployment of technology to assist in  
4       compliance with this Act by distributing the pro-  
5       ceeds from no less than 10 percent of the total al-  
6       lowances allocated to it. The support shall include  
7       the following:

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

1 (B) AGRICULTURAL PROGRAMS.—The Cor-  
 2 poration shall establish and carry out a pro-  
 3 gram, through direct grants, revolving loan pro-  
 4 grams, or other financial measures, to provide  
 5 incentives for greenhouse gas emissions reduc-  
 6 tions or net increases in greenhouse gas seques-  
 7 tration on agricultural lands. The program shall  
 8 include incentives for—

9 (i) production of wind energy on agri-  
 10 cultural lands;

11 (ii) agricultural management practices  
 12 that achieve verified, incremental increases  
 13 in net carbon sequestration, in accordance  
 14 with the requirements established by the  
 15 Administrator under section 371; and

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

## 20 **Subtitle D—Sequestration**

### 21 **Accounting; Penalties**

#### 22 **SEC. 371. SEQUESTRATION ACCOUNTING.**

23 (a) SEQUESTRATION ACCOUNTING.—If a covered en-  
 24 tity uses a registered net increase in sequestration to sat-  
 25 isfy the requirements of section 301 for any year, that

1 covered entity shall submit information to the Adminis-  
2 trator every 5 years thereafter sufficient to allow the Ad-  
3 ministrator to determine, using the methods and stand-  
4 ards created under section 204, whether that net increase  
5 in sequestration still exists. Unless the Administrator de-  
6 termines that the net increase in sequestration continues  
7 to exist, the covered entity shall offset any loss of seques-  
8 tration by submitting additional tradeable allowances of  
9 equivalent amount in the calender year following that de-  
10 termination.

11 (b) REGULATIONS REQUIRED.—The Secretary, act-  
12 ing through the Under Secretary of Commerce for Science  
13 and Technology, in coordination with the Secretary of Ag-  
14 riculture, the Secretary of Energy, and the Administrator,  
15 shall issue regulations establishing the sequestration ac-  
16 counting rules for all classes of sequestration projects.

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

20 (1) If the range of possible amounts of net in-  
21 crease in sequestration for a particular class of se-  
22 questration project is not more than 10 percent of  
23 the median of that range, the amount of sequestra-  
24 tion awarded shall be equal to the median value of  
25 that range.

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

7           (3) The regulations shall include procedures for  
8           accounting for potential leakage from sequestration  
9           projects and for ensuring that any registered in-  
10          crease in sequestration is in addition that which  
11          would have occurred if this Act had not been en-  
12          acted.

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

16   **SEC. 372. PENALTIES.**

17          Any covered entity that fails to meet the require-  
18          ments of section 301 for a year shall be liable for a civil  
19          penalty, payable to the Administrator, equal to thrice the  
20          market value (determined as of the last day of the year  
21          at issue) of the tradeable allowances that would be nec-  
22          essary for that covered entity to meet those requirements  
23          on the date of the emission that resulted in the violation.

○