

108TH CONGRESS
1ST SESSION

S. 139

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 could be used interchangeably with passenger vehicle fuel economy standard credits, 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.

IN THE SENATE OF THE UNITED STATES

JANUARY 9, 2003

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

OCTOBER 30, 2003

Rereferred to the Committee on Environment and Public Works by
unanimous consent

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 could be used interchangeably with passenger vehicle fuel economy standard credits, 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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Climate Stewardship
 5 Act of 2003”.

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 scholarships.
- 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. NIST greenhouse gas functions.
- Sec. 107. Development of new measurement technologies.
- Sec. 108. Enhanced environmental measurements and standards.
- Sec. 109. Technology development and diffusion.

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

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- Sec. 311. Covered entities must submit allowances for emissions.
- Sec. 312. Compliance.
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- Sec. 314. Borrowing against future reductions.
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- Sec. 316. 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.
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- Sec. 334. Initial allocations for early participation and accelerated participation.
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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) COVERED SECTORS.—The term “covered
16 sectors” means the electricity, transportation, indus-
17 try, and commercial sectors, as such terms are used
18 in the Inventory.

19 (4) COVERED ENTITY.—The term “covered en-
20 tity” means an entity (including a branch, depart-

1 ment, agency, or instrumentality of Federal, State,
2 or local government) that—

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

11 (B) emits over 10,000 metric tons of
12 greenhouse gas per year, measured in units of
13 carbon dioxide equivalence, or produces or im-
14 ports—

15 (i) petroleum products that, when
16 combusted, will emit,

17 (ii) hydrofluorocarbons, perfluoro-
18 carbons, or sulfur hexafluoride that, when
19 used, will emit, or

20 (iii) other greenhouse gases that,
21 when used, will emit,

22 over 10,000 metric tons of greenhouse gas per
23 year, measured in units of carbon dioxide
24 equivalence.

1 (5) DATABASE.—The term “database” means
2 the National Greenhouse Gas Database established
3 under section 201.

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

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

12 (8) GREENHOUSE GAS.—The term “greenhouse
13 gas” means—

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

20 (9) INDIRECT EMISSIONS.—The term “indirect
21 emissions” means greenhouse gas emissions that
22 are—

- 23 (A) a result of the activities of an entity;
- 24 but

1 (B) emitted from a facility owned or con-
2 trolled by another entity; and

3 (C) not reported as direct emissions by the
4 entity from which they were emitted.

5 (10) 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 (11) PHASE I ALLOTMENT.—The term “Phase
11 I allotment” means—

12 (A) the amount of emissions emitted by a
13 covered sector, as identified in the Inventory for
14 the calendar year preceding the calendar year
15 in which this Act is enacted (reduced by the
16 amount of allowances allocated to early and ac-
17 celerated participants under section 334 of this
18 Act); multiplied by—

19 (B) the result of—

20 (i) the total greenhouse emissions for
21 all covered sectors for the year 2000, as
22 identified in the 2000 Inventory; divided by

23 (ii) the total greenhouse emissions for
24 all covered sectors for the calendar year

1 preceding the date of enactment of this
2 Act, as identified in the Inventory.

3 (12) PHASE II ALLOTMENT.—The term “Phase
4 II allotment” means—

5 (A) the amount of emissions emitted by a
6 covered sector, as identified in the Inventory for
7 the calendar year preceding the calendar year
8 in which this Act is enacted (reduced by the
9 amount of allowances allocated to early and ac-
10 celerated participants under section 334 of this
11 Act); multiplied by—

12 (B) the result of—

13 (i) the total greenhouse emissions for
14 all covered sectors for the year 1990, as
15 identified in the 1990 Inventory; divided by

16 (ii) the total greenhouse emissions for
17 all covered sectors for the calendar year
18 preceding the date of enactment of this
19 Act, as identified in the Inventory.

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

23 (14) SECRETARY.—The term “Secretary”
24 means the Secretary of Commerce.

25 (15) SEQUESTRATION.—

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

5 (B) INCLUSIONS.—The term “sequestra-
6 tion” includes—

7 (i) agricultural and conservation prac-
8 tices;

9 (ii) reforestation;

10 (iii) forest preservation; and

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

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

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

20 (ii) any introduction of non-native
21 species or genetically modified organisms.

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

1 **TITLE I—FEDERAL CLIMATE**
2 **CHANGE RESEARCH AND RE-**
3 **LATED ACTIVITIES**

4 **SEC. 101. NATIONAL SCIENCE FOUNDATION SCHOLAR-**
5 **SHIPS.**

6 The Director of the National Science Foundation
7 shall establish a scholarship program for post-secondary
8 students studying global climate change, including capa-
9 bility in observation, analysis, modeling, paleoclimatology,
10 consequences, and adaptation.

11 **SEC. 102. COMMERCE DEPARTMENT STUDY OF TECH-**
12 **NOLOGY TRANSFER BARRIERS.**

13 (a) STUDY.—The Assistant Secretary of Technology
14 Policy at Department of Commerce shall conduct a study
15 of technology transfer barriers, best practices, and out-
16 comes of technology transfer activities at Federal labora-
17 tories related to the licensing and commercialization of en-
18 ergy efficient technologies. The study shall be submitted
19 to the Senate Committee on Commerce, Science, and
20 Transportation and the House of Representatives Com-
21 mittee on Science within 6 months after the date of enact-
22 ment of this Act. The Assistant Secretary shall work with
23 the existing interagency working group to address identi-
24 fied barriers.

1 (b) AGENCY REPORT TO INCLUDE INFORMATION ON
2 TECHNOLOGY TRANSFER INCOME AND ROYALTIES.—
3 Paragraph (2)(B) of section 11(f) of the Stevenson-
4 Wydler Technology Innovation Act of 1980 (15 U.S.C.
5 3710(f)) is amended—

6 (1) by striking “and” after the semicolon in
7 clause (vi);

8 (2) by redesignating clause (vii) as clause (ix);
9 and

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

11 “(vii) the number of fully-executed li-
12 censes which received royalty income in the
13 preceding fiscal year for climate-change or
14 energy-efficient technology;

15 “(viii) the total earned royalty income
16 for climate-change or energy-efficient tech-
17 nology; and”.

18 (c) INCREASED INCENTIVES FOR DEVELOPMENT OF
19 CLIMATE-CHANGE OR ENERGY-EFFICIENT TECH-
20 NOLOGY.—Section 14(a) of the Stevenson-Wydler Tech-
21 nology Innovation Act of 1980 (15 U.S.C. 3710c(a)) is
22 amended—

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

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

4 **SEC. 103. REPORT ON UNITED STATES IMPACT OF KYOTO**
5 **PROTOCOL.**

6 Within 6 months after the date of enactment of this
7 Act, the Secretary shall submit a report to the Senate
8 Committee on Commerce, Science, and Transportation
9 and the House of Representatives Committee on Science
10 on the effects that the entry into force of the Kyoto Pro-
11 tocol will have on—

12 (1) United States industry and its ability to
13 compete globally;

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

16 (3) United States participation in international
17 environmental climate change mitigation efforts and
18 technology deployment.

19 **SEC. 104. RESEARCH GRANTS.**

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

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

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

1 “(c) RESEARCH GRANTS.—

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

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

11 “(3) FUNDING THROUGH NSF.—

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

19 “(B) AUTHORIZATION.—For fiscal year
20 2004 and each fiscal year thereafter, there are
21 authorized to be appropriated to the National
22 Science Foundation not less than \$17,000,000,
23 to be made available through the Science and
24 Technology Policy Institute, for research in
25 those priority areas.”.

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

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

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

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

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

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

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

23 **SEC. 106. NIST GREENHOUSE GAS FUNCTIONS.**

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

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

3 (2) by redesignating paragraph (22) as para-
4 graph (23); and

5 (3) by inserting after paragraph (21) the fol-
6 lowing:

7 “(22) perform research to develop enhanced
8 measurements, calibrations, standards, and tech-
9 nologies which will enable the reduced production in
10 the United States of greenhouse gases associated
11 with global warming, including carbon dioxide, meth-
12 ane, nitrous oxide, ozone, perfluorocarbons, hydro-
13 fluorocarbons, and sulfur hexafluoride; and”.

14 **SEC. 107. DEVELOPMENT OF NEW MEASUREMENT TECH-**
15 **NOLOGIES.**

16 The Secretary shall initiate a program to develop,
17 with technical assistance from appropriate Federal agen-
18 cies, innovative standards and measurement technologies
19 (including technologies to measure carbon changes due to
20 changes in land use cover) to calculate—

21 (1) greenhouse gas emissions and reductions
22 from agriculture, forestry, and other land use prac-
23 tices;

24 (2) noncarbon dioxide greenhouse gas emissions
25 from transportation;

1 (3) greenhouse gas emissions from facilities or
2 sources using remote sensing technology; and

3 (4) any other greenhouse gas emission or reduc-
4 tions for which no accurate or reliable measurement
5 technology exists.

6 **SEC. 108. ENHANCED ENVIRONMENTAL MEASUREMENTS**
7 **AND STANDARDS.**

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

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

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

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

14 “(a) IN GENERAL.—The Director shall establish
15 within the Institute a program to perform and support re-
16 search on global climate change standards and processes,
17 with the goal of providing scientific and technical knowl-
18 edge applicable to the reduction of greenhouse gases (as
19 defined in section 3(8) of the Climate Stewardship Act of
20 2003).

21 “(b) RESEARCH PROGRAM.—

22 “(1) IN GENERAL.—The Director is authorized
23 to conduct, directly or through contracts or grants,
24 a global climate change standards and processes re-
25 search program.

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

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

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

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

22 “(D) to assist in developing improved in-
23 dustrial processes designed to reduce or elimi-
24 nate greenhouse gases.

25 “(c) NATIONAL MEASUREMENT LABORATORIES.—

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

9 “(2) MATERIAL, PROCESS, AND BUILDING RE-
10 SEARCH.—The National Measurement Laboratories
11 shall conduct research under this subsection that
12 includes—

13 “(A) developing material and manufac-
14 turing processes which are designed for energy
15 efficiency and reduced greenhouse gas emissions
16 into the environment;

17 “(B) developing environmentally-friendly,
18 ‘green’ chemical processes to be used by indus-
19 try; and

20 “(C) enhancing building performance with
21 a focus in developing standards or tools which
22 will help incorporate low- or no-emission tech-
23 nologies into building designs.

24 “(3) STANDARDS AND TOOLS.—The National
25 Measurement Laboratories shall develop standards

1 and tools under this subsection that include software
2 to assist designers in selecting alternate building
3 materials, performance data on materials, artificial
4 intelligence-aided design procedures for building sub-
5 systems and ‘smart buildings’, and improved test
6 methods and rating procedures for evaluating the
7 energy performance of residential and commercial
8 appliances and products.

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

20 **SEC. 109. TECHNOLOGY DEVELOPMENT AND DIFFUSION.**

21 The Director of the National Institute of Standards
22 and Technology, through the Manufacturing Extension
23 Partnership Program, may develop a program to support
24 the implementation of new “green” manufacturing tech-

1 nologies and techniques by the more than 380,000 small
2 manufacturers.

3 **TITLE II—NATIONAL**
4 **GREENHOUSE GAS DATABASE**

5 **SEC. 201. NATIONAL GREENHOUSE GAS DATABASE AND**
6 **REGISTRY ESTABLISHED.**

7 (a) ESTABLISHMENT.—As soon as practicable after
8 the date of enactment of this Act, the Administrator, in
9 coordination with the Secretary, the Secretary of Energy,
10 the Secretary of Agriculture, and private sector and non-
11 governmental organizations, shall establish, operate, and
12 maintain a database, to be known as the “National Green-
13 house Gas Database”, to collect, verify, and analyze infor-
14 mation on greenhouse gas emissions by entities.

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

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

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

22 (c) COMPREHENSIVE SYSTEM.—

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

1 prehensive system for greenhouse gas emissions re-
2 porting, inventorying, and reductions registration.

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

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

7 (i) maximize completeness, trans-
8 parency, and accuracy of information re-
9 ported; and

10 (ii) minimize costs incurred by entities
11 in measuring and reporting greenhouse gas
12 emissions; and

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

16 (i) to prevent the reporting of some or
17 all of the same greenhouse gas emissions
18 or emission reductions by more than 1 re-
19 porting entity;

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

22 (iii) to provide for adjustment to data
23 by reporting entities that have had a sig-
24 nificant organizational change (including
25 mergers, acquisitions, and divestiture), in

1 order to maintain comparability among
2 data in the database over time;

3 (iv) to provide for adjustments to re-
4 flect new technologies or methods for
5 measuring or calculating greenhouse gas
6 emissions;

7 (v) to account for changes in registra-
8 tion of ownership of emission reductions
9 resulting from a voluntary private trans-
10 action between reporting entities; and

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

14 (3) SERIAL NUMBERS.—Through regulations
15 promulgated under paragraph (1), the Administrator
16 shall develop and implement a system that pro-
17 vides—

18 (A) for the verification of submitted emis-
19 sions reductions;

20 (B) for the provision of unique serial num-
21 bers to identify the verified emission reductions
22 made by an entity relative to the baseline of the
23 entity; and

24 (C) for the tracking of the reductions asso-
25 ciated with the serial numbers.

1 **SEC. 202. INVENTORY OF GREENHOUSE GAS EMISSIONS**
2 **FOR COVERED ENTITIES.**

3 (a) IN GENERAL.—Not later than July 1st of each
4 calendar year after 2008, a covered entity shall submit
5 to the Administrator a report that describes, for the pre-
6 ceding calendar year, the entity-wide greenhouse gas emis-
7 sions (as reported at the facility level), including—

8 (1) the total quantity of direct greenhouse gas
9 emissions from stationary sources, expressed in units
10 of carbon dioxide equivalence;

11 (2) the amount of petroleum products sold or
12 imported and the amount of greenhouse gases, ex-
13 pressed in carbon dioxide equivalents, that would be
14 produced when these products are used for transpor-
15 tation; and

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

20 (A) indirect emissions from imported elec-
21 tricity, heat, and steam;

22 (B) process and fugitive emissions; and

23 (C) production or importation of green-
24 house gases.

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

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

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

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

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

13 (b) REQUIREMENTS.—

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

17 (A) establish a baseline; and

18 (B) submit the report described in sub-
19 section (c)(1).

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

1 entity is required to comply with the requirements
2 by reason of an activity other than the agreement.

3 (c) REPORTS.—

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

12 (A) the total quantity of direct greenhouse
13 gas emissions from stationary sources, ex-
14 pressed in units of carbon dioxide equivalence;

15 (B) the amount of petroleum products sold
16 or imported and the amount of greenhouse
17 gases, expressed in carbon dioxide equivalents,
18 that would be produced when these products
19 are used by vehicles; and

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

- 1 (i) indirect emissions from imported
2 electricity, heat, and steam;
3 (ii) process and fugitive emissions;
4 and
5 (iii) production or importation of
6 greenhouse gases.

7 (2) VOLUNTARY REPORTING.—An entity de-
8 scribed in subsection (a) may (along with estab-
9 lishing a baseline and reporting emissions under this
10 section)—

11 (A) submit a report described in paragraph
12 (1) before the date specified in that paragraph
13 for the purposes of achieving and
14 commoditizing greenhouse gas reductions
15 through use of the registry; and

16 (B) submit to the Administrator, for inclu-
17 sion in the registry, information that has been
18 verified in accordance with regulations promul-
19 gated under section 201(e)(1) and that relates
20 to—

21 (i) any entity-wide greenhouse gas
22 emission reductions activities of the entity
23 that were carried out during or after 1990
24 and before the establishment of the Na-
25 tional Greenhouse Gas Database, verified

1 in accordance with regulations promul-
2 gated under section 201(c)(1), and sub-
3 mitted to the Administrator before the
4 date that is 4 years after the date of enact-
5 ment of this Act; and

6 (ii) with respect to the calendar year
7 preceding the calendar year in which the
8 information is submitted, any project or
9 activity that results in an entity-wide re-
10 duction of greenhouse gas emissions or an
11 increase in net sequestration of a green-
12 house gas that is carried out by the entity.

13 (3) PROVISION OF VERIFICATION INFORMATION
14 BY REPORTING ENTITIES.—Each entity that submits
15 a report under this subsection shall provide informa-
16 tion sufficient for the Administrator to verify, in ac-
17 cordance with measurement and verification methods
18 and standards developed under section 203, that the
19 greenhouse gas report of the reporting entity—

20 (A) has been accurately reported; and

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

23 (i) actual reductions in direct green-
24 house gas emissions—

1 (I) relative to historic emission
2 levels of the entity; and

3 (II) after accounting for any in-
4 creases in indirect emissions described
5 in paragraph (1)(C)(i); or

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

8 (4) FAILURE TO SUBMIT REPORT.—An entity
9 that participates or has participated in the registry
10 and that fails to submit a report required under this
11 subsection shall be prohibited from using, or allow-
12 ing another entity to use, its registered emissions re-
13 ductions or increases in sequestration to satisfy the
14 requirements of section 311.

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

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

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

23 (6) AVAILABILITY OF DATA.—

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

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

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

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

18 (8) ADDITIONAL ISSUES TO BE CONSIDERED.—
19 In promulgating the regulations under section
20 201(c)(1) and implementing the database, the Ad-
21 ministrator shall take into consideration a broad
22 range of issues involved in establishing an effective
23 database, including—

- 24 (A) the appropriate allowances for report-
25 ing each greenhouse gas;

1 (B) the data and information systems and
2 measures necessary to identify, track, and
3 verify greenhouse gas emissions in a manner
4 that will encourage private sector trading and
5 exchanges;

6 (C) the greenhouse gas reduction and se-
7 questration methods and standards applied in
8 other countries, as applicable or relevant;

9 (D) the extent to which available fossil
10 fuels, greenhouse gas emissions, and greenhouse
11 gas production and importation data are ade-
12 quate to implement the database; and

13 (E) the differences in, and potential
14 uniqueness of, the facilities, operations, and
15 business and other relevant practices of persons
16 and entities in the private and public sectors
17 that may be expected to participate in the data-
18 base.

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

21 (1) describes the total greenhouse gas emissions
22 and emission reductions reported to the database
23 during the year covered by the report;

1 (2) provides entity-by-entity and sector-by-sector
2 analyses of the emissions and emission reductions
3 reported;

4 (3) describes the atmospheric concentrations of
5 greenhouse gases; and

6 (4) provides a comparison of current and past
7 atmospheric concentrations of greenhouse gases.

8 **SEC. 204. MEASUREMENT AND VERIFICATION.**

9 (a) STANDARDS.—

10 (1) IN GENERAL.—Not later than 1 year after
11 the date of enactment of this Act, the Secretary
12 shall develop comprehensive measurement and
13 verification methods and standards to ensure a consistent
14 and technically accurate record of greenhouse
15 gas emissions, emission reductions, sequestration,
16 and atmospheric concentrations for use in the registry.
17

18 (2) REQUIREMENTS.—The development of
19 methods and standards under paragraph (1) shall
20 include—

21 (A) a requirement that a covered entity
22 use a continuous emissions monitoring system,
23 or another system of measuring or estimating
24 emissions that is determined by the Secretary
25 to provide information with the same precision,

1 reliability, accessibility, and timeliness as a con-
2 tinuous emissions monitoring system provides;

3 (B) establishment of standardized meas-
4 urement and verification practices for reports
5 made by all entities participating in the reg-
6 istry, taking into account—

7 (i) protocols and standards in use by
8 entities desiring to participate in the reg-
9 istry as of the date of development of the
10 methods and standards under paragraph
11 (1);

12 (ii) boundary issues, such as leakage
13 and shifted use;

14 (iii) avoidance of double counting of
15 greenhouse gas emissions and emission re-
16 ductions;

17 (iv) protocols to prevent a covered en-
18 tity from avoiding the requirements of this
19 Act by reorganization into multiple entities
20 that are under common control; and

21 (v) such other factors as the Sec-
22 retary, in consultation with the Adminis-
23 trator, determines to be appropriate;

24 (C) establishment of measurement and
25 verification standards applicable to actions

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

3 (D) 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) organic soil carbon sequestration
8 practices; and

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

13 (E) 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 (F) 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 (G) 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. 311. 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 equivalence, that it emits;

18 (2) producer or importer of hydrofluorocarbons,
19 perfluorocarbons, or sulfur hexafluoride that is a
20 covered entity shall submit to the Administrator one
21 tradeable allowance for every metric ton of
22 hydrofluorocarbons, perfluorocarbons, or sulfur
23 hexafluoride it produces or imports, measured in
24 units of carbon dioxide equivalence; and

1 (3) each petroleum refiner or importer that is
2 a covered entity shall submit one tradeable allowance
3 for every unit of petroleum product it sells that will
4 produce one metric ton of greenhouse gases, meas-
5 ured in units of carbon dioxide equivalence, when
6 used for transportation.

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

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

19 (1) the emission is deposited in a geological
20 storage facility approved by the Administrator under
21 section 204(a)(2)(F); and

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

1 **SEC. 312. COMPLIANCE.**

2 (a) IN GENERAL.—

3 (1) SOURCE OF TRADEABLE ALLOWANCES
4 USED.—A covered entity may use a tradeable allow-
5 ance to meet the requirements of this section with-
6 out regard to whether the tradeable allowance was
7 allocated to it under subtitle B or acquired from an-
8 other entity or the Climate Change Credit Corpora-
9 tion established under section 351.

10 (2) VERIFICATION BY ADMINISTRATOR.—At
11 various times during each year, the Administrator
12 shall determine whether each covered entity has met
13 the requirements of this section. In making that de-
14 termination, the Administrator shall—

15 (A) take into account tradeable allowances
16 allocated to, or acquired by, that covered entity;
17 and

18 (B) retire the serial number assigned to
19 each such tradeable allowance so used.

20 (b) ALTERNATIVE MEANS OF COMPLIANCE FROM
21 2010 THROUGH 2015.—For the years 2010, 2011, 2012,
22 2013, 2014, and 2015, a covered entity may satisfy 15
23 percent of its total allowance submission requirement
24 under this section by—

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

4 (A) the Secretary certifies that the other
5 nation's system for trading in greenhouse gas
6 emissions is complete, accurate, and trans-
7 parent and reviews that determination at least
8 once every 5 years;

9 (B) the other nation has adopted enforce-
10 able limits on its greenhouse gas emissions
11 which the tradeable allowances were issued to
12 implement; and

13 (C) the covered entity certifies that the
14 tradeable allowance has been retired unused in
15 the other nation's market;

16 (2) submitting a registered net increase in se-
17 questration, as registered in the National Green-
18 house Gas Database established under section 201,
19 adjusted, if necessary, to comply with the accounting
20 standards and methods established under section
21 372;

22 (3) submitting a greenhouse gas emissions re-
23 duction (other than a registered net increase in se-
24 questration) that was registered in the National

1 Greenhouse Gas Database by a person that is not a
2 covered entity; or

3 (4) submitting credits obtained from the Ad-
4 ministrator under section 314

5 (c) ALTERNATIVE MEANS OF COMPLIANCE AFTER
6 2015.—For years beginning after 2015, a covered entity
7 may meet the requirements of this section by any means
8 described in subsection (b), except that for the purpose
9 of applying subsection (d) after 2015, “10 percent” shall
10 be substituted for “15 percent”.

11 **SEC. 313. TRADEABLE ALLOWANCES AND FUEL ECONOMY**
12 **STANDARD CREDITS.**

13 (a) IN GENERAL.—Section 32903 of title 49, United
14 States Code, is amended by striking the second sentence
15 of subsection (a) and inserting “The credits may be—

16 “(1) applied to any of the 3 model years imme-
17 diately following the model year for which the credits
18 are earned; or

19 “(2) if the average fuel economy of a manufac-
20 turer exceeds the fuel efficiency standards by more
21 than 20 percent, sold to the registry established
22 under section 201 of the Climate Stewardship Act of
23 2003.”.

24 (b) CONVERSION RATIO.—The Secretary of Trans-
25 portation, in consultation with the Administrator, shall de-

1 termine the conversion factor to be used for purposes of
2 credits purchased from, or sold to, the registry established
3 under section 201 of this Act and fuel economy standard
4 credits under section 32903 of title 49, United States
5 Code.

6 (c) **REDUCTION OF TRANSPORTATION SECTOR ALLO-**
7 **CATION.**—If any manufacturer sells credits under section
8 32903(a)(2) of title 49, United States Code, to the reg-
9 istry established under section 201 of this Act in any cal-
10 endar year, the amount of tradeable allowances allocated
11 to the transportation sector under section 311(b) for the
12 next calendar year, and the total allocation of tradeable
13 allowance available for allocation in the next calendar
14 year, shall be reduced by an amount equivalent to the sum
15 of the credits, measured in units of carbon dioxide equiva-
16 lents, sold to the registry by such manufacturers during
17 the preceding calendar year.

18 **SEC. 314. BORROWING AGAINST FUTURE REDUCTIONS.**

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

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

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

1 current calendar year, subject to the limitation im-
2 posed by section 312(b).

3 (b) DETERMINATION OF TRADEABLE ALLOWANCE

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

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

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

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

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

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

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

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

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

6 (2) the number of years beginning after the use
7 year and before the source year.

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

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

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

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

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

4 **SEC. 315. OTHER USES OF TRADEABLE ALLOWANCES.**

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

8 (b) INTERSECTOR TRADING.—Covered entities may
9 purchase or otherwise acquire tradeable allowances from
10 other covered sectors to satisfy the requirements of section
11 311.

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

20 (d) BANKING OF TRADEABLE ALLOWANCES.—Not-
21 withstanding the requirements of section 311, a covered
22 entity that has more than a sufficient amount of tradeable
23 allowances to satisfy the requirements of section 311, may
24 refrain from submitting a tradeable allowance to satisfy

1 the requirements in order to sell, exchange, or use the
2 tradeable allowance in the future.

3 **SEC. 316. EXEMPTION OF SOURCE CATEGORIES.**

4 (a) IN GENERAL.—The Administrator may grant an
5 exemption from the requirements of this Act to a source
6 category if the Administrator determines, after public no-
7 tice and comment, that it is not feasible to measure or
8 estimate emissions from that source category.

9 (b) REDUCTION OF LIMITATIONS.—If the Adminis-
10 trator exempts a source category under subsection (a), the
11 Administrator shall also reduce the total tradeable allow-
12 ances under section 321(a) as follows:

13 (1) 2010 LIMITATION.—For the tradeable al-
14 lowances under section 311(a)(1), the Administrator
15 shall reduce the total by the amount of greenhouse
16 gas emissions that the exempted source category
17 emitted in calendar year 2000, as identified in the
18 2000 Inventory.

19 (2) 2016 LIMITATION.—For the tradeable al-
20 lowances under subsection 311(a)(2), the Adminis-
21 trator shall reduce the total by the amount of green-
22 house gas emissions that the exempted source cat-
23 egory emitted in calendar year 1990, as identified in
24 the 1990 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 equivalence—

10 (1) for calendar years beginning after 2009 and
11 before 2016, equal to—

12 (A) 5896 million metric tons, measured in
13 units of carbon dioxide equivalence, reduced by

14 (B) the amount of emissions of greenhouse
15 gases in calendar year 2000 from non-covered
16 entities; and

17 (2) for calendar years beginning after 2015,
18 equal to—

19 (A) 5123 million metric tons, measured in
20 units of carbon dioxide equivalence, reduced by

21 (B) the amount of emissions of greenhouse
22 gases in calendar year 1990 from non-covered
23 entities.

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

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

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

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

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

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

20 (B) is not a covered entity, determined by
21 applying the definition in section 3(4) for the
22 year 2000 (for the purpose of subsection
23 (a)(1)(B)) or the year 1990 (for the purpose of
24 subsection (a)(2)(B)).

1 (2) EXCEPTION.—Notwithstanding paragraph
2 (1), an entity that is a covered entity for any cal-
3 endar year beginning after 2009 shall not be consid-
4 ered to be a non-covered entity for the purpose of
5 either subsection (a)(1)(B) or subsection (a)(2)(B)
6 only because it emitted, or its products would have
7 emitted, 10,000 metric tons or less of greenhouse
8 gas, measured in units of carbon dioxide equivalence,
9 in the year 2000 or 1990, respectively.

10 **SEC. 332. DETERMINATION OF TRADEABLE ALLOWANCE**
11 **ALLOCATIONS.**

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

13 (1) the amount of tradeable allowances to be al-
14 located to each covered sector of that sector’s Phase
15 I and Phase II allotments; and

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

19 (b) ALLOCATION FACTORS.—In making the deter-
20 mination required by subsection (a), the Secretary shall
21 consider—

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

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

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

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

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

7 (6) the degree to which the amount of alloca-
8 tions to the covered sectors should decrease over
9 time.

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

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

2 (a) IN GENERAL.—Beginning with calendar year
3 2010 and after taking into account any initial allocations
4 under section 334, the Administrator shall—

5 (1) allocate to each covered sector that sector's
6 Phase I and Phase II allotments determined by the
7 Administrator under section 332 (adjusted for any
8 such initial allocations and the allocation to the Cli-
9 mate Change Credit Corporation established under
10 section 351); and

11 (2) allocate to the Climate Change Credit Cor-
12 poration established under section 351 the tradeable
13 allowances allocable to that Corporation.

14 (b) INTRASECTORIAL ALLOTMENTS.—The Adminis-
15 trator shall, by regulation, establish a process for the allo-
16 cation of tradeable allowances under this section, without
17 cost to facilities within each sector, that will—

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

21 (2) minimize the costs to the government of al-
22 locating the tradeable allowances;

23 (3) not penalize a covered entity for registered
24 emissions reductions made before 2010; and

25 (4) provide sufficient allocation for new en-
26 trants into the sector.

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

6 (d) HYDROFLUOROCARBONS, PERFLUOROCARBONS,
7 AND SULFUR HEXAFLUORIDE.—The Administrator shall
8 allocate the tradeable allowances for producers or import-
9 ers of hydrofluorocarbons, perfluorocarbons, or sulfur
10 hexafluoride one tradeable allowance for every metric ton
11 of hydrofluorocarbons, perfluorocarbons, or sulfur
12 hexafluoride produced or imported, measured in units of
13 carbon dioxide equivalence.

14 (e) SPECIAL RULE FOR ALLOCATION WITHIN THE
15 TRANSPORTATION SECTOR.—The Administrator shall al-
16 locate the tradeable allowances for the transportation sec-
17 tor to petroleum refiners or importers that produce or im-
18 port petroleum products that will be used as fuel for trans-
19 portation.

20 **SEC. 334. INITIAL ALLOCATIONS FOR EARLY PARTICIPA-**
21 **TION AND ACCELERATED PARTICIPATION.**

22 Before making any allocations under section 333, the
23 Administrator shall allocate—

24 (1) to any covered entity an amount of
25 tradeable allowances equivalent to the amount of

1 greenhouse gas emissions reductions registered by
2 that covered entity in the national greenhouse gas
3 database if—

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

7 (B) the reduction was registered prior to
8 2010; and

9 (C) the Administrator retires the unique
10 serial number assigned to the reduction under
11 section 201(c)(3); and

12 (2) to any covered entity that has entered into
13 an accelerated participation agreement under section
14 335, such tradeable allowances as the Administrator
15 has determined to be appropriate under that section.

16 **SEC. 335. BONUS FOR ACCELERATED PARTICIPATION.**

17 (a) IN GENERAL.—If a covered entity executes an
18 agreement with the Administrator under which it agrees
19 to reduce its level of greenhouse gas emissions to a level
20 no greater than the level of its greenhouse gas emissions
21 for calendar year 1990 by the year 2010, then, for the
22 6-year period beginning with calendar year 2010, the Ad-
23 ministrator shall—

24 (1) provide additional tradeable allowances to
25 that entity when allocating allowances under section

1 334 in order to recognize the additional emissions
2 reductions that will be required of the covered entity;

3 (2) allow that entity to satisfy 20 percent of its
4 requirements under section 311 by—

5 (A) submitting tradeable allowances from
6 another nation's market in greenhouse gas
7 emissions under the conditions described in sec-
8 tion 312(b)(1);

9 (B) submitting a registered net increase in
10 sequestration, as registered in the National
11 Greenhouse Gas Database established under
12 section 201, and as adjusted by the appropriate
13 sequestration discount rate established under
14 section 372; or

15 (C) submitting a greenhouse gas emission
16 reduction (other than a registered net increase
17 in sequestration) that was registered in the Na-
18 tional Greenhouse Gas Database by a person
19 that is not a covered entity.

20 (b) TERMINATION.—An entity that executes an
21 agreement described in subsection (a) may terminate the
22 agreement at any time.

23 (c) FAILURE TO MEET COMMITMENT.—If an entity
24 that executes an agreement described in subsection (a)

1 fails to achieve the level of emissions to which it committed
2 by calendar year 2010—

3 (1) its requirements under section 311 shall be
4 increased by the amount of any tradeable allowances
5 provided to it under subsection (a)(1); and

6 (2) any tradeable allowances submitted there-
7 after shall be counted first against the increase in
8 those requirements.

9 **SEC. 336. ENSURING TARGET ADEQUACY.**

10 (a) IN GENERAL.—Beginning 2 years after the date
11 of enactment of this Act, the Under Secretary of Com-
12 merce for Oceans and Atmosphere shall review the allow-
13 ances established by subsection (a) no less frequently than
14 biennially—

15 (1) to re-evaluate the levels established by that
16 subsection, after taking into account the best avail-
17 able science and the most currently available data,
18 and

19 (2) to re-evaluate the environmental and public
20 health impacts of specific concentration levels of
21 greenhouse gases,

22 to determine whether the allowances established by sub-
23 section (a) continue to be consistent with the objective of
24 the United Nations' Framework Convention on Climate
25 Change of stabilizing levels of greenhouse gas emissions

1 at a level that will prevent dangerous anthropogenic inter-
2 ference with the climate system.

3 (b) REVIEW OF 2010 AND 2016 LEVELS.—The
4 Under Secretary shall specifically review in 2008 the level
5 established under section 311(a)(1) and, in 2012, the level
6 established under section 311(a)(2), and transmit a report
7 on his reviews, together with any recommendations, in-
8 cluding legislative recommendations, for modification of
9 the levels, to the Senate Committee on Commerce,
10 Science, and Transportation, the Senate Committee on
11 Environment and Public Works, the House of Representa-
12 tives Committee on Science, and the House of Representa-
13 tives Committee on Energy and Commerce.

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 (c) ANNUAL REPORT.—The Corporation shall issue
 16 an annual report setting forth the results of its operations
 17 for the year.

18 **Subtitle D—Sequestration**
 19 **Accounting; Penalties**

20 **SEC. 371. SEQUESTRATION ACCOUNTING.**

21 (a) SEQUESTRATION ACCOUNTING.—If a covered en-
 22 tity uses a registered net increase in sequestration to sat-
 23 isfy the requirements of section 311 for any year, that
 24 covered entity shall submit information to the Adminis-
 25 trator every 5 years thereafter sufficient to allow the Ad-

1 administrator to determine, using the methods and stand-
2 ards created under section 204, whether that net increase
3 in sequestration still exists. Unless the Administrator de-
4 termines that the net increase in sequestration continues
5 to exist, the covered entity shall offset any loss of seques-
6 tration by submitting additional tradeable allowances of
7 equivalent amount in the calendar year following that de-
8 termination.

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

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

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

24 (2) If the range of possible amounts of net in-
25 crease in sequestration for a particular class of se-

1 sequestration project is more than 10 percent of the
2 median of that range, the amount of sequestration
3 awarded shall be equal to the fifth percentile of that
4 range.

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

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

14 **SEC. 372. PENALTIES.**

15 Any covered entity that fails to meet the require-
16 ments of section 311 for a year shall be liable for a civil
17 penalty, payable to the Administrator, equal to thrice the
18 market value (determined as of the last day of the year
19 at issue) of the tradeable allowances that would be nec-
20 essary for that covered entity to meet those requirements
21 on the date of the emission that resulted in the violation.

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