

110TH CONGRESS
2D SESSION

S. 2614

To facilitate the development, demonstration, and implementation of technology for use in removing carbon dioxide and other greenhouse gases from the atmosphere.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 8 (legislative day, FEBRUARY 6), 2008

Mr. BARRASSO introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To facilitate the development, demonstration, and implementation of technology for use in removing carbon dioxide and other greenhouse gases from the atmosphere.

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 “Greenhouse Gas Emis-
5 sion Atmospheric Removal Act” or the “GEAR Act”.

6 **SEC. 2. STATEMENT OF POLICY.**

7 It is the policy of the United States to provide incen-
8 tives to encourage the development and implementation of

1 technology to permanently remove greenhouse gases from
2 the atmosphere on a significant scale.

3 **SEC. 3. DEFINITIONS.**

4 In this Act:

5 (1) COMMISSION.—The term “Commission”
6 means the Greenhouse Gas Emission Atmospheric
7 Removal Commission established by section 5(a).

8 (2) GREENHOUSE GAS.—The term “greenhouse
9 gas” means—

10 (A) carbon dioxide;

11 (B) methane;

12 (C) nitrous oxide;

13 (D) sulfur hexafluoride;

14 (E) a hydrofluorocarbon;

15 (F) a perfluorocarbon; and

16 (G) any other gas that the Commission de-
17 termines is necessary to achieve the purposes of
18 this Act.

19 (3) INTELLECTUAL PROPERTY.—The term “in-
20 tellectual property” means—

21 (A) an invention that is patentable under
22 title 35, United States Code; and

23 (B) any patent on an invention described
24 in subparagraph (A).

1 (4) SECRETARY.—The term “Secretary” means
2 the Secretary of Energy.

3 **SEC. 4. GREENHOUSE GAS EMISSION ATMOSPHERIC RE-**
4 **MOVAL PROGRAM.**

5 The Secretary, acting through the Commission, shall
6 provide to public and private entities, on a competitive
7 basis, financial awards for the achievement of milestones
8 in developing and applying technology that could signifi-
9 cantly slow or reverse the accumulation of greenhouse
10 gases in the atmosphere by permanently capturing or se-
11 questrating those gases without significant countervailing
12 harmful effects.

13 **SEC. 5. GREENHOUSE GAS EMISSION ATMOSPHERIC RE-**
14 **MOVAL COMMISSION.**

15 (a) ESTABLISHMENT.—There is established within
16 the Department of Energy a commission to be known as
17 the “Greenhouse Gas Emission Atmospheric Removal
18 Commission”.

19 (b) MEMBERSHIP.—

20 (1) COMPOSITION.—The Commission shall be
21 composed of 11 members appointed by the Presi-
22 dent, by and with the advice and consent of the Sen-
23 ate, who shall provide expertise in—

24 (A) climate science;

25 (B) physics;

- 1 (C) chemistry;
2 (D) biology;
3 (E) engineering;
4 (F) economics;
5 (G) business management; and
6 (H) such other disciplines as the Commis-
7 sion determines to be necessary to achieve the
8 purposes of this Act.

9 (2) TERM; VACANCIES.—

10 (A) TERM.—A member of the Commission
11 shall serve for a term of 6 years.

12 (B) VACANCIES.—A vacancy on the Com-
13 mission—

14 (i) shall not affect the powers of the
15 Commission; and

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

18 (3) INITIAL MEETING.—Not later than 30 days
19 after the date on which all members of the Commis-
20 sion have been appointed, the Commission shall hold
21 the initial meeting of the Commission.

22 (4) MEETINGS.—The Commission shall meet at
23 the call of the Chairperson.

1 (5) QUORUM.—A majority of the members of
2 the Commission shall constitute a quorum, but a
3 lesser number of members may hold hearings.

4 (6) CHAIRPERSON AND VICE CHAIRPERSON.—
5 The Commission shall select a Chairperson and Vice
6 Chairperson from among the members of the Com-
7 mission.

8 (7) COMPENSATION.—A member of the Com-
9 mission shall be compensated at level III of the Ex-
10 ecutive Schedule.

11 (c) DUTIES.—The Commission shall—

12 (1) subject to subsection (d), develop specific
13 requirements for—

14 (A) the competition process;

15 (B) minimum performance standards;

16 (C) monitoring and verification procedures;

17 and

18 (D) the scale of awards for each milestone
19 identified under paragraph (3);

20 (2) establish minimum levels for the capture or
21 net sequestration of greenhouse gases that are re-
22 quired to be achieved by a public or private entity
23 to qualify for a financial award described in para-
24 graph (3);

1 (3) in coordination with the Secretary, offer
2 those financial awards to public and private entities
3 that demonstrate—

4 (A) a design document for a successful
5 technology;

6 (B) a bench scale demonstration of a tech-
7 nology;

8 (C) technology described in subparagraph
9 (A) that—

10 (i) is operational at demonstration
11 scale; and

12 (ii) achieves significant greenhouse
13 gas reductions; and

14 (D) operation of technology on a commer-
15 cially viable scale that meets the minimum lev-
16 els described in paragraph (2); and

17 (4) submit to Congress—

18 (A) an annual report that describes the
19 progress made by the Commission and recipi-
20 ents of financial awards under this section in
21 achieving the demonstration goals established
22 under paragraph (3); and

23 (B) not later than 1 year after the date of
24 enactment of this Act, a report that describes

1 the levels of funding that are necessary to
2 achieve the purposes of this Act.

3 (d) PUBLIC PARTICIPATION.—In carrying out sub-
4 section (c)(1), the Commission shall—

5 (1) provide notice of and, for a period of at
6 least 60 days, an opportunity for public comment
7 on, any draft or proposed version of the require-
8 ments described in subsection (c)(1); and

9 (2) take into account public comments received
10 in developing the final version of those requirements.

11 (e) PEER REVIEW.—No financial award may be pro-
12 vided under this Act until such time as the proposal for
13 which the award is sought has been peer reviewed in ac-
14 cordance with such standards for peer review as the Com-
15 mission shall establish.

16 **SEC. 6. INTELLECTUAL PROPERTY CONSIDERATIONS.**

17 (a) IN GENERAL.—Title to any intellectual property
18 arising from a financial award provided under this Act
19 shall vest in 1 or more entities that are incorporated in
20 the United States.

21 (b) RESERVATION OF LICENSE.—The United
22 States—

23 (1) may reserve a nonexclusive, nontransferable,
24 irrevocable, paid-up license, to have practiced for or
25 on behalf of the United States, in connection with

1 any intellectual property described in subsection (a);
2 but

3 (2) shall not, in the exercise of a license re-
4 served under paragraph (1), publicly disclose propri-
5 etary information relating to the license.

6 (c) **TRANSFER OF TITLE.**—Title to any intellectual
7 property described in subsection (a) shall not be trans-
8 ferred or passed, except to an entity that is incorporated
9 in the United States, until the expiration of the first pat-
10 ent obtained in connection with the intellectual property.

11 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

12 There are authorized to be appropriated such sums
13 as are necessary to carry out this Act.

14 **SEC. 8. TERMINATION OF AUTHORITY.**

15 The Commission and all authority of the Commission
16 provided under this Act terminate on December 31, 2020.

○