

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

# S. 1013

To authorize the Secretary of Energy to carry out a program to demonstrate the commercial application of integrated systems for long-term geological storage of carbon dioxide, and for other purposes.

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## IN THE SENATE OF THE UNITED STATES

MAY 7, 2009

Mr. BINGAMAN (for himself, Mr. BARRASSO, Mr. DORGAN, Mr. TESTER, Mr. BAYH, Ms. LANDRIEU, Mr. CASEY, and Mr. VOINOVICH) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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## A BILL

To authorize the Secretary of Energy to carry out a program to demonstrate the commercial application of integrated systems for long-term geological storage of carbon dioxide, and for other purposes.

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

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Department of Energy  
5       Carbon Capture and Sequestration Program Amendments  
6       Act of 2009”.

1 **SEC. 2. LARGE-SCALE CARBON STORAGE PROGRAM.**

2 (a) IN GENERAL.—Subtitle F of title IX of the En-  
3 ergy Policy Act of 2005 (42 U.S.C. 16291 et seq.) is  
4 amended by inserting after section 963 (42 U.S.C. 16293)  
5 the following:

6 **“SEC. 963A. LARGE-SCALE CARBON STORAGE PROGRAM.**

7 “(a) DEFINITIONS.—In this section:

8 “(1) INDUSTRIAL SOURCE.—The term ‘indus-  
9 trial source’ means any source of carbon dioxide that  
10 is not naturally occurring.

11 “(2) LARGE-SCALE.—The term ‘large-scale’  
12 means the injection of over 1,000,000 tons of carbon  
13 dioxide each year from industrial sources into a geo-  
14 logical formation.

15 “(3) SECRETARY CONCERNED.—The term ‘Sec-  
16 retary concerned’ means—

17 “(A) the Secretary of Agriculture (acting  
18 through the Chief of the Forest Service), with  
19 respect to National Forest System land; and

20 “(B) the Secretary of the Interior, with re-  
21 spect to land managed by the Bureau of Land  
22 Management (including land held for the ben-  
23 efit of an Indian tribe).

24 “(b) PROGRAM.—In addition to the research, develop-  
25 ment, and demonstration program authorized by section  
26 963, the Secretary shall carry out a program to dem-

1 onstrate the commercial application of integrated systems  
2 for the capture, injection, monitoring, and long-term geo-  
3 logical storage of carbon dioxide from industrial sources.

4 “(c) AUTHORIZED ASSISTANCE.—In carrying out the  
5 program, the Secretary may enter into cooperative agree-  
6 ments to provide financial and technical assistance to up  
7 to 10 demonstration projects.

8 “(d) PROJECT SELECTION.—The Secretary shall  
9 competitively select recipients of cooperative agreements  
10 under this section from among applicants that—

11 “(1) provide the Secretary with sufficient geo-  
12 logical site information (including hydrogeological  
13 and geophysical information) to establish that the  
14 proposed geological storage unit is capable of long-  
15 term storage of the injected carbon dioxide, includ-  
16 ing—

17 “(A) the location, extent, and storage ca-  
18 pacity of the geological storage unit at the site  
19 into which the carbon dioxide will be injected;

20 “(B) the principal potential modes of  
21 geomechanical failure in the geological storage  
22 unit;

23 “(C) the ability of the geological storage  
24 unit to retain injected carbon dioxide; and

1           “(D) the measurement, monitoring, and  
2           verification requirements necessary to ensure  
3           adequate information on the operation of the  
4           geological storage unit during and after the in-  
5           jection of carbon dioxide;

6           “(2) possess the land or interests in land nec-  
7           essary for—

8           “(A) the injection and storage of the car-  
9           bon dioxide at the proposed geological storage  
10          unit; and

11          “(B) the closure, monitoring, and long-  
12          term stewardship of the geological storage unit;

13          “(3) possess or have a reasonable expectation of  
14          obtaining all necessary permits and authorizations  
15          under applicable Federal and State laws (including  
16          regulations); and

17          “(4) agree to comply with each requirement of  
18          subsection (e).

19          “(e) TERMS AND CONDITIONS.—The Secretary shall  
20          condition receipt of financial assistance pursuant to a co-  
21          operative agreement under this section on the recipient  
22          agreeing to—

23          “(1) comply with all applicable Federal and  
24          State laws (including regulations), including a cer-  
25          tification by the appropriate regulatory authority

1 that the project will comply with Federal and State  
2 requirements to protect drinking water supplies;

3 “(2) in the case of industrial sources subject to  
4 the Clean Air Act (42 U.S.C. 7401 et seq.), inject  
5 only carbon dioxide captured from industrial sources  
6 in compliance with that Act;

7 “(3) comply with all applicable construction and  
8 operating requirements for deep injection wells;

9 “(4) measure, monitor, and test to verify that  
10 carbon dioxide injected into the injection zone is  
11 not—

12 “(A) escaping from or migrating beyond  
13 the confinement zone; or

14 “(B) endangering an underground source  
15 of drinking water;

16 “(5) comply with applicable well-plugging,  
17 postinjection site care, and site closure requirements,  
18 including—

19 “(A)(i) maintaining financial assurances  
20 during the postinjection closure and monitoring  
21 phase until a certificate of closure is issued by  
22 the Secretary; and

23 “(ii) promptly undertaking remediation ac-  
24 tivities for any leak from the geological storage

1 unit that would endanger public health or safe-  
2 ty or natural resources; and

3 “(B) complying with subsection (f);

4 “(6) comply with applicable long-term care re-  
5 quirements;

6 “(7) maintain financial protection in a form  
7 and in an amount acceptable to—

8 “(A) the Secretary;

9 “(B) the Secretary with jurisdiction over  
10 the land; and

11 “(C) the Administrator of the Environ-  
12 mental Protection Agency; and

13 “(8) provide the assurances described in section  
14 963(d)(4)(B).

15 “(f) POSTINJECTION CLOSURE AND MONITORING  
16 ELEMENTS.—In assessing whether a project complies with  
17 site closure requirements under subsection (e)(5), the Sec-  
18 retary, in consultation with the Administrator of the Envi-  
19 ronmental Protection Agency, shall determine whether the  
20 recipient of financial assistance has demonstrated contin-  
21 uous compliance with each of the following over a period  
22 of not less than 10 consecutive years after the plume of  
23 carbon dioxide has come into equilibrium with the geologic  
24 formation that comprises the geologic storage unit fol-  
25 lowing the cessation of injection activities:

1           “(1) The estimated location and extent of the  
2 project footprint (including the detectable plume of  
3 carbon dioxide and the area of elevated pressure re-  
4 sulting from the project) has not substantially  
5 changed.

6           “(2) There is no leakage of either carbon diox-  
7 ide or displaced fluid in the geologic storage unit  
8 that is endangering public health and safety, includ-  
9 ing underground sources of drinking water and nat-  
10 ural resources.

11           “(3) The injected or displaced fluids are not ex-  
12 pected to migrate in the future in a manner that en-  
13 counters a potential leakage pathway.

14           “(4) The injection wells at the site completed  
15 into or through the injection zone or confining zone  
16 are plugged and abandoned in accordance with the  
17 applicable requirements of Federal or State law gov-  
18 erning the wells.

19           “(g) INDEMNIFICATION AGREEMENTS.—

20           “(1) DEFINITION OF LIABILITY.—In this sub-  
21 section, the term ‘liability’ means any legal liability  
22 for—

23                   “(A) bodily injury, sickness, disease, or  
24 death;

1           “(B) loss of or damage to property, or loss  
2           of use of property; or

3           “(C) injury to or destruction or loss of nat-  
4           ural resources, including fish, wildlife, and  
5           drinking water supplies.

6           “(2) AGREEMENTS.—The Secretary may agree  
7           to indemnify and hold harmless the recipient of a co-  
8           operative agreement under this section from liability  
9           arising out of or resulting from a demonstration  
10          project in excess of the amount of liability covered  
11          by financial protection maintained by the recipient  
12          under subsection (e)(7).

13          “(3) EXCEPTION FOR GROSS NEGLIGENCE AND  
14          INTENTIONAL MISCONDUCT.—Notwithstanding para-  
15          graph (1), the Secretary may not indemnify the re-  
16          cipient of a cooperative agreement under this section  
17          from liability arising out of conduct of a recipient  
18          that is grossly negligent or that constitutes inten-  
19          tional misconduct.

20          “(4) COLLECTION OF FEES.—

21                 “(A) IN GENERAL.—The Secretary shall  
22                 collect a fee from any person with whom an  
23                 agreement for indemnification is executed under  
24                 this subsection in an amount that is equal to  
25                 the net present value of payments made by the



1 United States to cover liability under the in-  
2 demnification agreement.

3 “(B) AMOUNT.—The Secretary shall estab-  
4 lish, by regulation, criteria for determining the  
5 amount of the fee, taking into account—

6 “(i) the likelihood of an incident re-  
7 sulting in liability to the United States  
8 under the indemnification agreement; and

9 “(ii) other factors pertaining to the  
10 hazard of the indemnified project.

11 “(C) USE OF FEES.—Fees collected under  
12 this paragraph shall be deposited in the Treas-  
13 ury and credited to miscellaneous receipts.

14 “(5) CONTRACTS IN ADVANCE OF APPROPRIA-  
15 TIONS.—The Secretary may enter into agreements  
16 of indemnification under this subsection in advance  
17 of appropriations and incur obligations without re-  
18 gard to section 1341 of title 31, United States Code  
19 (commonly known as the ‘Anti-Deficiency Act’), or  
20 section 11 of title 41, United States Code (com-  
21 monly known as the ‘Adequacy of Appropriations  
22 Act’).

23 “(6) CONDITIONS OF AGREEMENTS OF INDEM-  
24 NIFICATION.—

1           “(A) IN GENERAL.—An agreement of in-  
2           demnification under this subsection may con-  
3           tain such terms as the Secretary considers ap-  
4           propriate to carry out the purposes of this sec-  
5           tion.

6           “(B) ADMINISTRATION.—The agreement  
7           shall provide that, if the Secretary makes a de-  
8           termination the United States will probably be  
9           required to make indemnity payments under the  
10          agreement, the Attorney General—

11                   “(i) shall collaborate with the recipi-  
12                   ent of an award under this subsection; and

13                   “(ii) may—

14                           “(I) approve the payment of any  
15                           claim under the agreement of indem-  
16                           nification;

17                           “(II) appear on behalf of the re-  
18                           cipient;

19                           “(III) take charge of an action;  
20                           and

21                           “(IV) settle or defend an action.

22          “(C) SETTLEMENT OF CLAIMS.—

23                   “(i) IN GENERAL.—The Attorney  
24                   General shall have final authority on behalf  
25                   of the United States to settle or approve

1 the settlement of any claim under this sub-  
2 section on a fair and reasonable basis with  
3 due regard for the purposes of this sub-  
4 section.

5 “(ii) EXPENSES.—The settlement  
6 shall not include expenses in connection  
7 with the claim incurred by the recipient.

8 “(h) FEDERAL LAND.—

9 “(1) IN GENERAL.—The Secretary concerned  
10 may authorize the siting of a project on Federal  
11 land under the jurisdiction of the Secretary con-  
12 cerned in a manner consistent with applicable laws  
13 and land management plans and subject to such  
14 terms and conditions as the Secretary concerned de-  
15 termines to be necessary.

16 “(2) FRAMEWORK FOR GEOLOGICAL CARBON  
17 SEQUESTRATION ON PUBLIC LAND.—In determining  
18 whether to authorize a project on Federal land, the  
19 Secretary concerned shall take into account the  
20 framework for geological carbon sequestration on  
21 public land prepared in accordance with section 714  
22 of the Energy Independence and Security Act of  
23 2007 (Public Law 110–140; 121 Stat. 1715).

24 “(i) ACCEPTANCE OF TITLE AND LONG-TERM MONI-  
25 TORING.—

1           “(1) IN GENERAL.—As a condition of a cooper-  
2           ative agreement under this section, the Secretary  
3           may accept title to, or transfer of administrative ju-  
4           risdiction from another Federal agency over, any  
5           land or interest in land necessary for the monitoring,  
6           remediation, or long-term stewardship of a project  
7           site.

8           “(2) LONG-TERM MONITORING ACTIVITIES.—  
9           After accepting title to, or transfer of, a site closed  
10          in accordance with this section, the Secretary shall  
11          monitor the site and conduct any remediation activi-  
12          ties to ensure the geological integrity of the site and  
13          prevent any endangerment of public health or safety.

14          “(3) FUNDING.—There is appropriated to the  
15          Secretary, out of funds of the Treasury not other-  
16          wise appropriated, such sums as are necessary to  
17          carry out paragraph (2).”.

18          (b) CONFORMING AMENDMENTS.—

19                 (1) Section 963 of the Energy Policy Act of  
20                 2005 (42 U.S.C. 16293) is amended—

21                         (A) by redesignating subsections (a)  
22                         through (d) as subsections (b) through (e), re-  
23                         spectively;

24                         (B) by inserting before subsection (b) (as  
25                         so redesignated) the following:

1 “(a) DEFINITIONS.—In this section:

2 “(1) INDUSTRIAL SOURCE.—The term ‘indus-  
3 trial source’ means any source of carbon dioxide that  
4 is not naturally occurring.

5 “(2) LARGE-SCALE.—The term ‘large-scale’  
6 means the injection of over 1,000,000 tons of carbon  
7 dioxide from industrial sources over the lifetime of  
8 the project.”;

9 (C) in subsection (b) (as so redesignated),  
10 by striking “IN GENERAL” and inserting “PRO-  
11 GRAM”;

12 (D) in subsection (c) (as so redesignated),  
13 by striking “subsection (a)” and inserting “sub-  
14 section (b)”;

15 (E) in subsection (d)(3) (as so redesign-  
16 ated), by striking subparagraph (D).

17 (2) Sections 703(a)(3) and 704 of the Energy  
18 Independence and Security Act of 2007 (42 U.S.C.  
19 17251(a)(3), 17252) are amended by striking “sec-  
20 tion 963(c)(3) of the Energy Policy Act of 2005 (42  
21 U.S.C. 16293(c)(3))” each place it appears and in-  
22 serting “section 963(d)(3) of the Energy Policy Act  
23 of 2005 (42 U.S.C. 16293(d)(3))”.

1 **SEC. 3. TRAINING PROGRAM FOR STATE AGENCIES.**

2 (a) ESTABLISHMENT.—The Secretary of Energy, in  
3 consultation with the Administrator of the Environmental  
4 Protection Agency and the Secretary of Transportation,  
5 shall establish a program to provide grants for employee  
6 training purposes to State agencies involved in permitting,  
7 management, inspection, and oversight of carbon capture,  
8 transportation, and storage projects.

9 (b) AUTHORIZATION OF APPROPRIATIONS.—There is  
10 authorized to be appropriated to the Secretary of Energy  
11 to carry out this section \$10,000,000 for each of fiscal  
12 years 2010 through 2020.

○