

112TH CONGRESS
1ST SESSION

S. 699

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.

IN THE SENATE OF THE UNITED STATES

MARCH 31, 2011

Mr. BINGAMAN (for himself, Mr. BARRASSO, Mr. ROCKEFELLER, and Ms. MURKOWSKI) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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 2011”.

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, post-
17 injection site care, and site closure requirements, in-
18 cluding—

19 “(A)(i) maintaining financial assurances
20 during the post-injection 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(c)(4)(B).

15 “(f) POST INJECTION 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 stabilized within the geologic formation
 24 that comprises the geologic storage unit following the ces-
 25 sation 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 and is contained within the geologic storage
6 unit.

7 “(2) The injection zone formation pressure has
8 ceased to increase following cessation of carbon diox-
9 ide injection into the geologic storage unit.

10 “(3) There is no leakage of either carbon diox-
11 ide or displaced formation fluid from the geologic
12 storage unit that is endangering public health and
13 safety, including underground sources of drinking
14 water and natural resources.

15 “(4) The injected or displaced formation fluids
16 are not expected to migrate in the future in a man-
17 ner that encounters a potential leakage pathway.

18 “(5) The injection wells at the site completed
19 into or through the injection zone or confining zone
20 are plugged and abandoned in accordance with the
21 applicable requirements of Federal or State law gov-
22 erning the wells.

23 “(g) INDEMNIFICATION AGREEMENTS.—

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

4 “(A) bodily injury, sickness, disease, or
 5 death;

6 “(B) loss of or damage to property, or loss
 7 of use of property; or

8 “(C) injury to or destruction or loss of nat-
 9 ural resources, including fish, wildlife, and
 10 drinking water supplies.

11 “(2) AGREEMENTS.—Not later than 1 year
 12 after the date of the receipt by the Secretary of a
 13 completed application for a demonstration project,
 14 the Secretary may agree to indemnify and hold
 15 harmless the recipient of a cooperative agreement
 16 under this section from liability arising out of or re-
 17 sulting from a demonstration project in excess of the
 18 amount of liability covered by financial protection
 19 maintained by the recipient under subsection (e)(7).

20 “(3) EXCEPTION FOR GROSS NEGLIGENCE AND
 21 INTENTIONAL MISCONDUCT.—Notwithstanding para-
 22 graph (1), the Secretary may not indemnify the re-
 23 cipient of a cooperative agreement under this section
 24 from liability arising out of conduct of a recipient

1 that is grossly negligent or that constitutes inten-
2 tional misconduct.

3 “(4) COLLECTION OF FEES.—

4 “(A) IN GENERAL.—The Secretary shall
5 collect a fee from any person with whom an
6 agreement for indemnification is executed under
7 this subsection in an amount that is equal to
8 the net present value of payments made by the
9 United States to cover liability under the in-
10 demnification agreement.

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

14 “(i) the likelihood of an incident re-
15 sulting in liability to the United States
16 under the indemnification agreement; and

17 “(ii) other factors pertaining to the
18 hazard of the indemnified project.

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

22 “(5) CONTRACTS IN ADVANCE OF APPROPRIA-
23 TIONS.—

24 “(A) IN GENERAL.—Subject to subpara-
25 graph (B), the Secretary may enter into agree-

1 ments of indemnification under this subsection
 2 in advance of appropriations and incur obliga-
 3 tions without regard to section 1341 of title 31,
 4 United States Code (commonly known as the
 5 ‘Anti-Deficiency Act’), or section 11 of title 41,
 6 United States Code (commonly known as the
 7 ‘Adequacy of Appropriations Act’).

8 “(B) LIMITATION.—The amount of indem-
 9 nification under this subsection shall not exceed
 10 \$10,000,000,000 (adjusted not less than once
 11 during each 5-year period following the date of
 12 enactment of this section, in accordance with
 13 the aggregate percentage change in the Con-
 14 sumer Price Index since the previous adjust-
 15 ment under this subparagraph), in the aggre-
 16 gate, for all persons indemnified in connection
 17 with an agreement and for each project, includ-
 18 ing such legal costs as are approved by the Sec-
 19 retary.

20 “(6) CONDITIONS OF AGREEMENTS OF INDEM-
 21 NIFICATION.—

22 “(A) IN GENERAL.—An agreement of in-
 23 demnification under this subsection may con-
 24 tain such terms as the Secretary considers ap-

1 appropriate to carry out the purposes of this sec-
2 tion.

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

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

10 “(ii) may—

11 “(I) approve the payment of any
12 claim under the agreement of indem-
13 nification;

14 “(II) appear on behalf of the re-
15 cipient;

16 “(III) take charge of an action;
17 and

18 “(IV) settle or defend an action.

19 “(C) SETTLEMENT OF CLAIMS.—

20 “(i) IN GENERAL.—The Attorney
21 General shall have final authority on behalf
22 of the United States to settle or approve
23 the settlement of any claim under this sub-
24 section on a fair and reasonable basis with

1 due regard for the purposes of this sub-
2 section.

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

6 “(h) FEDERAL LAND.—

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

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

22 “(i) ACCEPTANCE OF TITLE AND LONG-TERM MONI-
23 TORING.—

24 “(1) IN GENERAL.—As a condition of a cooper-
25 ative agreement under this section, the Secretary

1 may accept title to, or transfer of administrative ju-
 2 risdiction from another Federal agency over, any
 3 land or interest in land necessary for the monitoring,
 4 remediation, or long-term stewardship of a project
 5 site.

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

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

16 (b) CONFORMING AMENDMENTS.—

17 (1) Section 963 of the Energy Policy Act of
 18 2005 (42 U.S.C. 16293) is amended—

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

22 (B) by inserting before subsection (b) (as
 23 so redesignated) the following:

24 “(a) DEFINITIONS.—In this section:

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

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

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

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

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

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

1 **SEC. 3. TRAINING PROGRAM FOR STATE AND TRIBAL**
2 **AGENCIES.**

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

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

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