

110TH CONGRESS
1ST SESSION

S. 962

To amend the Energy Policy Act of 2005 to reauthorize and improve the carbon capture and storage research, development, and demonstration program of the Department of Energy and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 22, 2007

Mr. BINGAMAN (for himself, Mr. DOMENICI, Mr. TESTER, Mr. BUNNING, Mr. SALAZAR, Mr. OBAMA, and Mr. WEBB) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To amend the Energy Policy Act of 2005 to reauthorize and improve the carbon capture and storage research, development, and demonstration program of the Department of Energy 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 Storage Research, Development, and
6 Demonstration Act of 2007”.

1 **SEC. 2. CARBON CAPTURE AND STORAGE RESEARCH, DE-**
2 **VELOPMENT, AND DEMONSTRATION PRO-**
3 **GRAM.**

4 Section 963 of the Energy Policy Act of 2005 (42
5 U.S.C. 16293) is amended—

6 (1) in the section heading, by striking “**RE-**
7 **SEARCH AND DEVELOPMENT**” and inserting
8 **“AND STORAGE RESEARCH, DEVELOPMENT,**
9 **AND DEMONSTRATION”**;

10 (2) in subsection (a)—

11 (A) by striking “research and develop-
12 ment” and inserting “and storage research, de-
13 velopment, and demonstration”; and

14 (B) by striking “capture technologies on
15 combustion-based systems” and inserting “cap-
16 ture and storage technologies related to energy
17 systems”;

18 (3) in subsection (b)—

19 (A) in paragraph (3), by striking “and” at
20 the end;

21 (B) in paragraph (4), by striking the pe-
22 riod at the end and inserting “; and”; and

23 (C) by adding at the end the following:

24 “(5) to expedite and carry out large-scale test-
25 ing of carbon sequestration systems in a range of ge-
26 ological formations that will provide information on

1 the cost and feasibility of deployment of sequestra-
2 tion technologies.”; and

3 (4) by striking subsection (c) and inserting the
4 following:

5 “(c) PROGRAMMATIC ACTIVITIES.—

6 “(1) ENERGY RESEARCH AND DEVELOPMENT
7 UNDERLYING CARBON CAPTURE AND STORAGE
8 TECHNOLOGIES.—

9 “(A) IN GENERAL.—The Secretary shall
10 carry out fundamental science and engineering
11 research (including laboratory-scale experi-
12 ments, numeric modeling, and simulations) to
13 develop and document the performance of new
14 approaches to capture and store carbon dioxide.

15 “(B) PROGRAM INTEGRATION.—The Sec-
16 retary shall ensure that fundamental research
17 carried out under this paragraph is appro-
18 priately applied to energy technology develop-
19 ment activities and the field testing of carbon
20 sequestration activities, including—

21 “(i) development of new or improved
22 technologies for the capture of carbon diox-
23 ide;

1 “(ii) modeling and simulation of geo-
2 logical sequestration field demonstrations;
3 and

4 “(iii) quantitative assessment of risks
5 relating to specific field sites for testing of
6 sequestration technologies.

7 “(2) FIELD VALIDATION TESTING ACTIVI-
8 TIES.—

9 “(A) IN GENERAL.—The Secretary shall
10 promote, to the maximum extent practicable,
11 regional carbon sequestration partnerships to
12 conduct geologic sequestration tests involving
13 carbon dioxide injection and monitoring, mitiga-
14 tion, and verification operations in a variety of
15 candidate geological settings, including—

16 “(i) operating oil and gas fields;

17 “(ii) depleted oil and gas fields;

18 “(iii) unmineable coal seams;

19 “(iv) saline formations; and

20 “(v) deep geologic systems that may
21 be used as engineered reservoirs to extract
22 economical quantities of heat from geo-
23 thermal resources of low permeability or
24 porosity.

1 “(B) OBJECTIVES.—The objectives of tests
2 conducted under this paragraph shall be—

3 “(i) to develop and validate geo-
4 physical tools, analysis, and modeling to
5 monitor, predict, and verify carbon dioxide
6 containment;

7 “(ii) to validate modeling of geological
8 formations;

9 “(iii) to refine storage capacity esti-
10 mated for particular geological formations;

11 “(iv) to determine the fate of carbon
12 dioxide concurrent with and following in-
13 jection into geological formations;

14 “(v) to develop and implement best
15 practices for operations relating to, and
16 monitoring of, injection and storage of car-
17 bon dioxide in geologic formations;

18 “(vi) to assess and ensure the safety
19 of operations related to geological storage
20 of carbon dioxide; and

21 “(vii) to allow the Secretary to pro-
22 mulgate policies, procedures, requirements,
23 and guidance to ensure that the objectives
24 of this subparagraph are met in large-scale
25 testing and deployment activities for car-

1 bon capture and storage that are funded
2 by the Department of Energy.

3 “(3) LARGE-SCALE TESTING AND DEPLOY-
4 MENT.—

5 “(A) IN GENERAL.—The Secretary shall
6 conduct not less than 7 initial large-volume se-
7 questration tests for geological containment of
8 carbon dioxide (at least 1 of which shall be
9 international in scope) to validate information
10 on the cost and feasibility of commercial deploy-
11 ment of technologies for geological containment
12 of carbon dioxide.

13 “(B) DIVERSITY OF FORMATIONS TO BE
14 STUDIED.—In selecting formations for study
15 under this paragraph, the Secretary shall con-
16 sider a variety of geological formations across
17 the United States, and require characterization
18 and modeling of candidate formations, as deter-
19 mined by the Secretary.

20 “(4) PREFERENCE IN PROJECT SELECTION
21 FROM MERITORIOUS PROPOSALS.—In making com-
22 petitive awards under this subsection, subject to the
23 requirements of section 989, the Secretary shall give
24 preference to proposals from partnerships among in-
25 dustrial, academic, and government entities.

1 “(5) COST SHARING.—Activities under this sub-
2 section shall be considered research and development
3 activities that are subject to the cost-sharing re-
4 quirements of section 988(b).

5 “(d) AUTHORIZATION OF APPROPRIATIONS.—There
6 are authorized to be appropriated to carry out this sec-
7 tion—

8 “(1) \$90,000,000 for fiscal year 2007;

9 “(2) \$105,000,000 for fiscal year 2008; and

10 “(3) \$120,000,000 for fiscal year 2009.”.

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