

Union Calendar No. 317

111TH CONGRESS
2^D SESSION

H. R. 5716

[Report No. 111-554, Part I]

To provide for enhancement of existing efforts in support of research, development, demonstration, and commercial application activities to advance technologies for the safe and environmentally responsible exploration, development, and production of oil and natural gas resources.

IN THE HOUSE OF REPRESENTATIVES

JULY 13, 2010

Mr. GORDON of Tennessee introduced the following bill; which was referred to the Committee on Science and Technology, and in addition to the Committee on Natural Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

JULY 21, 2010

Reported from the Committee on Science and Technology with an amendment
[Strike out all after the enacting clause and insert the part printed in italic]

JULY 21, 2010

Committee on Natural Resources discharged; committed to the Committee of the Whole House on the State of the Union and ordered to be printed

[For text of introduced bill, see copy of bill as introduced on July 13, 2010]

A BILL

To provide for enhancement of existing efforts in support of research, development, demonstration, and commercial application activities to advance technologies for the safe and environmentally responsible exploration, development, and production of oil and natural gas resources.

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 “Safer Oil and Natural*
5 *Gas Drilling Technology Research and Development Act”.*

6 **SEC. 2. SUBTITLE AMENDMENT.**

7 *Subtitle J of title IX of the Energy Policy Act of 2005*
8 *(42 U.S.C. 16371 et seq.) is amended in the subtitle heading*
9 *by striking “**Ultra-Deepwater and Unconven-***
10 ***tional Natural Gas and Other Petroleum Re-***
11 ***sources” and inserting “Safer Oil and Natural***
12 ***Gas Drilling Technology Research and Devel-***
13 ***opment Program”.***

14 **SEC. 3. SAFER OIL AND NATURAL GAS DRILLING TECH-**
15 **NOLOGY RESEARCH AND DEVELOPMENT PRO-**
16 **GRAM.**

17 (a) *PROGRAM AUTHORITY.*—*Section 999A of the En-*
18 *ergy Policy Act of 2005 (42 U.S.C. 16371) is amended—*

19 (1) *in subsection (a)—*

20 (A) *by striking “ultra-deepwater” and in-*
21 *serting “deepwater”; and*

22 (B) *by inserting “well control and accident*
23 *prevention,” after “safe operations,”;*

24 (2) *in subsection (b)—*

1 (A) by inserting “, accident prevention and
2 mitigation,” after “improving safety”;

3 (B) by striking paragraph (1) and inserting
4 the following:

5 “(1) Deepwater architecture and technology, in-
6 cluding those for drilling to formations in water
7 depths greater than 1,000 feet.”; and

8 (C) by striking paragraph (4) and inserting
9 the following:

10 “(4) Complementary research carried out by the
11 Department.”;

12 (3) in subsection (d)—

13 (A) in the subsection heading, by striking
14 “NATIONAL ENERGY TECHNOLOGY LABORA-
15 TORY” and inserting “DEPARTMENT OF EN-
16 ERGY”; and

17 (B) by striking “National Energy Tech-
18 nology Laboratory” and inserting “Office of Fos-
19 sil Energy of the Department”;

20 (4) in subsection (e)—

21 (A) in the subsection heading, by striking
22 “SECRETARY OF THE INTERIOR” and inserting
23 “OTHER FEDERAL AGENCIES”; and

24 (B) by inserting “and other agencies as ap-
25 propriate, including those serving on, and col-

1 *laborating with, the Interagency Coordinating*
2 *Committee on Oil Pollution Research as estab-*
3 *lished under section 7001 of the Oil Pollution*
4 *Act of 1990 (33 U.S.C. 2761(a))” after “Sec-*
5 *retary of the Interior”;* and

6 (5) *by adding at the end the following:*

7 “(f) *PARTNERSHIPS.—In carrying out the program*
8 *under this subtitle, the Secretary shall seek to establish part-*
9 *nerships with eligible research performers, as described by*
10 *section 999E, to undertake research and development not*
11 *likely otherwise to be undertaken in the absence of support*
12 *from the program.”.*

13 (b) *PROGRAM ELEMENTS.—Section 999B of the En-*
14 *ergy Policy Act of 2005 (42 U.S.C. 16372) is amended—*

15 (1) *in the section heading, by striking “ULTRA-*
16 **DEEPWATER AND UNCONVENTIONAL ONSHORE**
17 **NATURAL GAS AND OTHER PETROLEUM” and**
18 *inserting “SAFER OIL AND NATURAL GAS DRILL-*
19 **ING TECHNOLOGY”;**

20 (2) *by amending subsection (a) to read as fol-*
21 *lows:*

22 “(a) *IN GENERAL.—The Secretary shall carry out the*
23 *activities under section 999A to maximize the benefits of*
24 *natural gas and other petroleum resources of the United*
25 *States by advancing the safe and environmentally respon-*

1 sible exploration, development, and production of those re-
2 sources.”;

3 (3) in subsection (c)(1)—

4 (A) by redesignating subparagraphs (D)
5 and (E) as subparagraphs (E) and (F), respec-
6 tively; and

7 (B) by inserting after subparagraph (C) the
8 following:

9 “(D) select projects on a competitive basis;”;

10 (4) in subsection (c)(3)(A)(ii), by striking
11 “under subsection (f)(4)”;

12 (5) in subsection (d)—

13 (A) in paragraph (6), by striking “ultra-
14 deepwater” and inserting “deepwater”; and

15 (B) by striking paragraph (7) and inserting
16 the following:

17 “(7) FOCUS AREAS FOR AWARDS.—

18 “(A) DEEPWATER RESOURCES.—Awards
19 from allocations under section 999H(d)(1) shall
20 focus on research, development, demonstration,
21 and commercial application activities in areas
22 that include—

23 “(i) technologies and systems aimed at
24 improving operational safety and reducing
25 potential environmental impacts of deep-

1 *water exploration and production activities,*
2 *including—*

3 *“(I) wellbore integrity, well con-*
4 *trol, and blowout prevention;*

5 *“(II) capture and containment of*
6 *oil at or near the wellhead; and*

7 *“(III) expanding operational ca-*
8 *pabilities and efficiency of remotely*
9 *operated devices and mechanics;*

10 *“(ii) safe and environmentally respon-*
11 *sible deepwater exploration and production*
12 *technologies, integrated systems, and archi-*
13 *tectures for enhancing oil and natural gas*
14 *drilling and recovery, including under ex-*
15 *treme conditions;*

16 *“(iii) methods and technologies for se-*
17 *vere weather and ocean surface condition*
18 *preparedness;*

19 *“(iv) utilization of exploration and*
20 *production methods and materials that re-*
21 *duce the potential impact of such activities*
22 *on the environment; and*

23 *“(v) other areas as determined appro-*
24 *priate by the Secretary.*

1 “(B) UNCONVENTIONAL ONSHORE RE-
2 SOURCES.—Awards from allocations under sec-
3 tion 999H(d)(2) shall focus on research, develop-
4 ment, demonstration, and commercial applica-
5 tion activities in areas that include—

6 “(i) advanced coalbed methane, deep
7 drilling, natural gas production from tight
8 sands, natural gas production from gas
9 shales, stranded gas, innovative exploration
10 and production techniques, and enhanced
11 recovery techniques;

12 “(ii) increased efficiency of energy use
13 in exploration and production activities;

14 “(iii) utilization of exploration and
15 production methods and materials that re-
16 duce the potential impact of such activities
17 on the environment;

18 “(iv) recovery, utilization, reduction,
19 and improved management of produced
20 water from exploration and production ac-
21 tivities; and

22 “(v) accident prevention and mitiga-
23 tion of unconventional natural gas and
24 other petroleum resources exploration and
25 production.

1 “(C) *SMALL PRODUCERS.*—Awards from al-
2 locations under section 999H(d)(3) shall be made
3 to consortia consisting of small producers or or-
4 ganized primarily for the benefit of small pro-
5 ducers, and shall focus on areas that include—

6 “(i) safety and accident prevention, en-
7 vironmental mitigation, waste reduction,
8 reduction of energy use, and well control
9 and systems integrity;

10 “(ii) complex geology involving rapid
11 changes in the type and quality of the oil
12 and gas reserves across the reservoir;

13 “(iii) low reservoir pressure and un-
14 conventional natural gas reservoirs in coal-
15 beds, deep reservoirs, tight sands, or shales;
16 and

17 “(iv) advancing energy efficient, safe,
18 and environmentally responsible production
19 of unconventional oil reservoirs in tar sands
20 and oil shales.

21 “(D) *SAFETY, AND ACCIDENT PREVENTION*
22 *AND MITIGATION, TECHNOLOGY RESEARCH AND*
23 *DEVELOPMENT BY THE DEPARTMENT.*—Awards
24 from allocations under section 999H(d)(4) shall
25 focus on safety, and accident prevention and

1 mitigation, research, development, demonstra-
2 tion, and commercial application activities in
3 areas that may include—

4 “(i) improved technologies and best
5 management practices for enhanced well in-
6 tegrity including—

7 “(I) cementing;

8 “(II) casing;

9 “(III) wellbore sealant tech-
10 nologies;

11 “(IV) well-plugging and abandon-
12 ment;

13 “(V) improvement and standard-
14 ization of blowout prevention devices;

15 “(VI) actuation and pressure test-
16 ing; and

17 “(VII) other well control activi-
18 ties;

19 “(ii) research to aid in the develop-
20 ment of industry best practices and stand-
21 ards for workforce training, design of safe
22 workplace environments, and safety related
23 decisionmaking processes, including by
24 drawing on existing research into human
25 factors and safety related practices in fields

1 *such as the nuclear energy, aviation, and*
2 *automotive industries;*

3 “(iii) *secondary control systems to ac-*
4 *tivate blowout prevention devices and termi-*
5 *nate well-flow, including—*

6 “(I) *deadman switches;*

7 “(II) *automatic shears; and*

8 “(III) *remote acoustic switches;*

9 “(iv) *technologies and methods for ac-*
10 *cident mitigation, including—*

11 “(I) *capture, containment, or dis-*
12 *persing of oil at or near the wellhead;*

13 “(II) *estimating flow rate;*

14 “(III) *diagnostic sensors to deter-*
15 *mine equipment malfunction; and*

16 “(IV) *procedures to terminate*
17 *flow;*

18 “(v) *continuing ongoing efforts, includ-*
19 *ing in resource assessment and character-*
20 *ization, and in simulation of safe and effec-*
21 *tive drilling under extreme conditions, in-*
22 *cluding high temperatures and pressures;*

23 “(vi) *development of methodologies for*
24 *risk management decisionmaking, including*
25 *comparative risk analysis and quantitative*

1 *risk assessment of potential for failure in*
2 *the technologies, management practices, and*
3 *systems studies under this subsection; and*

4 *“(vii) other activities as described in*
5 *this paragraph or as determined appro-*
6 *priate by the Secretary.”;*

7 (6) *in subsection (e)—*

8 *(A) in paragraph (2)—*

9 *(i) in the second sentence of subpara-*
10 *graph (A), by inserting “to the Secretary*
11 *for review” after “submit”; and*

12 *(ii) in the first sentence of subpara-*
13 *graph (B), by striking “Ultra-Deepwater”*
14 *and all that follows through “and such Ad-*
15 *visory Committees” and inserting “Pro-*
16 *gram Advisory Committee established under*
17 *section 999D(a), and the Advisory Com-*
18 *mittee”;*

19 *(B) in paragraph (4)—*

20 *(i) by striking “and” at the end of sub-*
21 *paragraph (A);*

22 *(ii) by striking the period at the end of*
23 *subparagraph (B) and inserting “; and”;*
24 *and*

1 (iii) by adding at the end the following
2 new subparagraph:

3 “(C) a summary of ongoing and planned
4 activities aimed at improving operational safety
5 and reducing potential environmental impacts of
6 exploration and production.”; and

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

8 “(6) *RESEARCH FINDINGS AND RECOMMENDA-*
9 *TIONS FOR IMPLEMENTATION.*—The Secretary shall
10 publish in the Federal Register an annual report on
11 the research findings of the program carried out
12 under this section and any recommendations for im-
13 plementation that the Secretary determines to be nec-
14 essary.”;

15 (7) in subsection (f)(2), by inserting “In car-
16 rying out this subsection, the Secretary shall ensure
17 that safety and accident prevention and mitigation be
18 regularly included as specific focus areas for solicita-
19 tions.” after “consortium.”;

20 (8) in subsection (i)—

21 (A) in the subsection heading, by striking
22 “UNITED STATES GEOLOGICAL SURVEY” and in-
23 serting “DEPARTMENT OF THE INTERIOR”; and

24 (B) by striking “, through the United States
25 Geological Survey,”; and

1 (9) in subsection (j), by striking “National En-
2 ergy Technology Laboratory” and inserting “Office of
3 Fossil Energy of the Department”.

4 **SEC. 4. PROGRAM ADVISORY COMMITTEE.**

5 Section 999D of the Energy Policy Act of 2005 (42
6 U.S.C. 16374) is amended to read as follows:

7 **“SEC. 999D. PROGRAM ADVISORY COMMITTEE.**

8 “(a) *ESTABLISHMENT.*—Not later than 90 days after
9 the date of enactment of the Safer Oil and Natural Gas
10 Drilling Technology Research and Development Act, the
11 Secretary shall establish an advisory committee to be known
12 as the ‘Program Advisory Committee’ (referred to in this
13 section as the ‘Advisory Committee’).

14 “(b) *MEMBERSHIP.*—

15 “(1) *IN GENERAL.*—The Advisory Committee
16 shall be composed of members appointed by the Sec-
17 retary, each of whom shall be qualified by education,
18 training, and experience to evaluate scientific and
19 technical information relevant to the research, devel-
20 opment, and demonstration under this subtitle. Mem-
21 bers shall include—

22 “(A) individuals with extensive research ex-
23 perience or operational knowledge of oil and nat-
24 ural gas exploration and production;

1 “(B) *individuals broadly representative of*
2 *the affected interests in oil and natural gas pro-*
3 *duction, including interests in environmental*
4 *protection and operational safety;*

5 “(C) *State regulatory agency representa-*
6 *tives; and*

7 “(D) *other individuals, as determined by*
8 *the Secretary.*

9 “(2) *LIMITATIONS.—*

10 “(A) *IN GENERAL.—The Advisory Com-*
11 *mittee shall not include individuals who are*
12 *board members, officers, or employees of the pro-*
13 *gram consortium.*

14 “(B) *CATEGORICAL REPRESENTATION.—In*
15 *appointing members of the Advisory Committee,*
16 *the Secretary shall ensure that no class of indi-*
17 *viduals described in any of subparagraphs (B),*
18 *(C), or (D) of paragraph (1) comprises more*
19 *than $\frac{1}{3}$ of the membership of the Advisory Com-*
20 *mittee.*

21 “(c) *SUBCOMMITTEES.—The Advisory Committee may*
22 *establish subcommittees or ad hoc working groups for the*
23 *research focus areas described in section 999B(d)(7).*

24 “(d) *DUTIES.—The Advisory Committee shall—*

1 “(1) advise the Secretary on the development and
2 implementation of programs under this subtitle; and

3 “(2) carry out section 999B(e)(2)(B).

4 “(e) *COMPENSATION*.—A member of the Advisory Com-
5 mittee shall serve without compensation but shall be entitled
6 to receive travel expenses in accordance with subchapter I
7 of chapter 57 of title 5, United States Code.

8 “(f) *PROHIBITION*.—The Advisory Committee shall not
9 make recommendations on funding awards to particular
10 consortia or other entities, or for specific projects.”.

11 **SEC. 5. DEFINITIONS.**

12 Section 999G of the Energy Policy Act of 2005 (42
13 U.S.C. 16377) is amended—

14 (1) in paragraph (1), by striking “200 but less
15 than 1,500 meters” and inserting “1,000 feet”;

16 (2) by striking paragraphs (8), (9), and (10);

17 (3) by redesignating paragraphs (2) through (7)
18 and (11) as paragraphs (4) through (9) and (10), re-
19 spectively; and

20 (4) by inserting after paragraph (1) the fol-
21 lowing:

22 “(2) *DEEPWATER ARCHITECTURE*.—The term
23 ‘deepwater architecture’ means the integration of tech-
24 nologies for the safe and environmentally responsible

1 *exploration for, or production of, natural gas or other*
2 *petroleum resources located at deepwater depths.*

3 “(3) *DEEPWATER TECHNOLOGY.*—*The term*
4 *‘deepwater technology’ means a discrete technology*
5 *that is specially suited to address 1 or more chal-*
6 *lenges associated with the safe and environmentally*
7 *responsible exploration for, or production of, natural*
8 *gas or other petroleum resources located at deepwater*
9 *depths.”.*

10 **SEC. 6. FUNDING.**

11 *Section 999H of the Energy Policy Act of 2005 (42*
12 *U.S.C. 16378) is amended—*

13 *(1) in the first sentence of subsection (a) by*
14 *striking “Ultra-Deepwater and Unconventional Nat-*
15 *ural Gas and Other Petroleum Research Fund” and*
16 *inserting “Safer Oil and Natural Gas Drilling Tech-*
17 *nology Research and Development Fund”;*

18 *(2) in subsection (d)—*

19 *(A) in paragraph (1), by striking “35 per-*
20 *cent” and inserting “32.5 percent”;*

21 *(B) in paragraph (2), by striking “32.5*
22 *percent” and inserting “25 percent”; and*

23 *(C) in paragraph (4)—*

24 *(i) by striking “25 percent” and in-*
25 *serting “35 percent”; and*

1 (ii) by striking “contract manage-
2 ment,” and all that follows through the pe-
3 riod at the end and inserting “and contract
4 management.”;

5 (3) in subsection (f), by striking “Ultra-Deep-
6 water and Unconventional Natural Gas and Other
7 Petroleum Research Fund” and inserting “Safer Oil
8 and Natural Gas Drilling Technology Research and
9 Development Fund”; and

10 (4) at the end of the section, by inserting the fol-
11 lowing new subsection:

12 “(g) *COORDINATION AND NONDUPLICATION.*—*The Sec-*
13 *retary shall ensure, to the maximum extent practicable, that*
14 *the research activities carried out by the consortium funded*
15 *under paragraphs (1), (2), and (3) of subsection (d), and*
16 *the research activities carried out by the Department of En-*
17 *ergy as funded by subsection (d)(4), shall be coordinated*
18 *and not duplicative of one another.”.*

19 **SEC. 7. CONFORMING AMENDMENTS.**

20 *The table of contents of the Energy Policy Act of 2005*
21 *is amended—*

22 (1) by amending the item relating to subtitle *J*
23 of title *IX* to read as follows:

“Subtitle J—Safer Oil and Natural Gas Drilling Technology Research and Development Program”;

1 (2) *by amending the item relating to section*
2 *999B to read as follows:*

“Sec. 999B. Safer Oil and Natural Gas Drilling Technology Research and Development Program.”;

3 *and*

4 (3) *by amending the item relating to section*
5 *999D to read as follows:*

“Sec. 999D. Program Advisory Committee.”.

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