

111TH CONGRESS
2^D SESSION

H. R. 5716

AN ACT

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
8 2005 (42 U.S.C. 16371 et seq.) is amended in the subtitle
9 heading by striking “**Ultra-Deepwater and Uncon-**
10 **ventional Natural Gas and Other Petroleum**
11 **Resources**” 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**
16 **PROGRAM.**

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 sserting “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 insert-
4 ing 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 insert-
9 ing the following:

10 “(4) Complementary research carried out by
11 the 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
19 Fossil 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
25 appropriate, 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
9 partnerships with eligible research performers, as de-
10 scribed by section 999E, to undertake research and devel-
11 opment not likely otherwise to be undertaken in the ab-
12 sence of support 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
23 the activities under section 999A to maximize the benefits
24 of natural gas and other petroleum resources of the
25 United States by advancing the safe and environmentally

1 responsible exploration, development, and production of
2 those resources.”;

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)
8 the following:

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

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

13 (5) in subsection (d)—

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

16 (B) by striking paragraph (7) and insert-
17 ing the following:

18 “(7) FOCUS AREAS FOR AWARDS.—

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

24 “(i) technologies and systems aimed
25 at improving operational safety and reduc-

1 ing potential environmental impacts of
2 deepwater exploration and production ac-
3 tivities, including—

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

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

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

11 “(ii) safe and environmentally respon-
12 sible deepwater exploration and production
13 technologies, integrated systems, and ar-
14 chitectures for enhancing oil and natural
15 gas drilling and recovery, including under
16 extreme conditions;

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

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

24 “(v) other areas as determined appro-
25 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, devel-
4 opment, demonstration, and commercial appli-
5 cation 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
2 allocations under section 999H(d)(3) shall be
3 made to consortia consisting of small producers
4 or organized primarily for the benefit of small
5 producers, and shall focus on areas that in-
6 clude—

7 “(i) safety and accident prevention,
8 environmental mitigation, waste reduction,
9 reduction of energy use, and well control
10 and systems integrity;

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

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

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

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

1 focus on safety, and accident prevention and
2 mitigation, research, development, demonstra-
3 tion, and commercial application activities in
4 areas that may include—

5 “(i) improved technologies and best
6 management practices for enhanced well
7 integrity including—

8 “(I) cementing;

9 “(II) casing;

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

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

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

16 “(VI) actuation and pressure
17 testing; and

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

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

1 factors and safety related practices in
2 fields such as the nuclear energy, aviation,
3 and automotive industries;

4 “(iii) secondary control systems to ac-
5 tivate blowout prevention devices and ter-
6minate well-flow, including—

7 “(I) deadman switches;

8 “(II) automatic shears; and

9 “(III) remote acoustic switches;

10 “(iv) technologies and methods for ac-
11cident mitigation, including—

12 “(I) capture, containment, or dis-
13persing of oil at or near the wellhead;

14 “(II) estimating flow rate;

15 “(III) diagnostic sensors to de-
16termine equipment malfunction; and

17 “(IV) procedures to terminate
18flow;

19 “(v) continuing ongoing efforts, in-
20cluding in resource assessment and charac-
21terization, and in simulation of safe and
22effective drilling under extreme conditions,
23including high temperatures and pressures;

24 “(vi) development of methodologies
25for risk management decisionmaking, in-

1 cluding comparative risk analysis and
2 quantitative risk assessment of potential
3 for failure in the technologies, management
4 practices, and systems studies under this
5 subsection; and

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

9 (6) in subsection (e)—

10 (A) in paragraph (2)—

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

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

21 (B) in paragraph (4)—

22 (i) by striking “and” at the end of
23 subparagraph (A);

1 (ii) by striking the period at the end
2 of subparagraph (B) and inserting “;
3 and”; and

4 (iii) by adding at the end the fol-
5 lowing new subparagraph:

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

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

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

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

23 (8) in subsection (i)—

24 (A) in the subsection heading, by striking
25 “UNITED STATES GEOLOGICAL SURVEY” and

1 inserting “DEPARTMENT OF THE INTERIOR”;
2 and

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

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

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

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

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

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

18 “(b) MEMBERSHIP.—

19 “(1) IN GENERAL.—The Advisory Committee
20 shall be composed of members appointed by the Sec-
21 retary, each of whom shall be qualified by education,
22 training, and experience to evaluate scientific and
23 technical information relevant to the research, devel-
24 opment, and demonstration under this subtitle.
25 Members shall include—

1 “(A) individuals with extensive research
2 experience or operational knowledge of oil and
3 natural gas exploration and production;

4 “(B) individuals broadly representative of
5 the affected interests in oil and natural gas pro-
6 duction, including interests in environmental
7 protection and operational safety;

8 “(C) State regulatory agency representa-
9 tives; and

10 “(D) other individuals, as determined by
11 the Secretary.

12 “(2) LIMITATIONS.—

13 “(A) IN GENERAL.—The Advisory Com-
14 mittee shall not include individuals who are
15 board members, officers, or employees of the
16 program consortium.

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

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

4 “(d) DUTIES.—The Advisory Committee shall—

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

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

9 “(e) COMPENSATION.—A member of the Advisory
10 Committee shall serve without compensation but shall be
11 entitled to receive travel expenses in accordance with sub-
12 chapter I of chapter 57 of title 5, United States Code.

13 “(f) PROHIBITION.—The Advisory Committee shall
14 not make recommendations on funding awards to par-
15 ticular consortia or other entities, or for specific
16 projects.”.

17 **SEC. 5. DEFINITIONS.**

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

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

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

23 (3) by redesignating paragraphs (2) through
24 (7) and (11) as paragraphs (4) through (9) and
25 (10), respectively; and

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

3 “(2) DEEPWATER ARCHITECTURE.—The term
4 ‘deepwater architecture’ means the integration of
5 technologies for the safe and environmentally re-
6 sponsible exploration for, or production of, natural
7 gas or other petroleum resources located at deep-
8 water depths.

9 “(3) DEEPWATER TECHNOLOGY.—The term
10 ‘deepwater technology’ means a discrete technology
11 that is specially suited to address 1 or more chal-
12 lenges associated with the safe and environmentally
13 responsible exploration for, or production of, natural
14 gas or other petroleum resources located at deep-
15 water depths.”.

16 **SEC. 6. FUNDING.**

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

19 (1) in the first sentence of subsection (a) by
20 striking “Ultra-Deepwater and Unconventional Nat-
21 ural Gas and Other Petroleum Research Fund” and
22 inserting “Safer Oil and Natural Gas Drilling Tech-
23 nology Research and Development Fund”;

24 (2) in subsection (d)—

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

3 (B) in paragraph (2), by striking “32.5
4 percent” and inserting “25 percent”; and

5 (C) in paragraph (4)—

6 (i) by striking “25 percent” and in-
7 serting “35 percent”; and

8 (ii) by striking “contract manage-
9 ment,” and all that follows through the pe-
10 riod at the end and inserting “and contract
11 management.”;

12 (3) in subsection (f), by striking “Ultra-Deep-
13 water and Unconventional Natural Gas and Other
14 Petroleum Research Fund” and inserting “Safer Oil
15 and Natural Gas Drilling Technology Research and
16 Development Fund”; and

17 (4) at the end of the section, by inserting the
18 following new subsection:

19 “(g) COORDINATION AND NONDUPLICATION.—The
20 Secretary shall ensure, to the maximum extent practicable,
21 that the research activities carried out by the consortium
22 funded under paragraphs (1), (2), and (3) of subsection
23 (d), and the research activities carried out by the Depart-
24 ment of Energy as funded by subsection (d)(4), shall be
25 coordinated and not duplicative of one another.”.

1 **SEC. 7. CONFORMING AMENDMENTS.**

2 The table of contents of the Energy Policy Act of
3 2005 is amended—

4 (1) by amending the item relating to subtitle J
5 of title IX to read as follows:

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

6 (2) by amending the item relating to section
7 999B to read as follows:

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

8 and

9 (3) by amending the item relating to section
10 999D to read as follows:

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

Passed the House of Representatives July 21, 2010.

Attest:

Clerk.

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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.