

116TH CONGRESS  
1ST SESSION

# S. 1685

To require the Secretary of Energy to establish a program for the research, development, and demonstration of commercially viable technologies for the capture of carbon dioxide produced during the generation of natural gas-generated power.

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## IN THE SENATE OF THE UNITED STATES

MAY 23 (legislative day, MAY 22), 2019

Mr. CORNYN (for himself, Mr. CASSIDY, Mr. COONS, and Ms. SINEMA) 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 require the Secretary of Energy to establish a program for the research, development, and demonstration of commercially viable technologies for the capture of carbon dioxide produced during the generation of natural gas-generated power.

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 “Launching Energy Ad-  
5       vancement and Development through Innovations for Nat-  
6       ural Gas Act of 2019”.

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

4 (a) IN GENERAL.—Subtitle F of title IX of the En-  
 5 ergy Policy Act of 2005 (42 U.S.C. 16291 et seq.) is  
 6 amended by adding at the end the following:

7 **“SEC. 969. NATURAL GAS CARBON CAPTURE RESEARCH,**  
 8 **DEVELOPMENT, AND DEMONSTRATION PRO-**  
 9 **GRAM.**

10 “(a) DEFINITIONS.—In this section:

11 “(1) ELIGIBLE ENTITY.—The term ‘eligible en-  
 12 tity’ means an entity that documents to the satisfac-  
 13 tion of the Secretary that—

14 “(A) the entity is financially responsible;  
 15 and

16 “(B) the entity will provide sufficient in-  
 17 formation to the Secretary to enable the Sec-  
 18 retary to ensure that any funds awarded to the  
 19 entity are spent efficiently and effectively.

20 “(2) NATURAL GAS.—The term ‘natural gas’  
 21 means any fuel consisting in whole or in part of—

22 “(A) natural gas;

23 “(B) liquid petroleum gas;

24 “(C) synthetic gas derived from petroleum  
 25 or natural gas liquids;

1           “(D) any mixture of natural gas and syn-  
2           thetic gas; or

3           “(E) any product derived directly from  
4           natural gas, including hydrogen.

5           “(3) NATURAL GAS-GENERATED POWER.—The  
6           term ‘natural gas-generated power’ means electric  
7           energy generated through the use of natural gas.

8           “(4) PROGRAM.—The term ‘program’ means  
9           the program established under subsection (b)(1).

10          “(5) QUALIFYING ELECTRIC GENERATION FA-  
11          CILITY.—

12               “(A) IN GENERAL.—The term ‘qualifying  
13               electric generation facility’ means a facility that  
14               generates electric energy using natural gas as  
15               the fuel.

16               “(B) INCLUSIONS.—The term ‘qualifying  
17               electric generation facility’ includes—

18                       “(i) a traditional natural gas plant;

19                       “(ii) a simple cycle plant;

20                       “(iii) a combined cycle plant;

21                       “(iv) a combined heat and power  
22                       plant; or

23                       “(v) any other facility that uses nat-  
24                       ural gas as the fuel for generating electric  
25                       energy.

1           “(6) QUALIFYING TECHNOLOGY.—The term  
 2           ‘qualifying technology’ means any commercially via-  
 3           ble technology, as determined by the Secretary, for  
 4           the capture of carbon dioxide produced during the  
 5           generation of natural gas-generated power.

6           “(b) ESTABLISHMENT OF RESEARCH, DEVELOP-  
 7           MENT, AND DEMONSTRATION PROGRAM.—

8           “(1) IN GENERAL.—The Secretary shall estab-  
 9           lish a program of research, development, and dem-  
 10          onstration of qualifying technologies for use by  
 11          qualifying electric generation facilities.

12          “(2) OBJECTIVES.—The objectives of the pro-  
 13          gram shall be—

14               “(A) to identify opportunities to accelerate  
 15               the development and commercial applications of  
 16               qualifying technologies to reduce the quantity of  
 17               carbon dioxide emissions released from quali-  
 18               fying electric generation facilities;

19               “(B) to enter into cooperative agreements  
 20               with eligible entities to expedite and carry out  
 21               demonstration projects (including pilot projects)  
 22               for qualifying technologies for use by qualifying  
 23               electric generation facilities to demonstrate the  
 24               technical feasibility and economic potential of

1           those qualifying technologies for commercial de-  
2           ployment; and

3           “(C) to identify any barriers to the com-  
4           mercial deployment of any qualifying tech-  
5           nologies under development.

6           “(3) PARTICIPATION OF NATIONAL LABORA-  
7           TORIES, UNIVERSITIES, AND RESEARCH FACILI-  
8           TIES.—The program may include the participation  
9           of—

10                 “(A) National Laboratories;

11                 “(B) institutions of higher education;

12                 “(C) research facilities; or

13                 “(D) other appropriate entities.

14           “(4) COOPERATIVE AGREEMENTS.—

15                 “(A) IN GENERAL.—In carrying out the  
16           program, the Secretary may enter into coopera-  
17           tive agreements with eligible entities to carry  
18           out research, development, and demonstration  
19           projects for qualifying technologies.

20                 “(B) APPLICATIONS; PROPOSALS.—An eli-  
21           gible entity desiring to enter into a cooperative  
22           agreement under this paragraph shall submit to  
23           the Secretary an application at such time, in  
24           such manner, and containing such information  
25           as the Secretary may require.

1       “(c) CARBON CAPTURE FACILITIES DEMONSTRATION  
2 PROGRAM.—

3               “(1) ESTABLISHMENT.—As part of the pro-  
4 gram, the Secretary shall establish a demonstration  
5 program under which the Secretary shall enter into  
6 cooperative agreements with eligible entities for dem-  
7 onstration or pilot projects to license, permit, con-  
8 struct, and operate, by not later than September 30,  
9 2025, three or more facilities to capture carbon diox-  
10 ide from qualifying electric generation facilities.

11              “(2) GOALS.—Each demonstration or pilot  
12 project under the demonstration program shall—

13                   “(A) be designed to further the develop-  
14 ment of qualifying technologies that may be  
15 used by a qualifying electric generation facility;

16                   “(B) be financed in part by the private  
17 sector;

18                   “(C) if necessary, secure agreements for  
19 the offtake of the majority of the carbon dioxide  
20 emissions captured by qualifying technologies  
21 during the project; and

22                   “(D) support energy production in the  
23 United States.

24              “(3) REQUEST FOR APPLICATIONS.—Not later  
25 than 120 days after the date of enactment of this

1 Act, the Secretary shall solicit applications for coop-  
2 erative agreements for projects—

3 “(A) to demonstrate qualifying tech-  
4 nologies at three or more qualifying electric  
5 generation facilities;

6 “(B) to obtain any license or permit from  
7 a State or Federal agency that is necessary for  
8 the construction of three or more facilities to  
9 capture carbon dioxide from a qualifying elec-  
10 tric generation facility; and

11 “(C) to construct and operate three or  
12 more facilities to capture carbon dioxide from a  
13 qualifying electric generation facility.

14 “(4) REVIEW OF APPLICATIONS.—In reviewing  
15 applications submitted under paragraph (3), the  
16 Secretary, to the maximum extent practicable,  
17 shall—

18 “(A) ensure a broad geographic distribu-  
19 tion of project sites;

20 “(B) ensure that a broad selection of  
21 qualifying electric generation facilities are rep-  
22 resented;

23 “(C) ensure that a broad selection of quali-  
24 fying technologies are represented;

1                   “(D) require information and knowledge  
2                   gained by each participant in the demonstration  
3                   program to be transferred and shared among—

4                   “(i) all participants in the demonstra-  
5                   tion program; and

6                   “(ii) other interested parties; and

7                   “(E) leverage existing—

8                   “(i) public-private partnerships; and

9                   “(ii) Federal resources.

10           “(d) COST SHARING.—In carrying out this section,  
11 the Secretary shall require cost sharing in accordance with  
12 section 988.

13           “(e) FEE TITLE.—The Secretary may vest fee title  
14 or other property interests acquired under cooperative  
15 agreements entered into under subsection (b)(4) in any  
16 entity, including the United States.

17           “(f) REPORT.—Not later than 180 days after the  
18 date on which the Secretary solicits applications under  
19 subsection (c)(3), and annually thereafter, the Secretary  
20 shall submit to the appropriate committees of jurisdiction  
21 of the Senate and the House of Representatives a report  
22 that—

23                   “(1) with respect to subsections (b) and (c), in-  
24                   cludes recommendations for any legislative changes



1       needed to improve the implementation of those sub-  
2       sections;

3               “(2) with respect to subsection (b), includes—

4                       “(A) a detailed description of how applica-  
5                       tions for cooperative agreements under para-  
6                       graph (4) of that subsection will be solicited  
7                       and evaluated, including—

8                               “(i) a list of any activities carried out  
9                               by the Secretary to solicit or evaluate ap-  
10                              plications; and

11                             “(ii) a process for ensuring that any  
12                             projects carried out under a cooperative  
13                             agreement are designed to result in the de-  
14                             velopment or demonstration of qualifying  
15                             technologies;

16                       “(B) a detailed list of technical milestones  
17                       for each qualifying technology pursued under  
18                       that subsection;

19                       “(C) a detailed description of how each  
20                       project carried out pursuant to a cooperative  
21                       agreement under paragraph (4) of that sub-  
22                       section will meet the milestones for carbon cap-  
23                       ture described in the September 2017 report of  
24                       the Office of Fossil Energy entitled ‘Accel-

1 erating Breakthrough Innovation in Carbon  
 2 Capture, Utilization, and Storage’; and

3 “(D) an affirmation from the Secretary  
 4 that all recipients of funding under that sub-  
 5 section are eligible entities; and

6 “(3) with respect to the demonstration program  
 7 established under subsection (c), includes—

8 “(A) an estimate of the cost of licensing,  
 9 permitting, constructing, and operating each  
 10 carbon capture facility expected to be con-  
 11 structed under that demonstration program;

12 “(B) a schedule for—

13 “(i) obtaining any license or permit  
 14 necessary to construct and operate each  
 15 carbon capture facility expected to be con-  
 16 structed; and

17 “(ii) constructing each facility; and

18 “(C) an estimate of any financial assist-  
 19 ance, compensation, or incentives proposed to  
 20 be paid by the host State, Indian Tribe, or local  
 21 government with respect to each facility.

22 “(g) FUNDING.—For each of fiscal years 2020  
 23 through 2025, out of any amounts appropriated to the De-  
 24 partment to carry out fossil energy research and develop-  
 25 ment activities and not otherwise obligated, the Secretary

1 may use to carry out this section not more than  
2 \$50,000,000.”.

3 (b) CLERICAL AMENDMENT.—The table of contents  
4 for the Energy Policy Act of 2005 (Public Law 109–58;  
5 119 Stat. 600) is amended by inserting after the item re-  
6 lating to section 968 the following:

“Sec. 969. Natural gas carbon capture research, development, and demonstra-  
tion program.”.

