

115TH CONGRESS  
1ST SESSION

# S. 1535

To amend the Internal Revenue Code of 1986 to improve, expand, and extend the credit for carbon dioxide sequestration.

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IN THE SENATE OF THE UNITED STATES

JULY 12, 2017

Ms. HEITKAMP (for herself, Mrs. CAPITO, Mr. WHITEHOUSE, Mr. BARRASSO, Mr. KAINE, Mr. GRAHAM, Mr. SCHATZ, Mr. BLUNT, Mr. BOOKER, Mr. PORTMAN, Mr. TESTER, Mr. COCHRAN, Mr. CASEY, Ms. KLOBUCHAR, Mr. DURBIN, Mr. FRANKEN, Mr. BROWN, Mr. WARNER, Mr. DONNELLY, Mr. MANCHIN, Ms. DUCKWORTH, Mr. PETERS, Mr. COONS, Mr. BENNET, and Mr. KING) introduced the following bill; which was read twice and referred to the Committee on Finance

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## A BILL

To amend the Internal Revenue Code of 1986 to improve, expand, and extend the credit for carbon dioxide sequestration.

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 “Furthering carbon cap-  
5       ture, Utilization, Technology, Underground storage, and  
6       Reduced Emissions Act” or the “FUTURE Act”.

1 **SEC. 2. ENHANCEMENT OF CARBON DIOXIDE SEQUESTRA-**  
2 **TION CREDIT.**

3 (a) IN GENERAL.—Section 45Q of the Internal Rev-  
4 enue Code of 1986 is amended to read as follows:

5 **“SEC. 45Q. CREDIT FOR CARBON OXIDE SEQUESTRATION.**

6 “(a) GENERAL RULE.—For purposes of section 38,  
7 the carbon oxide sequestration credit for any taxable year  
8 is an amount equal to the sum of—

9 “(1) \$20 per metric ton of qualified carbon  
10 oxide which is—

11 “(A) captured by the taxpayer using car-  
12 bon capture equipment which is originally  
13 placed in service at a qualified facility before  
14 the date of the enactment of the FUTURE Act,  
15 and

16 “(B) disposed of by the taxpayer in secure  
17 geological storage and not used by the taxpayer  
18 as described in paragraph (2)(B),

19 “(2) \$10 per metric ton of qualified carbon  
20 oxide which is—

21 “(A) captured by the taxpayer using car-  
22 bon capture equipment which is originally  
23 placed in service at a qualified facility before  
24 the date of the enactment of the FUTURE Act,  
25 and

1           “(B)(i) used by the taxpayer as a tertiary  
2           injectant in a qualified enhanced oil or natural  
3           gas recovery project and disposed of by the tax-  
4           payer in secure geological storage, or

5           “(ii) utilized by the taxpayer in a manner  
6           described in subsection (f)(5),

7           “(3) the applicable dollar amount (as deter-  
8           mined under subsection (b)(1)) per metric ton of  
9           qualified carbon oxide which is—

10           “(A) captured by the taxpayer using car-  
11           bon capture equipment which is originally  
12           placed in service at a qualified facility on or  
13           after the date of the enactment of the FU-  
14           TURE Act, during the 12-year period begin-  
15           ning on the date the equipment was originally  
16           placed in service, and

17           “(B) disposed of by the taxpayer in secure  
18           geological storage and not used by the taxpayer  
19           as described in paragraph (4)(B), and

20           “(4) the applicable dollar amount (as deter-  
21           mined under subsection (b)(1)) per metric ton of  
22           qualified carbon oxide which is—

23           “(A) captured by the taxpayer using car-  
24           bon capture equipment which is originally  
25           placed in service at a qualified facility on or

1 after the date of the enactment of the FU-  
 2 TURE Act, during the 12-year period begin-  
 3 ning on the date the equipment was originally  
 4 placed in service, and

5 “(B)(i) used by the taxpayer as a tertiary  
 6 injectant in a qualified enhanced oil or natural  
 7 gas recovery project and disposed of by the tax-  
 8 payer in secure geological storage, or

9 “(ii) utilized by the taxpayer in a manner  
 10 described in subsection (f)(5).

11 “(b) APPLICABLE DOLLAR AMOUNT; ADDITIONAL  
 12 EQUIPMENT; ELECTION.—

13 “(1) APPLICABLE DOLLAR AMOUNT.—

14 “(A) IN GENERAL.—The applicable dollar  
 15 amount shall be an amount equal to—

16 “(i) for any taxable year beginning in  
 17 a calendar year after 2016 and ending be-  
 18 fore 2027—

19 “(I) for purposes of paragraph  
 20 (3) of subsection (a), the dollar  
 21 amount established by linear inter-  
 22 polation between \$22.66 and \$50 for  
 23 each calendar year during such pe-  
 24 riod, and

1                   “(II) for purposes of paragraph  
2                   (4) of such subsection, the dollar  
3                   amount established by linear inter-  
4                   polation between \$12.83 and \$35 for  
5                   each calendar year during such pe-  
6                   riod, and

7                   “(ii) for any taxable year beginning in  
8                   a calendar year after 2026—

9                   “(I) for purposes of paragraph  
10                  (3) of subsection (a), an amount equal  
11                  to the product of \$50 and the infla-  
12                  tion adjustment factor for such cal-  
13                  endar year determined under section  
14                  43(b)(3)(B) for such calendar year,  
15                  determined by substituting ‘2025’ for  
16                  ‘1990’, and

17                  “(II) for purposes of paragraph  
18                  (4) of such subsection, an amount  
19                  equal to the product of \$35 and the  
20                  inflation adjustment factor for such  
21                  calendar year determined under sec-  
22                  tion 43(b)(3)(B) for such calendar  
23                  year, determined by substituting  
24                  ‘2025’ for ‘1990’.

1           “(B) ROUNDING.—The applicable dollar  
2           amount determined under subparagraph (A)  
3           shall be rounded to the nearest cent.

4           “(2) INSTALLATION OF ADDITIONAL CARBON  
5           CAPTURE EQUIPMENT ON EXISTING QUALIFIED FA-  
6           CILITY.—In the case of a qualified facility placed in  
7           service before the date of the enactment of the FU-  
8           TURE Act, for which additional carbon capture  
9           equipment is placed in service on or after the date  
10          of the enactment of such Act, the amount of quali-  
11          fied carbon oxide which is captured by the taxpayer  
12          shall be equal to—

13                 “(A) for purposes of paragraphs (1)(A)  
14                 and (2)(A) of subsection (a), the lesser of—

15                         “(i) the total amount of qualified car-  
16                         bon oxide captured at such facility for the  
17                         taxable year, or

18                         “(ii) the total amount of the carbon  
19                         dioxide capture capacity of the carbon cap-  
20                         ture equipment in service at such facility  
21                         on the day before the date of the enact-  
22                         ment of the FUTURE Act, and

23                 “(B) for purposes of paragraphs (3)(A)  
24                 and (4)(A) of such subsection, an amount (not  
25                 less than zero) equal to the excess of—

1 “(i) the amount described in clause (i)  
2 of subparagraph (A), over

3 “(ii) the amount described in clause  
4 (ii) of such subparagraph.

5 “(3) ELECTION.—For purposes of determining  
6 the carbon oxide sequestration credit under this sec-  
7 tion, a taxpayer may elect to have the dollar  
8 amounts applicable under paragraph (1) or (2) of  
9 subsection (a) apply in lieu of the dollar amounts  
10 applicable under paragraph (3) or (4) of such sub-  
11 section for each metric ton of qualified carbon oxide  
12 which is captured by the taxpayer using carbon cap-  
13 ture equipment which is originally placed in service  
14 at a qualified facility on or after the date of the en-  
15 actment of the FUTURE Act.

16 “(c) QUALIFIED CARBON OXIDE.—For purposes of  
17 this section—

18 “(1) IN GENERAL.—The term ‘qualified carbon  
19 oxide’ means—

20 “(A) any carbon dioxide which—

21 “(i) is captured from an industrial  
22 source by carbon capture equipment which  
23 is originally placed in service before the  
24 date of the enactment of the FUTURE  
25 Act,

1           “(ii) would otherwise be released into  
2           the atmosphere as industrial emission of  
3           greenhouse gas or lead to such release, and

4           “(iii) is measured at the source of  
5           capture and verified at the point of dis-  
6           posal, injection, or utilization,

7           “(B) any carbon dioxide or other carbon  
8           oxide which—

9           “(i) is captured from an industrial  
10           source by carbon capture equipment which  
11           is originally placed in service on or after  
12           the date of the enactment of the FUTURE  
13           Act,

14           “(ii) would otherwise be released into  
15           the atmosphere as industrial emission of  
16           greenhouse gas or lead to such release, and

17           “(iii) is measured at the source of  
18           capture and verified at the point of dis-  
19           posal, injection, or utilization, or

20           “(C) in the case of a direct air capture fa-  
21           cility, any carbon dioxide which—

22           “(i) is captured directly from the am-  
23           bient air, and



1                   “(ii) is measured at the source of cap-  
2                   ture and verified at the point of disposal,  
3                   injection, or utilization.

4                   “(2) RECYCLED CARBON OXIDE.—The term  
5                   ‘qualified carbon oxide’ includes the initial deposit of  
6                   captured carbon oxide used as a tertiary injectant.  
7                   Such term does not include carbon oxide that is re-  
8                   captured, recycled, and re-injected as part of the en-  
9                   hanced oil and natural gas recovery process.

10                  “(d) QUALIFIED FACILITY.—For purposes of this  
11                  section, the term ‘qualified facility’ means any industrial  
12                  facility or direct air capture facility—

13                         “(1) the construction of which begins before  
14                         January 1, 2024, and—

15                                 “(A) construction of carbon capture equip-  
16                                 ment begins before such date, or

17                                 “(B) the original planning and design for  
18                                 such facility includes installation of carbon cap-  
19                                 ture equipment, and

20                         “(2) which captures—

21                                 “(A) in the case of a facility which emits  
22                                 not more than 500,000 metric tons of carbon  
23                                 oxide into the atmosphere during the taxable  
24                                 year, not less than 25,000 metric tons of quali-  
25                                 fied carbon oxide during the taxable year which

1 is utilized in a manner described in subsection  
2 (f)(5),

3 “(B) in the case of an electricity gener-  
4 ating facility which is not described in subpara-  
5 graph (A), not less than 500,000 metric tons of  
6 qualified carbon oxide during the taxable year,  
7 or

8 “(C) in the case of a direct air capture fa-  
9 cility or any facility not described in subpara-  
10 graph (A) or (B), not less than 100,000 metric  
11 tons of qualified carbon oxide during the tax-  
12 able year.

13 “(e) DEFINITIONS.—For purposes of this section—

14 “(1) DIRECT AIR CAPTURE FACILITY.—

15 “(A) IN GENERAL.—Subject to subpara-  
16 graph (B), the term ‘direct air capture facility’  
17 means any facility which uses carbon capture  
18 equipment to capture carbon dioxide directly  
19 from the ambient air.

20 “(B) EXCEPTION.—The term ‘direct air  
21 capture facility’ shall not include any facility  
22 which captures carbon dioxide—

23 “(i) which is deliberately released  
24 from naturally occurring subsurface  
25 springs, or

1 “(ii) using natural photosynthesis.

2 “(2) QUALIFIED ENHANCED OIL OR NATURAL  
3 GAS RECOVERY PROJECT.—The term ‘qualified en-  
4 hanced oil or natural gas recovery project’ has the  
5 meaning given the term ‘qualified enhanced oil re-  
6 covery project’ by section 43(c)(2), by substituting  
7 ‘crude oil or natural gas’ for ‘crude oil’ in subpara-  
8 graph (A)(i) thereof.

9 “(3) TERTIARY INJECTANT.—The term ‘ter-  
10 tiary injectant’ has the same meaning as when used  
11 within section 193(b)(1).

12 “(f) SPECIAL RULES.—

13 “(1) ONLY QUALIFIED CARBON OXIDE CAP-  
14 TURED AND DISPOSED OF OR USED WITHIN THE  
15 UNITED STATES TAKEN INTO ACCOUNT.—The credit  
16 under this section shall apply only with respect to  
17 qualified carbon oxide the capture and disposal, use,  
18 or utilization of which is within—

19 “(A) the United States (within the mean-  
20 ing of section 638(1)), or

21 “(B) a possession of the United States  
22 (within the meaning of section 638(2)).

23 “(2) SECURE GEOLOGICAL STORAGE.—The Sec-  
24 retary, in consultation with the Administrator of the  
25 Environmental Protection Agency, the Secretary of

1 Energy, and the Secretary of the Interior, shall es-  
2 tablish regulations for determining adequate security  
3 measures for the geological storage of qualified car-  
4 bon oxide under subsection (a) such that the quali-  
5 fied carbon oxide does not escape into the atmos-  
6 phere. Such term shall include storage at deep saline  
7 formations, oil and gas reservoirs, and unminable  
8 coal seams under such conditions as the Secretary  
9 may determine under such regulations.

10 “(3) CREDIT ATTRIBUTABLE TO TAXPAYER.—

11 “(A) IN GENERAL.—Except as provided in  
12 subparagraph (B) or in any regulations pre-  
13 scribed by the Secretary, any credit under this  
14 section shall be attributable to—

15 “(i) in the case of qualified carbon  
16 oxide captured using carbon capture equip-  
17 ment which is originally placed in service  
18 at a qualified facility before the date of the  
19 enactment of the FUTURE Act, the per-  
20 son that captures and physically or con-  
21 tractually ensures the disposal, utilization,  
22 or use as a tertiary injectant of such quali-  
23 fied carbon oxide, and

24 “(ii) in the case of qualified carbon  
25 oxide captured using carbon capture equip-

1           ment which is originally placed in service  
2           at a qualified facility on or after the date  
3           of the enactment of the FUTURE Act, the  
4           person that owns the carbon capture equip-  
5           ment and physically or contractually en-  
6           sures the capture and disposal, utilization,  
7           or use as a tertiary injectant of such quali-  
8           fied carbon oxide.

9           “(B) ELECTION.—If the person described  
10          in subparagraph (A) makes an election under  
11          this subparagraph in such time and manner as  
12          the Secretary may prescribe by regulations, the  
13          credit under this section—

14                 “(i) shall be allowable to the person  
15                 that disposes of the qualified carbon oxide,  
16                 utilizes the qualified carbon oxide, or uses  
17                 the qualified carbon oxide as a tertiary  
18                 injectant, and

19                 “(ii) shall not be allowable to the per-  
20                 son described in subparagraph (A).

21          “(4) RECAPTURE.—The Secretary shall, by reg-  
22          ulations, provide for recapturing the benefit of any  
23          credit allowable under subsection (a) with respect to  
24          any qualified carbon oxide which ceases to be cap-  
25          tured, disposed of, or used as a tertiary injectant in

1 a manner consistent with the requirements of this  
2 section.

3 “(5) UTILIZATION OF QUALIFIED CARBON  
4 OXIDE.—

5 “(A) IN GENERAL.—For purposes of this  
6 section, utilization of qualified carbon oxide  
7 means—

8 “(i) the fixation of such qualified car-  
9 bon oxide through photosynthesis or  
10 chemosynthesis, such as through the grow-  
11 ing of algae or bacteria,

12 “(ii) the chemical conversion of such  
13 qualified carbon oxide to a material or  
14 chemical compound in which such qualified  
15 carbon oxide is securely stored, or

16 “(iii) the use of such qualified carbon  
17 oxide for any other purpose for which a  
18 commercial market exists (with the excep-  
19 tion of use as a tertiary injectant in a  
20 qualified enhanced oil or natural gas recov-  
21 ery project), as determined by the Sec-  
22 retary.

23 “(B) MEASUREMENT.—

24 “(i) IN GENERAL.—For purposes of  
25 determining the amount of qualified carbon

1 oxide utilized by the taxpayer under para-  
2 graph (2)(B)(ii) or (4)(B)(ii) of subsection  
3 (a), such amount shall be equal to the met-  
4 ric tons of qualified carbon oxide which the  
5 taxpayer demonstrates, based upon an  
6 analysis of lifecycle greenhouse gas emis-  
7 sions and subject to such requirements as  
8 the Secretary, in consultation with the Sec-  
9 retary of Energy and the Administrator of  
10 the Environmental Protection Agency, de-  
11 termines appropriate, were—

12 “(I) captured and permanently  
13 isolated from the atmosphere, or

14 “(II) displaced from being emit-  
15 ted into the atmosphere,

16 through use of a process described in sub-  
17 paragraph (A).

18 “(ii) LIFECYCLE GREENHOUSE GAS  
19 EMISSIONS.—For purposes of clause (i),  
20 the term ‘lifecycle greenhouse gas emis-  
21 sions’ has the same meaning given such  
22 term under subparagraph (H) of section  
23 211(o)(1) of the Clean Air Act (42 U.S.C.  
24 7545(o)(1)), as in effect on the date of the  
25 enactment of the FUTURE Act, except

1           that ‘product’ shall be substituted for ‘fuel’  
2           each place it appears in such subpara-  
3           graph.

4           “(6) ELECTION FOR APPLICABLE FACILITIES.—

5           “(A) IN GENERAL.—For purposes of this  
6           section, in the case of an applicable facility, for  
7           any taxable year in which such facility captures  
8           not less than 500,000 metric tons of qualified  
9           carbon oxide during the taxable year, the per-  
10          son described in paragraph (3)(A)(ii) may elect  
11          to have such facility, and any carbon capture  
12          equipment placed in service at such facility,  
13          deemed as having been placed in service on the  
14          date of the enactment of the FUTURE Act.

15          “(B) APPLICABLE FACILITY.—For pur-  
16          poses of this paragraph, the term ‘applicable fa-  
17          cility’ means a qualified facility—

18                  “(i) which was placed in service before  
19                  the date of the enactment of the FUTURE  
20                  Act, and

21                  “(ii) for which no taxpayer claimed a  
22                  credit under this section in regards to such  
23                  facility for any taxable year ending before  
24                  the date of the enactment of such Act.



1           “(7) INFLATION ADJUSTMENT.—In the case of  
2           any taxable year beginning in a calendar year after  
3           2009, there shall be substituted for each dollar  
4           amount contained in paragraphs (1) and (2) of sub-  
5           section (a) an amount equal to the product of—

6                   “(A) such dollar amount, multiplied by

7                   “(B) the inflation adjustment factor for  
8           such calendar year determined under section  
9           43(b)(3)(B) for such calendar year, determined  
10          by substituting ‘2008’ for ‘1990’.

11          “(g) APPLICATION OF SECTION FOR CERTAIN CAR-  
12          BON CAPTURE EQUIPMENT.—In the case of any carbon  
13          capture equipment placed in service before the date of the  
14          enactment of the FUTURE Act, the credit under this sec-  
15          tion shall apply with respect to qualified carbon oxide cap-  
16          tured using such equipment before the end of the calendar  
17          year in which the Secretary, in consultation with the Ad-  
18          ministrators of the Environmental Protection Agency, cer-  
19          tifies that, during the period beginning after October 3,  
20          2008, a total of 75,000,000 metric tons of qualified carbon  
21          oxide have been taken into account in accordance with—

22                   “(1) subsection (a) of this section, as in effect  
23          on the day before the date of the enactment of the  
24          FUTURE Act, and

1           “(2) paragraphs (1) and (2) of subsection (a)  
2           of this section.

3           “(h) REGULATIONS.—The Secretary may prescribe  
4 such regulations and other guidance as may be necessary  
5 or appropriate to carry out this section, including regula-  
6 tions or other guidance to—

7           “(1) ensure proper allocation under subsection  
8           (a) for qualified carbon oxide captured by a taxpayer  
9           during the taxable year ending after the date of the  
10          enactment of the FUTURE Act, and

11          “(2) determine whether a facility satisfies the  
12          requirements under subsection (d)(1) during such  
13          taxable year.”.

14          (b) EFFECTIVE DATE.—The amendments made by  
15 this section shall take effect on the date of the enactment  
16 of this Act.

○