

115TH CONGRESS
1ST SESSION

S. _____

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

IN THE SENATE OF THE UNITED STATES

Ms. HEITKAMP (for herself, Mr. WHITEHOUSE, Mrs. CAPITO, Mr. BARRASSO, and Mr. GRAHAM) introduced the following bill; which was read twice and referred to the Committee on _____

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 “Carbon Capture Utili-
5 zation and Storage Act”.

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

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

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

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

5 “(1) \$20 per metric ton of qualified carbon
6 oxide which is—

7 “(A) captured by the taxpayer using car-
8 bon capture equipment which is originally
9 placed in service at a qualified facility before
10 the date of the enactment of the Carbon Cap-
11 ture Utilization and Storage Act, and

12 “(B) disposed of by the taxpayer in secure
13 geological storage and not used by the taxpayer
14 as described in paragraph (2)(B),

15 “(2) \$10 per metric ton of qualified carbon
16 oxide which is—

17 “(A) captured by the taxpayer using car-
18 bon capture equipment which is originally
19 placed in service at a qualified facility before
20 the date of the enactment of the Carbon Cap-
21 ture Utilization and Storage Act, and

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

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

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

6 “(A) captured by the taxpayer using car-
7 bon capture equipment which is originally
8 placed in service at a qualified facility on or
9 after the date of the enactment of the Carbon
10 Capture Utilization and Storage Act, during the
11 12-year period beginning on the date the equip-
12 ment was originally placed in service, and

13 “(B) disposed of by the taxpayer in secure
14 geological storage and not used by the taxpayer
15 as described in paragraph (4)(B), and

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

19 “(A) captured by the taxpayer using car-
20 bon capture equipment which is originally
21 placed in service at a qualified facility on or
22 after the date of the enactment of the Carbon
23 Capture Utilization and Storage Act, during the
24 12-year period beginning on the date the equip-
25 ment was originally placed in service, 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 “(b) APPLICABLE DOLLAR AMOUNT; ADDITIONAL
8 EQUIPMENT; ELECTION.—

9 “(1) APPLICABLE DOLLAR AMOUNT.—

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

12 “(i) for any taxable year beginning in
13 a calendar year after 2016 and ending be-
14 fore 2027—

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

21 “(II) for purposes of paragraph
22 (4) of such subsection, the dollar
23 amount established by linear inter-
24 polation between \$12.83 and \$35 for

1 each calendar year during such pe-
2 riod, and

3 “(ii) for any taxable year beginning in
4 a calendar year after 2026—

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

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

21 “(B) ROUNDING.—The applicable dollar
22 amount determined under subparagraph (A)
23 shall be rounded to the nearest cent.

24 “(2) INSTALLATION OF ADDITIONAL CARBON
25 CAPTURE EQUIPMENT ON EXISTING QUALIFIED FA-

1 CILITY.—In the case of a qualified facility placed in
2 service before the date of the enactment of the Car-
3 bon Capture Utilization and Storage Act, for which
4 additional carbon capture equipment is placed in
5 service on or after the date of the enactment of such
6 Act, the amount of qualified carbon oxide which is
7 captured by the taxpayer shall be equal to—

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

10 “(i) the total amount of qualified car-
11 bon oxide captured at such facility for the
12 taxable year, or

13 “(ii) the total amount of the carbon
14 dioxide capture capacity of the carbon cap-
15 ture equipment in service at such facility
16 on the day before the date of the enact-
17 ment of the Carbon Capture Utilization
18 and Storage Act, and

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

22 “(i) the amount described in clause (i)
23 of subparagraph (A), over

24 “(ii) the amount described in clause
25 (ii) of such subparagraph.

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

13 “(c) QUALIFIED CARBON OXIDE.—For purposes of
14 this section—

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

17 “(A) any carbon dioxide which—

18 “(i) is captured from an industrial
19 source by carbon capture equipment which
20 is originally placed in service before the
21 date of the enactment of the Carbon Cap-
22 ture Utilization and Storage Act,

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

1 “(iii) is measured at the source of
2 capture and verified at the point of dis-
3 posal, injection, or utilization,

4 “(B) any carbon dioxide or other carbon
5 oxide which—

6 “(i) is captured from an industrial
7 source by carbon capture equipment which
8 is originally placed in service on or after
9 the date of the enactment of the Carbon
10 Capture Utilization and Storage Act,

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

14 “(iii) is measured at the source of
15 capture and verified at the point of dis-
16 posal, injection, or utilization, or

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

19 “(i) is captured directly from the am-
20 bient air, and

21 “(ii) is measured at the source of cap-
22 ture and verified at the point of disposal,
23 injection, or utilization.

24 “(2) RECYCLED CARBON OXIDE.—The term
25 ‘qualified carbon oxide’ includes the initial deposit of

1 captured carbon oxide used as a tertiary injectant.
2 Such term does not include carbon oxide that is re-
3 captured, recycled, and re-injected as part of the en-
4 hanced oil and natural gas recovery process.

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

8 “(1) the construction of which begins before
9 January 1, 2024, and—

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

12 “(B) the original planning and design for
13 such facility includes installation of carbon cap-
14 ture equipment, and

15 “(2) which captures—

16 “(A) in the case of a facility which emits
17 not more than 500,000 metric tons of carbon
18 oxide into the atmosphere during the taxable
19 year, not less than 25,000 metric tons of quali-
20 fied carbon oxide during the taxable year which
21 is utilized in a manner described in subsection
22 (f)(5),

23 “(B) in the case of an electricity gener-
24 ating facility which is not described in subpara-
25 graph (A), not less than 500,000 metric tons of

1 qualified carbon oxide during the taxable year,
2 or

3 “(C) in the case of a direct air capture fa-
4 cility or any facility not described in subpara-
5 graph (A) or (B), not less than 100,000 metric
6 tons of qualified carbon oxide during the tax-
7 able year.

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

9 “(1) DIRECT AIR CAPTURE FACILITY.—

10 “(A) IN GENERAL.—Subject to subpara-
11 graph (B), the term ‘direct air capture facility’
12 means any facility which uses carbon capture
13 equipment to capture carbon dioxide directly
14 from the ambient air.

15 “(B) EXCEPTION.—The term ‘direct air
16 capture facility’ shall not include any facility
17 which captures carbon dioxide—

18 “(i) which is deliberately released
19 from naturally-occurring subsurface
20 springs, or

21 “(ii) using natural photosynthesis.

22 “(2) QUALIFIED ENHANCED OIL OR NATURAL
23 GAS RECOVERY PROJECT.—The term ‘qualified en-
24 hanced oil or natural gas recovery project’ has the
25 meaning given the term ‘qualified enhanced oil re-

1 covery project’ by section 43(c)(2), by substituting
2 ‘crude oil or natural gas’ for ‘crude oil’ in subpara-
3 graph (A)(i) thereof.

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

7 “(f) SPECIAL RULES.—

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

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

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

18 “(2) SECURE GEOLOGICAL STORAGE.—The Sec-
19 retary, in consultation with the Administrator of the
20 Environmental Protection Agency, the Secretary of
21 Energy, and the Secretary of the Interior, shall es-
22 tablish regulations for determining adequate security
23 measures for the geological storage of qualified car-
24 bon oxide under subsection (a) such that the quali-
25 fied carbon oxide does not escape into the atmos-

1 phere. Such term shall include storage at deep saline
2 formations, oil and gas reservoirs, and unminable
3 coal seams under such conditions as the Secretary
4 may determine under such regulations.

5 “(3) CREDIT ATTRIBUTABLE TO TAXPAYER.—

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

10 “(i) in the case of qualified carbon
11 oxide captured using carbon capture equip-
12 ment which is originally placed in service
13 at a qualified facility before the date of the
14 enactment of the Carbon Capture Utiliza-
15 tion and Storage Act, the person that cap-
16 tures and physically or contractually en-
17 sures the disposal, utilization, or use as a
18 tertiary injectant of such qualified carbon
19 oxide, and

20 “(ii) in the case of qualified carbon
21 oxide captured using carbon capture equip-
22 ment which is originally placed in service
23 at a qualified facility on or after the date
24 of the enactment of the Carbon Capture
25 Utilization and Storage Act, the person

1 that owns the carbon capture equipment
2 and physically or contractually ensures the
3 capture and disposal, utilization, or use as
4 a tertiary injectant of such qualified car-
5 bon oxide.

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

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

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

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

1 “(5) UTILIZATION OF QUALIFIED CARBON
2 OXIDE.—

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

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

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

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

21 “(B) MEASUREMENT.—

22 “(i) IN GENERAL.—For purposes of
23 determining the amount of qualified carbon
24 oxide utilized by the taxpayer under para-
25 graph (2)(B)(ii) or (4)(B)(ii) of subsection

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

10 “(I) captured and permanently
11 isolated from the atmosphere, or

12 “(II) displaced from being emit-
13 ted into the atmosphere,

14 through use of a process described in sub-
15 paragraph (A).

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

1 shall be substituted for ‘fuel’ each place it
2 appears in such subparagraph.

3 “(6) ELECTION FOR APPLICABLE FACILITIES.—

4 “(A) IN GENERAL.—For purposes of this
5 section, in the case of an applicable facility, for
6 any taxable year in which such facility captures
7 not less than 500,000 metric tons of qualified
8 carbon oxide during the taxable year, the per-
9 son described in paragraph (3)(A)(ii) may elect
10 to have such facility, and any carbon capture
11 equipment placed in service at such facility,
12 deemed as having been placed in service on the
13 date of the enactment of the Carbon Capture
14 Utilization and Storage 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 Carbon
20 Capture Utilization and Storage 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 Carbon Capture Utilization and Storage
15 Act, the credit under this section shall apply with respect
16 to qualified carbon oxide captured using such equipment
17 before the end of the calendar year in which the Secretary,
18 in consultation with the Administrator of the Environ-
19 mental Protection Agency, certifies that, during the period
20 beginning after October 3, 2008, a total of 75,000,000
21 metric tons of qualified carbon oxide have been taken into
22 account in accordance with—

23 “(1) subsection (a) of this section, as in effect
24 on the day before the date of the enactment of the
25 Carbon Capture Utilization and Storage 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 Carbon Capture Utilization and
11 Storage Act, and

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

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