

117TH CONGRESS
1ST SESSION

H. R. 5192

To amend the Internal Revenue Code of 1986 to establish a credit for
production of clean hydrogen, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 7, 2021

Mr. LARSON of Connecticut (for himself, Ms. DELBENE, and Mr. BEYER) in-
troduced the following bill; which was referred to the Committee on Ways
and Means

A BILL

To amend the Internal Revenue Code of 1986 to establish
a credit for production of clean hydrogen, and for other
purposes.

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 “Clean Hydrogen Pro-
5 duction and Investment Tax Credit Act of 2021”.

6 **SEC. 2. CLEAN HYDROGEN.**

7 (a) CREDIT FOR PRODUCTION OF CLEAN HYDRO-
8 GEN.—

1 (1) IN GENERAL.—Subpart D of part IV of
2 subchapter A of chapter 1 is amended by adding at
3 the end the following new section:

4 **“SEC. 45U. CREDIT FOR PRODUCTION OF CLEAN HYDRO-**
5 **GEN.**

6 “(a) AMOUNT OF CREDIT.—For purposes of section
7 38, the clean hydrogen production credit for any taxable
8 year is an amount equal to the product of—

9 “(1) the applicable amount, multiplied by

10 “(2) the kilograms of qualified clean hydrogen
11 produced by the taxpayer during such taxable year
12 at a qualified clean hydrogen production facility dur-
13 ing the 10-year period beginning on the date such
14 facility was originally placed in service.

15 “(b) APPLICABLE AMOUNT.—

16 “(1) IN GENERAL.—For purposes of subsection
17 (a)(1), the applicable amount shall be an amount
18 equal to the applicable percentage of \$3.00. If any
19 amount as determined under the preceding sentence
20 is not a multiple of 0.1 cent, such amount shall be
21 rounded to the nearest multiple of 0.1 cent.

22 “(2) APPLICABLE PERCENTAGE.—For purposes
23 of paragraph (1), the term ‘applicable percentage’
24 means—

1 “(A) in the case of any qualified clean hy-
2 drogen which is produced through a process
3 that, as compared to hydrogen produced by
4 steam-methane reforming, achieves a percent-
5 age reduction in lifecycle greenhouse gas emis-
6 sions which is less than 75 percent, 20 percent,

7 “(B) in the case of any qualified clean hy-
8 drogen which is produced through a process
9 that, as compared to hydrogen produced by
10 steam-methane reforming, achieves a percent-
11 age reduction in lifecycle greenhouse gas emis-
12 sions which is not less than 75 percent and less
13 than 85 percent, 25 percent,

14 “(C) in the case of any qualified clean hy-
15 drogen which is produced through a process
16 that, as compared to hydrogen produced by
17 steam-methane reforming, achieves a percent-
18 age reduction in lifecycle greenhouse gas emis-
19 sions which is not less than 85 percent and less
20 than 95 percent, 34 percent, and

21 “(D) in the case of any qualified clean hy-
22 drogen which is produced through a process
23 that, as compared to hydrogen produced by
24 steam-methane reforming, achieves a percent-
25 age reduction in lifecycle greenhouse gas emis-

1 sions which is not less than 95 percent, 100
2 percent.

3 “(3) INFLATION ADJUSTMENT.—The \$3.00
4 amount in paragraph (1) shall be adjusted by multi-
5 plying such amount by the inflation adjustment fac-
6 tor (as determined under section 45(e)(2), deter-
7 mined by substituting ‘2020’ for ‘1992’ in subpara-
8 graph (B) thereof) for the calendar year in which
9 the qualified clean hydrogen is produced. If any
10 amount as increased under the preceding sentence is
11 not a multiple of 0.1 cent, such amount shall be
12 rounded to the nearest multiple of 0.1 cent.

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

14 “(1) LIFECYCLE GREENHOUSE GAS EMIS-
15 SIONS.—For purposes of this section, the term
16 ‘lifecycle greenhouse gas emissions’ has the same
17 meaning given such term under subparagraph (H) of
18 section 211(o)(1) of the Clean Air Act (42 U.S.C.
19 7545(o)(1)), as in effect on the date of enactment of
20 this section, as related to the full fuel lifecycle
21 through the point of hydrogen production.

22 “(2) QUALIFIED CLEAN HYDROGEN.—

23 “(A) IN GENERAL.—The term ‘qualified
24 clean hydrogen’ means hydrogen which is pro-
25 duced through a process that, as compared to

hydrogen produced by steam-methane reforming, achieves a percentage reduction in lifecycle greenhouse gas emissions which is not less than 40 percent.

“(B) ADDITIONAL REQUIREMENTS.—Such term shall not include any hydrogen unless such hydrogen is produced—

“(i) in the United States (as defined in section 638(1) or a possession of the United States (as defined in section 638(2)),

“(ii) in the ordinary course of a trade or business of the taxpayer, and

“(iii) for sale or use.

“(3) QUALIFIED CLEAN HYDROGEN PRODUCTION FACILITY.—

“(A) IN GENERAL.—The term ‘qualified clean hydrogen production facility’ means a facility owned by the taxpayer which produces qualified clean hydrogen and which meets the requirements of subparagraph (B).

“(B) TERMINATION.—The term ‘qualified clean hydrogen production facility’ shall not include any facility the construction of which begins after December 31, 2028.

1 “(4) STEAM-METHANE REFORMING.—The term
2 ‘steam-methane reforming’ means a hydrogen pro-
3 duction process in which high-temperature steam is
4 used to produce hydrogen from natural gas (other
5 than natural gas derived from biomass (as defined
6 in section 45K(c)(3)), without carbon capture and
7 sequestration.

8 “(d) SPECIAL RULES.—

9 “(1) TREATMENT OF FACILITIES OWNED BY
10 MORE THAN 1 TAXPAYER.—Rules similar to the
11 rules section 45(e)(3) shall apply for purposes of
12 this section.

13 “(2) COORDINATION WITH CREDIT FOR CARBON
14 OXIDE SEQUESTRATION.—No credit shall be allowed
15 under this section with respect to any qualified clean
16 hydrogen produced at a facility which includes prop-
17 erty for which a credit is allowed under section 45Q.

18 “(e) REGULATIONS.—Not later than 1 year after the
19 date of enactment of this section, the Secretary, after con-
20 sultation with the Secretary of Energy and the Adminis-
21 trator of the Environmental Protection Agency, shall issue
22 regulations or other guidance to carry out the purposes
23 of this section, including regulations or other guidance—

24 “(1) for determining lifecycle greenhouse gas
25 emissions, and

“(2) which require verification by unrelated third parties of the production and sale or use of qualified clean hydrogen with respect to which credit is otherwise allowed under this section.”.

(2) CONFORMING AMENDMENTS.—

(A) Section 38(b) is amended—

(i) in paragraph (32), by striking “plus” at the end,

(ii) in paragraph (33), by striking the period at the end and inserting “, plus”, and

(iii) by adding at the end the following new paragraph:

“(34) the clean hydrogen production credit determined under section 45U(a).”.

(B) The table of sections for subpart D of part IV of subchapter A of chapter 1 amended by adding at the end the following new item:

“Sec. 45U. Credit for production of clean hydrogen.”.

(3) EFFECTIVE DATE.—The amendments made by this subsection shall apply to hydrogen produced after December 31, 2021, at facilities placed in service before such date.

(b) CREDIT FOR ELECTRICITY PRODUCED FROM RENEWABLE RESOURCES ALLOWED IF ELECTRICITY IS USED TO PRODUCE CLEAN HYDROGEN.—

1 (1) IN GENERAL.—Section 45(e) is amended by
2 adding at the end the following new paragraph:

3 “(12) SPECIAL RULE FOR ELECTRICITY USED
4 AT A QUALIFIED CLEAN HYDROGEN PRODUCTION
5 FACILITY.—Electricity produced by the taxpayer
6 shall be treated as sold by such taxpayer to an unre-
7 lated person during the taxable year if such elec-
8 tricity is used during such taxable year by the tax-
9 payer or a person related to the taxpayer at a quali-
10 fied clean hydrogen production facility (as defined in
11 section 45U(d)(3)) to produce qualified clean hydro-
12 gen (as defined in section 45U(d)(2)) during the 10-
13 year period after such facility is placed in service.
14 The Secretary shall issue such regulations or other
15 guidance as the Secretary determines appropriate to
16 carry out the purposes of this paragraph, including
17 regulations or other guidance to require verification
18 by unrelated third parties of the production and use
19 of electricity to which this paragraph applies.”.

20 (2) EFFECTIVE DATE.—The amendment made
21 by this subsection shall apply to electricity produced
22 after December 31, 2021.

23 (c) ELECTION TO TREAT CLEAN HYDROGEN PRO-
24 DUCTION FACILITIES AS ENERGY PROPERTY.—

1 (1) IN GENERAL.—Section 48(a) is amended by
2 adding at the end the following new paragraph:

3 “(8) ELECTION TO TREAT CLEAN HYDROGEN
4 PRODUCTION FACILITIES AS ENERGY PROPERTY.—

5 “(A) IN GENERAL.—In the case of any
6 qualified property (as defined in paragraph
7 (5)(D)) which is part of a specified clean hydro-
8 gen production facility—

9 “(i) such property shall be treated as
10 energy property for purposes of this sec-
11 tion, and

12 “(ii) the energy percentage with re-
13 spect to such property is—

14 “(I) in the case of a facility
15 which is designed and reasonably ex-
16 pected to produce qualified clean hy-
17 drogen which is described in a sub-
18 paragraph (A) of section 45U(b)(2), 6
19 percent,

20 “(II) in the case of a facility
21 which is designed and reasonably ex-
22 pected to produce qualified clean hy-
23 drogen which is described in a sub-
24 paragraph (B) of such section, 7.5
25 percent,

1 “(III) in the case of a facility
2 which is designed and reasonably ex-
3 pected to produce qualified clean hy-
4 drogen which is described in a sub-
5 paragraph (C) of such section, 10.2
6 percent, and

7 “(IV) in the case of a facility
8 which is designed and reasonably ex-
9 pected to produce qualified clean hy-
10 drogen which is described in a sub-
11 paragraph (D) of such section, 30
12 percent.

13 “(B) DENIAL OF PRODUCTION CREDIT.—
14 No credit shall be allowed under section 45U
15 for any taxable year with respect to any speci-
16 fied clean hydrogen production facility.

17 “(C) SPECIFIED CLEAN HYDROGEN PRO-
18 Duction FACILITY.—For purposes of this para-
19 graph, the term ‘specified clean hydrogen pro-
20 duction facility’ means any qualified clean hy-
21 drogen production facility (as defined in section
22 45U(d)(3)) or any portion of such facility—

23 “(i) which is placed in service after
24 December 31, 2021, and

25 “(ii) with respect to which—

1 “(I) no credit has been allowed
2 under section 45U or 45Q, and

3 “(II) the taxpayer make an irrev-
4 ocable election to have this paragraph
5 apply.

6 “(D) QUALIFIED CLEAN HYDROGEN.—For
7 purposes of this paragraph, the term ‘qualified
8 clean hydrogen’ has the meaning given such
9 term by section 45U(d)(2).

10 “(E) REGULATIONS.—The Secretary shall
11 issue such regulations or other guidance as the
12 Secretary determines necessary or appropriate
13 to carry out the purposes of this section, includ-
14 ing regulations or other guidance which—

15 “(i) requires verification by unrelated
16 third parties that the facility produces hy-
17 drogen which is consistent with the hydro-
18 gen that such facility was designed and ex-
19 pected to produce under subparagraph
20 (A)(ii), and

21 “(ii) recaptures so much of any credit
22 allowed under this section as exceeds the
23 amount of the credit which would have
24 been allowed if the expected production
25 were consistent with the actual verified

1 production (or all of the credit so allowed
2 in the absence of such verification).”.

3 (2) EFFECTIVE DATE.—The amendments made
4 by this section shall apply to periods after December
5 31, 2021, under rules similar to the rules of section
6 48(m) of the Internal Revenue Code of 1986 (as in
7 effect on the day before the date of the enactment
8 of the Revenue Reconciliation Act of 1990).

9 (d) TERMINATION OF EXCISE TAX CREDIT FOR HY-
10 DROGEN.—

11 (1) IN GENERAL.—Section 6426(d)(2) is
12 amended by striking subparagraph (D) and by re-
13 designating subparagraphs (E), (F), and (G) as sub-
14 paragraphs (D), (E), and (F), respectively.

15 (2) CONFORMING AMENDMENT.—Section
16 6426(e)(2) is amended by striking “(F)” and insert-
17 ing “(E)”.

18 (3) EFFECTIVE DATE.—The amendments made
19 by this subsection shall apply to fuel sold or used
20 after December 31, 2021.

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