

  
(Original Signature of Member)

117TH CONGRESS  
1ST SESSION

**H. R.**

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

Mr. LARSON of Connecticut introduced the following bill; which was referred to the Committee on \_\_\_\_\_

*with Ms. DeBene of Washington and Mr. Beyer of Virginia*

**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

1 hydrogen produced by steam-methane reform-  
2 ing, achieves a percentage reduction in lifecycle  
3 greenhouse gas emissions which is not less than  
4 40 percent.

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

8 “(i) in the United States (as defined  
9 in section 638(1) or a possession of the  
10 United States (as defined in section  
11 638(2)),

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

14 “(iii) for sale or use.

15 “(3) QUALIFIED CLEAN HYDROGEN PRODUC-  
16 TION FACILITY.—

17 “(A) IN GENERAL.—The term ‘qualified  
18 clean hydrogen production facility’ means a fa-  
19 cility owned by the taxpayer which produces  
20 qualified clean hydrogen and which meets the  
21 requirements of subparagraph (B).

22 “(B) TERMINATION.—The term ‘qualified  
23 clean hydrogen production facility’ shall not in-  
24 clude any facility the construction of which be-  
25 gins after December 31, ~~2020~~ 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(e)(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

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

5           (2) CONFORMING AMENDMENTS.—

6           (A) Section 38(b) is amended—

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

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

12           (iii) by adding at the end the fol-  
13 lowing new paragraph:

14           “(34) the clean hydrogen production credit de-  
15 termined under section 45U(a).”.

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

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

19           (3) EFFECTIVE DATE.—The amendments made  
20 by this subsection shall apply to hydrogen produced  
21 after December 31, 2021, at facilities placed in serv-  
22 ice before such date.

23           (b) CREDIT FOR ELECTRICITY PRODUCED FROM RE-  
24 NEWABLE RESOURCES ALLOWED IF ELECTRICITY IS  
25 USED TO PRODUCE CLEAN HYDROGEN.—

1           (1) IN GENERAL.—Section 45(c) 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 ovable 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.