

117TH CONGRESS
1ST SESSION

S. _____

To amend the Internal Revenue Code of 1986 to provide investment and production tax credits for emerging energy technologies, and for other purposes.

IN THE SENATE OF THE UNITED STATES

_____ 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 provide investment and production tax credits for emerging energy technologies, 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 “Energy Sector Innova-
5 tion Credit Act of 2021”.

6 **SEC. 2. FINDINGS.**

7 Congress finds the following:

8 (1) Promising energy resources with zero or
9 very low market penetration often face significant

1 incumbency disadvantages as they establish a foot-
2 hold, including suboptimal resource location relative
3 to existing grid infrastructure and the lack of econo-
4 mies of scale.

5 (2) Energy sector innovation can confer numer-
6 ous benefits to jobs and the economy, the environ-
7 ment and climate, and the general social welfare.

8 (3) Energy sector innovation can come in nu-
9 merous forms, not all of which are readily quantifi-
10 able, including—

11 (A) diversifying and increasing the Na-
12 tion's energy generation portfolio and energy
13 security,

14 (B) improving the dispatchability and reli-
15 ability of energy generation, and

16 (C) improving energy efficiency, emissions
17 reductions, or other markers of performance.

18 **SEC. 3. INVESTMENT CREDIT FOR EMERGING ENERGY**
19 **TECHNOLOGY.**

20 (a) IN GENERAL.—Subpart E of part IV of sub-
21 chapter A of chapter 1 of the Internal Revenue Code of
22 1986 is amended by inserting after section 48C the fol-
23 lowing new section:

1 **“SEC. 48D. EMERGING ENERGY TECHNOLOGY CREDIT.**

2 “(a) ESTABLISHMENT OF CREDIT.—For purposes of
3 section 46, the emerging energy technology credit for any
4 taxable year is an amount equal to the applicable percent-
5 age (as determined under subsection (c)) of the basis of
6 any qualified emerging energy property placed in service
7 by the taxpayer during such taxable year.

8 “(b) QUALIFIED EMERGING ENERGY PROPERTY.—

9 “(1) IN GENERAL.—The term ‘qualified emerg-
10 ing energy property’ means property which is con-
11 structed, reconstructed, erected, or acquired by the
12 taxpayer, and the original use of which commences
13 with the taxpayer, which is—

14 “(A) a qualified production facility (as de-
15 fined in section 45U(d)),

16 “(B) carbon capture equipment, or

17 “(C) energy storage technology.

18 “(2) CARBON CAPTURE EQUIPMENT.—

19 “(A) IN GENERAL.—For purposes of this
20 section, the term ‘carbon capture equipment’
21 means property which contains equipment that
22 can separate and capture qualified carbon oxide
23 (as defined in section 45Q(c)) and is placed in
24 service at, and used in connection with, a facil-
25 ity—

1 “(i) which satisfies the requirements
2 under section 45Q(d)(2), and

3 “(ii) which is—

4 “(I) an electric generating facility
5 which—

6 “(aa) was originally placed
7 in service before such property,
8 and

9 “(bb) is a point source of air
10 pollutants,

11 “(II) a manufacturing or indus-
12 trial facility—

13 “(aa) which was originally
14 placed in service before such
15 property,

16 “(bb) which is a point
17 source of air pollutants, and

18 “(cc) for which such prop-
19 erty is primarily used to capture
20 qualified carbon oxide (as defined
21 in section 45Q(e)) which would
22 otherwise be released into the at-
23 mosphere as a result of—

1 “(AA) the production of
2 ammonia, helium, or ethanol
3 at such facility, or

4 “(BB) the processing of
5 natural gas at such facility,
6 or

7 “(III) a manufacturing or indus-
8 trial facility described in subclause
9 (II) for which item (cc) of such sub-
10 clause does not apply.

11 “(B) DIRECT AIR CAPTURE.—

12 “(i) IN GENERAL.—For purposes of
13 this section, the term ‘carbon capture
14 equipment’ shall include any direct air cap-
15 ture facility which can capture not less
16 than 10,000 metric tons of qualified car-
17 bon oxide (as defined in section 45Q(e))
18 annually.

19 “(ii) DIRECT AIR CAPTURE FACIL-
20 ITY.—The term ‘direct air capture facility’
21 has the same meaning given such term
22 under section 45Q(e)(1) (as in effect on
23 the date of enactment of this section).

24 “(C) RULES REGARDING CAPTURE OF CAR-
25 BON OXIDE.—With respect to any qualified car-

1 bon oxide captured using property described in
2 subparagraph (A) or (B), the taxpayer shall
3 physically or contractually ensure the disposal,
4 utilization, or use of such qualified carbon oxide
5 in a manner consistent with the requirements
6 under section 45Q.

7 “(3) ENERGY STORAGE TECHNOLOGY.—For
8 purposes of this section, the term ‘energy storage
9 technology’ means stationary equipment which—

10 “(A) is capable of absorbing energy, stor-
11 ing energy for a period of time, and dispatching
12 the stored energy using batteries, compressed
13 air, pumped hydropower, thermal energy stor-
14 age, liquid air, regenerative fuel cells, flywheels,
15 capacitors, superconducting magnets, stacked
16 objects, or other technologies identified by the
17 Secretary, in consultation with the Secretary of
18 Energy, and

19 “(B) has a capacity of not less than 1
20 megawatt.

21 “(4) APPLICATION WITH OTHER CREDITS.—

22 “(A) IN GENERAL.—The term ‘qualified
23 emerging energy property’ shall not include any
24 property for which, for the taxable year or any
25 prior taxable year—

1 “(i) electricity produced from such
2 property is taken into account for purposes
3 of the credit allowed under section 45,
4 45J, or 45U,

5 “(ii) qualified carbon oxide captured
6 by such property is taken into account for
7 purposes of the credit allowed under sec-
8 tion 45Q,

9 “(iii) the basis of such property is
10 taken into account for purposes of the
11 credit allowed under section 48, 48A, 48B,
12 or 48C, or

13 “(iv) hydrogen produced from such
14 property is taken into account for purposes
15 of the credit allowed under section 45V.

16 “(B) DENIAL OF DOUBLE BENEFIT.—With
17 respect to any section described in clause (i),
18 (ii), (iii), or (iv) of subparagraph (A), no credit
19 shall be allowed under such section for any tax-
20 able year with respect to any property for which
21 a credit is allowed under this section for such
22 taxable year or any prior taxable year.

23 “(C) ADDITIONAL RULE.—Subparagraphs
24 (A)(ii) and (B) shall not apply for purposes of
25 the credit allowed under this section or section

1 45Q with respect to any qualified carbon oxide
2 captured using property described in paragraph
3 (2)(A) if such carbon oxide is disposed of in a
4 manner consistent with section 45Q(a)(3)(B).

5 “(c) APPLICABLE PERCENTAGES.—

6 “(1) QUALIFIED PRODUCTION FACILITIES.—In
7 the case of any qualified production facility which
8 satisfies the requirements for—

9 “(A) a tier 1 facility (as described in
10 clause (i) of section 45U(b)(2)(A)), the applica-
11 ble percentage shall be 40 percent,

12 “(B) a tier 2 facility (as described in
13 clause (ii) of such section), the applicable per-
14 centage shall be 30 percent,

15 “(C) a tier 3 facility (as described in
16 clause (iii) of such section), the applicable per-
17 centage shall be 20 percent, and

18 “(D) a tier 4 facility (as described in
19 clause (iv) of such section), the applicable per-
20 centage shall be 10 percent.

21 “(2) CARBON CAPTURE EQUIPMENT.—

22 “(A) IN GENERAL.—With respect to car-
23 bon capture equipment, the applicable percent-
24 age shall be—

1 “(i) in the case of tier 1 equipment,
2 40 percent,

3 “(ii) in the case of tier 2 equipment,
4 30 percent,

5 “(iii) in the case of tier 3 equipment,
6 20 percent,

7 “(iv) in the case of tier 4 equipment,
8 10 percent, and

9 “(v) in the case of any other such
10 equipment, zero percent.

11 “(B) EQUIPMENT TIERS.—

12 “(i) IN GENERAL.—For purposes of
13 this paragraph—

14 “(I) TIER 1 EQUIPMENT.—The
15 term ‘tier 1 equipment’ means any
16 carbon capture equipment placed in
17 service during the taxable year if the
18 market penetration level for the cal-
19 endar year preceding the calendar
20 year in which such taxable year began
21 is less than 0.5 percent.

22 “(II) TIER 2 EQUIPMENT.—The
23 term ‘tier 2 equipment’ has the same
24 meaning given the term ‘tier 1 equip-
25 ment’ under subclause (I), except that

1 ‘at least 0.5 percent but less than 1
2 percent’ shall be substituted for ‘less
3 than 0.5 percent’.

4 “(III) TIER 3 EQUIPMENT.—The
5 term ‘tier 3 equipment’ has the same
6 meaning given the term ‘tier 1 equip-
7 ment’ under subclause (I), except that
8 ‘at least 1 percent but less than 1.5
9 percent’ shall be substituted for ‘less
10 than 0.5 percent’.

11 “(IV) TIER 4 EQUIPMENT.—The
12 term ‘tier 4 equipment’ has the same
13 meaning given the term ‘tier 1 equip-
14 ment’ under subclause (I), except that
15 ‘at least 1.5 percent but less than 2
16 percent’ shall be substituted for ‘less
17 than 0.5 percent’.

18 “(ii) MARKET PENETRATION
19 LEVEL.—For purposes of this subpara-
20 graph, the term ‘market penetration level’
21 means, with respect to any calendar year,
22 the amount equal to the greater of—

23 “(I) the amount (expressed as a
24 percentage) equal to the quotient of—

1 “(aa) the total amount (ex-
2 pressed in metric tons) of carbon
3 oxide captured and disposed of,
4 used, or utilized in a manner
5 consistent with the requirements
6 under section 45Q by carbon cap-
7 ture equipment within the United
8 States during such calendar year
9 (as determined by the Secretary
10 on the basis of data reported by
11 the Environmental Protection
12 Agency), divided by

13 “(bb) the total amount of
14 greenhouse gas emissions in the
15 United States (expressed in met-
16 ric tons of CO₂-e) during such
17 year, or

18 “(II) the amount determined
19 under this clause for the preceding
20 calendar year.

21 “(iii) INITIAL APPLICATION.—For
22 purposes of the first calendar year begin-
23 ning after the date of enactment of this
24 section, the amount under clause (ii)(II)
25 shall be deemed to be zero.

1 “(C) DIVISION OF EQUIPMENT FOR PUR-
2 POSES OF DETERMINING TIER.—For purposes
3 of determining the applicable tier for any car-
4 bon capture equipment under subparagraph
5 (B), such subparagraph shall be applied sepa-
6 rately (and the total amount of carbon oxide
7 captured by such equipment shall be determined
8 separately) with respect to—

9 “(i) any such equipment described in
10 subclause (I) of subsection (b)(2)(A)(ii),

11 “(ii) any such equipment described in
12 subclause (II) of such subsection,

13 “(iii) any such equipment described in
14 subclause (III) of such subsection, and

15 “(iv) any such equipment described in
16 subparagraph (B) of subsection (b)(2).

17 “(D) DETERMINATION OF TIER.—For pur-
18 poses of this paragraph, the determination as to
19 whether any carbon capture equipment qualifies
20 as a tier 1, 2, 3, or 4 equipment shall be made
21 during the year in which construction of such
22 equipment begins (as determined under rules
23 similar to the rules in section 45U(e)).

24 “(E) REPORTING.—The Secretary shall, as
25 part of the report described in section

1 45U(b)(2)(E)(i), publish the applicable tier for
2 any carbon capture equipment (as determined
3 separately for such equipment pursuant to sub-
4 paragraph (C)).

5 “(3) ENERGY STORAGE TECHNOLOGY.—

6 “(A) IN GENERAL.—With respect to en-
7 ergy storage technology, the applicable percent-
8 age shall be—

9 “(i) in the case of tier 1 technology,
10 40 percent,

11 “(ii) in the case of tier 2 technology,
12 30 percent,

13 “(iii) in the case of tier 3 technology,
14 20 percent,

15 “(iv) in the case of tier 4 technology,
16 10 percent, and

17 “(v) in the case of any other such
18 technology, zero percent.

19 “(B) TECHNOLOGY TIERS.—

20 “(i) IN GENERAL.—For purposes of
21 this paragraph—

22 “(I) TIER 1 TECHNOLOGY.—The
23 term ‘tier 1 technology’ means any en-
24 ergy storage technology placed in
25 service during the taxable year if the

1 market penetration level for the cal-
2 endar year preceding the calendar
3 year in which such taxable year began
4 is less than 0.5 percent.

5 “(II) TIER 2 TECHNOLOGY.—The
6 term ‘tier 2 technology’ has the same
7 meaning given the term ‘tier 1 tech-
8 nology’ under subclause (I), except
9 that ‘at least 0.5 percent but less than
10 1 percent’ shall be substituted for
11 ‘less than 0.5 percent’.

12 “(III) TIER 3 TECHNOLOGY.—
13 The term ‘tier 3 technology’ has the
14 same meaning given the term ‘tier 1
15 technology’ under subclause (I), ex-
16 cept that ‘at least 1 percent but less
17 than 1.5 percent’ shall be substituted
18 for ‘less than 0.5 percent’.

19 “(IV) TIER 4 TECHNOLOGY.—
20 The term ‘tier 4 technology’ has the
21 same meaning given the term ‘tier 1
22 technology’ under subclause (I), ex-
23 cept that ‘at least 1.5 percent but less
24 than 2 percent’ shall be substituted
25 for ‘less than 0.5 percent’.

15

1 “(ii) MARKET PENETRATION
2 LEVEL.—For purposes of this subpara-
3 graph, the term ‘market penetration level’
4 means, with respect to any calendar year,
5 the amount equal to the greater of—

6 “(I) the amount (expressed as a
7 percentage) equal to the quotient of—

8 “(aa) the total nameplate
9 capacity (expressed in
10 megawatts) of energy storage
11 technology in operation within
12 the United States at the begin-
13 ning of such calendar year (as
14 determined by the Secretary on
15 the basis of data reported by the
16 Energy Information Administra-
17 tion), divided by

18 “(bb) the total domestic
19 electricity production nameplate
20 capacity (expressed in
21 megawatts) at the close of such
22 year, or

23 “(II) the amount determined
24 under this clause for the preceding
25 calendar year.

1 “(iii) INITIAL APPLICATION.—For
2 purposes of the first calendar year begin-
3 ning after the date of enactment of this
4 section, the amount under clause (ii)(II)
5 shall be deemed to be zero.

6 “(C) DIVISION OF TECHNOLOGY FOR PUR-
7 POSES OF DETERMINING TIER.—

8 “(i) IN GENERAL.—For purposes of
9 determining the applicable tier for any en-
10 ergy storage technology under subpara-
11 graph (B), such subparagraph shall be ap-
12 plied separately (and the total capacity of
13 such technology shall be determined sepa-
14 rately) with respect to—

15 “(I) any such technology which is
16 lithium-ion based,

17 “(II) any such technology which
18 uses pumped hydropower,

19 “(III) any such technology
20 which—

21 “(aa) is not described in
22 subclause (I) or (II), and

23 “(bb) is classified as short-
24 duration storage under clause
25 (ii), and

17

1 “(IV) any such technology
2 which—

3 “(aa) is not described in
4 subclause (I) or (II), and

5 “(bb) is classified as long-
6 duration storage under clause
7 (ii).

8 “(ii) CLASSIFICATION.—The Secretary
9 of Energy (in consultation with the Sec-
10 retary) shall issue such regulations or
11 other guidance as the Secretary of Energy
12 determines necessary or appropriate to de-
13 fine the terms ‘short-duration storage’ and
14 ‘long-duration storage’ for purposes of
15 classifying energy storage technology under
16 clause (i).

17 “(D) DETERMINATION OF TIER.—For pur-
18 poses of this paragraph, the determination as to
19 whether any energy storage technology qualifies
20 as a tier 1, 2, 3, or 4 technology shall be made
21 during the year in which construction of such
22 technology begins (as determined under rules
23 similar to the rules in section 45U(e)).

24 “(E) REPORTING.—The Secretary shall, as
25 part of the report described in section

1 45U(b)(2)(E)(i), publish the applicable tier for
2 any energy storage technology (as determined
3 separately for such technology pursuant to sub-
4 paragraph (C)).

5 “(d) SPECIAL RULES.—

6 “(1) CERTAIN QUALIFIED PROGRESS EXPENDI-
7 TURE RULES MADE APPLICABLE.—Rules similar to
8 the rules of subsections (c)(4) and (d) of section 46
9 (as in effect on the day before the enactment of the
10 Revenue Reconciliation Act of 1990) shall apply for
11 purposes of this section.

12 “(2) TRANSFER OF CREDIT.—

13 “(A) IN GENERAL.—If, with respect to a
14 credit allowed under subsection (a) for any tax-
15 able year, the taxpayer elects the application of
16 this paragraph for such taxable year with re-
17 spect to all (or any portion specified in such
18 election) of such credit, the eligible project part-
19 ner specified in such election, and not the tax-
20 payer, shall be treated as the taxpayer for pur-
21 poses of this title with respect to such credit (or
22 such portion thereof).

23 “(B) ELIGIBLE PROJECT PARTNER.—

24 “(i) IN GENERAL.—For purposes of
25 this paragraph, the term ‘eligible project

1 partner’ means, with respect to any quali-
2 fied emerging energy property, any person
3 who—

4 “(I) has an ownership interest in
5 such property,

6 “(II) provided equipment for or
7 services in the construction of such
8 property,

9 “(III) provides electric trans-
10 mission or distribution services for
11 such property,

12 “(IV) purchases electricity from
13 such property pursuant to a contract,
14 or

15 “(V) provides financing for such
16 property.

17 “(ii) FINANCING.—For purposes of
18 clause (i)(V), any amount paid as consider-
19 ation for a transfer described in subpara-
20 graph (A) shall not be treated as financing
21 for qualified emerging energy property.

22 “(C) DEDUCTION FOR PAYMENTS IN CON-
23 NECTION WITH TRANSFER.—A deduction under
24 part VI of subchapter B shall be allowed in an
25 amount equal to the amount paid by the tax-

1 payer as consideration for a transfer described
2 in subparagraph (A).

3 “(D) TAXABLE YEAR IN WHICH CREDIT
4 TAKEN INTO ACCOUNT.—In the case of any
5 credit (or portion thereof) with respect to which
6 an election is made under subparagraph (A),
7 such credit shall be taken into account in the
8 first taxable year of the eligible project partner
9 ending with, or after, the electing taxpayer’s
10 taxable year with respect to which the credit
11 was determined.

12 “(E) LIMITATIONS ON ELECTION.—

13 “(i) TIME FOR ELECTION.—An elec-
14 tion under this paragraph to transfer any
15 portion of the credit allowed under sub-
16 section (a) shall be made not later than the
17 due date for the return of tax for the elect-
18 ing taxpayer’s taxable year with respect to
19 which the credit was determined.

20 “(ii) NO FURTHER TRANSFERS.—No
21 election may be made under this paragraph
22 by a taxpayer with respect to any portion
23 of the credit allowed under subsection (a)
24 which has been previously transferred to
25 such taxpayer under this paragraph.

1 “(F) TREATMENT OF TRANSFER UNDER
2 PRIVATE USE RULES.—For purposes of section
3 141(b)(1), any benefit derived by an eligible
4 project partner in connection with an election
5 under this paragraph shall not be taken into ac-
6 count as a private business use.

7 “(G) SPECIAL RULES FOR PUBLIC PROP-
8 ERTY.—

9 “(i) IN GENERAL.—If, with respect to
10 a credit under subsection (a) for any tax-
11 able year—

12 “(I) a qualified public entity
13 would be the taxpayer (but for this
14 subparagraph), and

15 “(II) such entity elects the appli-
16 cation of subparagraph (A) for such
17 taxable year with respect to all (or
18 any portion specified in such election)
19 of such credit,

20 the eligible project partner specified in
21 such election, and not the qualified public
22 entity, shall be treated as the taxpayer for
23 purposes of this title with respect to such
24 credit (or such portion thereof).

1 “(ii) QUALIFIED PUBLIC ENTITY.—

2 For purposes of this subparagraph, the

3 term ‘qualified public entity’ means—

4 “(I) any State or local govern-

5 ment, or a political subdivision there-

6 of, or

7 “(II) an Indian tribal govern-

8 ment.

9 “(H) PROPERTY USED BY CERTAIN TAX-

10 EXEMPT ORGANIZATIONS AND GOVERNMENTAL

11 UNITS.—In the case of a taxpayer making an

12 election under this paragraph, the credit subject

13 to such an election shall be determined notwith-

14 standing—

15 “(i) section 50(b)(3), and

16 “(ii) in the case of any entity de-

17 scribed in section 50(b)(4)(A)(i), section

18 50(b)(4).

19 “(I) ADDITIONAL ELECTION REQUIRE-

20 MENTS.—The Secretary may prescribe such

21 regulations as may be appropriate to carry out

22 the purposes of this paragraph, including—

23 “(i) rules for determining which per-

24 sons are eligible project partners with re-

1 spect to any qualified emerging energy
2 property, and

3 “(ii) requiring information to be in-
4 cluded in an election under subparagraph
5 (A) or imposing additional reporting re-
6 quirements.

7 “(e) REGULATIONS.—The Secretary (in consultation
8 with the Secretary of Energy and the Administrator of
9 the Environmental Protection Agency) shall issue such
10 regulations or other guidance as the Secretary determines
11 necessary or appropriate to carry out the purposes of this
12 section, including rules for reporting—

13 “(1) for purposes of paragraph (2)(B)(ii) of
14 subsection (c), the amount of carbon oxide captured
15 by carbon capture equipment, and

16 “(2) for purposes of paragraph (3)(B)(ii) of
17 such subsection, the capacity of energy storage tech-
18 nology.”.

19 (b) SPECIAL RULE FOR PROCEEDS OF TRANSFERS
20 FOR MUTUAL OR COOPERATIVE ELECTRIC COMPANIES.—
21 Section 501(c)(12)(I) of such Code is amended by insert-
22 ing “or 48D(d)(2)” after “section 45J(e)(1)”.

23 (c) CONFORMING AMENDMENTS.—

24 (1) Section 46 of such Code is amended by
25 striking “and” at the end of paragraph (5), by strik-

1 ing the period at the end of paragraph (6) and in-
2 sserting “, and”, and by adding at the end the fol-
3 lowing new paragraph:

4 “(7) the emerging energy technology credit.”.

5 (2) Section 49(a)(1)(C) of such Code is amend-
6 ed by striking “and” at the end of clause (iv), by
7 striking the period at the end of clause (v) and in-
8 sserting “, and”, and by adding at the end the fol-
9 lowing new clause:

10 “(vi) the basis of any qualified emerg-
11 ing energy property (as defined in section
12 48D(b)(1)).”.

13 (3) The table of sections for subpart E of part
14 IV of subchapter A of chapter 1 of such Code is
15 amended by inserting after the item relating to sec-
16 tion 48C the following new item:

“Sec. 48D. Emerging energy technology credit.”.

17 (d) EFFECTIVE DATE.—The amendments made by
18 this section shall apply to property placed in service in
19 taxable years beginning after the date of the enactment
20 of this Act, under rules similar to the rules of section
21 48(m) of the Internal Revenue Code of 1986 (as in effect
22 on the day before the date of the enactment of the Rev-
23 enue Reconciliation Act of 1990).

1 **SEC. 4. PRODUCTION CREDIT FOR EMERGING ENERGY**
2 **TECHNOLOGY.**

3 (a) IN GENERAL.—Subpart D of part IV of sub-
4 chapter A of chapter 1 of the Internal Revenue Code of
5 1986 is amended by adding at the end the following new
6 section:

7 **“SEC. 45U. ELECTRICITY PRODUCED FROM EMERGING EN-**
8 **ERGY TECHNOLOGY.**

9 “(a) GENERAL RULE.—For purposes of section 38,
10 the emerging energy technology production credit deter-
11 mined under this section for any taxable year beginning
12 in the credit period with respect to a qualified production
13 facility of the taxpayer is an amount equal to the applica-
14 ble percentage of the lesser of—

15 “(1) the annual gross receipts of the taxpayer
16 from the sale of electricity generated at the qualified
17 production facility to an unrelated person (within
18 the meaning of section 45(e)(4)) during such taxable
19 year, or

20 “(2) the product of—

21 “(A) 150 percent of the national average
22 wholesale price of a kilowatt hour of electricity
23 in the calendar year preceding the calendar
24 year in which such taxable year begins, as de-
25 termined by the Secretary in consultation with
26 the Secretary of Energy, multiplied by

1 “(B) the number of kilowatt hours of elec-
2 tricity produced at the qualified production fa-
3 cility and sold to an unrelated person (within
4 the meaning of section 45(e)(4)) during such
5 taxable year.

6 “(b) APPLICABLE PERCENTAGE.—

7 “(1) IN GENERAL.—For purposes of subsection
8 (a), the applicable percentage is—

9 “(A) in the case of a tier 1 facility, 60 per-
10 cent,

11 “(B) in the case of a tier 2 facility, 45 per-
12 cent

13 “(C) in the case of a tier 3 facility, 30 per-
14 cent,

15 “(D) in the case of a tier 4 facility, 15 per-
16 cent, and

17 “(E) in the case of any other facility, zero
18 percent.

19 “(2) FACILITY TIERS.—

20 “(A) IN GENERAL.—For purposes of this
21 section—

22 “(i) TIER 1 FACILITY.—The term ‘tier
23 1 facility’ means any qualified production
24 facility which generates electricity from an
25 individual energy production technology—

1 “(I) described in subsection
2 (d)(2)(A), and

3 “(II) for which the market pene-
4 tration level for the calendar year pre-
5 ceding the calendar year in which the
6 taxable year begins is less than 0.5
7 percent.

8 “(ii) TIER 2 FACILITY.—The term
9 ‘tier 2 facility’ has the same meaning given
10 the term ‘tier 1 facility’ under clause (i),
11 except that ‘at least 0.5 percent but less
12 than 1 percent’ shall be substituted for
13 ‘less than 0.5 percent’.

14 “(iii) TIER 3 FACILITY.—The term
15 ‘tier 3 facility’ has the same meaning given
16 the term ‘tier 1 facility’ under clause (i),
17 except that ‘at least 1 percent but less
18 than 1.5 percent’ shall be substituted for
19 ‘less than 0.5 percent’.

20 “(iv) TIER 4 FACILITY.—The term
21 ‘tier 4 facility’ has the same meaning given
22 the term ‘tier 1 facility’ under clause (i),
23 except that ‘at least 1.5 percent but less
24 than 2 percent’ shall be substituted for
25 ‘less than 0.5 percent’.

1 “(B) MARKET PENETRATION LEVEL.—For
2 purposes of this paragraph, the term ‘market
3 penetration level’ means, with respect to any
4 calendar year, the amount equal to the greater
5 of—

6 “(i) the amount (expressed as a per-
7 centage) equal to the quotient of—

8 “(I) the sum of all electricity pro-
9 duced (expressed in terawatt hours)
10 from the individual energy production
11 technology by all qualified production
12 facilities (as defined in subsection
13 (d)(1), except that subparagraph (D)
14 of such subsection shall not apply)
15 during such calendar year (as deter-
16 mined by the Secretary on the basis of
17 data reported by the Energy Informa-
18 tion Administration), divided by

19 “(II) the total domestic power
20 sector electricity production (ex-
21 pressed in terawatt hours) for such
22 calendar year, or

23 “(ii) the amount determined under
24 this subparagraph for the preceding cal-
25 endar year.

1 “(C) INITIAL APPLICATION.—For purposes
2 of the first calendar year beginning after the
3 date of enactment of this section, the amount
4 under subparagraph (B)(ii) shall be deemed to
5 be zero.

6 “(D) CONSTRUCTION BEGINS.—For pur-
7 poses of this subsection and section 48D, the
8 determination as to whether a facility qualifies
9 as a tier 1, 2, 3, or 4 facility shall be—

10 “(i) made during the year in which
11 construction of such facility begins, and

12 “(ii) contingent on the taxpayer main-
13 taining a continuous program of construc-
14 tion or continuous efforts to advance to-
15 wards completion of the facility.

16 “(E) GUIDANCE AND REPORTS.—

17 “(i) REPORTS.—Not later than 1 year
18 after the date of enactment of this section,
19 and not later than January 31 of each
20 subsequent year, the Secretary of Energy
21 (in consultation with the Secretary) shall
22 publish a report with respect to the appli-
23 cable tier for each individual energy pro-
24 duction technology described in subsection
25 (d)(2)(A) which has been used to generate

1 electricity by any qualified production facil-
2 ity (as defined in subsection (d)(1), except
3 that subparagraph (D) of such subsection
4 shall not apply).

5 “(ii) CLASSIFICATION OF ENERGY
6 PRODUCTION TECHNOLOGY.—The Sec-
7 retary of Energy (in consultation with the
8 Secretary) shall issue such regulations or
9 other guidance (as well as any subsequent
10 updates to such regulations or guidance)
11 as the Secretary of Energy determines nec-
12 essary or appropriate to ensure that any
13 qualified production facility or technology
14 used for the production of electricity is
15 classified within a single energy production
16 technology for purposes of subsection
17 (d)(2). In the case of any technology used
18 for the production of electricity which may
19 be classified within 2 or more different cat-
20 egories of energy production technology
21 under such subsection, the Secretary of
22 Energy shall make the determination as to
23 the correct category with respect to such
24 technology as rapidly as possible, with such

1 “(ii) Light water reactor-based ad-
2 vanced nuclear fission.

3 “(iii) Non-light water reactor-based
4 advanced nuclear fission.

5 “(iv) Nuclear fusion.

6 “(v) Concentrating solar thermal
7 power.

8 “(vi) Silicon photovoltaic.

9 “(vii) Cadmium telluride and copper
10 indium gallium selenide solar.

11 “(viii) Emerging photovoltaics.

12 “(ix) Enhanced geothermal.

13 “(x) Hydrothermal.

14 “(xi) Marine energy.

15 “(xii) Fixed bottom offshore wind.

16 “(xiii) Floating offshore wind.

17 “(xiv) Traditional onshore wind.

18 “(xv) New onshore wind.

19 “(xvi) Coal.

20 “(xvii) Natural gas.

21 “(xviii) Petroleum.

22 “(xix) Open-loop biomass.

23 “(xx) Closed-loop biomass.

24 “(xxi) Hydropower.

25 “(B) ADDITIONAL SPECIFICATIONS.—

1 “(i) NUCLEAR FISSION.—

2 “(I) TRADITIONAL NUCLEAR FIS-
3 SION.—For purposes of clause (i) of
4 subparagraph (A), the term ‘tradi-
5 tional nuclear fission’ means any nu-
6 clear fission which is not described in
7 subclause (II) or (III).

8 “(II) LIGHT WATER REACTOR-
9 BASED ADVANCED NUCLEAR FIS-
10 SION.—For purposes of clause (ii) of
11 such subparagraph, the term ‘light
12 water reactor-based advanced nuclear
13 fission’ shall include small modular
14 light water reactors.

15 “(III) NON-LIGHT WATER REAC-
16 TOR-BASED ADVANCED NUCLEAR FIS-
17 SION.—For purposes of clause (iii) of
18 such subparagraph, the term ‘non-
19 light water reactor-based advanced
20 nuclear fission’ means any advanced
21 nuclear fission which is not included
22 under clause (ii) of such subpara-
23 graph.

24 “(ii) NUCLEAR FUSION.—For pur-
25 poses of clause (iv) of subparagraph (A),

1 only nuclear fusion for which net power is
2 produced from the fusion reaction shall be
3 included.

4 “(iii) EMERGING PHOTOVOLTAICS.—
5 For purposes of clause (viii) of such sub-
6 paragraph, the term ‘emerging
7 photovoltaics’ includes perovskite-based
8 and perovskite-enhanced solar, quantum
9 dots, organic photovoltaics, multi-junction
10 tandem devices, and any photovoltaic solar
11 technology not included under clause (vii)
12 of such subparagraph.

13 “(iv) MARINE ENERGY.—For pur-
14 poses of clause (xi) of such subparagraph,
15 the term ‘marine energy’ has the same
16 meaning given such term under section
17 632 of the Energy Independence and Secu-
18 rity Act of 2007 (42 U.S.C. 17211).

19 “(v) TRADITIONAL ONSHORE WIND.—
20 For purposes of clause (xiv) of subpara-
21 graph (A), the term ‘traditional onshore
22 wind’ means any energy production tech-
23 nology of a design which is the same as or
24 substantially similar to wind technology
25 that has achieved megawatt scale or larger

1 deployment in the United States as of the
2 date of enactment of this section.

3 “(vi) NEW ONSHORE WIND.—For pur-
4 poses of clause (xv) of such subparagraph,
5 the term ‘new onshore wind’ means any
6 energy production technology which is not
7 included in clause (xiv) of such subpara-
8 graph.

9 “(vii) OPEN-LOOP BIOMASS.—For
10 purposes of clause (xix) of such subpara-
11 graph, the term ‘open-loop biomass’ has
12 the same meaning given such term under
13 section 45(c)(3).

14 “(viii) CLOSED-LOOP BIOMASS.—For
15 purposes of clause (xx) of such subpara-
16 graph, the term ‘closed-loop biomass’ has
17 the same meaning given such term under
18 section 45(c)(2).

19 “(3) EMISSIONS RATE.—

20 “(A) EXCLUSIONS.—For purposes of para-
21 graph (1)(C), the emissions rate shall not in-
22 clude—

23 “(i) any emissions which are captured
24 using carbon capture equipment, provided
25 that any carbon oxide captured using such

1 equipment is disposed of, used, or utilized
2 in a manner consistent with the require-
3 ments under section 45Q, or

4 “(ii) in the case of electricity gen-
5 erated from any fossil fuel, any upstream
6 or fugitive emissions, such as emissions re-
7 lated to the extraction, transportation,
8 storage of such fuel.

9 “(B) LIFECYCLE ANALYSIS.—For purposes
10 of paragraph (1)(C), in the case of any facility
11 which generates electricity through combustion
12 of a non-fossil fuel, the emissions rate shall be
13 determined based on a lifecycle analysis.

14 “(4) APPLICATION WITH OTHER CREDITS.—

15 “(A) IN GENERAL.—The term ‘qualified
16 production facility’ shall not include any prop-
17 erty for which, for the taxable year or any prior
18 taxable year—

19 “(i) electricity produced from such
20 property is taken into account for purposes
21 of the credit allowed under section 45 or
22 45J,

23 “(ii) qualified carbon oxide captured
24 by such property is taken into account for

1 purposes of the credit allowed under sec-
2 tion 45Q,

3 “(iii) the basis of such property is
4 taken into account for purposes of the
5 credit allowed under section 48, 48A, 48B,
6 48C, or 48D, or

7 “(iv) hydrogen produced from such
8 property is taken into account for purposes
9 of the credit allowed under section 45V.

10 “(B) DENIAL OF DOUBLE BENEFIT.—With
11 respect to any section described in clause (i),
12 (ii), (iii), or (iv) of subparagraph (A), no credit
13 shall be allowed under such section for any tax-
14 able year with respect to any property for which
15 a credit is allowed under this section for such
16 taxable year or any prior taxable year.

17 “(5) CO₂-e.—In this section, the term ‘CO₂-e’
18 means the quantity of a greenhouse gas that has a
19 global warming potential equivalent to 1 metric ton
20 of carbon dioxide, as determined under table A–1 of
21 subpart A of part 98 of title 40, Code of Federal
22 Regulations, as in effect on the date of enactment of
23 this section.

1 “(e) DETERMINATION OF WHEN CONSTRUCTION BE-
2 GINS; CONTINUOUS PROGRAM OF CONSTRUCTION OR
3 CONTINUITY OF EFFORT.—

4 “(1) IN GENERAL.—For purposes of this sec-
5 tion, construction of a facility begins when—

6 “(A) physical work of a significant nature
7 begins, or

8 “(B) during the year in which the taxpayer
9 begins physical work, a facility has invested not
10 less than—

11 “(i) 2 percent of construction costs, or

12 “(ii) \$50,000,000.

13 “(2) WORK PERFORMED.—For purposes of
14 paragraph (1), any work performed—

15 “(A) by the taxpayer, or

16 “(B) for the taxpayer by other persons
17 under a binding written contract which is en-
18 tered into prior to the manufacture, construc-
19 tion, or production of the property for use by
20 the taxpayer in the taxpayer’s trade or business
21 (or for the taxpayer’s production of income),

22 shall be taken into account in determining whether
23 construction has begun.

24 “(3) CONTINUOUS PROGRAM OF CONSTRUC-
25 TION.—For purposes of this section, the term ‘con-

1 tinuous program of construction’ means continuing
2 physical work of a significant nature, as determined
3 by the Secretary based upon relevant facts and cir-
4 cumstances.

5 “(4) CONTINUOUS EFFORTS.—For purposes of
6 this section, the term ‘continuous efforts’ means
7 making continuous efforts towards completion of the
8 facility, as determined by the Secretary based upon
9 relevant facts and circumstances.

10 “(f) TRANSFER OF CREDIT.—Rules similar to the
11 rules of subsection (d)(2) of section 48D shall apply for
12 purposes of this section.

13 “(g) REGULATIONS.—Not later than 18 months after
14 the date of the enactment of this section, the Secretary
15 shall prescribe such regulations as may be necessary or
16 appropriate to carry out the purposes of this section.”.

17 (b) CREDIT ALLOWED AS PART OF GENERAL BUSI-
18 NESS CREDIT.—Section 38(b) of the Internal Revenue
19 Code of 1986 is amended by striking “plus” at the end
20 of paragraph (32), by striking the period at the end of
21 paragraph (33) and inserting “, plus”, and by adding at
22 the end the following new paragraph:

23 “(34) the emerging energy technology produc-
24 tion credit determined under section 45U(a).”.

1 (c) SPECIAL RULE FOR PROCEEDS OF TRANSFERS
2 FOR MUTUAL OR COOPERATIVE ELECTRIC COMPANIES.—
3 Section 501(c)(12)(I) of such Code, as amended by section
4 3(b), is amended by striking “or 48D(d)(2)” and inserting
5 “, 45U(f), or 48D(d)(2)”.

6 (d) CLERICAL AMENDMENT.—The table of sections
7 for subpart D of part IV of subchapter A of chapter 1
8 of the Internal Revenue Code of 1986 is amended by add-
9 ing at the end the following new item:

“Sec. 45U. Electricity produced from emerging energy technology.”.

10 (e) EFFECTIVE DATE.—The amendments made by
11 this section shall apply to electricity produced and sold
12 in taxable years beginning after the date of the enactment
13 of this Act, at facilities the construction of which begins
14 after the date of enactment of this section.

15 **SEC. 5. CLEAN HYDROGEN PRODUCTION CREDIT.**

16 (a) IN GENERAL.—Subpart D of part IV of sub-
17 chapter A of chapter 1 of the Internal Revenue Code of
18 1986, as amended by section 4, is amended by adding at
19 the end the following new section:

20 **“SEC. 45V. CLEAN HYDROGEN PRODUCTION.**

21 “(a) GENERAL RULE.—

22 “(1) AMOUNT OF CREDIT.—For purposes of
23 section 38, the clean hydrogen production credit de-
24 termined under this section for any taxable year be-
25 ginning in the credit period with respect to a quali-

1 fied hydrogen production facility of the taxpayer is
2 an amount equal to the product of—

3 “(A) the applicable percentage of the na-
4 tional average wholesale price of a kilogram of
5 hydrogen in the calendar year preceding the
6 calendar year in which such taxable year be-
7 gins, as determined by the Secretary in con-
8 sultation with the Secretary of Energy, and

9 “(B) subject to paragraph (2), the amount
10 of clean hydrogen produced at the qualified hy-
11 drogen production facility and sold to an unre-
12 lated person (within the meaning of section
13 45(e)(4)) during such taxable year.

14 “(2) INCREASE FOR ZERO-EMISSIONS HYDRO-
15 GEN.—In the case of any clean hydrogen described
16 in subsection (d)(1)(A)(ii), the amount determined
17 under paragraph (1)(B) with respect to such clean
18 hydrogen shall be equal to twice the amount other-
19 wise determined under such paragraph.

20 “(b) APPLICABLE PERCENTAGE.—

21 “(1) IN GENERAL.—For purposes of subsection
22 (a)(1)(A), the applicable percentage is—

23 “(A) in the case of a tier 1 facility, 60 per-
24 cent,

1 “(B) in the case of a tier 2 facility, 45 per-
2 cent

3 “(C) in the case of a tier 3 facility, 30 per-
4 cent,

5 “(D) in the case of a tier 4 facility, 15 per-
6 cent, and

7 “(E) in the case of any other facility, zero
8 percent.

9 “(2) FACILITY TIERS.—

10 “(A) IN GENERAL.—For purposes of this
11 subsection—

12 “(i) TIER 1 FACILITY.—The term ‘tier
13 1 facility’ means any qualified hydrogen
14 production facility which produces clean
15 hydrogen from a qualified production
16 method for which the market penetration
17 level for the calendar year preceding the
18 calendar year in which the taxable year be-
19 gins is less than 0.5 percent.

20 “(ii) TIER 2 FACILITY.—The term
21 ‘tier 2 facility’ has the same meaning given
22 the term ‘tier 1 facility’ under clause (i),
23 except that ‘at least 0.5 percent but less
24 than 1 percent’ shall be substituted for
25 ‘less than 0.5 percent’.

1 ties (as defined in subsection
2 (d)(2)(A), except that clause (iii) of
3 such subsection shall not apply) dur-
4 ing such calendar year (as determined
5 by the Secretary on the basis of data
6 reported by the Energy Information
7 Administration), divided by

8 “(II) the total domestic power
9 sector electricity production (ex-
10 pressed in megawatt hours) for such
11 calendar year, or

12 “(ii) the amount determined under
13 this subparagraph for the preceding cal-
14 endar year

15 “(C) INITIAL APPLICATION.—For purposes
16 of the first calendar year beginning after the
17 date of enactment of this section, the amount
18 under subparagraph (B)(ii) shall be deemed to
19 be zero.

20 “(D) DIVISION OF PRODUCTION METHODS
21 FOR PURPOSES OF DETERMINING TIER.—For
22 purposes of determining the applicable tier for
23 any qualified production method under subpara-
24 graph (B), such subparagraph shall be applied
25 separately with respect to—

1 “(i) any such method described in
2 subparagraph (A) of subsection (d)(3), and

3 “(ii) any such method described in
4 subparagraph (B) of such subsection.

5 “(E) CONSTRUCTION BEGINS.—For pur-
6 poses of this subsection, the determination as to
7 whether a facility qualifies as a tier 1, 2, 3, or
8 4 facility shall be—

9 “(i) made during the year in which
10 construction or modification of such facil-
11 ity begins, and

12 “(ii) contingent on the taxpayer main-
13 taining a continuous program of construc-
14 tion or continuous efforts to advance to-
15 wards completion of the facility.

16 “(F) REPORTS.—Not later than 1 year
17 after the date of enactment of this section, and
18 not later than January 31 of each subsequent
19 year, the Secretary shall publish a report with
20 respect to the applicable tier for each qualified
21 production method which has been used to
22 produce clean hydrogen by any qualified hydro-
23 gen production facility (as defined in subsection
24 (d)(2)(A), except that clause (iii) of such sub-
25 section shall not apply).

1 “(c) CREDIT PERIOD.—For purposes of this section,
2 the credit period with respect to any qualified hydrogen
3 production facility is—

4 “(1) in the case of a facility described in sub-
5 clause (I) of subsection (d)(2)(A)(iii), the 10-year
6 period beginning with the date the facility was origi-
7 nally placed in service, or

8 “(2) in the case of a facility described in sub-
9 clause (II) of such subsection, the 10-year period be-
10 ginning with the date that the property required to
11 modify such facility is placed in service.

12 “(d) DEFINITIONS.—In this section—

13 “(1) CLEAN HYDROGEN.—

14 “(A) IN GENERAL.—The term ‘clean hy-
15 drogen’ means hydrogen which, as determined
16 based on a lifecycle analysis, is produced
17 through a qualified production method for
18 which the rate of the greenhouse gas emis-
19 sions—

20 “(i) is greater than zero and not
21 greater than 2,000g CO₂-e (as defined in
22 section 45U(d)(5)) per kilogram of hydro-
23 gen produced, or

24 “(ii) is equal to or less than zero.

25 “(B) SPECIAL RULES.—

1 “(i) EMISSIONS FROM GENERATION
2 OF ELECTRICITY.—In the case of any hy-
3 drogen produced from a qualified produc-
4 tion method described in paragraph
5 (3)(A)—

6 “(I) if such method uses elec-
7 tricity generated from a renewable en-
8 ergy resource (as defined in section
9 403 of the Renewable Energy Re-
10 sources Act of 1980 (42 U.S.C.
11 7372)) or nuclear power, such hydro-
12 gen shall be deemed to be clean hy-
13 drogen described in subparagraph
14 (A)(ii), or

15 “(II) if such method uses elec-
16 tricity generated from a source that
17 emits greenhouse gases during pro-
18 duction, any such emissions which are
19 released into the atmosphere during
20 such production shall be included for
21 purposes of determining the rate of
22 the greenhouse gas emissions under
23 subparagraph (A).

1 “(ii) NON-ELECTROLYSIS OR USE OF
2 FOSSIL FUELS.—In the case of any hydro-
3 gen produced—

4 “(I) through the use of fossil
5 fuels or through the use of electricity
6 which is generated through combus-
7 tion of a fossil fuel, or

8 “(II) using a method described in
9 paragraph (3)(B),
10 subparagraph (A) shall be applied with re-
11 spect to such hydrogen on the basis of a
12 lifecycle analysis.

13 “(iii) EXCLUSION OF HYDROGEN
14 EMISSIONS.—For purposes of subpara-
15 graph (A), with respect to hydrogen pro-
16 duced through a qualified production meth-
17 od, any such hydrogen which is released
18 into the atmosphere during such produc-
19 tion shall not be included for purposes of
20 determining the rate of the greenhouse gas
21 emissions under such subparagraph.

22 “(iv) CARBON CAPTURE.—For pur-
23 poses of determining the rate of the green-
24 house gas emissions under subparagraph
25 (A), such subparagraph shall not apply

1 with respect to any qualified carbon oxide
2 (as defined in section 45Q(e)) captured
3 using carbon capture equipment if such
4 carbon oxide is disposed of, used, or uti-
5 lized in a manner consistent with the re-
6 quirements under section 45Q.

7 “(v) UPSTREAM AND DOWNSTREAM
8 EMISSIONS.—

9 “(I) IN GENERAL.—In the case
10 of hydrogen produced using a quali-
11 fied production method described in
12 clause (ii), for purposes of the appli-
13 cation of subparagraph (A) based on
14 a lifecycle analysis with respect to
15 such method, such subparagraph shall
16 not apply with respect to—

17 “(aa) any upstream emis-
18 sions, and

19 “(bb) any downstream emis-
20 sions related to the use or trans-
21 port of hydrogen subsequent to
22 production.

23 “(II) HIGH-TEMPERATURE ELEC-
24 TROLYSIS.—For purposes of deter-
25 mining the rate of the greenhouse gas

1 emissions under subparagraph (A)
2 with respect to hydrogen produced
3 using high-temperature electrolysis,
4 such subparagraph shall apply with
5 respect to any direct emissions result-
6 ing from the fuel source used to cre-
7 ate heat to which clause (iv) does not
8 apply.

9 “(III) UPSTREAM EMISSIONS.—
10 For purposes of this clause, the term
11 ‘upstream emissions’ means the quan-
12 tity of greenhouse gases, expressed in
13 metric tons of CO₂-e, emitted to the
14 atmosphere resulting from, nonexclu-
15 sively, the extraction, processing,
16 transportation, financing, or other
17 preparation of hydrogen for use.

18 “(C) ENERGY CONTENT.—For purposes of
19 subsection (b)(2)(B)(i)(I), the energy content of
20 1 kilogram of clean hydrogen shall be deemed
21 to be equal to 33.6 kilowatt hours of energy.

22 “(2) QUALIFIED HYDROGEN PRODUCTION FA-
23 CILITY.—

1 “(A) IN GENERAL.—The term ‘qualified
2 hydrogen production facility’ means any facil-
3 ity—

4 “(i) which is located in the United
5 States or a possession of the United States
6 (as such terms are used in section 638),

7 “(ii) which produces clean hydrogen
8 using a qualified production method, and

9 “(iii)(I) the construction of which be-
10 gins after the date of enactment of this
11 section, or

12 “(II) which—

13 “(aa) was originally placed in
14 service before the date of enactment
15 of this section and, prior to the modi-
16 fication described in item (bb), did not
17 produce clean hydrogen, and

18 “(bb) after the date of enactment
19 of this section, is modified to produce
20 clean hydrogen, including—

21 “(AA) modification of a fa-
22 cility which, prior to such modi-
23 fication, produced hydrogen
24 which did not satisfy the require-

1 allowed under section 48, 48A,
2 48B, 48C, or 48D,

3 “(II) any facility which receives
4 electricity—

5 “(aa)(AA) from another fa-
6 cility for which a credit is allowed
7 for such taxable year or any pre-
8 vious taxable year with respect to
9 such electricity under section 45,
10 45J, or 45U, or

11 “(BB) from another facility
12 or project for which, for such
13 taxable year or any previous tax-
14 able year, the basis of such facil-
15 ity or project is taken into ac-
16 count for purposes of the credit
17 allowed under section 48, 48A,
18 48B, 48C, or 48D, and

19 “(bb) which is used by such
20 facility for the production of
21 clean hydrogen, or

22 “(III) any carbon capture equip-
23 ment placed in service at a facility
24 which is used to capture qualified car-
25 bon oxide which is taken into account

1 in such taxable year or any previous
2 taxable year for purposes of the credit
3 allowed under section 45Q.

4 “(ii) DENIAL OF DOUBLE BENEFIT.—
5 With respect to any section described in
6 clause (I), (II), or (III) of clause (i), no
7 credit shall be allowed under such section
8 for any taxable year with respect to any
9 property for which a credit is allowed
10 under this section for such taxable year or
11 any prior taxable year.

12 “(3) QUALIFIED PRODUCTION METHOD.—The
13 term ‘qualified production method’ means—

14 “(A) electrolysis, and

15 “(B) any method not described in subpara-
16 graph (A).

17 “(e) TRANSFER OF CREDIT.—

18 “(1) IN GENERAL.—If, with respect to a credit
19 allowed under subsection (a) for any taxable year,
20 the taxpayer elects the application of this subsection
21 for such taxable year with respect to all (or any por-
22 tion specified in such election) of such credit, the eli-
23 gible project partner specified in such election, and
24 not the taxpayer, shall be treated as the taxpayer for

1 purposes of this title with respect to such credit (or
2 such portion thereof).

3 “(2) ELIGIBLE PROJECT PARTNER.—

4 “(A) IN GENERAL.—For purposes of this
5 subsection, the term ‘eligible project partner’
6 means, with respect to any qualified hydrogen
7 production facility, any person who—

8 “(i) has an ownership interest in such
9 facility,

10 “(ii) provided equipment for or serv-
11 ices in the construction of such facility,

12 “(iii) provides electricity or feedstock
13 for production of hydrogen at such facility,

14 “(iv) purchases hydrogen, or a direct
15 product thereof, produced at such facility
16 pursuant to a contract, or

17 “(v) provides financing for such facil-
18 ity.

19 “(B) FINANCING.—For purposes of sub-
20 paragraph (A)(v), any amount paid as consider-
21 ation for a transfer described in paragraph (1)
22 shall not be treated as financing for qualified
23 hydrogen production facility.

24 “(C) OTHER RULES.—Rules similar to the
25 rules of subparagraphs (C) through (I) of sec-

1 tion 48D(d)(2) shall apply for purposes of this
2 subsection.

3 “(f) DETERMINATION OF WHEN CONSTRUCTION BE-
4 GINS; CONTINUOUS PROGRAM OF CONSTRUCTION OR
5 CONTINUITY OF EFFORT.—Rules similar to the rules of
6 section 45U(e) shall apply for purposes of this section.

7 “(g) REGULATIONS.—Not later than 1 year after the
8 date of the enactment of this section, the Secretary shall
9 prescribe such regulations as may be necessary or appro-
10 priate to carry out the purposes of this section.”.

11 (b) CREDIT ALLOWED AS PART OF GENERAL BUSI-
12 NESS CREDIT.—Section 38(b) of the Internal Revenue
13 Code of 1986, as amended by section 4(b), is amended
14 by striking “plus” at the end of paragraph (33), by strik-
15 ing the period at the end of paragraph (34) and inserting
16 “, plus”, and by adding at the end the following new para-
17 graph:

18 “(35) the clean hydrogen production credit de-
19 termined under section 45V(a).”.

20 (c) CLERICAL AMENDMENT.—The table of sections
21 for subpart D of part IV of subchapter A of chapter 1
22 of the Internal Revenue Code of 1986, as amended by sec-
23 tion 4(d), is amended by adding at the end the following
24 new item:

“Sec. 45V. Clean hydrogen production.”.

1 (d) EFFECTIVE DATE.—The amendments made by
2 this section shall apply to hydrogen produced and sold in
3 taxable years beginning after the date of the enactment
4 of this Act, at facilities the construction or modification
5 of which begins after the date of enactment of this section.

6 **SEC. 6. REPORT ON ADDITIONAL ENERGY PRODUCTION**
7 **TECHNOLOGY.**

8 (a) IN GENERAL.—Not later than 1 year after the
9 date of enactment of this Act, and every 5 years there-
10 after, the Secretary of Energy (referred to in this section
11 as the “Secretary”) shall submit a report to the Com-
12 mittee on Ways and Means of the House of Representa-
13 tives and the Committee on Finance of the Senate
14 which—

15 (1) identifies new and emerging energy produc-
16 tion technologies which—

17 (A) have less than 2 percent market pene-
18 tration level (as defined in subsection (b)(2)(B)
19 of section 45U of the Internal Revenue Code of
20 1986 (as added by section 4 of this Act)); and

21 (B) the Secretary recommends should be
22 added to subsection (d)(2)(A) of such section as
23 an individual energy production technology;

1 (2) includes legislative language to carry out
2 the recommendations described in paragraph (1)(B);
3 and

4 (3) considers petitions and comments submitted
5 under subsection (b).

6 (b) REPORT PROCESS.—

7 (1) IN GENERAL.—Not later than 24 months
8 after the date of enactment of this Act, the Sec-
9 retary shall publish in the Federal Register and on
10 a publicly available Internet website of the Depart-
11 ment of Energy a notice requesting members of the
12 public to submit to the Department of Energy dur-
13 ing the [_____-day] period beginning on the date
14 of such publication petitions for inclusion of any
15 technology used for the production of electricity as
16 an individual energy production technology under
17 subsection (d)(2) of section 45U of the Internal Rev-
18 enue Code of 1986 (as added by section 4 of this
19 Act).

20 (2) CONTENT.—Each petition described in
21 paragraph (1) shall include the following informa-
22 tion:

23 (A) The name and address of the peti-
24 tioner.

1 (B) A description of the technology used
2 for the production of electricity.

3 (C) A certification as to whether such tech-
4 nology satisfies the requirements under sub-
5 section (d)(1)(C) of section 45U of the Internal
6 Revenue Code of 1986.

7 (D) Such other information as the Sec-
8 retary may require.

9 (3) PROCEDURES.—The Secretary shall pre-
10 scribe and publish in the Federal Register and on a
11 publicly available Internet website of the Depart-
12 ment of Energy procedures to be complied with by
13 members of the public submitting petitions for inclu-
14 sion under paragraph (1).

15 (c) REVIEW.—

16 (1) PUBLICATION AND PUBLIC AVAILABILITY.—
17 As soon as practicable, the Secretary shall publish
18 on a publicly available Internet website of the De-
19 partment of Energy the petitions for inclusions sub-
20 mitted under paragraph (1) of subsection (b) that
21 contain the information required under paragraph
22 (2) of such subsection.

23 (2) PUBLIC COMMENT.—

24 (A) IN GENERAL.—The Secretary shall
25 publish in the Federal Register and on a pub-

1 licely available Internet website of the Depart-
2 ment of Energy a notice requesting members of
3 the public to submit to the Department of En-
4 ergy comments on the petitions for inclusion
5 published by the Department of Energy under
6 paragraph (1).

7 (B) PUBLICATION.—The Secretary shall
8 publish a notice in the Federal Register direct-
9 ing members of the public to a publicly avail-
10 able Internet website of the Department of En-
11 ergy to view the comments of the members of
12 the public received under subparagraph (A).

13 (d) SENSE OF CONGRESS.—It is the sense of Con-
14 gress that, to incentivize innovation in energy generation
15 technologies and to promote the reliability of and perform-
16 ance improvements in the United States energy sector,
17 Congress should, not later than 90 days after the Sec-
18 retary submits any report under subsection (a), consider
19 a bill to add any technology used for the production of
20 electricity which is included in such report to the list of
21 individual energy production technologies under section
22 45U(d)(2) of the Internal Revenue Code of 1986.