

- (x) Magnesium.
- (xi) Palladium.
- (xii) Platinum.
- (xiii) Praseodymium.
- (xiv) Rhodium.
- (xv) Rubidium.
- (xvi) Ruthenium.
- (xvii) Samarium.
- (xviii) Scandium.
- (xix) Tantalum.
- (xx) Terbium.
- (xxi) Thulium.
- (xxii) Titanium.
- (xxiii) Ytterbium.
- (xxiv) Zinc.
- (xxv) Zirconium.

(d) Special rules

In this section—

(1) Related persons

Persons shall be treated as related to each other if such persons would be treated as a single employer under the regulations prescribed under section 52(b).

(2) Only production in the United States taken into account

Sales shall be taken into account under this section only with respect to eligible components the production of which is within—

- (A) the United States (within the meaning of section 638(1)), or
- (B) a possession of the United States (within the meaning of section 638(2)).

(3) Pass-thru in the case of estates and trusts

Under regulations prescribed by the Secretary, rules similar to the rules of subsection (d) of section 52 shall apply.

(4) Sale of integrated components

For purposes of this section, a person shall be treated as having sold an eligible component to an unrelated person if such component is integrated, incorporated, or assembled into another eligible component which is sold to an unrelated person.

(Added Pub. L. 117–169, title I, § 13502(a), Aug. 16, 2022, 136 Stat. 1971.)

Editorial Notes

REFERENCES IN TEXT

The date of the enactment of this section, referred to in subsec. (c)(1)(B), is the date of enactment of Pub. L. 117–169, which was approved Aug. 16, 2022.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Pub. L. 117–169, title I, § 13502(c), Aug. 16, 2022, 136 Stat. 1981, provided that: “The amendments made by this section [enacting this section and amending section 38 of this title] shall apply to components produced and sold after December 31, 2022.”

§ 45Y. Clean electricity production credit

(a) Amount of credit

(1) In general

For purposes of section 38, the clean electricity production credit for any taxable year is an amount equal to the product of—

(A) the kilowatt hours of electricity—

- (i) produced by the taxpayer at a qualified facility, and
- (ii)(I) sold by the taxpayer to an unrelated person during the taxable year, or
- (II) in the case of a qualified facility which is equipped with a metering device which is owned and operated by an unrelated person, sold, consumed, or stored by the taxpayer during the taxable year, multiplied by

(B) the applicable amount with respect to such qualified facility.

(2) Applicable amount

(A) Base amount

Subject to subsection (g)(7), in the case of any qualified facility which is not described in clause (i) or (ii) of subparagraph (B) and does not satisfy the requirements described in clause (iii) of such subparagraph, the applicable amount shall be 0.3 cents.

(B) Alternative amount

Subject to subsection (g)(7), in the case of any qualified facility—

- (i) with a maximum net output of less than 1 megawatt (as measured in alternating current),
- (ii) the construction of which begins prior to the date that is 60 days after the Secretary publishes guidance with respect to the requirements of paragraphs (9) and (10) of subsection (g), or
- (iii) which—
 - (I) satisfies the requirements under paragraph (9) of subsection (g), and
 - (II) with respect to the construction of such facility, satisfies the requirements under paragraph (10) of subsection (g),

the applicable amount shall be 1.5 cents.

(b) Qualified facility

(1) In general

(A) Definition

Subject to subparagraphs (B), (C), and (D), the term “qualified facility” means a facility owned by the taxpayer—

- (i) which is used for the generation of electricity,
- (ii) which is placed in service after December 31, 2024, and
- (iii) for which the greenhouse gas emissions rate (as determined under paragraph (2)) is not greater than zero.

(B) 10-year production credit

For purposes of this section, a facility shall only be treated as a qualified facility during the 10-year period beginning on the date the facility was originally placed in service.

(C) Expansion of facility; incremental production

The term “qualified facility” shall include either of the following in connection with a facility described in subparagraph (A) (without regard to clause (ii) of such subparagraph) which was placed in service before January 1, 2025, but only to the extent of the

increased amount of electricity produced at the facility by reason of the following:

- (i) A new unit which is placed in service after December 31, 2024.
- (ii) Any additions of capacity which are placed in service after December 31, 2024.

(D) Coordination with other credits

The term “qualified facility” shall not include any facility for which a credit determined under section 45, 45J, 45Q, 45U, 48, 48A, or 48E is allowed under section 38 for the taxable year or any prior taxable year.

(2) Greenhouse gas emissions rate

(A) In general

For purposes of this section, the term “greenhouse gas emissions rate” means the amount of greenhouse gases emitted into the atmosphere by a facility in the production of electricity, expressed as grams of CO₂e per KWh.

(B) Fuel combustion and gasification

In the case of a facility which produces electricity through combustion or gasification, the greenhouse gas emissions rate for such facility shall be equal to the net rate of greenhouse gases emitted into the atmosphere by such facility (taking into account lifecycle greenhouse gas emissions, as described in section 211(o)(1)(H) of the Clean Air Act (42 U.S.C. 7545(o)(1)(H))) in the production of electricity, expressed as grams of CO₂e per KWh.

(C) Establishment of emissions rates for facilities

(i) Publishing emissions rates

The Secretary shall annually publish a table that sets forth the greenhouse gas emissions rates for types or categories of facilities, which a taxpayer shall use for purposes of this section.

(ii) Provisional emissions rate

In the case of any facility for which an emissions rate has not been established by the Secretary, a taxpayer which owns such facility may file a petition with the Secretary for determination of the emissions rate with respect to such facility.

(D) Carbon capture and sequestration equipment

For purposes of this subsection, the amount of greenhouse gases emitted into the atmosphere by a facility in the production of electricity shall not include any qualified carbon dioxide that is captured by the taxpayer and—

- (i) pursuant to any regulations established under paragraph (2) of section 45Q(f), disposed of by the taxpayer in secure geological storage, or
- (ii) utilized by the taxpayer in a manner described in paragraph (5) of such section.

(c) Inflation adjustment

(1) In general

In the case of a calendar year beginning after 2024, the 0.3 cent amount in paragraph

(2)(A) of subsection (a) and the 1.5 cent amount in paragraph (2)(B) of such subsection shall each be adjusted by multiplying such amount by the inflation adjustment factor for the calendar year in which the sale, consumption, or storage of the electricity occurs. If the 0.3 cent amount as increased under this paragraph is not a multiple of 0.05 cent, such amount shall be rounded to the nearest multiple of 0.05 cent. If the 1.5 cent amount as increased under this paragraph is not a multiple of 0.1 cent, such amount shall be rounded to the nearest multiple of 0.1 cent.

(2) Annual computation

The Secretary shall, not later than April 1 of each calendar year, determine and publish in the Federal Register the inflation adjustment factor for such calendar year in accordance with this subsection.

(3) Inflation adjustment factor

The term “inflation adjustment factor” means, with respect to a calendar year, a fraction the numerator of which is the GDP implicit price deflator for the preceding calendar year and the denominator of which is the GDP implicit price deflator for the calendar year 1992. The term “GDP implicit price deflator” means the most recent revision of the implicit price deflator for the gross domestic product as computed and published by the Department of Commerce before March 15 of the calendar year.

(d) Credit phase-out

(1) In general

The amount of the clean electricity production credit under subsection (a) for any qualified facility the construction of which begins during a calendar year described in paragraph (2) shall be equal to the product of—

- (A) the amount of the credit determined under subsection (a) without regard to this subsection, multiplied by
- (B) the phase-out percentage under paragraph (2).

(2) Phase-out percentage

The phase-out percentage under this paragraph is equal to—

- (A) for a facility the construction of which begins during the first calendar year following the applicable year, 100 percent,
- (B) for a facility the construction of which begins during the second calendar year following the applicable year, 75 percent,
- (C) for a facility the construction of which begins during the third calendar year following the applicable year, 50 percent, and
- (D) for a facility the construction of which begins during any calendar year subsequent to the calendar year described in subparagraph (C), 0 percent.

(3) Applicable year

For purposes of this subsection, the term “applicable year” means the later of—

- (A) the calendar year in which the Secretary determines that the annual greenhouse gas emissions from the production of electricity in the United States are equal to

or less than 25 percent of the annual greenhouse gas emissions from the production of electricity in the United States for calendar year 2022, or
(B) 2032.

(e) Definitions

For purposes of this section:

(1) CO₂e per KWh

The term “CO₂e per KWh” means, with respect to any greenhouse gas, the equivalent carbon dioxide (as determined based on global warming potential) per kilowatt hour of electricity produced.

(2) Greenhouse gas

The term “greenhouse gas” has the same meaning given such term under section 211(o)(1)(G) of the Clean Air Act (42 U.S.C. 7545(o)(1)(G)), as in effect on the date of the enactment of this section.

(3) Qualified carbon dioxide

The term “qualified carbon dioxide” means carbon dioxide captured from an industrial source which—

(A) would otherwise be released into the atmosphere as industrial emission of greenhouse gas,

(B) is measured at the source of capture and verified at the point of disposal or utilization, and

(C) is captured and disposed or utilized within the United States (within the meaning of section 638(1)) or a possession of the United States (within the meaning of section 638(2)).

(f) Guidance

Not later than January 1, 2025, the Secretary shall issue guidance regarding implementation of this section, including calculation of greenhouse gas emission rates for qualified facilities and determination of clean electricity production credits under this section.

(g) Special rules

(1) Only production in the United States taken into account

Consumption, sales, or storage shall be taken into account under this section only with respect to electricity the production of which is within—

(A) the United States (within the meaning of section 638(1)), or

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

(2) Combined heat and power system property

(A) In general

For purposes of subsection (a)—

(i) the kilowatt hours of electricity produced by a taxpayer at a qualified facility shall include any production in the form of useful thermal energy by any combined heat and power system property within such facility, and

(ii) the amount of greenhouse gases emitted into the atmosphere by such facility in the production of such useful thermal energy shall be included for purposes of determining the greenhouse gas emissions rate for such facility.

(B) Combined heat and power system property

For purposes of this paragraph, the term “combined heat and power system property” has the same meaning given such term by section 48(c)(3) (without regard to subparagraphs (A)(iv), (B), and (D) thereof).

(C) Conversion from BTU to KWh

(i) In general

For purposes of subparagraph (A)(i), the amount of kilowatt hours of electricity produced in the form of useful thermal energy shall be equal to the quotient of—

(I) the total useful thermal energy produced by the combined heat and power system property within the qualified facility, divided by

(II) the heat rate for such facility.

(ii) Heat rate

For purposes of this subparagraph, the term “heat rate” means the amount of energy used by the qualified facility to generate 1 kilowatt hour of electricity, expressed as British thermal units per net kilowatt hour generated.

(3) Production attributable to the taxpayer

In the case of a qualified facility in which more than 1 person has an ownership interest, except to the extent provided in regulations prescribed by the Secretary, production from the facility shall be allocated among such persons in proportion to their respective ownership interests in the gross sales from such facility.

(4) Related persons

Persons shall be treated as related to each other if such persons would be treated as a single employer under the regulations prescribed under section 52(b). In the case of a corporation which is a member of an affiliated group of corporations filing a consolidated return, such corporation shall be treated as selling electricity to an unrelated person if such electricity is sold to such a person by another member of such group.

(5) Pass-thru in the case of estates and trusts

Under regulations prescribed by the Secretary, rules similar to the rules of subsection (d) of section 52 shall apply.

(6) Allocation of credit to patrons of agricultural cooperative

(A) Election to allocate

(i) In general

In the case of an eligible cooperative organization, any portion of the credit determined under subsection (a) for the taxable year may, at the election of the organization, be apportioned among patrons of the organization on the basis of the amount of business done by the patrons during the taxable year.

(ii) Form and effect of election

An election under clause (i) for any taxable year shall be made on a timely filed return for such year. Such election, once

made, shall be irrevocable for such taxable year. Such election shall not take effect unless the organization designates the apportionment as such in a written notice mailed to its patrons during the payment period described in section 1382(d).

(B) Treatment of organizations and patrons

The amount of the credit apportioned to any patrons under subparagraph (A)—

(i) shall not be included in the amount determined under subsection (a) with respect to the organization for the taxable year, and

(ii) shall be included in the amount determined under subsection (a) for the first taxable year of each patron ending on or after the last day of the payment period (as defined in section 1382(d)) for the taxable year of the organization or, if earlier, for the taxable year of each patron ending on or after the date on which the patron receives notice from the cooperative of the apportionment.

(C) Special rules for decrease in credits for taxable year

If the amount of the credit of a cooperative organization determined under subsection (a) for a taxable year is less than the amount of such credit shown on the return of the cooperative organization for such year, an amount equal to the excess of—

(i) such reduction, over
(ii) the amount not apportioned to such patrons under subparagraph (A) for the taxable year,

shall be treated as an increase in tax imposed by this chapter on the organization. Such increase shall not be treated as tax imposed by this chapter for purposes of determining the amount of any credit under this chapter.

(D) Eligible cooperative defined

For purposes of this section, the term “eligible cooperative” means a cooperative organization described in section 1381(a) which is owned more than 50 percent by agricultural producers or by entities owned by agricultural producers. For this purpose an entity owned by an agricultural producer is one that is more than 50 percent owned by agricultural producers.

(7) Increase in credit in energy communities

In the case of any qualified facility which is located in an energy community (as defined in section 45(b)(11)(B)), for purposes of determining the amount of the credit under subsection (a) with respect to any electricity produced by the taxpayer at such facility during the taxable year, the applicable amount under paragraph (2) of such subsection shall be increased by an amount equal to 10 percent of the amount otherwise in effect under such paragraph.

(8) Credit reduced for tax-exempt bonds

Rules similar to the rules of section 45(b)(3) shall apply.

(9) Wage requirements

Rules similar to the rules of section 45(b)(7) shall apply.

(10) Apprenticeship requirements

Rules similar to the rules of section 45(b)(8) shall apply.

(11) Domestic content bonus credit amount

(A) In general

In the case of any qualified facility which satisfies the requirement under subparagraph (B)(i), the amount of the credit determined under subsection (a) shall be increased by an amount equal to 10 percent of the amount so determined (as determined without application of paragraph (7)).

(B) Requirement

(i) In general

The requirement described in this subclause is satisfied with respect to any qualified facility if the taxpayer certifies to the Secretary (at such time, and in such form and manner, as the Secretary may prescribe) that any steel, iron, or manufactured product which is a component of such facility (upon completion of construction) was produced in the United States (as determined under section 661 of title 49, Code of Federal Regulations).

(ii) Steel and iron

In the case of steel or iron, clause (i) shall be applied in a manner consistent with section 661.5 of title 49, Code of Federal Regulations.

(iii) Manufactured product

For purposes of clause (i), the manufactured products which are components of a qualified facility upon completion of construction shall be deemed to have been produced in the United States if not less than the adjusted percentage (as determined under subparagraph (C)) of the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

(C) Adjusted percentage

(i) In general

Subject to subclause (ii), for purposes of subparagraph (B)(iii), the adjusted percentage shall be—

(I) in the case of a facility the construction of which begins before January 1, 2025, 40 percent,

(II) in the case of a facility the construction of which begins after December 31, 2024, and before January 1, 2026, 45 percent,

(III) in the case of a facility the construction of which begins after December 31, 2025, and before January 1, 2027, 50 percent, and

(IV) in the case of a facility the construction of which begins after December 31, 2026, 55 percent.

(ii) Offshore wind facility

For purposes of subparagraph (B)(iii), in the case of a qualified facility which is an offshore wind facility, the adjusted percentage shall be—

(I) in the case of a facility the construction of which begins before January 1, 2025, 20 percent,

(II) in the case of a facility the construction of which begins after December 31, 2024, and before January 1, 2026, 27.5 percent,

(III) in the case of a facility the construction of which begins after December 31, 2025, and before January 1, 2027, 35 percent,

(IV) in the case of a facility the construction of which begins after December 31, 2026, and before January 1, 2028, 45 percent, and

(V) in the case of a facility the construction of which begins after December 31, 2027, 55 percent.

(12) Phaseout for elective payment

(A) In general

In the case of a taxpayer making an election under section 6417 with respect to a credit under this section, the amount of such credit shall be replaced with—

- (i) the value of such credit (determined without regard to this paragraph), multiplied by
- (ii) the applicable percentage.

(B) 100 percent applicable percentage for certain qualified facilities

In the case of any qualified facility—

- (i) which satisfies the requirements under paragraph (11)(B), or
- (ii) with a maximum net output of less than 1 megawatt (as measured in alternating current),

the applicable percentage shall be 100 percent.

(C) Phased domestic content requirement

Subject to subparagraph (D), in the case of any qualified facility which is not described in subparagraph (B), the applicable percentage shall be—

- (i) if construction of such facility began before January 1, 2024, 100 percent,
- (ii) if construction of such facility began in calendar year 2024, 90 percent,
- (iii) if construction of such facility began in calendar year 2025, 85 percent, and
- (iv) if construction of such facility began after December 31, 2025, 0 percent.

(D) Exception

(i) In general

For purposes of this paragraph, the Secretary shall provide exceptions to the requirements under this paragraph if—

(I) the inclusion of steel, iron, or manufactured products which are produced in the United States increases the overall costs of construction of qualified facilities by more than 25 percent, or

(II) relevant steel, iron, or manufactured products are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality.

(ii) Applicable percentage

In any case in which the Secretary provides an exception pursuant to clause (i),

the applicable percentage shall be 100 percent.

(Added Pub. L. 117–169, title I, § 13701(a), Aug. 16, 2022, 136 Stat. 1982.)

Editorial Notes

REFERENCES IN TEXT

The date of the enactment of this section, referred to in subsec. (e)(2), is the date of enactment of Pub. L. 117–169, which was approved Aug. 16, 2022.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Pub. L. 117–169, title I, § 13701(c), Aug. 16, 2022, 136 Stat. 1990, provided that: “The amendments made by this section [enacting this section and amending section 38 of this title] shall apply to facilities placed in service after December 31, 2024.”

§ 45Z. Clean fuel production credit

(a) Amount of credit

(1) In general

For purposes of section 38, the clean fuel production credit for any taxable year is an amount equal to the product of—

(A) the applicable amount per gallon (or gallon equivalent) with respect to any transportation fuel which is—

- (i) produced by the taxpayer at a qualified facility, and
- (ii) sold by the taxpayer in a manner described in paragraph (4) during the taxable year, and

(B) the emissions factor for such fuel (as determined under subsection (b)).

(2) Applicable amount

(A) Base amount

In the case of any transportation fuel produced at a qualified facility which does not satisfy the requirements described in subparagraph (B), the applicable amount shall be 20 cents.

(B) Alternative amount

In the case of any transportation fuel produced at a qualified facility which satisfies the requirements under paragraphs (6) and (7) of subsection (f), the applicable amount shall be \$1.00.

(3) Special rate for sustainable aviation fuel

(A) In general

In the case of a transportation fuel which is sustainable aviation fuel, paragraph (2) shall be applied—

(i) in the case of fuel produced at a qualified facility described in paragraph (2)(A), by substituting “35 cents” for “20 cents”, and

(ii) in the case of fuel produced at a qualified facility described in paragraph (2)(B), by substituting “\$1.75” for “\$1.00”.

(B) Sustainable aviation fuel

For purposes of this subparagraph (A),¹ the term “sustainable aviation fuel” means liq-

¹ So in original.