DESCRIPTION OF THE CHAIRMAN’S MARK
OF THE
“CLEAN ENERGY FOR AMERICA ACT”

Scheduled for Markup
by the
SENATE COMMITTEE ON FINANCE
on May 26, 2021

Prepared by the Staff
of the
JOINT COMMITTEE ON TAXATION

May 24, 2021
JCX-26-21
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INTRODUCTION

The Senate Committee on Finance has scheduled a committee markup on May 26, 2021 of the “Clean Energy for America Act.” This document, prepared by the staff of the Joint Committee on Taxation, provides a description of the Chairman’s mark.

1 This document may be cited as follows: Joint Committee on Taxation, Description of the Chairman’s Mark of the “Clean Energy for America Act,” (JCX-26-21), May 24, 2021. This document can also be found on the Joint Committee on Taxation website at www.jct.gov.
I. INCENTIVES FOR CLEAN ELECTRICITY

Summary of Present Law Clean Electricity and Certain Other Energy-Related Tax Incentives

The Internal Revenue Code contains a number of tax incentives to encourage zero or low carbon electricity production, including credits relating to renewable power, nuclear power, other forms of energy efficient power, as well as carbon oxide sequestration. The following tables provide summaries of these incentives.

<table>
<thead>
<tr>
<th>Eligible Electricity Production Activity (sec. 45)</th>
<th>Credit Rate for 2021&lt;sup&gt;2&lt;/sup&gt; (cents per kilowatt-hour)</th>
<th>Expiration&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind</td>
<td>2.5</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>Closed-loop biomass</td>
<td>2.5</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>Open-loop biomass</td>
<td>1.3</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>Geothermal</td>
<td>2.5</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>Municipal solid waste</td>
<td>1.3</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>(including landfill gas facilities and trash combustion facilities)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qualified hydropower</td>
<td>1.3</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>Marine and hydrokinetic</td>
<td>1.3</td>
<td>January 1, 2022</td>
</tr>
</tbody>
</table>

1 Except where otherwise provided, all section references are to the Internal Revenue Code of 1986, as amended (the “Code”).

2 Credit rates are adjusted annually for inflation. See 86 Fed. Reg. 22300, April 27, 2021. In general, the credit is available for electricity produced during the first 10 years after a facility has been placed in service. Taxpayers may also elect to get a 30-percent investment tax credit in lieu of this production tax credit. In the case of wind facilities, the available production tax credit or investment tax credit is reduced by 20 percent for facilities the construction of which began in 2017, by 40 percent for facilities the construction of which began in 2018, by 60 percent for facilities the construction of which began in 2019, and by 40 percent for facilities the construction of which began after 2019.

3 Expires for property the construction of which begins after this date.
<table>
<thead>
<tr>
<th>Qualified Energy Property (sec. 48)</th>
<th>Credit Rate</th>
<th>Maximum Credit</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment to produce energy from a geothermal deposit</td>
<td>30% (in lieu of production tax credit)</td>
<td>None</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Equipment to use ground or ground water for heating or cooling</td>
<td>10%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Equipment that uses fiber-optics to distribute sunlight inside a structure</td>
<td>30%</td>
<td>None</td>
<td>January 1, 2020</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>None</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Microturbine property (&lt; 2 megawatt electrical generation power plants of ≥ 26% efficiency)</td>
<td>10%</td>
<td>$200 per kilowatt of capacity</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Combined heat and power property (simultaneous production of electrical/mechanical power and useful heat &gt; 60% efficiency)</td>
<td>10%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Solar electric or solar hot water property</td>
<td>30%</td>
<td>None</td>
<td>January 1, 2020</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>None</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Fuel cell property (generates electricity through electrochemical process)</td>
<td>30%</td>
<td>$1,500 for each ½ kilowatt of capacity</td>
<td>January 1, 2020</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>None</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Small (&lt; 100 kilowatt capacity) wind electrical generation property</td>
<td>30%</td>
<td>None</td>
<td>January 1, 2020</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>None</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td>Qualified Energy Property (sec. 48)</td>
<td>Credit Rate</td>
<td>Maximum Credit</td>
<td>Expiration[^4]</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>----------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>Waste energy recovery property</td>
<td>26%</td>
<td>None</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Wind, biomass, municipal solid waste, qualified hydropower, and marine and hydrokinetic property</td>
<td>30%</td>
<td>None</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>(in lieu of production tax credit)</td>
<td></td>
<td></td>
<td>January 1, 2026, in the case of offshore wind facilities[^5]</td>
</tr>
<tr>
<td>Credit for residential energy efficient property (sec. 25D)</td>
<td>30%</td>
<td>$500 per ½ kilowatt of capacity for fuel cells</td>
<td>December 31, 2019[^6]</td>
</tr>
<tr>
<td>Personal credit for residential solar water heating or solar electric property, fuel cell, small wind property, geothermal heat pump property, qualified biomass fuel property (wood/pellet stoves)</td>
<td>26%</td>
<td></td>
<td>December 31, 2022</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td></td>
<td>December 31, 2023</td>
</tr>
</tbody>
</table>

[^4]: For all eligible property, construction of the property must begin before the expiration date, except where otherwise noted. For credits subject to a rate phase down, except where noted, construction must begin before the dates listed and placed in service before January 1, 2026.

[^5]: In the case of wind facilities other than offshore wind facilities, the available investment tax credit is reduced by 20 percent for facilities the construction of which begins in 2017, by 40 percent for facilities the construction of which begins in 2018, by 60 percent for facilities the construction of which begins in 2019, and by 40 percent for facilities the construction of which begins after 2019.

[^6]: Residential energy efficient property must be placed in service by the dates listed in order to be eligible for a credit.
<table>
<thead>
<tr>
<th>Eligible Activity</th>
<th>Description of Provision</th>
<th>Expiration</th>
</tr>
</thead>
</table>
| **Five-year cost recovery for certain energy property (secs. 168(e)(3)(B)(vi) and 48(a)(3)(A))** | • A five-year Modified Accelerated Cost Recovery System (“MACRS”) recovery period is generally provided for equipment using solar and wind energy to generate electricity (e.g., solar panels), to heat or cool (or provide hot water for use in) a structure, or to provide solar (or wind) process heat; equipment using solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight; equipment used to produce, distribute, or use energy derived from a geothermal deposit; qualified fuel cell or microturbine property; combined heat and power system property; equipment using the ground or ground water as a thermal energy source (or sink) to heat (or cool) a structure; and waste energy recovery property

• A five-year MACRS recovery period is also provided for certain small power production biomass facilities (i.e., a qualifying small power production facility within the meaning of section 3(17)(C) of the Federal Power Act (16 U.S.C. 796 (17)(C)), as in effect on September 1, 1986, that also qualifies as certain biomass property, including (i) a boiler, the primary fuel for which will be an alternate substance; (ii) a burner (including necessary on-site equipment to bring the alternate substance to the burner) for a combustor other than a boiler if the primary fuel for such burner will be an alternate substance; (iii) equipment for converting an alternate substance into a qualified fuel; (iv) certain pollution control equipment; and (v) equipment used for the unloading, transfer, storage, reclaiming from storage, and preparation (including, but not limited to, washing, crushing, drying, and weighing) at the point of use of an alternative substance for use in equipment described in (i), (ii) or (iii)) | January 1, 2024, for all property except for solar and wind energy property |
<table>
<thead>
<tr>
<th>Eligible Activity</th>
<th>Description</th>
<th>Credit Amount</th>
<th>Expiration</th>
</tr>
</thead>
</table>
| **Advanced nuclear power production credit (sec. 45J)**    | • Credit for production of nuclear power from new facilities that use modern designs and have received an allocation from the Secretary<br>• Secretary may allocate up 6,000 megawatts of credit-eligible capacity                                                                 | • 1.8 cents per kilowatt-hour for the eight-year period starting when the facility was placed in service.  
• Not inflation adjusted.                                                                                                                | None                          |
| **Carbon oxide sequestration credit (sec. 45Q)**           | • Credit for the sequestration of carbon oxides captured at qualified U.S. facilities<br>• Sequestered carbon oxides can be captured from either industrial sources or directly from the ambient air, within the U.S.<br>• The credit amount varies depending on the method by which captured carbon oxides are sequestered (geologic storage versus use commercially or as a tertiary injectant) | • In 2021, the credit amount is $22.68 per metric ton of carbon dioxide captured and used as a tertiary injectant for fossil fuel extraction or utilized for certain other commercial purposes.<br>• In 2021, the credit amount is $34.81 per metric ton of carbon dioxide captured and sequestered in secure geological storage.<br>• The credit period is the 12-year period beginning on the date the carbon capture equipment was originally placed in service | January 1, 2026<sup>7</sup> |

<sup>7</sup> Carbon capture equipment must be placed in service at a qualified facility the construction of which begins at that date.
A. Clean Electricity Production Credit

Description of Proposal

In general

The proposal creates a 1.5 cent per kilowatt-hour production tax credit for electricity produced by the taxpayer at a qualified facility and sold to an unrelated person during the taxable year. The credit is also available where such electricity is consumed or stored by the taxpayer during the taxable year and there is no third-party sale, but only if the qualified facility is equipped with a metering device owned and operated by an unrelated person. The credit is available for electricity produced during the 10-year period beginning when the qualified facility is originally placed in service.

Qualified facilities

A qualified facility is a facility: (1) which is used for the generation of electricity, (2) which is originally placed in service after December 31, 2022, (3) for which the greenhouse gas emissions rate is not greater than zero, and (4) in the case of any facility with a maximum output equal to or greater than one megawatt, which meets certain wage and workforce requirements (described below).

A qualified facility includes a facility placed in service before January 1, 2023, but only to the extent of the increased amount of electricity produced at the facility by reason of either a new power unit placed in service after December 31, 2022, or any efficiency improvements or additions of capacity placed in service after December 31, 2022. A qualified facility does not include any facility for which a credit determined under sections 45, 45J, 45Q, 48, or the new clean electricity investment credit (described in a later portion of this document) is allowed for the taxable year or any prior taxable year.

Greenhouse gas emissions rate

The 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 carbon dioxide equivalents per kilowatt-hour (“CO2e per KWh”; see definitions below for how this is measured). 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) in the production of electricity, expressed as grams of CO2e per KWh.

The proposal directs the Secretary, in consultation with the Administrator of the Environmental Protection Agency (“EPA”), to establish greenhouse gas emissions rates for types or categories of facilities, for use by taxpayers to determine whether a facility qualifies. The Secretary is directed to publish annually a table that sets forth the greenhouse gas emissions rates for similar types or categories of facilities.

In the case of any facility for which an emissions rate has not been established by the Secretary, a taxpayer which owns such a facility may file a petition with the Secretary for a determination of the emissions rate with respect to such facility. In the case of such a petition,
the Secretary, in consultation with the EPA Administrator, shall not later than 12 months after its filing provide a provisional emissions rate for such facility and not later than 24 months after its filing establish the emissions rate for such facility.

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 sequestered in secure geological storage under rules similar to the rules applicable under section 45Q(f) or utilized by the taxpayer in a manner described in section 45Q(f)(5).

**Wage and workforce requirements**

In the case of any qualified facility with a maximum output equal to or greater than one megawatt, the taxpayer must ensure that any laborers and mechanics employed by contractors and subcontractors in the construction, alteration, or repair of such facility prior to it being placed in service or during the 10-year credit period are paid wages at a rate not less than the prevailing wage rates for construction, alteration, or repair of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code.

The taxpayer must also ensure that the qualified apprenticeship requirements (described in section VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

**Inflation adjustment and credit phase-out**

In the case of a calendar year beginning after 2021, the 1.5 cent credit rate is adjusted annually for inflation, rounded to the nearest multiple of 0.1 cents. This annual inflation adjustment shall be determined and published by the Secretary not later than April 1 of each calendar year. The inflation adjustment shall be calculated using an inflation adjustment factor defined with respect to a calendar year as 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.

If the Secretary, in consultation with the Secretary of Energy and the EPA Administrator, 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 2021, the amount of the clean electricity production credit for any qualified facility is reduced according to the following schedule: by 25 percent for a facility the construction of which begins during the second calendar year following the determination, by 50 percent for a facility the construction of which begins during the third calendar year following the determination, and by 100 percent for facilities the construction of which begins during any subsequent calendar year.\(^2\)

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\(^2\) For example, if annual greenhouse gas emissions from the production of electricity in the United States are first at or drop below 25 percent of such 2021 emissions in the year 2042, the credit is reduced by 25 percent, 50
Definitions

For purposes of the proposal, the CO2e per KWh equals, with respect to any greenhouse gas, the equivalent carbon dioxide (as determined based on global warming potential) per kilowatt hour of electricity produced. The term “greenhouse gas” has the same meaning given such term under section 211(o)(1)(G) of the Clean Air Act, as in effect on the date of the enactment of the proposal. The term “qualified carbon dioxide” means carbon dioxide captured from an industrial source which would otherwise be released into the atmosphere as industrial emission of greenhouse gas, is measured at the source of capture and verified at the point of disposal or utilization, and is captured and disposed of 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)).

Final guidance

Not later than January 1, 2023, the Secretary, in consultation with the EPA Administrator, shall issue final guidance regarding implementation of this proposal, including calculation of greenhouse gas emission rates for qualified facilities and determination of clean electricity production credits.

Special rules

Electricity eligible for this credit must be produced in the United States (within the meaning of section 638(1)) or a possession of the United States (within the meaning of section 638(2)).

In the case of combined heat and power system property (as defined in section 48(c)(3), without regard to subparagraphs (A)(iv), (B), and (D) thereof), the kilowatt-hours of electricity produced by the 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 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. In applying this rule, the amount of kilowatt-hours of electricity produced in the form of useful thermal energy equals the total useful thermal energy produced by the combined heat and power system property within the qualified facility divided by the heat rate for such facility. For this purpose, the heat rate means the amount of energy used by the qualified facility to generate one kilowatt-hour of electricity, expressed as British thermal units per net kilowatt-hour generated.

In the case of a qualified facility in which more than one 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.

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

percent, and 100 percent for facilities the construction of which begin during 2044, 2045, and 2046 and later, respectively.
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.

In the case of estates and trusts, rules similar to the rules of section 52(d) shall apply. In the case of agricultural cooperatives, rules similar to the rules of section 45(e)(11) shall apply.

**Election for direct payment**

Taxpayers may elect to have the tax credits otherwise allowed under this proposal be treated as payments made by the taxpayer against the tax imposed by Chapter 1 of the Code, regardless of whether such tax would have been imposed. Such an election is irrevocable and must be made prior to the date on which construction begins on the qualified facility in such manner as the Secretary may prescribe. Such payments would be in lieu of any tax credits determined under the proposal.

**Secretary’s authority to request information**

As a condition of, and prior to, receiving a direct payment, the Secretary may require such information as the Secretary deems necessary to prevent duplication, fraud, and any other improper payments.

**Excessive amount penalty**

Any portion of a direct payment made under this provision which constitutes an excessive amount may be assessed and collected as if it were a tax and as if the person who made the claim were liable for such tax. If any claim for payment is made for an excessive amount, unless it is shown that the claim is due to reasonable cause, the person making such claim shall be liable for a penalty in an amount equal to 20 percent of the excessive amount. The term “excessive amount” means the amount by which the amount of the claim for payment exceeds the amount of such claim allowable under the provision for the taxable year.

**Effective Date**

The proposal is effective for facilities placed in service after December 31, 2022.
B. Clean Electricity Investment Credit

1. Clean electricity business investment credit

Description of Proposal

In general

The proposal creates a 30 percent investment credit for qualified investments with respect to any qualified facility and any grid improvement property. In the case of a qualified facility that is a microgrid, the credit is equal to 30 percent of the qualified investment multiplied by the relative avoided emissions rate with respect to such microgrid.

In the case of any qualified facility (other than one that generates electricity using combustion or gasification) or any grid improvement property that is energy storage property which is placed in service within a disadvantaged community and has a maximum output of less than 5 megawatts, the credit rate is 40 percent rather than 30 percent. For this purpose, a disadvantaged community has the same meaning given the term “low-income community” in section 45D(e)(1), substituting 60 percent for 80 percent where it appears in subparagraph (B) thereof.

Qualified investments and qualified property

Under the proposal, the qualified investment with respect to any qualified facility for any taxable year is the basis of any qualified property placed in service by the taxpayer during such taxable year which is part of a qualified facility. Qualified property is tangible personal property or other property (not including a building or its structural components), but only if such property is used as an integral part of the qualified facility, with respect to which depreciation (or amortization in lieu of depreciation) is allowable, which is constructed, reconstructed, erected, or acquired by the taxpayer, and the original use of which commences with the taxpayer.

A qualified facility is a facility: (1) which is used for the generation of electricity, (2) which is originally placed in service after December 31, 2022, (3) for which the greenhouse gas emissions rate is not greater than zero, and (4) in the case of any facility with a maximum output equal to or greater than one megawatt meets certain wage and workforce requirements (described below). A qualified facility does not include any facility for which a credit determined under sections 45, 45J, 45Q, 48, or the proposed clean electricity production credit (described above) is allowed for the taxable year or any prior taxable year.

The qualified investment with respect to any qualified facility for any taxable year shall not include that portion of the basis of any property which is attributable to qualified rehabilitation expenditures (as defined in section 47(c)(2)).

Greenhouse gas emissions rate

The 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. 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 gasses emitted into the atmosphere by such facility (taking into account lifecycle greenhouse gas emissions).
emissions, as described in section 211(o)(1)(H) of the Clean Air Act) in the production of electricity, expressed as grams of CO2e per KWh.

The proposal directs the Secretary, in consultation with the EPA Administrator, to establish greenhouse gas emissions rates for types or categories of facilities, for use by taxpayers to determine whether a facility qualifies. The Secretary is directed to publish annually a table that sets forth the greenhouse gas emissions rates for similar types or categories of facilities.

In the case of any facility for which an emissions rate has not been established by the Secretary, a taxpayer which owns such a facility may file a petition with the Secretary for a determination of the emissions rate with respect to such facility. In the case of such a petition, the Secretary, in consultation with the EPA Administrator, shall not later than 12 months after its filing provide a provisional emissions rate for such facility and not later than 24 months after its filing establish the emissions rate for such facility.

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 sequestered in secure geological storage under rules similar to the rules applicable under section 45Q(f) or utilized by the taxpayer in a manner described in section 45Q(f)(5).

**Wage and workforce requirements**

In the case of any qualified facility with a maximum output equal to or greater than one megawatt, the taxpayer must ensure that any laborers and mechanics employed by contractors and subcontractors in the construction, alteration, or repair of such facility are paid wages at a rate not less than the prevailing wage rates for construction, alteration, or repair of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code. The prevailing wage requirement applies to the construction of the facility and to alteration or repair of the facility until the date that is five years after the date on which the facility was originally placed in service.

The taxpayer must also ensure that the qualified apprenticeship requirements (described in section VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

**Microgrids**

For purposes of this proposal, the term “microgrid” means an interconnected system of distributed energy resources used for the generation of electricity which (1) is contained within a clearly defined electrical boundary and has the ability to operate as a single and controllable entity, (2) has the ability to be managed and isolated from the applicable grid region in order to withstand larger disturbances, and (3) has a maximum net output of no more than 20 megawatts. An applicable grid region means a set of power plants and transmission lines which are under the control of a single grid operator and interconnected to the microgrid.

A microgrid’s relative avoided emissions rate is the quotient of (1) the non-baseload output emissions rate for the applicable grid region minus the greenhouse gas emissions rate for the microgrid, divided by (2) the non-baseload output emissions rate for the applicable grid region. The non-baseload output emissions rate is the amount of greenhouse gases emitted into the atmosphere by the applicable grid region for the production of electricity (expressed as grams
of CO₂e per KWh) above baseload.³ For purpose of the proposal, the term “baseload” means the amount of electricity demand required on a continuous basis for the applicable grid region. The non-baseload output emissions rate and the baseload demand for any applicable grid region shall be determined by the Secretary, in consultation with the EPA Administrator.

**Grid improvement property**

The qualified investment with respect to grid improvement property for any taxable year is the basis of any grid improvement property placed in service by the taxpayer during such taxable year. For this purpose, the term “grid improvement property” means any energy storage property or qualified transmission property which satisfies the wage and workforce requirements described above.

Energy storage property is depreciable property built or acquired by the taxpayer (1) which receives, stores, and delivers electricity, or energy for conversion to electricity, provided that such electricity is sold to or stored for an unrelated person by the taxpayer, (2) the original use of which commences with the taxpayer, (3) which has a capacity of not less than five kilowatt-hours, and (4) which is placed in service after December 31, 2021.

Qualified transmission property is (1) any overhead, submarine, or underground transmission property which is capable of transmitting electricity at a voltage of not less than 275 kilovolts, and (2) any other equipment necessary for the operation of such property, including equipment listed as a “transmission plant” in the Uniform System of Account for the Federal Energy Regulatory Commission. Such property does not include any property used for the distribution of electricity between substations and end-use customers.

**Progress expenditures**

Rules similar to the rules of subsections (c)(4) and (d) of section 46 (as in effect on the day before the date of the enactment of the Revenue Reconciliation Act of 1990) apply.

**Credit phase-out**

If the Secretary, in consultation with the EPA Administrator, 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 2021, the amount of the credit is reduced according to the following schedule: by 25 percent for a facility the construction of which begins during the second calendar year following the determination, by 50 percent for a facility the construction of which begins during the third calendar year following the determination, and by 100 percent for facilities the construction of which begins during any subsequent calendar year.

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³ For example, let X be the non-baseload output emissions rate for the applicable grid region. If a microgrid has a greenhouse gas emission rate that is ¼ of the non-baseload output emissions rate for the applicable grid region, the relative avoided emissions rate is \((X - \frac{1}{4} X)/X = \frac{3}{4}\). The applicable investment credit rate for this microgrid would then be 30 percent * \(\frac{3}{4}\) = 22.5 percent.
Definitions

For purposes of the proposal, the term CO\textsubscript{2}e 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. The term “greenhouse gas” has the same meaning given such term under section 211(o)(1)(G) of the Clean Air Act, as in effect on the date of the enactment of the proposal. The term “qualified carbon dioxide” means carbon dioxide captured from an industrial source which would otherwise be released into the atmosphere as industrial emission of greenhouse gas, is measured at the sourced of capture and verified at the point of disposal or utilization, and is captured and disposed of 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)).

Recapture of credit

For purposes of section 50, if the Secretary, in consultation with the EPA Administrator, determines that the greenhouse gas emissions rate for a qualified facility is significantly higher than the anticipated greenhouse gas emissions rate claimed by the taxpayer for purposes of the clean electricity investment credit, the facility or equipment shall cease to be investment credit property in the taxable year in which the determination is made.

Final guidance

Not later than January 1, 2023, the Secretary, in consultation with the EPA Administrator, shall issue final guidance regarding implementation of this proposal.

Election for direct payment

Taxpayers may elect to have the tax credits otherwise allowed under this proposal be treated as payments made by the taxpayer against the tax imposed by Chapter 1 of the Code, regardless of whether such tax would have been imposed. Such an election is irrevocable and must be made prior to the date on which construction begins on the qualified facility in such manner as the Secretary may prescribe. Such payments would be in lieu of any tax credits determined under the proposal.

Secretary's authority to request information

As a condition of, and prior to, receiving a direct payment, the Secretary may require such information as the Secretary deems necessary to prevent duplication, fraud, and any other improper payments.

Excessive amount penalty

Any portion of a direct payment made under this provision which constitutes an excessive amount may be assessed and collected as if it were a tax and as if the person who made the claim were liable for such tax. If any claim for payment is made for an excessive amount, unless it is shown that the claim is due to reasonable cause, the person making such claim shall be liable for a penalty in an amount equal to 20 percent of the excessive amount. The term “excessive amount” means the amount by which the amount of the claim for payment exceeds the amount of such claim allowable under the provision for the taxable year.
Public utilities

Public utilities may elect out of section 50(d)(2) with respect to any grid improvement property, provided that such an election is not prohibited by a State or local government, by any agency or instrumentality of the United States, or by a public service or public utility commission or other similar body of any State or local government that regulated public utilities. An election shall be made separately with respect to each grid improvement property by the due date (including extensions) of the Federal tax return for the taxable year in which such property is placed in service by the taxpayer, and once made, may be revoked only with the consent of the Secretary. An election shall not apply with respect to any energy storage property if such property has a maximum capacity equal to or less than 500 kilowatt-hours.

Effective Date

For energy storage property, the proposal is effective for property placed in service after December 31, 2021, under rules similar to the rules of section 48(m) as in effect on the day before the date of enactment of the Revenue Reconciliation Act of 1990. For all other property, the proposal is effective for property placed in service after December 31, 2022, under similar rules.

2. Residential clean electricity credit

Description of Proposal

In general

The proposal allows individuals to claim an income tax credit equal to 30 percent of the expenditures made by the taxpayer for any qualified property and any energy storage property placed in service during the taxable year which is for use in connection with a dwelling unit used as a residence in the United States by the taxpayer. Qualified property is tangible personal property used for the generation of electricity which is built or acquired by the taxpayer, the original use of which commences with the taxpayer, which is originally placed in service after December 31, 2022, and for which the anticipated greenhouse gas emissions rate is not greater than zero. Energy storage property is property that receives, stores, and delivers electricity or energy for conversion to electricity, which is consumed or sold by the taxpayer, which is equipped with a metering device which is owned and operated by an unrelated person, and which has a capacity of not less than three kilowatt-hours. This proposal replaces present law section 25D, which has its sunset date accelerated such that property placed in service after December 31, 2022, is not eligible for the present law section 25D credit.

Greenhouse gas emissions rate

The Secretary, in consultation with EPA Administrator, shall establish greenhouse gas emissions rates for types or categories of qualified property which are for use in a dwelling unit. The Secretary shall publish annually a table that sets forth the greenhouse gas emissions rates for similar types or categories of qualified property. These determinations and published tables shall be used by taxpayers to determine whether property can be qualified property.
**Carryforward of unused credit**

Unused credits may be carried forward for up to three years subject to the limitation in section 26(a) reduced by the sum of any other nonrefundable personal credits (other than this one).

**Credit phase-out**

If the Secretary, in consultation with the Secretary of Energy and the EPA Administrator, 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 2021, the amount of the credit is reduced according to the following schedule: by 25 percent for property placed in service during the second calendar year following the determination, by 50 percent for property placed in service during the third calendar year following the determination, and by 100 percent for property placed in service during any subsequent calendar year.

**Special rules**

Expenditures for labor costs properly allocable to the onsite preparation, assembly, or original installation of the qualified property or energy storage property and for piping or wiring to interconnect such property to the dwelling unit shall be taken into account for purposes of the credit.

In the case of an individual who is a tenant-stockholder in a cooperative housing corporation, such individual shall be treated as having made his tenant-stockholder’s proportionate share of any expenditures of such corporation. In the case of an individual who is a member of a condominium management association with respect to a condominium which the individual owns, such individual shall be treated as having made the individual’s proportionate share of any expenditures of such association.

If less than 80 percent of the use of a property is for nonbusiness purposes, only that portion of the expenditures for such property which is properly allocable to use for nonbusiness purposes shall be taken into account.

If a credit is allowed under this section for any expenditures with respect to any property, the increase in basis of such property which would have resulted from such expenditures shall be reduced by the amount of the allowed credit.

**Final guidance**

Not later than January 1, 2023, the Secretary, in consultation with the EPA Administrator, shall issue final guidance regarding implementation of this proposal, including calculation of greenhouse gas emission rates for qualified property and determination of residential clean electricity property credits.

**Effective Date**

The proposal is effective for property placed in service after December 31, 2022.

1. Residential energy efficient property credit

**Description of Proposal**

The sunset date for the residential energy efficient property credit is accelerated by one year such that the credit expires after December 31, 2022.

**Effective Date**

The proposal is effective for property placed in service after the date of enactment.

2. Renewable electricity production credit

**Description of Proposal**

**Credit carryforwards**

The proposal allows general business credits that are renewable electricity production credits to be carried forward for 25 years (instead of 20 years under present law).

**Election for direct payment**

The proposal adds a direct payment option to the section 45 renewable electricity production credit. Taxpayers may elect to have such credits treated as payments made by the taxpayer against the tax imposed by Chapter 1 of the Code, regardless of whether such tax would have been imposed. Such payments are in lieu of any tax credits determined under the proposal. An election for direct payment is irrevocable and, except for the transition rule described below, must be made prior to the date on which construction of a qualified facility begins in such manner as the Secretary may prescribe. As a transition rule, a taxpayer may make an election for direct payment within 180 days of the date of enactment of the proposal with respect to qualified facilities the construction of which began before the date of enactment of the proposal that are placed in service after December 31, 2020.

**Secretary's authority to request information**

As a condition of, and prior to, receiving a direct payment, the Secretary may require such information as the Secretary deems necessary to prevent duplication, fraud, and any other improper payments.

**Excessive amount penalty**

Any portion of a direct payment made under this provision which constitutes an excessive amount may be assessed and collected as if it were a tax and as if the person who made the claim were liable for such tax. If any claim for payment is made for an excessive amount, unless it is shown that the claim is due to reasonable cause, the person making such claim shall be liable for a penalty in an amount equal to 20 percent of the excessive amount. The term “excessive amount” means the amount by which the amount of the claim for payment exceeds the amount of such claim allowable under the provision for the taxable year.
Effective Date

The proposal is effective for credit carryforwards in taxable years beginning after the date of enactment. The election for direct payment is effective for elections made after the date of enactment for taxable years ending after such date with respect to property placed in service after December 31, 2020.

3. Advanced nuclear power production credit

Description of Proposal

The proposal eliminates the reallocating of unutilized national megawatt capacity limitation under the advanced nuclear power credit.

Effective Date

The proposal is effective for advanced nuclear power facilities the construction of which begins after the date of enactment.

4. Carbon oxide sequestration credit

Description of Proposal

Enhanced oil recovery

The proposal eliminates the use of carbon oxide as a tertiary injectant from the carbon oxide sequestration credit.

Direct air capture

The proposal increases the carbon oxide sequestration credit for carbon captured from the ambient air at a direct air capture facility and utilized or sequestered in underground geologic storage. Under the proposal, for any taxable year beginning in a calendar year before 2027, the credit for carbon oxide captured directly from the air is increased to $175 per ton where such carbon oxide is stored in secure geological storage. If such carbon oxide is utilized rather than stored in secure geological storage, the credit rate is $150 per ton. These amounts are adjusted for inflation beginning in the calendar year after 2026, using the inflation adjustment factor under section 43(b)(3)(B), calculated using 2025 instead of 1990 as the base year.

The proposal also eliminates the requirement that a minimum number of tons must be directly captured from the air in order for a facility using direct air capture technology to qualify for the carbon oxide sequestration credit.

Minimum carbon capture requirement

The proposal replaces the minimum number of tons of carbon dioxide that must be captured from a qualified facility eligible for the carbon oxide sequestration credit with a new requirement. In the case of an electricity generating facility, not less than 75 percent of the carbon oxide that would otherwise be released into the atmosphere must be captured. In the case of an industrial facility which is not an electricity generating facility, not less than 50 percent of the carbon oxide which would otherwise be released into the atmosphere must be captured.
No double benefit

For purposes of section 45Q, a qualified facility does not include any facility for which a credit determined under the proposed clean electricity production credit or proposed clean electricity investment credit (described in above) is allowed for the taxable year or any prior taxable year.

Phase-out

If the Secretary, in consultation with the EPA Administrator, 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 2021, the amount of the carbon oxide sequestration credit for any qualified facility is reduced according the following schedule: by 25 percent for a facility the construction of which begins during the second calendar year following the determination, by 50 percent for a facility the construction of which begins during the third calendar year following the determination, and by 100 percent for facilities the construction of which begins during any subsequent calendar year. This phase-out rule does not apply to direct air capture facilities.

Wage and workforce requirements

In the case of any qualified facility eligible for the carbon oxide sequestration credit, the taxpayer must ensure that any laborers and mechanics employed by contractors and subcontractors in the construction, alteration, or repair of such facility prior to it being placed in service or during the 12-year credit period are paid wages at a rate not less than the prevailing wage rates for construction, alteration, or repair of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code.

The taxpayer must also ensure that the qualified apprenticeship requirements (described in section VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

Election for direct payment

Taxpayers may elect to have the tax credits otherwise allowed under this proposal be treated as payments made by the taxpayer against the tax imposed by Chapter 1 of the Code, regardless of whether such tax would have been imposed. Such payments would be in lieu of any tax credits determined under the proposal. An election for direct payment is irrevocable and, except for the transition rule described below, must be made prior to the date on which construction of a qualified facility begins and in such manner as the Secretary may prescribe. As a transition rule, a taxpayer may make an election for direct payment within 180 days of the date of enactment of the proposal with respect to qualified facilities the construction of which began before the date of enactment of the proposal that are placed in service after December 31, 2020.

Secretary’s authority to request information

As a condition of, and prior to, receiving a direct payment, the Secretary may require such information as the Secretary deems necessary to prevent duplication, fraud, and any other improper payments.
Excessive amount penalty

Any portion of a direct payment made under this provision which constitutes an excessive amount may be assessed and collected as if it were a tax and as if the person who made the claim were liable for such tax. If any claim for payment is made for an excessive amount, unless it is shown that the claim is due to reasonable cause, the person making such claim shall be liable for a penalty in an amount equal to 20 percent of the excessive amount. The term “excessive amount” means the amount by which the amount of the claim for payment exceeds the amount of such claim allowable under the provision for the taxable year.

Effective Date

The proposal is generally effective on the date of enactment, except that the wage and workforce requirements apply to facilities or equipment the construction of which begins after December 31, 2021, and the elimination of the use of carbon oxide as a tertiary injectant is effective for property the construction of which begins after December 31, 2026. The election for direct payment is effective for elections made after the date of enactment for taxable years ending after such date with respect to property placed in service after December 31, 2020.

5. Energy investment credit

Description of Proposal

Linear generator assemblies

The proposal modifies the definition of fuel cell property in section 48 to include linear generator assemblies. A linear generator assembly does not include any assembly which contains rotating parts.

Acceleration of sunset date

Except for geothermal heat pump property, the proposal sunsets the energy credit for property the construction of which begins after December 31, 2022.

Election for direct payment

The proposal adds a direct payment options to the section 48 energy credit. Taxpayers may elect to have such credits treated as payments made by the taxpayer against the tax imposed by Chapter 1 of the Code, regardless of whether such tax would have been imposed. Such payments are in lieu of any tax credits determined under the proposal. An election for direct payment is irrevocable and, except for the transition rule described below, must be made prior to the date on which construction of the qualified property begins and in such manner as the Secretary may prescribe. As a transition rule, a taxpayer may make an election for direct payment within 180 days of the date of enactment of the proposal with respect to qualified facilities the construction of which began before the date of enactment of the proposal that are placed in service after December 31, 2020.

4 Note that a proposal in Title III of this document makes additional changes to the credit for geothermal heat pump property.
Secretary's authority to request information

As a condition of, and prior to, receiving a direct payment, the Secretary may require such information as the Secretary deems necessary to prevent duplication, fraud, and any other improper payments.

Excessive amount penalty

Any portion of a direct payment made under this provision which constitutes an excessive amount may be assessed and collected as if it were a tax and as if the person who made the claim were liable for such tax. If any claim for payment is made for an excessive amount, unless it is shown that the claim is due to reasonable cause, the person making such claim shall be liable for a penalty in an amount equal to 20 percent of the excessive amount. The term “excessive amount” means the amount by which the amount of the claim for payment exceeds the amount of such claim allowable under the provision for the taxable year.

Effective Date

The modification of the definition of fuel cell property is effective for fuel cells the construction of which begins after December 31, 2020. The modification of the sunset dates is effective on the date of enactment. The election for direct payment is effective for elections made after the date of enactment for taxable years ending after such date with respect to property placed in service after December 31, 2020.

6. Cost recovery for qualified facilities, qualified property, and grid improvement property

Description of Proposal

The proposal makes qualifies facilities, qualified property, and grid improvement property, as those terms are defined for purposes of the clean electricity production and clean electricity investment credits described earlier, five-year property under the modified accelerated cost recovery system (“MACRS”). The proposal gives such property a 30-year class life for purposes of the alternative depreciation system.

Effective Date

The proposal is effective for facilities and property placed in service after December 31, 2022.
II. INCENTIVES FOR CLEAN TRANSPORTATION

Summary of Present Law Clean Transportation Energy-Related Tax Incentives

The Code contains a number of tax incentives for biofuels, alternative fuels, alternative fuel vehicles, and related infrastructure. The following tables provide summaries of these incentives.

<table>
<thead>
<tr>
<th>Fuel Type</th>
<th>Per Gallon Incentive Amount</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agri-biodiesel and biodiesel (secs. 40A, 6426, and 6427)</td>
<td>$1.00 per gallon, plus $0.10 per gallon for small agri-biodiesel producers</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td>Renewable diesel (secs. 40A, 6426, and 6427)</td>
<td>$1.00 per gallon</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td>Second generation biofuel (cellulosic and algae) (sec. 40(b)(6))</td>
<td>$1.01 per gallon</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>Alternative fuel and alternative fuel mixtures (secs. 6426 and 6427):</td>
<td>$0.50 per gallon</td>
<td>January 1, 2022</td>
</tr>
<tr>
<td>- liquefied petroleum gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- P Series Fuels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- compressed or liquefied natural gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- liquefied hydrogen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- any liquid fuel derived from coal through the Fischer-Tropsch process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- compressed or liquefied gas derived from biomass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- liquid fuel derived from biomass</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Income tax only credit which is not refundable.

2 The refundable component of the alternative fuel mixture credit sunset for alternative fuel mixtures sold or used after December 31, 2011 (sec. 6427(e)(6)(D)).

3 For alternative fuels that are used or sold “neat” (not as part of a mixture with taxable fuel) the incentive can be claimed two ways: (1) as an excise tax credit against fuel tax liability, or (2) as a cash (outlay) payment if the taxpayer has insufficient fuel tax liability. For alternative fuel in a mixture, only excise tax credits are allowed.
<table>
<thead>
<tr>
<th>Type of Property</th>
<th>Description of Qualifying Property</th>
<th>Credit Amount and Explanation</th>
<th>Expiration</th>
</tr>
</thead>
</table>
| Fuel cell vehicles (sec. 30B) | Vehicles propelled by chemically combining oxygen with hydrogen and creating electricity | • Base credit of $4,000 for vehicles weighing 8,500 pounds or less  
• Heavier vehicles can get up to a $40,000 credit, depending on weight  
• An additional $1,000 to $4,000 credit is available to cars and light trucks to the extent fuel economy exceeds 2002 base fuel economy | December 31, 2021 |
| Alternative fuel refueling property (sec. 30C) | Property that dispenses alternative fuels, including ethanol, biodiesel, natural gas, hydrogen, and electricity | 30% credit up to $30,000 for business property and $1,000 for property installed at a principal residence | December 31, 2021 |
| Plug-in electric-drive motor vehicles (sec. 30D) | Four-wheeled vehicles (excluding low speed vehicles and vehicles weighing 14,000 or more) propelled by a battery with at least 4 kilowatt-hours of electricity that can be charged from an external source | Base credit of $2,500, plus $417 for each kilowatt-hour of additional battery capacity in excess of 4 kilowatt-hours (up to $5,000) for a maximum combined credit of up to $7,500 | 200,000 vehicles per manufacturer limitation |
| Plug-in electric-drive motorcycles (sec. 30D) | Two-wheeled vehicles able to achieve speeds of at least 45 miles per hour propelled by a battery with at least 2.5 kilowatt-hours of electricity that can be charged from an external source | Credit is 10% of cost, up to $2,500 | December 31, 2021 |
A. Clean Fuel Production Credit

Description of Proposal

Clean fuel production credit

The proposal creates a new general business credit, the “Clean Fuel Production Credit” for transportation fuel. For this purpose, “transportation fuel” is a fuel suitable for use as a fuel in a highway vehicle or aircraft.5 The level of the incentive depends on the lifecycle carbon emissions of a given fuel. For transportation fuel sold during any calendar year ending before January 1, 2030, the credit is the product of (1) $1.00 per gallon (or gallon equivalent) of transportation fuel produced and sold by the taxpayer under specified circumstances and (2) the emissions factor for such fuel. For calendar years 2030 and thereafter, the credit is equal to the applicable amount6 per gallon of transportation fuel produced and sold by the taxpayer under specified circumstances.7 To qualify for the credit, the transportation fuel must be produced at a qualified facility, and sold by the taxpayer to an unrelated person (1) for use by such person in the production of a fuel mixture, (2) for use by such person in a trade or business, or (3) who sells such fuel at retail into the fuel tank of another person.

Fuel must be produced at a qualified facility

A “qualified facility” is a facility used for the production of transportation fuels and which satisfies certain wage and workforce requirements. In particular, the taxpayer must ensure that any laborers and mechanics employed by contractors and subcontractors in the construction of such facility (or for any year for which the credit is claimed, an alteration or repair of such facility) are paid wages at a rates not less than the prevailing wage rates for construction, alteration, or repair of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code.

The taxpayer must also ensure that the qualified apprenticeship requirements (described in Part VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

In the case of a qualified facility that was placed in service before the date of enactment, the wage and workforce requirements only apply to construction, alteration, or repair in any year

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5 The use of term “transportation fuel” does not prohibit the use of transportation-grade fuel from being used for purposes other than transportation, such as home or commercial heating, or for other business uses.

6 “Applicable amount” with respect to any transportation fuel is an amount equal to $1.00 increased by 10 cents for every kilogram of CO2e per mmBTU (or fraction thereof) for which the emissions rate for such fuel is below zero. “CO2e” means, with respect to any greenhouse gas, the equivalent carbon dioxide (as determined based on relative global warming potential). “Greenhouse gas” has the same meaning given that term under section 211(o)(1)(G) of the Clean Air Act (42 USC 7545(o)(1)(G)) as in effect on the date of enactment.

7 If the amount of clean fuel production credit is not a multiple of 0.1, the amount is to be rounded to the nearest multiple of 0.1.
in which the credit is claimed. The requirements do not apply to the original construction of such facility.

Emissions factor calculation and establishment by the Secretary

The emissions factor of a transportation fuel is an amount equal to the quotient of (1) an amount equal to the baseline emissions rate, minus the emissions rate for such fuel, divided by (2) the baseline emissions rate. For any calendar year ending before January 1, 2026, “baseline emissions rate” means 75 kilograms of CO\textsubscript{2}e per 1,000,000 British thermal units (“mmBTU”). For calendar years 2026 and 2027, the baseline emissions rate is 50 kilograms per CO\textsubscript{2}e per mmBTU. For calendar years 2028 and 2029, the baseline emissions rate is 25 kilograms of CO\textsubscript{2}e per mmBTU.\footnote{For example, consider a fuel with an emissions rate of 30 kilograms of CO\textsubscript{2}e per mmBTU. In 2023 the emissions factor is (75-30)/75 = .6. In 2026 the emissions factor is (50-30)/50 = .4. In 2028 the emissions factor is (25-30)/50 < 0. Thus, the credit for each gallon of such a fuel produced would be $.60, $.40, and $0 per gallon (prior to inflation adjustment or phase-out), in 2023, 2026, and 2028 respectively.}

The Secretary, in consultation with the Department of Energy, is to establish the emissions rate for similar types and categories of transportation fuels based on the amount of lifecycle greenhouse gas emissions\footnote{As described in section 211(o)(1)(H) of the Clean Air Act as in effect on the date of enactment.} for such fuels, expressed as kilograms of CO\textsubscript{2}e per mmBTU, which a taxpayer is required to use for purposes of the proposal.\footnote{The Secretary may round the emissions rates to the nearest multiple of five kilograms of CO\textsubscript{2}e per mmBTU, except that in the case of an emissions rate that is less than 2.5 kilograms of CO\textsubscript{2}e per mmBTU, the Secretary may round such rate to zero.} The Secretary is required to publish annually a table that sets forth the emission rate for similar types and categories of transportation fuel.

Petition for provisional emissions rate

In the case of any transportation fuel for which an emissions rate has not been established by the Secretary, a taxpayer producing such fuel may file a petition with the Secretary for determination of the emissions rate with respect to such fuel. Within 12 months of the filing of a petition, the Secretary, in consultation with the Secretary of Energy is required to provide a provisional emissions rate for such fuel. The emissions rate for such fuel must be established not later than 24 months after the filing of the petition.

Inflation adjustment and credit phase-out

In the case of calendar years beginning after 2023, the $1.00 amount is adjusted by multiplying such amount by the inflation adjustment factor for the calendar year in which the sale or use of the transportation fuel occurs. The inflation adjustment factor is the inflation adjustment factor determined and published by the Secretary under the new clean electricity production credit.
If the Secretary, in consultation with the EPA Administrator determines that the annual greenhouse gas emissions from the transportation of persons and goods annually in the United States are equal to or less than 25 percent of the annual greenhouse gas emissions from the transportation of persons and goods in the United States for calendar year 2021, the amount of the clean fuel production credit under the proposal is determined by substituting the “applicable dollar amount” for the dollar amount per gallon of transportation fuel. The “applicable dollar amount” is calculated by multiplying the dollar amount by a phase-out percentage. For any taxable year beginning in the first calendar year following the calendar year the determination is made, the phase-out percentage is equal to 100 percent. For any taxable year beginning in the second calendar year following such determination year, the phase-out percentage is equal to 75 percent. For any taxable year beginning in the third calendar year following the determination, the phase-out percentage is equal to 50 percent, and for any taxable year beginning thereafter, the phase-out percentage is reduced to zero percent.

Final guidance and special rules

Not later than January 1, 2023, the Secretary, in consultation with the Secretary of Energy, is required to issue final guidance with regard to the implementation of the proposal, including the calculation of emissions factors for transportation fuel, the required table publication, and the proper determination of clean fuel production credits under the proposal.

To claim the clean fuel production credit, the taxpayer must be registered with the Internal Revenue Service (“IRS”) as a producer of clean fuel at the time of production. Such fuel must be produced in the United States.

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

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 fuel to an unrelated person if such fuel is sold to such a person by another member of such group.

In the case of estates and trusts, rules similar to the rules of section 52(d) shall apply. In the case of agricultural cooperatives, an election may be made to apportion the credit determined among the patrons of the cooperative on the basis of business done by the patrons during the taxable year.

Effective Dates

The proposal is effective for transportation fuel produced after December 31, 2022.
B. Transportation Electrification

1. Fuel cell vehicle credit

Description of Proposal

The calendar year sunset date for the fuel cell vehicle credit is eliminated and replaced with a credit phase-out rule. Under this phase-out rule, if the Secretary, in consultation with the Secretary of Transportation, determines that the total annual sales of new qualified fuel cell motor vehicles and new qualified plug-in electric drive motor vehicles in the United States exceed 50 percent of the total annual sales of new passenger vehicles in the United States, the amount of the fuel cell vehicle credit is reduced according to the following schedule: by 25 percent for a vehicle purchased during the second calendar year following the determination, by 50 percent for a vehicle purchased during the third calendar year following the determination, and by 100 percent for a vehicle purchased during any subsequent calendar year.

Effective Date

The proposal is effective for property purchased after December 31, 2021.

2. Alternative fuel refueling property credit

Description of Proposal

In general

The proposal extends the alternative fuel refueling property credit. It also modifies the credit limitation and the definition of qualifying fuels and adds wage and workforce requirements.

Modification of limitation

The proposal modifies the limitation in section 30C(b) so that the credit cap is no longer applied “per location” but rather is applied “with respect to any single item of qualified alternative fuel vehicle refueling property placed in service by the taxpayer during the taxable year.”\(^{11}\) In addition, the credit cap is increased from $30,000 to $200,000, in the case of qualified property that is depreciable property.

Modification of qualifying fuels

The proposal modifies the definition of qualifying fuels such that the list in section 30C(c)(2)(A) consists of hydrogen and any transportation fuel for which the clean fuel production credit (described earlier) is allowed. The proposal also modifies the definition of qualifying mixtures listed in section 30C(c)(2)(B) to be any mixture of a taxable fuel and a fuel

\(^{11}\) Thus, for example, the present-law limitation which might treat a gasoline service station as a single location would, under the proposal, be applied to each item of qualifying property installed at such service station.
that qualifies for the clean fuel production credit, where at least 20 percent of the volume of such mixture is a liquid transportation fuel for which the clean fuel production credit is allowed.

**Wage and workforce requirements**

For property to be qualified property for purposes of section 30C, the taxpayer must ensure that the any laborers and mechanics employed by contractors and subcontractors in the construction of such property are paid wages at a rate not less than the prevailing wage rates for construction of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code.

The taxpayer must also ensure that the qualified apprenticeship requirements (described in section VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

**Credit phase-out**

If the Secretary, in consultation with the Secretary of Transportation and the EPA Administrator, determines that the annual greenhouse gas emissions from the transportation of persons and goods annually in the United States are equal to or less than 25 percent of the annual greenhouse gas emissions from the transportation of persons and goods in the United States for calendar year 2021, the amount of the credit is reduced according the following schedule: by 25 percent for any property placed in service during the second calendar year following the determination, by 50 percent for any property placed in service during the third calendar year following the determination, and by 100 percent for any property placed in service during any subsequent calendar year.

**Effective Date**

The proposal is generally effective for property placed in service after December 31, 2021, except for the change to the definition of qualifying fuels and the wage and workforce requirements, which are effective for property placed in service after December 31, 2022, and the addition of the credit phase-out rules which are effective on the date of enactment.

3. Electric vehicle credits

**Description of Proposal**

**In general**

The proposal extends and modifies the section 30D credit for new qualified plug-in electric drive motor vehicles (the “EV credit”). The proposal creates a new credit for qualified commercial electric vehicles.

**Modifications to the EV credit**

The proposal extends the credit in section 30D for three-wheeled vehicles (which had expired after December 31, 2013) for vehicles acquired after December 31, 2020. The proposal
also replaces the sunset date for the credit for two- and three-wheeled plug-in electric vehicles with the phase-out rule described below. The proposal also eliminates the EV credit’s limitation on the number of credit eligible EVs each manufacturer can sell.

Beginning January 1, 2022, the proposal makes the EV credit a refundable personal income tax credit for vehicles acquired on or after that date. The proposal also adds a requirement that taxpayers must list the vehicle identification number (“VIN”) on their returns for the taxable year in order to claim the EV credit. The proposal also gives the IRS mathematical error authority for taxpayers who omit the VIN.

**EV credit phase-out**

If the Secretary, in consultation with the Secretary of Transportation, determines that the total annual sales of new qualified fuel cell motor vehicles and new qualified plug-in electric drive motor vehicles in the United States exceed 50 percent of the total annual sales of new passenger vehicles in the United States, the amount of the EV credit is reduced according to the following schedule: by 25 percent for a vehicle purchased during the second calendar year following the determination, by 50 percent for a vehicle purchased during the third calendar year following the determination, and by 100 percent for a vehicle purchased during any subsequent calendar year.

**Credit for qualified commercial electric vehicles**

The proposal creates a new credit for each qualified commercial electric vehicle (“qualified commercial EV”) placed in service by the taxpayer. The credit amount is the lesser of 30 percent of the basis of a qualified vehicle or the incremental cost of such vehicle. For purposes of determining the credit amount, the incremental cost of any qualified commercial EV is an amount equal to the excess of the price paid for such vehicle over such price for a comparable vehicle of similar weight and size that is powered by a gasoline or diesel internal combustion engine and is intended for similar use. The Secretary, in consultation with the Secretary of Transportation, shall publish an annual list of comparable prices of various types and classes of commercial vehicles for use in calculating the incremental cost of a qualified commercial EV.

To be a qualified commercial EV, the vehicle must be depreciable and meet all the requirements of section 30D, except for the weight limitation. In addition, the vehicle must have a battery that has a capacity of at least 10 kilowatt-hours that is capable of being recharged from an external source. For a vehicle to qualify, a taxpayer must list the VIN of each vehicle on the return for the taxable year.

Rules similar to the rules in section 30D(f) apply to the commercial EV credit.

**Commercial EV credit phase-out**

If the Secretary, in consultation with the Secretary of Transportation, determines that the total annual sales of new qualified commercial EVs in the United States exceed 50 percent of the total annual sales of new commercial vehicles in the United States, the amount of the commercial EV credit is reduced according to the following schedule: by 25 percent for a vehicle purchased
during the second calendar year following the determination, by 50 percent for a vehicle purchased during the third calendar year following the determination, and by 100 percent for a vehicle purchased during any subsequent calendar year.

**Effective Date**

The extension of the EV credit for two- and three-wheeled electric vehicles is effective for vehicles acquired after December 31, 2020. The elimination of the per-manufacturer-cap is effective for vehicles sold after May 24, 2021. The portions of the proposal making the EV credit a refundable personal income tax credit along with the VIN requirement are effective for vehicles acquired after December 31, 2021. The EV credit phase-out rule is effective on the date of enactment.

The commercial EV credit is effective for vehicles acquired after December 31, 2021.
C. Temporary Extensions of Existing Fuel Incentives

**Second generation biofuel**

The proposal extends the second generation biofuel producer credit for an additional year, through December 31, 2022.

**Alternative fuel and alternative fuel mixtures**

The proposal modifies the definition of alternative fuel as it relates to hydrogen by no longer requiring that the hydrogen be liquefied. However, nonliquid hydrogen cannot qualify as part of an alternative fuel mixture. Both the alternative fuel credit and alternative fuel mixture credit are extended an additional year, through December 31, 2022. The payment provision for alternative fuel also is extended additional year, through December 31, 2022.

**Effective Dates**

For the second generation biofuel producer credit, the proposal applies to qualified second generation biofuel production after December 31, 2021.

For the alternative fuel and alternative fuel mixtures credits, the proposal applies to fuel sold or used after December 31, 2021.
III. INCENTIVES FOR ENERGY EFFICIENCY

Summary of Certain Present Law Energy Efficiency-Related Tax Incentives

The Code contains a number of tax incentives to encourage energy efficiency. The following tables provide summaries of a number of these incentives.

<table>
<thead>
<tr>
<th>Qualified Energy Property (sec. 48)</th>
<th>Credit Rate</th>
<th>Maximum Credit</th>
<th>Expiration¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment to use ground or ground water for heating or cooling</td>
<td>10%</td>
<td>None</td>
<td>January 1, 2024</td>
</tr>
<tr>
<td>Equipment that uses fiber-optics to distribute sunlight inside a structure</td>
<td>30%</td>
<td>None</td>
<td>January 1, 2020</td>
</tr>
<tr>
<td></td>
<td>26%</td>
<td>January 1, 2023</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>January 1, 2024</td>
<td></td>
</tr>
<tr>
<td>Waste energy recovery property</td>
<td>26%</td>
<td>None</td>
<td>January 1, 2023</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>January 1, 2024</td>
<td></td>
</tr>
</tbody>
</table>

¹ For all eligible property, construction of the property must begin before the expiration date, except where otherwise noted. For credits subject to a rate phase down, construction must begin before the dates listed and placed in service before January 1, 2026.
## Summary of Credits and Deduction to Make Homes and Buildings More Energy Efficient

<table>
<thead>
<tr>
<th>Credit</th>
<th>Rate or Amount</th>
<th>Maximum Credit</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal credit:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit for nonbusiness energy property installed at a principal residence (sec. 25C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insulation to 2009 international energy conservation code standard</td>
<td>10%</td>
<td>$500 (overall sec. 25C credit maximum)</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td>Energy efficient windows, doors, skylights, roofs</td>
<td>10%</td>
<td>$500 ($200 for windows and skylights)</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td>Advanced main air circulating fans</td>
<td>100%</td>
<td>$50</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td>Qualified natural gas, propane, or oil furnace or hot water boilers</td>
<td>100%</td>
<td>$150</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td>Qualified electric heat pump water heaters or natural gas, propane, or oil water heaters</td>
<td>100%</td>
<td>$300</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td>Qualified central air conditioners</td>
<td>100%</td>
<td>$300</td>
<td>December 31, 2021</td>
</tr>
<tr>
<td><strong>Business Credit:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manufacturer credit for new energy efficient home (sec. 45L)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homes 30 percent more efficient than standard or Energy Star manufactured homes</td>
<td></td>
<td>$1,000 p/er home</td>
<td>None</td>
</tr>
<tr>
<td>Homes 50 percent more efficient than the specified standard or is a manufactured home that meets the requirements of the Energy Star Labeled Homes program</td>
<td></td>
<td>$2,000 per home</td>
<td>None</td>
</tr>
</tbody>
</table>
### Business Deduction:

<table>
<thead>
<tr>
<th>Eligible Activity</th>
<th>Description</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy efficient commercial buildings deduction (sec. 179D)</td>
<td>A taxpayer may take in the placed-in-service year an additional deduction of $1.80 per square foot of commercial building property that exceeds certain energy efficiency standards. If a section 179D deduction is allowed, the basis of the property is reduced by the amount of the deduction; the remaining basis is recovered under otherwise applicable rules</td>
<td>None</td>
</tr>
</tbody>
</table>

2 Expires for property placed in service after the expiration date.
A. Credit for New Energy Efficient Residential Buildings

Description of Proposal

In general

The proposal creates a new energy efficient home credit to replace the credit in section 45L. The new credit is part of the general business credit.

Credit amount

In the case of an eligible contractor, the new energy efficient home credit for the taxable year is the applicable amount for each qualified residence which is constructed by the eligible contractor and acquired by a person from such eligible contractor for use as a residence during the taxable year. The applicable amount is either $2,500 or $5,000 depending on the efficiency standard achieved for the qualified residence.

The $2,500 credit is allowable for new dwelling units that are certified as satisfying the national program requirements under the Energy Star residential new construction program (or any successor program, as determined by the Secretary), as in effect on January 1 of the year in which construction of such dwelling units begins. The $5,000 credit is allowable for new dwelling units that are certified as satisfying the requirements for new residential construction under the Zero Energy Ready Home program (or any successor program, as determined by the Secretary) as in effect on January 1 of the year in which construction such dwelling units begins. Both of these amounts are adjusted for inflation, with changes rounding to the nearest increment of $100.

Definitions and other rules

For purposes of the credit, the term “construction” does not include substantial reconstruction or rehabilitation of an existing structure.

The term “eligible contractor” means the person who constructed the qualified residence, or, in the case of a manufactured home, the manufactured home producer of such residence.

The term “qualified residence” means a dwelling unit located in the United States, the construction of which is substantially completed after the date of enactment of the proposal, which is certified as satisfying either the national program requirements under the Energy Star new residential construction program or the Zero Energy Ready Home program, and which is built by workers paid prevailing wages.

A certification described in the proposal must be made by a third party who is accredited by a certification program approved by the Secretary, in consultation with the Secretary of Energy and in accordance with any applicable rules under the Energy Star new residential construction or Zero Energy Ready Home programs, as in effect on the date on which construction of the dwelling unit begins, and with any other guidance prescribed by the Secretary, in consultation with the Secretary of Energy.
If a credit is allowed under this proposal in connection with any expenditure for any property (other than a qualified low-income building described in section 42(c)(2)), the increase in the basis of such property which would (but for this proposal) result from such expenditure is reduced by the amount of the credit so determined.

For purposes of the proposal, expenditures taken into account under sections 25D or 47 are not taken into account for this credit.

**Effective Date**

The proposal is effective for any qualified residence acquired after December 31, 2021.
B. Energy Efficient Home Improvement Credit

Description of Proposal

In general

The proposal replaces the section 25C credit for nonbusiness energy property with an energy efficient home improvement credit available to individuals.

Credit amount

The credit amount is the lesser of the sum of the applicable qualified property amounts for any qualified property placed in service by an individual during the taxable year or $1,500. For any qualified property, the applicable qualified property amount equals the lesser of 30 percent of the amount paid or incurred by the individual for such qualified property (including any expenditures for labor costs properly allocable to the onsite preparation, assembly, or original installation of such property) or $600. The $600 and $1,500 amounts are adjusted for inflation, rounding any change by increments of $10.

In the case of any air-source heat pump that would otherwise be qualified property, the $600 maximum described above is increased to $800, which is also adjusted for inflation.

In the case of any ground source qualified geothermal heat pump property which meets the second through fourth requirements listed below for qualified property, the $600 credit maximum is increased to $10,000 (adjusted for inflation) and the $1,500 credit maximum does not apply. The credit amounts and limitations are calculated separately for this property and other credit eligible property.

In the case of any building envelope improvement that satisfies the definition of qualified property, the $600 amount does not apply.

Qualified property

The term “qualified property” means a furnace, boiler, condensing water heater, central air conditioning unit, heat pump, biomass property, or building envelope improvement which: (1) except in the case of a building envelope improvement, meets or exceeds the requirements of the highest efficiency tier (not including any advanced tier) established by the Consortium for Energy Efficiency that are in effect on January 1 of the calendar year in which the property is placed in service, (2) is installed according to applicable Air Conditioning Contractors of America Quality Installation standards which are in effect on January 1 of the calendar year in which the property is placed in service, (3) is for use in a dwelling unit which is located in the United States and used as a residence by the individual claiming the credit, and (4) is reasonably expected to remain in service in such dwelling unit for not less than five years.

Qualified geothermal heat pump property means any equipment that (1) uses the ground or ground water as a thermal energy source to heat a dwelling unit located in the United States and used as a residence by the taxpayer or as thermal energy sink to cool such dwelling unit and
(2) meets the requirements of the Energy Star program in effect at the time the expenditure for such equipment is made.

**Definitions and other rules**

The term “biomass property” means any property which uses the burning of biomass fuel to heat a dwelling unit or to heat water for use in a dwelling unit and that, using the higher heating value, has a thermal efficiency of not less than 75 percent. The term “biomass fuel” means any plant-derived fuel that is available on a renewable or recurring basis, including any such fuel which has been subject to a densification process (such as wood pellets).

For purposes of the proposal, the term “building envelope improvement” means (1) any insulation material or system (including air barrier insulation) which is specifically and primarily designed to reduce the heat loss or gain of a dwelling unit when installed in or on such dwelling unit and meets the prescriptive criteria for such material or system established by the International Energy Conservation Code, as such Code (including supplements) is in effect on January 1 of the calendar year in which such material or system is installed, and (2) exterior doors and windows (including skylights) which received certification under applicable Energy Star program requirements which are in effect on January 1 of the calendar year in which the property is placed in service.

The term “dwelling unit” includes manufactured homes which conform to Federal Manufactured Home Construction and Safety Standards.

No credit is allowed for any amounts paid or incurred for which a deduction or credit allowed under any other provision of Chapter 1 of Subtitle A of the Code.

**Effective Date**

The proposal is effective for any qualified property placed in service after December 31, 2021.

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12 A window treatment must meet applicable certification requirements for such product under the Attachments Energy Rating Council certification program to qualify as an energy efficient building envelope component.
C. Enhancement of Energy Efficient Commercial Buildings Deduction

Description of Proposal

In general

The proposal modifies the section 179D deduction for energy efficient commercial buildings.

Deduction amount

Under the proposal, the maximum deduction is increased to equal (1) the product of the applicable dollar value and the square footage of the relevant building over (2) the aggregate amount of the deduction with respect to such building for the three prior years. The applicable dollar value is $2.50 increased (but not above $5.00) by $0.10 for each percentage point by which the total annual energy and power costs for the building are certified to be reduced by a percentage greater than 25 percent.

Other modifications

The proposal reduces from 50 percent to 25 percent the amount by which the certified plan under section 179D(c)(1)(D) must be designed to reduce the relevant building’s total annual energy and power costs with respect to interior lighting systems, heating, cooling, ventilation, and hot water systems in comparison to a reference building which meets the minimum requirements of Reference Standard 90.1.

The proposal modifies the rules governing the allocation of the deduction where the building is owned by a tax-exempt entity. The proposal also expands these rules to cover additional types of entities. Under the proposal, in the case of energy efficient commercial building property installed on or in property owned by an eligible entity, the Secretary shall promulgate regulations to allow the allocation of the deduction to the person primarily responsible for designing the property in lieu of the owner of such property, with such person to be treated as the taxpayer for purposes of the deduction. For this purpose, the term “eligible entity” means a Federal, State, or local government or political subdivision thereof, an Indian tribe (as defined in section 45A(c)(6)), or an organization described in section 501(c) and exempt from tax under section 501(a).

The proposal eliminates the interim rule for lighting systems in section 179D(f) and modifies the inflation adjustment so that the new deduction formula described above is adjusted for inflation starting after 2022, using 2021 as the base year.

The proposal provides a special rule for a real estate investment trust’s earnings and profits to be reduced by any deductions for energy efficient commercial building property placed in service in the taxable year, in lieu of the five-year schedule under section 312(k)(3)(B).
Wage and workforce requirements

The proposal adds wage and workforce requirements to the deduction for energy efficient commercial buildings. The taxpayer must ensure that any laborers and mechanics employed by contractors and subcontractors in the construction, alteration, or repair of property otherwise eligible for the deduction are paid wages at a rate not less than the prevailing wage rates for construction, alteration, or repair of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code.

The taxpayer must also ensure that the qualified apprenticeship requirements (described in section VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

Effective Date

The proposal is effective for property placed in service after December 31, 2021.
D. Enhancement of Energy Credit for Geothermal Heat Pumps

Description of Proposal

The proposal increases the section 48 investment tax credit for geothermal heat pumps to 30 percent and removes the sunset date.

Effective Date

The proposal is effective for property the construction of which begins after December 31, 2021.
IV. CLEAN ELECTRICITY AND FUEL BONDS

A. Clean Energy Bonds

Prior Law

Tax-credit bonds provide tax credits to investors to replace a prescribed portion of the interest cost. The borrowing subsidy generally is measured by reference to the credit rate set by the Treasury Department. Tax-credit bonds include qualified tax credit bonds, which have certain common general requirements, and included two types of energy bonds: new clean renewable energy bonds (“New CREBs”) and qualified energy conservation bonds.13 For these energy tax-credit bonds, the subsidy was 70 percent of the credit rate on the bonds.

An issuer could elect to issue certain tax credit bonds as “direct-pay bonds.” Instead of allowing a credit to the holder, with a “direct-pay bond” the Federal government pays the issuer a percentage of the interest on the bonds. New CREBs and qualified energy conservation bonds were permitted to be issued as direct-pay bonds. Pursuant to the Balanced Budget and Emergency Deficit Control Act of 1985, as amended, sequestration applies to direct-pay bonds. For such bonds, refund payments and refund offset transactions processed are subject to a percentage reduction (5.9 percent for fiscal year 2020).

The authority to issue new tax credit bonds and direct-pay bonds was prospectively repealed by Public Law 115-97.

Description of Proposal

The proposal creates a new type of tax-credit bond, a “clean energy bond.” A clean energy bond means any bond issued as part of an issue if 100 percent of the excess of the available project proceeds over amounts in a reasonably required reserve with respect to such issue are to be used for capital expenditures incurred by a governmental body, public power provider or cooperative electric company, for one or more qualified facilities or grid improvement property. The bond must be issued by a governmental body, public power provider or cooperative electric company and the issuer must make an irrevocable election to have the proposal apply.

If a taxpayer holds a clean energy bond on one or more interest payment dates of the bond during the taxable year, the taxpayer is allowed a credit against the excess of regular and

13 New CREBs were issued by qualified issuers to finance qualified renewable energy facilities. Former sec. 54C. Qualified energy conservation bonds could be issued for capital expenditures incurred for reducing energy consumption in publicly owned buildings by at least 20 percent; implementing green community programs (including the use of loans, grants or other repayment mechanisms to implement such programs); rural development involving the production of electricity from renewable energy resources; or any qualified facility including facilities that generate electricity from wind, closed-loop biomass; open-loop biomass; geothermal or solar; small irrigation, hydroelectric; gas from biodegradation of municipal solid waste; marine and hydrokinetic renewable; and trash combustion facilities without regard to any placed in service date. The purposes also included expenditures for certain research facilities and grants, mass commuting facilities, demonstration projects and public education campaigns to promote energy efficiency. Former sec. 54D.
alternative minimum tax liability for the taxable year over the sum of other allowable credits.\textsuperscript{14} The amount of the credit with respect to any interest payment date is the applicable percentage of the amount of interest payable by the issuer with respect to such date. The maximum applicable percentage is 70 percent. In the case of a qualified facility used to produce transportation fuel, the applicable percentage is reduced (but not below zero) by an amount which bears the same ratio to the applicable percentage in effect as the anticipated average emissions rate for all transportation fuel produced by such facility bears to the baseline emissions rate. Rules similar to the clean fuel production credit apply to this proposal, including published emission rates.

**Credit phase-out**

**Electrical and energy storage property.**—If the Secretary, in consultation with the EPA Administrator, 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 greenhouse gas emissions from the production of electricity in the United States in 2021, the amount of the credit with respect to any clean energy bond issued during a phase-out calendar year will be the product of the amount determined without regard to this provision multiplied by the phase-out percentage.

**Fuel production.**—If the Secretary, in consultation with the EPA Administrator, determines that the annual greenhouse gas emissions from the transportation of persons and goods annually in the United States are equal to or less than 25 percent of greenhouse gas emissions from the transportation of persons and goods in the United States in 2021, the amount of the credit with respect to any clean energy bond issued during a phase-out calendar year will be the product of the amount determined without regard to this provision multiplied by the phase-out percentage.

**Phase-out percentage.**—The phase-out percentage is equal to, for any bond issued during the first calendar year following the calendar year the applicable determination is made, 100 percent. For any bond issued during the second calendar year following such determination year, the phase-out percentage is 75 percent. For any bond issued during the third calendar year following such determination the phase-out percentage is 50 percent. For any bond issued during a calendar year thereafter, the phase-out percentage is zero percent.

**Special rules**

The interest on any clean energy bond is includible in gross income for purposes of Federal income taxes. In the case of a clean energy bond held by an S corporation or partnership, the allocation of credit allowed to the shareholders of such corporation or partners of such partnership shall be treated as a distribution.

If a real estate investment trust holds a clean energy bond, under procedures prescribed by the Secretary, the credit shall be allowed to beneficiaries of such trust (and gross income included with respect to such credit shall be distributed to such beneficiaries). Under regulations prescribed by the Secretary, credits may be stripped, meaning that there may be a separation of

\textsuperscript{14} Unused credits may be carried over to a succeeding taxable year and added to the credit allowable for such succeeding taxable year.
the ownership of the bond and entitlement to the credit. For purposes of section 148 (relating to arbitrage) the yield of a clean energy bond shall be determined without regard to the credit allowed. A bond shall not be treated as a clean energy bond if the issue price has more than a de minimis amount of premium over the stated principal amount of the bond.

**Definitions**

“Available project proceeds” means: (1) the excess of the proceeds from the sale of an issue over the issuance costs (not to exceed two percent of such proceeds) and (2) the proceeds from any investment of the excess.

A “cooperative electric company” means a mutual or cooperative electric company described in section 501(c)(12) or section 1398(a)(2)(C). A “governmental body” means any State or Indian tribal government, or any political subdivision thereof. A “public power provider” means a State utility with a service obligation, as such terms are defined in section 217 of the Federal Power Act (as in effect on the date of enactment of the proposal).

An “interest payment date” is any date on which the holder of record of the clean energy bond is entitled to a payment of interest.

A “qualified facility” is a qualified facility for purposes of the clean electricity production credit, or the clean fuel production credit that only produces transportation fuel which has an emissions rate of less than 75 kilograms of CO₂e per mmBTU as defined for purposes of those credits.

**Direct-pay option**

The issuer of a qualified clean energy bond may make an irrevocable election, in lieu of any credit allowed to the bondholder, to receive a payment from the Federal government equal to the applicable percentage of the interest payable under such bond. Payment is to be made contemporaneously with each interest payment date under such bond and may be made to the issuer or to any person who makes such interest payments on behalf of the issuer. For this purpose, interest payment date means each date on which interest is payable by the issuer under the terms of the bond.

A qualified clean energy bond means a clean energy bond issued as part of an issue if the issuer makes an irrevocable election to have this provision apply.

In the case of sequestration, the amount of the payment is increased to any amount equal to such payment multiplied by the quotient obtained by dividing one by the amount by which one exceeds the percentage reduction in such payment pursuant to sequestration.

**Effective Date**

The proposal applies to obligations issued after December 31, 2022.
V. TERMINATION AND MODIFICATION OF CERTAIN FOSSIL FUEL PROVISIONS

Summary of Certain Present Law Fossil Fuel Tax Incentives

The Code contains a number of tax incentives and special rules for fossil fuels and other energy-related activities. The following tables provide summaries of the relevant provisions.

<table>
<thead>
<tr>
<th>Eligible Activity</th>
<th>Description of Provision</th>
<th>Expiration</th>
</tr>
</thead>
</table>
| Geological & geophysical expenditures (sec. 167(h)) | • Geological and geophysical ("G&G") expenditures (e.g., expenditures for geologists, seismic surveys, gravity meter surveys, and magnetic surveys) incurred by independent producers and smaller integrated oil companies in connection with domestic oil and gas exploration may be amortized over 24 months.  
• G&G expenditures incurred by major integrated oil companies are amortized over seven years.  
• No expensing of abandoned property (i.e., any remaining basis in the year of abandonment of a property must continue to be amortized over the remaining applicable amortization period). | None |
| Alaska natural gas pipeline (secs. 168(e)(3)(C)(iii), 168(g)(3)(B), and 168(l)(16)) | • A seven-year MACRS recovery period and a 22-year alternative depreciation system ("ADS") recovery period is provided for any natural gas pipeline system (including the pipe, trunk lines, related equipment, and appurtenances used to carry natural gas, but not any gas processing plant) located in the State of Alaska that has a capacity of more than 500 billion Btu of natural gas per day, and either:  
  o Is placed in service after December 31, 2013, or  
  o The taxpayer elects to treat the system as placed in service on January 1, 2014 (to the extent the system was placed in service before January 1, 2014). | None |

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| Natural gas gathering lines (secs. 168(e)(3)(C)(iv), 168(g)(3)(B), and 168(i)(17)) | - A seven-year MACRS recovery period and 14-year ADS recovery period is provided for any natural gas gathering line the original use of which commences with the taxpayer after April 11, 2005.  
  - A natural gas gathering line includes:  
    - The pipe, equipment, and appurtenances determined to be a gathering line by the Federal Energy Regulatory Commission ("FERC"), and  
    - The pipe, equipment, and appurtenances used to deliver natural gas from the wellhead or a common point to the point at which such gas first reaches:  
      - A gas processing plant,  
      - An interconnection with a transmission pipeline for which a certificate as an interstate transmission pipeline has been issued by FERC,  
      - An interconnection with an intrastate transmission pipeline, or  
      - A direct interconnection with a local distribution company, a gas storage facility, or an industrial consumer. | None       |
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| Deduction for tertiary injectants (sec. 193)          | - Taxpayers engaged in petroleum extraction activities may generally deduct qualified tertiary injectant expenses injected during the taxable year as part of a tertiary recovery method.  
- A “qualified tertiary injectant expense” is any cost paid or incurred for any tertiary injectant (other than a recoverable hydrocarbon injectant) which is used as part of a tertiary recovery method. The cost of a recoverable hydrocarbon injectant (which includes natural gas, crude oil and any other injectant with more than an insignificant amount of natural gas or crude oil) is not a qualified tertiary injectant expense unless the amount of the recoverable hydrocarbon injectant in the qualified tertiary injectant is insignificant.  
- No deduction is permitted for expenditures for which a taxpayer has elected to deduct such costs under section 263(c) (intangible drilling costs) or if a deduction is allowed for such amounts under any other income tax provision. | None       |
| Election to expense intangible drilling costs (secs. 263(c), 263(i), 291, and 638) | - Taxpayers may elect to currently deduct intangible drilling costs (“IDCs”) paid or incurred with respect to the development of an oil or gas property located in the United States (including certain wells drilled offshore).  
- For an integrated oil company that has elected to expense IDCs, 30 percent of the IDCs on productive wells must be capitalized and amortized over a 60-month period.  
- In the case of IDCs paid or incurred with respect to an oil or gas well located outside of the United States, the taxpayer may elect to either (1) include the IDCs in adjusted basis for purposes of computing the amount of any deduction allowable for cost depletion, or (2) capitalize and amortize the IDCs ratably over a 10-year period beginning with the taxable year such costs were paid or incurred. | None       |
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| Expensing for some or all exploration and development costs for coal mining (secs. 616, 617, and 291) | • Taxpayers may currently deduct all expenditures paid or incurred during the taxable year for the development of a mine or other natural deposit (other than an oil or gas well) if paid or incurred after the existence of ores or minerals in commercially marketable quantities has been disclosed.  
• Taxpayers may also elect to deduct mining exploration expenditures that are paid or incurred before the beginning of the development stage of the mine.  
• Corporations are required to amortize 30 percent of the deductions ratably over 60 months beginning with the month in which the costs are paid or incurred. | None |

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| **Depletion** (secs. 611-613A and 291) | - Depletion is available to any person having an economic interest in a producing mine or oil and gas property (e.g., a working or royalty interest in an oil- or gas-producing property). There generally are two types of depletion: cost and percentage depletion.  
  
  - Under the cost depletion method, the taxpayer deducts that portion of the adjusted basis of the depletable property which is equal to the ratio of units sold from that property during the taxable year relative to the number of units remaining as of the end of taxable year plus the number of units sold during the taxable year.  
  
  - Under the percentage depletion method, a percentage, varying from five percent to 22 percent (generally 15 percent for oil and gas properties), of the taxpayer’s gross income from a producing property is allowed as a deduction in each taxable year. The amount deducted generally may not exceed 50 percent (100 percent in the case of oil and gas properties) of the net income from the oil and gas property in any year (the “net-income limitation”).  
  
  - Additionally, the percentage depletion deduction for all oil and gas properties may not exceed 65 percent of the taxpayer’s overall taxable income for the year (determined before such deduction, as well as before any deduction allowable under section 199A, and adjusted for certain loss carrybacks and trust distributions).  
  
  - Cost depletion is limited to the taxpayer’s basis in the property, whereas percentage depletion is not limited by the basis, but is subject to limitations based on net income derived from the property and taxable income.  
  
  - Percentage depletion for producing oil and gas property (15-percent rate) is available only to independent producers and royalty owners. Integrated oil and gas companies must use cost depletion. Generally, an integrated oil company is a producer of crude oil that engages in the refining or retail sale of petroleum products in excess of certain threshold amounts. | None |
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<tr>
<td><strong>Depletion (secs. 611-613A and 291) (cont’d)</strong></td>
<td>• Percentage depletion is also available for coal and lignite (10-percent rate) and oil shale (15-percent rate). The percentage depletion deduction for coal and lignite is generally reduced for corporations by an amount equal to 20 percent of the percentage depletion that exceeds the adjusted basis of the property.</td>
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<td>• Percentage depletion is not available to individuals where capital gains rates apply under section 631(c).</td>
<td>None</td>
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| Capital gains treatment of certain coal royalties (sec. 631(c)) | • In the case of the disposal of coal (including lignite) mined in the United States, held for more than one year prior to disposal, by the owner in a form under which the owner retains an economic interest in such coal, the excess of the amount realized from the sale over the adjusted depletable basis of the coal (plus certain disallowed deductions) is treated as from the sale of property used in the owner’s trade or business (i.e., the sale of section 1231 property).  
• If the owner’s net section 1231 gains, including royalties from eligible coal disposals, exceed its section 1231 losses, the royalties are treated as capital gains.  
• Where individual capital gains rates apply, percentage depletion is not available.                                                                                           | None       |
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| Enhanced oil recovery (“EOR”) credit (sec. 43) | • Credit for expenses associated with an EOR project  
• An EOR project is generally a project that involves the use of one or more tertiary recovery methods to increase the amount of recoverable domestic crude oil. | • 15% of enhanced oil recovery costs                                           | None           |
| Marginal wells credit (sec. 45f)        | Production credit for marginal wells or wells that have an average daily production of not more than 25 barrels per day | • $3-per-barrel credit (adjusted for inflation from 2004) for the production of crude oil from marginal wells  
• $0.50-per-1,000-cubic-feet credit (adjusted for inflation from 2004) for the production of natural gas from a marginal well | None           |
| Indian coal credit (sec. 45)            | Production credit for coal produced from reserves that on June 14, 2005, were owned by (or held in trust on behalf of) an Indian tribe | • $2-per-ton credit (adjusted for inflation; $2.60 per ton for 2021)            | January 1, 2022 |
## Summary of Energy Credits Related to Fossil Fuels

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<th>Eligible Activity</th>
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| **Advanced coal project credit (sec. 48A)** | • Investment credit for projects that use integrated gasification combined cycle (“IGCC”) or other advanced coal-based electricity generation technologies  
• Credits are allocated by the Secretary.  
• First round allocations are capped at $800 million for IGCC projects and $500 million for other projects.  
• Second round allocations are capped at $1.25 billion.  
• Second round projects must generally sequester 65% of total CO₂ emissions (70% in the case of reallocated credits). | • 20% for first round IGCC projects  
• 15% for other first round projects  
• 30% for second round projects | None  
Approximately $2 billion of credits will be reallocated in 2021 due to forfeiture of the initial allocations. |
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<tr>
<td>Gasification credit (sec. 48B)</td>
<td>• Investment credit for qualified projects that use gasification technology</td>
<td>• 20 percent for first round</td>
<td>None, but the credit has effectively expired</td>
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<td>• Qualified projects convert coal, petroleum residue, biomass, or other materials recovered for their energy content into a synthesis gas for direct use or subsequent chemical or physical conversion</td>
<td>• 30 percent for second round</td>
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<tr>
<td></td>
<td>• Credits are allocated by the Secretary</td>
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<td>• First round allocations are capped at $350 million</td>
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<td></td>
<td>• Second round allocations are capped at $250 million</td>
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<td>• First round projects are generally limited to industrial applications; second round projects include projects designed to produce motor fuels</td>
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<td>• Second round projects must generally sequester 65 percent of total CO₂ emissions</td>
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<td>• All credits have been fully allocated</td>
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## Summary of Certain Other Energy Provisions Related to Fossil Fuels

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| Passive loss rules for working interests in oil and gas property (sec. 469) | • Passive activity loss rules not applicable to working interest in any oil or gas property that taxpayer holds directly or indirectly through an entity that does not limit the taxpayer’s liability.  
• Losses and credits from such interests, in general, may offset income from other activities of taxpayer.                                                                                      | None       |
| Certain publicly traded partnerships treated as corporations (secs. 7704 and 851) | • General rule that a publicly traded partnership is taxed as a corporation is not applicable if 90 percent or more of gross income is interest, dividends, real property rents, or certain other types of qualifying income.  
• Other types of qualifying income include income and gains from certain activities with respect to minerals or natural resources.                                                                                      | None       |
| Dual capacity taxpayers (sec. 901) | • In general, a taxpayer receives a credit against U.S. taxes for income taxes paid to a foreign country related to economic activity in that country. Royalties paid to a foreign country for extracting oil and gas from that country are not creditable against U.S. taxes.  
• A dual capacity taxpayer is a taxpayer that is subject to a foreign levy and also receives a specific economic benefit from the foreign country (e.g., pays a tax to an oil exporting country and receives a license to extract oil and gas from that country).  
• Dual capacity taxpayers may use either a safe harbor or facts and circumstances method to establish that a foreign levy is a creditable tax and not a royalty-like payment for a specific economic benefit from the foreign country.  
• The taxpayer need not establish that the foreign country generally imposes an income tax to establish a levy is a creditable tax.                                                                                     | None       |
## Summary of Certain Other Energy Provisions Related to Fossil Fuels

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| **Global intangible low-taxed income rules for foreign oil and gas extraction income (secs. 907(c)(1) and 951A(c)(2)(A)(i)(V))** | • For purposes of determining global intangible low-taxed income included in gross income of U.S. shareholders, tested income excludes any foreign oil and gas extraction income of the controlled foreign corporation.  
• “Foreign oil and gas extraction income” means the taxable income derived from sources without the United States and its possessions from (A) the extraction (by the taxpayer or any other person) of minerals from oil or gas wells or (B) the sale or exchange of assets used by the taxpayer in the trade or business described in (A). Any passive dividend or interest income (as defined in sec. 904(d)(2)(A)) is excluded. | None |
| **Foreign base company oil related income (sec. 954)** | • Certain passive and readily movable income of a foreign corporation that is controlled by U.S. shareholders is currently taxable to those U.S. shareholders (“subpart F income”).  
• Prior to 2018, subpart F income included foreign base company oil related income. | None |
| **Oil Spill Liability Trust Fund tax (sec. 4611)** | • A 9-cents-per-barrel Oil Spill Liability Trust Fund excise tax is imposed on crude oil received at refineries or imported petroleum products. | December 31, 2025 |
A. Termination of Provisions Relating to Oil, Gas, and Other Materials

1. Amortization of G&G expenditures

   Description of Proposal

   The proposal sunsets the 24-month amortization period (seven-year amortization period in the case of major integrated oil companies) for G&G expenditures provided by section 167(h).

   Once the 24-month amortization period assigned by the Code sunsets, taxpayers will generally be required to allocate G&G expenditures to the cost of the property acquired, retained, or abandoned, and recover such costs over the life of such property or in the year of abandonment of the property.\(^{15}\)

   Effective Date

   The proposal is effective for expenses paid or incurred during any taxable year beginning after the date of enactment.

2. Alaska natural gas pipelines

   Description of Proposal

   The proposal sunsets the seven-year MACRS and 22-year ADS recovery periods for Alaska natural gas pipelines.

   Once the seven-year MACRS and 22-year ADS recovery periods assigned by the Code sunset, the applicable recovery period for Alaska natural gas pipelines will be determined under Revenue Procedure 87-56, which dictates the applicable recovery period for an asset based on its class life.\(^{16}\) Asset class 46.0 of Revenue Procedure 87-56, describing pipeline transportation, provides a 22-year class life, 15-year MACRS recovery period, and 22-year ADS recovery period for applicable assets, which include natural gas pipelines.

   Effective Date

   The proposal is effective for property placed in service on or after the end of the calendar year that includes the date of enactment.

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\(^{15}\) See secs. 263(a) and 165; Treas. Reg. secs. 1.263(a)-1 and 1.263(a)-3(l); Rev. Rul. 77-188, 1977-1 C.B. 76; and Rev. Rul. 83-105, 1983-2 C.B. 51.

\(^{16}\) Exercising authority granted by Congress, the Secretary issued Rev. Proc. 87-56, 1987-2 C.B. 674, laying out the framework of recovery periods for enumerated classes of assets. The Secretary clarified and modified the list of asset classes in Rev. Proc. 88-22, 1988-1 C.B. 785. In November 1988, Congress revoked the Secretary’s authority to modify the class lives of depreciable property. Rev. Proc. 87-56, as modified, remains in effect except to the extent that the Congress has, since 1988, statutorily modified the recovery period for certain depreciable assets, effectively superseding any administrative guidance with regard to such property.
3. Natural gas gathering lines

**Description of Proposal**

The proposal sunsets the seven-year MACRS and 14-year ADS recovery periods for natural gas gathering lines.

Once the seven-year MACRS and 14-year ADS recovery periods assigned by the Code sunset, the applicable recovery period for natural gas gathering lines will be determined under Revenue Procedure 87-56. Revenue Procedure 87-56 includes two asset classes under which natural gas gathering lines could be classified. Asset class 13.2, describing assets used in the exploration for and production of petroleum and natural gas deposits, provides a 14-year class life, seven-year MACRS recovery period, and 14-year ADS recovery period for applicable assets, which include natural gas gathering lines used by producers of petroleum and natural gas. Asset class 46.0, describing pipeline transportation, provides a 22-year class life, 15-year MACRS recovery period, and 22-year ADS recovery period for assets used in the private, commercial, and contract carrying of petroleum, gas and other products by means of pipes and conveyors, including the trunk lines and related storage facilities of integrated petroleum and natural gas producers. In the case of natural gas gathering lines not eligible for present law section 168(e)(3)(C)(iv) (e.g., because the original use did not commence with the taxpayer after April 11, 2005), certain appellate courts have held that such natural gas gathering lines owned by nonproducers and used for the benefit of producers fell within the scope of Asset class 13.2 (i.e., with a seven-year MACRS recovery period). The appellate court in each case reversed a lower court holding that natural gas gathering lines owned by nonproducers fell within the scope of Asset class 46.0 (i.e., with a 15-year MACRS recovery period).

**Effective Date**

The proposal is effective for property placed in service on or after the end of the calendar year that includes the date of enactment.

4. Repeal of deduction for tertiary injectants

**Description of Proposal**

The proposal sunsets the deduction for tertiary injectants under section 193.

**Effective Date**

The proposal is effective for expenditures paid or incurred during any taxable year beginning after the date of enactment.

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5. IDCs in the case of oil and gas wells and geothermal wells

**Description of Proposal**

The proposal requires IDCs paid or incurred by a taxpayer with regard to any oil or gas well located in the United States (including certain wells drilled offshore) to be capitalized and amortized ratably over 60 months beginning with the month in which the costs are paid or incurred. The proposal also treats any such amortization deduction as an IDC deduction for purposes of section 1254.

**Effective Date**

The proposal is effective for amounts paid or incurred in any taxable year beginning after the date of enactment.

6. Percentage depletion of oil and gas wells, coal, lignite, and oil shale

**Description of Proposal**

The proposal sunsets the use of percentage depletion for oil and gas wells, coal, lignite, and oil shale.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.

7. Termination of capital gains treatment for royalties from coal

**Description of Proposal**

The proposal sunsets the capital gains treatment for royalties from coal provided by section 631.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.

8. Enhanced oil recovery credit

**Description of Proposal**

The proposal repeals the enhanced oil recovery credit provided by section 43.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.
9. Credit for producing oil and gas from marginal wells

**Description of Proposal**

The proposal repeals the credit for producing oil and gas from marginal wells provided by section 45I.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.

10. Qualifying advanced coal project credit

**Description of Proposal**

The proposal repeals the credit for qualifying advanced coal projects provided by section 48A.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.

11. Qualifying gasification project credit

**Description of Proposal**

The proposal repeals the credit for qualifying gasification projects provided by section 48B.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.

12. Passive loss rules for working interests in oil and gas property

**Description of Proposal**

The proposal repeals the passive loss rules for working interests in oil and gas property.

**Effective Date**

The proposal is effective for taxable years beginning after the date of enactment.
13. Repeal of corporate income tax exemption for publicly traded partnerships with qualifying income and gains from activities relating to fossil fuels

Description of Proposal

The proposal repeals the treatment of income from pipelines transporting gas or oil and products thereof as qualifying income of publicly traded partnership. The proposal also excludes coal, gas, oil, or products thereof from the definition of a mineral or natural resource. As a result, a partnership with income and gains from these activities may be treated as a corporation for Federal tax purposes.

Effective Date

The proposal is effective for taxable years beginning after the date of enactment.
B. Modification of Certain Provisions Relating to Oil, Gas, and Other Fossil Fuels

1. Dual capacity taxpayers

**Description of Proposal**

The proposal denies a foreign tax credit for certain levies paid or accrued by a dual capacity taxpayer that is a major integrated oil company\(^{18}\) to a foreign country or possession of the United States. Any such levy is not considered a tax to the extent such levy exceeds the amount that the dual capacity taxpayer pays or would pay under a generally applicable income tax imposed by the foreign country or possession. If the foreign country or possession does not impose a generally applicable income tax, no levy paid or accrued to the foreign country or possession is considered a tax.

For this purpose, a generally applicable income tax is an income tax (or series of income taxes) which is generally imposed under the laws of the foreign country or possession on income derived from the conduct of a trade or business within such country or possession. Such a tax is a generally applicable income tax only if the tax has substantial application, by its terms and in practice, to persons who are not dual capacity taxpayers and persons who are citizens or residents of the foreign country or possession.

The proposal would not apply to the extent contrary to any treaty obligation of the United States.

**Effective Date**

The proposal is effective for taxes paid or accrued in taxable years beginning after the date of enactment.

2. Reinstatement of treatment of foreign base company oil related income as foreign base company income

**Description of Proposal**

The proposal reinstates the treatment of foreign base company oil related income ("FBCORI") as foreign base company income. Thus, under the proposal, FBCORI is foreign oil related income other than income derived from a source within a foreign country in connection with (A) oil or gas which was extracted from an oil or gas well located in such foreign country, or (B) oil, gas, or a primary product of oil or gas which is sold by the foreign corporation or a related person for use or consumption within such country or is loaded in such country on a vessel or aircraft as fuel for such vessel or aircraft. In addition, FBCORI excludes income of a foreign corporation that is not a large oil producer for the taxable year. For this purpose, a large oil producer is any corporation if, for the taxable year or the preceding taxable year, the average

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\(^{18}\) Within the meaning of section 167(h)(5).
daily production of foreign crude oil and natural gas of the related group which includes such corporation equaled or exceeded 1,000 barrels.

**Effective Date**

The proposal is effective for taxable years of foreign corporations beginning after the date of the enactment, and to taxable years of U.S. shareholders with or within which such taxable years of foreign corporations end.

3. **Inclusion of foreign oil and gas extraction income in tested income for purposes of determining global intangible low-taxed income**

**Description of Proposal**

The proposal repeals the exclusion from tested income of foreign oil and gas extraction income for purposes of determining global intangible low-taxed income.

**Effective Date**

The proposal is effective for taxable years of foreign corporations beginning after the date of the enactment, and to taxable years of U.S. shareholders with or within which such taxable years of foreign corporations end.

4. **Modification of Oil Spill Liability Trust Fund excise tax**

**Description of Proposal**

The proposal expands the definition of crude oil to include crudes that are produced from bituminous deposits and received at a U.S. refinery, entered into the United States, or used or exported after December 31, 2021. This expansion is intended to encompass crude oil from tar sands and oil shale.

**Effective Date**

The proposal is effective for crudes received, entered, used or exported after December 31, 2021.
VI. WORKFORCE DEVELOPMENT REQUIREMENTS

A. Use of Qualified Apprentices

Present Law

Under present law there are no requirements for a taxpayer to use apprentices to perform labor in order to qualify for a tax benefit. However, there are some tax preferences related to education that may benefit individuals participating in apprenticeship programs.

529 Plans

A qualified tuition program (often referred to as a “529 plan”) is a program established and maintained by a State or agency or instrumentality thereof, or by one or more eligible educational institutions, which satisfies certain requirements and under which a person may purchase tuition credits or certificates on behalf of a designated beneficiary that entitle the beneficiary to the waiver or payment of qualified higher education expenses of the beneficiary (“prepaid tuition contract”). In the case of a program established and maintained by a State or agency or instrumentality thereof, a qualified tuition program also includes a program under which a person may make contributions to an account that is established for the purpose of satisfying the qualified higher education expenses of the designated beneficiary of the account, provided it satisfies certain specified requirements (“tuition savings account”). Section 529 provides specified income tax and transfer tax rules for the treatment of accounts and contracts established under qualified tuition programs. Under both types of qualified tuition programs, a contributor establishes an account for the benefit of a particular designated beneficiary to provide for that beneficiary’s qualified higher education expenses.

Distributions for the purpose of meeting the designated beneficiary’s higher education expenses are generally not subject to tax. For purposes of receiving a distribution from a qualified tuition program that qualifies for this favorable tax treatment, the term qualified higher education expenses means tuition, fees, books, supplies, and equipment required for the enrollment or attendance of a designated beneficiary at an eligible educational institution, and expenses for special needs services in the case of a special needs beneficiary that are incurred in connection with such enrollment or attendance. Qualified higher education expenses generally also include room and board for students who are enrolled at least half-time. Qualified higher education expenses include the purchase of any computer technology or equipment, or Internet access or related services, if such technology or services are to be used primarily by the beneficiary during any of the years a beneficiary is enrolled at an eligible institution.

Qualified higher education expenses for purposes of distributions also include: (1) expenses for tuition in connection with enrollment or attendance at an elementary or secondary public, private, or religious school (up to $10,000 per year), (2) amounts used to make payments on principal or interest on a qualified education loan (up to $10,000 per individual, in aggregate, over the individual’s lifetime), and (3) expenses for fees, books, supplies, and equipment required for the participation of a designated beneficiary in an apprenticeship program. The
apprenticeship program must be registered and certified with the Secretary of Labor under section 1 of the National Apprenticeship Act.¹⁹

**Lifetime learning credit**

Taxpayers may be eligible to claim a nonrefundable credit, the Lifetime Learning credit, against Federal income taxes equal to 20 percent of qualified tuition and related expenses paid by the taxpayer during the taxable year on behalf of the taxpayer, the taxpayer’s spouse, or any dependents. Up to $10,000 of qualified tuition and related expenses per taxpayer return are eligible for the Lifetime Learning credit (i.e., the maximum credit per taxpayer return is $2,000).

Qualified tuition and related expenses generally include tuition and fees required for enrollment or attendance of the taxpayer, the taxpayer’s spouse, or any dependent of the taxpayer with respect to any course of instruction at an eligible educational institution to acquire or improve job skills of such individual.

A taxpayer may claim the Lifetime Learning credit for an unlimited number of taxable years and the maximum amount of the Lifetime Learning credit that may be claimed on a taxpayer’s return does not vary based on the number of students in the taxpayer’s family. The Lifetime Learning credit amount that a taxpayer may otherwise claim is phased out ratably for taxpayers with modified adjusted gross income (“AGI”) between $80,000 and $90,000 ($160,000 and $180,000 for married taxpayers filing a joint return) in 2021.

The Lifetime Learning credit is available in the taxable year the expenses are paid, subject to the requirement that the education is furnished to the student during that year or during an academic period beginning during the first three months of the next taxable year. Qualified tuition and related expenses paid with the proceeds of a loan generally are eligible for the Lifetime Learning credit. However, repayment of a loan is not a qualified tuition expense.

A taxpayer may claim the Lifetime Learning credit with respect to a student who is not the taxpayer or the taxpayer’s spouse (e.g., in cases in which the student is the taxpayer’s child) only if the taxpayer claims the student as a dependent for the taxable year for which the credit is claimed. If a student is claimed as a dependent by a parent or other taxpayer, the student may not claim the Lifetime Learning credit for that taxable year on the student’s own tax return. If a parent (or other taxpayer) claims a student as a dependent, any qualified tuition and related expenses paid by the student are treated as paid by the parent (or other taxpayer) for purposes of the provision.

**Exclusions for employer-provided educational assistance**

**Educational assistance programs**

If certain requirements are satisfied, up to $5,250 annually of educational assistance provided by an employer to an employee is excludable from the employee’s gross income for

income tax purposes and from wages for employment tax purposes. The educational assistance must be provided pursuant to a separate written plan of the employer. The employer’s educational assistance program must not discriminate in favor of highly compensated employees. In addition, no more than five percent of the amounts paid or incurred by the employer during the year for educational assistance under a qualified educational assistance program can be provided for the class of individuals consisting of more-than-five-percent owners of the employer and the spouses or dependents of such more-than-five-percent owners.

For purposes of this exclusion, educational assistance means the payment by an employer of expenses incurred by or on behalf of the employee for education of the employee including, but not limited to, tuition, fees, and similar payments, books, supplies, and equipment. Educational assistance also includes the provision by the employer of courses of instruction for the employee (including books, supplies, and equipment). Educational assistance does not include (1) tools or supplies that may be retained by the employee after completion of a course, (2) meals, lodging, or transportation, and (3) any education involving sports, games, or hobbies. The exclusion for employer-provided educational assistance applies only with respect to education provided to the employee (i.e., it does not apply to education provided to the spouse or a child of the employee).

Working condition fringe benefit

In the absence of the specific exclusion for employer-provided educational assistance under section 127, employer-provided educational assistance is excludable from gross income and wages if the education expenses qualify as a working condition fringe benefit. A deduction for education expenses generally is allowed under section 162 and therefore is considered a working condition fringe benefit when paid or provided by an employer if the education or training (1) maintains or improves a skill required in a trade or business currently engaged in by the taxpayer, or (2) meets the express requirements of the taxpayer’s employer, or requirements of applicable law or regulations, imposed as a condition of continued employment. Education expenses are not deductible if they relate to certain minimum educational requirements or to education or training that enables a taxpayer to begin working in a new trade or business. These education expenses provided by an employer to an employee that qualify as a working condition fringe benefit are excludable from the employee’s gross income. Unlike a qualified educational assistance program, there is no dollar cap, written plan requirement, or nondiscrimination requirement for educational expenses that qualify as a working condition fringe benefit.

Description of Proposal

The proposal requires that at least 15 percent of total labor hours of construction, alteration, or repair work on any applicable project be performed by qualified apprentices. In

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20 Secs. 127 and 3121(a)(18).

21 Sec. 132(d).

addition, the ratio of apprentice-to-journeyworker must meet the standard set by the Department of Labor or applicable State apprenticeship agency. Exceptions from these requirements are provided for taxpayers that demonstrate a lack of available qualified apprentices in the geographic area of the construction, alteration, or repair work and make a good faith effort to comply with the requirements of the proposal.

Labor hours are the total number of hours devoted to construction, alteration, or repair work by employees of the contractor or subcontractor and excludes certain hours worked by managers or owners.

An applicable project is qualified alternative fuel vehicle refueling property (including modifications), certain qualified facilities (for purposes of the modified credit for carbon oxide sequestration, proposed clean electricity production credit, proposed clean electricity investment credit, and proposed clean fuel production credit), grid improvement property, energy efficient commercial building property, or eligible property for which a credit is allowed under the relevant Code sections.

A qualified apprentice is an employee of the contractor or subcontractor who is participating in a registered apprenticeship program.

If an applicable project fails to satisfy these requirements, the taxpayer must pay the IRS a penalty equal to $500 per hour of apprenticeship requirement that has not been met, not to exceed the value of the tax benefit, unless the taxpayer demonstrates a lack of available qualified apprentices in the geographic area of the construction, alteration, or repair work and has made a good faith effort to comply with the requirements of the proposal.

23 In general, a journeyworker is a worker who has attained a level of skill, abilities and competencies recognized within an industry as having mastered the skills and competencies required for the occupation.

24 Labor hours exclude hours worked by foremen, superintendents, owners, or persons employed in an executive, administrative, or professional capacity (within the meaning of 29 C.F.R. part 541).

25 As defined under section II.B.2 of this document, the alternative fuel refueling property credit.

26 As defined under section I.C.3 of this document, the carbon oxide sequestration credit.

27 As defined under section I.A of this document, the clean electricity production credit.

28 As defined under section I.B.1 of this document, the clean electricity investment credit.

29 As defined under section II.A of this document, the clean fuel production credit.

30 As defined under section I.B.1 of this document, the clean electricity business investment credit.

31 As defined under section III.C of this document, the energy efficient commercial buildings deduction.

32 As defined under section VII.A of this document, the qualifying advanced energy project credit.

33 Registered apprenticeship program as defined in sec. 3131(e)(3)(B).
Effective Date

The proposal is effective on date of enactment. The requirement for work performed by qualified apprentices on applicable projects applies to each relevant credit according to the effective dates described elsewhere in this document.
B. Failure to Comply With Prevailing Wage Rules

Present Law

Present law does not contain any rules requiring that prevailing wages be paid in order to claim certain tax benefits.

Description of Proposal

In general

The proposal provides rules governing failures to comply with the prevailing wage requirements described throughout this document.

Production tax credits

In the case of any applicable production tax credit, a facility is not a qualifying facility unless the prevailing wage requirements are met during construction, before such property is placed in service. However, a taxpayer may bring a facility into compliance, and have the facility qualify, by paying any affected workers the difference between the actual compensation paid to such workers and the wages required to be paid to those workers to meet prevailing wage requirements, plus any applicable interest. In addition, such taxpayer must pay a penalty to the IRS equal to $5,000 per affected worker.

Once a qualifying facility has been placed in service, a taxpayer that does not meet the prevailing wage requirements associated with the alteration or repair of such facility is ineligible for any production credits for energy or fuel produced during the taxable year of noncompliance. A taxpayer may bring the facility into compliance by paying any affected workers the difference between the actual compensation paid to such workers and the wages required to be paid to those workers to meet prevailing wage requirements, plus any applicable interest. In addition, such taxpayer must also pay a penalty to the IRS equal to $5,000 per affected worker.

Investment tax credits

In the case of any applicable investment tax credit, a facility is not a qualifying facility unless the prevailing wage requirements are met during construction, before such property is placed in service. However, a taxpayer may bring the facility into compliance, and have the facility qualify, by paying any affected workers the difference between the actual compensation paid to such workers and the wages required to be paid to those workers to meet prevailing wage requirements, plus any applicable interest. In addition, such taxpayer must also pay a penalty to the IRS equal to $5,000 per affected worker.

Once a qualifying facility has been placed in service, if it does not meet prevailing wage requirements associated with any alterations or repairs, the property comprising such facility shall be treated as disposed of under the rules of section 50(a)(1). A taxpayer may bring the facility into compliance by paying any affected workers the difference between the actual compensation paid to such workers and the wages required to be paid to those workers to meet
prevailing wage requirements, plus any applicable interest. In addition, such taxpayer must also pay a penalty to the IRS equal to $5,000 per affected worker.

**Other incentives**

In the case of other applicable incentives, no benefit is allowed unless the prevailing wage requirements are satisfied. However, a taxpayer may come into compliance and qualify for the incentive by paying any affected workers the difference between the actual compensation paid to such workers and the wages required to be paid to those workers to meet prevailing wage requirements, plus any applicable interest. In addition, such taxpayer must also pay a penalty to the IRS equal to $5,000 per affected worker.

**Applicable credits and incentives**

Under the proposal, the applicable production credits are the proposed clean electricity production credit,\(^{34}\) the proposed clean fuel production credit,\(^{35}\) and the modified carbon oxide sequestration credit.\(^{36}\) The applicable investment credits are the proposed clean electricity investment credit\(^{37}\) and the modified alternative fuel refueling property credit,\(^{38}\) and the modified qualifying advanced energy project credit.\(^{39}\) The other applicable incentives are the modified new energy efficient home credit\(^{40}\) and the modified energy efficient commercial buildings deduction.\(^{41}\)

**Effective Date**

The proposal is effective on the date of enactment.

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\(^{34}\) As defined under section I.A of this document.

\(^{35}\) As defined under section II.A of this document.

\(^{36}\) Sec. 45Q, as modified in section I.C.3 of this document.

\(^{37}\) As defined under section I.B.1 of this document.

\(^{38}\) Sec. 30C, as modified in section II.B.2 of this document.

\(^{39}\) Sec. 48C, as modified in section VII.A of this document.

\(^{40}\) Sec. 45L, as modified in section III.A of this document.

\(^{41}\) Sec. 179D, as modified in section III.C of this document.
VII. DOMESTIC MANUFACTURING INCENTIVES FOR CLEAN ENERGY

A. Extend and Modify the Qualifying Advanced Energy Project Credit

Present Law

<table>
<thead>
<tr>
<th>Eligible Activity</th>
<th>Description</th>
<th>Credit Amount</th>
<th>Expiration</th>
</tr>
</thead>
</table>
| Advanced energy project credit (sec. 48C)  | • Investment credit for qualified projects that re-equip, expand, or establish a manufacturing facility for the production of specified energy related products  
  • Credits are allocated by the Secretary and are capped at $2.3 billion  
  • All credits have been fully allocated                                                                                                                                                                                                                                         | 30 percent    | None       |

Description of Proposal

In general

Under the proposal, the 30-precent credit for investment in qualified property used in a qualified advance energy manufacturing project is modified as follows.

Qualified advanced energy projects

A qualified advanced energy project is a project that re-equip, expands, or establishes a manufacturing or industrial facility for the production or recycling of: (1) property designed to be used to produce energy from the sun, water, geothermal deposits, or other renewable resources; (2) fuel cells, microturbines, or energy storage systems and components; (3) electric grid modernization equipment or components; (4) property designed to remove, use, or sequester carbon dioxide emissions; (5) equipment designed to refine, electrolyze, or blend any fuel, chemical, or product which is (a) renewable or (b) low-carbon and low-emission; (6) property designed to produce energy conservation technologies (including for residential, commercial, and industrial applications); (7) electric or fuel cell vehicles and (a) technologies, components, or materials for such vehicles and (b) associated charging or refueling infrastructure; (8) hybrid vehicles with a gross vehicle weight rating of not less than 14,000 pounds as well as technologies, components, or materials for such vehicles; or (9) other advanced energy property designed to reduce greenhouse gas emissions as may be determined by the Secretary.

A qualifying advanced energy project also includes a project that re-equip an industrial or manufacturing facility with equipment designed to reduce its greenhouse gas emissions well below current best practices through the installation of (1) low- or zero-carbon process heat systems, (2) carbon capture, transport, utilization and storage systems, (3) energy efficiency and
reduction in waste from industrial processes, or (4) any industrial technology which significantly reduces greenhouse gas emissions, as determined by the Secretary.

Qualified property must be depreciable (or amortizable) property used in a qualified advanced energy project. Only tangible personal property and other tangible property (not including a building or its structural components) are credit-eligible. The basis of qualified property must be reduced by the amount of credit received.

Certification

Credits are available only for projects certified by the Secretary of Treasury, in consultation with the Secretary of Energy. The Secretary of Treasury must establish a certification program no later than 180 days after the date of enactment this proposal. The proposal provides an additional allocation of $8 billion in credits, of which not more than $4 billion may be allocated to projects that are not in a census tract that (1) prior to the date of enactment of this proposal, had no projects that received a certification or allocation of credits under 48C(d) and (2) had a coal mine close after December 31, 1999, had a coal-fired electric generating unit retired after December 31, 2009, or is immediately adjacent to one such census tract. No credit is allowed for any qualified investment that was allowed a credit under sections 45Q, 48, 48A, 48B, or 48D.

In selecting projects, the Secretary may consider only those projects where there is a reasonable expectation of commercial viability and which will ensure that any laborers and mechanics employed by contractors and subcontractors in the construction, alteration, or repair of such projects are paid wages at a rate not less than the prevailing wage rates for construction, alteration, or repair of a similar character in the locality as determined by the Secretary of Labor, in accordance with subchapter IV of chapter 31, of title 40, United States Code and that the qualified apprenticeship requirements (described section VI.A of this document) are satisfied by ensuring that not less than 15 percent of the total labor hours are performed by qualified apprentices.

In addition, the Secretary must consider other selection criteria, including which projects (1) will provide the greatest net impact in avoiding or reducing anthropogenic emissions of greenhouse gases (or, in the case of a fuel cell, microturbine, or energy storage system and component project, will provide the greatest reduction of greenhouse gas emissions compared to current best practices), (2) will provide the greatest domestic job creation during the credit period, (3) will provide the greatest job creation within the vicinity of the project, particularly with respect to low-income communities and dislocated workers previously employed in manufacturing, coal power plants, or coal mining, (4) have the greatest potential for technological innovation and commercial deployment, (5) have the lowest levelized cost of generated or stored energy, or of measured reduction in energy consumption or greenhouse gas emission, and (6) have the shortest project time from certification to completion.

Each project application must be submitted during the three-year period beginning on the date such certification program is established. An applicant for certification has 18 months from

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42 Within the meaning of sec. 45D(e).
the date the Secretary accepts the application to provide the Secretary with evidence that the requirements for certification have been met. The Secretary has up to 180 days after the date such evidence was provided by the applicant to determine whether the requirements of certification have been met. Upon certification, the applicant has three years from the date of issuance of the certification to place the project in service. An applicant’s certification is invalid if the Secretary determines the project has been placed in a location materially different than the location specified in the application for such project.

Election for direct payment

Taxpayers may elect to have the tax credits otherwise allowed under this proposal be treated as payments made by the taxpayer against the tax imposed by Chapter 1 of the Code, regardless of whether such tax would have been imposed. Such an election is irrevocable and must be made at the time of application in such manner as the Secretary may prescribe. Such payments would be in lieu of any tax credits determined under the proposal.

Report and reallocation

Not later than four years after the date of enactment of the credit, the Secretary is required to review the credit allocations and submit a report regarding credit allocations to the Committees on Finance and Energy and Natural resources in the Senate and the Committees on Ways and Means and Energy and Commerce of the House of Representatives. The Secretary may redistribute any credits that were not used either because of a revoked certification or because of an insufficient quantity of credit applications. Credits which are reallocated are not subject to the census tract limitation rule described above.

Effective Date

The proposal is effective for property placed in service after December 31, 2021.