



## U.S. Departments of Treasury and Energy Release [Additional Guidance](#) on Inflation Reduction Act Programs to Incentivize Manufacturing and Clean Energy Investments in Hard-Hit Coal Communities

### **Background**

The Qualifying Advanced Energy Project Credit (48C) program was established by the American Recovery and Reinvestment Act of 2009 and expanded with a \$10 billion investment under the Inflation Reduction Act of 2022. Treasury and IRS established the expanded Qualifying Advanced Energy Project Credit program under section 48C of the Internal Revenue Code on February 13, 2023.

Key elements of the Qualifying Advanced Energy Project Credit (48C) include:

- Provides a tax credit for purchasing and commissioning property to build an industrial or manufacturing facility. This contrasts against 45X which provides tax credits for each clean energy component domestically produced.
- Provides a tax credit for investments in advanced energy projects, as defined in 26 USC § 48C(c)(1).
- Provides incentives for clean energy manufacturing and recycling, industrial decarbonization, and critical materials processing, refining, and recycling.
- The initial funding round will include \$4 billion, with about \$1.6 billion reserved for projects in designated coal communities.
- A broad variety of projects are eligible to apply for an investment tax credit of up to 30 percent, ranging from manufacturing of fuel cells and components for geothermal electricity and hydropower, to producing carbon capture equipment or installing it at an industrial facility, to critical minerals processing.

The guidance outlined below provides additional information about the application process and technical guidance for the program under Section 48C.

### **Guidance Outline**

The guidance contains further details on the following:

1. Definitions of the term “facility” for purposes of §§ 48C and 45X,
2. Clarification regarding projects placed in service prior to being awarded an allocation of qualifying advanced energy project credits (§ 48C credits),
3. The process for submitting concept papers and joint applications for Department of Energy (DOE) recommendations and for IRS § 48C certifications (§ 48C applications),
4. Information regarding § 48C Energy Communities Census Tracts,
5. The selection criteria used to evaluate whether a project merits a DOE recommendation,
6. The procedure for informing the IRS and the DOE of a significant change in plans for a project that has received an allocation of § 48C credits,
7. The disclosure of certain information,

- Information regarding when the DOE eXCHANGE portal will begin accepting concept papers and the timeline for submitting a § 48C application.

### **Application Process and Credit Allocations Overview**

To apply, taxpayers will submit concept papers describing the proposed project. Taxpayers whose concept papers receive a favorable review will be encouraged to submit a full application. Concept paper submissions will be accepted starting June 30, 2023, and the deadline for concept papers will be July 31, 2023.

Treasury Department and the IRS anticipate providing at least two allocation rounds. Priorities for Round 1 include:

- **Priority Areas for Clean Energy Manufacturing and Recycling Projects:** Clean Hydrogen; Electric Grid; Electric Heat Pumps; Electric Vehicles (EV); Nuclear Energy; Solar Energy; Wind Energy
- **Priority Areas for Greenhouse Gas Emissions Reduction Projects:** projects that deeply reduce emissions to levels significantly below a reasonable domestic industry average and the 20 percent reduction eligibility requirement; projects that advance the commercial viability and uptake of replicable decarbonization efforts in major industrial applications;
- **Priority Areas for Critical Material Projects:** The DOE has issued a Request for Information (RFI) input to improve upon DOE's Critical Materials Assessment for energy-critical materials.

### **Defining “Facility” for Section 48C versus 45X**

- **Section 48C:** a “facility” is the eligible property that makes up the qualified investment that is part of the qualifying advanced energy project. “Eligible properties” are necessary for the production or recycling of property, re-equipping an industrial or manufacturing facility, or re-equipping, expanding, or establishing an industrial facility; tangible personal property, or other tangible property, but only if such property is used as an integral part of the qualified investment credit facility; and depreciable.
- **Section 45X:** “facility” does not include any property which is produced at a facility if the basis of any property which is part of such facility is taken into account for purposes of the credit allowed under § 48C after August 16, 2022.
- All tangible property that comprises an independently functioning production unit that produces one or more eligible components will be treated as a single facility (§ 45X Facility).
- A 45X Facility cannot produce eligible components for purposes of the 45X credit if the facility includes eligible property that has been taken into account for purposes of the credit allowed under § 48C after August 16, 2022.

### **Selection Criteria**

The Secretary of the Treasury is to determine which projects merit a DOE recommendation given that a project:

- Will provide the greatest domestic job creation during the period
- Will provide the greatest net impact in avoiding or reducing air pollutants or anthropogenic emissions of GHGs
- Has the greatest potential for technological innovation and commercial deployment
- Has the lowest levelized cost of generated or stored energy, or of reduction in energy consumption or GHG emission
- Has the shortest project time from certification to completion

Technical Review Criteria: DOE will implement the selection criteria and evaluate whether a project merits a DOE recommendation based on the following four technical review criteria:

1. Commercial viability,
2. Greenhouse gas emissions impacts,
3. Strengthening U.S. supply chains and domestic manufacturing for a net-zero economy,
4. Workforce and community engagement.

### **Credit Eligibility**

A facility is considered within the eligible census tract if 50 percent or more of its square footage is within the Energy Community Census Tract, as indicated in the census tract map [here](#). **A minimum of \$4 billion of the \$10 billion 48C credits must be allocated to qualified investments in energy community census tracts.**

Qualifying Advanced Energy Projects fall into three categories:

1. Clean Energy Manufacturing and Recycling projects,
2. Greenhouse gas emissions Reduction Projects, and
3. Critical Minerals Projects.

Eligibility details for each project category are outlined below.

**1. Clean Energy Manufacturing and Recycling Projects:** re-equips, expands, or establishes an industrial or manufacturing facility for the production or recycling of specified advanced energy property as follows:

- a. Property designed to be used to produce energy from the sun, water, wind, geothermal deposits, or other renewable resources. (eg. solar panels, wind turbines, and other products directly used to generate electrical and/or thermal energy from renewable resources, as well as the specialized components, subcomponents, and materials incorporated into any such eligible property, including equipment for sensing, communication, and control.)
- b. Fuel cells, microturbines, or energy storage systems and components (eg. stationary batteries and the components of any such equipment)
  - Note: For electric vehicle batteries and fuel cells for vehicles see the “light-, medium-, or heavy-duty electric or fuel cell vehicles” project class (section 1.g.).
- c. Electric grid modernization equipment or components. (eg. grid equipment for electricity delivery; power flow, control, and conversion, etc.)

- Note: Storage technologies for grid applications qualify under the “fuel cells, microturbines, or energy storage systems and components” project class.
- d. Property designed to capture, remove, use, or sequester carbon oxide emissions. (eg. carbon capture equipment, transportation equipment, and equipment to convert carbon oxides).
  - Note: Refining equipment is not included in this category.
- e. Equipment designed to refine, electrolyze, or blend any fuel, chemical, or product which is renewable, or low-carbon and low-emission. Such fuels, chemicals, and products include:
  - Renewable transportation fuel (not derived from fossil fuels or natural gas)
  - Clean hydrogen produced with a well-to-gate lifecycle greenhouse gas (GHG) emissions rate of not greater than 4 kg CO<sub>2</sub>e per kg H<sub>2</sub>
  - Other fuel, product, or chemical which is derived from or co-processed with a renewable feedstock or achieves at least a 50 percent reduction in lifecycle GHG emissions in comparison with the conventional alternative.
- f. Property designed to produce energy conservation technologies (including residential, commercial, and industrial applications). (eg. ultra-efficient heat pumps, insulation, ultra-efficient hot water systems, sensors, controls, and similar advanced efficiency technologies.)
- g. Light-, medium-, or heavy-duty electric or fuel cell vehicles, as well as technologies, components, or materials for such vehicles, and associated charging or refueling infrastructure.
  - Examples of **eligible property** include battery electric, plug-in hybrid electric, or fuel cell cars, trucks, and buses, as well as the specialized components of those vehicles, such as batteries, anode and cathode components and materials, electric drive systems, fuel cells, and other materials and subcomponents.
  - Examples of **eligible charging or refueling infrastructure** include electric vehicle supply equipment (EVSE), components from the grid connection to the vehicle, bidirectional charging equipment, and components used in hydrogen refueling stations (e.g., hydrogen compressors, pumps, storage vessels, and dispensing equipment).
  - Examples of **ineligible property** include internal combustion engine vehicles of all sizes, non-plug-in hybrid vehicles of less than 14,000 pounds gross vehicle weight rating, and their components, as well as associated refueling infrastructure, such as petroleum gas, liquefied or compressed natural gas, or ethanol refueling stations. Examples of **ineligible property** also include electrical components upstream of the EVSE connection to the grid and components of charging or refueling stations, such as signage, that are not directly involved in the transfer of fuel or power to the vehicle
- h. 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.
- i. Other advanced energy properties designed to reduce greenhouse gas emissions as may be determined by the Secretary. For such “other advanced energy property,” which is not designed to directly reduce GHG emissions, the applicant must demonstrate that

the advanced energy property is highly specialized equipment necessary to strengthen U.S. resilience of critical domestic energy supply chains and the reduction of GHG emissions is a necessary ultimate outcome from the production of the advanced energy property.

**2. Greenhouse gas emissions Reduction Projects:** re-equips an industrial or manufacturing facility, including in energy-intensive manufacturing sectors, such as cement, iron and steel, aluminum, chemicals, and other sectors, with equipment designed to reduce greenhouse gas emissions by at least 20 percent through the installation of one of more of the following:

- a. Low- or zero-carbon process heat systems.
- b. Carbon capture, transport, utilization, and storage systems.
- c. Energy efficiency and reduction in waste from industrial processes (eg. technologies that reduce direct fuel use, electricity use, or waste in industrial applications)
- d. Any other industrial technology designed to reduce greenhouse gas emissions, as determined by the Secretary, may qualify by installing equipment designed to achieve a minimum of a 20 percent reduction in GHG emissions in one or more of the following ways:
  - o Achieve a direct (Scope 1) GHG emissions reduction of 20 percent facility-wide
  - o Achieve an indirect fuel- or energy-related (Scope 2) GHG emissions reduction of 20 percent facility-wide
  - o Achieve a direct or indirect fuel- or energy-related GHG emissions reduction of 20 percent at a facility subunit, such as a particular process step or fuel combustion unit

**3. Critical Mineral Projects:** re-equips, expands, or establishes an industrial facility for the processing, refining, or recycling of critical materials. For purposes of this Round 1, critical materials will consist of:

- a. The currently effective final list of critical minerals as determined by the U.S. Geological Survey (see 2022 Final List of Critical Minerals for the list [published in 2022](#)); and
- b. Any additional critical materials as determined by the Secretary of Energy and for which a final determination is posted on the [DOE's critical materials page](#) on or before July 31, 2023.