Proposed regulations on investment tax credit for energy property under section 48

Initial observations and analysis

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Background

The U.S. Treasury Department and IRS in November 2023 released proposed regulations on the investment tax credit (ITC) for energy property under section 48 of the Internal Revenue Code.

The Proposed Regulations provide clarifying definitions for energy property that has been ITC eligible for many decades and also for energy property that became newly eligible for the ITC under the "Inflation Reduction Act of 2022" (IRA).

As the regulations for section 48 have not been updated since 1987, this package of proposed regulations provides clarity for taxpayers that invest in energy projects and seek tax incentives.

The Proposed Regulations would be effective for tax years ending on or after the date that final regulations are published in the Federal Register. Taxpayers that want to rely on these rules before they are final generally are allowed to do so, provided they apply the regulations in their entirety.

1.48-9: Definition of energy property

An ITC is claimed on the eligible basis of energy property.

The applicable credit rate is as follows:

- Generally, the "base rate" is 6%.
- For projects that
  - Are less than 1 MW,
  - That begin construction prior to January 29, 2023, or
  - Satisfy certain prevailing wage and apprenticeship requirements ("PWA requirement"),

  The credit rate is 30%—called the "bonus rate."
- For projects that qualify for the bonus rate, an additional 10% credit rate is available for projects that satisfy certain domestic content requirements, and the additional credit rate is 2% for projects that don't qualify for bonus rate ("domestic content adder").
- For projects that qualify for the bonus rate, an additional 10% credit rate is available for projects that are built in energy communities, and the additional credit rate is 2% for projects that don't qualify for the bonus rate ("energy community adder").

The Proposed Regulations define energy property.

Types of energy property

Solar energy property

Solar energy property includes solar electric generation equipment (equipment that converts sunlight into electricity through the use of devices such as solar cells or other collectors), solar process heat equipment (equipment that uses solar energy to generate steam at high temperatures for use in industrial or commercial processes) and equipment that uses solar energy to heat or cool a structure or provide hot

water for use in a structure, and parts related to the functioning of all such equipment. The passive solar exclusion is also removed in the Proposed Regulations because the statute does not distinguish between passive and active solar energy systems.

Electrochromic glass property

Electrochromic glass energy property is property that uses electricity to change its light transmittance properties (both visible and near infrared light) to heat or cool a structure. The Proposed Regulations clarify that windows, including secondary windows (also referred to as secondary glazings), that incorporate electrochromic glass are treated as electrochromic glass property. Therefore, in addition to the electronic controls package that includes the power electronics, sensors, wires, and software systems, the electrochromic window or secondary glazing also includes the electrochromic glass coating and the balance of window and installation components including glass, flashing, framing, and sealants, as applicable, to the type of electrochromic glass property. Also, to be eligible for the credit, the windows must be rated in accordance with the National Fenestration Rating Council (NFRC) and seconding glazing systems must be rated in accordance with the Attachments Energy Rating Council (AERC) Rating and Certification Process, or subsequent revisions.

Geothermal property

Geothermal property is equipment used to produce, distribute, or use energy derived from a geothermal deposit (within the meaning of section 613(e)(2) of the Code), but only, in the case of electricity generated by geothermal power, up to (but not including) the electrical transmission stage. Geothermal equipment includes production equipment and distribution equipment.

Production equipment includes equipment necessary to bring geothermal energy from the subterranean deposit to the surface, including well-head and downhole equipment (such as screening or slotting liners, tubing, downhole pumps, and associated equipment). Production, injection, and monitoring wells required for production of the geothermal deposit qualify as production equipment. Production equipment would also include the electricity generating equipment for those projects that convert geothermal energy to electricity. Production equipment does not include equipment used for exploration and development of geothermal deposits.

KPMG observation

While the existing regulations provide that reinjection wells required for production may qualify as production equipment, this would expand the types of wells that may qualify as production equipment to production, injection, and monitoring wells.

Distribution equipment is equipment that transports geothermal energy from a geothermal deposit to the site of ultimate use. If geothermal energy is used to generate electricity, distribution equipment includes equipment that transports geothermal fluids between the geothermal deposit and the power plant. Distribution equipment also includes components of a building's heating and/or cooling system, such as pipes and ductwork that distribute within a building the energy derived from the geothermal deposit.

Fuel cell property

Qualified fuel cell property is a fuel cell powerplant that has a nameplate capacity of at least 0.5 kilowatts of electricity using an electrochemical or electromechanical process, and an electricity-only generation efficiency greater than 30%. The Proposed Regulations provide rules to determine electricity-only generation efficiency.

A fuel cell power plant is an integrated system comprised of a fuel cell stack assembly, or linear generator assembly, and associated balance of plant components that converts a fuel into electricity using

electrochemical or electromechanical means. A linear generator assembly does not include any assembly that contains rotating parts.

Microturbine property

Qualified microturbine property is a stationary microturbine power plant that has a nameplate capacity of less than 2,000 kw and an electricity-only generation efficiency of not less than 26% at International Standard Organization conditions. A stationary microturbine power plant is an integrated system comprised of a gas turbine engine, a combustor, a recuperator or regenerator, a generator or alternator, and associated balance of plant components that converts a fuel into electricity and thermal energy. A stationary microturbine power plant also includes all secondary components located between the existing infrastructure for fuel delivery and the existing infrastructure for power distribution, including equipment and controls for meeting relevant power standards, such voltage, frequency, and power factors.

Combined heat and power (CHP) property

Combined heat and power system property is property comprising a system that uses the same energy source for the simultaneous or sequential generation of electrical power, mechanical shaft power, or both, in combination with the generation of steam or other forms of useful thermal energy (including heating and cooling applications). Eligible property must produce at least 20% of its total useful energy in the form of thermal energy that is not used to produce electrical or mechanical power (or combination thereof), and at least 20% of its total useful energy in the form of electrical or mechanical power (or combination thereof). The energy efficiency percentage of eligible property must exceed 60% (except in the case of a system that uses biomass within the meaning of section 45 of the Code). Eligible property does not include any property comprising a system if such system has a capacity in excess of 50 MW or a mechanical energy capacity in excess of 67,000 horsepower or an equivalent combination of electrical or mechanical energy capacities.

Eligible property does not include property used to transport the energy source to the generating facility or to distribute energy produced by the facility.

Qualified small wind energy property

Qualified small wind energy property is property that uses a qualifying small wind turbine to generate electricity. A qualifying small wind turbine means a wind turbine that has a nameplate capacity of not more than 100 kw. Small wind property must meet the performance and quality standards in effect at the time of acquisition of the small wind turbine set forth in the American Wind Energy Association Small Wind Turbine Performance and Safety Standard 9.1-2009 or subsequent revisions (AWEA); International Electrotechnical Commission 61400-1, 61400-2, 61400-11, 61400-12, or subsequent revisions (IEC); or the ANSI/ACP 101-1-2021, the Small Wind Turbine Standard, or subsequent revisions (ACP).

Geothermal heat pump equipment

Geothermal heat pump equipment is equipment that uses the ground, ground water, or other underground fluids as a thermal energy source to heat a structure or as a thermal energy sink to cool a structure.

KPMG observation

The preamble to the Proposed Regulations provides that energy distribution equipment and components of a building's heating and cooling system constitute eligible property.

Waste energy recovery property

Waste energy recovery property (WERP) is property that generates electricity solely from heat from buildings or equipment if the primary purpose of such building or equipment is not the generation of electricity. The Proposed Regulations provide examples of buildings or equipment the primary purpose of which is not the generation of electricity including, but not limited to, manufacturing plants, medical care facilities, facilities on college campuses, pipeline compressor stations, and associated equipment.

Energy storage technology

The IRA amended section 48 to include standalone energy storage technology. This includes electrical energy storage property, thermal energy storage property and hydrogen energy storage property.

Electrical energy storage property is property (other than property primarily used in the transportation of goods or individuals and not for the production of electricity) that receives, stores, and delivers energy for conversion to electricity, and has a nameplate capacity of not less than 5 kWh. Examples include rechargeable electrochemical batteries of all types (such as lithium ion, vanadium flow, sodium sulfur and lead-acid), ultracapacitors, physical storage (such as pumped storage hydropower, compressed air storage and flywheels) and reversible fuel cells.

Thermal energy storage property is property comprising a system that is directly connected to a heating, ventilation, or air conditioning (HVAC) system; removes heat from, or adds heat to, a storage medium for subsequent use; and provides energy for the heating or cooling of the interior of a residential or commercial building. Thermal energy storage property includes equipment and materials, and parts related to the functioning of such equipment, to store thermal energy for later use to heat or cool, or to provide hot water for use in heating a residential or commercial building. It does not include a swimming pool CHP property, or a building or its structural components.

Thermal energy storage systems include thermal ice storage systems that use electricity to run a refrigeration cycle to produce ice that is later connected to the HVAC system as an exchange medium for air-conditioning the building, heat pump systems that store thermal energy in an underground tank or borehole field to be extracted for later use for heating and/or cooling, and electric furnaces that use electricity to heat bricks to high temperatures and later use this stored energy to heat a building through the HVAC system.

Hydrogen energy storage property includes property (other than property primarily used in the transportation of goods or individuals and not for the production of electricity) that stores hydrogen and has a nameplate capacity of not less than 5 kWh, equivalent to 0.127 kg of hydrogen or 52.7 standard cubic feet (scf) of hydrogen. Hydrogen energy storage property must store hydrogen that is solely used as energy and not for other purposes such as for the production of end products such as fertilize.

Eligible property includes a hydrogen compressor and associated storage tank and an underground storage facility and associated compressors.

The type of hydrogen storage medium (for example, physical based or material based), is not limited.

Qualified biogas property

The IRA also amended section 48 to include qualified biogas property.

Qualified biogas property is property comprising a system that converts biomass into a gas that consists of not less than 52% methane by volume or is concentrated by such system into a gas that consists of not less than 52% methane and captures such gas for sale or productive use and not for disposal via combustion.

Qualified biogas property also includes any property that is part of such system that cleans and conditions such gas. The Proposed Regulations provide the following examples of qualified biogas property: waste feedstock collection system, a landfill gas collection system, mixing or pumping equipment, and an anaerobic digester.

Additionally, the Proposed Regulations provide that the methane requirements described in the statute are measured at the point at which gas exits the biogas production system (which may include an anerobic digester, landfill gas collectors, or thermal gasification equipment) of biogas property because this is the point when the taxpayer must determine whether it will convert the biogas to fuel for sale or use it directly to generate heat or fuel an electricity generation unit.

KPMG observation

The preamble provides that property used to clean the methane gas to the point that it is pipeline quality is not ITC eligible. This was a surprise to industry participants. This equipment can constitute a large percentage of the total cost of a project.

Microgrid controllers

The IRA also amended section 48 to include microgrid controllers. A microgrid controller is equipment that is part of a qualified microgrid and is designed and used to monitor and control the energy resources and loads on such microgrid. A qualified microgrid is an electrical system that includes equipment capable of generating not less than 4 kW and not greater than 20 MW of electricity; capable of operating in connection with the electrical grid and as a single controllable entity with respect to such electrical grid, and independently (and disconnected) from such electrical grid. It is not part of a bulk-power system.

Interconnection property

An ITC is available for qualified interconnection property (as defined), that is constructed in connection with the installation of an energy project that itself qualifies for the ITC and that has a maximum net output of not greater than 5 MW.

The property must provide for the transmission or distribution of the electricity produced or stored by such facility and must be properly chargeable to the capital account of the taxpayer.

Qualified interconnection property means, with respect to an energy project that is not a microgrid controller, any tangible property that is part of an addition, modification, or upgrade to a transmission or distribution system that is required at or beyond the point at which the energy project interconnects to such transmission or distribution system in order to accommodate such interconnection; is either constructed, reconstructed or erected by the taxpayer, or for which the cost with respect to the construction, reconstruction, or erection of such property is paid or incurred by such taxpayer; and the original use, of which, pursuant to an interconnection agreement, commences with a utility.

An interconnection agreement means an agreement with a utility for the purposes of interconnecting the energy property owned by such taxpayer to the transmission or distribution system of the utility.

A utility is the owner or operator of an electrical transmission or distribution system that is subject to the regulatory authority of a state or political subdivision thereof, any agency or instrumentality of the United States, a public service or public utility commission or other similar body of any state or political subdivision thereof, any agency or instrumentality of the United States, a public service or public utility commission or other similar body of any state or political subdivision thereof, or the governing or ratemaking body of an electric cooperative.

KPMG observation

Unlike other property under section 48, the credit for interconnection property is not generally claimed by the owner of the interconnection property (i.e., the utility), but by the developer of the energy property (e.g., solar or wind project) who bears the economic cost of making the interconnection upgrades, either directly, or through the hiring of a third party. The cost of the interconnection upgrades is capitalized by the developer as an indirect cost of the energy property and is recovered as part of the basis of the energy property. The developer's basis in that indirect cost is reduced by half the credit claimed.

Qualified interconnection property is not itself energy property. Accordingly, the Proposed Regulations clarify that qualified interconnection property is not considered in determining whether an energy property satisfies the requirements for the domestic content bonus credit amount or the increase in credit rate for energy communities.

Energy property—Integral property

In addition to providing the definition of energy property, the Proposed Regulations contain rules on how to determine what costs and/or related property is included in ITC-eligible property.

Property owned by the taxpayer that is an integral part of an energy property is treated as energy property. Property is an integral part of energy property if it is used directly in the intended function of the energy property as provided under section 48 and is essential to the completeness of the intended function. Power conditioning equipment and transfer equipment and parts related to the functioning of those components would meet the definition of an integral part.

Energy property includes each unit of energy property. A unit of energy property means all functionally interdependent components of property owned by the taxpayer that are operated together and that can operate apart from other energy properties within a larger energy project.

Functional interdependence means that the placing in service of each component is dependent upon the placing in service of each of the other components to generate or store electricity, thermal energy, or hydrogen, or to perform the intended function of the energy property, in the case of solar process heat equipment, fiber-optic solar energy property, electrochromic glass property, geothermal heat pump equipment, biogas property, and microgrid controllers.

Multiple owners

The Proposed Regulations provide that a taxpayer that has no ownership interest (directly or indirectly) in the property that conducts the eligible activity (e.g., power generation, biodegradation of biomass, energy storage assets) but owns property that is integral to the energy property, is not eligible to claim the ITC on the property it owns.

For instance, if a taxpayer (Taxpayer A) owns all the offshore wind turbines and an unrelated taxpayer (Taxpayer B) owns all the power conditioning equipment (which is integral to the energy property), Taxpayer B cannot claim the ITC because it doesn't own an interest in the power generation assets. Conversely, if Taxpayer A and Taxpayer B own the power conditioning equipment in a 50/50 partnership Taxpayer A could claim the ITC on its 50% share of the power conditioning equipment.

1.48-13 and 1.6418-5: Rules relating to PWA

The IRA changes to the ITC for energy property include that to be eligible for the 30% ITC credit rate certain prevailing wage and apprenticeship (PWA) requirements must be satisfied during the construction, alteration or repair of a project. If the PWA requirements are not satisfied, the available ITC credit rate is 6%. There are exceptions to these requirements available if construction began prior to January 29, 2023, or if the project has a maximum output of less than 1 MW. In August 2023, Treasury and IRS issued proposed regulations relating to PWA. Read *TaxNewsFlash*. The Proposed Regulations withdraw and repropose portions of the PWA proposed regulations to provide additional clarity on items specifically relating to the section 48 ITC.

Recapture

The increased credit amount available for meeting the prevailing wage requirements is subject to recapture during the five-year ITC recapture period if prevailing wage requirements are not satisfied in alteration or repair projects related to the energy property during the five-year period. A taxpayer can avoid recapture by taking the steps to "cure" the failure to pay prevailing wages by making a payment to correct the failure and paying the applicable penalties. In such case, the correction and penalty payments must be made on or before the date that is 180 days after the date of a final determination by the IRS, otherwise the increased credit amount is subject to recapture. The determination of whether there has been a recapture event is made with respect to the first five 365-day periods following the placed-in-service date of the ITC-eligible energy property.

The Proposed Regulations provide that in addition to general reporting requirements, a taxpayer claiming an ITC or transferring an ITC under section 6418 is required to provide information on the payment of prevailing wages with respect to any alteration or repair of the project during the recapture period at the time and in the form and manner prescribed in IRS forms or instructions or in publications or guidance. In the case of a transfer of an ITC to which recapture applies due to failure to comply with the prevailing wage requirements, the transferor is required to notify the transferee taxpayer of the recapture event and the transferee taxpayer is responsible for any amount of increase in tax due to the recapture.

KPMG observation

It is notable that the Proposed Regulations do not refer to a failure to meet the apprenticeship rules during the 5-year recapture period as a recapture event. There has been ongoing uncertainty about whether the apprenticeship requirements apply to alterations and repairs during the ITC recapture period.

Definition of energy project

Section 48, as amended by the IRA, provides that the PWA requirements (as well as the energy community adder and the domestic content adder and the 1 MW exception) apply to an "energy project." Section 48(a)(8) defines "energy project" as a "project consisting of one or more energy properties that are part of a single project." The Proposed Regulations provide that multiple energy properties will be treated as one project if at any point during construction they are owned by a single taxpayer or related taxpayers (related by more than 50% ownership) **and** two or more of the following factors are present:

- The energy properties are constructed on contiguous pieces of land.
- The energy properties are described in a common power purchase, thermal energy, or other off-take agreement or agreements.
- The energy properties have a common intertie.

- The energy properties share a common substation, or thermal energy offtake point.
- The energy properties are described in one or more common environmental or other regulatory permits.
- The energy properties are constructed pursuant to a single master construction contract.
- The construction of the energy properties is financed pursuant to the same loan agreement.

The Proposed Regulations also provide that, if multiple properties are treated as a single project for purposes of the beginning of construction rules, then those properties will also be treated as a single energy project for purpose of PWA and the credit adders.

KPMG observation

Although there has long been a project aggregation rule under the ITC and PTC begin construction rules, the concept of an "energy project" as referred to in the relevant PWA and credit adder provisions as a mandatory designation, from which individual properties cannot be disaggregated, has been challenging to apply in some situations. The additional guidance in the Proposed Regulations is helpful but may also cause some confusion in that it proposes a modified application of the factors from Notice 2018-59. It should also be noted that the rules relating to the determination of whether multiple property are a single "energy project" are proposed to apply to energy projects the construction of which begins after November 22, 2023.

1 MW exception

The Proposed Regulations state that, because the electrochromic glass, fiber-optic solar, and microgrid controllers do not generate electricity or thermal energy, they are not eligible for the 1 MW exception from the PWA rules. In addition, the Proposed Regulations describe that the two-factor aggregated energy project test described above is applicable in determining whether an energy project meets the 1 MW exception.

KPMG observation

Application of the two-factor test to small projects will make it likely that projects in close physical proximity that are subject to the same construction contract or financing arrangement would need to be aggregated.

1.48-14: Rules applicable to energy property

Retrofits

Section 48 provides that property that is reconstructed is eligible to claim an ITC.

The Proposed Regulations provide guidance on what level of improvement to property must be made to property for it to qualify for an ITC.

The Proposed Regulations apply the so-called "80/20 Rule" to energy property for purposes of the section 48 credit. The 80/20 Rule allows a qualified facility to qualify as originally placed in service even though it contains some used property, provided the fair market value of the used property is not more than 20% of the qualified facility's total value (defined as the value of the old property and the cost of the new property). By implication, costs for new components of property added to used components of energy property are not ITC eligible unless the taxpayer satisfies the 80/20 Rule.

The test is applied to each unit of energy property comprising an energy project (i.e., all functionally interdependent components of property owned by the taxpayer that are operated together and that can operate apart from other energy properties within a larger energy project).

KPMG observation

Prior regulations suggested that any capital improvement to an existing eligible asset was ITC eligible. If the proposed rule is finalized in its current form, this would be a significant change in the law.

Treas. Reg. sec. 1.48-2(b)(7) provides: "The question of whether property is reconditioned or rebuilt property is a question of fact. Property will not be treated as reconditioned or rebuilt merely because it contains some used parts. If the cost of reconstruction may properly either be capitalized and recovered through depreciation or charged against the depreciation reserve, such cost may be taken into account as the basis of new section 38 property even though it is charged against the depreciation reserve."

Treas. Reg. sec. 1.48-2(c) – Example (5) provides: "In 1962, a taxpayer buys from X for $20,000 an item of [ITC eligible] property which has been previously used by X. The taxpayer in 1962 makes an expenditure on the property of $5,000 of the type that must be capitalized. Regardless of whether the $5,000 is added to the basis of such property or is capitalized in a separate account, such amount shall be taken into account by the taxpayer in computing [the ITC] for 1962. No part of the $20,000 purchase price may be taken into account for such purpose."

Dual use property

The Proposed Regulations address how to pro-rate ITC eligible basis when property is using energy from both a qualifying source and a nonqualifying source.

Property of this type is called "dual use property."

The Proposed Regulations permit dual use property to be eligible for the ITC but only to the extent the property's basis or cost is allocable to the annual use of energy from a qualified source ("Dual Use Rule.").

In addition, dual use property is not eligible for the ITC at all if less than 50% of the total energy input of the property during the year comes for a qualifying source.

KPMG observation

The current law Dual Use Rule threshold is 75%. The reduction to 50% is a taxpayer favorable change.

Thus, an energy property will need to derive a minimum of 50% of energy from a qualifying source during the year. If the energy used from qualifying sources is between 50 – 100%, only a proportionate amount of the eligible basis of the energy property will be considered in computing the amount of the ITC. If less than 50% of the energy used is from qualifying sources, then the eligible basis is zero, and the property is not eligible for the credit.

Notably, the Proposed Regulations also modify the Dual Use Rule to allow an energy property to aggregate energy from a combination of qualifying sources.

Recapture of the ITC will be required if the equipment's use of energy from all qualifying sources is reduced below 50% in any of the years after the year the equipment is placed in service.

Treasury and the IRS confirmed in the preamble that the Dual Use Rule is no longer relevant to energy storage property because the IRA added energy storage property as eligible for the ITC for property placed in service after 2022.

Multiple credits

The Proposed Regulations provide that the same energy property may be eligible for both the ITC and another federal income tax credit, as long as both credits are not claimed with respect to the same eligible basis in the energy property.

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