Solar Energy Credits

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SOLAR ENERGY CREDITS

Course objectives: This course focuses on solar credits available to both individuals and businesses. Topics addressed include: qualifying for the Residential Clean Energy Credit; business use allocation of the credit; basis adjustments; interaction of credit and subsidies; reporting and claiming residential and business solar credits; Energy Credit; Investment Tax Credit; construction begin date; recapture; and more.

After completing this course, you will be able to:

- Select which types of property qualify for the Residential Clean Energy Credit
- Recall the differences between qualified solar water heating property and qualified solar electric property
- Determine the construction begin date based on the physical work test and the 5% safe harbor test
- Determine the basis of business property that receives an Investment Tax Credit

Category: Taxes

Recommended CPE Hours: CPAs — 1 Tax
EAs — 1 Federal Tax
CRTPs — 1 Federal Tax

Level: Basic

Prerequisite: None

Advance Preparation: None

Expiration Date: July 2024

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RESIDENTIAL CLEAN ENERGY CREDIT

FOCUS OF THESE MATERIALS

Energy efficient home improvement credits and residential clean energy credits are covered under IRC §§25C and 25D, respectively. Prior to the passage of the Inflation Reduction Act in August 2022, these credits were known as the nonbusiness energy property credit (IRC §25C) and the residential energy efficient property (REEP) credit (IRC §25D).

The credits allowed under these two Code sections are often discussed together because both are residential energy-related credits. For this reason, the requirements of each credit are often confused for the other. However, only IRC §25D contains credits for installing solar energy property. Although the credits under IRC §25C are not solar credits, the following chart comparing the IRC §§25C and 25D credits is included for reference purposes.

Residential Energy Efficiency Tax Credits Comparison Chart		
	IRC §25C credit	**IRC §25D credit**
Types of qualifying property	Qualifying energy efficiency improvements: • Building envelope components (e.g., doors, windows and skylights, insulation); • Home energy audits; • Residential energy property (e.g., air conditioners, water heaters, furnaces); and • Heat pumps, biomass stoves, and biomass boilers	Solar property: • Solar electric; and • Solar water heating Other energy efficient property: • Fuel cell; • Small wind energy; and • Geothermal heat pumps
Calculation of credit	Up to 30% of qualifying energy property installed plus qualifying energy property expenditures	30% of residential energy efficient property Reduced to: • 26% for property placed in service in 2033; and • 22% for property placed in service in 2034
		(continued)

Residential Energy Efficiency Tax Credits Comparison Chart (continued)		
	IRC §25C credit	**IRC §25D credit**
Credit cap	$1,200 (annual cap for most property) ($600 for windows and skylights and $2,000 for heat pumps, biomass stoves and biomass boilers)	**Fuel cell:** $500 per 0.5kW of capacity per taxable year
Qualifying residence	Must own the home and use it as principal residence for: • Exterior doors; • Windows/skylights; • Insulation materials; and • Air sealing materials Must use the home as a residence (but doesn't have to be principal residence and doesn't have to be owned by the taxpayer): • Central air conditioning; • Eligible water heaters and hot water boilers; • Eligible heat pumps; • Biomass stoves and boilers; and • Limited other property Must use the home as a principal residence (but doesn't have to be owned by the taxpayer): • Home energy audits	Any residence of the taxpayer (except for fuel cell — principal residence only). Both existing residence and new residence qualify
Applicable against AMT	Yes	Yes
Refundable	No	No
Carryover	No	Yes (indefinite)
Expiration	December 31, 2032	December 31, 2034

The IRS has posted FAQs addressing both of these credits at:

Website
www.irs.gov/pub/taxpros/fs-2022-40.pdf

This webinar is focused solely on the solar credits available to both individuals and businesses. We do not discuss the IRC §25C Energy Efficient Home Improvement Credit.

The first part of these materials will focus solely on the residential solar credits, which are defined in IRC §25D(d)(1) and (2). Other solar energy credits are contained in IRC §48 as part of the Energy Investment Tax Credit, which is part of the General Business Credit. These credits will be covered in the second part, "Solar credits for businesses," starting on page 12.

The clean energy credit also provides credits for purchases of qualified fuel cell property, qualified small wind energy property, and qualified geothermal heat pump property, which are defined in IRC §25D(d)(3), (4), and (5), respectively. The credit for these purchases also has the same phasedown and scheduled expiration date as the credit for residential solar property discussed below.

SOLAR PROPERTY QUALIFYING FOR THE RESIDENTIAL CLEAN ENERGY CREDIT

Many of the terms used to describe qualified property in IRC §25D can be difficult to understand. The following chart lists the types of property that qualify for the credits under IRC §25D and their plain English translation.

Types of Property Qualifying for Residential Clean Energy Credit		
Residential clean energy property	**Translation**	**Solar-based credit**
Qualified solar water heating property expenditure (IRC §25D(d)(1))	A water heater that typically has its own dedicated solar panels that are used to collect energy and heat the water. The water heater's solar panels are in addition to other solar panels installed on a home	Yes
Qualified solar electric property expenditure (IRC §25D(d)(2))	Your typical solar panels, usually installed on the roof of the taxpayer's home	Yes
Qualified fuel cell property expenditure (IRC §25D(d)(3))	A system that typically uses natural gas or propane to produce electricity and is not dependent on an electric energy grid	No
Qualified small wind energy property expenditure (IRC §25D(d)(4))	A stand-alone wind turbine system that produces electricity	No
Qualified geothermal heat pump property expenditure (IRC §25D(d)(5))	A closed-loop underground pipe system that circulates water to transfer heat from the ground to the home in the winter and cools the home in the summer	No

AMOUNT OF THE CREDIT

The amount of the Residential Clean Energy Credit depends on the calendar year it is placed in service as follows:

Residential Clean Energy Credit	
Date qualified property placed in service	**Credit amount**
January 1, 2022–December 31, 2032	30%
January 1, 2033–December 31, 2033	26%
January 1, 2034–December 31, 2034	22%

SOLAR CREDIT COMPARISON

The following chart highlights the notable similarities and differences in the Residential Clean Energy Credit for qualified solar water heating property versus qualified solar electric property.

Comparison of Solar Credits		
	Qualified solar water heater property (IRC §25D(d)(1))	**Qualified solar electric property (IRC §25D(d)(2))**
Maximum credit	No maximum credit	
Dates system must be placed in service	January 1, 2006–December 31, 2034	
Principal residence restriction	Home served by the system can be the taxpayer's primary residence or a vacation home but cannot be an investment or rental property. The taxpayer does not have to own the home to claim the credit	
Certification	Equipment must be certified for performance by the Solar Rating Certification Corporation (SRCC) or a comparable entity endorsed by the government of the state in which the property is installed	None
Energy use	At least half the energy used to heat the dwelling's water must be from solar to qualify for the credit	None

SPECIAL RULES

Home batteries

The Inflation Reduction Act added qualified battery storage technology expenditures to the list of qualified expenditures eligible for the credit, applicable to expenditures made after December 31, 2022.

For taxable years 2022 and earlier, home batteries qualified for the Residential Clean Energy Credit (aka the residential energy efficient property credit) under IRC §25D, but only if the battery was- used to store power generated by a taxpayer's solar panels. (PLR 201809003)

In the IRS's ruling, home batteries qualify for the solar credit even if they were installed years after the solar panels and do not generate solar power (they are merely integrated into an existing solar energy system).

Comment

The IRS's 2018 private letter ruling is essentially superseded by the Inflation Reduction Act starting in 2023 because home batteries now qualify for the credit under IRC §25D even if they are not attached to a solar energy system.



California conformity

California offers a rebate for home batteries as well. See "California home battery rebate program" on page 11 for more details.

Labor and related installation costs

Labor and installation costs allocable to the onsite preparation, assembly, or original installation of the qualified solar electric property and for piping or wiring to connect to the residence can be taken into account in computing the credit. (IRC §25D(e)(1))

However, the credit cannot be claimed for:

- Financing costs, including interest and origination fees;
- Extended warranty costs; or
- Roof repairs and replacements.

Solar panels used as roofing/structural components

Where solar panels and equipment are installed as roofing material, the costs associated with the solar property qualify for the credit even though they constitute a structural component of the building. (IRC §25D(e)(2))

Using solar panels as roofing is becoming more common on school and park playgrounds and in parking lots. Solar panels that are installed in lieu of roofing materials on a carport or over a school playground as shade qualify for solar credits, as well as the structural components of the carport or shade as long as the main purpose of the structural components is to hold the solar panels.

Solar roof shingles are becoming more common in the home solar market. Because the roofing material itself is solar property, homeowners can claim a solar credit for roofs that are replaced with solar shingles.

Swimming pools, etc., used as storage medium

The credit cannot be claimed for expenditures allocable to a swimming pool, hot tub, or any other energy storage medium which has a function other than the function of such energy storage. (IRC §25D(e)(3))

Tenant-stockholders in cooperative housing corporations and condominiums

Co-op and condo owners can claim a proportional share of qualified expenditures incurred by the co-op or condo management association. (IRC §25D(e)(5) and (6))

Example of co-op housing corporation/condo association

James lives in a condominium that he owns. There are 100 owners. In 2023, the condo association spends $2 million to install qualified solar electric property that provides energy to its tenants.

James is treated as if he paid $20,000 ($2 million ÷ 100 owners) and may claim a Residential Clean Energy Credit of $6,000 ($20,000 × 30%).

"Condominium management association" is an organization that meets the requirements of IRC §528(c)(1) with respect to a condominium project where substantially all of the units are used as residences.

Business use allocation

If more than 20% of the property's use is for business, the qualified expenditures must be allocated between business and nonbusiness purposes. Only the nonbusiness expenditures are eligible for the Residential Clean Energy Credit. (IRC §25D(e)(7))

Taxpayers who use more than 20% of their home for business purposes should be aware that their solar credit may be limited.

Comment

Where a taxpayer uses more than 20% of their home for business and must allocate the solar costs between business and nonbusiness use, then both solar credits come into play:

- The costs allocated to nonbusiness use are eligible for the Residential Clean Energy Credit under IRC §25D; and
- The costs allocated to business use are eligible for the Energy Investment Tax Credit under IRC §48, discussed in more detail in the "Solar credits for businesses" section starting on page 12.

Timing of expenditures

All expenditures qualifying for the Residential Clean Energy Credit are treated as made when the original installation of the property is completed. (IRC §25D(e)(8)) This is significant for taxpayers undertaking solar projects toward the end of a tax year. If the project is not completed before December 31, then the taxpayer must wait another tax year to claim the credit.

New construction

A taxpayer may claim the credit if a qualifying property is installed in or on an existing home or a newly constructed home. For property installed on a new home, the taxpayer may request that the homebuilder make a reasonable allocation — or the taxpayer may use any other reasonable method — to determine the cost of the property that is eligible for the credit. (Notice 2013-70) The credit is allowed in the year the taxpayer occupies the residence.

Example of new construction

Homebuilder constructed a house in which qualifying solar property was installed in Year 1. The house was not sold and used as a residence until Year 2. The homeowner takes the credit in Year 2.

Example of model home

Homebuilder constructed a house in which qualifying property was installed in Year 1. The house was used as a model home by Homebuilder, during which time the qualifying property was used. The home was sold, and the buyer occupies the home in Year 2. The credit is claimed by the homeowner in Year 2.

BASIS ADJUSTMENTS

The home's basis must be reduced by the amount of any credit allowed. (IRC §25D(f))

Example of basis adjustment

Laura purchases and installs qualifying solar electric property (solar panels) on her principal residence at a cost of $60,000. At the time of the installation, Laura's basis in her home was $1.2 million. Laura's new basis is $1,242,000, calculated as follows:

Basis of home at time of solar installation	$1,200,000
Solar installation (capital improvement)	60,000
Less: solar credit ($60,000 × 30%)	(18,000)
Adjusted basis	$1,242,000

TAXPAYER LIMITATIONS

The amount of the Residential Clean Energy Credit available to taxpayers carries no real limitation. As such, it is a credit that high income taxpayers can take without fear of reduction. The main points are as follows:

- There is no maximum credit any taxpayer can take (annually or lifetime);
- The credit is not limited by the taxpayer's AGI;
- The credit can offset AMT; and
- The credit is nonrefundable, but any unused portion may be carried forward indefinitely (even into years after new solar credits have expired).



California nonconformity

California has no comparable credit.

INTERACTION OF CREDIT AND SUBSIDY

Double benefit disallowed

There is no credit allowed for energy efficient property to the extent that an energy conservation subsidy for that expenditure was excluded from income. (IRC §136(b)) An excluded subsidy is one that a public utility provides, directly or indirectly, to a customer to buy or install energy conservation property.

The rule applies whether a third-party contractor receives the subsidy on behalf of the taxpayer or the taxpayer receives the subsidy directly. (Notice 2013-70)

Looking to the phrase "directly or indirectly," the IRS has concluded that state subsidies paid to solar installation contractors, rather than to the system owners, are excludible to the system owners under IRC §136. (PLR 201607004) IRC §136 provides that gross income shall not include the value of any subsidy provided (directly or indirectly) by a public utility to a customer for the purchase or installation of any energy conservation measure. Because the subsidies paid to the contractors bring down the cost to the end user (the homeowner), the legislative intent of IRC §136 is met.

Example of subsidy

Zack pays for and installs solar panels on his primary residence. The cost for the panels and installation is $50,000, but Zack receives an excludable energy conservation subsidy of $6,500 from his electric company. Zack's Residential Clean Energy Credit is $13,050 calculated as follows:

Cost	$50,000
Subsidy	(6,500)
Net cost to Zack	43,500
Credit	30%
Total	$13,050

California conformity

California conforms to the IRC §136 exclusion for energy subsidies. (R&TC §24326) If a grant received by an individual from a city to install solar panels qualifies for the §136 exclusion, it would not be taxable for California. There are no California-specific exclusions for solar subsidies.

INVESTMENT AND RENTAL PROPERTIES

Taxpayers may not claim the Residential Clean Energy Credit for expenditures for improvements made to an investment property, such as rental property, that is not also used as a residence by the taxpayer. (Notice 2013-70, Q&A-6) In other words, the credit is available to taxpayers who install qualifying property on a multifamily dwelling that serves as both the taxpayer's primary residence and a rental property, subject to the 20% business use allocation previously discussed.

Taxpayers who install solar property on an investment or rental property may still claim a solar credit under IRC §48. See "Solar credits for businesses" starting on page 12.

LEASED SOLAR PANELS

A taxpayer must purchase the qualifying property to claim the Residential Clean Energy Credit, and therefore taxpayers who lease a solar system are ineligible for the credit. (Notice 2013-70)

Typically, when taxpayers lease panels, the company that installs the panels maintains them and also keeps any government subsidy. (www.npr.org/2015/02/10/384958332/the-great-solar-panel-debate-to-lease-or-to-buy) Leases usually run for 15–20 years.

Taxpayers generally have four options at the end of the lease:

- Request to renew the agreement;
- Have the solar provider remove the system;
- Purchase the system (varies by state and provider); or
- Upgrade to a new system.

To compare the benefits of leasing versus buying, go to:

Website
https://ilsr.org/ultimate-solar-calculator/

Comparison of Purchasing Versus Leasing	
Purchasing	**Leasing**
Maximizes the financial benefits of installing a solar panel system, rather than solely benefitting from the system's environmental benefits	Primarily for those interested in using electricity generated from renewable resources, rather than maximizing the financial benefits of installing a solar panel system
Eligible to reduce tax liability through federal credits	Avoids the responsibility of maintenance or repairs for a solar panel system
If a business, can realize tax benefits by treating the solar panel system as a depreciable asset	Ineligible for federal or state investment tax credits resulting from investment in a solar panel system
Increases the market value of a home by installing a solar panel system	Get the reduced electricity bills right away without the financial outlay of purchasing the system.
Source: www.energysage.com/solar/financing/should-you-buy-or-lease-your-solar-panel-system	

Some disadvantages of leasing

Leased systems are considered personal property rather than part of a house. For potential home buyers, a solar lease may be a liability rather than an asset and may drive some buyers away. Typically, the buyer must assume the lease payments for what could be a lengthy period of time, depending on how far into the lease the seller is.

If a buyer does want to take over the lease contract, the solar provider must approve the new leaseholder. If the buyer's credit score is short of the solar company's minimum, it could be rejected. However, in the majority of cases, buyers who qualify for a mortgage will also qualify to take over a solar lease.

When selling a solar home, taxpayers may have the following options, depending on their solar provider:

- Transfer the solar energy contract and monthly payments to the new homeowner (lessor must agree to transfer);
- Prepay the agreement with a one-time discounted payment, which equals all remaining payments and applicable tax under the solar agreement; or
- Move the system to the new home, which may be possible within the same utility district and if the utility company allows it. There may be a fee to move the panels and damage to the roof during removal.

SELLING EXCESS ELECTRICITY

Taxpayers who install solar property on their home and sell more than a minimal amount of excess electricity to a utility may not claim the credit for the full amount of the solar expenditures. The taxpayer may only claim the credit for the portion of the solar electric property expenditure that relates to the electricity generated for use in the taxpayer's home. (IRS Notice 2013-70, Q&A #27)

The taxpayer may be able to claim the IRC §48 Energy Credit for a portion of the solar electric property expenditure if the requirements of IRC §48 are satisfied (see "Solar credits for businesses" beginning on page 12 for more details).

Sale of excess electricity taxable

If a taxpayer generates electricity in excess of their home's usage, then any electricity sold back to the utility company is taxable.

Net energy metering (NEM) programs operate on an annual cycle, often referred to as a solar customer's 12-month relevant period. A homeowner's 12-month relevant period starts on the date their solar panels are put in service and ends at the end of that 12-month period. Most utility companies will credit taxpayers for excess electricity generated month-to-month, but once a taxpayer's 12-month relevant period ends, they can elect to either receive a payment for their excess generation or roll it over to their next 12-month relevant period.

COMMUNITY-SHARED SOLAR CREDIT

Taxpayers qualify for the Residential Clean Energy Credit even if the solar panels are not directly located on the taxpayer's residence (primary or vacation), but solar energy is used to generate electricity directly for the home.

However, in order to take the credit, off-site solar panels must generally work in this fashion:

- The taxpayer enters into a direct contractual arrangement with the local public utility that supplies electricity to the taxpayer's residence;
- The taxpayer provides electricity to the grid using a "net metering" system that measures the amount of electricity produced by the taxpayer's solar panels and transmitted to the grid and the amount of electricity used by the taxpayer's residence and drawn from the grid; and
- Under the contract, the taxpayer owns the energy transmitted by the solar panels to the utility grid until drawn from the grid at their residence.

The panels ordinarily won't generate more electricity than is expected to be consumed at the taxpayer's residence. If the panels generate an excess of electricity and the taxpayer sells the excess to the utility, the excess energy rules discussed above apply.

PLR on point

The IRS issued a 2015 private letter ruling to an individual owner of solar panels installed in an off-site net metered community-shared solar project. (PLR 201536017)

The taxpayer purchased solar panels that were placed on a ground-mounted solar array located in the taxpayer's state. The array included other panels owned by other individuals. The taxpayer also purchased a partial ownership in racking equipment, inverter equipment, and wiring and other equipment, as well as installation services required for the integration of the panels in the array and the interconnection of the array to the public utility's electric distribution system. All members of the array were customers of the public utility company. The entire array was installed and completed in the same tax year.

All of the electricity that the array generated was delivered to the public utility. The public utility calculated a net metering credit based on the aggregate amount of electricity delivered to it from the array. The public utility then applied a portion of that net metering credit against amounts due from the taxpayer for the public utility's provision of electric services to the taxpayer's residence.

It was estimated that the taxpayer's net metering credit would not generally offset more than the amounts that the taxpayer owed the public utility for the provision of electric service to the taxpayer's residence.

In this PLR, the IRS said it would allow the credit when:

- The array provides energy to the taxpayer's local utility;
- The local utility credits the taxpayer for his share of the electricity generated; and
- The taxpayer's share of the solar panels is not expected to generate electricity in excess of the taxpayer's expected needs.

CALIFORNIA SOLAR REBATES

California home battery rebate program

California provides a rebate program for energy storage. The program is called the Self-Generation Incentive Program (SGIP), and it provides rebates for battery storage systems so that homeowners can store solar power they generate instead of sending it back to the energy grid. The program also permits solar energy systems to generate power even when the external energy power grid is down.

Like other state rebates, the SGIP rebate is applied for directly through the state and is limited to the funds set aside by the state. Once the funds have been depleted for the year, no more rebates are available. Most companies selling equipment that qualifies for the rebates will handle the rebate application as well.

SOLAR PANEL PAYMENTS AND PROPERTY TAXES

Two programs, PACE (Property Assessed Clear Energy) and HERO (Home Energy Renovation Opportunity) programs allow homeowners to finance solar panels through their property tax bills. Neither the principal nor interest amounts paid on a taxpayer's property tax bill for energy saving projects are deductible real estate taxes. (CCA 201310029) However, taxpayers may be able to deduct some or all of the interest as a home mortgage interest deduction. (FTB Tax News, July 2016)

IRS Information Letter 2012-0018 states that assessments based on anything other than the assessed value of the property may be deductible in certain circumstances if they are levied:

- For the general public welfare;
- By a proper taxing authority;
- At a like rate; and
- On owners of all properties in the taxing authority's jurisdiction.

Amounts assessed only on specific properties for a local benefit (such as for solar panels) cannot be deducted as real property taxes. However, taxpayers are permitted a deduction for the portion of the local benefit assessments that were imposed to repair, maintain, or meet interest charges for these local benefits. (Treas. Regs. §1.164-(b))

The best way to address these payments is to treat them as a second mortgage for home improvements. This would mean that the interest portion of the payment is a deductible payment, but the principal portion is not. (IRC §163(h))

Interest deduction

If the loans are on commercial property, interest on the loans will generally be deductible as a business expense.

If the loans are on a personal residence, interest on the loans may be deductible as home mortgage interest because the loan is secured by the residence.

Acquisition indebtedness

If the work done on the property is a "substantial improvement" to the property, the loan is acquisition indebtedness. If not, the loan is home equity indebtedness, which is not deductible on the federal return for the 2018 through 2025 tax years under the Tax Cuts and Jobs Act (TCJA).

Generally, solar property will be considered a substantial improvement and will increase the taxpayer's basis in their home (see the discussion of basis adjustments beginning on page 6). As such, mortgage interest allocated to the purchase and installation of solar property and components is acquisition interest. An example of solar property that may not be considered an improvement would be home batteries. If the home battery can easily be removed and taken when the taxpayer sells their home, then it may be more akin to an appliance than a home improvement.

Property tax exclusion

Although the solar panel payments are not deductible as property taxes, the installation of the panels will not result in an increased property tax assessment in California. (R&TC §73)

> ***Comment***
>
> Be sure to check state laws for clients living outside of California to determine whether the installation of solar property will subject your client to additional property tax assessments.

REPORTING AND CLAIMING RESIDENTIAL SOLAR CREDITS

Residential energy credits are calculated on Form 5695, which then flows up to the Form 1040. The Residential Clean Energy Credit is claimed on page 1 of Form 5695.

SOLAR CREDITS FOR BUSINESSES

GENERALLY

IRC §48 provides for credits for expenditures on nonresidential energy property. The Energy Credit provided under IRC §48 is part of the Investment Tax Credit provided under IRC §46, which, in turn, is part of the General Business Credit provided under IRC §38.

Similar to the qualifying property covered in the residential solar credit portion of this webinar above, not all energy property qualifying for the Energy Credit under IRC §48 is solar property. We will focus solely on the qualifying solar property. This report is further limited to those not in the energy business, such as utility companies. Special rules for energy businesses are beyond the scope of this webinar.

AMOUNT OF THE CREDIT

The base amount of the Energy Credit for equipment that generates solar energy under IRC §48(a)(3)(A)(i) and (ii) is 6% of the basis of such property. (IRC §48(a)(2)(A)(i)(II)) The credit is increased five times and becomes a 30% "bonus credit rate" if:

- Certain wage and apprenticeship requirements are met (IRC §48(a)(9)(A)(i));
- The project is small enough to be exempt from the wage and apprenticeship requirements (IRC §48(a)(9)(B)(i)); or
- Construction of the facility began prior to January 30, 2023, (IRS Notice 2022-61)

Old phaseouts retroactively repealed

Taxpayers may claim the full 30% credit if the property is placed in service in 2022.

Under pre-Inflation Reduction Act law, the amount of the Energy Credit was phased down to 26% for solar energy property, qualified fuel cell property, and qualified small wind property if the construction began after 2019 and the property was placed in service prior to 2026. The credit was scheduled to be further reduced to 22% if the construction began after 2022. The Inflation Reduction Act limits the application of the 26% rate to those properties that were placed in service prior to 2022.

Small projects

If the facility upon which the solar energy property is constructed has a maximum net output of electrical or thermal energy of less than 1 megawatt, then the taxpayer can claim the bonus credit rate of 30% without having to meet the wage and apprenticeship requirements put in place by the Inflation Reduction Act. (IRC §48(a)(9)(B)(i))

The average home in the United States requires 1,223 watts of power. (www.forbes.com/home-improvement/home/how-many-watts-run-house/) In other words, 1 megawatt of output is the equivalent of over 800 average homes.

The vast majority of solar projects, including those for most residential rental and even commercial buildings, are unlikely to be constructed on buildings whose electricity output is greater than 800 average homes. As such, most taxpayers will be able to claim the 30% bonus credit rate without having to comply with the Inflation Reduction Act's wage and apprenticeship requirements.

Wage and apprenticeship requirements

Business solar projects that don't qualify for the exceptions listed above must meet certain prevailing wage and apprenticeship requirements in order to qualify for the 30% bonus credit rate.

Prevailing wages

Taxpayers satisfy the prevailing wage requirements of the Inflation Reduction Act by paying at least the prevailing wages for the geographic area and type(s) of construction applicable to the facility on which work is being performed, including all labor classifications for the construction, alteration, or repair work that will be done on the facility by laborers or mechanics.

The prevailing wage rates are published by the Secretary of Labor at:

Website
www.sam.gov

If the Secretary of Labor has not published a prevailing wage determination for the geographic area and type of construction for the facility on www.sam.gov (or if one or more labor classifications for the project are not listed), then the taxpayer must contact the Department of Labor Wage and Hour Division via e-mail and request the correct prevailing wage rate for the worker(s) at issue.

When e-mailing the Department of Labor Wage and Hour Division, the taxpayer must provide the following information to the department for each classification that is not listed:

- Type of facility;
- Facility location;
- Proposed labor classifications;
- Proposed prevailing wage rates;
- Job description and duties; and
- Any rationale for the proposed classifications.

The e-mail address is:

E-mail
iraprevailingwage@dol.gov

Even though the Inflation Reduction Act requires the payment of prevailing wages, the term "wages" includes amounts paid to all individuals performing services for the taxpayer, contractor, or subcontractor in exchange for remuneration, regardless of whether the individual would be characterized as an employee or independent contractor for other federal tax purposes.

When calculating whether prevailing wages are paid, taxpayers include any *bona fide* fringe benefits defined under 29 CFR §5.2(p).

Apprenticeship requirement

In order to satisfy the apprenticeship requirements, taxpayers must:

- Satisfy the apprenticeship labor hour requirements;
- Satisfy the apprenticeship participation requirements; and
- Comply with the same general bookkeeping requirements that apply to the prevailing wage requirement under IRC §6001 and Treas. Regs. §1.6001-1 et seq.

If a taxpayer is not able to satisfy either the apprenticeship labor hour requirements or the participation requirements, then the taxpayer is deemed to have met the requirements if they meet the good faith effort exception. (IRC §45(b)(8)(D)(ii)) Under the good faith exception, the taxpayer must:

- Request qualified apprentices from a registered apprenticeship program, as defined in IRC §3131(e)(3)(B); and
- Either:
    - The request must have been denied (for purposes other than the taxpayer's failure to meet the requirements of the apprenticeship program's established standards); or
    - The registered apprenticeship program fails to respond to the taxpayer's request within five business days from the date the registered apprenticeship program received the taxpayer's request.

Under the apprenticeship labor hour requirement, the taxpayer must ensure that at least the applicable percentage of the total labor hours for the project is performed by qualified apprentices. The applicable percentages are:

- 12.5% for projects which begin in 2023; and
- 15% for projects that begin after December 31, 2023.

Under the apprenticeship participation requirement, each taxpayer, contractor, or subcontractor who employs four or more individuals to perform construction, alteration, or repair work with respect to the facility for which an applicable credit or deduction is claimed must employ at least one qualified apprentice. (IRC §45(b)(8)(B))

Comment

Certain provisions of the Inflation Reduction Act, such as IRC §§45, 45Y, and 48, require prevailing wages to be maintained for any alterations or repairs on a facility for which enhanced credits were claimed for up to 10 years.

BEGINNING OF CONSTRUCTION

The IRS allows two methods to establish the beginning of construction:

- The physical work test; and
- The 5% safe harbor.
  (IRS Notice 2018-59)

A taxpayer is deemed to have begun work on the earliest date the taxpayer satisfies either test.

The physical work test

A taxpayer satisfies the physical work test when physical work of a significant nature begins. This test focuses on the nature of the actual work performed, not the amount or the cost, and both off-site and on-site work may be taken into account. However, it does not include preliminary activities, even if the cost of the preliminary activities will be included in the depreciable basis of the property. Notice 2018-59 does not otherwise define "work of a significant nature."

The 5% safe harbor test

A taxpayer satisfies the 5% safe harbor test if:

- A taxpayer pays or incurs 5% or more of the total cost of the energy property; and
- Thereafter, the taxpayer makes continuous efforts to advance toward completion of the energy property.

All costs that will be part of the depreciable basis of the business solar property are taken into account to determine whether the 5% test is met.

Continuity requirement

Once a taxpayer meets either the physical work test or the 5% safe harbor test, the taxpayer must make continuous progress toward completion of the project. Whether a taxpayer meets the continuity requirement is based on all the facts and circumstances including, but not limited to:

- Paying or incurring additional amounts included in the total cost of the energy property;
- Entering into binding contracts for the manufacture, construction, or production of components of property or for future work to construct the energy property;
- Obtaining necessary permits; and
- Performing physical work of a significant nature.

Disruptions to the continuity requirement that are beyond the taxpayer's control are not an indication that the taxpayer has failed to satisfy the continuity requirement.

Continuity requirement safe harbor: The continuity requirement itself has a safe harbor. If the taxpayer places the business solar property in service by the end of the calendar year that is no more than four calendar years after the calendar year during which construction of the energy property began (referred to as the continuity safe harbor deadline), the energy property is deemed to satisfy the continuity requirement.

> ***Example of continuity safe harbor***
>
> ABC, Inc. satisfied the physical work test and the 5% safe harbor test (and has therefore begun construction) on August 18, 2023. The continuity safe harbor deadline for ABC, Inc.'s solar project is December 31, 2027.
>
> As long as the solar project is completed by December 31, 2027, then ABC, Inc. has satisfied the continuity requirement.

Notice 2018-59 does not address what happens if the continuity requirement is disrupted. Presumably, if the continuity requirement is disrupted, the taxpayer would then be required to determine a new construction begin date.

Coordination with rehabilitation credit

Property that qualifies for the Rehabilitation Credit under IRC §47 cannot also qualify for the Energy Credit under IRC §48. (IRC §48(a)(2)(B))

DEFINING ENERGY PROPERTY

"Energy property" for purposes of the Energy Investment Tax Credit is equipment which uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat (other than to heat a swimming pool) (IRC §48(a)(3)(A)(i)). Such property includes:

- Solar panels;
- Storage devices;
- Power conditioning equipment;
- Transfer equipment; and
- Parts related to the functioning of those items (e.g., solar cells or other collectors).

However, solar energy property used to generate electricity only includes equipment up to (but not including) the stage that transmits or uses electricity. (Treas. Regs. §1.48-9(d)(3))

Comment

The Investment Tax Credit also contains provisions for solar energy property used to illuminate the inside of a structure using fiber-optic distributed sunlight. (IRC §48(a)(3)(A)(ii)) This type of solar energy property contains its own separate sets of rules not discussed here.

Caution

Because "energy property" is part of the larger Investment Tax Credit, which may contain lengthy and detailed rules applicable to all property encompassed within the Investment Tax Credit, additional rules may apply that are not discussed here. The purpose of this webinar is to clarify the rules solely applicable to the solar property used to generate power contained within the Investment Tax Credit.

Construction or original use

Only solar property that the taxpayer constructs, reconstructs, erects, or acquires for original use, or that is acquired by the taxpayer if the original use of the property commences with the taxpayer, is eligible for the credit. (IRC §48(a)(3)(B))

Must be depreciable or amortizable property

In order to qualify as "energy property," the property must be subject to the allowance for depreciation (or amortization in lieu of depreciation). (IRC §48(a)(3)(C))

No credit for lease unless capital lease

The requirements that the property be subject to the allowance for depreciation removes leased solar energy property from the credit. However, a lease treated as a capital lease would qualify because the property would be subject to the allowance for depreciation.

Depreciable life of solar property

Solar property falls under the five-year property classification under IRC §168 (MACRS) and is bonus depreciation eligible. (CCA 201032038; IRC §168(e)(3)(B)(vi)(I))

Property must meet performance and quality standards

The energy property must meet quality performance standards (if any) that have been prescribed by the IRS and are in effect at the time of the acquisition of the property. (IRC §48(a)(3)(D)) The IRS works with the Department of Energy to develop standards that change as technology changes. Practitioners should advise their clients to verify that the solar property they seek to install meets all current government standards.

BASIS ADJUSTMENTS

Basis adjustment to energy property within the Energy Investment Tax Credit

If a business receives an Investment Tax Credit for qualifying solar energy property, the basis of the property must be reduced by 50% of the credit. (IRC §50(c))

Example of basis adjustment

Penco, Inc., a C corporation, is a manufacturer and owns a factory with an adjusted basis of $7 million. Penco purchases and installs solar panels on its factory on August 4, 2023, at a cost of $230,000 and receives an Investment Tax Credit of $69,000 ($230,000 × 30%).

The new basis of Penco's building is $7,195,500 calculated as follows:

Adjusted basis before solar panels	$7,000,000
Plus solar panel installation (capital improvement)	230,000
Less 50% of credit	(34,500)
New basis	$7,195,500

Adjustment in basis of interest in partnership or S corporation

The adjusted basis of a partner's interest in a partnership or a shareholder's stock in an S corporation must also be adjusted to take into account the entity's basis adjustments in the energy property held by the partnership or S corporation. (IRC §50(c)(5))

Example of partner/shareholder basis adjustment

In the above example, assume Penco is an S corporation with two shareholders, Mary and Amanda. Mary owns 25% of Penco's issued and outstanding shares, and Amanda owns 75%. Mary and Amanda would each reduce the basis of their Penco stock as follows:

Mary:
$34,500 downward basis adjustment × 25% = $8,625

Amanda:
$34,500 downward basis adjustment × 75% = $25,875

Mary's and Amanda's K-1s from Penco should provide them with the information necessary to make their basis adjustments.

If Penco is a partnership, then Mary and Amanda would make the adjustments to their outside basis in the partnership in the same way pursuant to Treas. Regs. §1.704-1(b)(2)(iv)(j).

Recapture of reductions

For purposes of IRC §§1245 and 1250, any reduction in basis due to the Energy Credit is treated as a deduction allowed for depreciation. (IRC §50(c)(4)(A))

For purposes of IRC §1250(b), the determination of what would have been a depreciation adjustment under the straight line method is made as if there had been no reduction. (IRC §50(c)(4)(B))

Basis adjustments where credits are recaptured

If any amount of the credit is recaptured (discussed below) with respect to any energy investment property the basis of which was reduced, the basis of the property (immediately before the event resulting in recapture) is increased by an amount equal to such recapture amount.

The downward basis adjustments made by S corporation shareholders and partners in partnerships must be restored to the extent credits are recaptured.

Basis adjustments for subsidized financing and private activity bonds

The full credit may be claimed even if the property is financed by subsidized energy financing or through private activity bonds. "Subsidized energy financing" means financing provided under a federal, state, or local program, a principal purpose of which is to provide subsidized financing for projects designed to conserve or produce energy. (IRC §48(a)(4)(C))

RECAPTURE IN CASE OF DISPOSITIONS, ETC.

The credit is subject to recapture if the solar energy property is disposed of, or otherwise ceases to qualify, within five years from the date the property is placed in service. The amount of credit that must be recaptured depends on the year the property is disposed of or ceases to qualify. (IRC §50(a)(1)(A)); IRS Notice 2013-12) The following table sets forth the recapture percentage during the year in the five-year recapture period the property is disposed or ceases to be Investment Tax Credit property (IRC §50(a)(1)(B)):

Recapture Percentage	
If the property ceases to qualify within:	**The recapture percentage is:**
One full year after the property is placed in service	100%
The second full year	80%
The third full year	60%
The fourth full year	40%
The fifth full year	20%

Example of recapture

If Penco from the previous example sells its building on December 1, 2025, then it must recapture $41,400 of the original $69,000 credit as an addition to tax in 2025 ($69,000 × 60%).

Recapture Table	
If the property ceases to be investment credit property within:	**The recapture amount is:**
August 4, 2023–August 3, 2024	$69,000 ($69,000 × 100%)
August 4, 2014– August 3, 2025	$55,200 ($69,000 × 80%)
August 4, 2025– August 3, 2026	$41,400 ($69,000 × 60%)
August 4, 2026– August 3, 2027	$27,600 ($69,000 × 40%)
August 4, 2027– August 3, 2028	$13,800 ($69,000 × 20%)
August 4, 2028, or later	No recapture

Unused credit carryovers must be adjusted

Unused business solar credits may be carried back one year and forward twenty years. If the solar investment credit property is disposed of or otherwise ceases to be investment credit property, then any carrybacks or carryforwards resulting from recaptured credits must be adjusted.

No adjustments necessary in certain cases

The aforementioned adjustments (for recapture and carryover/carrybacks) are not required in cases of:

- Transfers by reason of death;
- Corporate acquisition transactions to which IRC §381(a) applies; and
- Transfers between spouses or incident to divorce.
  (IRC §50(a)(4))

INELIGIBLE PROPERTY

Solar energy property may be ineligible for the Energy Investment Tax Credit under IRC §48 based on its use or the organization that uses the property.

Property used outside the United States

The credit may not be claimed for any property which is used predominantly outside the United States. (IRC §50(b)(1))

Property used by tax-exempt organizations

The Inflation Reduction Act allows eligible taxpayers to elect to be treated as having made a payment of tax equal to the value of the credit they would otherwise be eligible for, starting in 2023. This essentially turns these otherwise nonrefundable credits into refundable credits. (IRA '22 §13801(a); IRC §6417(a))

Not all energy credits are eligible for this treatment, but the Energy Investment Tax Credit under IRC §48 is eligible.

Comment

The purpose of IRC §6417, which allows certain entities to elect to treat some energy credits as tax payments, is to benefit tax-exempt entities. Income tax credits provide little or no benefit to tax-exempt organizations because they don't typically have any income tax liabilities.

By allowing these entities to elect to treat the credits as a tax payment under IRC §6417, they can now receive the same monetary benefit of energy credits that for-profit taxpayers receive.

Property used by governmental units or foreign persons or entities

In general, no Investment Tax Credit is allowed with respect to property used by the United States, a state or political subdivision thereof, any possession of the United States, or any tax-exempt foreign person or entity. (IRC §50(b)(4))

Comment

The IRC provides for exceptions for governmental units or foreign persons or entities that are beyond the scope of this report.

SPECIAL RULES FOR CERTAIN TAX-FAVORED ORGANIZATIONS

Special rules apply to certain tax-favored organizations, including regulated investment companies (RICs), public utilities, certain cooperative organizations, religious organizations, and others. Detailed discussions of specialized industries are beyond the scope of this special report but are mentioned here to make the practitioner aware that if their client is a business that receives tax-favored treatment, then they should be aware that their solar credits may be limited. (IRC §50(d))

CREDIT BASE AND AT-RISK RULES

Special rules reduce the credit base of investment credit property and subject such property to at-risk rules under IRC §49. However, energy property, including solar property, is excluded from these rules.

REPORTING AND CLAIMING THE ENERGY INVESTMENT TAX CREDIT

The Investment Credit is claimed on IRS Form 3468, Part III. The credit is calculated on Form 3468, Part III and then reported on Form 3800, Part III, line 4a as part of the General Business Credit.

GLOSSARY

Energy Credit: a credit for expenditures on nonresidential energy property. The Energy Credit under IRC §48 is part of the Investment Tax Credit under IRC §46, which in turn in part of the General Business Credit under IRC §38

General Business Credit: made up of over 30 separate business credits that are calculated and reported on their own IRS forms. The credits are then combined on Form 3800, General Business Credit, and are subject to limitations on the aggregate credit

Home Energy Renovation Opportunity (HERO) program: allows homeowners to finance energy efficient, water efficient, and renewable energy products through their property tax bills, although the payments are not deductible as property tax payments. Products include attic insulation, fuel cell generation systems, air sealing electric vehicle charging stations, artificial turf, etc.

Investment Tax Credit: a federal incentive for business investment. Consists of the following credits: rehabilitation, energy, qualifying advanced coal project, qualifying gasification project, and qualifying advanced energy project

Net energy metering (NEM) program: a billing arrangement that allows customers to reduce their monthly electric bill with energy generated by their solar system. They operate on an annual cycle known as a 12-month relevant period

Property Assessed Clear Energy (PACE) program: allows homeowners to finance renewable energy products through their property tax bills, although the payments are not deductible as property tax payments. A PACE assessment is tied to the property not the property owners, so the repayment obligation transfers with property ownership depending upon state legislation

Qualified fuel cell property: a system that typically uses natural gas or propane to produce electricity and that is not dependent on an electric energy grid

Qualified geothermal heat pump property: a closed-loop underground pipe system that circulates water to transfer heat from the ground to the home in the winter and cools the home in the summer

Qualified small wind energy property: a stand-alone wind turbine system that produces electricity

Rehabilitation Credit: a percentage of expenditures incurred for the rehabilitation of qualifying buildings for the year the property is placed in service. Under the TCJA, taxpayers are required to take the 20% credit ratably over five years instead of in the year the building is placed in service. In addition under the TCJA, the 10% Rehabilitation Credit for pre-1936 buildings was eliminated. Property that qualifies for the Rehabilitation Credit cannot also qualify for the energy credit under IRC §48

Residential Clean Energy Credit: passed under the Inflation Reduction Act of 2022; the new name for the Residential Energy Efficient Property (REEP) Credit and often referred to as the Solar Energy Credit. The credit has been extended for an additional 11 years and is available for property placed in service prior to January 1, 2035

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Self-Generation Incentive Program (SGIP): a California rebate program for energy storage whereby homeowners can store solar power they generate instead of sending it back to the energy grid

Subsidized energy financing: financing provided under a federal, state, or local program whose purpose is to provide subsidized financing for projects designed to conserve or produce energy

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