



New York Energy Storage Tax Incentive Reference Guide for Developers and Financiers



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Results analysis

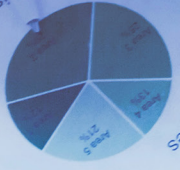
SUSTAINABLE DEVELOPMENT PLAN

Overview

Monthly results



Opportunities



Category	Item 1	Item 2	Item 3	Item 4	Item 5
Section A	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section B	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section C	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section D	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section E	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section F	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section G	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section H	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section I	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00
Section J	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00	\$ 24,000.00

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Note: The rules governing the availability of State and federal tax incentives such as the Investment Tax Credit involve many complex concepts. Experience with and understanding renewable energy projects and renewable finance is crucial to applying these tax rules correctly. NYSERDA is not a qualified tax advisor; this document and its contents are not legal or tax advice. Readers should not rely on anything contained herein; this document is provided only as an informational summary. NYSERDA cannot and does not offer advice on specific tax issues. Tax laws may change over time. Companies and individuals should consult a professional tax advisor experienced with renewable energy projects when seeking to understand or claim any tax treatment, State or federal.

For questions related to information found in this reference guide, please contact energystorage@nyserdera.ny.gov.

Overview

Multiple tax incentives are available for the deployment of energy storage and solar resources in New York State. These tax incentives are provided by both New York State and the federal government. Two major tax incentives are discussed in this document, along with a discussion of accelerated depreciation deductions, a New York State exemption for property taxes, and tax credits for residential solar. A brief summary of the incentives is included, with a more in-depth analysis in the following pages.

New York City Solar and Energy Storage Property Tax Abatement provides a property tax abatement for building owners in New York City who install energy storage or solar energy systems. The annual abatement for energy storage systems is generally equal to the lesser of 10% of the energy storage system's costs or \$62,500. The annual abatement for solar energy generating systems is generally equal to the lesser of 5% of the project's costs or \$62,500. This abatement amount is credited against a qualifying taxpayer's tentative total property tax bill on an annual basis for a maximum of four years.

Federal Investment Tax Credit provides an income tax credit to any U.S. taxpayer that installs and owns a solar project (or a qualifying combined solar + storage project) in the United States. The Investment Tax Credit (ITC) is currently equal to 30% of the total project's costs and is applied against the taxpayer's tentative federal income tax liability. Excess credits that are not utilized do not result in tax refunds but can be carried over to the taxpayer's subsequent tax years so long as the federal ITC has not statutorily expired.

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New York City Solar and Energy Storage Property Tax Abatement

Background

Since 2009, New York State has provided property tax abatements for solar electric generating systems installed in New York State cities with more than one million people. This is applicable for only New York City. Historically, this abatement has only been available for solar electric generation. However, a newly amended state property tax provision, signed into law by Governor Andrew M. Cuomo on December 21, 2018, broadens the scope of eligibility for this property tax credit by also encompassing property owners who deploy electric energy storage equipment.¹

Opportunity

Under New York State's Real Property Tax law, New York City residents who install solar generating systems or electric energy storage systems in their homes or buildings are eligible for a real property tax abatement to recoup some of their project-related costs until March 15, 2024^{sw}. Prior to the law's amendment, New York's Solar Panel Tax Abatement program was scheduled to expire on March 15, 2019. However, the sunset date has been extended to 2024, and the eligibility criteria has been broadened to include electric energy storage equipment—not just solar generating equipment and systems.

In general, a tax abatement represents a dollar-for-dollar decrease in a taxpayer's total tax bill (i.e., it is a decrease to the actual property taxes due). Often, a dollar-for-dollar tax credit results in a more generous tax benefit to a taxpayer than a partial "property tax exemption" because the latter merely exempts a percentage of the property's total value from the tax base on which the property tax is calculated and assessed.

Depending on a specific project's costs and the underlying real property's value, applicants who install eligible energy storage systems on their properties are eligible for a property tax abatement that is limited to the least of three amounts: (1) 10% of their expenditures, (2) the amount of real property taxes payable in that tax year, or (3) \$62,500.² A qualifying building owner is entitled to this annual property tax abatement for the entirety of the "compliance period," which cannot exceed four years, bringing the potential maximum value of this tax abatement to \$250,000 per qualifying project. No eligible building is allowed more than one property tax abatement for installing solar or energy storage.

This property tax abatement can also benefit project developers even if they own "the project," but not necessarily the underlying real property on which the project is ultimately deployed and put into service. In these cases, the real property owner is the taxpayer who is eligible to receive the property tax abatement even though the real property owner is not necessarily the taxpayer that developed or owns the project. Solar project developers have frequently used this property tax abatement to encourage building owners to pursue a solar or storage project at their property. Because eligibility for this property tax abatement is now significantly expanded, and its sunset date extended to March 2024, many energy storage developers and project owners are likely to continue to use this tax incentive.

Requirements and Eligibility

The solar generating system or electric energy storage system is required to operate for the duration of the compliance period, defined as the tax year for which the abatement is first applied and the three tax years immediately thereafter. New York's Department of Tax and Finance reserves the right to inspect projects for the duration of the four-year compliance period to make sure all the eligibility criteria for the property tax abatement are being met. Generally, all real property types are eligible except for utility-owned property. Under New York State's Real Property Tax Law, an application for the property tax abatement must be filed on or before March 15, 2024.³ More information on the New York State Solar and Energy Storage Property Tax Abatement can be found [here](#).

Federal Investment Tax Credit (ITC)

Energy storage systems that are both co-located with and charged by eligible renewable energy systems at least 75% of the time, are eligible for the ITC. Presently, the ITC is 30%, but is scheduled to decline after 2019, as shown in Table 1. Energy storage systems that are charged by a renewable energy system 75% or more of the time are eligible for a like percentage of the 30% ITC. For example, a storage system that is charged by renewable energy 80% of the time is generally eligible for the 30% ITC multiplied by 80%, which equals a 24% ITC instead of a full 30% credit. The renewable energy source system, itself—for example, a solar photovoltaic (PV) system—is still entitled to the full 30% credit. Energy storage systems that are charged by the renewable energy system 100% of the time on a yearly basis are eligible to claim the full value of the ITC. These guidelines generally apply to energy storage systems that are installed at the same time as the renewable energy system.

Table 1

Year	Residential	Commercial and Industrial
2019	30%	30%
2020	26%	26%
2021	22%	22%
2022 and beyond	0%	10%

The IRS takes the view that “dual use” storage, capable of both transmitting energy to and storing energy from the grid, is only eligible for the ITC if, for a period of five years, at least 75% of the energy used on an annual basis to charge the storage device comes only from solar (or other qualifying) technology. The 75% requirement cannot be met by averaging. Even if the percentage of energy the storage device receives from solar technology exceeds 75% in all five years, if it dips below the benchmark (set by the first-year percentage) in any one of the four years subsequent to the first, then the ITC amount claimed on the percentage differential during the latter years is subject to recapture as gross income. Tax policy concerns surrounding energy arbitrage inspired this recapture rule, but its application presents challenges to developers in determining, at the time of construction, what storage equipment may be eligible for the ITC.

Eligibility and General Requirements

In general, the ITC under Section 48 for any taxable year is equal to the stipulated “energy percentage” applicable to the energy property multiplied by the tax basis of the energy property when it is placed in service. In order to qualify for the ITC, Section 48(a) requires the following:

- The taxpayer must complete the construction, reconstruction or erection of the property, or if the taxpayer acquired the property, the original use commenced with the taxpayer
- Depreciation or amortization is allowed on the property
- The tax basis of the property is reduced by 50% of the ITC claimed

Thus, the U.S. taxpayer that owns the energy property is generally the person who is eligible for the federal Investment Tax Credit. However, joint owners of a qualifying joint venture project are eligible to claim the ITC on their own individual federal income tax returns—for example, if the project is owned through an equity partnership. When a developer of a qualifying project owns the project outright, then the developer is eligible for the ITC. Under certain circumstances, if the developer transfers the project to the building owner, the building’s owner may become eligible to claim the ITC on the new owner’s tax return.

The fact that the right to claim the ITC can, in certain circumstances, be transferred with the qualifying project, gives developers the flexibility to explore different ownership models. For example, under special rules, a lessee, who is not the owner of property, can claim the ITC if all the following conditions are satisfied:

- The lessee is the one who originally placed the energy property in service
- The property was either sold and leased back by the lessee, or was leased to the lessee within three months after the date the property was originally placed in service
- The lessee and lessor did not elect to preclude application of the sale-leaseback rules⁴

In addition, if a property owner who leases property to a lessee so elects, the lessee may be treated as the owner of some or all the energy property and be allowed to claim some or all the ITC.⁵

To be clear, the provisions of the Internal Revenue Code that provide for the ITC do not explicitly list energy storage projects as independently qualifying for the federal Investment Tax Credit.⁶ However, in 2011, the Internal Revenue Service (IRS) began issuing a series of important private letter rulings (PLRs), which allowed the addressee taxpayers to claim the ITC for joint renewables and energy storage projects (i.e., paired projects), with the energy storage portion being considered a “qualified solar electric property expenditure.” Although an IRS private letter ruling may indicate how the agency may rule on any particular set of facts arising in the future, a PLR only constitutes binding legal precedent as to the taxpayer who asked for (and paid the fee for) the private ruling. Private letter rulings do not bind the IRS going forward, are not considered binding legal precedent for taxpayers at large, and cannot be cited as such. A PLR can only be relied on as an authoritative tax ruling by the addressee-taxpayer with respect to the specific factual scenario that taxpayer submitted to the government.

Despite the absence of definitive IRS guidance regarding storage systems’ qualification for the ITC to date, it is possible to read the PLRs in this area, note the particular facts and rationales underlying the rulings, and obtain a good sense of the circumstances under which the IRS has allowed, and may continue to allow, taxpayers to claim the ITC. For example, the PLRs issued to date indicate that solar photovoltaic (PV) cells and energy storage systems need to be in close physical proximity with each other, and owned by the same taxpayer, in order to qualify for the ITC under Section 48.⁷

IRS Guidance: Determining When “Construction Begins”

Eligibility for the ITC, and in many cases the amount of the ITC percentage, depend on meeting certain deadlines for “beginning construction” on the energy property and “placing the property in service.” For all renewable energy projects, including solar, the ITC may only be claimed when construction on the project has commenced, as shown in Table 2. In each instance, the property must be placed in service no later than December 31, 2023. If the placed-in-service deadline is missed, such that the property is placed in service on or after January 1, 2024, then the maximum credit allowable is reduced to 10%. The phase-out of the federal ITC for fiber-optic solar projects is even more rapid; no ITC is allowed for fiber-optic solar projects if they are placed in service on or after January 1, 2024.

Table 2.

Type of Energy Property	Date “Construction Begins”	Date “Placed in Service”	ITC Percentage
Solar	Before 1/1/20	Before 1/1/24	30%
	1/1/20 – 12/31/20	Before 1/1/24	26%
	1/1/21 – 12/31/21	Before 1/1/24	22%
	Before 1/1/22	On or after 1/1/24	10%
	On or after 1/1/22	Any	10%
Fiber-Optic Solar, Small Wind, Qualified Fuel Cell	Before 1/1/20	Before 1/1/24	30%
	1/1/20 – 12/31/20	Before 1/1/24	26%
	1/1/21 – 12/31/21	Before 1/1/24	22%
	Before 1/1/22	On or after 1/1/24	0%
	On or after 1/1/22	Not applicable	0%
Geothermal	Any	Any	10%
Qualified Micro-Turbine, CHP, Geothermal Heat Pump	Before 1/1/22	Any	10%
	On or after 1/1/22	Not applicable	0%

The “commencement of construction” requirement has not proved to be a straightforward concept. On June 22, 2018, the IRS issued [Notice 2018-59](#) (“the Notice”), which contains official guidance as to what “commencing construction” means for purposes of qualifying renewable energy projects for the ITC under Section 48(a). Among other important clarifications, the Notice specifies two alternative methods by which a taxpayer can establish when construction has begun:

- Physical Work Test
- Five Percent Safe Harbor⁸

Construction of an energy property is deemed to have begun at the time the taxpayer first satisfies one of the two methods’ criteria. At that point, a special continuity requirement kicks in, under which physical construction work or other completion efforts must be maintained in order satisfy the commencement-of-construction condition. Each of these two methods, and each method’s special continuity requirement, are outlined.

Physical Work Test

Under this test, taxpayers may establish that construction has begun by starting “physical work of a significant nature” on the property. The Notice makes clear that this facts-and-circumstances test focuses on the nature of the work performed—not the amount or cost of labor. Although there is no fixed minimum amount of work or cost threshold that must be met to satisfy the Physical Work Test, the Notice states that the IRS will “closely scrutinize energy property” to determine whether physical work of a significant nature has begun and whether construction is being maintained.

Both on-site and off-site work may be taken into account for purposes of the Physical Work Test. “Off-site physical work of a significant nature” may include the manufacture of components, mounting equipment, support structures such as racks and rails, inverters, transformers, and other power conditioning equipment.⁹ The Notice contains a non-exclusive list of activities that may constitute “on-site physical work of a significant nature” including, with respect to solar energy property, the installation of racks or other structures to affix photovoltaic (PV) panels, collectors, or solar cells to a site. With respect to fiber-optic solar energy property, on-site physical work of a significant nature may include the installation of collectors, concentrators, tracking systems, bundles of optical fibers, or fixtures within a structure. (Notably, the Notice does not explicitly address whether work on energy storage systems or work on paired storage components are to be counted in this test.)

Physical work of a significant nature does not include preliminary activities, even if the costs of those activities are properly includible in the depreciable tax basis of an energy property. Generally, “preliminary activities” include, but are not limited to, the following:

- Planning or designing
- Securing financing
- Researching or exploring
- Obtaining permits and licenses
- Conducting geophysical, gravity, magnetic, and seismic surveys, or environmental and engineering studies
- Clearing or excavating a site
- Removing existing foundations, towers, turbines, solar panels, or any components that will no longer be part of the energy property (including those attached to a building structure)

Physical work of a significant nature also does not include work to produce components of an energy property that are either in existing inventory or are the type of components that are normally held in inventory by a vendor.

Work performed by a third party may count toward satisfying the Physical Work Test so long as the work is performed pursuant to a binding legal contract entered into prior to the construction or production of the energy property or its components.

Five Percent Safe Harbor

Alternatively, taxpayers can establish that construction has begun by satisfying the Five Percent Safe Harbor, which requires the taxpayer pay or incur at least 5% of the energy property’s total costs by the particular target date, and then make continuous efforts to complete the energy project. All costs normally includible in the depreciable tax basis of the energy property are taken into account to determine if the 5% cost threshold is met. The total cost of the energy property does not include the cost of land or any property not “integral” to the energy property.¹⁰

Cost Overruns

If the total cost of an energy property that is part of a single project comprised of multiple energy properties exceeds its anticipated total cost, so that the amount a taxpayer actually paid or incurred turns out to be less than 5% of the total cost of the single project at the time it is placed in service, the Five Percent Safe Harbor is not technically satisfied. However, the Notice provides that the Safe Harbor will be deemed satisfied and the ITC may be claimed with respect to some, but not all, of the energy properties comprising the single project, so long as the total aggregate cost of those energy properties does not exceed 20 times the amount the taxpayer actually paid or incurred.

Continuity Requirement

While a taxpayer may meet both of the two sanctioned methods for establishing that construction has commenced, Notice 2018-59 states that construction will be deemed to have begun on the date the taxpayer first satisfies one of the two tests.¹¹ At that point, the taxpayer is required to satisfy a continuity requirement. With respect to the Physical Work Test, the continuity requirement is satisfied if the taxpayer can demonstrate under the facts that construction of a significant nature is ongoing and continuing. With respect to the Five Percent Safe Harbor, the continuity requirement is met if the taxpayer demonstrates that continuous efforts are being made to complete the project. These efforts may include paying or incurring additional costs; entering into contracts for the construction, production, or manufacture of component parts; obtaining necessary permits; or performing physical work of a significant nature.

Excusable Disruptions

Certain disruptions in the taxpayer's continuous construction or continuous efforts to complete a project will be overlooked by the IRS if they are beyond the taxpayer's control. Excusable disruptions may include, but are not limited to, the following:

- Delays due to severe weather and/or natural disasters
- Delays in obtaining permits or licenses from federal, State, local, or Native American tribal governments, or from a federal agency such as the environmental protection agency
- Delays due to labor stoppages
- Interconnection delays such as those related to upgrades to resolve grid connection issues
- Delays due to the inability to obtain custom component parts, supplies, or specialized equipment
- Delays due to the presence of endangered species
- Financing delays

Continuity Safe Harbor

If a taxpayer places an energy property in service by the end of a calendar year that is no more than four calendar years after the calendar year during which construction of the energy property began (not allowing extensions for "excusable disruptions"), the energy property will be considered to satisfy the Continuity Safe Harbor. However, if an energy property is not placed in service before the end of the fourth calendar year after the calendar year during which construction of the energy property began, facts and circumstances will determine whether the continuity requirement is satisfied.

Transfers of Energy Property

Section 48(a)(3)(B) provides that energy property is any property the construction, reconstruction, or erection of which is completed by the taxpayer, or which is acquired by the taxpayer if the original use of such property commences with the taxpayer. A taxpayer that owns energy property on the date it is originally placed in service may elect to claim the ITC even if the taxpayer did not own the energy property at the time its construction began. Thus, a fully or partially developed energy property may be transferred without losing its qualification under the Physical Work Test or the Five Percent Safe Harbor. In cases where the energy property was transferred, any ITC claimed on energy property will be limited to the taxpayer's basis in the property.

Recapture of ITC as Income upon "Early Disposition" of the Energy Property

If, prior to five full years of service, the taxpayer disposes of the energy property, or the project ceases to qualify as "energy property" under the IRC Section 48, then the taxpayer must "recapture" as gross income all or part of the ITC the taxpayer previously claimed on the tax return.¹²

The amount to be recaptured as gross income equals the applicable credit multiplied by the "recapture percentage." The recapture percentage depends on how much time has elapsed between the date the energy property was placed in service and the date of the triggering disposition or other event, which caused the property to be disqualified. The recapture percentage is 100% if less than one full year has elapsed since the property was first placed in service. The recapture percentage is 80% if more than one full year but less than two full years has elapsed, 60% if more than two full years but less than three full years have elapsed, 40% if more than three full years but less than four full years have elapsed, and 20% if more than four full years but less than five full years have elapsed.¹³ Thus, the longer the taxpayer is able to keep the energy property in service, the less gross income the taxpayer will have to report if there is a disqualifying event within the five-year ITC vesting period.

If a full five years has elapsed since the property was first placed in service, then the recapture provisions do not apply even if the property is disposed of, or a disqualifying event occurs. Moreover, the ITC recapture provisions do not apply to property transfers by reason of death, to property transfers between spouses or incident to their divorce, or to property that is transferred in certain tax-free corporate reorganizations and similar transactions.

Mechanics of Claiming the Investment Tax Credit

The Energy Investment Tax Credit is claimed on the taxpayer's annual federal income tax return or amended return. If the taxpayer is claiming the Residential Energy-Efficient Property Credit, then [IRS Form 5965](#) should be filed with the return. The energy ITC for depreciable property is claimed by filing [IRS Form 3468](#).

Taxpayers whose tentative federal income tax liability is not sufficient to fully absorb the ITC are allowed to “carry over” excess credits to be utilized in future years, so long as the ITC has not statutorily expired and is still in effect for the year the credit is claimed.

Special rules apply for purposes of determining the Investment Credit applicable to certain financial organizations, Regulated Investment Companies (RICs), Real Estate Investment Trusts (REITs), certain non-corporate lessors, certain financial organizations that are lessees, public utilities, cooperatives, and certain tax-exempt membership organizations.

Storage Installed as a Retrofit

The IRS published several PLRs finding that batteries and similar storage devices qualify for the ITC under Section 48 when installed contemporaneously with the solar panels or other technology that gathers renewable energy and converts it to electricity. Moreover, Treasury Regulations promulgated under Section 48 expressly contemplate energy storage assets as credit-qualifying “property.” But guidance has been less clear on whether the storage assets must be placed in service at the same time as the solar generating system or other property feeding energy to the storage system.

On March 2, 2018, the IRS released an important private letter ruling—[PLR 201809003](#)—in which the IRS allowed a married couple to claim a “residential energy efficient property” credit under Section 25D of the Code for a battery that was to be installed as a “retrofit” to an existing solar energy system powering their home. In allowing the taxpayers to claim the credit for the costs associated with the battery retrofit, the IRS stated that one fact “essential” to its ruling was the taxpayers’ representation “that all energy that is used to charge the Battery” was coming from their solar energy system—a requirement peculiar to Section 25D(d)(2) defining “qualified solar electric property.” Although this 2018 PLR is addressed to the individual taxpayers seeking to claim the Section 25D credit with respect to a renewable energy storage system added to their home—and not the ITC under Section 48—the ruling’s outcome sheds light on the degree to which the IRS may allow commercial, industrial, and utility-scale projects to claim the ITC under Section 48 for storage assets that are placed in service at a time subsequent to, or different from, the solar energy generation systems to which the storage assets become attached.

Taxpayers exploring retrofits should consult a tax attorney as to the availability of the federal ITC in these situations.

Energy Storage Projects and the ITC: Need for More Clarity

The extended sunset dates of the federal Energy Investment Tax Credit, coupled with the IRS Notice 2018-59 (previously discussed), provide much needed tax guidance and a promising path towards further development of commercial solar projects and other forms of renewable energy. However, the extent to which energy storage systems will qualify for the ITC is presently still uncertain, and more guidance is needed. For example, the Notice does not shed light on the degree to which energy storage equipment can be counted as “energy property” in applying either of the two sanctioned tests for establishing when construction of a project began.

Although U.S. Treasury regulations define solar “energy property” as including “storage devices, power conditioning equipment, transfer equipment, and arts relating to the functioning of those items,” the regulations do not explicitly state what types of storage equipment will qualify for the Investment Tax Credit.

While the IRS has provided limited guidance in the form of private letter rulings suggesting that batteries are storage devices eligible for the federal ITC, other types of storage—like thermal storage, flywheels, compressed air energy storage and pumped hydropower storage—are not addressed. In short, many questions regarding the availability of the ITC for energy storage projects remain open and unanswered, and it will likely take a legislative amendment to Section 48 to provide energy storage developers, owners, and other taxpayers with greater certainty on this issue.

Bill Introduced in U.S. Congress to Establish ITC for Energy Storage

On April 4, 2019, U.S. Representative Michael Doyle (D-PA) introduced the Energy Storage Tax Incentive and Deployment Act as a bill in the House of Representatives ([H.R. 2096](#)) that, if signed into law, would amend Section 48 of the Internal Revenue Code to expand the availability of the energy ITC for utilities, businesses, and homes that deploy energy storage technologies.

An identical bill was also introduced in the U.S. Senate ([S. 1142](#)) on April 11, 2019, by Senator Martin Heinrich (D – NM). The House and Senate bills propose to expand the definition of “energy property” in Section 48(a)(3)(A) of the Tax Code by adding an eighth category of energy property encompassing:

“equipment which receives, stores, and delivers energy using batteries, compressed air, pumped hydropower, hydrogen storage (including hydrolysis), thermal energy storage, regenerative fuel cells, flywheels, capacitors, superconducting magnets, or other technologies identified by the Secretary [of the Treasury] in consultation with the Secretary of Energy, and which has a capacity of not less than 5 kilowatt hours....”

The congressional proposal has been billed as a “clarification” of the Tax Code’s definition of energy property for purposes of the ITC. And, although it would explicitly include energy storage technologies within the definition of energy property, it does not propose to change the current ITC percentage phase-out. More information on the federal Investment Tax Credit can be found [here](#) and [here](#).

Federal Income Tax Deductions for Depreciation

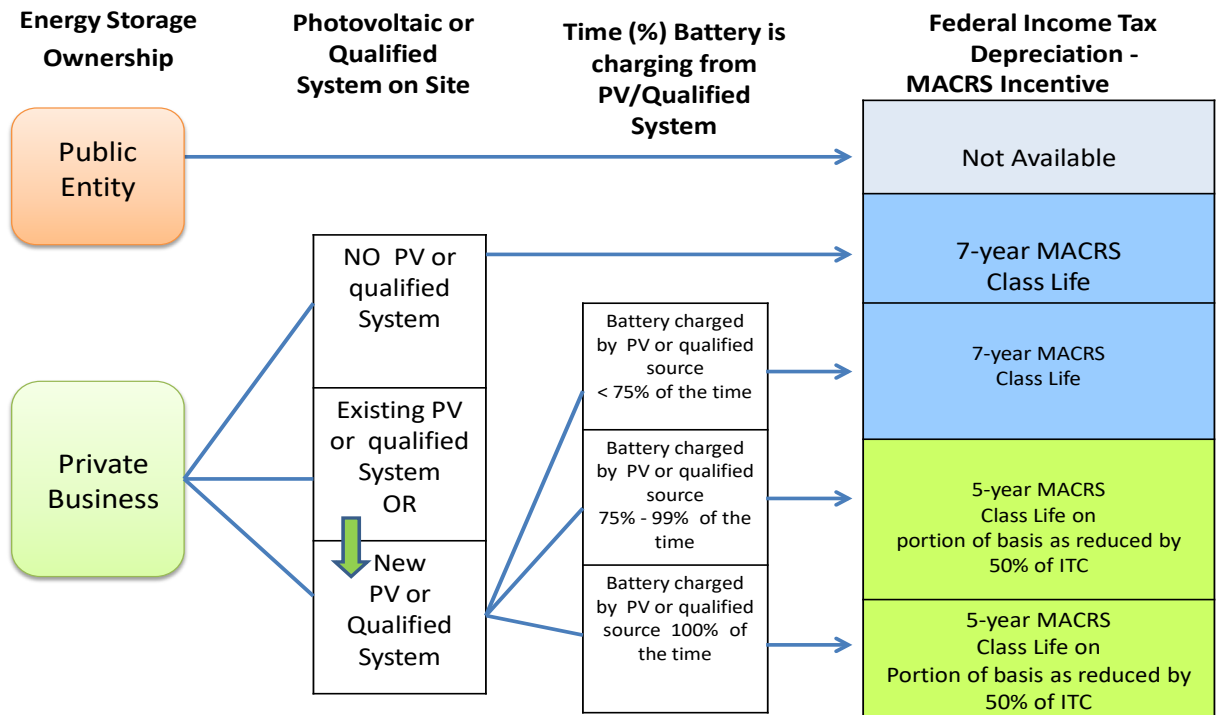
Commercial businesses that deploy renewable energy storage systems may be eligible for accelerated depreciation deductions, including “bonus depreciation,” which would lower the cost of beginning a new project and increase the after-tax rates of return on the investment.

Since its inception, the Internal Revenue Code has allowed taxpayers to take depreciation deductions to recover the cost of property and equipment used in the taxpayer’s trade or business over the property’s “useful life.”¹⁴ Historically, only economic depreciation was allowed to be deducted using a “straight-line” method, which spreads depreciation deductions equally across the entire cost-recovery period. In 1986, Congress streamlined the system for claiming depreciation deductions by creating the Modified Accelerated Cost Recovery System (MACRS),¹⁵ which allows commercial enterprises to deduct the costs of acquiring business property and equipment much more rapidly as compared to the old economic depreciation schedules.

The availability of depreciation deductions for energy storage systems is similar to the rules ostensibly applicable to paired energy storage systems under Section 48’s Investment Tax Credit.¹⁶ Thus, depending on the percentage of total stored energy supplied by qualifying renewable energy sources (e.g., photovoltaic solar panels), the MACRS “class life” of an energy storage system is either five or seven years. For example, as illustrated in Figure 1, if a solar battery system is charged by a qualified renewable energy system more than 75% of the time on a yearly basis, the energy storage battery should qualify for the more rapid five-year MACRS depreciation schedule. If the battery is being charged by a qualified renewable energy system less than 75% of the time, then the battery storage system is subject to a slower cost-recovery period, with a class life of seven years.¹⁷ If the business is also claiming the federal Investment Tax Credit, the rules require that, for purposes of claiming depreciation deductions on the energy property, the depreciable tax basis of the property must be reduced by half the amount of the ITC claimed on the tax return.

Figure 1.

Depreciation Deductions for Solar/Renewable Energy Storage Systems



Qualifying energy storage systems may also be eligible for “bonus depreciation,” which enables business taxpayers to write off the cost of acquiring certain assets more rapidly than MACRS would ordinarily permit. Under the 2017 Tax Cuts and Jobs Act (TCJA), 100% bonus depreciation is available for qualified renewable energy property acquired and placed into service after September 27, 2017 and before the end of 2022, which is a significant increase from the 50% bonus depreciation under the prior law. After 2022, the bonus depreciation level is phased down by 20% each year until it is eliminated at the end of 2026.

Prior to the TCJA, only new property had been eligible for bonus depreciation. The TCJA eliminated this “original use” requirement, thereby extending eligibility to used property, provided such property is acquired from an unrelated party in a taxable transaction. Assuming there are buyers with sufficient income tax liabilities to absorb the 100% bonus depreciation deduction, this change in the law should increase the value of existing renewable energy projects on the market.

Energy properties acquired in 2017—the year the TCJA was adopted—are subject to special rules. A property “acquired” before September 27, 2017 is only eligible for the pre-TCJA bonus depreciation schedule (i.e., 50%), even if such property is placed into service after that date. For this purpose, the acquisition date is not the closing date, but the date when a written binding contract for the acquisition was entered into.

The TCJA allows a business taxpayer to opt out of the bonus depreciation and depreciate the energy property over its applicable MACRS class life. Taxpayers who have invested in renewable energy projects through partnerships may opt out of bonus depreciation in favor of MACRS. The allocation of any tax depreciation to a partner is limited to that partner’s capital account balance, which may be insufficient to fully absorb the partner’s pro rata share of bonus depreciation. Thus, while depreciation deductions taken under the MACRS constitute a slower cost-recovery system than the up-front bonus depreciation deduction, the MACRS may yield a better tax result.

If after a renewable energy property or storage system has been depreciated, it is sold by the taxpayer for a profit, any tax gain is subject to special recapture rules which can, among other things, turn what would be capital gain into higher-taxed ordinary income for the seller.¹⁸

New York State Real Property Tax Exemption

Under Section 487 of New York State's Real Property Tax Law, a partial tax exemption is available for properties that make use of the following technologies:

- Solar or wind energy systems
- Farm waste energy systems
- Micro-hydroelectric energy systems
- Fuel cell electric generating systems
- Micro-combined heat and power generating equipment systems
- Electric energy storage equipment and electric energy storage systems

When a property owner installs one of the above technologies in a participating jurisdiction, the incremental increase in property value will not be included in property tax calculations for a period of 15 years.

Municipalities and school districts in New York (except Syracuse, New York City, Yonkers, Rochester, and Buffalo) have the option to opt out of this tax exemption. The State maintains a list of all municipalities that have opted out, which can be accessed [here](#).

New York State Residential Solar Tax Credit

New York offers a State income tax credit for people who purchase solar systems. State taxpayers are eligible for a credit equal to the lesser of 25% of their system cost, or \$5,000. If the taxpayer's tentative total tax liability is not sufficient to fully utilize the credit, the excess credit can be carried over to be used against the following year's tax liability. This tax credit only applies to residential solar systems under 25 kW. For more information on this tax credit, click [here](#).

Green Economy Tax Credits: Green Jobs and Green Investment

New York's Fiscal Year (FY) 2021 Enacted Budget¹⁹ amended the Excelsior Jobs Program Act²⁰ to create two new opportunities. It created a refundable, discretionary Green Jobs Tax Credit totaling up to 7.5 percent of wages for each net new job created that fosters the expansion of green economy businesses and positions New York State. The State will also create a refundable, discretionary Green Investment Tax Credit totaling up to 5 percent of qualifying new capital investments in connection with qualifying green economy projects and increasing to up to 8 percent of eligible investments for research and development in qualifying green economy projects.

Eligibility for Green Projects

To be eligible for Green Economy Tax Credits, a company must participate in the Empire State Development's Excelsior Jobs Program²¹ and engage in green projects. A "green project" is a project to make products or develop technologies to reduce greenhouse gas emissions or support the use of clean energy. This includes the manufacture or development of products or technologies or supply chain components primarily for renewable energy systems, vehicles that use non-hydrocarbon fuels and produce zero or near zero emissions, heat pumps, energy efficiency, clean energy storage and other products that significantly reduce greenhouse gas emissions.

A green project is not the retail sale, construction, or deployment of a clean energy product or technology at an end user's site. A green project is also not the production of products or development of technologies that would produce only marginal and incremental energy savings or environmental benefits ancillary to the core function of the product or technology.

Value of the Tax Credits

Both the green jobs and investment tax credits are available for green projects as follows:

- The credit for each net new job for a green project in New York State will be equal to the product of the gross wages paid and up to 7.5 percent.
- The investment tax credit for green projects will be equal to 5 percent of the cost or other basis for federal income tax purposes of the qualified investment.
- The research and development tax credit for a green project is 50% of the Federal research and development credit that relates to New York State up to 8 percent of the research and development expenditures attributable to activities conducted in New York State. Salary or wage expenses for jobs related to research and development activities may be used as the basis for the research and development tax credit component. Both the investment tax credit and the research and development tax credit may be claimed for the same green project.

Claiming Tax Benefits

Participants must submit an annual performance report to Empire State Development for each year indicated on the Excelsior Jobs Program preliminary schedule of benefits. The report demonstrates that all applicable eligibility requirements were satisfied and forms the basis for the tax credit components. If eligible, a Certificate of Tax Credit will be issued indicating the appropriate amount of each component of the credit the participant may claim. The tax credit components may only be claimed on tax returns for the tax year indicated on the certificate. These tax credits are currently available for up to ten consecutive years until January 1, 2040. If, in any given year, a participant who has satisfied the eligibility criteria realizes job creation less than the estimated amount, the credit will be reduced by the proportion of actual job creation to the estimated amount, provided the proportion is at least seventy-five percent of the jobs estimated.

Note: The rules governing the availability of State and federal tax incentives such as the Investment Tax Credit involve many complex concepts. Experience with and understanding renewable energy projects and renewable finance is crucial to applying these tax rules correctly. NYSERDA is not a qualified tax advisor; this document and its contents are not legal or tax advice. Readers should not rely on anything contained herein; this document is provided only as an informational summary. NYSERDA cannot and does not offer advice on specific tax issues. Companies and individuals should consult a professional tax advisor experienced with renewable energy projects when seeking to understand or claim any tax treatment, State or federal.

End Notes

- ¹ The 2018 amendment to Title 4-C of New York's Real Property Tax Law defines "electric energy storage equipment" as a set of technologies capable of storing electric energy and releasing that energy as electric power at a later time. Electric energy storage technologies may store energy as potential, kinetic, chemical or thermal energy that can be released as electric power, and include, but are not limited to, various types of batteries, flywheels, electrochemical capacitors, compressed air storage and thermal devices.
- ² For solar generation projects, the abatement amount is limited to the least of: (i) 5% of total project costs, (ii) the amount of real property tax otherwise due, or (iii) \$62,500.
- ³ See, New York State Real Property Tax Law Exemptions at <https://www.nysenate.gov/legislation/laws/RPT/A4T4-C>
- ⁴ IRC § 50(d)(4) (referencing pre-1990 Revenue Reconciliation Act, § 48(b)(2), § 48(b)(3)).
- ⁵ IRC § 50(d)(5) (referencing § 48(d)(1) and d)(2)(A) before enactment of the Revenue Reconciliation Act of 1990, Pub. L. No. 101-508). See Reg. §1.48-4(a)(1). See also Goldstein v. Commissioner, T.C. Memo 1987-47.
- ⁶ See IRC § 48(a), defining "energy property."
- ⁷ See PLR 201208035 (2/24/2012)(ruling that a wind farm owner could properly claim the ITC with respect to an energy storage system that was added to the owner's existing wind farm).
- ⁸ IRS Notice 2018-59, § 3.01. A "safe harbor" in the tax law is generally a provision that purports to protect a taxpayer from specified negative tax consequences or factual determinations, so long as the taxpayer satisfies the conditions set forth in the safe-harbor provision.
- ⁹ IRS Notice 2018-59, 4.02. The manufacture of solar energy storage equipment is not specifically mentioned in the Notice.
- ¹⁰ Notice 2018-59, 7.02 attempts to describe what components are "integral" to a particular energy property, stating that it includes property integral to the production of electricity, but not property that is used for the mere transmission of electricity. The Notice is silent as to how energy storage equipment is to be classified in this regard.
- ¹¹ Id. at § 3.02.
- ¹² IRC § 50(a). Investment tax credit recapture is reported on IRS Form 4255, Recapture of Investment Credit, and filed with the taxpayer's federal income tax return.
- ¹³ IRC § 50(a)(1)(B).
- ¹⁴ In general, a business is subject to federal income tax only on its net income, a concept that requires deducting from gross receipts costs that the business reasonably incurs in providing goods or services. Some costs can be deducted immediately as trade-or-business "expenses." However, to the extent a business incurs costs for acquiring a tangible asset that will last or be useful beyond one year, the Internal Revenue Code requires the business to spread the cost recovery deductions over the asset's "useful life." This annual deduction ensures that the income tax is assessed on business's income, rather than on its gross receipts.
- ¹⁵ IRC § 167(a), § 168.
- ¹⁶ IRC § 168(e)(3)(B)(vi), defining what property is eligible for an accelerated 5-year recovery period, incorporates by reference the definition of "energy property" found in § 48(a)(3) (which definition members of Congress are proposing to expand to explicitly list energy storage property).
- ¹⁷ Even if the energy storage system is not attached to a renewable energy resource, it may qualify for depreciation deductions under the MACRS using a 7-year class life, which is the default category for properties that are not assigned a specific class life. See IRC § 168(e)(3)(C)(v)(I).
- ¹⁸ See IRC § 1245, § 1250.
- ¹⁹ See Division of the Budget, FY 2021 Enacted Budget at <https://www.budget.ny.gov/pubs/archive/fy21/enac/fy2021-enacted-budget.html>
- ²⁰ See Article 17 of the Economic Development Law of New York, Excelsior Jobs program Act at <https://www.nysenate.gov/legislation/laws/COM/A17>
- ²¹ The Excelsior Jobs Program is a New York initiative to encourage businesses to expand in and relocate to New York. For information, visit <https://esd.ny.gov/excelsior-jobs-program>



NYSERDA

**New York State
Energy Research and
Development Authority**

17 Columbia Circle
Albany, NY 12203-6399

toll free: 866-NYSERDA
local: 518-862-1090
fax: 518-862-1091

info@nyserda.ny.gov
nyserda.ny.gov