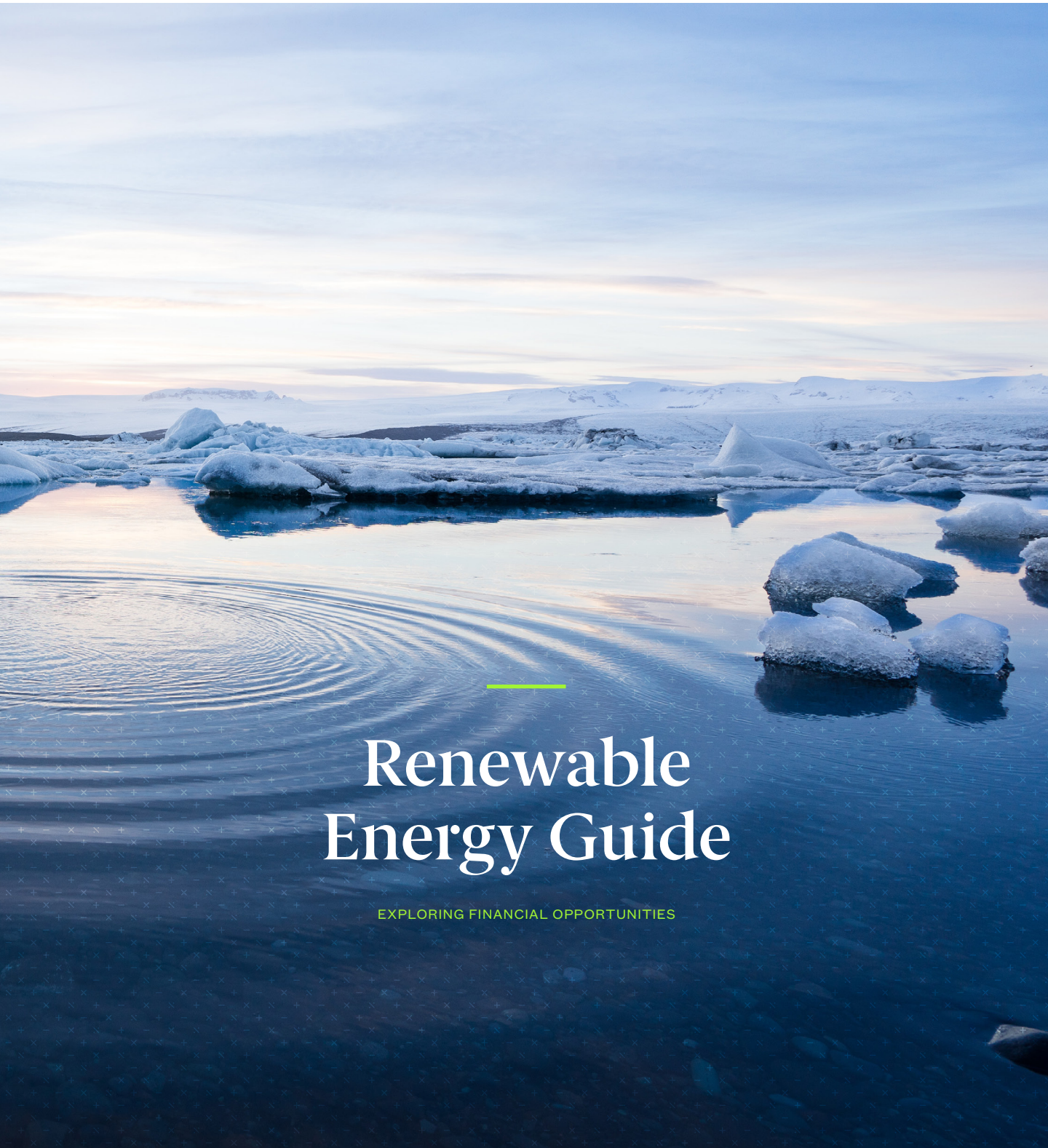
MOSSADAMS



Renewable Energy Guide

EXPLORING FINANCIAL OPPORTUNITIES

Opportunities & Challenges

It's an exciting time with extraordinary potential for investors in renewable energy projects. Public support has never been higher and the majority of the largest companies in the United States continue to set increasingly ambitious clean energy targets. Federal, state and local governments are also continuing to diversify their energy supplies to reduce carbon emissions by encouraging investment in renewable energy projects—especially through solar and wind.

While demand for renewable energy remains high, there's increasing uncertainty in the market. Decreasing cost structures and more efficient technologies have created new challenges—such as reduced motivation for some governmental agencies to subsidize development—along with more viable renewable energy platforms that offer substantial opportunity.

There are three particularly compelling reasons why investing in renewable energy projects and pursuing the associated tax incentives continues to be a smart financial strategy.

Corporate Investments

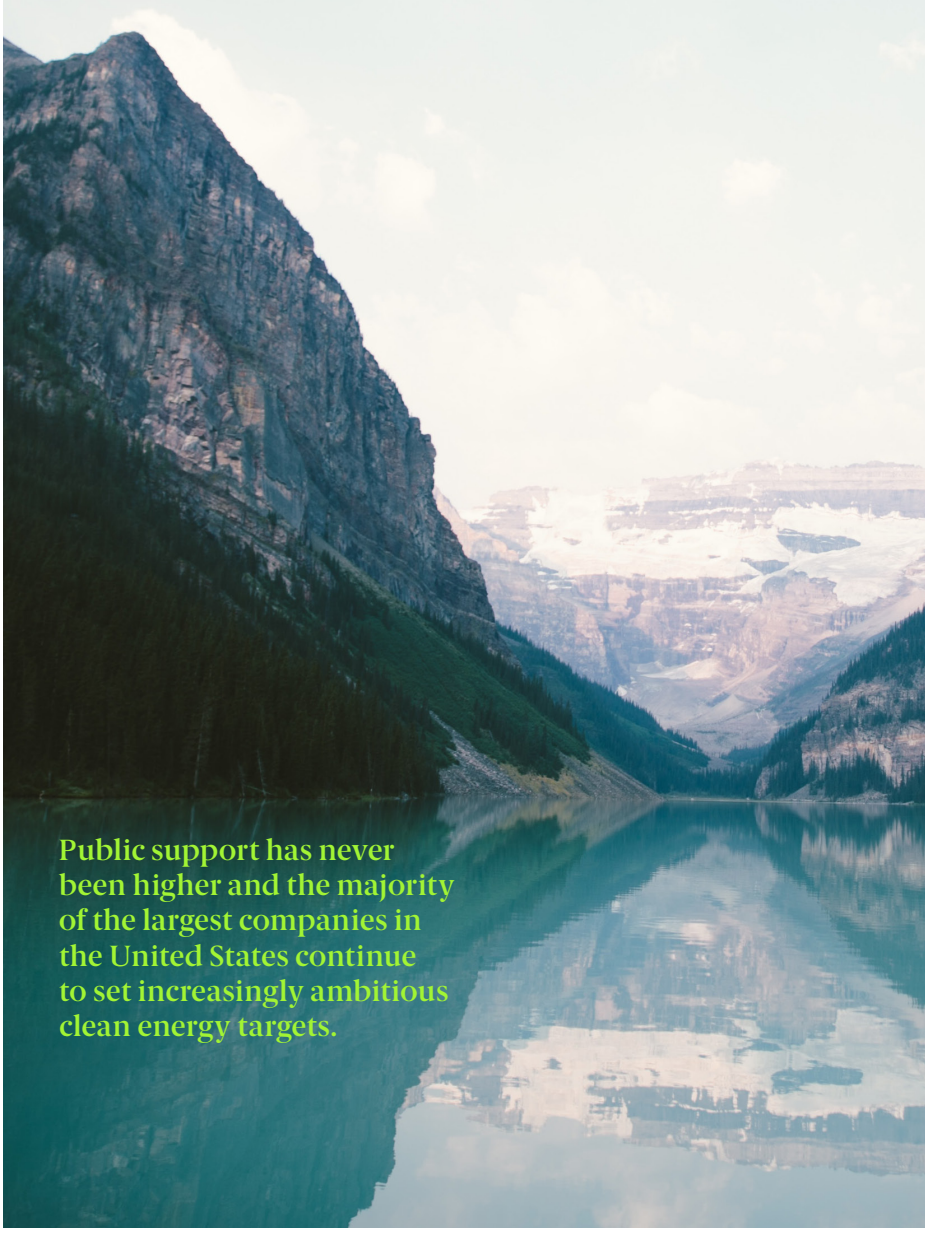
Private and public-sector corporate investment in renewables has never been higher. Progressive-minded corporations see investing in renewable energy projects as a tax-savvy, socially responsible initiative. Annually, more than half of all Fortune 100 companies set clean energy targets and almost half of all Fortune 500 companies do too, according to the World Wildlife Fund.

Government Incentives

Federal, state, and local governments encourage investment in renewables to help diversify their energy supply and reduce carbon emissions. Wind and solar are the most advanced renewable energy technologies in terms of existing or near-term power generation, industry maturity, and financial incentives, so they tend to receive the most investment.

Public Opinion

Demand for more renewable energy from the general public is also at an all-time high. The majority of Americans prioritize developing alternative energy over fossil fuels, according to studies by the Pew Research Center.



STATE RENEWABLE PORTFOLIO STANDARD (RPS) POLICIES

58%

STATES

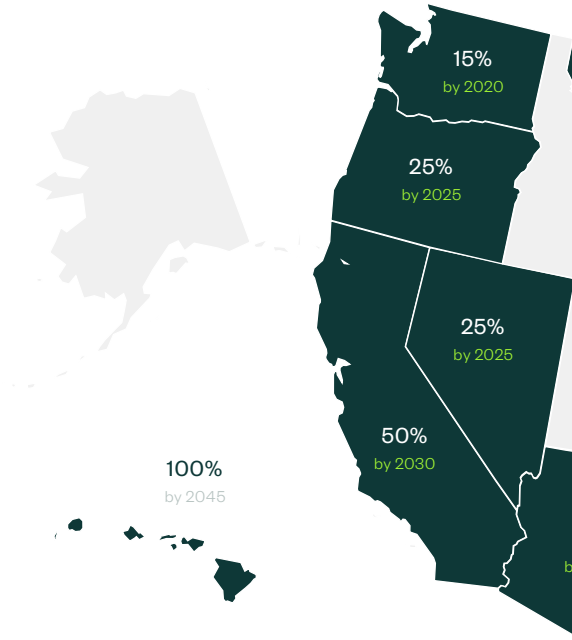
RPS policies exist in 29 states and DC.[1]

Note: Mandatory standards or nonbinding RPS goals also exist in the US territories of American Samoa, Guam, Puerto Rico, and the US Virgin Islands.

54%

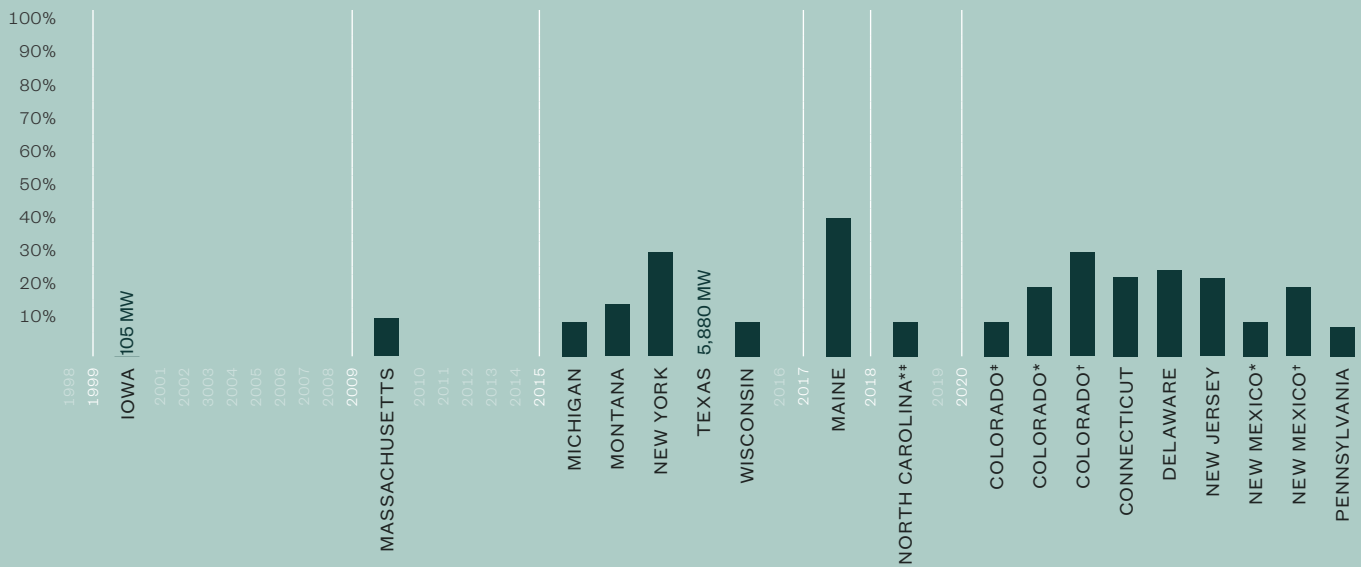
ELECTRICITY SALES

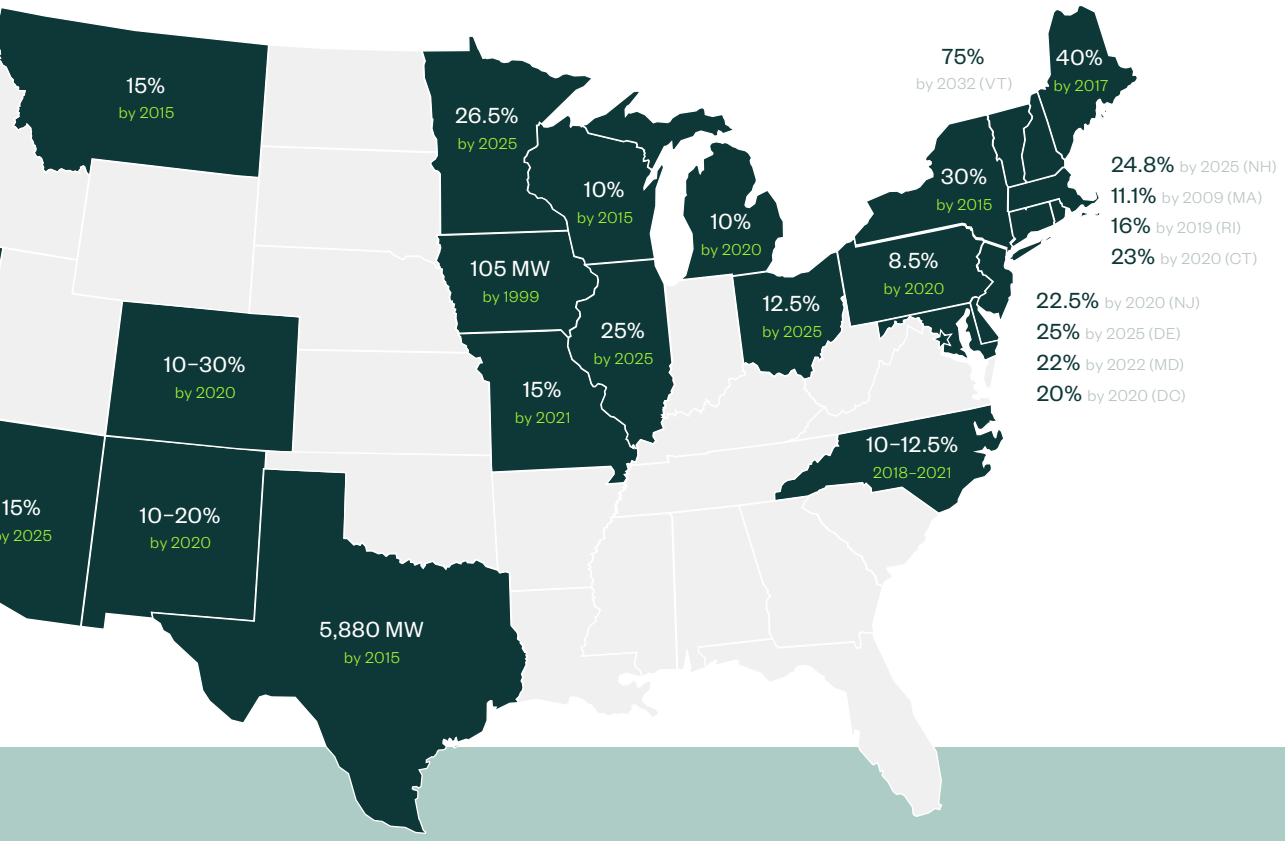
RPS policies apply to more than half of total US retail electricity sales.

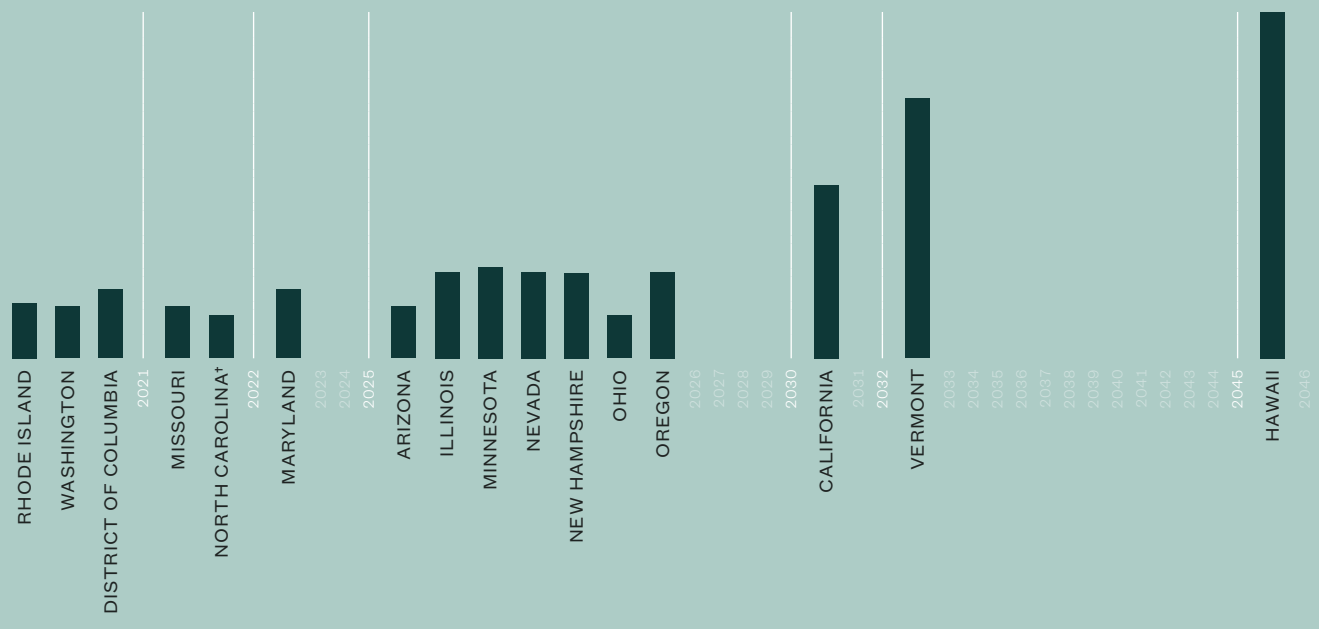


*CO-OPS †IOUS ‡MUNIS

Source: Berkeley Lab




15%
by 2015
26.5%
by 2025
10%
by 2015
10%
by 2020
105 MW
by 1999
25%
by 2025
15%
by 2021
10–30%
by 2020
10–20%
by 2020
5,880 MW
by 2015
12.5%
by 2025
8.5%
by 2020
30%
by 2015
75%
by 2032 (VT)
40%
by 2017
24.8% by 2025 (NH)
11.1% by 2009 (MA)
16% by 2019 (RI)
23% by 2020 (CT)
22.5% by 2020 (NJ)
25% by 2025 (DE)
22% by 2022 (MD)
20% by 2020 (DC)
10–12.5%
2018–2021


RHODE ISLAND
WASHINGTON
DISTRICT OF COLUMBIA
2021
MISSOURI
NORTH CAROLINA†
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MARYLAND
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MINNESOTA
NEVADA
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2045
HAWAII
2046

INVESTORS

Renewable energy has historically been sustained by investors that demand a return-based yield, which is often largely produced by tax incentives.

For projects with revenue-generating prospects that are contractually defined, identifying and claiming available tax incentives and containing costs are two of the most effective ways to increase return on investment (ROI). This is achieved by employing sophisticated accounting and tax strategies that allow investors to monetize all of the tax and cash attributes of a project and by structuring projects in ways that benefit the unique interests of each partner.

There are typically five types of stakeholders when it comes to renewable energy projects.

Developers & Sponsors

These are the originators of a project—often through greenfield investment. They gather the assets, land leases, supply agreements, leverage, engineering, procurement and construction contracts (EPCC), and the power purchase agreement (PPA).

MOTIVATIONS

These stakeholders either design, build, and sell (DBS) a project for an immediate cash return or design, build, and own (DBO) it—or at least a portion of it. They'll often DBO the cash equity portion of a project, keeping it in their generating portfolio and then enter into a partnership by selling off the tax equity piece to an entity that can absorb the incentives they can't.

Tax & Cash Equity Investors

Project sponsors are often cash equity investors; however, cash equity investors can also be passive investors that are interested in the project's cash flow. Tax equity investors are generally passive investors with the ability to absorb tax incentives. Increasingly, tax equity investors are large corporations with energy intensive infrastructure that have the ability to absorb tax incentives and are looking for socially responsible and sustainable ways to meet their energy demands.

MOTIVATIONS

Tax equity investors look for a reasonably secure ROI over a defined period, which is largely driven from tax incentives. Cash equity investors look for a secure ROI on predictable cash returns, since they typically don't have an appetite for tax incentives.

Suppliers & Contractors

These partners design and manufacture a project's underlying renewable energy equipment or construct renewable facilities.

MOTIVATIONS

Suppliers are interested in selling the underlying assets to the renewable energy project for a profit. Contractors and engineers design and construct the project's infrastructure for a fee.

Offtakers

Usually a regulated utility that purchases the generated electricity from a project under a PPA, offtakers may also be residential homeowners, commercial businesses, corporations, or government agencies. Corporations—typically energy-intensive businesses, such as ones with data centers—enter a virtual PPA to acquire energy at a set price for each megawatt-hour that a renewable facility puts on the grid, even though the energy may not go directly to the corporation.

MOTIVATIONS

Offtakers are looking for cost-effective and reliable sources of energy to meet the consumer's—their own or the public's—demands. Governments often require utilities to meet renewable energy portfolio standards. Many corporate offtakers are also looking to meet the energy demands of their business in a socially responsible way.

Regulators & Other Government Entities

These entities are either directly involved in approving projects and managing incentives programs or may have related interests. They represent the public interest in a project.

MOTIVATIONS

The public can either rally for or against a new project's perceived economic, environmental, and social impacts—and possesses significant influence in the regulatory process. Governments and regulators are motivated to have sustainable, emission-free energy and to be less reliant on fossil fuels.

Renewable energy projects can produce cash and tax benefits to investors through:

- Investment tax credits
- Production tax credits
- Accelerated depreciation
- Operating cash flows
- Other incentives, such as property tax rebates and abatements or sales tax exemptions

Project Structuring

Understanding the financial motivations of each project partner helps to establish the right financial modeling and monetization structure to benefit each party as much as possible. The more efficiently attributes can be used by investors, the more valuable a project is.

Taxpayers encounter substantial statutory hurdles when trying to claim these tax incentives, which can often result in the benefits being underused or unmonetized.

Most tax incentives are applied to reduce an entity's tax liability. In most cases, the tax incentives can only be absorbed by a taxpayer that has enough taxable income to absorb the credits and that's in a position to make large capital commitments.

Some investors may want only cash on cash returns, for example, while other taxpayers that have large tax liabilities may have an appetite for accelerated depreciation and tax credits. The ideal scenario is to structure a project so that the attributes—cash or tax incentives—can be steered to the investor that can use them most efficiently.

Three different types of partnership structures are commonly used to achieve this.

PARTNERSHIP STRUCTURES

Partnership Flip

Under a common variant of this structure, the tax equity investor may—for a period of time—share 99% of the accelerated depreciation and credits generated by the project and 5% of the cash, while the cash investor shares 1% of the tax attributes and 95% of the cash.

Once the tax equity investors achieve an agreed upon rate of return or investment balance or holds the asset for an agreed term, the investment flips. After the partnership flips, the tax equity investor may only share in the tax attributes at 5% and cash at 95%, and the cash equity investor may share in 95% of the tax attributes and 5% of cash.

Sale Leaseback

In this scenario, the sponsor records a tax gain from the sale of the asset to the tax equity investor. The tax equity investor becomes the lessor and claims accelerated depreciation and investment tax credits (ITCs) generated by the assets. The lessor also receives a lease payment from the sponsor investor, also known as the lessee.

The lessor may require a significant prepayment of the lease obligation, essentially requiring the lessee to return a portion of the proceeds received from the sale of the asset to the lessor. The lessee operates the assets, receiving cash and earnings from generating and selling electricity to the offtaker, and makes lease payments to the lessor.

Inverted Lease

Also known as a lease pass-through, under this structure the sponsor company is the lessor that assigns customer agreements and leases under the head lease to the lessee or master tenant. The lessor can either claim the credits generated by the assets or make a credit pass-through election, opting to pass the credit along to the master tenant.

The master tenant operates the assets and generates cash by selling electricity to its third-party customers. The master tenant is usually a partnership owned by a tax equity investor that has appetite for the credits passed through from the lessor to the master tenant and then allocated to the tax equity investor.

STRUCTURING CONSIDERATIONS

Along with each potential partnership structure there are a number of issues that must be carefully addressed, such as complex partnership provisions for special allocations, important tax elections, and safe harbor provisions in some cases.

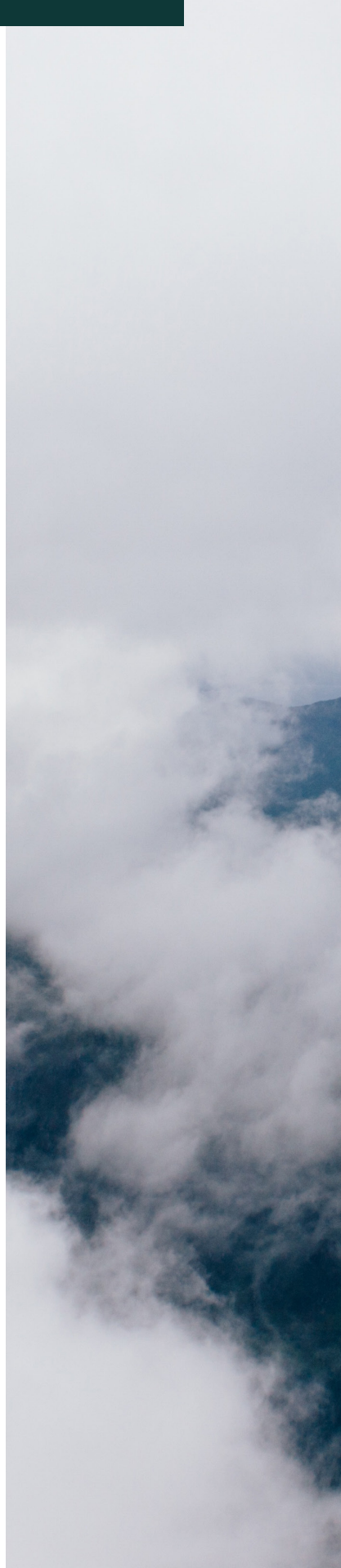
Each type of partnership structure requires:

CREDITS & INCENTIVES

Knowing which states, local tax authorities, and utilities offer incentives and understanding the characteristics of the incentives—such as transferability and required certifications and the tax implications of the incentives—can help investors increase the rate of return on the projects they invest in.

Federal ITCs and PTCs aren't generally transferrable, meaning the credit must be used by the taxpayer to which the credit enures; however, some states allow it. If a project generates a credit in a state where the taxpayer can't absorb it—because the taxpayer doesn't pay sufficient tax in that state—the taxpayer may be able to monetize the credit by selling it to a taxpayer that does have tax appetite in that area. Transferable credits are often exchanged between taxpayers at discounts.

Some states also offer credits that are refundable. Refundable credits can be monetized by an investor even if the investor has no other tax footprint within a particular state.



Sales & Use Tax

Most states provide exemptions for at least some of the following activities and expenses.

MANUFACTURING

The definition of *manufacturing* differs from state to state; however, many states do consider the production of electricity as a manufacturing activity.

SOLAR EQUIPMENT AND SYSTEMS

Sales of equipment and devices used to heat, cool, provide lighting, or that are used in power generation are examples of items that may qualify for solar equipment and systems exemptions.

POLLUTION CONTROL

Whether a pollution control activity is the predominant activity or subsystems at a facility, exemptions could apply to equipment and systems that exceed state or federal standards.

R&D

Research and development activities that may qualify for an exemption include modifying equipment to improve efficiency and testing products or pollutants to develop better processes.

CONSTRUCTION

The sales and use taxability of construction projects may depend on the type of contract that's entered into between the contractor and the customer. Exemptions may be lost when a contract is structured as a fixed-price instead of a time-and materials contract.

LEASED PROPERTY OR EQUIPMENT

Although some states provide sales and use tax exemptions for intercompany and related party transactions, those exemptions may have strict rules that dictate specifics of those transactions. The type of item being leased and the lease term can also impact the taxability of a lease transaction.

Property Tax Incentives

Property tax incentives for renewable energy installations come in many forms and provide exemptions, abatements, credits, or special assessments that mitigate or eliminate the increase in assessed value of a property.

Although there are many states with property tax policy as it relates to solar projects, there are fewer property tax incentives available for other renewable energy projects such as wind and geothermal.

More than 30 states have enacted policies addressing how solar projects should be treated for property tax purposes, for example. Some states have multiple policies that apply to different system configurations or ownership structures. These state policies take the form of either an exemption from property tax for the value added by a solar project or a special assessment that formalizes an approach to valuing a solar project.

Assessment appeals relative to the real or personal property of renewable energy projects are also an avenue of addressing annual property tax assessments. As state policy regarding the assessment of these projects differ, so will local jurisdiction policy differ as to assessment appeals.

The continuation of any property tax incentives must be reevaluated when any changes in ownership or control occur, because those actions could significantly impact and increase a property tax assessment.

Cost Segregation

Cost segregation enhances the depreciation deductions of properties in the first few years of ownership by looking at the details of the component costs of a project, then categorizing those costs in a way that's most advantageous to an investor.

It takes specialists in engineering, construction, cost accounting, and federal tax depreciation to maximize the opportunity and entails a detailed review of cost records, invoices, and construction drawings to identify assets and allocation of costs to those assets.

A cost segregation study also involves a compliance component with varying recovery periods that's particularly significant for the following assets and expenses:

- Credit eligible and ineligible tangible energy property
- Intangible property, such as PPAs and interconnection agreements
- Transmission property
- Land improvements
- Network costs
- O&M buildings
- Leases

Depreciation

Claiming accelerated depreciation and bonus depreciation or both is a time value of money benefit that adds value to a project. A taxpayer that can absorb the accelerated deductions to offset tax liability will value a project higher than a taxpayer that can't absorb the losses at the same rate.

Often, the largest component cost of a renewable energy project can be recovered over five years using the double declining balance method under modified accelerated cost recovery (MACRS).

Bonus depreciation—where a taxpayer might be able to recover 50% of the asset basis in the first year the asset is placed in service—may be available for certain asset categories, including eligible five-year energy property.

BONUS DEPRECIATION RATES
BY YEAR PROPERTY IS PLACED IN SERVICE

Phaseouts

Section 45

The Section 45 credit—often referred to as the renewable energy production tax credit or PTC—is based on a taxpayer's production of electricity from qualified renewable energy property and sold to an unrelated party. Eligible energy property generally includes wind but may apply to other renewable energy resources if the construction of the facility began before 2017.

The credit is generally 1.5 cents—indexed for inflation—per kilowatt-hour produced by the taxpayer and sold to an unrelated person. It's usually available for a 10-year period beginning on the date the qualifying facility is placed in service.

For wind property in 2016, the indexed PTC rate is 2.3 cents per kilowatt-hour. For 2017, the indexed rate is 2.4 cents per kilowatt-hour.

In partnership transactions, PTCs are allocated to taxpayer investors in proportion to the amount of gross income from energy sales that's allocated to investors. For wind projects, Revenue Procedure 2007-65 provides a safe harbor for specially allocating tax attributes to investors in partnership flip transactions.

For wind energy properties, the PTC rate is subject to a phase out if construction begins before 2020.

Under a special election, taxpayers can elect to have PTC eligible property treated as energy property subject to the 30% investment tax credit (ITC) under Section 48, but a taxpayer can't claim both.

For wind energy facilities beginning construction before 2020, the 30% ITC is phased out similar to the PTC phaseout schedule. If a taxpayer elects to treat the facility as energy property, for example, and construction begins in 2017, the taxpayer may claim a 24% ITC—a 20% reduction of the 30% ITC rate.

Section 48

The Section 48 energy credit is generally a 30% credit on eligible solar equipment that uses solar energy to generate electricity and is placed in service by the taxpayer. The original use of the eligible property—whether acquired, constructed, reconstructed, or erected by the taxpayer—must start with the taxpayer.

For solar energy properties, the ITC rate is subject to a phase out if the construction begins before 2022.

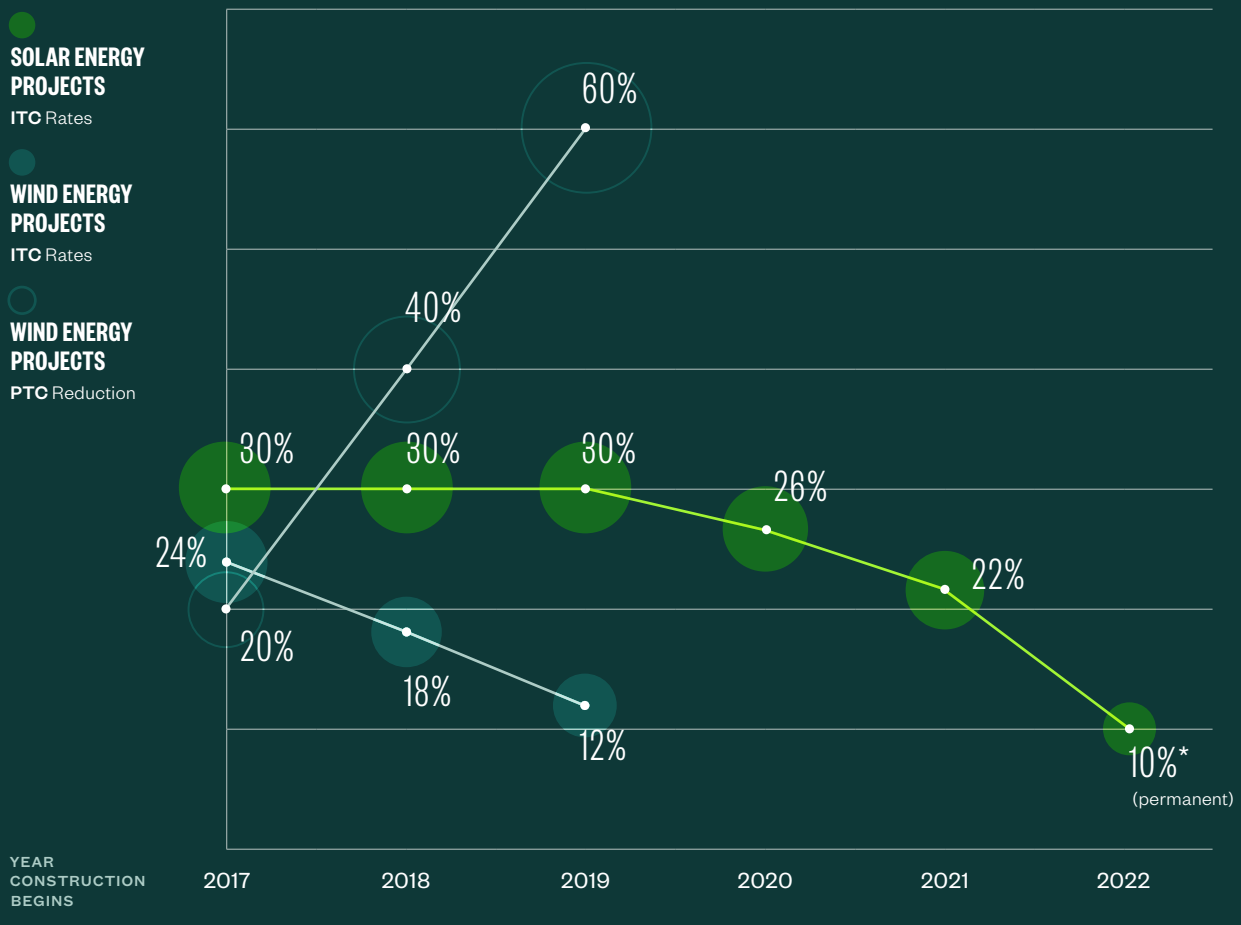
ITC-eligible energy property generally includes solar equipment that's tangible personal property integral to the proper functioning of the qualifying facility, such as:

- PV panels
- Inverters
- Storage devices
- Roadways
- Fencing

The basis of eligible solar equipment is reduced by 50% of the credit claimed on such equipment. Accelerated depreciation and bonus depreciation is claimed on the reduced basis.

If ITC property is disposed of or ceases to be ITC property before the end of the five-year recapture period, the ITC taken for all earlier years is recaptured. If a partner that claimed the credit disposes of his interest in the partnership or reduces his interest in the partnership by more than one-third during the five-year recapture period, the ITC may be subject to recapture as well.

PHASEOUT SCHEDULE: SECTION 45 & SECTION 48 CREDITS



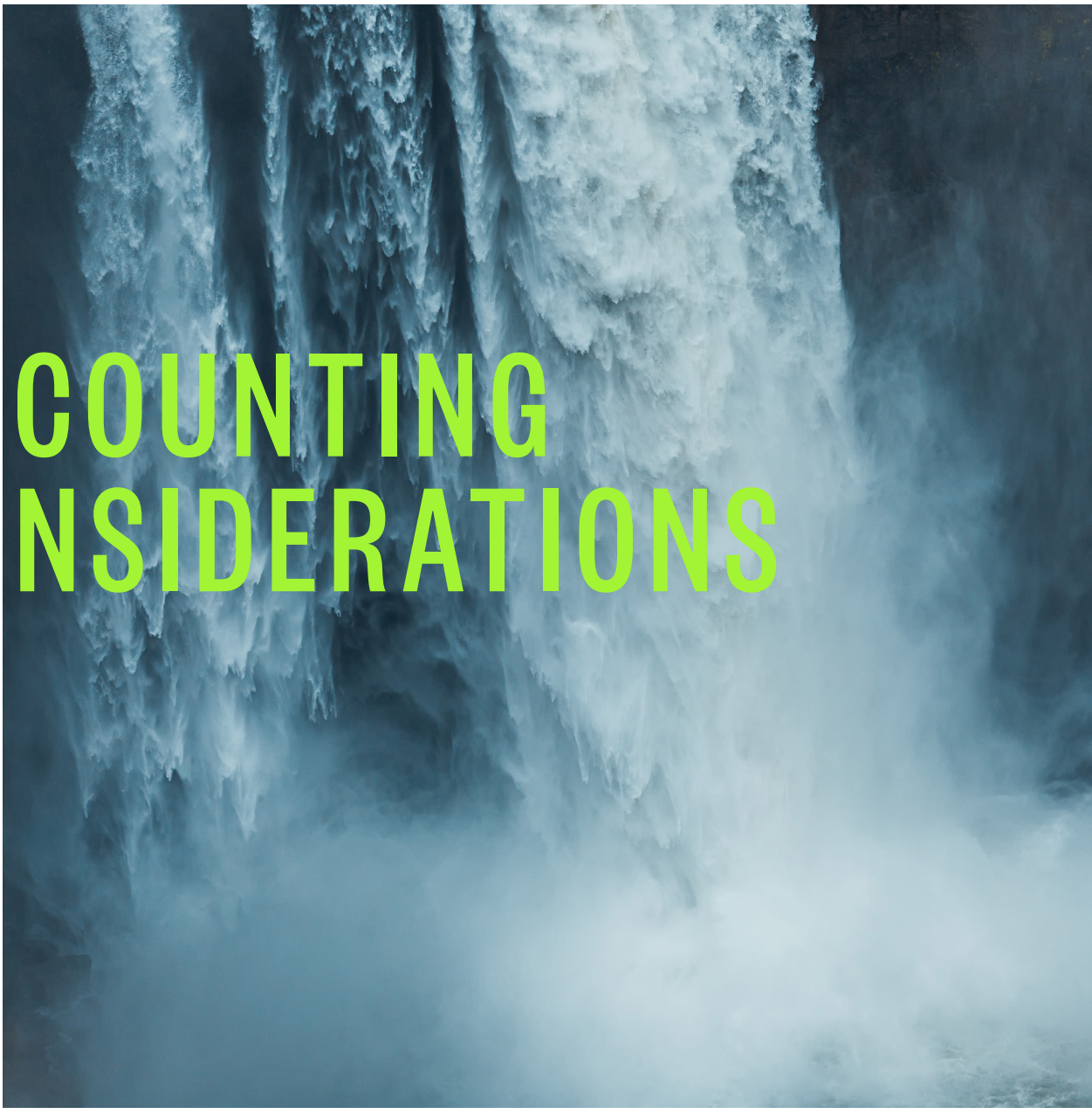
* If a project that commences prior to 2022 isn't completed by 2023, the ITC is 10%.

ITC RECAPTURE PERCENTAGES FOR RENEWABLE ENERGY PROPERTIES

Year property is sold or loses ITC status		Percentage recaptured
	1	100%
	2	80%
	3	60%
	4	40%
	5	20%
	6+	–

SOLAR ITC SAFE HARBOR

The safe harbor protection provided in Revenue Procedure 2007-65 for wind energy partnership flip structures doesn't extend to solar equipment on which ITC is claimed, but many solar ITC structures are flip partnerships and have been structured similarly.



ACCOUNTING CONSIDERATIONS

The business activities of a renewable energy project are often limited to energy production, so the reporting may be less complex than for a full operating company. Nonetheless, several technical accounting matters often require detailed analysis.

Reporting Equity—HLBV

Renewable energy projects are typically structured as partnerships where the operating agreement governs the allocation of income and loss and credits. An operating agreement may require income and loss sharing ratios that vary over the life of the project. Often, the equity investors in a project will need to apply the equity method to their investments and the question that arises is how does an investor account for its ownership in a project when the interest in the project and its attributes—income and loss—is dynamic over the life of the project. In the case of renewable energy projects where an investor's interest in the investment varies, investors usually require that the hypothetical liquidation at book value (HLBV) method be used to allocate the net assets of a project to the investors at a financial reporting date.

In a typical HLBV model, the net assets of a project entity are allocated to the investors based on their respective capital balances as determined under the liquidation provisions of the operating agreement. Following HLBV accounting, the project assets are deemed sold at their book carrying values under a hypothetical sale scenario, liabilities are settled, and the remaining cash is distributed to the partners in liquidation of their interest. How the liquidating cash is distributed, referred to as the liquidation waterfall, is determined based on the provisions in the operating agreement. In some cases, the standalone financial statements of a renewable energy project include the HLBV allocation, while other times the analysis is maintained separately.

Energy Sale Contracts—PPAs

Historically, most renewable energy projects enter into a long-term PPA where the offtaker—in most cases, a public utility—agrees to take output from the project for a fixed or scheduled price. More recently, so-called virtual PPAs are used when corporate or financial offtakers agree to pay for energy output.

The reporting of energy sales often is simple and, most commonly, revenue is booked based on energy generated and contracted prices. Regardless, it's prudent to assess energy sale contracts for other complexities that can arise.

A typical analysis looks at whether an energy contract:

- Meets the financial reporting definition of a *derivative instrument* and, if so, whether the so-called normal exception can be applied
- Should be accounted for as a lease—of the project asset to the offtaker—and, if so, the impact on financial reporting
- Is recorded based on energy generated and the contracted prices

A closely related item is accounting for energy-related attributes, such as renewable energy credits (RECs). In some cases, all RECs are sold with the energy to the offtaker while in other cases the project keeps RECs and can sell them in separately negotiated transactions.

Leases

In 2016, the Financial Accounting Standards board (FASB) issued new US generally accepted accounting principles (GAAP) that significantly impact accounting for revenues and for leases. For renewable projects, there may be unique interplay between the standards and, in any case, the impact of the new guidance must be assessed.

Renewable energy projects typically have at least two significant lease accounting matters to address. One is related to the energy sale agreements and the other is related to the land leases that are usually in place as the project assets are often installed on leased land. The reporting for land leases by a renewable energy project will require the same technical analysis that would be required by any operating company.

Plant Assets

For project developers, the guidance for project cost capitalization is similar to what applies to a significant self-constructed asset. For example, solar or wind turbine supply agreements can be complex with multiple facets, including potential extended warranty payments and contingent payments based on operating performance.

Often, developers acquire project rights and then go on to construct the operating asset group. For those situations, it's prudent to conduct analysis of the acquisition of the project rights as an asset purchase or, possibly, a business and an allocation of the acquired rights.

Project developers often conclude there's a requirement for the project to restore the property to its original condition when the lease is terminated. In many cases, this creates an asset retirement obligation to the project and an asset that's built into the fixed asset basis.

An expected present value technique is usually the only appropriate technique to estimate the liability for an asset retirement obligation.

Debt

Many renewable energy projects are debt-financed. This may result in a project holding financial derivatives such as interest rate swaps or caps. The reporting for these elements by a renewable energy project will require the same technical analysis that would be required by any operating company.

Tax Credits

These are usually accounted for in the financial statements of the investor that applies the credit against its tax liability. There are two acceptable methods for accounting for ITCs and PTCs.

TAX BENEFIT METHOD

The taxpayer treats the tax credit as a permanent tax provision benefit in the period in which the credit is earned.

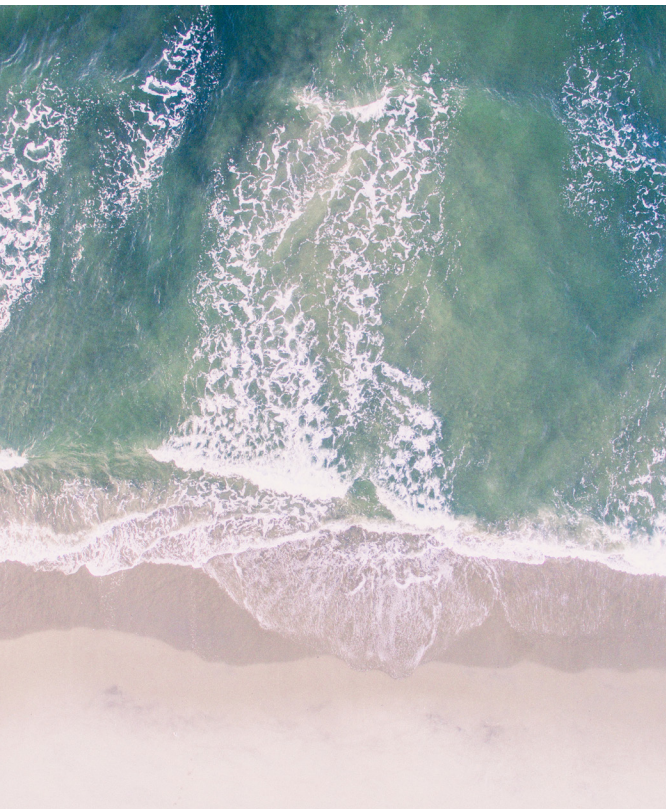
GRANT METHOD

Also known as the deferred method, the benefit of the tax credit is taken through earnings before income taxes (EBIT) or earnings before income taxes and depreciation (EBITDA), rather than through income taxes.

Income Tax

Partners that are subject to income taxes must account for income taxes under FASB Accounting Standards Codification® (ASC) Topic 740.

Taxpayers need to record deferred taxes for any differences between the book and tax bases in the assets or investments resulting from the ITC haircut, which requires the basis of ITC assets to be reduced by 50% of the credit claimed, and accelerated depreciation or both.



Partnership Flips

A question that often arises around partnership flip structures is how to account for basis differences where a taxpayer may claim 99% of the partnership's tax attributes for a certain period of time followed by a *flip* and a period of time where the taxpayer claims 5% of the partnership's tax attributes.

Generally, taxpayers should track the basis differences in the investment account, rather than look through the partnership and apply the current sharing ratios to the partnership's underlying asset's basis differences.

By tracking the book investment account and the tax investment account, a taxpayer can account for the basis differences even through variations in ownership of the partnership's underlying assets.

The same concept applies when a taxpayer may be required to consolidate a variable interest entity and record a noncontrolling interest. In such cases, the taxpayer will generally track the net investment basis between book and tax and record deferred taxes for the difference.

For more information on how to account for your next renewable energy project investment or how to effectively claim tax credits and incentives for it, contact your Moss Adams professional.

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About Our Clean Technology Practice

With a rare blend of technical excellence, creativity, and social responsibility, Moss Adams helps clean technology companies inspire the world to discover and claim the future. Whether your business is in the development of renewable energy resources or other environmentally friendly technologies, your engagement team shares your entrepreneurial ethos and has the industry-specific experience to help your company concentrate on what really matters: creating a cleaner, more sustainable future.

We've been serving the needs of clean technology and renewable energy companies for decades, helping them to take advantage of federal and state incentives and tax credits, wade through existing regulations, and develop effective strategies for the future.

WHO WE SERVE

With extraordinary potential in the renewable energy industry, our professionals help guide wind, solar, landfill, gas, biomass, hydropower, and geothermal project stakeholders, including:

- Developers
- Cash and tax equity investors
- Contractors, engineers, and manufacturers
- Independent power producers and utilities

RENEWABLE ENERGY SERVICES

In addition to traditional assurance and tax services, such as state and local and property taxes, we offer a full spectrum of consulting services for renewable energy investments and projects:

- Mergers and acquisitions
- Transactions planning
- Internal control reviews
- Credits and incentives, including R&D, and credit monetization and exchanges
- Valuations
- Cost segregation studies

As you explore your next opportunity, we invite you to discover how Moss Adams can help you thrive.

About Moss Adams

With more than 2,600 professionals across 20-plus locations in the West and beyond, Moss Adams provides the world's most innovative companies with specialized accounting, consulting, and wealth management services to help them embrace emerging opportunity. Discover how Moss Adams is bringing more West to business.