

Technical Line

Accounting considerations for transactions and arrangements related to climate change initiatives

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What you need to know

- ▶ Entities considering transactions and arrangements that relate to climate change initiatives need to be aware of the potential accounting and financial reporting implications.
- ▶ Entities need to keep in mind that the accounting standards may not directly address specific transactions or arrangements. If that's the case, entities will need to first determine which existing standard is most applicable or, in the absence of an applicable standard, an appropriate analogy.
- ▶ The FASB has added a project to its standard-setting agenda on the accounting for environmental credit programs and a research project on financial instruments with ESG-linked features to its agenda. Entities should monitor developments.
- ▶ Entities should also be aware that the SEC issued a proposal that would require climate-related disclosures, including disclosures in an audited note to the annual financial statements filed with the SEC (e.g., Form 10-K).

Overview

Many entities across industries are considering or entering into transactions and arrangements related to climate change initiatives, often in response to stakeholders' increased focus on environmental, social and governance (ESG) matters. For example, some airlines have invested in projects to offset carbon emissions, and many automotive manufacturers have made commitments to be carbon neutral by a certain date.

Due to the increase in these types of transactions and arrangements, the Financial Accounting Standards Board (FASB) added a project to its technical agenda on the accounting for environmental credits, which include emission allowances, renewable energy certificates, renewable identification numbers and carbon offsets. The scope of the project includes both purchasers of and entities whose activities generate environmental credits that are used voluntarily or to comply with government regulations. The FASB also has a project on its research agenda on the accounting for financial instruments with ESG-linked features that may be added to the standard-setting agenda in the coming months. Entities should monitor developments at the FASB and at the Securities and Exchange Commission (SEC), which is expected to finalize new climate-related reporting rules by the end of the year.

This publication highlights certain accounting implications that entities considering or entering into transactions or arrangements related to climate change initiatives may need to consider. The accounting for these arrangements can often be complex and require judgment. Because the FASB has not yet made any changes to the accounting standards, entities may need to consider which existing US GAAP standard(s) to apply by analogy to account for their arrangements. We expect to update this publication periodically as the landscape evolves.

Entities pursuing climate-related initiatives also should consider the broader accounting implications addressed in the FASB educational paper, *Intersection of Environmental, Social, and Governance Matters with Financial Accounting Standards*, and the Center for Audit Quality white paper, *Audited Financial Statements and Climate-Related Risk Considerations*. These papers address topics such as the impact of an entity's carbon reduction or neutrality commitments on management's evaluation of impairment or the useful lives of assets.

Carbon reduction and neutrality programs

Greenhouse gas (GHG) emissions are categorized in the international Greenhouse Gas Protocol¹ as Scope 1 (direct from sources that are owned or controlled by an entity), Scope 2 (resulting from the generation of electricity, heat or steam purchased by an entity) or Scope 3 (resulting from sources not owned or controlled by an entity but that exist in an entity's value chain). As entities make commitments to reduce their carbon footprint (e.g., becoming "carbon neutral"),² they will likely implement multiple strategies. We describe some accounting considerations below.

Emission allowance compliance programs ('cap-and-trade')

An emission allowance in a cap-and-trade program represents a tradable instrument certified by a regulatory body that allows its holder to emit a set amount of carbon dioxide or other GHG. In a typical cap-and-trade program, the supply of emission allowances is limited by the mandated "cap" on GHG emissions set by legislation or regulation to make sure that the environmental goal is met. A regulator distributes the emission allowances at no cost, sells the allowances in auctions or both. An entity that emits more emissions than its allowed limits (after considering the allowances it currently holds) must buy allowances in the market or pay a penalty. The tradable allowances provide flexibility for the emitter to set its own compliance timeline (e.g., an entity may purchase credits until it invests in emissions reduction activities, such as modifying or replacing less efficient equipment). Cap-and-trade programs are common in the power and utility, oil and gas, and automotive industries and are run by states or other government bodies.

Key accounting considerations for cap-and-trade programs

US GAAP does not specifically address the accounting for emission allowances (or other carbon reduction programs). As a result, entities use different approaches. When the FASB added the project on environmental credits to its agenda,³ the FASB staff noted this diversity in practice. For example, the FASB staff indicated that tradable emission allowances have often been recognized as assets and classified as either intangible assets or inventory.

Entities likely will need to use judgment to determine the appropriate accounting for strategies they use in their carbon reduction and neutrality programs.

We understand that in practice, under the intangible asset accounting model, entities generally initially measure emission allowances they receive from a regulator or acquire in the open market at cost (i.e., the transaction price they pay). Under that approach, the cost of allowances entities receive from a regulator would be zero.

The FASB staff noted that there is diversity in practice regarding the subsequent accounting for allowances under the intangible asset accounting model. That is, some entities conclude that the economic benefits of their emission allowances do not diminish until they are consumed, and they, therefore, do not amortize any cost recognized. Instead, they expense the cost of their emission allowances upon use (e.g., when the allowance is submitted to the regulator). However, other entities amortize the recorded cost of their allowances over the compliance period. In both cases, the emission allowances are subject to evaluation for impairment.

Under the inventory accounting model, we understand that some entities measure emission allowances received from a regulator or acquired in the open market at cost determined using a weighted average cost or first-in, first-out (FIFO) method. Entities expense the weighted average or FIFO cost of the allowance to cost of sales upon use. The emission allowances would also be subject to the lower of cost or net realizable value approach to impairment.

Because entities in a cap-and-trade program are contractually and/or legally required to obtain additional emission allowances or incur penalties when their GHG emissions exceed a cap, they should carefully consider whether and when to recognize a liability. For example, we understand in certain circumstances that some entities consider a liability to exist when the actual level of their emissions for a given period exceeds the emission allowances they hold.

Renewable energy certificates

Renewable energy certificates (RECs) are tradable certificates that are issued (e.g., by a registry) when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource (e.g., solar, wind, hydroelectric). RECs may be used by utilities to meet compliance requirements or by other entities to demonstrate that they have used or supported power produced by renewable energy sources, which may reduce their reported Scope 2 emissions from their electricity usage. Each REC has a unique identification number, so the climate-related benefits can only be claimed by the holder that retires the REC with the associated registry.

Entities may obtain RECs by investing in projects that generate RECs, or they may purchase RECs from a third party that generates RECs or from another holder in an open market. Entities may also use power purchase agreements (PPAs) or virtual power purchase agreements (VPPAs) to obtain RECs. See the *Power purchase agreements and virtual power purchase agreements* section below.

Key accounting considerations for RECs

In general, the accounting considerations for RECs held by entities subject to compliance requirements are similar to those for emission allowances held by entities in cap-and-trade programs described above.

Entities that purchase RECs voluntarily need to consider the facts and circumstances of the arrangements to determine what accounting guidance to apply. The FASB staff has observed diversity in practice in the accounting for RECs by holders, and there may be more than one acceptable approach in the absence of standard setting.

Entities that immediately retire purchased RECs generally expense the cost of the REC when they acquire it since the REC has no future benefit. But some entities that plan to retire a REC at a future date also expense the cost of the REC when they acquire it because they believe

the REC lacks utility beyond their intent to claim any climate-related benefits. Other entities that do not immediately retire the REC when they receive it initially recognize the REC as an asset at cost if the REC is legally enforceable and tradeable (e.g., can be sold or transferred). They then expense the cost of the REC when it is retired, similar to the accounting for emission allowances described above.

Entities that obtain RECs from investments in other entities or produce energy that generates RECs will need to consider the facts and circumstances of the arrangements to determine what accounting guidance to apply.

Contracts to acquire a fixed number of RECs in the future may be subject to derivative accounting. A derivative is a financial instrument or other contract whose cash flows or fair value fluctuates based on the changes in one or more underlyings (e.g., the change in the value of a REC). The contract also must contain one or more notional amounts or payment provisions (that together with the change in the underlying, determine the amount of settlement required), require no (or little) initial net investment and allow for net settlement.

The key accounting consideration for these contracts will likely be the determination of whether RECs are considered readily convertible to cash and, thus, meet the net settlement criterion in Accounting Standards Codification (ASC) 815, *Derivatives and Hedging*. To be readily convertible to cash, the asset that's gross physically settled (i.e., the REC) must have interchangeable (fungible) units and quoted prices available in an active market that can rapidly absorb the quantity held by the entity without significantly affecting the price. That is, the asset must be actively traded in a liquid market. As noted above, RECs have different characteristics (e.g., date and location generated) and are not all the same.

Significant judgment may be required to determine whether RECs are readily convertible to cash. While markets for RECs have developed and published prices for certain RECs are readily available, we have not yet observed an active, liquid market in which an individual REC could be converted to cash in a relatively short time period. However, markets are developing rapidly, so the accounting for these contracts could be affected. Companies with these arrangements should monitor the markets.

Carbon offset units

Entities may seek to offset some of their emissions by purchasing carbon offset units generated by certain programs. For example, an airline may purchase carbon offset units created as a result of reforestation projects, or a manufacturer may purchase carbon offset units created as a result of projects that capture and sequester carbon emissions. Offsets are often used to help an entity achieve a self-imposed carbon reduction goal rather than a government-imposed requirement.

Carbon offset units are typically measured in tons of carbon dioxide equivalents and can be used to offset an equivalent amount of carbon dioxide emitted by the entity (i.e., Scope 1, Scope 2 or Scope 3 emissions).

Verification of a carbon offset unit is an important part of any carbon offset program, regardless of the type of program that generates it. Voluntary carbon offset program certification organizations (e.g., nongovernmental organizations) approve carbon offset programs based on their own standards and operate registry systems that are designed to verify, issue, facilitate the transfer of, and record retired carbon offsets.

Key accounting considerations for carbon offset programs

The accounting considerations for entities that purchase carbon offset units or obtain them from investments in other entities that generate carbon offset units are similar to those for entities that purchase RECs or obtain them from investments as described above. Entities that purchase carbon offset units or obtain them from investments will need to consider the facts and circumstances of the arrangements to determine the appropriate accounting guidance to apply.

How we see it

Because US GAAP currently doesn't specifically address the accounting for emission allowances, RECs or carbon offsets, entities should carefully consider the facts and circumstances of each of their arrangements to identify an appropriate accounting model. The selected method should be applied consistently and disclosed, if the amounts recorded are material.

SEC registrants should also consider their disclosures about material purchases or sales of carbon offsets or carbon credits. In its reviews of company filings, the SEC staff has asked registrants to disclose more information about material purchases or sales of these offsets and credits and their effects on the financial statements.

Developing new technology

New technology often helps entities reach their carbon reduction goals. For example, the electrification of powertrains has allowed automotive entities to meet increasingly more stringent emission allowances, and the technology used by oil refineries to capture carbon emissions and sequester them underground has created new ways for entities to reduce their own emissions or generate carbon offsets.

Key accounting considerations for developing new technology

Entities need to consider the guidance in ASC 730, *Research and Development*, to determine the appropriate accounting for the development of new technology. Generally, research and development (R&D) costs are expensed as incurred. However, materials, equipment, facilities that are acquired or constructed for R&D activities, and intangible assets purchased from others for R&D activities are capitalized and depreciated/amortized if they have alternative future uses (in R&D activities or otherwise).

Entities also should consider whether any software related to the development of new technology is for use in R&D activities. Software purchased or leased for use in R&D activities is capitalized as described above. However, software developed internally for use in R&D activities is expensed as incurred, as the alternative future use test does not apply to internally developed software.

Two or more entities may also work together to develop new technologies or commercialize existing intellectual property, among other activities. Such arrangements make take a variety of forms, including creating a separate legal entity (e.g., a joint venture) or establishing a collaborative contractual relationship without forming a separate legal entity. Such arrangements should be evaluated carefully to determine the appropriate accounting guidance that applies (e.g., ASC 810, *Consolidation*, ASC 323, *Investments – Equity Method and Joint Ventures*, ASC 808, *Collaborative Arrangements*).

An entity also may receive government assistance to help it develop new technology. See the section *Investment tax credits and government grants* below for a discussion of the accounting for and disclosures about government assistance.

Investment tax credits and government grants

Government agencies, both domestic and foreign, have established or may establish programs to promote or guide the development of climate change initiatives by providing financial assistance to businesses. The form and type of government assistance received by entities vary depending on the government program under which the funds were or are received, with each program having differing terms. The accounting and financial reporting implications (e.g., timing of recognition and financial statement presentation) can vary significantly, depending on, for example, whether the assistance is considered a loan, a grant, a payment for goods or services, a contribution or an income tax credit.

If an entity determines that the government assistance does not fall within the scope of ASC 740, *Income Taxes*, (e.g., it is not considered an investment tax credit (ITC)), ASC 470, *Debt*, or ASC 606, *Revenue from Contracts with Customers*, the entity should consider whether the government assistance is a government grant (i.e., a credit received from a government entity without regard to taxable income).

Key accounting considerations for investment tax credits

Entities need to consider whether the receipt of government assistance falls within the scope of accounting for income taxes in ASC 740. Legislation for government assistance programs may use terms such as “grant” or “credit” to describe the form of the assistance. However, careful evaluation of the substance of the enacted legislation and whether a credit is required to be recovered through taxable income is necessary to determine the applicable accounting guidance.

We generally believe that an entity that receives government assistance in the form of an income tax credit should account for it in accordance with ASC 740. Government assistance in the form of a credit that is not based on taxable income or that provides a means by which a credit can be received without regard to taxable income would generally be considered a government grant and would not be in the scope of ASC 740.

ASC 740 provides guidance on the accounting for ITCs. Once an entity determines that a tax credit qualifies as an ITC, the ITC is reflected in the financial statements to the extent that it has been used as an offset against income taxes that would otherwise be currently payable or to the extent its benefit is recognizable under the provisions of ASC 740 (i.e., qualifies as a deferred tax asset).

The following two methods for accounting for ITCs are acceptable:

- ▶ **Deferral method** – Under ASC 740-10-25-45 through 46, the ITC is reflected in income over the productive life of the acquired property. The deferral of the ITC is presented either (1) as a reduction in the carrying amount of the related asset, which will reduce future depreciation of that asset, or (2) in a separate deferral account and reflected in income tax expense over the productive life of the acquired property.
- ▶ **Flow-through method** – The ITC is treated as a reduction of federal income taxes in the year in which the credit arises (and should be recognized only after the taxpayer has no continuing obligation).

While this guidance generally applies to tax credits resulting from the acquisition of depreciable property, we believe it also may be applied to tax credits resulting from investments in certain partnerships or other pass-through entities (referred to as project entities) that acquire or construct assets that generate ITCs and pass those credits to their investors.⁴

The accounting and financial reporting implications for government assistance depends on whether the assistance is considered a loan, a grant, a payment for goods or services, a contribution or an income tax credit.

We believe that an investor in a project entity that accounts for its investment using the equity method could analogize to, and apply, the ITC guidance in ASC 740-10-25-45 through 46 and ASC 740-10-45-26 through 28 to account for the tax benefits from the ITCs. That is, the investor could apply a method similar to the deferral or flow-through methods described in that guidance to account for the tax credits in its financial statements.

However, there may be other acceptable methods an investor can apply to account for the tax credits that are passed through from the project entity. The investor should carefully analyze its arrangement to determine when the tax credits are generated and whether there are any recapture provisions attached to them.

Key accounting considerations for government grants

There is no US GAAP accounting guidance for for-profit business entities that receive government grants that are not in the form of a loan, an income tax credit or revenue from a contract with a customer. Therefore, business entities that receive government grants will need to determine the appropriate accounting treatment for them by analogizing to other guidance.

We generally believe that business entities should account for government assistance that is not in the form of a loan, an income tax credit or revenue from a contract with a customer by analogy to International Accounting Standard (IAS) 20 *Accounting for Government Grants and Disclosure of Government Assistance* in the International Financial Reporting Standards. However, analogies to other guidance, such as ASC 958-605, *Not-for-Profit Entities – Revenue Recognition – Contributions*, for contributions received by not-for-profit entities or ASC 450-30, *Contingencies – Gain Contingencies*, for gain contingencies, also may be appropriate. A not-for-profit entity that receives a government grant should apply ASC 958-605.

In addition, business entities will be required to make annual disclosures about transactions with a government (including government assistance) they account for by analogizing to a grant or contribution accounting model (e.g., IAS 20, ASC 958-605) after the adoption of ASC 832, *Government Assistance*, which is effective for financial statements issued for annual periods beginning after 15 December 2021.

Transactions with embedded features

Financial instruments with ESG-linked features

An entity may issue or hold financial instruments with ESG-linked features. One common instrument is a sustainability-linked bond, which is typically similar in structure to a traditional bond but may reward or penalize a borrower for meeting or failing to meet predetermined sustainability metrics. For example, a five-year bond may have an interest rate step-up feature that is triggered if the issuer does not attain an agreed-upon reduction in GHG emissions in the first three years.

Entities may issue these types of bonds for a variety of reasons, including to finance their climate-related initiatives or to position themselves as good corporate citizens. For example, some investors may focus on or prioritize investing with entities with viable ESG and related climate change initiatives.

Key accounting considerations for financial instruments with ESG-linked features

Issuers should consider whether a financial instrument with ESG-linked features (e.g., a sustainability-linked bond) contains an embedded feature that meets the definition of a derivative and potentially requires bifurcation under ASC 815.

ASC 815 defines a derivative as a financial instrument or other contract with all of the following characteristics:

- ▶ The instrument has both (1) one or more underlyings and (2) one or more notional amounts or payment provisions or both.
- ▶ The instrument requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that would be expected to have a similar response to changes in market factors.
- ▶ The instrument has net settlement provisions through (1) implicit or explicit terms, (2) a market mechanism outside the contract or (3) delivery of an asset that, because the delivered asset is readily convertible to cash, puts the recipient in a position not substantially different from net settlement (a gross settlement that is economically equivalent to a net settlement).

The triggering event (i.e., the borrower meeting or failing to meet predetermined sustainability metrics) that results in an increase or decrease in interest payments is generally considered the underlying. Therefore, if the remaining criteria in the definition of a derivative under ASC 815 are met (i.e., the feature includes a notional or payment provision, requires no or little initial net investment, and can be net settled), the feature would represent a derivative embedded in the financial instrument (e.g., the sustainability-linked bond).

If an ESG-linked feature meets the definition of a derivative, the issuer must then determine whether the ESG-linked feature should be bifurcated and accounted for separately at its fair value. An embedded derivative would be bifurcated from the host contract and accounted for separately as a derivative under ASC 815 if (1) the economic characteristics and risks of the embedded derivative are not clearly and closely related to those of the host contract, (2) the hybrid instrument (i.e., the host contract with embedded derivatives) is not measured at fair value and (3) a separate instrument with the same terms as the embedded derivative would be a derivative on a standalone basis (i.e., no scope exception to derivative accounting would apply).

How we see it

While the facts and circumstances of each instrument need to be considered, an ESG feature in a sustainability-linked bond often requires bifurcation because its economic characteristics and risks are not clearly and closely related to the characteristics and risks of the bond host contract (i.e., interest rate risk and the credit risk of the borrower).

In response to questions and concerns raised by constituents about the need to bifurcate ESG-linked features in financial instruments, the FASB added a research project to consider the accounting and disclosure requirements for these features.

During a recent FASB meeting, the FASB staff said that, based on its initial research, both users and preparers of the financial statements generally believe that accounting for and measuring ESG-linked features in financial instruments as derivatives at fair value would not provide decision-useful information to users of the financial statements.

To date, the FASB has not made any decisions. Interested parties should monitor developments.

Investors that hold sustainability-linked bonds (that meet the definition of a security) also need to consider the classification and measurement guidance in ASC 320, *Investments – Debt Securities*. Upon acquisition of a sustainability-linked bond, an investor must classify it in one of three categories:

- ▶ Trading – debt securities bought and held primarily to be sold in the near term
- ▶ Held-to-maturity – debt securities for which management has both the positive intent and ability to hold until the security matures
- ▶ Available-for-sale – the residual category for debt securities not classified as held-to-maturity or trading

The classification of a security determines the subsequent measurement basis (i.e., amortized cost or fair value) of the security and how it is presented and disclosed in the financial statements. For example, sustainability-linked bonds classified as trading or available-for-sale are measured on the balance sheet at fair value with changes in fair value recorded in earnings for trading securities and other comprehensive income (OCI) for available-for-sale securities, while those classified as held-to-maturity are measured at amortized cost.

For sustainability-linked bonds that are not classified as trading securities, an investor would need to evaluate whether the bond contains an embedded derivative, similar to the issuer's evaluation described above.

An investor should carefully consider its future plans or opportunities when classifying investments in sustainability-linked bonds. For example, the investor should consider the possibility that it might decide to sell some of its sustainability-linked bonds to take advantage of potential future business or investment opportunities.

Power purchase agreements and virtual power purchase agreements

A power purchase agreement, or PPA, is a long-term contract generally between a consumer of power and a producer of power. These contracts can take many forms (e.g., the pricing may be fixed or variable, the power may be generated by renewable or traditional sources). This discussion addresses contracts for power generated from renewable sources.

In a typical PPA, a purchaser takes delivery of the produced power at a defined point on the grid. This may allow the purchaser to schedule the purchase of renewable energy at a defined price and location to establish a percentage of its power that is renewable.

Another form of contract, commonly referred to as a virtual power purchase agreement, or VPPA, is similar to a PPA except that it doesn't involve the physical delivery of power. Rather, a VPPA is a contract in which the "purchaser" receives RECs and settles the VPPA for the difference between the fixed price established in the contract and the market price of power. In a VPPA, the purchaser makes a payment to the power producer if the market price is lower than the fixed price set in the contract or receives a payment from the power producer if the market price exceeds the fixed price. The purpose of the VPPA is often to allow the purchaser to participate in the green energy market (i.e., receive RECs associated with the renewable power generated) and provide the power producer with a guaranteed revenue stream to help it obtain financing to develop and construct the facility.

The purchaser generally receives RECs associated with the renewable power generated under both PPAs and VPPAs.

Entities need to consider several accounting topics when accounting for instruments with embedded features.

Key accounting considerations for PPAs and VPPAs

A careful analysis of the facts and circumstances of each arrangement is necessary because the terms and conditions of PPAs and VPPAs vary.

Consolidation considerations

A PPA or VPPA may represent a variable interest, as defined by ASC 810, in the power-producing entity (i.e., the legal entity that holds title to the renewable energy facility) that would need to be considered in determining whether the purchaser needs to consolidate the power-producing entity or make other disclosures required under ASC 810.

Identifying variable interests generally requires a qualitative assessment that focuses on the purpose and design of the entity being evaluated for consolidation (i.e., the power-producing entity). This may require determining whether the PPA or VPPA meets the definition of a derivative, as discussed in the section below.

If the PPA or VPPA represents a variable interest, the purchaser would need to determine whether the power-producing entity meets the definition of a variable interest entity (VIE) and, if so, whether the purchaser is the primary beneficiary of the power-producing entity. Under ASC 810, the primary beneficiary is determined based on a qualitative analysis of whether a reporting entity has the power to direct the activities of the VIE that most significantly impact its economic performance (power) and has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant (benefits).

The first step in determining whether an entity has power over the significant activities that impact the economic performance of the VIE is to identify those significant activities. The activities that significantly impact the economic performance of the power-producing entity may include making decisions about the following:

- ▶ Design, development and construction
- ▶ Operations and maintenance
- ▶ Sale of power and entry into new agreements after inception
- ▶ End-of-life of the facility (e.g., decommissioning solar panels, burying wind turbines)

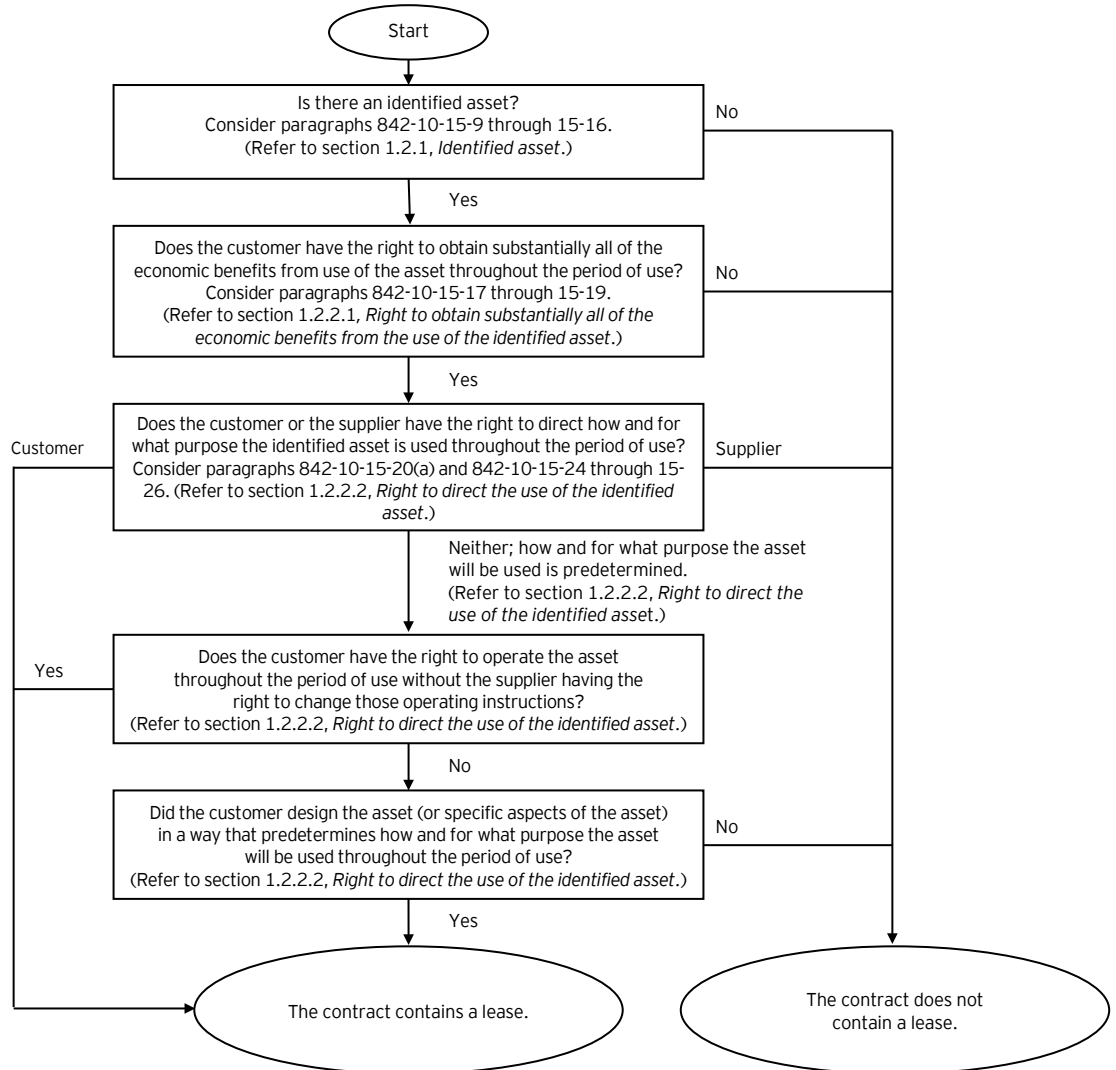
The purchaser in a PPA may enter into operating and maintenance contracts or other contractual agreements with the power producer or its owner. These arrangements will need to be carefully considered to determine whether they give the purchaser the ability to make decisions about the activities that significantly affect the economic performance of the power-producing entity in a PPA.

While purchasers in VPPAs should consider the facts and circumstances of their arrangements, we believe it would be unusual for a purchaser in a VPPA to have power over the significant activities for a power-producing entity because VPPAs generally do not provide the purchaser with decision-making rights over the significant activities. However, a purchaser in a VPPA will need to carefully evaluate all facts and circumstances when reaching a conclusion. A purchaser that does not have power over the power-producing entity would not control or consolidate the power-producing entity, unless the related party provisions in the VIE model apply. However, a purchaser that has a variable interest should consider the disclosure requirements in ASC 810 if the power-producing entity is a VIE, even when the purchaser is not the primary beneficiary.

If a purchaser has power or the related party provisions apply, the purchaser must evaluate whether it has “benefits” from the power-producing entity (i.e., whether it absorbs a significant amount of the variability through the PPA or VPPA). If the purchaser has power and benefits over the power-producing entity, it would control and consolidate the power-producing entity. These arrangements will need to be carefully evaluated, and different arrangements may result in different conclusions regarding which entity, if any, has control over the power-producing entity.

Lease considerations

Purchasers should evaluate whether a PPA or VPPA includes a lease of the renewable energy facility and related equipment (e.g., battery storage equipment). A lease is a contract that conveys the right to control the use of identified property, plant or equipment (i.e., an identified asset) for a period of time in exchange for consideration. The following decision-making process included in ASC 842’s implementation guidance (ASC 842-10-55-1), along with references to our Financial reporting developments publication, *Lease accounting, Accounting Standards Codification 842, Leases*, is helpful in this evaluation.



A PPA often includes an identified asset, and the purchaser often has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use because in many PPAs, a purchaser contracts for all of the output of a specified renewable energy facility. Therefore, a company's assessment of whether a PPA contains a lease is often determined by whether the purchaser has the right to direct how and for what purpose the identified asset is used throughout the period of use. In many cases, neither the purchaser nor the power producer has the right to direct how and for what purpose the renewable energy facility is used during the period of use because power is produced when the renewable resource is available (e.g., when the wind is blowing or when the sun is shining). A purchaser in a PPA generally doesn't have the right to operate the asset, so it will need to evaluate whether it designed the asset (or specific aspects of the asset) in a way that predetermines how and for what purpose the asset will be used through the period of use. If the purchaser did not design the asset (or specific aspects of the design) in a way that predetermines how and for what purpose the asset will be used, the PPA does not contain a lease.

Additional analysis may be required for a PPA that includes other assets, such as a battery storage asset, because a purchaser may have the right to direct how and for what purpose these other assets are used throughout the term of the contract (e.g., by determining whether and when the energy stored in a battery is discharged into the grid). Although a VPPA often includes an identified asset, the purchaser does not have the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use because the purchaser does not have the right to obtain the power produced by the facility.

Derivative considerations

If an entity determines that a PPA or VPPA is not a lease, an entity would need to evaluate whether it is or contains a derivative in the scope of ASC 815.

When evaluating whether a PPA or VPPA is a derivative in its entirety or contains features that may need to be accounted for separately as derivatives, an entity will first need to determine whether, at inception of a contract, the obligation to deliver RECs over the contract term and the physically settled power in a PPA, or the financially settled component of a VPPA, should be treated as separate units of account or a single unit of account.

One acceptable view is that the RECs and the physically settled power in a PPA or the financially settled component in a VPPA should be accounted for as a single unit of account. That is because the purchase of RECs and the purchase of the power in a PPA or the financially settled component in a VPPA generally cannot be contractually detached and transferred separately over the term of the contract, even though they are separate aspects of the arrangement. Although individual RECs become "detached" from the PPA or VPPA as they are delivered, the producer's obligation to deliver RECs over the remaining contract term is generally not contractually detachable and the counterparty to the PPA or VPPA could not transfer its rights to future RECs while retaining the power or the financially settled component of the contract. That is, prior to being delivered, the REC is generally contractually linked to the rest of the contract.

An entity will then need to evaluate whether the PPA or the VPPA in its entirety is in the scope of ASC 815. If the PPA or VPPA in its entirety is not in the scope of ASC 815 (because it does not meet the definition of a derivative in its entirety), an entity would then evaluate whether there are any embedded features that have to be bifurcated and accounted for separately under the embedded derivatives guidance in ASC 815.

An entity will need to evaluate whether a PPA or a VPPA meets the definition of a derivative.

Generally, the analysis of whether a PPA or a VPPA in its entirety meets the definition of a derivative or whether it contains an embedded derivative in the scope of ASC 815 depends on whether the contract contains a notional amount, an underlying or payment provision, requires no or little initial net investment, and can be net settled.

In practice, a PPA or VPPA without a contractual minimum is generally not considered to contain a notional amount because it cannot be readily determined based on the contractual provisions in the agreement. This view is based on the guidance for requirements contracts in ASC 815-10-55-5 through 55-7, which includes various examples that point to the need for a notional to be based on a quantity that can be determined using volumes or formulas contained in attachments or appendices to the contract or legally binding side agreements. We note that these contracts, including the default provisions, generally do not have any contractual minimums for the amount of power to be generated by the facility nor do they specify the quantity of RECs that must be delivered. Instead, the provisions often state that the settlement amount of the power component (whether settled physically or financially) and the number of RECs to be delivered are based on the actual electricity production during the settlement period (e.g., a month), which depends on how much the wind blows or the sun shines.

These contracts are often complex and should be reviewed carefully to make sure that default or other provisions in the contract do not create a contractual minimum for the RECs or the physically or financially settled power component, which could impact the analysis.

If the contract lacks a notional amount for both the REC and physically or financially settled power component, the PPA or the VPPA in its entirety will not meet the definition of a derivative under ASC 815. An entity will then need to account for the settlement each period (e.g., the receipt of RECs and receipt or payment of consideration in a VPPA or receipt of physical power in a PPA) in accordance with other US GAAP topics.

Energy-as-a-service agreements

Energy-as-a-service (EaaS) agreements have grown in popularity as entities seek to update their energy infrastructure by replacing older systems (e.g., HVAC, lighting) with new equipment that is more energy efficient. EaaS agreements are attractive because they don't typically require significant up-front capital expenditures since the vendor purchases and maintains the assets. The customer in an EaaS agreement makes payments to the vendor that are typically based, at least in part, on actual energy and related cost savings.

Key accounting considerations for EaaS agreements

Entities in EaaS agreements need to evaluate whether the arrangement contains a lease for the underlying equipment (see flowchart in the *Power purchase agreements and virtual power purchase agreements* section above). EaaS agreements generally convey to the customer the right to control the use of the underlying equipment, since the customer has both the right to obtain substantially all of the economic benefits from the use of the equipment and the right to direct the use of the equipment.

When an entity concludes that an EaaS agreement contains a lease, it will need to determine the appropriate classification for the lease and recognize and measure a lease liability and a right-of-use (ROU) asset. This evaluation involves judgment because it may appear that lease payments are entirely variable (and not dependent on an index or rate) because the payments may depend, at least in part, on energy usage and related cost savings, which could vary from month to month.

However, depending on the terms of the EaaS agreement, the payments, or a portion of the payments, may actually be in-substance fixed payments in accordance with ASC 842-10-55-31. For example, this would be the case if the EaaS arrangement contains any minimum usage requirements or caps that limit or prevent genuine variability.

The distinction matters because, under ASC 842, *Leases*, variable lease payments that are not based on an index or rate are not included in the measurement of a lease liability and are not considered in the lease classification analysis, while in-substance fixed payments are included in the measurement of a lease liability and the corresponding ROU asset and are considered in the lease classification analysis.

SEC activities

Entities should also be aware that the SEC and its staff are focusing on disclosures relating to ESG matters. The SEC issued a proposal in March 2022 that would require climate-related disclosures in both annual reports and the audited financial statements.

Under the proposal, an entity would be required to disclose in a note in its audited financial statements disaggregated climate-related financial statement metrics, and contextual information for those metrics, for all periods presented in the financial statements. The proposed rules would require disclosure under the following categories:

- ▶ Financial impact metrics - Registrants would be required to separately disclose the positive and negative financial impacts of both (1) severe weather events and other natural conditions and (2) transition activities by financial statement line item unless the aggregate impact on an absolute basis is less than 1% of the total line item for the relevant fiscal year.
- ▶ Expenditure metrics - Registrants would be required to separately disclose the aggregate amount of costs incurred for both climate-related events and transition activities that are both expensed and capitalized, unless the aggregate amount is less than 1% of the expenditures expensed or capitalized costs incurred, respectively.
- ▶ Financial estimates and assumptions - Registrants would be required to disclose whether and how climate-related events and transition activities impacted estimates and assumptions used in preparing the financial statements.

The proposal also includes climate-related disclosures outside the financial statements. The SEC expects to finalize these rules by the end of 2022. For more information about the SEC's proposal, see our [To the Point, *SEC proposes enhancing and standardizing climate-related disclosures*](#), as well as our [comment letter](#) on the proposal.

The SEC staff also has been asking registrants about their compliance with the SEC's 2010 interpretive release, [Commission Guidance Regarding Disclosure Related to Climate Change](#), which cited examples of disclosures the SEC believes entities are required to make under its current rules.

The SEC staff has posted a [sample comment letter](#) on the SEC website to illustrate the types of comments it may issue to registrants regarding their compliance with the 2010 guidance. While the letter focuses on disclosures of risk factors and other matters, it indicates that the staff may also ask registrants how they considered whether the information they include voluntarily in sustainability reports should also be included in their annual reports filed with the SEC.

For more information about how to apply the SEC's 2010 guidance, see our Technical Line, [Revisiting the SEC's guidance on climate change disclosures in today's environment](#).

Next steps

- ▶ Entities should consider whether their existing processes and controls enable them to appropriately account for and make disclosures about ESG-related transactions and arrangements they are considering or entering into. Registrants should also consider what changes may be necessary to comply with the requirements the SEC has proposed.
- ▶ Entities should monitor developments in the FASB's project on the accounting for environmental credit programs and its research project on financial instruments with ESG-linked features.
- ▶ Entities should also monitor developments at the SEC.

Endnotes:

- ¹ The Greenhouse Gas Protocol is maintained by the World Resources Institute and the World Business Council for Sustainable Development.
- ² "Carbon neutral" is a state where an entity's net contribution to global carbon dioxide emissions is zero.
- ³ 25 May 2022 FASB meeting. See Tentative Board Decisions at <https://www.fasb.org/Page/PageContent?pagel=/meetings/pastmeetings/05-25-22.html&bcpath=tff>.
- ⁴ In July 2022, the FASB ratified a consensus for exposure of the Emerging Issues Task Force (EITF), which would expand the use of the proportional amortization method to all tax credit investments that meet the criteria in ASC 323-740-25-1. That is, the use of the proportional amortization method would no longer be restricted to low-income housing tax credit (LIHTC) investments. The proportional amortization method would be an accounting policy election that entities may apply on a tax-credit-program-by-tax-credit-program basis. See our publication, [EITF update: June 2022](#) for more information. Readers should monitor developments.

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Appendix: Other EY ESG publications

Environmental

- ▶ [Technical Line, Revisiting the SEC's guidance on climate change disclosures in today's environment](#)
- ▶ [To the Point, SEC proposes enhancing and standardizing climate-related disclosures](#)
- ▶ [Comment letter, Response to SEC's proposal on climate-related disclosures](#)
- ▶ [Technical Line, How the climate-related disclosure proposals from the SEC, EFRAG and ISSB compare](#)

Social

- ▶ [How to approach the SEC's new human capital disclosures](#)

Governance

- ▶ [How boards can help companies advance on the path to sustainability](#)
- ▶ [Six ways companies can enhance their ESG reporting](#)