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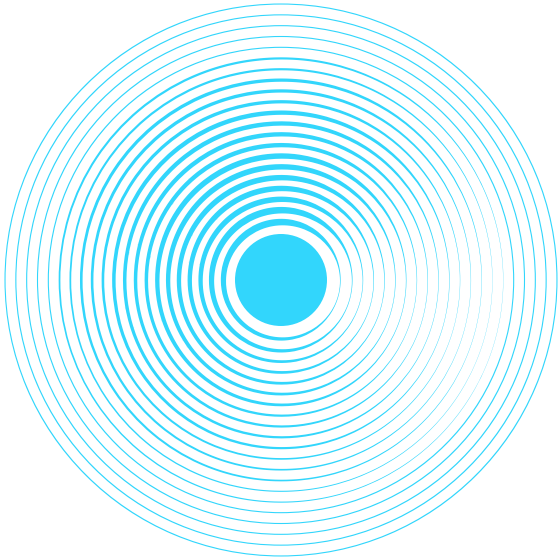

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Introduction

Environmental, social, and governance (ESG) matters have become common topics in the news. At the same time, investors, credit rating agencies, lenders, regulators, policymakers, and other interested parties have increasingly focused on these issues. In addition, the FASB, SEC, and CAQ have all provided public information[1] regarding the importance of considering environmental matters, both for preparers of financial statements and for auditors.

Given the increased interest in ESG matters from various parties, entities in virtually all industries are considering how these matters will affect their business strategies, operations, and long-term value. As entities develop business strategies related to the evolving ESG landscape, they will need to incorporate ESG considerations into their preparation of financial statements. In doing so, they should ensure that any plans or commitments related to environmental initiatives are considered in a consistent manner for both sustainability reporting and the preparation of the financial statements. For example, when preparing financial statements, an entity that plans to reduce its carbon footprint should evaluate the impact of those plans, if any, on topics such as the useful life of assets, impairment of assets, asset retirement obligations (AROs), other liabilities, and disclosure requirements under current U.S. GAAP.

[1] See FASB Staff Educational Paper *Intersection of Environmental, Social, and Governance Matters With Financial Accounting Standards*, issued on March 19, 2021; SEC's interpretive release *Commission Guidance Regarding Disclosure Related to Climate Change* (the "2010 interpretive release"), issued on February 2, 2010, and request for input, "Public Input Welcomed on Climate Change Disclosures," issued on March 15, 2021; and CAQ White Paper *Audited Financial Statements and Climate-Related Risk Considerations*, issued on September 9, 2021.

- Compensation Agreements
- Environmental Credits
- SEC Climate-Related Disclosures

Entities may also pursue specific arrangements or transactions in connection with climate-related objectives that involve complex accounting issues, require significant judgment, or both. For example, if entities enter into transactions involving sustainability bonds or virtual power purchase agreements (VPPAs), they will need to assess whether these transactions include embedded derivatives. Similarly, for other types of transactions with climate-related objectives, such as compensation arrangements linked to the achievement of company-specific environmental metrics, entities may be required to assess the probability of achieving such metrics.

In addition, many entities use environmental credits to help them accomplish their carbon emission reduction targets and goals. While such credits have increased in popularity for entities across different sectors and industries, questions have emerged regarding the accounting and reporting for them since the treatment of environmental credits is not explicitly addressed in U.S. GAAP. Such questions have included whether environmental credits are assets and, if so, how they should be classified, whether they should be subject to impairment testing, and when entities should record expenses related to their use of credits to offset their carbon emissions. In May 2022, the FASB added to its agenda a project to address the accounting for environmental credits.

In recent years, the SEC has also increased its focus on climate-related disclosures in its review of public company filings, including assessing the extent to which the information provided by such companies is consistent with the SEC's 2010 interpretive release. On September 22, 2021, the SEC's Division of Corporation Finance publicly released a sample letter that highlights the types of comments it may issue to public companies regarding climate-related disclosures. Within the last year, the SEC has issued comment letters to a number of registrants across all industries.

In March 2022, the SEC issued a proposed rule[2] that would require that registrants disclose (1) certain climate-related financial impacts and expenditure metrics as well as a discussion of such impacts on their financial estimates and assumptions within the audited financial statements and (2) certain greenhouse-gas (GHG) metrics and qualitative information in their annual report but outside the audited financial statements. With the SEC expected to issue its final rule in the coming months, entities should be mindful of climate-related SEC reporting requirements, particularly those associated with the business, risk factors, MD&A, and results of operations sections of SEC filings.

For more information about recent SEC communications regarding climate-related matters, see Deloitte's September 27, 2021, and March 21, 2022 (updated March 29, 2022), *Heads Up* newsletters.

This *Financial Reporting Alert* examines certain potential impacts of climate-related matters on an entity's financial accounting and reporting in the context of the existing accounting guidance and current regulatory environment. While these impacts will vary depending on the entity's industry along with factors such as relevant regulatory, legal, and contractual obligations, all entities should evaluate environmental-related financial accounting and reporting implications. The remainder of this publication is intended to address these matters.

Potential Accounting and Reporting Implications of Environmental Objectives

Entities from various industries have begun issuing public statements regarding their plans to address the impacts of climate change on their businesses, and recent news headlines have often highlighted these statements — for example, "Entity A commits to being carbon neutral by 2030" or "Entity B pledges to reduce greenhouse gas emissions by 90% by 2040." As a result, questions have arisen about the accounting and disclosure considerations

[2] SEC Proposed Rule Release No. 33-11042, *The Enhancement and Standardization of Climate-Related Disclosures for Investors.*

related to such statements. While such considerations will depend on the specific facts and circumstances of an entity's climate-related public statements, plans, and actions, this section highlights certain key considerations related to evaluating the accounting and disclosure implications.

Before this evaluation is performed, it is critical to understand how the plans and actions of management (i.e., personnel with the appropriate authority) align with its specific public statements (e.g., those made by the two entities in the preceding paragraph). By obtaining such an understanding, an entity will be better able to assess the effect on its net assets, including whether any assets are impaired or any contractual liabilities exist. For example, Entity A may operate in a jurisdiction or industry in which it is required to provide a certain level of carbon offsets, either internally generated or purchased, as part of its plan to become carbon-neutral. Depending on the facts and circumstances of the government regulation and A's specific operation, A's obligation to provide carbon offsets for carbon emissions may result in a liability that needs to be recorded, potentially disclosed, or both. See the Environmental Credits section for details related to environmental credit liabilities under compliance programs.

Assessing the Impact on Assets

Entities should evaluate how their climate-related public statements and supporting plans and actions affect various aspects of their businesses as well as the related accounting implications of those plans in light of existing accounting standards. For example, if Entity B plans to reduce its GHG emissions by replacing its current manufacturing equipment with new technology and equipment that emit fewer GHGs, it should evaluate whether there has been a triggering event[3] related to the recoverability of its existing manufacturing equipment and reassess whether the current useful life of its existing manufacturing equipment remains appropriate. Further, if B has goodwill related to a reporting unit that includes the product lines produced by the existing equipment, it should assess whether its future manufacturing process will result in a different profit margin profile. Lower future profit margins could affect the expected future cash flows of the reporting unit and ultimately could alter the results of the entity's goodwill impairment test. See the Use and Recoverability of Long-Lived Assets, Environmental Obligations, and Asset Retirement Obligations sections for more detailed information.

Assessing the Incurrence of Liabilities

In addition to considering whether it has any contractual obligations to address climate-related issues, an entity should consider whether government or regulator actions or the entity's own public statements, plans, or actions could give rise to any other legal or constructive obligations that the entity would be required to account for, disclose, or both, in its financial statements.

Paragraph E38 of FASB Concepts Statement 8, Chapter 4[4] (released in December 2021), identifies two essential characteristics of a liability:

1. "It is a present obligation."
2. "The obligation requires an entity to transfer or otherwise provide economic benefits to others."

This section discusses the two characteristics outlined above.

[3] See ASC 360-10-35-21 for examples of events or changes in circumstances that may indicate a long-lived asset (asset group) may not be recoverable. For titles of *FASB Accounting Standards Codification* (ASC) references, see Deloitte's "Titles of Topics and Subtopics in the *FASB Accounting Standards Codification*."

[4] FASB Concepts Statement No. 8, *Conceptual Framework for Financial Reporting — Chapter 4*, Elements of Financial Statements.

Characteristic 1 — Present Obligation

In the assessment of whether a present obligation exists, the determination of whether there is a legal obligation is often unambiguous. However, the definition of the term "legal obligation" in the ASC master glossary acknowledges that such an obligation can be established by "an existing or enacted law, statute, ordinance, or written or oral contract or by legal construction of a contract under the doctrine of promissory estoppel." If an entity makes a promise to a third party, including the public at large, about its intentions to undertake certain activities, the entity may be required to use significant judgment to determine whether it has created a legal obligation under the legal doctrine of promissory estoppel, which is defined as the "principle that a promise made without consideration may nonetheless be enforced to prevent injustice if the promisor should have reasonably expected the promisee to rely on the promise and if the promisee did actually rely on the promise to his or her detriment."[5]

Entities should evaluate the existence of legal obligations on the basis of current laws, regulations, and contractual obligations, as well as the related interpretations and facts and circumstances; they should not forecast changes in laws or in the interpretations of laws and regulations. The impacts of any changes in laws or regulations should be considered in the period in which the new or amended laws or regulations are enacted. In addition, in determining whether a public statement has created a legal obligation under the notion of promissory estoppel, entities should work closely with legal counsel to evaluate their own specific facts and circumstances. If the results of this determination are unclear, they may wish to obtain a legal opinion to support their conclusions.

According to paragraph E43 of FASB Concepts Statement 8, Chapter 4, "[l]iabilities necessarily involve other parties, society, or law. The identity of the other party or recipient need not be known to the obligated entity before the time of settlement." Further, paragraph E45 notes that the present obligation of a liability must exist as of the financial statement date and that "[t]ransactions or other events or circumstances expected to occur in the future do not in and of themselves give rise to obligations today." In issuing Concepts Statement 8, Chapter 4, the FASB was aiming to shift the emphasis away from identifying a past or future transaction or event and to focus instead on the term "present."

FASB Concepts Statement 8, Chapter 4, states that to be presently obligated for a liability, "an entity must be bound, either legally or in some other way, to perform or act." For instance, many obligations can stem from legally enforceable contracts and agreements, resulting in a recorded liability. However, the FASB also indicates that a constructive obligation may be "created, inferred, or construed from the facts in a particular situation rather than contracted by agreement." In describing constructive obligations, FASB Concepts Statement 8, Chapter 4, further states that an "entity's past behavior also may give rise to a present obligation."

In assessing whether it has a constructive obligation that is not a legal obligation, an entity must employ significant judgment and consider its specific facts and circumstances. For an event or circumstance (e.g., a public statement) to rise to the level of a constructive obligation that should be recognized as a liability, the entity must, as a result of the event or circumstance, be obligated to sacrifice assets in the future and have little or no discretion to avoid the future sacrifice. The assessment of whether an entity has a constructive obligation related to its climate-related public statements, plans, or actions should not be a one-time evaluation; rather, the entity should continue to assess its facts and circumstances as its climate-related initiatives progress.

If an entity determines that it has or may have an obligation (contractual, legal, or constructive) that should be recorded in its financial statements, the entity should carefully consider (1) the point in time at which the entity's obligation began and (2) whether the obligation exists as of the financial statement date. Liabilities arise as a result of a past event. For example, as

[5] See ASC 410-20-20, which cites the definition of promissory estoppel that is used in *Black's Law Dictionary*, seventh edition.

employees render services to an entity, the entity incurs the liability to pay the employees for their services. The rendering of services in exchange for payment is an example of a reciprocal transaction in which one party exchanges a good or service with another party (in this case, the employee rendering services in exchange for payment). However, obligations arising as a result of a government action or an entity's climate-related public statements, plans, or actions may not be reciprocal transactions but obligations to the public at large or other relevant stakeholders. In assessing the point in time at which an entity has incurred an obligation that does not result from a reciprocal transaction, an entity may need to use significant judgment and consider all relevant facts and circumstances. For example, an entity's obligation may arise as a result of future carbon emissions, which may indicate that the obligation does not exist as of the financial statement date.

Characteristic 2 — Obligation to Provide Economic Benefits

As outlined in paragraphs E54 through E60 of FASB Concepts Statement 8, Chapter 4, a second essential characteristic of a liability is that "the obligation requires an entity to transfer or provide economic benefits to others or to be ready to do so." Such an entity often must transfer cash or other assets to one or more other entities. However, FASB Concepts Statement 8, Chapter 4, states that an obligation "can be fulfilled, satisfied, or settled in a number of other ways, including by granting a right to use an asset, providing services, replacing that obligation with another obligation, converting the obligation to equity, or, in certain circumstances, transferring shares of the entity."

Voluntary Programs Related to Environmental Credit Liabilities

The FASB staff discussed recognizing environmental credit liabilities for compliance and voluntary programs at its May 25, 2022, meeting (for further details, see the Environmental Credits section). With regard to voluntary programs, a FASB staff member observed that when an entity obtains and uses credits solely as a result of self-imposed mandates, a liability may not exist, since an "obligation of an entity to itself cannot be a liability," as indicated in paragraph E45 of FASB Concepts Statement 8, Chapter 4. Thus, depending on the facts and circumstances, a voluntary program (i.e., one in which an entity makes a public statement about its environmental credit initiatives that are not part of a required compliance program) may not result in the need to record a liability because there is no external obligation (e.g., contractual, legal, or constructive).

Disclosure Considerations

Entities should also evaluate whether any of their climate-related public statements, plans, or actions must be disclosed in the financial statements, even if they conclude that there is nothing to record in the current-period financial statements. ASC 275 requires an entity to disclose information that helps financial statement users assess major risks and uncertainties. Specifically, ASC 275-10-50-1 requires disclosure of risks and uncertainties related to the following:

a. Nature of operations, including the activities in which the entity is currently engaged if principal operations have not commenced

b. Use of estimates in the preparation of financial statements

c. Certain significant estimates

d. Current vulnerability due to certain concentrations.

Example

Entity X operates in an industry in which a key product line uses a significant amount of petroleum. Entity X expects the product line to move away from use of petroleum in the near term, which will affect the nature of its operations, and believes that the product line will ultimately no longer rely on petroleum. In a manner consistent with its public statements, X is actively engaging with vendors of alternative fuel sources to identify a green alternative and expects such an alternative to be available for use in the near term. On the basis of its facts and circumstances, X concludes that it does not have any present obligations (contractual, legal, or constructive) or impacts on other financial statement accounts to record in its financial statements; however, X may be required to disclose the risks and uncertainties related to the future of this key product line in accordance with ASC 275.

To assess whether its plans or actions result in risks or uncertainties that must be disclosed in accordance with ASC 275, an entity must apply professional judgment after considering all relevant facts and circumstances.

In addition, an entity should assess whether any of its public statements regarding climate-related initiatives give rise to commitments that must be disclosed in the financial statements. The ASC master glossary defines a firm commitment as "[a]n agreement with an unrelated party, binding on both parties and usually legally enforceable," that is both (1) specific in "all significant terms, including . . . fixed price, and the timing of the transaction," and (2) "includes a disincentive for nonperformance that is sufficiently large to make performance probable."

ASC 440 requires an entity to disclose certain situations that are not recorded in the financial statements. Specifically, ASC 440-10-50-1, as amended by ASU 2016-02,[6] requires disclosure of:

a. Unused letters of credit
b. Leases . . .
c. Assets pledged as security for loans
d. Pension plans . . .
e. The existence of cumulative preferred stock dividends in arrears
f. Commitments, including:
    1. A commitment for plant acquisition
    2. An obligation to reduce debts
    3. An obligation to maintain working capital
    4. An obligation to restrict dividends.

In addition, ASC 440-10-50-2 requires disclosure of "unconditional purchase obligations."

These examples are not an exhaustive list of commitments to be disclosed, and entities should evaluate their specific facts and circumstances to determine whether they have any commitments that should be disclosed in their financial statements in accordance with ASC 440.

Entities should also consider whether a loss contingency is probable and can be reasonably estimated; if so, specific disclosures may be required under ASC 450. If the criteria in ASC 450-20-25-2 are met, an entity should disclose the nature of the contingency and an estimate of the possible loss or range of loss (or a statement that an estimate cannot be made). On the basis of recent comment letter trends, the SEC staff has expressed concern that entities are not complying with the loss contingency disclosure requirements in ASC 450. For example, the fact that an entity has a reasonable estimate or calculations of potential damages, outstanding claims, compliance discussions with regulators, or settlement offers may serve as evidence that the incurrence of a loss is reasonably possible and that disclosure is necessary. In every reporting period, entities should consider all facts and circumstances when making this determination.

[6] FASB Accounting Standards Update (ASU) No. 2016-02, *Leases (Topic 842)*.

For more information about SEC reporting requirements, see Deloitte's September 27, 2021, *Heads Up* and the SEC Climate-Related Disclosures section in this publication.

Developing Estimates and Maintaining Consistency of Assumptions and Estimates

As entities focus on climate-related initiatives and make changes to their businesses, they may face challenges related to selecting appropriate assumptions and developing reliable estimates. Nevertheless, they will still be required by U.S. GAAP to develop estimates that underlie various accounting conclusions. To develop such estimates, entities will need to consider all available information.

Further, entities may be required to use assumptions or estimates for more than one purpose (e.g., forecasted revenues or cash flows may be an assumption that is used in multiple impairment tests, assessments of the realizability of deferred tax assets (DTAs), and the evaluation of an entity's ability to continue as a going concern). When a single assumption is used in multiple analyses, entities should verify that the same assumption is being used in each analysis unless the guidance in U.S. GAAP permits otherwise. In addition, entities should verify that assumptions and estimates outside of the financial statements (e.g., sustainability reports) are consistent with those used when preparing estimates required by U.S. GAAP.

Entities should also consider external events and circumstances, including changes in regulatory environments, when assessing whether (1) the changes they made in assumptions and estimates from the previous period were appropriate or (2) it was appropriate in the current period *not* to have updated or changed the assumptions used in the previous period.

Use and Recoverability of Long-Lived Assets

As an entity considers climate-related matters, it should continue to evaluate the accounting and reporting impacts of its goals or targets with respect to its carbon footprint. Understanding how its business shifts to support these goals or targets is critical to evaluating the ongoing use and recoverability of its long-lived assets, including goodwill, as well as other indefinite-lived intangible assets and property, plant, and equipment (PP&E). On the basis of these business shifts, an entity may need to reassess the useful life of an asset or test an asset (asset group) for impairment.

It is also important to consider the order in which assets are tested for impairment so that the entity can ensure that any required adjustments are made before including those assets in the testing of larger units of account. Assets that are not held for sale should be tested for impairment in the following order: (1) assets outside the scope of ASC 360-10 (other than goodwill), such as inventory, capitalized costs to obtain or fulfill a revenue contract, and indefinite-lived intangible assets; (2) long-lived assets in accordance with ASC 360-10; and (3) goodwill in accordance with ASC 350-20.

Indefinite-Lived Intangible Assets Other Than Goodwill

An entity should assess changes to its business as a result of climate-related initiatives, since these could affect the value of its indefinite-lived intangible assets. As stated in ASC 350-30-35-4, an indefinite-lived intangible asset is one for which "there is no foreseeable limit on the period of time over which it is expected to contribute to the cash flows of the reporting entity." Brands and trademarks are common examples of indefinite-lived intangible assets.

Indefinite-lived intangible assets are tested annually for impairment and more frequently if an event or a change in circumstances indicates that it is more likely than not that the intangible asset is impaired in accordance with ASC 350-30. ASC 350-30-35-18B provides examples of these events or changes in circumstances, which include, but are not limited to, financial performance, legal or political factors, entity-specific events, and industry or

market considerations. On the basis of this assessment, if an entity determines that it is more likely than not that the carrying value of the intangible asset exceeds its fair value, the entity performs a valuation to determine the fair value of the asset and recognizes an impairment loss equal to the excess of the carrying amount of the intangible asset over its fair value.

A valuation technique that is often applied to the measurement of a brand or trademark is the relief-from-royalty method. This method, which focuses primarily on expected revenues and royalty rates, requires the entity to make fewer assumptions than other income methods. However, an entity may find it challenging to project revenues because of an expected shift in demand for its product due not only to changes in consumer buying decisions, as consumers seek to purchase more environmentally friendly products, but also to a change in the entity's ability to continue producing and selling its current products while also meeting any internal climate-related targets (such as a commitment to being carbon neutral by a certain date). Entities are expected to use their best estimate of all required business and valuation assumptions for this method or other income methods used to measure the fair value of an indefinite-lived intangible asset.

In addition to evaluating the need for an interim impairment test, an entity should consider whether there are any indicators that an intangible asset classified as indefinite-lived has become finite-lived, which might occur if the entity changes its expected use of the asset in response to its strategy to produce more environmentally friendly products.

Long-Lived Assets

An entity should consider whether it expects to experience (1) a decline in revenues, (2) an increase in costs (i.e., a decline in net cash flows), or (3) both, as a result of changes to its business to undertake climate-related initiatives. If so, such changes may indicate that the entity should test its long-lived assets for recoverability.

Entities are required by ASC 360-10-35-21 to test a long-lived asset (asset group) that is classified as held and used for recoverability "whenever events or changes in circumstances indicate that its carrying amount may not be recoverable" — for example, if there is a "significant adverse change . . . in the business climate that could affect the value of a long-lived asset (asset group)." Events or changes in circumstances that prompt a recoverability test are commonly referred to as "triggering events." As an entity adjusts its business to align with climate-focused initiatives, it may experience one or more of the triggering events listed in ASC 360-10-35-21. For example, depending on the nature of the entity's business and its assets, it may determine that certain product lines will be phased out (as well as the related assets producing them) or that products will be produced by more environmentally friendly assets. Triggering events that may be present as a result of an entity's response to climate-related initiatives include, but are not limited to, a "significant adverse change in the extent or manner in which a long-lived asset (asset group) is being used or in its physical condition," a "significant adverse change in legal factors or in the business climate that could affect the value of a long-lived asset (asset group), including an adverse action or assessment by a regulator," or a "current expectation that, more likely than not, a long-lived asset (asset group) will be sold or otherwise disposed of significantly before the end of its previously estimated useful life."

ASC 360-10-35-23 states, in part, that "a long-lived asset or assets shall be grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities." Such a combination is called an asset group.

An asset group may include not only long-lived assets that are within the scope of ASC 360-10 but also other assets such as receivables, inventory, indefinite-lived intangible assets, or goodwill. ASC 360-10-15-5 provides a list of assets that are not within the scope of ASC 360-10. Note that ASC 360-10 applies to long-lived assets that are not within the scope

of other GAAP, such as PP&E, finite-lived intangible assets (e.g., customer relationships, technology, brands, and trade names), and right-of-use (ROU) assets.

To test a long-lived asset (asset group) for recoverability, an entity compares the carrying value of the asset (asset group) with the undiscounted net cash flows generated from the asset's (asset group's) use and eventual disposal. While the use of undiscounted cash flows generally indicates that a long-lived asset (asset group) is less prone to impairment, a long-lived asset (asset group) may not be recoverable if reductions in the estimates of undiscounted cash flows are based on changes to the entity's business operations as it supports climate-related initiatives in response to consumer demand. For example, the net cash flows expected to be generated from the eventual disposal of a piece of machinery may decline if the machinery is not deemed environmentally friendly and demand for the related product has decreased as a result of a heightened focus on climate-related initiatives by both entities and consumers. Therefore, the decline in expected salvage value may result in an impairment of the asset (asset group).

If an entity estimates future cash flows to test the recoverability of a long-lived asset (asset group), such an estimate should include only the future cash flows (cash inflows minus associated cash outflows) that are (1) directly associated with the asset (asset group) and (2) expected to arise as a direct result of the use and eventual disposition of the asset (asset group). To estimate future cash flows, the entity must consider both cash inflows and cash outflows. Note that ASC 360-10-35-30 states, in part, that the "assumptions used in developing [cash flow estimates should] be reasonable in relation to the assumptions used in developing other information used by the entity for comparable periods, such as internal budgets and projections, accruals related to incentive compensation plans, or information communicated to others."

In addition, ASC 360 indicates that it may be useful for the entity to apply a probability-weighted approach when considering alternative courses of action to recover the carrying amount of a long-lived asset (asset group). Such an approach may be beneficial when the entity is considering alternative courses of action it may take as a result of its climate-related initiatives.

If the entity determines that the carrying amount of the long-lived asset (asset group) is not recoverable, it performs the next step in the impairment test by recognizing an impairment loss for the amount by which the carrying amount of the long-lived asset (asset group) exceeds its fair value. It then allocates that amount to the long-lived assets that are within the scope of ASC 360-10 "on a pro rata basis using the relative carrying amounts of those assets, except that [in accordance with ASC 360-10-35-28,] the loss allocated to an individual long-lived asset of the group shall not reduce the carrying amount of that asset below its fair value whenever that fair value is determinable without undue cost and effort."

By contrast, if an entity determines that a long-lived asset (asset group) is recoverable, it does not recognize an impairment loss, even if the carrying value of that asset (asset group) exceeds its fair value. Regardless of whether an entity recognizes an impairment loss, it should still consider whether the existence of a trigger indicates that there has been a change in the useful life or salvage value of its long-lived assets. For example, an entity may determine that although a certain asset (asset group) is not impaired, it will not be in operation as long as originally intended because it will be phased out as more environmentally friendly assets are placed into service. In that case, the entity should revise the asset's (asset group's) useful life and depreciation or amortization estimates accordingly.

Sometimes, an entity may conclude that the affected long-lived assets will be sold, abandoned, or otherwise disposed of. In accordance with ASC 360-10-35-43, if the held-for-sale criteria in ASC 360-10-45-9 are met, the entity is required to measure the asset (asset group) "at the lower of its carrying amount or [its] fair value less cost to sell." A long-lived asset that will be

abandoned will continue to be classified as held and used until it is disposed of. Such an asset is disposed of when it ceases to be used. However, as indicated in ASC 360-10-35-49, a "long-lived asset that [is] temporarily idled shall not be accounted for as if abandoned." Further, ASC 360-10-35-48 states, in part, that when "a long-lived asset ceases to be used, the carrying amount of the asset should equal its salvage value, if any."

Goodwill

As an entity continues to adjust its business operations to support climate-related initiatives, it should consider whether such adjustments result in a triggering event that would require it to test the goodwill of one or more reporting units for impairment between annual testing dates. In addition, even if the entity does not identify a triggering event in between annual testing dates, it should consider its climate-related initiatives and their impacts on business operations when testing goodwill for impairment annually.

Under ASC 350-20-35-28 through 35-30, an entity is required to test goodwill for impairment at the reporting-unit level at least annually or "between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount." ASC 350-20-35-3C provides examples of events and circumstances that may meet such a threshold and hence necessitate the testing of goodwill for impairment between annual tests. These include "a deterioration in general economic conditions," "a deterioration in the environment in which an entity operates," "a change in the market for an entity's products or services," "[o]verall financial performance such as negative or declining cash flows or a decline in actual or planned revenue or earnings compared with actual and projected results of relevant prior periods," and, "[i]f applicable, a sustained decrease in share price (consider in both absolute terms and relative to peers)."

A reporting unit with only a small cushion (excess of fair value over carrying amount) at the time of its most recent quantitative test is generally more susceptible to impairment, which may have been noted in prior disclosures related to goodwill of reporting units at higher risk for impairment.

An entity may choose to qualitatively evaluate relevant events or circumstances to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Alternatively, an entity may skip the qualitative assessment and proceed directly to step 1 of the goodwill impairment test. In step 1 of the test, the entity compares the reporting unit's carrying amount, including goodwill, with its fair value and recognizes an impairment loss for any excess.

In January 2017, the FASB issued ASU 2017-04,[7] which eliminated step 2 of the goodwill impairment test and the requirement to calculate the implied fair value of goodwill. While most entities have adopted the provisions of ASU 2017-04, the provisions are not yet effective for all entities (e.g., certain private companies and not-for-profit entities). Note that because ASC 350-20-35-18 is superseded by ASU 2017-04, entities that have adopted the ASU will no longer be permitted to book a "best estimate" of the impairment when step 2 is not complete and subsequently recognize any adjustment in the following reporting period when step 2 is complete.

When performing a quantitative test, an entity must develop certain business and valuation assumptions. If the entity is using an income approach to perform its fair value measurements, it must use judgment when developing its prospective financial information and consider the impacts of its climate-related initiatives as well as potential shifts in consumer behaviors. For example, an entity may have plans to shut down a manufacturing facility and build a new one with new, more environmentally friendly equipment. In such a case, the entity should consider the impact of these plans, including the costs to close the current manufacturing facility,

[7] FASB Accounting Standards Update No. 2017-04, *Simplifying the Test for Goodwill Impairment*.

in its business assumptions. Uncertainty regarding the changes in an entity's business and the impact of those changes to support the entity's climate-related initiatives should also be considered. The entity is expected to use its best estimates of those business and valuation assumptions.

In addition, if the entity is using a market approach when performing its fair value measurements, it should consider whether any shifts in its business or that of its peers affect its ability to identify the appropriate multiples and transactions to use. An entity may need to consult with its valuation specialists when performing the quantitative test.

ASC 350 provides an accounting alternative for the subsequent measurement of goodwill for private companies and not-for-profit entities. While certain differences exist for entities adopting the accounting alternative, such entities are still required to test goodwill for impairment when a triggering event occurs.

Inventory

ASC 330 requires an entity to initially value its inventory at the cost needed to bring the inventory to its current condition and location. An entity generally determines that cost by using an acceptable cost flow method such as first in, first out or last in, first out (LIFO). Inventory that is measured by using any method other than LIFO or the retail inventory method (RIM) is subsequently valued at the lower of cost or net realizable value (i.e., the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal, and transportation). However, if inventory is measured by using LIFO or RIM, it is subsequently valued at the lower of cost or market.[8]

When estimating the net realizable value of inventory, management is required to consider all relevant facts and circumstances. If certain climate-related events occur, the estimates of net realizable value could be materially affected. For example, wildfires could significantly damage crops, or floods could significantly damage goods held in a warehouse. In addition, an entity's operations may be affected by new regulations, customer preferences, or its own initiatives related to environmental concerns — for example, a ban on the use of plastic bags or straws in certain states, new regulations related to aerosol cans, or changes in consumer preferences for LED lights that have negatively affected demand for the more traditional incandescent lights.

Historically, changes in regulations have typically come with enough advance notice for entities to prepare for such changes, and consumer behavior changes have in many cases been gradual. However, with the current focus on sustainability and environmental matters, both regulatory actions and changes in consumer behavior may occur more rapidly and frequently in the future; therefore, entities should closely monitor such potential developments and any related impacts on inventory values.

Taxes

The tax effects of law changes designed to bring about environmental changes (e.g., the elimination or introduction of certain environmental tax credits) should not be anticipated; rather, entities should account for a change in tax law in the period in which the change is enacted.

[8] ASC 330-10-20 defines market as follows: "As used in the phrase lower of cost or market, the term market means current replacement cost (by purchase or by reproduction, as the case may be) provided that it meets both of the following conditions:
a. Market shall not exceed the net realizable value
b. Market shall not be less than net realizable value reduced by an allowance for an approximately normal profit margin."

2022 Legislation to Provide Clean Energy Credits and Incentives

The Creating Helpful Incentives to Produce Semiconductors Act (known as the "Chips Act") and Inflation Reduction Act of 2022 (collectively the "Acts") introduced a plethora of new clean energy tax credits, while amending the computation and extending the period of eligibility of existing credits. The Acts also included new options for credit utilization under either a direct pay election (refundable credits) or a transferability election (transferable credits). See Deloitte Tax LLP's *Tax Alert* "Clean Energy Credits and Incentives in the Inflation Reduction Act of 2022 — Details and Observations" and its report "Advancing Energy Security: Sustainability-Related Tax Provisions in the Inflation Reduction Act."

The new options for credit utilization can significantly affect how the following ESG-related tax credits are accounted for in an entity's financial statements:

- *Refundable tax credits* — If an entity has the ability to elect to treat a credit as a direct payment of tax and receive a refund of such payment even in the absence of any taxable income (i.e., the entity is otherwise in a loss position), we believe the tax credit represents a refundable credit that would be outside the scope of ASC 740. See further discussion in Section 2.7 of Deloitte's Roadmap *Income Taxes*.

  There is no specific authoritative guidance in U.S. GAAP on the accounting for, or disclosure of, government assistance received by business entities. Accordingly, diversity in practice exists and differing models have been used under U.S. GAAP to account for government assistance. See ASU 2021-10[9] and Deloitte's April 9, 2020 (updated September 18, 2020), *Heads Up* for a more detailed discussion of the accounting for government assistance in the context of the CARES Act. Accounting for ESG-related refundable tax credits would generally be consistent with the models discussed therein.

- *Transferable tax credits* — Transferable tax credits are those in which an eligible taxpayer can elect to transfer or sell the credit, or some portion thereof, to an unrelated taxpayer. If an entity does not have sufficient taxable income to use all or a portion of the income tax credit or if using the credit might take multiple tax years, the entity might achieve a better economic benefit (i.e., present value benefit) by selling the credit.

  Regardless of intent, we believe that if a credit (1) can only be used to reduce an income tax liability of either the entity that generated it or the entity to which it is transferred and (2) would never be refundable by the government, the credit should remain in the scope of ASC 740.[10]

  In such situations, the entity that generated the credit would initially recognize and measure it in accordance with the recognition and measurement criteria of ASC 740. To the extent that the income tax credit does not reduce income taxes that are currently payable, the entity would recognize a DTA for the carryforward and assess it for realizability in a manner consistent with the sources of income cited in ASC 740-10-30-18. While we believe that such an assessment would generally be predicated upon the normal course of business (i.e., an entity would not factor in its ability to sell the underlying credit as a basis for realizing the related DTA), we understand, on the basis of a technical inquiry with the FASB staff, that it would also be acceptable for the entity to consider the expected sales proceeds when assessing realizability.

  If an entity were to subsequently sell the income tax credit, we understand based on the same FASB staff technical inquiry that it would be most appropriate to reflect any proceeds and resulting gain or loss on the sale as a component of the tax provision.

[9] FASB Accounting Standards Update No. 2021-10, *Disclosures by Business Entities About Government Assistance*.

[10] While we believe accounting for the credits within the scope of ASC 740 is most appropriate, consistent with feedback received from the FASB staff, we believe it would also be acceptable for a company to account for the transferable credits in a manner similar to refundable credits as the company generating the credit does not need taxable income in order to monetize the credit.

Alternatively, we believe that a sale could be treated no differently than the sale of any other asset, with a gain or loss recognized in pretax earnings for any difference between the proceeds received and the recorded carrying value of the DTA for the income tax credit that was recognized in accordance with the guidance in ASC 740 on recognition and measurement.[11]

Transferee considerations: The entity that purchases a transferable credit should generally record (1) a DTA for the amount of the tax credit purchased and (2) a deferred credit for the difference between the amount paid and the DTA recognized in accordance with ASC 740 (such deferred credit does not represent a deferred tax liability). The deferred credit would be reversed and recognized as an income tax benefit in proportion to the deferred tax expense recognized upon realization of the associated DTA (i.e., as the credits are used on the tax return).

Tax Equity Structures

In an effort to monetize certain tax credits (generally investment tax credits [ITCs]), sponsors of qualifying assets (e.g., those that produce clean energy) will sometimes partner with tax equity investors. In these situations, a pass-through entity is typically established so that the investor can provide an initial investment in exchange for the tax credits and other tax benefits (e.g., depreciation) that will be generated by the qualifying assets. The return is treated as a distribution to the investor, and the sponsor retains a greater share of the net assets, effectively providing a mechanism to allow the developer to monetize the credits and other tax benefits. In practice, accounting for this disproportionate allocation of income and losses associated with the tax equity structure often reflects the hypothetical liquidation at book value (HLBV) method. As discussed in Section 5.1.2 of Deloitte's Roadmap *Equity Method Investments and Joint Ventures*, there is diversity in practice related to recognizing earnings and losses under the HLBV equity method involving ITCs, which depends on the election to treat ITCs under the flow-through or the deferral method.[12]

Proposed ASU and the Proportional Amortization Method

In October 2022, the FASB issued a proposed ASU[13] that would expand the application of the proportional amortization method of accounting for investments in tax-specific structures. Currently, the method of accounting is limited to only certain Qualified Affordable Housing Project investments. However, the proposed ASU is expected to affect the accounting for investments that are made primarily for receiving tax credits and other tax benefits, including ITCs — specifically, certain investments traditionally considered to be ESG-focused. Under the proportional amortization method, as described in ASC 323-740, the investment made in the qualifying projects is treated as an equity method investment. An investor then amortizes the initial cost of the investment through the income tax expense line item in proportion to the tax credits and other tax benefits received.

See Section 12.4 of Deloitte's Roadmap *Income Taxes* for additional details on the accounting treatment.

Valuation Allowances

If, as a result of environmental initiatives, entities make or plan to make changes to their operations that affect their profitability, positively or negatively, they should consider how such changes might affect their income tax accounting under ASC 740. For example, a reduction in current-period income or the actual incurrence of losses, coupled with a reduction in

[11] If an entity's policy is to reflect gain or loss in pretax earnings, it would not be appropriate to consider the expected proceeds when assessing realizability of the related DTA.

[12] The two methods of accounting for an ITC are addressed in ASC 740-10-25-46 (see discussion in Section 3.5.9 of Deloitte's Roadmap *Income Taxes*).

[13] FASB Proposed Accounting Standards Update, *Investments — Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method* — a consensus of the FASB Emerging Issues Task Force.

forecasted income or a forecast of future losses, could result in (1) a reassessment of whether it is more likely than not that some or all of an entity's DTAs are realizable and (2) a need to recognize a valuation allowance. Entities will also need to consider the character (i.e., capital or operating) of incurred losses to evaluate whether there is sufficient income of the appropriate character to fully realize the related DTA. Such assessments could be particularly challenging in situations in which the changes in current and projected future profitability have actually resulted in or are expected to result in cumulative losses in recent years and the entity has not had a stable earnings history before factoring in the impacts of its environmental initiatives.

Leases

ROU Asset Impairment (Lessee Accounting)

Impairments of ROU assets could occur as a result of an entity's decision to abandon a current lease in favor of a lease for environmentally sustainable PP&E (e.g., if an entity decides to change the location of its corporate headquarters or manufacturing facilities). Such a decision could negatively affect the future cash flows expected to be derived from the original underlying PP&E.

ROU assets are subject to the impairment and disposal guidance in ASC 360; therefore, a lessee must test its ROU assets for impairment in a manner consistent with the treatment of other long-lived assets. In accordance with ASC 842-20-35-9, a "lessee shall determine whether a right-of-use asset is impaired and shall recognize any impairment loss in accordance with Section 360-10-35 on impairment or disposal of long-lived assets." Therefore, the impairment analysis of ROU assets would be included as part of the analysis for long-lived assets that are held and used.

In accordance with ASC 842-20-35-10, an impaired ROU asset should be subsequently measured at its carrying amount (after the impairment) less any accumulated amortization. Subsequent amortization of the ROU asset (for both operating and finance leases) would be on a straight-line basis unless another systematic basis is more representative of the pattern over which the lessee expects to consume the remaining economic benefits of the right to use the underlying asset.

In connection with its reevaluation of leases or lease portfolios on a go-forward basis, an entity should consider whether a decision to no longer use a leased asset constitutes an abandonment of the asset from an accounting standpoint. The entity's conclusion may represent a triggering event that prompts it to perform a recoverability test. For a leased asset to be deemed abandoned, an entity must not have the intent and ability to sublease the leased asset at any point during the remaining lease term. When determining whether it would have the intent and ability to sublease the asset, the entity should consider the economic environment and the expected demand in the sublease market. Consequently, an entity may be required to use greater judgment when assessing leases with longer remaining terms. An entity that has the intent and ability to sublease an asset at any point in the future would be precluded from considering an asset to be abandoned. For more information, see Section 8.4.4.2 in Deloitte's Roadmap *Leases*.

Leases for Assets With No Future Economic Benefit and Impairment of a Net Investment in a Lease (Lessor Accounting)

As a result of technological advancements, customer preferences, and increasing stakeholder concerns, some entities have shifted away from older, less efficient equipment toward environmentally friendly alternatives (e.g., hybrid or electric cars, buildings with solar panels, energy efficient manufacturing equipment). Entities that operate as lessors of less desirable PP&E may have assets that are no longer expected to have the future economic benefit that was originally anticipated.

When a lessor enters into a sales-type or direct financing lease, it derecognizes the underlying asset and records a new asset in its place. The new asset or "net investment" consists of two components: (1) the sum of the lease receivable in accordance with ASC 310 and (2) the present value of the unguaranteed residual asset in accordance with ASC 360. Although there are two components of the net investment, ASC 842 requires lessors to evaluate the net investment for impairment as one component. The net investment in a lease is typically primarily composed of a financial lease receivable (i.e., the unguaranteed residual is often insignificant) and therefore should be accounted for as a financial asset under ASC 310. The lessor's net investment must be monitored for impairment in accordance with the applicable guidance. As indicated in ASC 842-30-35-3, the lessor should include in its impairment analysis the cash flows it expects to receive from the "lease receivable and the unguaranteed residual asset during and following the end of the remaining lease term." Accordingly, these cash flows should include the amounts the lessor expects to receive for re-leasing or selling the underlying asset to a third party.

If decreases in expected consumer demand or changes in regulations, for example, result in diminished expected economic benefits from a lease, the lessor must use judgment when considering whether it is required to make any changes to the underlying asset's residual cash flows. A reduction in the expected cash flows generated from the asset following the end of the lease term could result in a required impairment. For more information, see Section 9.3.7.5 in Deloitte's Roadmap *Leases*.

Energy Service Agreements That May Contain Embedded Leases

As a result of increased focus on the environment and corporate accountability, many entities have been actively seeking out ways to transform their current operations to maximize environmental sustainability while limiting up-front capital expenditures. One increasingly common method is through use of an energy service agreement (ESA). ESAs are often marketed as an "off-balance-sheet financing solution" that will allow entities to capture the benefits of new efficient equipment without incurring the up-front capital expenditures associated with it. The typical term of an ESA is anywhere between 5 and 15 years. Under an ESA, the vendor will analyze the company's current energy infrastructure and understand its level of energy consumption. This evaluation forms the "base-line" energy consumption that the vendor promises to reduce.

In addition to performing various services in connection with the ESA, the vendor will often replace all, or a portion, of the entity's existing energy infrastructure (e.g., HVAC systems, boilers, lightbulbs) with new high-efficiency, environmentally sustainable equipment. The vendor usually bears the costs associated with the new machinery and its installation and retains title to the equipment. In many ESAs, the vendor pays for required maintenance throughout the duration of the contract. Payments to the vendor are generally based on the company's actual cost savings — for example, as a percentage of the actual savings or according to some type of formula linked to the entity's cost savings.

To determine the appropriate accounting for an ESA, an entity should consider whether the agreement includes an embedded lease for the underlying equipment. As indicated in ASC 842-10-15-3, a "contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration." The concept of "control" is expanded upon in ASC 842-10-15-4, which states, in part, that "[t]o determine whether a contract conveys the right to control the use of an identified asset . . . for a period of time, an entity shall assess whether, throughout the period of use, the customer has both of the following:" the "right to obtain substantially all of the economic benefits from use of the identified asset" and the "right to direct the use of the identified asset." Although an entity must use judgment in determining whether an agreement includes a lease, a key indicator that an embedded lease exists within a service agreement is a situation in which the service provider conveys control of the equipment to

the entity. We have observed that, in many instances, ESAs will be deemed to include a lease because the entity is able to control when the equipment is actually used and at what levels, among other factors.

If, on the basis of the terms of an ESA, the entity concludes that a lease exists, it will need to determine the lease payments so that it can ascertain the lease classification and calculate the associated ROU asset and lease liability. In many ESAs, the entity only pays the vendor to the extent that there are energy cost savings, which will vary from month to month. On the surface, this may appear to be an entirely variable lease payment stream, which would result in no lease liability and therefore no ROU asset at lease inception. However, the entity must consider the specific terms of the ESA to determine whether these payments, or a portion of these payments, constitute an in-substance fixed payment. Under ASC 842-10-55-31, "in substance fixed payments are payments that may, in form, appear to contain variability but are, in effect, unavoidable;" therefore, these payments are indistinguishable from fixed payments and should be considered in the calculation of the ROU asset and lease liability. However, if all payments are determined to be variable, from a lease accounting standpoint, an entity would not record an ROU asset or a lease liability. It is essential for an entity to understand what is driving the variability in its ESA when making this determination, since different ESAs may have different drivers of variability. Relevant considerations include whether the customer has any minimum usage requirements and whether the vendor is exposed to genuine economic downside on the basis of the PP&E's performance (e.g., downside risk if the PP&E fails to meet predefined efficiency standards). Portfolio considerations may also arise because a large volume of equipment typically is deployed and monitored in the aggregate for performance.

As ESAs continue to rise in popularity and evolve, entities are encouraged to consult with their advisers regarding the appropriate accounting treatment.

Virtual Power Purchase Agreements

Physical power purchase agreements (PPAs) are commonplace in the utilities industry and are a means through which entities can secure the future output of a power-generating facility for a contracted long-term period at a predetermined price. These agreements can be either for traditional power generation that results in GHG emissions or for renewable energy. Under a traditional PPA, the buyer takes ownership of the power produced by the power-generating facility and either uses the power for its own operations or sells the power in a secondary market.

In recent years, virtual PPAs (VPPAs) have emerged as a flexible tool through which an entity can support the renewable energy market, offset its electricity use from traditional sources, and meet its stakeholders' clean energy goals without drastically altering its current power structure.

Owners of renewable energy facilities, such as wind farms, may be entitled to receive renewable energy certificates (RECs). The number of RECs awarded is typically linked to a power production formula as determined by the applicable regulator. These RECs can be kept by the producer or sold in a secondary market. In a VPPA, the buyer does not retain the power produced by the renewable energy facility; instead, the power component of the transaction is financially settled while the buyer receives all or a predetermined amount of the generated RECs for each year of the contract term for an agreed-upon price. The RECs can be used to meet a renewable portfolio standard or simply retired, thus contributing to the environmental sustainability objectives of the buyer.

When evaluating a VPPA, an entity must consider the specific terms of the agreement and determine whether the VPPA represents a variable interest as defined in ASC 810-10-55-17. If the entity concludes that the VPPA is a variable interest, it must also consider the guidance

outlined in ASC 810 to determine whether the corporate buyer needs to consolidate the owner of the renewable energy facility.

The buyer should also consider whether a VPPA is a lease for the underlying assets that comprise the renewable energy facility. In accordance with ASC 842-10-15-3, a "contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration." The determination of whether a VPPA includes a lease involves judgment, and the entity will need to evaluate whether it has the right to control the underlying assets (i.e., the assets used in the production of the renewable energy and RECs) as defined in ASC 842-10-15-4. However, in our experience, a VPPA generally will not contain a lease because, as a result of the technology involved (e.g., wind, solar), the buyer does not control the timing of power generation.

A challenging question that often arises is whether a VPPA includes a derivative. As described in ASC 815-10-15-83, a derivative "is a financial instrument or other contract with all of the following characteristics:

a. Underlying, notional amount, payment provision. . . .

b. Initial net investment. The contract 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.

c. Net settlement."

When evaluating whether a derivative exists, an entity should determine whether the VPPA consists of a bundled product or two discrete components (i.e., the renewable energy produced and the REC). In addition, while all the criteria noted above need to be examined carefully, an entity may need to use significant judgment when determining whether a notional amount exists in these arrangements. For example, such a determination may be affected by whether the VPPA contains any minimum production guarantees. Practitioners should consider involving appropriate specialists and advisers when evaluating the accounting for a VPPA.

Insurance Recoveries

Entities that incur losses stemming from climate-related events may be entitled to insurance recoveries. For example, in certain cases, losses from closed facilities or disrupted supply chains may be insured if they are associated with property damage from hurricanes, wildfires, or tornados. Furthermore, entities may have business interruption insurance that provides coverage for lost profits that are caused by a suspension of their operations due to certain weather-related events.

Insured Losses

If an entity incurs a loss attributable to damaged property or to the incurrence of a liability and it expects to recover all or a portion of that loss through an insurance claim, it should record an asset in the amount for which recovery from the insurance claim is considered probable (not to exceed the amount of the total losses recognized). If the total loss exceeds the amount for which recovery from the insurance claim was initially deemed probable, the entity should subsequently recognize the excess portion only to the extent that it does not exceed actual additional covered losses or direct incremental costs incurred to obtain the insurance recovery. A conclusion that a potential insurance recovery is probable may involve significant judgment and should be based on all relevant facts and circumstances. In determining whether it is probable that an insurance recovery will be received, an entity will most likely need, among other factors, to understand the solvency of the insurance carrier and to have had enough dialogue and historical experience with the insurer regarding the specific type of

claim to assess the likelihood of payment. Other potential challenges an entity may encounter when evaluating whether a loss is considered recoverable through insurance include, but are not limited to, understanding (1) the extent of coverage and limits, including multiple layers of insurance from different carriers, and (2) the extent, if any, to which the insurance carrier disputes coverage. Consultation with legal counsel may also be necessary.

Connecting the Dots

We believe that while applicable to SEC registrants, the following guidance from footnote 49 of SAB Topic 5.Y[14] applies to all entities evaluating an insured loss that is contested by the insurance carrier:

> The staff believes there is a rebuttable presumption that no asset should be recognized for a claim for recovery from a party that is asserting that it is not liable to indemnify the registrant. Registrants that overcome that presumption should disclose the amount of recorded recoveries that are being contested and discuss the reasons for concluding that the amounts are probable of recovery.

Any expected recovery that is greater than covered losses or direct incremental costs incurred represents a gain contingency and therefore has a higher recognition threshold. An entity should generally recognize insurance proceeds that will result in a gain when the proceeds are either realized or realizable, whichever occurs first. Such insurance proceeds are realized when the insurance carrier settles the claim and no longer contests payment. Payment alone does not mean that realization has occurred if such payment is made under protest or is subject to refund.

Business Interruptions

Climate-related events can also lead an entity to temporarily suspend operations in cases in which, for example, there is a lack of power for an extended period or the entity is unable to access manufacturing locations as a result of city ordinances. Business interruption insurance differs from other types of insurance coverage in that it is designed to protect the prospective earnings or profits of the insured entity. That is, business interruption insurance provides coverage if business operations are suspended because of the loss of use of property and equipment resulting from a covered loss, and it also generally provides for reimbursement of certain costs and losses incurred during the interruption period. Such costs may be analogous to losses from property damage; accordingly, it may be appropriate to record a receivable for amounts whose recovery is considered probable. We encourage entities to consult with their independent auditors in connection with their evaluation of whether a receivable may be recorded for expected insurance recoveries associated with fixed costs incurred during an interruption period.

The loss of profit margin is considered a gain contingency and should be recognized when the gain contingency is resolved (i.e., the proceeds are realized or realizable). Because of the complex and uncertain nature of the settlement negotiation process, such recognition generally occurs at the time of final settlement or when nonrefundable cash advances are made.

Classification of Insurance Recoveries

ASC 220-30-45-1 addresses other income statement presentation matters related to business interruption insurance from the perspective of classification and allows an entity to "choose how to classify business interruption insurance recoveries in the statement of operations, as long as that classification is not contrary to existing [U.S. GAAP]."

For presentation within the statement of cash flows, ASC 230-10-45-21B states, in part, that "[c]ash receipts resulting from the settlement of insurance claims, excluding proceeds

[14] SEC Staff Accounting Bulletin (SAB) Topic 5.Y, "Accounting and Disclosures Related to Loss Contingencies."

received from corporate-owned life insurance policies and bank-owned life insurance policies, shall be classified on the basis of the related insurance coverage (that is, the nature of the loss)." For example, insurance settlement proceeds received as a result of claims related to a business interruption should be classified as operating activities.

Financial Instruments and Contract Assets

Sustainability-Linked Debt Instruments (Issuer's Considerations)

Entities that seek to demonstrate their corporate social responsibility may issue debt instruments tied to environmental factors (sometimes also referred to as sustainability factors). Such environmentally linked debt instruments include sustainability-linked bonds and sustainability-linked loans. With regard to structure, the terms of sustainability-linked debt instruments and conventional debt instruments may be largely similar. However, each sustainability-linked debt instrument may be issued for different purposes and have unique environmental linkage. For example, (1) debt instruments may be subject to early redemption if the borrower fails to meet a target sustainability metric (e.g., on the basis of S&P Global ESG Scores) on a specified date, (2) the contractual interest rate may be reduced if the borrower achieves predefined targets for reducing GHG emissions, or (3) the contractual interest rate might increase if the borrower fails to achieve the targets. When issuing debt instruments with cash flows linked to environmental factors, an entity needs to consider whether the arrangement contains an embedded feature or features that must be separately accounted for as a derivative under ASC 815-15 (if the fair value option is not applied).

Under ASC 815-15-25-1, an entity is required to separately account for a feature embedded within another contract (the host contract) if the following three conditions are met:

- The embedded feature and the host contract have economic characteristics and risks that are not clearly and closely related.
- The hybrid instrument (i.e., the combination of the embedded feature and its host contract) is not remeasured at fair value, with changes in fair value recorded immediately through earnings (e.g., under the fair value option election in ASC 815-15-25-4 or ASC 825-10).
- The embedded feature — if issued separately — would be accounted for as a derivative instrument under ASC 815-10. In evaluating whether this condition is met, the entity considers the definition of a derivative in ASC 815-10 and the scope exceptions from derivative accounting in ASC 815-10 and ASC 815-15.

The following outlines considerations related to the bifurcation analysis of certain features embedded in sustainability-linked debt instruments:[15]

- *Redemption features* — Debt instruments may contain features that trigger an acceleration or deferral of the due date or an adjustment of the repayment amount (1) upon the occurrence or nonoccurrence of a specified environmental event or events or (2) on the basis of an environmental metric. Generally, a redemption feature embedded in a debt host meets the definition of a derivative irrespective of whether the debt host contract is readily convertible to cash under the guidance in ASC 815-10-15-107 because neither party is required to deliver an asset associated with the underlying. The scope exceptions under ASC 815-10-15-13 and ASC 815-15-15-3 are usually not applicable for redemption features embedded in a debt host (e.g., there is no specific scope exception for sustainability-linked features). If no scope exception is available, a borrower's determination of whether a redemption feature must be bifurcated as a derivative is based on whether the feature is considered

[15] Note that this discussion assumes that the debt is not measured at fair value on a recurring basis (e.g., the issuer has not elected the fair value option in ASC 815-15-25-4 or ASC 825-10). In addition, an entity should always consider the terms and conditions of a specific feature in light of the applicable accounting guidance before reaching a conclusion.

clearly and closely related to the debt host contract. Typically, the borrower should evaluate whether the redemption feature is clearly and closely related to the debt host under the four-step decision sequence in ASC 815-15-25-42.

- *Contingent interest rate features* — Debt instruments may specify that the contractual interest rate (1) will be reduced by a certain amount if the borrower achieves predefined targets, such as reaching carbon neutral by a specified date, or will be increased if the borrower fails to achieve those targets or (2) will vary on the basis of changes in an index tied to specified environmental metrics. ASC 815-15-25-26 addresses whether an embedded feature whose only underlying is an interest rate or interest rate index should be considered clearly and closely related to a debt host contract. The guidance does not address features that are indexed to or contingent on something other than an interest rate or interest rate index, including features that are indexed to both an interest rate or interest rate index and other underlyings (e.g., environmental targets or key performance indicators). Under the existing guidance, generally, only certain features that are based on a market interest rate, an entity's credit risk, or inflation are viewed as clearly and closely related to a debt host contract. Therefore, features that adjust the interest rate of a debt instrument on the basis of an environmental factor typically are determined to be not clearly and closely related to a debt host and might have to be bifurcated as a derivative unless a specific scope exception is available.

  Given the wide variety of environmentally linked terms and the evolving nature of these instruments, entities are strongly encouraged to discuss their accounting analyses with their advisers.

  For more details about the manner in which specific embedded features should be evaluated to determine whether they require bifurcation as derivatives, see Section 8.4 of Deloitte's Roadmap *Issuer's Accounting for Debt*.

If the environmental-factor-related embedded derivatives must be accounted for separately from the debt host contract, the issuing entity must appropriately allocate the proceeds between the debt instrument and the features that are accounted for separately. Specifically, under the allocation method in ASC 815-15-30-2, the borrower is required to record "the embedded derivative at fair value and [determine] the initial carrying value assigned to the [debt] host contract as the difference between the basis of the hybrid instrument and the fair value of the embedded derivative."

Note that the determination of the fair value of environmental-factor-related embedded derivatives involves complexity and often requires the involvement of valuation specialists. Depending on the likelihood that a payment feature will be triggered and, if so, on its potential amount, the fair value of a payment feature embedded in debt host might be minimal (e.g., a feature in which a minor adjustment must be made to the interest rate upon an event whose likelihood of occurring is remote). In practice, therefore, entities sometimes determine and document that they are not required to make accounting entries upon debt issuance to recognize a feature that must be bifurcated as a derivative under ASC 815-15. Any such conclusion must be appropriately supported on the basis of materiality. A determination that a feature has a minimal fair value at inception does not negate the requirement to account for it as a derivative. Accordingly, if an entity makes such a determination, it should also monitor its facts and circumstances in each reporting period to evaluate whether the feature's fair value or a change to it is significant and therefore must, under U.S. GAAP requirements, be reflected in the entity's financial statements.

Sustainability-Linked Debt Instruments (Holder's Considerations)

Holders of sustainability-linked debt instruments (e.g., an investor or a lender) can account for such instruments at fair value by (1) applying a fair value option election in accordance with ASC 815-15 or ASC 825-10 or (2) classifying the instruments as trading securities in accordance with ASC 320-10-25-1 if they qualify as debt securities. If sustainability-linked debt instruments are not accounted for at fair value (e.g., the fair value option is not applied), with changes in fair value recorded immediately through earnings, holders also need to consider whether the environmental factor is an embedded feature that must be separately accounted for as a derivative under the aforementioned guidance and considerations.

Impairment Considerations (CECL)

Given rapidly evolving regulation over environmental matters, technology developments that focus on the replacement of environmentally unfriendly products and processes, and changes in customer preferences and behavior, entities need to consider whether these environment-related changes affect their business and credit risks.

Entities that have adopted ASC 326 must apply the current expected credit loss (CECL) impairment model to recognize (1) credit losses on financial assets with contractual cash flows that are carried at amortized cost (including financing receivables, held-to-maturity debt securities, and reinsurance receivables), (2) net investments in leases (except for operating lease receivables), and (3) off-balance-sheet credit exposures. Because the CECL model is based on expected losses rather than incurred losses, an allowance for credit losses under ASC 326-20 reflects (1) a risk of loss (even if remote) and (2) losses that are expected over the contractual life of the asset.

The allowance takes into account historical loss experience, current conditions, and reasonable and supportable forecasts. Because the CECL model does not specify a threshold for recognizing an impairment allowance, entities should assess the current and expected future effects of any expected changes in the regulatory or technological environment, or both, as a result of environmental factors and incorporate such effects into their estimate of expected credit losses on each reporting date.

If ASC 326 has not yet been adopted, creditors that lend to entities that may be affected by new environmental regulation requirements and other related factors will need to assess whether impairment evaluation is required if certain events occur (such as a new regulation limiting usage of certain water pollutant material that is essential to an entity's manufacturing process, thus reducing the entity's cash flows and liquidity).

Environmental Obligations

Changes in laws and regulations may affect the timing and cost of environmental remediation obligations, which have a direct impact on the associated environmental remediation liability. An entity should consider whether changes to current laws and regulations in the jurisdictions in which it operates affect its recording of environmental remediation obligations.

ASC 410-30 provides guidance on measuring an estimated environmental remediation liability, including how to consider the effects of future developments. Specifically, ASC 410-30-35-4 requires entities to recognize the "impact of changes in laws, regulations, and policies . . . when such changes are enacted or adopted." If the estimated costs of remediation obligations change on the basis of new information, such changes are considered changes in estimates under ASC 250 and should be recognized in the period in which the laws or regulations are enacted or adopted.

For example, an entity may be remediating an environmental site in a state in which laws and regulations require it to remediate groundwater contamination and subsequently monitor water quality at the site to verify the efficacy of the remedy for a stated number of years before declaring the site closed. The recorded environmental liability would be based on (1) the remaining time and cost needed to achieve the remediation plan in accordance with the state laws and regulations, (2) costs related to post-remediation monitoring, and (3) an assumption that the site would receive remedial closure or a "no further action" letter once the specific criteria are met (i.e., the environmental obligation would be zero at that point in time). If, perhaps in response to concerned citizens demanding more stringent requirements, the state amends its laws and regulations to include indefinite monitoring of the site (i.e., the site would not officially close), the entity would account for the cost of those changes in the period the new laws and regulations go into effect and should measure the environmental obligation in accordance with ASC 410-30.

Note that, as indicated in ASC 410-30-15-3(c), the guidance in ASC 410-30 does not apply to "[e]nvironmental remediation actions that are undertaken at the sole discretion of management and that are not induced by the threat . . . of litigation or of assertion of a claim or an assessment." Therefore, ASC 410-30 does not require the recognition of a liability for environmental remediation activities that are voluntarily undertaken by a reporting entity. The decision to incur the costs of performing such activities in the future does not give rise to a present liability since the entity has considerable discretion in changing its plans and avoiding the expenditure.

Asset Retirement Obligations

Unlike environmental liabilities that result from the improper use of an asset, AROs are legal or contractual obligations to perform remediation activities resulting from the proper, intended use of a long-lived asset. Entities should consider whether changes to their operations trigger a remeasurement of their AROs. Changes in operations that result in a change in management's intended use of an asset — including a change in its plans to maintain the asset, extend its useful life, or abandon the asset earlier than previously expected — may affect the recorded amount of an ARO associated with the asset, including the timing associated with the retirement activities.

ASC 410-20 provides the relevant guidance on accounting for AROs, including subsequent-measurement considerations related to revising either the timing or amount of the original estimate of cash flows used for measuring the fair value of the obligation. Specifically, ASC 410-20-35-8 states, in part, that "[c]hanges resulting from revisions to the timing or the amount of the original estimate of undiscounted cash flows shall be recognized as an increase or a decrease in the carrying amount of the liability for an asset retirement obligation."

For example, consider an entity that has pledged to reduce its carbon emissions in response to pressure from investors to transition to greener operations. To achieve this reduction, the entity plans to retire certain carbon-emitting assets and replace them with greener, low-carbon assets. If the older, carbon-emitting assets were required to be decommissioned and removed under the contractual agreement between the entity and the landowner and, as a result, the entity recorded an ARO on its books, it should consider whether (1) the early retirement of the carbon-emitting assets also results in the acceleration of the cash flows associated with retirement activities necessary to satisfy the ARO and (2) it is required to revise the ARO in accordance with ASC 410-20.

Compensation Agreements

As a means of driving sustainability, some entities link incentive pay for executives and employees to environmental metrics. For example, an auto executive's bonus might depend on advancing the company's electric vehicles, hybrid vehicles, or ride-sharing business, or a financial services firm's executives might be rewarded for the percentage of capital that is

allocated to worthy sustainable projects, such as renewable energy or sustainable agriculture. In such cases, there may be various accounting considerations, which depend on the specific climate-related metrics used, how performance is measured against those metrics, and the terms of the bonus arrangement.

Many entities use cash bonus plans to compensate their executives and employees. Annual bonus plans may be based on specific formulas and performance targets and are communicated early in the year. In some plans, annual bonus amounts are linked to environmental targets based on metrics that are unknown until after the end of a fiscal year and, thus, the bonus amounts may not be finalized until after the financial statements are issued. In addition, bonuses may be forfeited if an employee is terminated or resigns.

Entities should have a clear method of measuring and monitoring performance related to environmental metrics that are included in an annual or multiyear compensation agreement so that they can calculate the bonus accrual and update such amounts throughout the year under ASC 450-20 and ASC 710 (when the cash bonus plan is not subject to other applicable U.S. GAAP, such as ASC 718). If the amount of the bonus that will be achieved or granted is uncertain, the entity should compute a range in accordance with ASC 450-20-30-1, which indicates that if "no amount within the range is [considered] a better estimate than any other amount," the low end of the range should be selected. Entities must carefully evaluate bonuses that are based on achievement of a target to determine whether such achievement is probable and reasonably estimable.

Once an entity has determined the amount of the probable bonus, it should recognize that amount over the service period. Recognizing compensation expense in this manner is analogous to recognizing expense in connection with stock-based compensation arrangements over the related service period, as required by ASC 718. Under this model, the obligating event giving rise to the liability is considered the employee's performance of service. Recognition of a bonus liability should not be delayed just because the bonus would not be paid if the employee were to terminate employment before the end of the service period. Rather, if a reliable estimate of employee turnover is possible, the entity may factor this estimate into the range of estimates when determining the probable liability. Any difference between the actual bonus paid and the amount accrued is considered a change in accounting estimate. For more information, see Deloitte's Roadmap *Contingencies, Loss Recoveries, and Guarantees*.

Similarly, the compensation arrangement could be in the form of a company's own stock instead of cash. For example, a utility company may grant its senior executives a sustainability performance stock award related to environmental metrics such as establishing new water recycling facilities by 20X5 or reducing carbon emissions by 2 million metric tons. Entities should pay particular attention to plan details that describe how the environmental metrics are defined and how the related performance against those metrics is measured. In some instances, entities may seek assistance from appropriate environmental specialists when establishing and evaluating these type of compensation arrangements.

ASC 718 requires that the related cost be recognized over the employee's requisite service period when a service period exists. For awards with performance conditions, an entity should assess the probability of meeting the performance condition and will only recognize compensation cost if it is probable that the condition will be met. The total compensation cost recognized will ultimately be based on the outcome of the performance condition. Share-based payment transactions are recognized by using a fair-value-based measurement method under ASC 718.

Note also that when a share-based compensation award with environment-related factors is indexed to a factor other than a service, performance, or market condition, the award may be classified as a liability. Liability-classified awards are generally remeasured by using fair-

value-based measurement as of each reporting date until settlement. That is, changes in the fair-value-based measure of the liability at the end of each reporting period are recognized as compensation cost, either (1) immediately or (2) over the employee's requisite service period. Therefore, companies need to carefully evaluate the classification of their share-based awards. For more information, see Deloitte's Roadmap *Share-Based Payment Awards*.

Environmental Credits

What Are Environmental Credits?

Within this publication, the term "environmental credits" encompasses products such as carbon credits (both allowances and offsets) as well as RECs and other climate- or emission-related credits.

In the most basic sense, a carbon credit is a market-based or legal instrument (or both) that represents the ownership of one metric ton of carbon dioxide equivalent (MTCO2e) that can be held, sold, or retired to meet a mandatory emissions cap or a voluntary emissions reduction target. Carbon credits are primarily distinguished on the basis of whether they are allowances or offsets.

Allowances (also known as "permits") are initially issued by regulatory agencies in carbon compliance programs (e.g., cap-and-trade programs or emissions trading schemes). One allowance gives the holder the legal right to emit one MTCO2e. Typically, a carbon compliance program establishes a total volume of emissions permitted by all of its regulated entities in a given year and a corresponding volume of allowances. Regulating agencies then allocate (free of charge) or auction off allowances to the regulated entities. If an entity wishes to emit more or less MTCO2e, it can purchase allowances from, or sell them to, other entities. These allowances are often also referred to as "carbon credits" since each allowance represents a tradable MTCO2e.

Offsets are generated from projects in which the objective is to produce and sell verified carbon credits for every MTCO2e reduced, avoided, or removed from the atmosphere by the projects. Carbon credits from these projects are ultimately used by the final entity that purchases and retires the credits to "offset" its emissions, so they are often called "carbon offsets." "Voluntary carbon offsets" are used to help meet an entity's voluntary emissions reduction targets to compensate for emissions that it has not yet been able to abate. Many carbon compliance programs allow regulated entities to use credits generated from approved offset projects to compensate for a portion of their emissions (in addition to using allowances or permits); these are often called "compliance offsets."

In addition to carbon credits, numerous other "credits" exist. One of the more common examples is a REC, which is issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource.

The Role of Environmental Credits

Along with investing in carbon abatement projects that directly reduce their emissions (e.g., energy efficiency upgrades, electric vehicle fleets), entities are showing increased interest in purchasing carbon credits generated by projects outside their operations and value chain to offset their unabated emissions. Such projects may involve renewable energy initiatives in developing countries, improved forest management and reforestation, lower-carbon agriculture or grazing practices, direct air capture and sequestration, and many other efforts.

RECs can also play an important role for entities seeking to reduce their carbon footprint. Owners of renewable energy sources may be entitled to receive RECs. The number of RECs awarded is typically linked to a power production formula. By purchasing RECs, buyers help

finance and promote renewable energy generation and, in return, are allowed to use the RECs to report lower Scope 2[16] emissions from purchased electricity.

Acquiring Environmental Credits — Trending Transactions

While there are many ways entities can obtain environmental credits, three of the more common methods are discussed below.

Carbon Markets

Global markets for carbon offsets are growing rapidly to enable the generation, acquisition, trade, and tracking of environmental credits. These markets predominantly provide (1) voluntary environmental credits that have been certified by leading standards such as Verra's Verified Carbon Standard (VCS) Program or (2) credits for carbon compliance offset programs that are operated by the relevant regulatory agency. In addition, the markets act as a mechanism through which entities can actively trade and convert their environmental credits to cash.

Key types of participants in these ecosystems include:

- Regulatory agencies or nonprofit or for-profit organizations that set certification standards and methods as well as manage the registries to track environmental credit generation, ownership, and credit status (active or retired). The top voluntary standards and registries include Verra, the Climate Action Reserve, the American Carbon Registry, and Gold Standard. Each carbon compliance program that allows offsets specifies a set of rules regarding acceptable project methodologies, certification requirements, and credit registration, trading, or retirement processes.
- Project owners and developers that secure or provide financing, or implement and generate environmental credits, for initial sale. There is a growing number of very large project development firms.
- Buyers and sellers of environmental credits, which could include entities that need such credits to meet their emissions reduction goals, clean energy or fuel requirements, or mandated emissions limits. Note that a buyer of environmental credits can have various intended uses for its environmental credits. For example, an entity may plan to:
    - Hold environmental credits and remit or retire them to the relevant agency in subsequent years.
    - Immediately retire the credits to the relevant agency.
    - Trade its environmental credits.

    Further, it is possible for the entity's intended uses to change during the period over which it holds them.
- A complex web of brokers and marketplace platforms to match buyers and sellers or arrange spot trades, financing, or offtake agreements.
- An emerging array of fund managers and financial intermediaries that are creating investment vehicles or secondary markets for environmental credits.

PPAs and VPPAs

A PPA is a contract between two parties: the developer of a renewable energy project and a buyer. Under a PPA, the developer will typically receive a fixed price for each MWh of renewable energy produced and the buyer will receive the associated RECs over time as the project produces and sells electricity. The recipient of the RECs (the buyer) will be able to use

[16] See the EPA's Web site for a discussion of Scope 1, 2, and 3 inventory guidance.

them to reduce its gross Scope 2 emissions from purchased electricity. In a PPA contract, physical energy must also be delivered to the buyer.

By contrast, in a VPPA, the buyer does not take physical delivery of the power produced by the renewable energy source; instead, the power component of the transaction is financially settled while the buyer receives all, or a predetermined amount, of the generated RECs for each year of the contract term for an agreed-upon price. For more information regarding VPPAs, see the Virtual Power Purchase Agreements section.

Directly From the Regulator

A regulator issues several categories of environmental credits, including RECs. Cap-and-trade programs may also be established in which, for example, (1) total annual GHG emissions from regulated entities in the program are capped and (2) the cap (i.e., emissions limit) is reduced over time. Each year, a volume of allowances or permits equivalent to that year's cap are auctioned or allocated (for free) to the regulated entities. As noted previously, each allowance gives its owner the right to emit one MTCO2e. The entity can then trade allowances until it has the volume needed to match its emissions for the year.

Accounting Practices Under Existing GAAP

As previously noted, the treatment of environmental credits is not explicitly addressed in U.S. GAAP; consequently, entities have used different approaches, and questions have emerged about how to account and report for them. The sections below describe certain approaches that exist today in practice as well as observations regarding such approaches. Note that entities should carefully consider all relevant facts and circumstances when selecting an appropriate accounting model to use. They should then apply such model consistently and, if material, disclose their selection.

Environmental Credits as Assets

When accounting for environmental credits, entities should determine whether such credits represent assets.

FASB Concepts Statement 8, Chapter 4, defines an asset, in part, as "a present right of an entity to an economic benefit." It also describes an economic benefit as "the capacity to provide services or benefits to the entities that use them" and notes that "[g]enerally, in a business entity, that economic benefit eventually results in potential net cash inflows to the entity. . . . The relationship between the economic benefit of an entity's assets and net cash inflows to that entity can be indirect." Typically, an entity's ability to sell, transfer, or exchange an environmental credit provides evidence that the right to do so presently exists, the entity controls access to that right, and the right applies to an economic benefit.

Connecting the Dots

Entities must consider all relevant facts and circumstances when assessing whether their acquired or created environmental credits meet the definition of an asset. For instance, we believe that enhanced marketing, public claims regarding environmental activities, and the potential reduction of the entity's net emissions do not, by themselves, represent an economic benefit as described in FASB Concepts Statement 8, Chapter 4; therefore, costs incurred solely from obtaining these benefits would not qualify as assets.

Although still relatively new, environmental credit markets are continuing to grow regionally, nationally, and internationally. We do not believe that to qualify as an asset, an environmental credit necessarily needs to be actively traded on an exchange. However, we believe that the ability to place the environmental credit on an exchange

where it can be bought and sold, resulting in net cash inflows, supports a conclusion that such credit meets the definition of an asset.

Entities will need to carefully evaluate the nature of costs incurred in connection with environmental objectives to determine whether such costs meet the GAAP requirements to be capitalized and recorded as an asset.

Classification as Either Inventory or an Intangible Asset

The methods used in practice for accounting for environmental credits stem predominately from the accounting for emissions allowances. In informal and industry-related discussions that took place a number of years ago, the FASB and SEC have indicated that two methods of accounting for emission allowances are acceptable: (1) an inventory model by analogy to ASC 330 and (2) an intangible asset model by analogy to ASC 350.

An entity's use of an accounting model will also vary on the basis of its role within the market.

Connecting the Dots

In practice, entities generally select an accounting model on the basis of the intended use for the environmental credits. For instance, when an entity plans to actively trade its environmental credits, it often accounts for them under an inventory model. Entities need to consider the facts and circumstances of the underlying arrangements and their business objectives related to environmental credits to determine which accounting model is more appropriate to apply.

Entities also need to consider the treatment of such credits in the income statement and statement of cash flows. For example, we would generally expect that environmental credits accounted for as inventory would be expensed as a cost of goods sold when "used" or traded. Further, under an inventory model, we would usually expect the activity related to environmental credits to be reflected as cash flows from operations within the statement of cash flows.

If an entity uses the inventory model, it also needs to consider the cost capitalization process. ASC 330-10-30-1 states:

> The primary basis of accounting for inventories is cost, which has been defined generally as the price paid or consideration given to acquire an asset. As applied to inventories, cost means in principle the sum of the applicable expenditures and charges directly or indirectly incurred in bringing an article to its existing condition and location. It is understood to mean acquisition and production cost, and its determination involves many considerations.

Buyers of environmental credits need to use judgment to determine which costs associated with obtaining the credits should be capitalized.

Amortization Under an Intangible Asset Model

While entities that participate in compliance and voluntary programs may use an intangible asset model to account for environmental credits, some may not strictly apply the recognition and measurement guidance under that model. For instance, entities that use an intangible asset model may or may not record subsequent amortization for the environmental credits.

Connecting the Dots

Environmental credits can be finite-lived (e.g., RECs typically have a useful life of 18 months) or infinite-lived (e.g., carbon offsets have a "vintage year" that represents the year in which the emissions were offset; however, they do not have an expiration date). Strictly speaking, under an intangible asset model, an amortization expense

is required for finite-lived assets. However, some have observed that environmental credits are nonwasting assets. That is, if an environmental credit represents the removal of one MTCO2e, regardless of the credit's age or market value, an entity can use it to offset one MTCO2e to satisfy voluntary or compliance goals. Accordingly, entities will need to evaluate whether amortization of certain environmental credits is appropriate and, if so, the amortization method to use.

Note that we have observed that a number of entities do not record amortization for finite-lived environmental credits. We believe that such an approach is acceptable in certain circumstances.

Impairment Considerations

While some entities may subject environmental credits to the appropriate impairment or lower-of-cost-or-market evaluation, others may believe that an evaluation of impairment is not necessary. Entities in the latter group may believe that their approach is justified because the intended benefits of the environmental credits do not diminish until the credits are consumed (e.g., used to offset emissions). Therefore, these entities may believe that it is appropriate to expense the full cost of their environmental credits upon use (e.g., retirement with the relevant regulatory agency or registry).

However, other entities believe that the fact that buyers are willing to pay different amounts for different types of credits indicates that the credits' value is not based solely on the ability to offset a fixed quantity of emissions. Such entities note that characteristics such as, but not limited to, the type of project from which the credit was generated, the location of the project, the vintage year of the credit, and the registry verifying the credit may affect the value of credits, both at the time of acquisition and subsequently.

Connecting the Dots

We believe that under both the inventory and intangible asset models, entities should subject environmental credits to the applicable impairment method. The recognition of impairment adjustments under these models is intended to reflect changes in the utility and expected recoverability of the underlying asset.

In a manner similar to the concerns about amortization, some may believe that there are challenges associated with implementing an impairment model. These challenges stem from an entity's intended use for environmental credits and the credits' "nonwasting" characteristic. For example, if an entity intends to retire its environmental credits, some may argue that impairment write-downs may not appropriately reflect the utility of the asset because, regardless of market value declines, an environmental credit can be used to offset one MTCO2e. However, as previously noted, an entity's intent related to its environmental credits may change over time.

The decision to record an asset for an environmental credit is, as discussed above, based on the guidance in FASB Concepts Statement 8, Chapter 4, and specifically on the potential for generating net cash inflows. Entities should consider projected cash inflows, market values, and other factors, as applicable, when determining an appropriate impairment method.

In preparing an impairment analysis, entities should consider whether the environmental credits are part of a buffer pool. In general terms, a buffer pool is composed of a percentage or fixed number of environmental credits that are held in a "reserve." Such a reserve can give the buyer/holder assurance that any loss or damage to the project that produces the credits (e.g., because of a fire related to a forestation project) will not destroy the credits' value because the losses will be "covered" by retiring credits in the buffer pool. The number of environmental credits put aside as "buffer credits," if any, is often determined by the project risk or a set percentage

required by the certification body or registry. If a loss or damage event occurs, the existence of buffer credits may eliminate or reduce the actual loss for the holder of the environmental credits and, therefore, impairment might not be immediately necessary or may be mitigated.

Entities should monitor such indicators, when available, to apply the appropriate impairment model. In addition, market intelligence reports may also represent a useful data point to assess macroeconomic factors that may affect the fair value of environmental credits in certain markets, geographies, or project types.

Entities should consider all relevant data and characteristics, when available, to apply the appropriate impairment model.

Producers of Environmental Credits

Generally, in a manner similar to that of a user, a producer applies either the inventory or intangible asset model when accounting for environmental credits; however, there is diversity in practice. In some circumstances, environmental credits can be an output from a producer's operations to generate clean energy or produce sustainable goods. Producers that elect to account for environmental credits under an inventory model sometimes allocate a portion of production costs to the environmental credits. Other producers conclude that no incremental costs are incurred for generating such environmental credits and, thus, do not allocate any costs to them.

Connecting the Dots

ASC 330 defines the cost of inventory as "expenditures and charges directly or indirectly incurred in bringing an article to its existing condition and location." Producers that elect to account for environmental credits under an intangible asset model generally expense all associated production costs as incurred because they consider the environmental credits to be internally developed intangible assets. In determining which, if any, costs to allocate and capitalize, entities need to consider the accounting model they selected for environmental credits, the nature of the costs incurred related to the creation of the credits, and their own specific facts and circumstances.

Liabilities for Environmental Credits

Some entities participating in a compliance program only record a liability associated with their emissions if the actual emissions for a given period exceed the environmental credits an entity holds (i.e., an entity would need to acquire more environmental credits to satisfy its obligation). However, some compliance program participants may use a model in which a liability is recorded on the basis of an entity's total emissions. Under such a model, the "gross" liability associated with an entity's carbon emissions is based on the cost of acquiring the required allowances and an asset is recorded for the environmental credits held by the entity on the basis of the acquisition cost of any allowances purchased.

Investment in Carbon Credit Projects

Entities frequently enter into agreements with carbon-offset project developers before a project is fully developed or has generated verified carbon offsets available for purchase on a registry. In such scenarios, the investing entity often provides an up-front cash payment to a carbon credit developer and, as a return for the payment, obtains the right to receive and resell a defined portion of the future carbon credits generated yearly by the project. When such credits are issued, the entity can then resell the carbon credits received to other third parties looking to offset their emissions or buy carbon credits for other purposes. The investing entity may also share a portion (determined by the contract) of the consideration it receives with the project developer, and any difference between the total consideration

received and the amount shared with the project developer is often retained by those entities and will reduce the up-front payment balance that the project establisher "owes" to the investing entity. In these types of arrangements, the project developer is often not required to deliver a minimum number of carbon credits; however, if, by the end of the contract term, there are not enough carbon credits generated and resold by the entity to fully offset the up-front payment balance, the remaining portion of the up-front payment is returned to the investing entity without interest. There are different variations for these types of arrangements, and terms and conditions can differ on a case-by-case basis.

Connecting the Dots

When entering into an agreement involving a carbon-offset project, the investing entity needs to carefully evaluate the facts and circumstances of the arrangement and consider the accounting implications — such as how any up-front payment should be accounted for, whether there is a financial instrument, whether there is a derivative, what are the consolidation implications, whether revenue guidance would apply and, if so, whether the revenue should be recorded gross or net.

Revenue — ASC 606 Versus ASC 610

Because there is currently no accounting model that specifically applies to environmental credits, entities that sell such credits may have different approaches to classifying the sales. Some entities may classify the proceeds obtained from the sale of environmental credits as revenue, while others may not.

Connecting the Dots

ASC 606 applies to all contracts with customers as defined by the standard, except those that are within the scope of other topics in the FASB Codification. Entities should evaluate whether the sale of an environmental credit is to a customer to determine whether the transaction should be accounted for as revenue under ASC 606 or as a sale of a nonfinancial asset under ASC 610-20. In ASC 606, a customer is defined as a "party that has contracted with an entity to obtain goods or services that are an output of the entity's ordinary activities in exchange for consideration." Therefore, an entity that enters into a transaction to sell an environmental credit will need to determine whether it is doing so as part of its ordinary activities and, if so, required to record such transaction as revenue. An important part of the analysis will be how the entity initially recorded the asset and why it chose the applicable model, as described further below. For example, an entity may anticipate a growing demand for carbon offsets and stockpile credits for potential profits. Because the entity intends to sell the credits in the future as part of its ordinary activities, it elects to record them under the inventory model; therefore, the sale of such credits is likely to be within the scope of ASC 606 and should be recorded as revenue. By contrast, if an entity does *not* intend to resell credits for profit and instead elects to record the credits as intangible assets, the sale of such credits may not be in the ordinary course of business and may not meet the criteria to be recorded as revenue.

Principal-Versus-Agent Considerations

An entity may engage with third parties, such as brokers, to assist the execution of transactions to acquire environmental credits or to provide a matchmaking service between buyers and sellers. In such situations, the entity facilitating the sale of the credits must consider whether it is acting as a principal or an agent with respect to the underlying credit being transferred. For environmental credit transactions involving multiple parties, an entity should evaluate the factors in ASC 606-10-55-36 through 55-40 in the same manner as it would evaluate other contracts with customers. Because environmental credit brokers (1) often do not take legal title or control of the underlying environmental credit before transferring it to the buyer and (2) facilitate purchases on the basis of the buyer's

instructions, many such entities that facilitate the sale and purchase of credits are acting as agents in the transaction rather than as principals. However, an entity facilitating the sale or purchase (or both) of environmental credits should evaluate the nature and terms of the specific arrangement to determine whether it has the "ability to direct the use of, and obtain substantially all of the remaining benefits from," the credit, in accordance with ASC 606-10-25-25. For example, an entity may be a principal if it has arrangements with carbon-offset projects or developers to purchase a minimum number of credits that can be used to fulfill agreements with any buyer or an entity may be a principal in the arrangement if the buyer requires the entity to procure a sufficient number of environmental credits to offset a percentage of a buyer's emissions, and the entity has the discretion to choose from which source or project to obtain those credits and is primarily responsible for fulfilling the credits with the buyer.

Note that the determination of whether an entity is acting as principal or agent depends on the specific facts and circumstance and requires judgement in consideration of the guidance in ASC 606-10-55-36 through 55-40.

Environmentally Friendly Products and Services

Entities may enter into revenue arrangements for environmentally friendly or bundled products and services. These arrangements may involve the transfer of a "green" or "clean" good or service and can come in a variety of forms, such as a claim that the product or service is carbon neutral, or involve the purchase, transfer, or retirement of a credit to offset the emissions generated during the lifecycle of the good or service. In some instances, the seller may have already purchased environmental credits and offer potential customers the opportunity to retire such credits on their behalf or to transfer the credits to customers along with the transfer of other goods or services. In other instances, the seller may purchase environmental credits in connection with transactions.

A product or service for which the related carbon emissions have already been offset by the seller may be identical to the "dirty" version of that product or service, and the only distinction may be that its climate impact was offset by the seller. In the absence of accounting guidance for environmental credits (let alone for environmental credits bundled with other products and services), entities have raised questions about the appropriate accounting model for these types of transactions.

Connecting the Dots

When entering into agreements involving environmentally friendly products and services, entities should determine whether they are (1) buying or selling a separate asset in addition to the underlying good or service or (2) buying or selling a single good or service, perhaps at a higher cost in light of environmentally friendly activities. In addition, sellers of environmentally friendly bundled products or services should determine whether they have performance obligations for promises to their customers as part of their environmental strategies. If so, the entities should assess such performance obligations to determine whether they are distinct from other performance obligations in the contract. Performance obligations related to environmentally friendly activities may present questions regarding the timing of revenue recognition, regardless of whether such performance obligations are distinct from other performance obligations in the contract.

Timing of Expense

Some entities immediately retire environmental credits upon purchase and therefore do not record such credits as assets. Other entities may announce their intention to use or offset their environmental credits for sustainability reporting purposes but not formally retire them,

giving rise to questions regarding the appropriate time at which they should expense assets recorded for environmental credits.

Connecting the Dots

Generally, an entity derecognizes an environmental credit once that credit is officially retired with the applicable agency or registry and used to offset the entity's current emissions to demonstrate compliance with mandatory or internally set goals.

Although an entity may publicly announce its intention to use an environmental credit, the credit is not considered officially "retired" until a request is submitted to the applicable agency or registry and subsequently marked as retired and restricted from further trading. Further, since an entity's intent related to its environmental credits can change over time, until an environmental credit is irrevocably retired, it still represents a legal right that can be transferred.

We believe that the guidance in ASC 606 that describes the circumstances in which an asset has been transferred may be helpful in an entity's evaluation of when to derecognize an environmental credit.

FASB Project on Environmental Credits

While the FASB has considered addressing the accounting for environmental credits on several occasions beginning in 2003, it has yet to finalize a project on this topic.

In June 2021, the Board issued an invitation to comment to seek broad stakeholder feedback on its future standard-setting agenda, particularly pertaining to emerging areas of financial reporting. In the invitation to comment, the FASB specifically requested input on the accounting requirements for transactions related to ESG-related matters and whether they were unclear or needed improvement. Respondents commented on the accounting for environmental credits and highlighted concerns related to the lack of specific authoritative guidance on the accounting and disclosure requirements for environmental credit programs. Overall, the responding stakeholders expressed concerns about the expanded use of environmental credits under both compliance and voluntary programs and noted that the FASB should prioritize improving clarity related to the appropriate accounting for environmental credits to prevent further diversity in practice, particularly as the focus on ESG-related matters increases.

In addition to issuing the invitation to comment, the Board performed outreach to better understand how various entities currently account for environmental credits. Through this outreach, the Board observed significant diversity in practice among users and producers of environmental credits as well among entities operating in voluntary and compliance programs.

In response to stakeholder feedback on the invitation to comment and the results of its outreach, the FASB decided in May 2022 to add a project to its technical agenda to address the recognition, measurement, presentation, and disclosure of environmental credits that are legally enforceable and tradable. The project is also expected to address the accounting for users and producers of environmental credits and participants operating in compliance and voluntary programs. Board members noted that financial statement consistency will benefit users and that activity within the environmental credit market will only continue to increase, making this an opportune time for standard setting.

The FASB staff expressed a desire to explore other potential models that would be more representative of the unique nature of environmental credits and the underlying economics of transactions involving them. Such models could include fair value accounting or the creation of a new accounting model that may reside outside of existing GAAP.

SEC Climate-Related Disclosures

As noted previously, the SEC is increasingly focusing on registrants' climate-related disclosures. This section discusses the SEC staff's comments on climate-related disclosures and the Commission's March 2022 proposed rule on this topic.

SEC's Comments on Climate Change Disclosures

In 2010, the SEC issued an interpretive release[17] that identified four climate-related topics that public companies should consider when assessing what information to include in their filings under existing SEC disclosure requirements:

- The impact of legislation and regulations.
- International accords.
- Indirect consequences of regulation or business trends.
- Physical impacts of climate change.

In February 2021, then SEC Acting Chair Allison Herren Lee issued a statement directing the Commission's Division of Corporation Finance (DCF) to increase its focus on climate-related disclosures when reviewing public-company filings, including assessing the extent to which public companies have provided information that is consistent with the SEC's 2010 interpretive release. In a manner consistent with this directive, in September 2021, the DCF (1) began issuing comments to companies in various industries and (2) published a sample letter to companies regarding climate change disclosures. The letter, which served as an early warning to registrants that had not yet received any company-specific comments, highlights guidance from the 2010 interpretive release and contains sample comments that the SEC staff may provide to a registrant. The sample comments primarily focus on climate-related disclosures within the business, risk factors, and MD&A sections of a registrant's filings. The staff has also inquired about voluntary disclosures in a registrant's sustainability report and whether such information would be material for disclosure within the registrant's SEC filings.

During 2021, approximately 35 registrants received company-specific climate-related comment letters regarding their disclosures in 2020 annual reports and subsequent quarterly reports. The comments also contained inquiries about whether registrants would need to make material capital or operating expenditures to honor climate-change mitigation commitments, such as reducing GHGs.

In their responses to the comment letters, many registrants stated that (1) specific climate-related disclosures mentioned in the comments would not be material to their business, (2) climate-related disclosures and risk factors were already incorporated into their existing disclosures, or (3) the information in their corporate social responsibility (CSR) report was intended for a broader audience than users of the SEC filings. In other words, such registrants generally believed that while employees, customers, suppliers, nongovernmental organizations, and governments may use CSR reports, not all the information contained within them is material for disclosure purposes in SEC filings. In nearly all cases, the DCF issued follow-up comment letters principally requesting a more detailed materiality analysis as support for the registrants' initial responses. In some cases, registrants agreed to modify or expand language in future filings, particularly that related to risk factors and, to a lesser extent, MD&A.

Beginning in August 2022, the DCF began to publicly release company-specific comment letters and responses related to climate disclosures in 2021 annual reports and subsequent quarterly reports. The comments issued in 2022 are largely consistent with those issued in 2021 and the sample letter. For more information, see Section 3.1.5 of Deloitte's Roadmap *SEC Comment Letter Considerations, Including Industry Insights*, which includes sample comments from the SEC Staff.

[17] SEC Interpretive Release No. 33-9106, *Commission Guidance Regarding Disclosure Related to Climate Change*.

Many registrants may take a fresh look at the climate-related disclosures in their SEC filings as a result of the SEC's comments. As part of registrants' evaluation, they may wish to determine whether they have appropriate governance, as well as disclosure controls and procedures, related to (1) identifying climate-related risks, opportunities, and associated business impacts; (2) assessing whether climate-related information is material for disclosure in their SEC filings; and (3) ensuring that the information is accurate and complete in their SEC filings. While registrants may separately publish sustainability reports, such reports may not currently be subject to the same extent of disclosure controls and procedures as SEC filings. The evaluation of climate-related disclosures and associated controls and procedures should reflect appropriate governance and oversight from management, including relevant functions such as finance and the board of directors.

SEC's Proposed Rule on Climate Change Disclosures

Under the SEC's March 2022 proposed rule, registrants will be required to provide climate-related disclosures in their registration statements and annual reports. The proposed rule would require a registrant to address the following when disclosing the financial impacts included in the financial statements and related footnote disclosures:

- *Financial impact metrics* — Registrants would be required to separately disclose all negative and positive impacts of (1) climate-related events and (2) transition activities. These disclosures would be required for each affected financial statement line item if, on an aggregated basis, the absolute value of all such impacts (i.e., the absolute value of both negative and positive impacts and for both climate-related events and transition activities) exceeds 1 percent of the related line item. Examples of such impacts include changes to revenue or costs from disruptions, impairment charges driven by climate-related matters (e.g., reductions in cash flow projections as a result of changes to a registrant's business), changes to cash flows from changes in upstream costs, and changes to interest expense driven by climate-linked financing instruments.
- *Expenditure metrics* — Registrants would be required to disclose the total amount expensed for (1) climate-related events and (2) transition activities, as well as the total amount capitalized for such events and activities if they exceed 1 percent of the registrant's total expenditures or capitalized costs, respectively.
- *Financial estimates and assumptions* — Registrants would be required to disclose whether any risks, uncertainties, or other known factors are associated with climate-related events or transition activities that may affect estimates and assumptions in the financial statements.

Outside of the financial-related impacts, the proposed rule would also require registrants to disclose Scope 1, Scope 2, and Scope 3 GHG emissions (if Scope 3 is material or the registrant has established a target or goal based on Scope 3 emissions); climate-related risks and opportunities; climate risk management processes; climate targets and goals; and governance and oversight of climate-related risks.

Further, registrants would have to disclose Scope 1 and Scope 2 GHG emissions irrespective of the impact of offsets. The proposed rule defines a carbon offset as "an emissions reduction or removal of greenhouse gases in a manner calculated and traced for the purpose of offsetting an entity's GHG emissions." Entities that use environmental credits, particularly carbon offsets or RECs, in their climate-related business strategy would have to disclose information about such use.

The SEC's proposed rule would also require a registrant to disclose whether it has established any climate-related targets and goals and, if so, how it intends to achieve those targets and goals, including the role of offsets or RECs. The proposed rule would also require disclosure of how much of an entity's progress toward climate targets or goals has been attributable

to environmental credits, the source and cost of such credits, a description of the related underlying projects, and any registry or other authentication of the environmental credits. The disclosures would reflect the short-term and long-term risks associated with such progress, including the risks that the availability or value of carbon offsets or RECs could be curtailed by regulations or changes in the market.

For further details on the SEC's proposed rule, see Deloitte's March 29, 2022, *Heads Up*.