ISDA® Safe, Efficient Markets

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Accounting for Carbon Credits: Latest Developments and Emerging Challenges

CONTENTS

INTRODUCTION

This paper updates and extends the analysis set out in ISDA's October 2023 paper on accounting for carbon credits[1]. While preserving the original focus on the accounting treatment of voluntary carbon credits (VCCs) and compliance carbon credits (CCCs), it expands the analysis to address emerging issues and reflect important developments in accounting standard setting.

At present, there are no specific International Financial Reporting Standards (IFRS®) accounting standards dedicated to carbon credits, but existing requirements across various standards provide relevant guidance. Under US Generally Accepted Accounting Principles (US GAAP), the Financial Accounting Standards Board (FASB) recently issued an Accounting Standards Update (ASU) dedicated to environmental credits and environmental credit obligations (ECOs). This whitepaper addresses key accounting questions under existing guidance for both CCCs and VCCs[2].

The paper covers accounting considerations for entities that expect to use carbon credits to offset their own emissions, those that will trade these instruments in a secondary market and those that intend to do a combination of both. The paper addresses issues relevant to the application of both IFRS accounting standards and US GAAP, although IFRS accounting standards is the primary focus.

Recent standard setting by the FASB and guidance from the International Accounting Standards Board (IASB) are not fully aligned. ISDA encourages both boards to work together where possible to develop consistent accounting standards for carbon credits under IFRS accounting standards and US GAAP. ISDA recognizes that differences in the boards' definitions of a liability and the potential scope of the IASB's possible future project on pollutant pricing mechanisms (PPMs) may limit these opportunities.

As discussed in this paper, IFRS accounting standards require consideration of both legal and constructive obligations, including whether emissions or other past events have created a present obligation and whether an entity's actions have created a valid expectation that it will fulfil a public commitment. By contrast, Accounting Standards Codification (ASC) 818 focuses on enforceable ECOs arising from regulatory compliance programs. These differences may limit convergence for VCC arrangements or public offsetting commitments and for regulated compliance schemes.

In December 2022, ISDA published the 2022 ISDA Verified Carbon Credit Transactions Definitions and related template confirmations for spot, forward and options contracts to support the trading of VCCs[3]. In parallel, ISDA explored the key legal issues associated with the voluntary carbon market and recommended steps to create greater legal certainty in two whitepapers, published in December 2021[4] and November 2022[5].

[1] Accounting for Carbon Credits, ISDA, October 19, 2023, www.isda.org/2023/10/19/accounting-for-carbon-credits

[2] Compliance carbon credits (CCCs) and voluntary carbon credits (VCCs) are not formally defined in International Financial Reporting Standards (IFRS) accounting standards. At the IFRS Accounting Standards Advisory Forum in July 2024, the Canadian Accounting Standards Board presented its research on carbon credits (agenda paper 6), in which it discusses compliance versus voluntary markets. CCCs are implicitly defined as credits received from or purchased by an entity to satisfy a legal obligation under a governmental emissions trading scheme (slides 3, 20 to 22) and VCCs are used to meet net-zero or other sustainability pledges made by the entity on a voluntary basis (slides, 3, 6, 9 and 31), www.ifrs.org/content/dam/ifrs/meetings/2024/july/asaf/ap6-acsb-carbon-credit-research.pdf

[3] ISDA Launches Standard Definitions for the Voluntary Carbon Market, ISDA, December 13, 2022, www.isda.org/2022/12/13/isda-launches-standard-definitions-for-the-voluntary-carbon-market/

[4] Legal Implications of Voluntary Carbon Credits, ISDA, December 1, 2021, www.isda.org/2021/12/01/legal-implications-of-voluntary-carbon-credits/

[5] The Legal Nature of Voluntary Carbon Credits: France, Japan and Singapore, ISDA, November 22, 2022, www.isda.org/2022/11/22/the-legal-nature-of-voluntary-carbon-credits-france-japan-and-singapore/

As the legal framework continues to develop and VCC markets evolve further, participants will need to have confidence in the accounting framework for the transactions they enter into. This paper supports that objective.

2. EXECUTIVE SUMMARY

Carbon credits have a key role to play in the efforts of governments and businesses around the world to reduce or offset their greenhouse gas emissions. Existing CCC schemes have proven effective in allocating a cost to emitting carbon into the atmosphere and the resulting market mechanisms have led to emissions reductions. More recently, the development of the voluntary carbon markets has enabled firms to trade carbon credits outside of these regulated schemes.

This paper addresses key accounting issues for both VCCs and CCCs. The primary focus is on VCCs, specifically exploring accounting from the perspective of entities that have acquired and hold VCCs, or have entered into contracts to obtain VCCs in the future. In particular, the paper covers accounting by entities that expect to use VCCs for the purpose of offsetting their own emissions, those that will trade VCCs in a secondary market and those that intend to do a combination of both.

For the purposes of this paper, VCCs are considered to be 'ex-post credits', which are credits issued after the underlying emissions reduction or removal has occurred and been verified, rather than 'ex-ante credits', or contractual rights, which relate to reductions or removals expected to occur in the future and give rise to different accounting considerations from those addressed in this paper.

2.1 Accounting for Carbon Credits Under IFRS Accounting Standards

Although there are currently no specific IFRS accounting standards that address the recognition, measurement and derecognition of carbon credits, several existing accounting standards and interpretations of those standards provide relevant guidance. Recent developments demonstrate how this topic is being considered.

The IFRS Interpretations Committee (IFRIC) has published two agenda decisions that provide guidance on accounting for carbon credits, which are discussed later in this paper. Additionally, the IASB has considered accounting for carbon credits across several projects, including its work on PPMs and intangible assets. A decision on whether to add the PPM project, which includes accounting for carbon credits, to the IASB work plan will be made during its next agenda consultation. ISDA encourages stakeholders to respond to the IASB's request for information, which is expected in 2027, in support of including the PPM project in the IASB's work plan.

The accounting outcomes described in this paper vary depending on how the credits are obtained, the purpose for which they are held and whether a liability is recognized. For VCCs acquired and held by an entity, the first question is whether the credit gives rise to an asset under the IFRS Conceptual Framework (CF) for Financial Reporting. Where it does not, the acquisition cost is recognized as an expense. Where it does, the credit may be accounted for as an intangible asset under International Accounting Standard (IAS) 38, or as inventory under IAS 2, if it is held for sale in the ordinary course of business, consumed in producing goods or rendering services, or held by a commodity broker-trader. Those classifications can produce different subsequent measurement outcomes, including 'cost less impairment', 'lower of cost and net realizable value', 'fair value less costs to sell' for qualifying broker-traders, or, rarely, 'revaluation' under IAS 38, where an active market exists.

Different accounting outcomes may also arise when VCCs are retired or used. A credit acquired and retired immediately to meet a voluntary emissions target may be expensed immediately or recognized and derecognized in the same period if the asset recognition criteria are met. Where credits are used to support carbon-neutral goods or services, judgment is required to determine whether the cost is part of inventory or service fulfilment, or whether the entity has instead incurred an obligation to perform future offsetting activity. Similarly, public commitments to offset emissions or retire credits do not, by themselves, create a liability under IAS 37. A liability is recognized only when there is a present legal or constructive obligation arising from a past event and the other recognition criteria are met.

For CCCs, more established accounting practices have developed because compliance schemes usually include regulatory obligations, surrender mechanisms and, in some cases, government allocations of credits. Depending on the accounting policy selected, entities may apply approaches based on IFRIC 3 by analogy, a 'net liability approach' or a 'government grant approach'. These approaches can result in different timing and measurement of assets, grants, liabilities and profit or loss effects. Contracts to acquire carbon credits in the future may also result in different accounting outcomes, including pre-payments, executory contracts, derivatives within IFRS 9 (Financial Instruments), investments accounted for under IFRS 10, IFRS 11 or IAS 28, leases or revenue arrangements, depending on the contractual rights and obligations.

2.2 Accounting for Carbon Credits Under US GAAP

In May 2026, the FASB issued ASU 2026-02, Environmental Credits and Environmental Credit Obligations (Topic 818) which is discussed later in this paper[2]. The ASU provides specific guidance for the recognition, measurement, presentation and disclosure requirements for all entities that buy, receive or internally generate environmental credits they intend to sell, trade or distribute. This also includes participants in compliance and voluntary programs that result in the creation of environmental credits used for compliance and voluntary purposes and non-governmental creators of environmental credits.

2.3 Additional Considerations

Accounting for carbon credits is an emerging topic and the thinking may evolve further as markets mature, the way entities use carbon credits changes and accounting practices develop, especially with respect to VCCs.

The accounting issues that pertain to issuers of carbon credits can be extensive and fall beyond the scope of this paper. Similarly, any hedge accounting strategies associated with carbon credits and related accounting issues are not covered in this paper.

[6] FASB Issues Standard That Improves Financial Accounting for and Disclosure of Environmental Credits and Environmental Credit Obligation, Financial Accounting Standards Board (FASB), May 19, 2026, www.fasb.org/news-and-meetings/in-the-news/fasb-issues-standard-that-improves-financial-accounting-for-and-disclosure-of-environmental-credits-and-environmental-credit-obligations-424442

3. ACCOUNTING ISSUES FOR VOLUNTARY CARBON CREDITS

3.1 Accounting for VCCs Held Under IFRS Accounting Standards

3.1.1. Specific Considerations for Holders of Carbon Credits

The IFRS CF for Financial Reporting defines an asset as a present economic resource controlled by the entity as a result of past events (CF 4.3). An economic resource is defined as a right that has the potential to produce economic benefits (CF 4.4). The rights represented by VCCs are established by contract (CF 4.7) and an entity has control of a VCC if it can direct its use and obtain the economic benefits that may flow from it – for example, through holding, utilization and retirement or realization through sale (CF 4.20).

For a VCC to represent an economic resource that has the potential to produce economic benefits for an entity, it should entitle or enable the entity to produce cash inflows or avoid cash outflows. As a result, a VCC can be considered an economic resource capable of producing an economic benefit if it can be sold or transferred to a third party, such that the entity will receive cash or other economic resources, or if it can be used to extinguish a liability (CF 4.16(c), (d) and (e)) or reduce it, assuming a liability can be recognized.

If a VCC cannot be sold or otherwise transferred and cannot be used to reduce or extinguish a liability, it may be more difficult to demonstrate that it has the potential to produce economic benefits. In those circumstances, the entity would need to identify another way in which the VCC produces economic benefits. For example, if it can be demonstrated that holding the VCC meets a customer's request for goods or services, the entity proves to be carbon neutral and this enhances the value of those goods or services and supports the entity's ability to generate cash inflows from them (CF 4.16(c)(ii)).

Demonstrating the potential economic benefits of VCCs on that basis is likely to require careful analysis of the relevant facts and circumstances. The entity would need evidence that the carbon-neutral characteristic affects the cashflows generated by the related goods or services. For example, it might need to demonstrate that customers would not be willing to purchase the goods or services unless they were carbon neutral, or would pay a measurably lower price in the absence of the carbon offset.

Even in such instances, it may be difficult to demonstrate that the associated cost is not just a cost of doing business similar to a marketing expense, for example. An additional challenge is raised by the rapid change in expectations from consumers, which vary by geography and industry but are often seen as gradually moving from carbon neutrality achieved via offsetting to more ambitious net-zero targets achieved through the reduction or removal of all greenhouse gases (ie, not just carbon dioxide). In this context, carbon neutrality may not always be perceived by consumers as a differentiating factor that would significantly affect their buying decisions.

For an economic resource to have the potential to produce economic benefits, it is sufficient that the rights associated with that economic resource could produce economic benefits, even if the probability is low (CF 4.14-4.15). However, if the probability of the VCC producing economic benefits is low, it may affect whether the VCC can be recognized as an asset and how it is measured (CF 4.15).

If, based on these factors, it is concluded that the VCC is not an asset for the acquiring entity, the cost of acquiring it will be immediately recognized as an expense. If the VCC is an asset for the acquiring entity (as it satisfies the requirements in the CF), two balance sheet classification and measurement alternatives under IFRS accounting standards are considered:

i. Classifying VCCs as intangible assets under IAS 38 (Intangible Assets), using the cost or the revaluation model (noting that use of the revaluation model is unlikely to be possible at present as it depends on the existence of an active market for VCCs); or

ii. Classifying VCCs as inventory under IAS 2 (Inventories), considering the associated measurement alternatives.

IAS 38.2 explains that the standard should not be applied to intangible assets that are considered to fall within the scope of another standard. IAS 38 should therefore only be applied to VCCs when they do not fall within the scope of another standard. How an entity obtains the credit – for example, whether it is purchased separately in a spot transaction, acquired as part of a broader contract or customer arrangement or generated through the entity's own activities – and its intended use will be relevant in helping to determine the appropriate classification.

Neither IAS 38 nor IAS 2 provide any scope for reclassification between the standards.

The classification and measurement requirements described in this paper are not exhaustive and are based on the current application of the principles in IFRS accounting standards in issuance at the date of this paper.

3.1.2. Specific Considerations for Recognizing Liabilities Related to VCCs

The previous section of this paper outlined the factors to consider when determining whether VCCs meet the definition of an asset. Entities may also need to assess whether a liability should be recognized in relation to VCCs, particularly where voluntary commitments to offset emissions or participate in carbon schemes exist.

Recognizing a liability under IAS 37 (Provisions, Contingent Liabilities and Contingent Assets) requires a present obligation (legal or constructive) arising from a past event, a probable outflow of resources and a reliable estimate of the obligation (IAS 37.14). Determining whether a present obligation exists can be complex, especially in the absence of legal enforceability. A thorough assessment of all of the facts and circumstances is essential to support the recognition of any liability.

The following agenda decisions from the IFRIC are relevant to this topic:

- In its July 2022 agenda decision on negative low emission vehicle credits, the committee noted that the existence of a liability depends on an entity's past actions and not on its future actions, which will only determine the means by which the entity settles its present obligation. This liability is measured by reference to the assets and costs required to settle it, taking into account both the assets held by the entity and/or the cost to acquire any additional assets necessary to settle the liability. The committee clarified that an outflow of resources embodying economic benefits occurs when an entity surrenders existing rights as these credits could have been used by the entity for other purposes such as sale to a third party[7]. The decision's relevance for VCCs is that it highlights that they could be separate assets if they can generate economic benefits for the entity separate from settlement of the liability. Where that is the case, they are accounted for separately from the liability – otherwise, they are just part of the measurement of the liability or affect the threshold.

[7] Negative Low Emission Vehicle Credits (IAS 37 Provisions, Contingent Liabilities and Contingent Assets), International Accounting Standards Board (IASB), July 2022, www.ifrs.org/content/dam/ifrs/supporting-implementation/agenda-decisions/2022/negative-low-emission-vehicle-credits-jul-2022.pdf

- In the April 2024 agenda decision, the committee considered whether public commitments to reduce or offset greenhouse gas emissions create constructive obligations. It concluded that such commitments may give rise to constructive obligations, depending on the facts and circumstances, including actions taken to affirm the commitment. However, it also concluded that a provision is only recognized when the entity has a present constructive obligation as a result of a past event, such as actual emissions, and not merely from making the commitment[8].

The agenda decisions are helpful because they focus on the underlying IAS 37 principles that determine when a present obligation exists. In particular, the decisions illustrate the distinction between making a commitment and having a present obligation as a result of a past event, and the need to consider whether the entity's actions have created a valid expectation that it will fulfil that commitment. Those principles are equally relevant when assessing voluntary commitments to offset emissions or retire carbon credits.

Once an entity determines that a present obligation exists, it applies the measurement requirements in IAS 37 to measure the liability as the best estimate of the expenditure required to settle the present obligation at the end of the reporting period (IAS 37.36).

3.1.3. Specific Considerations for Contracts that May Result in the Acquisition of Carbon Credits

Certain factors should be considered for contracts or commitments to acquire carbon credits in the future. Different contractual terms, including payment, exposure, right to returns and settlement structures, may result in a variety of possible accounting alternatives. These alternatives include IFRS 9 (Financial Instruments) classifications (eg, equity investments or debt instruments), classifications driven by control or significant influence, leasing arrangements or treatment as prepayments, executory or revenue contracts. This section considers the potential permutations and the key factors for each alternative, but it is not intended to offer exhaustive guidance.

3.2 IAS 38 and IAS 2: Accounting Considerations for Acquired Carbon Credits

3.2.1. IAS 38 (Intangible Assets)

3.2.1.1. Exploring the Extent to which a VCC Meets the Definition and Recognition Criteria

By its nature, a VCC may meet the definition of an intangible asset according to the criteria outlined in IAS 38.8. For example, demonstrating that it is an 'identifiable non-monetary asset without physical substance' may be supported by the following:

- Identifiable: If each VCC is backed by a credit certificate verified by an independent agency and logged on a registry, such certificates may be tradeable and are normally transferrable. If this is the case, a VCC may meet the requirements in IAS 38.12 in that it is separable and arises from contractual rights;
- Non-monetary: VCCs are not cash or other monetary assets; and
- Without physical substance: VCCs represent the verified offset of a weight (normally a tonne) of carbon or other greenhouse gas and are not tangible.

[8] Climate-related Commitments (IAS 37 Provisions, Contingent Liabilities and Contingent Assets), IASB, April 2024, www.ifrs.org/content/dam/ifrs/supporting-implementation/agenda-decisions/2024/climate-related-commitments-apr-24.pdf

In addition, it is also necessary to assess whether the entity can exert control in accordance with IAS 38.13-16. In this respect, control is evidenced by an entity having the power to obtain the economic benefits the VCC will generate and to restrict the access of others to those benefits. The ability to restrict access is enabled by VCCs being underpinned by certificates and logged on a registry.

In accordance with IAS 38.2, the standard only applies to intangible assets that do not fall within the scope of another standard such as IAS 2. Entities therefore need to assess whether VCCs that satisfy the asset requirements as defined by the IFRS CF fall within the scope of another standard.

For VCCs that do not fall within the scope of another standard, and in accordance with IAS 38.21, an intangible asset should only be recognized if:

- It is probable that the expected future economic benefits that are attributable to the asset will flow to the entity; and
- The cost of the asset can be reliably measured.

VCCs that have been purchased and can be sold may meet both of these recognition criteria. This is reinforced by IAS 38.25, which states that the probability of future economic benefits criteria may always be considered as satisfied for separately acquired intangible assets.

3.2.1.2. Initial and Subsequent Measurement of VCCs Recognized as Intangible Assets

On initial recognition, a VCC that qualifies as an intangible asset within the scope of IAS 38 is measured at cost, provided that the VCC can be recognized as an asset. For a separately acquired VCC, cost is represented by the purchase price. Where a VCC is acquired as part of a broader arrangement, the entity should assess the transaction terms to determine the amount of costs attributable to the VCC and whether other IFRS accounting standards apply.

Subsequently, VCCs recognized as intangible assets will be carried either at cost less any accumulated impairment or, provided an active market exists for the VCCs held, entities may choose to use the revaluation model (IAS 38.74-75). For an active market to exist, there must be publicly observable prices, frequent transactions and the trading of homogenous assets (IAS 38.78). VCCs are not currently homogenous assets, although this may change in the future. The factors to be considered for the existence of an active market under IFRS 13 are discussed later in this paper.

If the revaluation model is applied, after initial recognition, an intangible asset will be carried at a revalued amount, which is its fair value at the date of the revaluation, less any subsequent accumulated amortization and any subsequent accumulated impairment losses. Any upward revaluation that is greater than the value at initial recognition is recognized through other comprehensive income (OCI) and accumulated in equity under the heading of revaluation surplus, rather than recognized in profit and loss (P&L). However, an increase in value will be recognized in P&L if it reverses a revaluation decrease of the same asset previously recognized in P&L. Any decrease in the asset's carrying value is recognized in P&L, although any decrease is recognized in OCI to the extent of any credit balance in the revaluation surplus in respect of the asset. Once the asset is retired or disposed of and therefore derecognized, there is no recycling of the accumulated gain from OCI to P&L (IAS 38.85-87).

For the purposes of applying the revaluation model, fair value must be measured by reference to an active market. VCC markets are still in their infancy and although trading platforms such as the CBL Nature-Based Global Emissions Offset[9] facilitate transactions, this does not necessarily indicate that active markets exist for individual VCCs. It may take time for trading frequency, liquidity and consistency in VCC standards to develop sufficiently for an active market for identical VCCs to exist. Evaluating whether a market is active or not may require significant judgment.

VCCs cannot currently be considered to be homogeneous, which affects the development of VCC markets. The absence of an active market precludes the use of the revaluation model and entities will need to judge whether an active market exists. This will need to be assessed for the different VCCs the entity owns, taking into account the characteristics of the market for that VCC. Further issues to consider around whether an active market exists for VCCs are discussed later in this section.

VCCs recognized as intangible assets fall within the scope of IAS 36 (Impairment of Assets). IAS 36 requires an entity to assess whether, at the end of each reporting period, there are any impairment indicators for an entity's asset. If there are, the standard requires an entity to perform an impairment assessment by determining the recoverable amount of the asset (IAS 36.9), which is the higher of fair value less costs of disposal and their value in use (IAS 36.18). For VCCs with indefinite useful lives, a test for impairment must be carried out on at least an annual basis (IAS 36.10).

IAS 36 requires an impairment assessment to be performed for an individual asset only if it can be demonstrated that it generates cashflows that are largely independent from the cashflows of other assets. For VCCs that can be sold or transferred to a third party, it is generally expected that this is the case and the price that could be obtained on sale or transfer of the VCCs provides relevant evidence for assessing the recoverable amount and testing VCCs for impairment. Where VCCs cannot be sold or transferred to a third party, they are less likely to generate largely independent cashflows. In those circumstances, the entity should consider whether the VCCs contribute to the cashflows of a broader business and assess their value in use at the level of the cash-generating unit (CGU) to which the VCCs belong, in a manner similar to how other assets that do not generate largely independent cashflows are assessed, such as property plants and equipment.

3.2.1.3. Useful Life and Retirement of VCCs Recognized as Intangible Assets

IAS 38 defines the useful life of an intangible asset as:

a) The period over which an asset is expected to be available for use by an entity; or

b) The number of production or similar units expected to be obtained from the asset by an entity (IAS 38.8).

The standard requires an entity to assess whether the useful life of an intangible asset is finite or indefinite (IAS 38.88). An intangible asset with a finite useful life is amortized over its useful life or the number of production units (or similar units) constituting that useful life, whereas an intangible asset with an indefinite useful life is not amortized (IAS 38.89).

VCCs qualifying for recognition as intangible assets will be derecognized when they are retired or sold. Retirement of a VCC is triggered when the holder uses the credit for carbon offsetting purposes. Unlike regulated schemes that have a compliance period (eg, one year) and credits must be retired to offset an emissions liability over that period, VCCs do not give rise to a charge to the P&L merely through the passage of time.

[9] CBL Nature-Based Global Emissions Offset, CME Group, www.cmegroup.com/markets/energy/emissions/cbl-nature-based-global-emissions-offset.html

VCCs retired for immediate use in meeting a present emissions target may be acquired and retired simultaneously. In this case, it may be that no asset is recognized and the cost is expensed immediately. Alternatively, where the recognition criteria are considered to be met, an asset may be recognized and immediately derecognized. Both approaches would result in the same impact on P&L.

With reference to the requirements of the IFRS CF, in most cases VCCs must continue to be capable of generating future economic benefits while they are recognized as intangible assets. If a VCC was initially recognized as intangible on the basis of tradability and that trading market ceases to exist, then the VCC must be expensed immediately.

3.2.2. IAS 2 (Inventories)

3.2.2.1. Classification of VCCs as Inventories

VCCs that satisfy the asset requirements as defined by the IFRS CF may meet the criteria to be recognized as intangible assets, as discussed earlier in the paper. However, IAS 38.3 states: “If another Standard prescribes the accounting for a specific type of intangible asset, an entity applies that Standard instead of this Standard (IAS 38). For example, this Standard does not apply to: (a) intangible assets held by an entity for sale in the ordinary course of business (see IAS 2 Inventories) […]”.

VCCs meet the criteria to be classified as inventories if they are:

a) held for sale in the ordinary course of business;

b) in the process of production for such sale; or

c) in the form of materials or supplies to be consumed in the production process or in the rendering of services (IAS 2.6).

Any VCCs classified as inventories are measured in accordance with the requirements of IAS 2.9 – that is, at the lower of cost and net realizable value, unless the measurement exception for commodity brokers/traders applies.

In the context of VCCs, the key terms to consider are “held for sale in the ordinary course of business” and “materials or supplies to be consumed in the production process or in the rendering of services”, as noted in a) and c) above. As a result, entities need to apply judgment, on the basis of the facts and circumstances specific to their situation, as to whether the VCCs meet the definition of inventories in IAS 2.

IAS 2.6 states that inventories are assets “in the form of materials or supplies to be consumed in the production process or in the rendering of services”. While VCCs are not physically consumed in the same manner as materials or supplies, to this extent, where carbon offsetting has been requested by the customer and therefore is necessary to generating revenues from the sale of goods or rendering of services that are carbon neutral (eg, in the power production industry), there may be an argument that the retirement of VCCs forms part of the process of rendering services or delivering goods, on the basis that they are used in the production process. If the customer requests offsetting, such that the good or service can only be satisfied by offsetting emissions, this will support the VCCs meeting the IAS 2.6 condition to be classified as inventories.

To establish whether the VCCs are consumed or used in the production process, it will be necessary to consider the specific contractual obligations of the entity to the recipient of the goods or services and the point at which the VCC is actually retired to fulfil those obligations. As long as a VCC has not been retired, it remains a separate asset of the entity and would not itself have been used in producing inventory or rendering services. Accordingly, the associated cost of carbon offsetting would form part of the cost of the related inventory only when the VCC is retired as part of producing that inventory or rendering the related service for which the customer has requested carbon offsetting, which the entity has agreed to, and the relevant recognition criteria in IAS 2 are met. Where goods or services are sold with a promise to offset the associated emissions, but the VCC has not yet been retired, offsetting has not taken place.

3.2.2.2. Measurement for Commodity Broker-traders

As an exception to the subsequent measurement approach described above, IAS 2.3(b) indicates that: "this Standard does not apply to the measurement of inventories held by […] b) commodity broker-traders who measure their inventories at fair value less costs to sell. When such inventories are measured at fair value less costs to sell, changes in fair value less costs to sell are recognized in profit or loss in the period of the change".

A broker-trader is defined in IAS 2.5 as: "those who buy or sell commodities for others or on their own account. The inventories referred to in paragraph 3(b) are principally acquired with the purpose of selling in the near future and generating a profit from fluctuations in price or broker-traders' margin".

In applying the measurement guidance to VCCs classified as inventory, a broker-trader may elect to measure VCCs at fair value less costs to sell under IAS 2.3(b), with changes in fair value less costs to sell recognized in P&L, instead of at the lower of cost and net realizable value. The use of the fair value less costs to sell measurement basis is not conditional on the existence of an active market, although the extent of observable market data will affect the robustness of the fair value measurement and the degree of valuation uncertainty.

IFRS accounting standards do not define 'commodities' for this purpose. IAS 2 instead defines commodity broker-traders by reference to their activities, ie, those that buy or sell commodities for others or on their own account, principally with the purpose of selling in the near future and generating a profit from price fluctuations or a broker-trader margin (IAS 2.5). The determination of the fair value less costs to sell in such instances is subject to judgment and applying the requirements of IFRS 13 (Fair Value Measurement).

While there are currently no active markets for VCCs, this does not preclude a VCC from being considered by a broker-trader to be a commodity for the purposes of IAS 2.3(b). In order to apply the IAS 2 commodity broker-trader exception that permits an entity to account for the VCCs at fair value less cost to sell, an entity would need to demonstrate that the relevant VCCs are managed and traded in a manner consistent with commodities (reflecting the requirements of IAS 2.5), that market participants regard them as sufficiently interchangeable or fungible (this is not currently the case for VCCs), and that fair value less cost to sell can be measured reliably using the principles in IFRS 13. Where trading activity is limited, it may be more difficult to conclude that VCCs have the characteristics of commodities held by broker-traders.

In practice, VCCs are often managed in a similar way to commodities by broker/trading entities, where some are used for trading purposes and others as a resource to reduce their emissions. Depending on the entity's business model, VCCs may therefore fall within the scope of IAS 2 or IAS 38 and the basis for this classification and the measurement approach should be carefully assessed and documented by the entity.

3.3 IASB Developments Relevant to Accounting for Carbon Credits

The IASB has placed a project on PPMs, which includes accounting for carbon credits, on its reserve list. A decision on whether to add this to the work plan is expected to be made during the next agenda consultation[10]. The IASB will issue a request for information, allowing stakeholders to provide input on the priority of this project. ISDA encourages stakeholders to respond to the request for information in support of including the PPM project in the IASB's work plan.

Separately, the IASB is also exploring a review of the intangible asset requirements in IAS 38. As part of this exercise, the IASB may consider in the later streams of work (depending on what is decided in the IASB's next agenda consultation) the accounting for intangible assets held for investment, based on the intended use or purpose of holding an asset, and using test cases that could include some carbon credits and cryptocurrencies[11].

3.4 IFRS 13 (Fair Value Measurement)

The fair value of VCCs is expected to be derived from VCC trading markets, where they exist. The likelihood of active markets developing for identical assets appears low at present, due to the specific characteristics of different VCCs. An assessment needs to be made of the volume and frequency of trading to determine whether any VCC trading market meets the necessary criteria to be considered an active market.

An active market is one "in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis" (IFRS 13 Appendix A). As IFRS 13 does not define explicit thresholds for frequency or volume, market participants will need to determine whether they have sufficient trading data to support the existence of an active market for VCCs in their region. This may require significant judgment.

In the absence of an active market for identical VCCs, entities will need to apply the guidance in IFRS 13 to arrive at a fair valuation. This includes:

- Applying the fair value hierarchy in IFRS 13, including using a quoted price in an active market for an identical asset, where it exists (IFRS 13.63);
- Maximizing the use of observable inputs and minimizing the use of unobservable inputs (IFRS 13.61); and
- If identical assets do not exist, an entity can use prices for similar assets that are traded in an active market as a starting point for measuring fair value. This results in a fair value measurement that would be categorized at a lower level of the fair value hierarchy (IFRS 13.79). Fair value measurements that rely on less observable inputs and fall within lower levels of the fair value hierarchy require more extensive disclosures under IFRS 13, such as disclosing sensitivity to changes in unobservable inputs (IFRS 13.93(h)).

In general terms, if in future the ability for a VCC to be readily convertible into cash (eg, the existence of a spot market with daily quoted prices) would indicate the existence an active market. However, given formalized VCC trading markets are not yet widely established and standardized offsetting quality requirements for trading purposes have not yet been developed, it is possible that separate active markets may develop with different fair values for the same VCCs. A holder of VCCs will need to apply the guidance in IFRS 13.16 and identify its 'principal market' (the market with the greatest volume and activity for the quality of carbon offsets it holds). In the absence of a principal market, the entity identifies the most advantageous market it can access for the VCC, taking into account all available information. In identifying the principal or most advantageous market, it is not necessary that the value of VCCs are observable or that there is an active market for VCCs.

The requirements for identifying the principal or most advantageous market suggest that VCC fair value measurement will be influenced by the development of all VCC markets with sufficient volume and frequency of trading to which the entity has access.

3.5 Accounting for Sales of VCCs

A VCC classified as an intangible asset is derecognized due to a sale, when the entity no longer controls the economic benefits associated with the VCC, or when no future economic benefits are expected from its use or disposal. When the value of sales proceeds for the VCC differs from the carrying value, a net gain or loss is recognized in P&L.

VCCs classified as inventories should be derecognized when they are sold or retired. Unlike intangible assets, the sale of inventory in the ordinary course of business would be recognized as revenue in P&L.

3.6 Disclosure Considerations for VCCs

Entities applying IAS 38 and IAS 2 to account for carbon credits must disclose their accounting policies in relation to those standards and apply the relevant disclosure requirements in those standards, subject to materiality considerations. Entities should also consider whether to provide additional disclosures when compliance with the specific requirements in IFRS accounting standards is insufficient to enable users of financial statements to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance (IAS 1.31).

3.6.1 Disclosures Under IAS 38

Where VCCs are recognized as intangible assets, the disclosure requirements in IAS 38.118-128 need to be applied.

These include:

- the gross carrying amount and accumulated amortization or impairment losses;
- the line item in P&L in which any impairment is included; and
- a reconciliation of the carrying amount at the beginning and end of the period, showing additions, disposals, retirements, impairment losses, reversals and other changes.

If the revaluation model is applied, the entity should disclose:

- the effective date of the revaluation;
- the carrying amount that would have been recognized under the cost model;
- the revaluation surplus and movements in that surplus; and
- the assumptions relevant to determining fair value.

Given the need for an active market to apply the revaluation model under IAS 38, disclosures may also be needed to explain the judgment made in concluding that such a market exists for the relevant VCCs.

Additionally, for VCCs carried under the revaluation model, the applicable fair value disclosures under IFRS 13 would need to be provided.

In either case (ie, both under the cost model and the revaluation model), the relevant IAS 36 disclosures must be provided as well, including impairments recognized in the period for the VCCs (or the CGU to which they belong).

3.6.2 Disclosures Under IAS 2

Where VCCs are recognized as inventory, the disclosure requirements in IAS 2.36 apply.

These may include disclosure for VCC inventories, including:

- the cost formula applied;
- the total carrying amount of VCC inventories and the carrying amount by classification where relevant;

the amount of VCC inventories recognized as an expense during the period, including amounts recognized on sale, retirement or consumption;

- any write-downs to net realizable value and reversals of previous write-downs; and
- the circumstances or events that led to those write-downs or reversals.

If VCCs are held by a commodity broker-trader and measured at fair value less costs to sell under the IAS 2 commodity-broker exception, the entity should also disclose under IAS 2.36 the carrying amount of those inventories measured on that basis and consider whether additional information is necessary to explain the effect of fair value changes recognized in P&L.

The entity should also provide the IFRS 13.91-93 disclosures necessary to help users understand:

- the valuation techniques and inputs used;
- the level of the fair value hierarchy within which the measurement is categorized; and
- the extent to which the measurement relies on observable or unobservable inputs.

For VCCs, those disclosures may be particularly important where there is no active market, where pricing is based on similar credits rather than identical credits, or where significant adjustments are made for characteristics such as project type, vintage, geography, verification standard, permanence, additionality or co-benefits. If significant unobservable inputs are used, the entity should provide the additional IFRS 13 disclosures for Level 3 measurements, including:

- quantitative information about significant unobservable inputs ;
- sensitivity to changes in those inputs; and

- a reconciliation of opening and closing balances, where applicable.

All disclosures should be tailored to the entity's facts and circumstances and be proportionate to the materiality of the VCCs to the entity. Where appropriate, the disclosures should explain the judgments made in classifying VCCs as inventory or intangible assets, the purpose for which the VCCs are held, the measurement basis applied and how retirements, sales or other consumption of VCCs are reflected in P&L and the statement of financial position.

Disclosure may also be needed of the significant judgments made, estimation uncertainty, including assumptions about future sale prices, net realizable value, fair value, active markets, useful lives, impairment indicators and the expected timing of retirement or sale.

3.6.3 ESMA Guidance

The European Securities and Markets Authority (ESMA) has provided recommended disclosures of what may be included in the financial statements to enable users of financial statements to understand the impact of carbon allowances[12]. The ESMA guidance focuses on CCCs, but it is helpful for entities to consider in relation to VCCs. Disclosures should be tailored to the facts and circumstances of the entity and considered in light of materiality.

Recommended disclosures include, but are not limited to:

- Accounting policy information: Entities should disclose the accounting policies applied to the recognition, measurement and presentation of carbon credits (IAS 1.117-117E). Entities should also disclose significant judgments made in applying those policies (IAS 1.122–124). This includes if significant judgments have been made to determine whether these are CCCs or VCCs – eg, assessing whether the credits arise from, or are required to settle, a legally enforceable compliance scheme; whether the entity has a present obligation linked to emissions or other regulated activity; whether the credits are held for voluntary offsetting, trading or regulatory compliance purposes; and whether any transferability, surrender or retirement restrictions affect their nature and use. In addition, any significant judgments made to support the recognition of assets. (IAS 1.117–124).

- Sources of estimation uncertainty: Where carbon credits are measured using internal assumptions, entities should disclose the nature of those assumptions and sensitivity of carrying amounts to the method, assumptions and estimates, including reasons for the sensitivity (IAS 1.125–133).

- Standard-specific disclosures: Entities should provide the disclosures required by the relevant IFRS accounting standards applied to carbon credits, including IAS 2 and IAS 38.

  Disclosure of gains or losses: Material gains or losses recognized on the sale of carbon credits should be presented or disclosed separately (IAS 1.85 and IAS 1.86 to assist users in understanding the financial performance achieved).

- Non-cash transactions: Where carbon credits are obtained through non-cash transactions, such as government grants or exchanges, entities should disclose the nature and terms of these transactions in a manner that provides all relevant information about these transactions and activities (IAS 7.43).

[12] Clearing the smog: Accounting for Carbon Allowances in Financial Statements, European Securities and Markets Authority, October 8 2024, www.esma.europa.eu/sites/default/files/2024-10/ESMA32-483087481-68_Statement_Clearing_the_smog_-_Accounting_for_Carbon_Allowances_in_the_FS.pdf

- Impairment testing assumptions: Where carbon credits are included in the impairment testing of CGUs, entities should disclose the key assumptions used in determining value in use, including carbon pricing assumptions (IAS 36.134). Where relevant, such disclosures may need to be accompanied by sensitivity analysis.

4. ACCOUNTING ISSUES FOR COMPLIANCE CARBON CREDITS

Due to the nature of CCCs, which are granted and then used to settle an emissions obligation over a compliance period, meeting the definition of an asset and a liability requires less judgment than is required for VCCs. However, various accounting standards can be applied to CCCs by analogy and therefore distinct accounting alternatives have arisen.

4.1 Previous IFRIC 3 Guidance on Emissions Trading Schemes

Previous attempts have been made by the IFRIC and the IASB to formulate guidance on how emissions trading schemes (ETSs) might be accounted for. IFRIC 3 (Emission Rights) was issued in 2004, but the interpretation met with significant resistance and was withdrawn in 2005.

ETSs are mandatory regulatory schemes that require participating entities to surrender allowances or credits for emissions made during a compliance period. Cap-and-trade programs are a common type of ETS. In these programs, a regulator sets an overall cap on permitted emissions, issues or auctions allowances up to that cap and allows participants to trade those allowances. Allowances or credits that arise in, or are held or used to, satisfy obligations under such legally enforceable schemes are CCCs. By contrast, VCCs are generally acquired and retired voluntarily outside a legally enforceable compliance scheme.

Until the IASB completes a new project on ETS, entities have the option to either apply IFRIC 3, by virtue of it being an appropriate interpretation of the existing IFRS accounting standards, or to develop their own accounting policies for compliance schemes, based on the hierarchy of authoritative guidance in IAS 8 (Accounting Policies, Changes in Accounting Estimates and Errors). Entities may consider IFRIC 3 (Emission Rights), notwithstanding that it was withdrawn, to the extent it provides insight into an interpretation of existing IFRS accounting standards. IFRIC 3 addressed the accounting for emission rights arising in an ETS on the basis that those rights were intangible assets within the scope of IAS 38; it did not consider whether cap-and-trade emission rights could instead meet the definition of inventory under IAS 2. Consequently, applying IFRIC 3 by analogy does not preclude an IAS 2 classification where it is supported by the entity's facts and circumstances.

IFRIC 3 took the view that a cap-and-trade emissions rights scheme does not give rise to a net asset or liability, but rather to various components that are to be accounted for separately, namely:

a) For the carbon credits themselves: carbon credits arising from the cap-and-trade program, whether allocated by government or purchased, were to be regarded as intangible assets and accounted for under IAS 38, as described in the previous section on VCC accounting;

b) For the issue of credits from a government at less than fair value: the difference between the amount paid and fair value was a government grant that must be accounted for under IAS 20 (Accounting for Government Grants and Disclosure of Government Assistance). Initially, the grant was to be recognized as deferred income in the statement of financial position and subsequently recognized as income on a systematic basis over the compliance period for which the carbon credits were issued, regardless of whether they were held or sold;

c) For the liability for the obligation to deliver allowances equal to emissions that have been made to the government: As emissions are made, a liability was to be recognized as a provision that falls within the scope of IAS 37. The liability was to be measured at the best estimate of the expenditure required to settle the present obligation at the reporting date.

This would usually be the present market price of the number of allowances required to cover emissions made up to the reporting date.

The withdrawal of IFRIC 3 was largely driven by a number of accounting mismatches arising from its application, including:

- A measurement mismatch between the assets and liabilities recognized in accordance with IFRIC 3;
- A mismatch in P&L geography where the gains and losses on those assets are reported; and
- A possible timing mismatch because allowances would be recognized when they are obtained, whereas the emission liability would be recognized during the year in which it is incurred.

As a result of these mismatches, IFRIC 3 has generally not been applied voluntarily in practice. Instead, observed accounting practice has developed around a range of alternative approaches to accounting for CCCs, including net liability approaches and government grant approaches.

4.2 Net Liability Approach

Two 'net liability' approaches have gained acceptance in practice to account for cap-and-trade schemes, particularly where allowances are granted by a government or regulator and the entity uses those allowances to settle emissions obligations.

Key elements of the approaches are as follows:

1. The 'net liability/carrying value' approach: under this approach, the allowances (or emission rights) received by way of a grant are recorded at a nominal amount (in most cases nil) and purchased rights are initially recognized at cost. The liability component is the best estimate of the cost to settle the liability, taking into account the cost of any allowances currently held (both granted and purchased);

2. The 'net liability/reimbursement rights' approach: under this approach, the allowances (or emission rights) received by way of a grant are also recorded initially at a nominal amount (in most cases nil) and purchased rights are also initially recognized at cost, but the entity remeasures (to fair value) the emission rights (or allowances) that it holds and can use to settle the liability up to the amount of emission made in the period. The liability component is measured as the best estimate of the cost to settle the liability, taking into account the cost of any allowances currently held (and remeasured to fair value).

These approaches apply IAS 37, which requires that a provision can only be recorded if the recognition criteria are met, including that the entity has a present obligation as a result of a past event, it is probable that an outflow of economic resources will be required to settle the obligation and a reliable estimate can be made (IAS 37.14). In this scenario, the 'obligating event' is the emission itself.

4.3 Government Grant Approach

Under this approach, emission rights granted by the government are recognized by an entity initially at fair value, with a corresponding government grant recognized in the statement of financial position. The government grant element is subsequently recognized as income in accordance with the requirements of IAS 20.

This approach largely follows the previous liability guidance under IFRIC 3. However, rather than measuring the liability for the obligation to deliver allowances over the allocation at the present market price of those allowances, the liability is measured by reference to the amounts recorded when those rights were first granted.

5. SPECIFIC IFRS ACCOUNTING STANDARDS ISSUES FOR CONTRACTS THAT WILL OR MAY RESULT IN THE ACQUISITION OF CARBON CREDITS

As the carbon market continues to develop, it seems inevitable that entities will acquire credits through methods other than spot price acquisitions. This section explores specific issues for holders of contracts that will or may result in the acquisition of carbon credits in the future. As in the rest of the paper, it refers to ex-post credits, which are credits issued after the underlying emissions reduction or removal has occurred and been verified, rather than ex-ante credits or contractual rights, which relate to reductions or removals expected to occur in the future. As there are a range of ways in which these contracts are arranged, the resulting accounting issues vary according to the contractual features of any arrangement. Holders of contracts to acquire carbon credits will need to carefully assess the contractual terms to determine how the nature of the arrangement influences the accounting treatment.

The various requirements to account for contracts that will or may result in the acquisition of carbon credits in the future are outlined below, alongside the corresponding contractual features that could drive that treatment. This list is not exhaustive, and the holder will need to consider the relevant facts and circumstances to determine the most appropriate accounting treatment.

Scenario	Applicable Accounting Requirements
The holder of the contract makes a cash advance to a provider that commits to deliver carbon credits to the holder in future.	Pre-payment
The holder commits to pay a fixed amount per carbon credit to the provider on delivery, and the carbon credits are purchased for the purposes of meeting the holders' expected own usage requirements. For example, they will hold the carbon credit and retire it to offset their carbon emissions. However, if the contract can be settled on a net basis in cash, with another financial instrument or by exchanging financial instruments, it would fall into the scope of IFRS 9 and be accounted for as a derivatives contract (see below).	Non-financial: Executory purchase contract
The holder enters into a contract with a provider to acquire, or have the option to acquire, a fixed number of carbon credits at a fixed price per credit. The contract has net settlement features (or is likely to be settled on a net basis), or the holder has the intention to sell the carbon credits within a short period after delivery to generate a dealer's margin. Contracts that are entered into and continue to be held for the purposes of the receipt or delivery of a non-financial item in accordance with the expected purchase, sale or usage requirements are beyond the scope of IFRS 9 (IFRS 9.2.4), as in the previous example. However, IFRS 9.2.6 explains that there are various ways in which a contract to buy or sell a non-financial item can fall within the standard, even if it is entered into to meet the entity's own purchase, sale or usage requirements, including when: i) The terms of the contract permit either party to settle on a net basis in cash, with another financial instrument, or by exchanging financial instruments; ii) The ability to settle the contract on a net basis in cash or with another financial instrument or by exchanging financial instruments is not explicit in its terms, but the entity has a practice of settling similar contracts on a net basis (whether with the counterparty, by entering into offsetting contracts or by selling the contract before its exercise or lapse); iii) For similar contracts, the entity has a practice of taking delivery of the underlying and selling it within a short period after delivery for the purposes of generating a profit from short-term fluctuations in price or dealer's margin; and iv) The non-financial item that is the subject of the contract is readily convertible into cash. A non-financial item would be considered readily convertible into cash if it consists of largely fungible units and quoted spot prices are available in an active market that can absorb the quantity held by the entity without significantly affecting the price. There is scope for contracts to acquire carbon credits in accordance with these features to qualify as derivatives forward contracts within the scope of IFRS 9.	IFRS 9 (Financial Instruments): derivatives forward contract

Scenario	Possible Accounting Approach (Non-exclusive)
The holder directly provides funding in the form of debt or equity to a carbon offsetting project.	IFRS 9 (Financial Instruments)
For equity or non-equity features for which the investment satisfies the criteria for control, joint control or associate (equity accounting). Should control be established, the holder may be required to consolidate its investment in the offsetting project. It will be important to establish if the entity is investing in the legal entity itself and not just the carbon offsetting project, as this affects which accounting standard applies – eg, if it is control over an asset, then IFRS 11 could apply.	IFRS 10, IFRS 11 and IAS 28: control, joint control, joint arrangements or significant influence
The holder enters into a "contract, or part of a contract, that conveys the right to use an asset (the underlying asset) for a period of time in exchange for consideration" (IFRS 16 (Leases) Appendix A). The underlying asset in this case could be land used for carbon reduction or removal projects over a period of time. It will be important to establish if the entity is investing in the legal entity itself and not just the carbon offsetting project, as this affects which accounting standard applies – eg, if it is control over an asset, then IFRS 11 could apply.	IFRS 10, IFRS 11, IFRS 16 and IAS 28: control, joint control, joint arrangements or significant influence
Contracts where an entity acts as an agent and holds VCCs on behalf of a customer.	IFRS 15 (Revenue from Contracts with Customers). Where the entity acts as agent for the customer, the VCCs would not be recognized by the entity.

6. ACCOUNTING ISSUES UNDER US GAAP

On May 19, 2026, the FASB issued ASU 2026-02, Environmental Credits and Environmental Credit Obligations (Topic 818). This update introduces a new topic, ASC 818, and provides authoritative guidance under US GAAP for the recognition, measurement, presentation and disclosure of environmental credits and ECOs. ASU 2026-02 addresses stakeholder feedback that US GAAP does not provide specific authoritative guidance on how to recognize and measure environmental credits and ECOs, leading to diversity in practice. ASU 2026-02 provides a consistent accounting framework for entities engaged in environmental credit programs.

ASU 2026-02 is effective for public business entities for annual periods beginning after December 15, 2027, including interim periods within those annual periods, and for all other entities for annual periods beginning after December 15, 2028. Early adoption is permitted.

The guidance in ASC 818 applies to all entities – public, private and not-for-profit – that acquire, generate or hold environmental credits, or that are subject to regulatory compliance programs resulting in ECOs.

ASU 2026-02 applies to all environmental credits defined as an enforceable right that is acquired, internally generated, granted by a regulatory agency or its designee(s), or received in a non-reciprocal transfer that is not a grant from a regulator or its designee(s) that meets all of the following criteria:

a) Lacks physical substance and is not a financial asset;

b) Is represented to prevent, control, reduce or remove emissions or other pollution;

c) Is separately transferable in an exchange transaction;

d) Is not an income tax credit that may be used to settle an entity's income tax liability, regardless of whether the entity has a tax liability or intends to use the credit for that purpose.

An environmental credit that meets the above criteria may exist in a variety of forms, including, but not limited to, credits, certificates, allowances and offsets. This is different to the IFRS concepts of VCCs and CCCs.

Carbon credits that meet the criteria above would be within the scope of ASC 818. This would generally include carbon offsets, renewable energy certificates, cap-and-trade allowances, emission allowances and other industry-specific credits, such as renewable identification numbers.

ASC 818 also provides the accounting framework for ECOs. These are enforceable obligations resulting from regulatory compliance programs represented to prevent, control, reduce or remove emissions or other pollution that may or are required to be settled with environmental credits. This definition is intended to capture common regulatory compliance programs, including cap-and-trade programs, renewable portfolio standard programs and renewable fuel standard programs. In contrast to IFRS accounting standards, US GAAP does not permit recognition of a liability solely on the basis of a constructive obligation. As a result, voluntary initiatives and similar statements of intent do not constitute an environmental credit obligation unless they create an enforceable obligation within the scope of ASC 818.

6.1 Environmental Credits: Recognition and Measurement

ASC 818 provides an accounting framework for environmental credits based on intended use.

- Recognize as asset: if it is probable that the credit will be used to settle an ECO or separately transferred in an exchange or non-reciprocal transaction (eg, sold, traded or distributed to investors), then an entity would recognize it as an asset. This includes both compliance and non-compliance environmental credits. Entities should note that under IFRS accounting standards the use of "probable" is typically interpreted as "more likely than not". While US GAAP does not define "probable", it is generally understood to be a higher threshold than IFRS. Accordingly, this assessment may require a higher degree of support under US GAAP than a similar probability assessment under IFRS accounting standards.

- Expense: The cost of all other environmental credits, including those acquired for voluntary purposes, is expensed as incurred.

Under the ASU, initial measurement of recognized environmental credits is at cost, including any transaction costs incurred. Credits received through a grant from a regulator or internally generated are measured at the amount of transaction costs, if any. Subsequent measurement depends on the classification of the credit. Compliance environmental credits (probable of being used to settle an ECO) are measured at cost and are not subject to impairment testing. Non-compliance environmental credits (all other recognized credits) are measured at cost less impairment, with impairment testing required at each reporting date. Entities may also elect an accounting policy to measure certain classes of eligible non-compliance environmental credits at fair value, with changes in fair value recognized in P&L. This election must be applied prospectively and disclosed in accordance with the fair value measurement guidance in Topic 820 (Fair Value Measurement).

The planned use is required to be evaluated on the date credit is obtained and reassessed at the end of each reporting period. If it is no longer probable that environmental credit would be used to settle the ECO or separately transferred in an exchange or non-reciprocal transaction, then an entity would be required to de-recognize such credit and subsequent recognition would be prohibited.

ECOs are recognized as liabilities when emissions or other triggering events occur. ASC 818 requires entities to assume that the reporting date is the end of the regulatory compliance period when evaluating whether a liability exists. The liability is measured using the carrying amount of compliance environmental credits held and expected to be used to settle that obligation at the reporting date (ie, the funded portion of the liability). If an entity has insufficient compliance environmental credits at the reporting date to satisfy the liability, that unfunded portion would be initially and subsequently measured at the fair value of the environmental credits necessary to settle the unfunded portion at the reporting date. If the entity intends to settle the unfunded portion in cash or through unconditional commitments to acquire credits, then the unfunded portion of the liability is measured based on the cash settlement amount specified by the compliance program or the estimated cost basis of the environmental credits to be obtained. An ECO liability would be derecognized when an entity remits the necessary environmental credits to a regulator.

6.2 Presentation and Disclosures

Under ASC 818, environmental credit assets and ECO liabilities are presented separately on the balance sheet.

For annual reporting periods, entities must disclose the types of environmental credits held, how they are obtained and used, the measurement methods applied and significant estimates and judgments made in applying the guidance. An entity is also required to disclose in annual reporting periods the current and non-current amounts of compliance environmental credits and non-compliance environmental credits (if not separately presented on a classified balance sheet), the total expense for voluntary environmental credits and the total impairment expense. If an entity changes its use, or intended use, of environmental credits, it is required for annual reporting periods to disclose the nature of that change as of the date that it occurs and the related effect, if any, on P&L on that date. If the fair value measurement election is applied, the relevant fair value disclosures under Topic 820 must also be provided.

For ECOs, entities must disclose the regulatory compliance programs to which the entity is subject and the nature of the environmental credits accepted as settlement for those obligations, including activities and events resulting in ECOs, nature and timing of settlement provisions, accounting policies to account for those obligations, how the unfunded portion is measured and any significant estimates and judgments used.

The entity must also disclose the current and non-current amounts of the funded and unfunded portions of obligations, total expense related to these obligations and total costs associated with these obligations that are capitalized in the carrying amount of another asset during the reporting period.

6.3 Current Accounting Models under US GAAP

Under US GAAP, until such time as ASU 2026-02 is adopted, there are two accounting models that are used to account for carbon and other environmental credits. Preparers follow either the intangible asset accounting model or the inventory accounting model.

6.3.1 Intangible Asset Accounting Model

Under the US GAAP intangible asset accounting model, entities initially measure emission credits they receive from a regulator or acquire in the open market at cost (ie, the transaction price paid).

Under this approach, the cost of credits entities receive would be:

- Zero when received from a government or regulatory body in the context of compliance carbon credit schemes;
- The purchase price if received from producers or the open market.

FASB staff noted the wide range of accounting practices for carbon credits under the intangible asset accounting model. Some entities conclude that the economic benefits of their emissions credits do not diminish until they are consumed, and therefore they do not amortize any cost recognized. Instead, they expense the cost of their emission credits upon use – that is, when the credit is submitted to the regulator to offset a liability or when the entity retires the credit for offsetting purposes.

Other entities amortize the recorded cost of their credits over a compliance period, in the case of cap-and-trade programs. In both cases, the emission allowances are subject to evaluation for impairment.

6.3.2 Inventory Accounting Model

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

7. CONCLUSION

This paper is intended to help ISDA members and all market participants to understand the key IFRS accounting standards and US GAAP accounting issues for VCCs from the holders' perspective. By developing an understanding of the accounting requirements for VCCs, market participants should be able to transact with increased confidence, contributing to the development of safe and efficient VCC markets.

The accounting practices applied by holders of VCCs continue to evolve to reflect new developments, including changes to generally accepted accounting interpretations and subsequent accounting requirements developed for VCCs by the accounting standard setters, particularly the IASB and the FASB.

Consistent with its mission to foster safe and efficient derivatives markets, ISDA encourages the IASB and the FASB to work together to develop requirements for carbon credits, aligning the accounting of US GAAP and IFRS accounting standards. Coordination is a key priority for both the FASB and the IASB, seeking more comparable global accounting standards and reducing differences for the benefit of investors and capital markets, as well as auditors and other market participants.

The accounting approaches will also evolve to reflect how active VCC trading markets develop and how holders assess the facts and circumstances of the transactions they enter into, in order to interpret and apply the accounting standards to their contracts.

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