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ISDA®

Accounting for Carbon Credits

CONTENTS

INTRODUCTION

At present, there are no specific International Financial Reporting Standards (IFRS) or US Generally Accepted Accounting Principles (US GAAP), or interpretations of those standards, that relate to carbon credit markets. This whitepaper addresses key accounting questions under existing guidance for both compliance carbon credits (CCCs) and voluntary carbon credits (VCCs).

The paper covers accounting by 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 and US GAAP, although IFRS is the principal focus.

ISDA encourages the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) to work together where possible to develop consistent accounting standards for carbon credits under IFRS and US GAAP.

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.

Although accounting practices have developed for CCCs, there are currently no IFRS or US GAAP accounting standards, or interpretations of those standards, that provide specific guidance on accounting for VCCs or related transactions[1]. This paper sets out the accounting practices that have developed for CCCs and explores how current accounting standards and interpretations could be used to develop an accounting framework for entities holding or transacting VCCs.

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

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[2]. In parallel to the development of the definitions, 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[3] and November 2022[4].

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 is intended to support that objective.

This paper addresses key accounting issues for both CCCs and VCCs. 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.

The issues explored in this paper are relevant to reporting under both IFRS and US GAAP, although IFRS is the primary focus. A FASB project to develop specific US GAAP guidance remains in the research phase and a range of accounting practices is currently adopted. Some initial questions for consideration under US GAAP have been included, but a more thorough analysis will not be possible until there is greater clarity on the FASB's proposed approach.

The accounting issues that pertain to VCC issuers can be extensive and are beyond the scope of this paper. Similarly, any hedge accounting strategies associated with VCCs and related accounting issues are also beyond the scope of this paper.

[1] In its educational material, Effects of climate-related matters on financial statements, republished in July 2023, the International Accounting Standards Board (IASB) acknowledged that the International Financial Reporting Standards (IFRS) do not explicitly refer to climate-related matters, www.ifrs.org/content/dam/ifrs/supporting-implementation/documents/effects-of-climate-related-matters-on-financial-statements.pdf

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

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

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

ACCOUNTING ISSUES FOR VOLUNTARY CARBON CREDITS

Accounting for VCCs Held Under IFRS

Specific Factors to be Considered for Holders of Carbon Credits

The IFRS conceptual framework (CF) defines an asset as a present economic resource controlled by the entity as a result of past events. An economic resource is defined as a right that has the potential to produce economic benefits for the entity (CF 4.3-4.4). The rights represented by VCCs are established by contract (CF 4.7) and an entity demonstrates 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 could produce an economic benefit 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 remove a liability (CF 4.16(c) and (d)).

If the VCC cannot be sold and the entity cannot use the VCC to reduce or remove a liability, it may be difficult to demonstrate that the entity will receive an economic benefit in other ways. For example, if it can be demonstrated that the VCC results in the goods or services the entity provides to third parties being considered carbon neutral, this may, in some circumstances, enhance the value of those other economic resources and result in the entity being able to treat the VCC as an asset (CF 4.16(c)(ii)).

Demonstrating the potential of VCCs to produce economic benefits may be difficult and will require careful analysis of facts and circumstances. For example, it might need to be demonstrated that customers would not be willing to accept goods or services from an entity that is not carbon-neutral, or would demand a measurably lower price in the absence of the carbon offset.

Even in such instances, it may be difficult to demonstrate that the VCC is separable from the goods and services to which it relates and that the associated cost is not just a cost of doing business, not dissimilar to a marketing expense, for example, or that it does not represent a cost to fulfil a service under IFRS 15 (Revenue from Contracts with Customers). 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, such as a marketing 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 are considered in this paper:

a) Classifying VCCs as intangible assets under International Accounting Standard (IAS) 38 (Intangible Assets), using the cost or revaluation model;

b) Classifying VCCs as inventory under IAS 2 (Inventories), considering the associated measurement alternatives, which may include inventories of intangible assets.

IAS 38.2 explains that the standard should not be applied for 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.

The classification and measurement alternatives addressed in this paper are not exhaustive and are based on the application of current IFRS accounting principles. The IASB has initiated a project to address the implications of climate-related risks that exist in financial statements (see IASB statement, March 2023[5]). However, it has not yet been decided whether accounting for VCCs will be in scope.

Specific Factors to be Considered for Contracts that Will or May Result in the Acquisition of Carbon Credits

In addition to the classification and measurement alternatives, this paper also discusses factors that 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 investment or debt instruments), classifications driven by control or significant influence, leasing arrangements, or treatment as prepayments, executory or revenue contracts. This paper considers the potential permutations and the key factors for each alternative, but it is not intended to offer exhaustive guidance.

Specific IAS 38 and IAS 2 Accounting Issues for Carbon Credits Held Following Acquisition

IAS 38 (Intangible Assets)

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

The IAS 38 requirements are considered on the assumption that a VCC can be sold, that the entity intends to use the VCC to reduce or remove a liability, or that it can demonstrate that the VCC could enhance the economic benefits of other assets, demonstrating the likelihood that the entity would realize economic benefits, in accordance with the requirements of the CF.

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

- Identifiable: each VCC is backed by a credit certificate verified by an independent agency and logged on a registry. Such certificates may be tradable and are normally transferrable. If this is the case, a VCC potentially meets the requirements in IAS 38.12 in that it is separable and arises from contractual rights;

[5] IASB initiates project to consider climate-related risks in financial statements, March 2023, www.ifrs.org/news-and-events/news/2023/03/iasb-initiates-project-to-consider-climate-related-risks-in-financial-statements/

- Non-monetary: VCCs are not cash or other monetary assets;
- Without physical substance: VCCs represent the verified offset of a weight (normally a tonne) of carbon or other greenhouse gas and are not tangible.

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 38.21, 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.

Subsequent Measurement of VCCs Recognized as Intangible Assets

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). 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 38.85-86).

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 there are some active markets such as the CBL Nature-Based Global Emissions Offset[6], it may take time for trading frequency, liquidity and consistency in VCC standards to develop sufficiently for an active market to exist.

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

In addition, it is not clear to what extent different VCCs can 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.

Where VCCs are measured at cost rather than fair value, different accounting standards will apply. This includes the assessment of impairment. VCCs recognized as intangible assets fall within the scope of IAS 36 (Impairment of Assets). For VCCs with definite lives, an entity must assess at each reporting date whether impairment indicators exist and if so, a VCC will be tested for impairment by determining the recoverable amount, which is the higher of fair value less costs of disposal and their value in use (IAS 36.18). For VCCs with indefinite lives, an assessment of whether an indicator of impairment exists must be carried out on at least an annual basis.

It should generally be possible to demonstrate that VCCs recognized as intangibles generate cashflows that are largely independent from the cashflows of other assets. In order to recognize an intangible asset, IAS 38 requires that it is considered probable that future economic benefits will flow to the entity. This is typically the case where VCCs can be traded, which normally results in the possibility of generating largely independent cashflows through a sale to a third party. For VCCs measured at cost, to demonstrate that the credit could be sold it is not necessary that it is traded in an active market, but entities must judge whether it could be sold. In this instance, the price that could be obtained for VCCs provides information that can be used to assess impairment. To identify the value in the use of VCCs, entities may make the assessment at the cash-generating unit (CGU) level, similar to how fixed property is assessed as part of a CGU.

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. 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 38.88-89].

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 at which point credits are retired to offset an emissions liability, the useful life of VCCs often depends on the facts and circumstances surrounding how the holder expects to use the VCC in offsetting its own emissions. The pattern of retirement of VCCs may therefore inform the assessment of their useful life. For example, if a VCC offsets a specified amount of carbon and an entity partially utilizes that VCC to offset its emissions to achieve net zero over a particular period, then the useful life could be determined via the units of carbon offsetting used over a period of time, according to IAS 38.8.

VCCs retired for immediate use in meeting a present emissions target, rather than a compliance market target, may be acquired and retired simultaneously. In this case, there would be no asset recognized with respect to the purchased VCCs, so their cost is expensed immediately, potentially as a marketing expense.

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.

IAS 2 (Inventories)

How VCCs Can be Classified as Inventories

VCCs that satisfy the asset requirements as defined by the IFRS CF meet the criteria to be recognized as intangible assets, but IAS 38.3(a) 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.

IFRS do not currently provide clear definitions of the terms in a) and c) above. As a result, entities need to judge, on the basis of the facts and circumstances specific to their situation, whether the VCCs would meet the above definition.

Measurement of VCCs Held for Consumption in the Production Process or in the Rendering of Services

IAS 2.6 states that VCCs could be classified as inventories if they are "consumed in the production process or in the rendering of services". To this extent, should carbon offsetting be considered incidental to generating revenues from the sale of goods or rendering of services that are carbon-neutral (eg, in the airline, shipping or power production industries), then there may be an argument that the retirement of VCCs forms part of the process of rendering services or delivering goods.

To establish whether the VCCs form part of the cost of services rendered or goods delivered, it will be necessary to consider the specific contractual obligations of the entity to the recipient of the service. It is likely that the VCC would not be separately recognized as an intangible but would rather form part of the cost of the underlying inventory itself. Potential examples of carbon-neutral products are goods or services sold to a customer where there is a concurrent obligation on the supplier to offset the emissions associated with the delivery of such goods or services. In these cases, the principles of IAS 2 could be applied and the VCC, forming part of the cost of inventory, would be derecognized consistently with the timing of the revenue-generating activity.

Measurement for Commodity Brokers/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 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, should a holder acquire VCCs for the purposes of trading (to generate a profit from market price fluctuations or to gain a broker-trader margin), then the holder may elect to measure the VCC at fair value less costs to sell, 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 existence of an observable market for VCCs might support them being treated as commodities, on the basis that they are traded on a market where prices can be observed. The determination of the fair value less costs to sell in such instances depends on, among other things, whether the market is considered to be active and is subject to judgment and informed by guidance provided by IFRS 13 (Fair Value Measurement). This is explored in the next section.

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 tally of emissions. It is therefore expected that VCCs will be in scope of IAS 2 rather than IAS 38 as a default. However, the measurement approach should be carefully assessed and documented by the entity.

IFRS 13 (Fair Value Measurement)

The fair value of VCCs is expected to be derived from formal VCC trading markets, where they exist. The likelihood of active markets developing is made more complicated by 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 judge whether they have sufficient trading data to support the existence of an active market for VCCs in their region.

Where there is not an active market or there are no identical VCCs, entities will need to apply the fair value hierarchy in IFRS 13 to arrive at a fair valuation.

Key issues to consider include:

- 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);
- 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).

In generic terms, the ability for a VCC to be readily convertible into cash (eg, the existence of a spot market with daily quoted prices) would indicate a liquid 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 similar VCCs. A holder will apply 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.

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. Trading may be evidenced in various ways and could include an entity's ability to use a VCC in a compliance market, or to exchange a VCC of one type for another.

Accounting for Sales of VCCs

VCCs classified as inventories should be derecognized when they are sold or transferred. Where the value of the sales proceeds differs from the carrying value, any gains or losses are recognized immediately in P&L.

Accounting for Changes in Classification

Holders of VCCs may need to determine how to treat any change of intention affecting the classification of a VCC between being an intangible asset and inventory.

Neither IAS 38 nor IAS 2 provide any scope for reclassification between the standards. Classification under IAS 2 is based on the business strategy, which for VCCs cannot be changed once determined:

- IAS 2 defines inventories as "assets held for sale in the ordinary course of business…";
- IAS 2 requires commodity broker-traders to have "principally acquired (such commodities) with the purpose of selling in the near future and generating a profit from fluctuations in price or broker-traders' margin" (IAS 2.5).

ACCOUNTING ISSUES FOR COMPLIANCE CARBON CREDITS

The accounting issues that must be considered for VCCs can also be applied to the compliance market. However, in practice, distinct accounting alternatives have arisen due to the way in which CCCs are granted and then used to settle an emissions obligation over a set compliance period.

Previous IFRIC 3 Guidance on ETSs

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

Until the IASB completes a new project on ETSs, entities have the option to either apply IFRIC 3, by virtue of it being an appropriate interpretation of the existing IFRS, 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).

IFRIC 3 took the view that a compliance 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, 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 allowances 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 (Provisions, Contingent Liabilities and Contingent Assets). 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, few entities actually apply IFRIC 3 on a voluntary basis. Instead, entities have developed a range of different approaches to accounting for CCCs.

Net Liability Approach

Applying the 'net liability' approach, purchased carbon credit grants are initially recognized at a nominal amount (cost) and the entity will only recognize a liability once the actual emissions exceed the emission rights granted and still held, thereby requiring the entity to purchase additional allowances in the market or incur a regulatory penalty.

This approach is consistent with IAS 20, as the standard allows non–monetary government grants and the related asset (carbon credit) received to be measured at a nominal amount. It is also consistent with IAS 37, which requires that a provision can only be recorded if the recognition criteria in the standard 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, so a provision is considered for recognition as emissions are made, but an outflow of resources is not probable until the reporting entity has made emissions in excess of any rights held.

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.

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

As the carbon market develops, it is 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 future. As there will be a range of ways in which these contracts are arranged, the resulting accounting issues will vary according to the contractual features of any arrangement. Holders of contracts to acquire carbon credits in future will need to carefully assess the contractual terms to determine how the nature of the arrangement influences the accounting treatment.

Possible alternative ways 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 classification.

Scenario	Possible accounting approach (non-exclusive)
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 (IFRS 9.2.4). 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 next paragraph).	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 it 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 to cash. A non–financial item would be considered readily convertible to 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 the above features to qualify as derivatives forward contracts within the scope of IFRS 9.	IFRS 9 (Financial Instruments): derivatives forward contract

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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.	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 Appendix A). The underlying asset in this case could be land used for carbon reduction or removal projects over a period of time.	IFRS 10, IFRS 11 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)

ACCOUNTING ISSUES UNDER US GAAP

At present, US GAAP does not specifically address the accounting for emissions allowances or other carbon reduction programs, including carbon credits. As a result, there is currently a range of practices and entities may need to consider which US GAAP standards to apply to account for their carbon credits.

When the FASB added the project on environmental credits to its research agenda in May 2022, staff noted the diversity of practices, which also applies to some of the IFRS accounting alternatives. For example, FASB staff indicated that tradable emissions allowances have often been recognized as assets and classified as either intangible assets or inventory[7].

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 practices regarding the accounting 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 (eg, 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 schemes. In both cases, the emissions allowances are subject to evaluation for impairment.

Inventory Accounting Model

Under the US GAAP inventory accounting model, some entities measure emission 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.

The FASB has added a project to its standard-setting agenda on the accounting for environmental credit programs[8]. As such, entities should monitor US GAAP application developments.

[7] Tentative Board Decisions, Financial Accounting Standards Board (FASB), May 25, 2022, www.fasb.org/Page/PageContent?pageId=/meetings/pastmeetings/05-25-22.html&bcpath=tff

[8] Project Update: Accounting for Environmental Credit Programs, FASB, July 2023, www.fasb.org/Page/ProjectPage?metadata=fasb-Accounting-for-Environmental-Credit-Programs

CONCLUSION

This paper is intended to help ISDA members and all market participants to understand the key IFRS 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 will continue to evolve to reflect new developments, including changes to generally accepted accounting interpretations and any subsequent accounting requirements developed for VCCs by the accounting standard setters, particularly the IASB and the FASB.

Consistent with ISDA's mission to foster safe and efficient derivatives markets, we encourage the IASB and the FASB to work together to develop requirements for carbon credits, aligning the accounting of US GAAP and IFRS. We understand 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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Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 1,000 member institutions from 77 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the association's website: www.isda.org. Follow us on Twitter, LinkedIn, Facebook and YouTube.