Accounting for the Development of Carbon Credits That Will Ultimately Be Sold

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The increasing focus on companies' environmental, social, and governance (ESG) and net-zero commitments has created demand for carbon credits generated by voluntary green schemes designed to drive "greener" behaviour. These carbon credits are meant to certify that a company has reduced or removed a specific amount of carbon dioxide from the atmosphere through its activities. The schemes can be managed by independent or government bodies.

The Group discussed one example of a voluntary scheme and a specific activity that generates carbon credits in that scheme, as outlined in the fact pattern below. Under different schemes involving different activities, separate and additional accounting considerations may arise.

Fact pattern

Overview

- Company A owns and manages forests for the purpose of harvesting trees for timber.
- Company A is also developing a forest carbon-credit project to reduce or remove greenhouse gas (GHG) emissions by deferring harvest of the trees on these lands.
- The project will be implemented following one of the methodologies outlined by the Verified Carbon Standard (VCS). The carbon credits generated from this project and using this standard are called "verified carbon units" (VCUs).

VCS framework

- The VCS framework is administered by Verra, a global non-profit organization unaffiliated with any Canadian governments. Hence, the Group did not consider whether guidance on government grant accounting may apply.
- Company A defines the project, which is related to a specific location (e.g., a designated forest area). The project must meet specific VCS requirements, must be validated and will be registered with Verra.
- Project registration is not required for Company A to operate and manage its existing forests. In addition, project registration itself does not entitle the company to VCUs because their issuance is subject to a separate verification process (see below).
- For the Group's discussion, the trees in the defined location and the project registration are viewed as a single unit of account.

Verification process

- The VCS framework requires an independent third party to verify periodically that the trees exist and meet certain requirements. After Verra reviews the completed verification process, it issues VCUs to Company A.

- It is anticipated that if the verification process is successful, Verra will issue VCUs to the company periodically, typically annually.

VCUs

- VCUs are “issued” to Company A through an account it holds with Verra (similar to a bank account).
- Each VCU represents one tonne of carbon dioxide reduced or removed from the atmosphere. Each VCU will have a registration number, and can be transferred to other companies.
- VCUs are “voluntary” carbon credits and will be purchased by other companies (i.e., third parties) who may wish to retire them to meet their own carbon commitments. Company A intends to regularly obtain and sell the VCUs as part of its ordinary business activities.

Company A’s current accounting approach

- Company A currently accounts for all trees as biological assets under IAS 41 *Agriculture*. The project does not require, and the company does not plan to cancel, the harvest of the designated forests. Instead, the company will defer harvesting the trees in order to generate more VCUs. Consequently, the trees will continue to meet the definition of biological assets.
- Company A concluded that VCUs would not meet the definition of agricultural produce in IAS 41. This is because the oxygen cannot be captured, and it seems difficult to argue that it is “harvested” in the notion contemplated by IAS 41.

Issue 1: Should the fair value of the trees include the value of the anticipated VCUs?

Analysis

View 1A – Yes, the fair value of the trees should include an estimate of future cash flows related to the VCUs

- Proponents of this view indicate that paragraph 12 of IAS 41 requires that a biological asset be measured on initial recognition and at the end of each reporting period at its fair value less costs to sell (FVLCTS), except where the fair value cannot be measured reliably (paragraph 30 of IAS 41). Markets for voluntary carbon credits are developing rapidly. Although there is some uncertainty related to prices, several data points and information sources can help determine the fair value of the VCUs. Consequently, the fair value of VCUs can be measured reliably.
- Paragraph 27 of IFRS 13 states, “A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its *highest and best use* or by selling it to another market participant that would use the asset in its highest and best use.” In the fact pattern, the highest and best use of the trees is to use them to generate VCUs and for future harvest. This is because the VCUs will be generated over time as the trees grow and then once the deferral period ends, the trees will be harvested as part of Company A’s harvest plan. Logically, a market participant would pay for the economic benefits (i.e., cash flows) coming from both the VCUs and the timber.

- Therefore, the fair value of the trees would include both the anticipated value of the VCUs generated from the trees, and the eventual harvest of the trees. This view recognizes there are two cash flow streams that are relevant in estimating the FVLCTS of the biological assets as a single unit of account.

View 1B – No, the fair value of the trees should not include an estimate of future cash flows related to the VCUs

- This view would seem appropriate if the VCUs' fair value could not be measured reliably. Otherwise, there seems to be little support for this view in light of the guidance in IAS 41 and IFRS 13.

The Group's Discussion

The Group agreed with the analysis. Several Group members pointed out that IFRS 13 requires entities to take the highest and best use of a non-financial asset into account when measuring its fair value. They thought that the highest and best use of the trees for Company A includes both harvesting the trees for timber and generating VCUs, and that these are both part of a single unit of account. Therefore, the fair value of the trees should include an estimate of future cash flows related to the VCUs.

One Group member pointed out that the VCUs do not meet the definition of agricultural produce in IAS 41 and contemplated whether this impacts the Company A's assessment of the fair value of the trees under IFRS 13. They thought that IFRS 13 requires an entity to take the highest and best use of an asset into account when measuring its fair value, regardless of how its various cash flow streams are classified. Therefore, they thought that the requirements in IFRS 13 apply to the future cash flows associated with the VCUs, whether they are classified as agricultural produce or not. One Group member commented that the trees and anticipated VCUs form a single unit of account and that the combined asset would be in the scope of IAS 41. Another Group member indicated that the VCUs are similar to agricultural produce even though they do not meet the strict definition in IAS 41. They noted that perhaps the intent of IAS 41 is for VCUs to be treated like any other produce harvested from trees (e.g., fruit). One Group member commented that there are two distinct cash flow streams that could be material to the overall valuation of the trees. They indicated that disclosures that disaggregate these components of the fair value of the trees might be useful information for financial statement users and might be necessary to meet the disclosure objectives in paragraphs 91-92 of IFRS 13.

Issue 2: When should the VCUs be recognized separately on the balance sheet?

Analysis

VCUs are "created" when a registration number is issued to track the VCU for sale or retirement. At this point, the VCU can be sold to third parties.

View 2A – When the VCUs are sold

- In this view, the VCUs are included in the measurement of the trees (as a biological asset) until the VCUs are sold. However, the VCUs would not meet the definition of a biological asset under IAS 41. There is limited support for this view, other than it may be easier to apply than View 2B.

View 2B – When the VCUs are "created"

- Proponents of this view indicate that once created, the VCUs would meet the definition of an asset. That is because the VCUs are rights that Company A controls which have the potential to produce economic benefits for the company through sales to third parties, and they will ultimately be separated from the trees through the verification and registration of the VCUs.

The Group's Discussion

The Group agreed with the analysis.

Some Group members thought that View 2A could be supported in limited circumstances. For example, if the fair value of VCUs decreases significantly relative to the fair value of harvested timber, it might no longer be the best business decision for Company A to sell the VCUs. Since Company A can choose to abandon its plan to sell the VCUs at any time, this might indicate that it should not separately recognize them on the balance sheet until they are sold. However, this Group member thinks it is unlikely an entity would abandon a plan to sell VCUs due to the high cost of doing so. One Group member also pointed out that Verra is not backed by the government, and therefore, the market for the VCUs might be influenced by the perception the organization's reliability.

Several Group members noted that carbon-credit generation is an emerging field, and that the process of generating and selling carbon credits is not well understood in the market. One Group member familiar with this process clarified how it normally works. They indicated that to create and sell VCUs, entities often make long-term commitments to sequester carbon in the trees (i.e., to not harvest the trees). If the trees are harvested before the term is complete, the carbon credits that were previously generated are forfeited. Once an entity's long-term commitment to defer harvesting its trees is met, it is then free to harvest the trees without forfeiting its carbon credits. This Group member also indicated it is common for the same forest to be used for both creating VCUs and harvesting timber. As part of an entity's overall forest management, it decides how many trees to use for creating VCUs versus for harvesting. Group members noted that Company A in this fact pattern does not have an ongoing carbon store obligation once a VCU is verified. However, they indicated there may be nuances in other arrangements and different fact patterns that would need to be considered in determining when to recognize the VCUs separately on the balance sheet.

Issue 3: How are VCUs classified on the balance sheet?

Analysis

When VCUs are separately recognized on the balance sheet, Company A should consider whether the VCUs would be classified as inventory or intangible assets based on the definitions of these assets in IAS 2 and IAS 38, respectively. This classification outcome may also be important even if View 2A applies because the VCU's sale/derecognition could result in either a cost of goods sold/expense (if inventory) or gains (if intangibles) in the income statement.

View 3A – The VCUs should be classified as inventory

- Inventories are defined in paragraph 6 of IAS 2 as assets that are held for sale in the ordinary course of business. Paragraph 3(a) of IAS 38 acknowledges that even intangible assets could meet the definition of inventory if the assets are held for sale in the ordinary course of business.
- Proponents of this view hold that VCUs in this fact pattern appear to meet the definition of inventory since Company A intends to generate and sell VCUs as part of its ordinary activities. Under this view, when the VCUs are sold, the carrying amount of the inventory will be recognized as an expense (paragraph 34 of IAS 2).

View 3B – The VCUs should be classified as intangible assets

- Proponents of this view hold that VCUs meet the definition of intangible assets since they are identifiable non-monetary assets without physical substance (paragraph 8 of IAS 38).
- However, per paragraphs 2-3 of IAS 38, such assets are only accounted for under IAS 38 when another standard does not apply. For example, intangible assets an entity holds for sale in the ordinary course of business would be accounted for under IAS 2.

The Group's Discussion

The Group agreed with the analysis. Group members agreed with View 3A since the VCUs are held for sale in the ordinary course of business.

Some Group members thought that in some fact patterns an entity might consider whether carbon credits might be classified as or analogized to financial assets. One Group member pointed out that carbon credits are not likely to meet the definition of a financial asset because they are not cash or a right to receive cash.

Issue 4: How should the VCUs be measured initially and subsequently?

Analysis

If View 1A applies (i.e., the fair value of the VCUs is included in the FVLCTS of the trees), then when the VCUs are recognized as a separate asset, the value of the VCU will be "removed" or excluded from the FVLCTS of the trees. Absent other changes in the measurement of the trees, there will be a credit to the biological asset for the fair value of the VCUs at initial recognition. The Group discussed the initial measurement of the VCUs when they are separately recognized as an asset, including Views 4A and 4B below. The subsequent measurement of the VCUs depends highly on the classification of the asset determined in Issue 3.

View 4A – Measure initially at FVLCTS (i.e., the value of the VCU included in the measurement of the trees)

- Under this view, the journal entry to recognize the VCUs would simply reclassify the amount included in the measurement of the biological assets to inventory or intangible assets (see Issue 3). Since biological assets are measured at FVLCTS, Company A will still need to consider the costs to sell the VCUs and when they are incurred.
- Inventory and intangible assets are typically recognized at the “cost” of acquiring the asset or incurred in the creation of the asset. However, the IFRS Accounting Standards glossary definition of cost permits cost as being the amount attributed to an asset when initially recognized in accordance with another standard. Proponents of this view think this guidance could be applied to the VCUs because they were initially included in the measurement of the trees and “recognized” as part of those trees in accordance with IAS 41.
- Paragraph 20 of IAS 2 includes guidance on how to move agricultural produce from an IAS 41 model (where the produce was measured at FVLCTS) to an IAS 2 model where inventories are recognized at cost. Specifically, Paragraph 20 of IAS 2 requires such inventories to be measured on initial recognition at their FVLCTS at the point of harvest. Although VCUs do not meet the definition of agricultural produce, it seems logical to analogize to the accounting in Paragraph 20 of IAS 2 since the VCUs are included in the measurement under IAS 41 and are otherwise accounted for in a manner similar to agricultural produce. In this case, it can be interpreted that the time of “harvest” means the time at which the VCUs are recognized as a separate asset.

View 4B – Measure initially at the “cost” of producing the VCU

- Internally generated intangible assets are recognized at “cost,” which includes the sum of expenditures incurred from the date the intangible asset first meets the recognition criteria and includes all directly attributable costs necessary to create, produce, and prepare the asset (paragraphs 65-66 of IAS 38). In addition, paragraph 10 of IAS 2 states, "The cost of inventories shall comprise all costs of purchase, costs of conversion and other costs incurred….” The costs incurred are assumed to be small in this case and likely related to collating data and submitting the application for VCU verification. The costs will not include depreciation for the trees as the trees are not depreciated under IAS 41.
- Proponents of this view also consider whether some forestry-management costs could be allocated to the VCUs using the guidance on by-products under paragraph 14 of IAS 2. While it does not seem like the VCUs meet the definition of a by-product (i.e., because they are material and not strictly produced simultaneously with the “main product” being the harvested timber), it may be possible that some amount of forestry-management costs could be allocated to the cost of “creating” VCUs. However, it may be practically difficult to allocate such costs due to the long-term nature of harvesting activities. Further, these costs are also quite small in this fact pattern.
- The journal entries under this view would result in a loss upon the change in the FVLCTS of biological assets when the VCU is recognized separately as an asset. It is questionable whether

this financial reporting outcome is useful to financial statement users because it may also be either fully or partially offset by income in a following period.

The Group's Discussion

The Group agreed with the analysis. Several Group members agreed with View 4A. A few Group members referred to the guidance in paragraph 13 of IAS 41 that agricultural produce harvested from a biological asset shall be measured at its FVLCTS at the point of harvest, and that such measurement is the cost at that date when applying IAS 2 or another applicable standard. However, they acknowledged that the VCUs may not meet the definition of agricultural produce in IAS 41.

Several Group members suggested that it may be necessary to go through the guidance in the *Conceptual Framework for Financial Reporting* or IAS 8 in order to support View 4A. Paragraph 10 of IAS 8 requires that, "[i]n the absence of an IFRS that specifically applies to a transaction, other event or condition, management shall use its judgment in developing and applying an accounting policy that results in information that is reliable and relevant to the economic decision-making needs of users." Several Group members commented that in the fact pattern, the information would be most relevant if the VCUs are measured at FVLCTS. They thought that it would not be useful to show a decrease in the value of biological assets without a corresponding increase in value for VCUs. One Group member also suggested that VCUs would be categorized as Level 1 fair value measurements under IFRS 13, and thus, measuring them at FVLCTS may be more relevant to users than measuring them at cost.

One Group member considered analogizing this transaction to contracts with customers under IFRS 15, with the customer being Verra. They thought it might be viewed that Company A is providing the service of carbon capture to Verra in exchange for carbon credits. This Group member noted that carbon credits might be considered non-cash consideration. Per paragraph 66 of IFRS 15, this non-cash consideration would be measured at fair value.

One Group member commented that while they agree with View 4A, they think View 4B also has merit. However, they also expressed concerns with the level of judgment required under View 4B associated with allocating costs to the VCUs.

Overall, the Group's discussion raised awareness of how an entity accounts for the development of carbon credits that will ultimately be sold. Group members also discussed that while IAS 41 may be useful to consider in this fact pattern, carbon credits can be generated in many different ways that may not necessarily be related to agriculture. The Group plans to bring this topic back for further discussion in the future and consider other fact patterns. No further actions were recommended to the AcSB.