Industries
Energy, Utilities & Mining

IETA
INTERNATIONAL EMISSIONS TRADING ASSOCIATION

150. DSR-Sitzung am 09.11.2010

150_06f_Survey_EU_ETS_Zusatzinfo

Trouble-Entry Accounting – Revisited*

Uncertainty in accounting for the EU Emissions Trading Scheme and Certified Emission Reductions

Analysis of the results of the Joint Survey undertaken by PricewaterhouseCoopers and IETA on the accounting approaches applied in practice and assessment of the key accounting approaches considered suitable under IFRS

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"There is a widespread feeling that the EU ETS has made great progress but that the pace of change has not always been matched by its infrastructure. Carbon financial accounting is a case in point. The industry is plagued with diversity of accounting and no uniform approach seems to be in sight since the International Accounting Standards Board withdrew its accounting interpretation set out in IFRIC 3. The impact of accounting is increasingly important. Companies trading within the EU ETS perceive increasingly how allowances and carbon credits represent a significant asset. For example, between 2008 and 2012 some 2 billion allowances* will be issued.

The important question is how these are recorded for accounting purposes. The survey which IETA is doing in conjunction with PwC will be a step in the right direction of bringing in more transparency and understanding on the real accounting issues within the EU ETS. On this basis IETA and PwC will be in a position to stimulate further debate and action on a uniform standard".

** Figures from Societe Generale.*
Andrei Marcu, President and CEO, IETA

Welcome

The emerging political consensus on climate change has pushed the green agenda from the debating chamber into the board room. Indeed, a raft of economic measures at the national and international level has ensured that both public and private companies have become increasingly alert to the financial consequences of climate change and the measures being employed to tackle it.

The European Union Emissions Trading Scheme (EU ETS) has emerged as one of the most significant measures to date to tackle climate change since its commencement on 1st January 2005. Overnight it created a pan-European market worth tens of billions of Euros and created new challenges and opportunities for those companies within scope of the scheme and the regulators overseeing it. By bringing the value of carbon dioxide emissions on to the balance sheet it also created a clear connection between emissions and corporate value.

As markets for carbon dioxide and other emissions emerge and develop in the EU and around the world, the need to communicate clearly and unambiguously to stakeholders about how company performance has been and is expected to be affected by such initiatives has become paramount.

A direct challenge to meeting this need for clear and effective accounting guidance and transparency was the withdrawal in June 2005 of the International Accounting Standard Board's (IASB) interpretation of how to account for the EU ETS (IFRIC 3)[1]. The reason for the withdrawal was the mismatch between the valuation of assets and liabilities leading to artificial income volatility. This gave rise to a notable absence of specific guidance on carbon accounting at the international level, although there are existing standards within IFRS that deal with the accounting. With the risk of alternative accounting treatments emerging, the comparability requirement of financial statements between entities as underpinned by the IASB Framework may be undermined. This in turn could pose clear risks to shareholder value and effective stakeholder decision making.

This risk is increased given the observed volatility in the market prices for the EU allowances since the scheme was introduced which has led to volatility in company income statements and in the valuation of carbon assets and liabilities on balance sheets.

Whilst the EU ETS represents the most significant of the new carbon abatement measures introduced to meet Kyoto obligations, other measures such as the 'Clean Development Mechanism (CDM)' have also been developed. The CDM allows industrialised countries (also known as Annex 1 countries under the Kyoto protocol) to earn emissions reductions credits towards Kyoto targets through investment in qualifying and sustainable projects in fast growing countries (also known as host countries of the project). Firms and governments can invest in the CDM by purchasing the outputs of the CDM – 'Certified Emissions Reductions' (CERs). Subject to certain limits, the CERs will be convertible into EU Allowances to contribute to meeting carbon emissions obligations.

The withdrawn IFRIC 3 does not apply to the CERs scheme as it is not a 'cap and trade' scheme like the EU ETS, hence there has not been any specific guidance issued by the accounting standard setters specifically aimed at CERs. However, as for EU ETS there are existing standards within IFRS that deal with the accounting both in terms of those CERs that are received by the asset owners themselves, and those that are purchased through bilateral trades in the market.

This publication aims to shed some light on some of the accounting approaches being applied in practice, and provides some useful guidance under IFRS and worked examples showing the impact on the financial statements. We hope that you find this publication both revealing and helpful.

Richard Gledhill, PricewaterhouseCoopers
Global Leader - Climate Change Services

Andrei Marcu, IETA
President and CEO

1. IFRIC 3 stands for the International Financial Reporting Interpretations Committee Interpretation 3 which provided guidance on the recognition of emissions rights, before its withdrawal in June 2005 by the International Accounting Standards Board (IASB).

Introduction

The purpose of the survey and of this publication is to present a synopsis of the accounting approaches applied in practice and to understand the key themes and issues arising given the absence of specific accounting guidance.

Purpose and objectives of this publication

Given the growing importance and impact of carbon abatement measures on financial reporting, PricewaterhouseCoopers (PwC), in conjunction with the International Emissions Trading Association (IETA), have conducted a Europe wide survey of the accounting approaches applied by major organisations which are significantly affected by the EU ETS. The survey focuses on the accounting for the EU ETS, but also covers the accounting for CERs, given the linkage to the EU ETS.

The purpose of the survey and of this publication is to present a synopsis of the accounting approaches applied in practice and to understand the key themes and issues arising given the absence of specific accounting guidance. The survey and findings are predominantly based on International Financial Reporting Standards (IFRS).

This detailed publication is an expanded version of the summary publication issued by PwC and IETA in May 2007.

The key additional areas included over and above the summary version are as follows:

- greater quantitative analysis of the responses to the survey questions.
- PwC view of the key accounting approaches for the EU ETS, with reference to worked examples.
- PwC view of the key accounting approaches for 'self generated' and purchased CERs.

Results of the survey at a glance

Based on the 26 surveys received, it is possible to identify six main approaches in relation to the EU ETS. Only a small minority of respondents have continued to apply the withdrawn IFRIC 3 as an accounting policy. The most common approach identified was to recognise the granted allowances at nil value, with the obligation recognised at the carrying value of allowances already granted/ purchased, with the balance at the prevailing market price. There was however more variation when the classification of the EU ETS on the balance sheet is considered, with fifteen different approaches identified in total.

In relation to the purchased CERs it is possible to identify two main approaches. All respondents initially recognise the purchased CERs at cost, but in terms of subsequent treatment, 38% revalue the CERs subsequent to initial recognition, with 62% choosing not to revalue the CERs. As with the EU ETS it is possible to identify more variation when it comes to classification, with eleven different approaches identified in total.

Decisions concerning the valuation of carbon assets and liabilities have a clear impact on a company's financial position and financial results for a given period.

It is also noted that financial institutions and traders tend to favour the approach of fair valuing the CERs and EU ETS certificates received and also forward purchase/sales contracts through the income statement. Utilities on the other hand have tended to be more compliance focused and have less of an appetite for recognising movements in fair value of the assets through the income statement and have tended to apply the own use exemption or cash-flow hedge accounting for forward purchase contracts.

The emergence of different accounting approaches applied to the EU ETS and to CERs poses clear challenges for the users of financial statements. Decisions concerning the valuation of carbon assets and liabilities have a clear impact on a company's financial position and financial results for a given period. Indeed, as one respondent commented; 'It is difficult to compare the business performance between the peers when accounting treatments are not clear or they vary so greatly'.

Respondents also expressed frustration over how much time was required to be spent in considering the alternative accounting treatments and in developing suitable accounting policies in the absence of authoritative guidance. This was particularly so for groups that report under both IFRS and another GAAP, as time consuming and often complex adjustments may be required between the two. Furthermore, respondents also highlighted how the lack of guidance posed challenges for effective operational and investment decision making due to the impact that the accounting treatment can have on company and transaction valuations.

Whilst in this publication we do not go so far as to advocate one particular accounting approach over another, nor do we opine on the appropriateness of the approaches within the survey, we do highlight how some of the principles of IFRS could be interpreted in the context of the EU ETS and CERs. From this we have provided a number of approaches that are clearly supportable under IFRS.

The IASB has stated that work on a project to address the underlying accounting for emission trading schemes is due to resume towards the end of 2007, by which time a further round of financial year ends will have passed. In the absence of specific guidance, the need for effective communication to stakeholders about the accounting policies adopted and the impact of the schemes on the financial position and performance of the company is paramount.

Acknowledgement

We would like to express our gratitude to those who have completed the survey and have made this publication possible. All individual responses will of course be kept strictly confidential.

Overview of the EU Emissions Trading Scheme (EU ETS) and Certified Emissions Reductions (CERs)

Under the EU ETS, EU member states have set limits on carbon dioxide emissions from energy intensive companies – approximately 10,000 steel factories, power plants, oil refineries, paper mills, and glass and cement installations.

EU Emissions Trading Scheme (EU ETS)

The ratification of the Kyoto Protocol by the EU required total emissions of greenhouse gases within the EU member states to fall to 92% of their 1990 levels in the period between 2008 and 2012. The introduction of the EU Emissions Trading Scheme (EU ETS) on 1st January 2005 represents a significant EU policy response to the challenge. Under the scheme, EU member states have set limits on carbon dioxide emissions from energy intensive companies – approximately 10,000[2] steel factories, power plants, oil refineries, paper mills, and glass and cement installations.

Phase 1 of the EU ETS commenced on 1 January 2005 and runs through to 31 December 2007 and is designed to embed the scheme before full implementation is scheduled in 2008 – 'Phase 2 of the EU ETS'.

The scheme works on a 'cap' and 'trade' basis and each member state of the EU is required to set an emissions cap covering all installations covered by the scheme. In this way, organisations within scope of the EU ETS must make an economic decision as to whether to introduce abatement measures to reduce carbon dioxide emissions so as to be within their carbon allocation under the scheme, or purchase credits on the market from organisations that have reduced emissions to a level whereby a surplus is created which can be traded.

2. MEMO/03/154 http://ec.europa.eu/environment/climat/emission/linking_en.htm

CERS represent a unit of greenhouse gas reduction that has been generated and certified by the United Nations under the Clean Development Mechanism (CDM) provisions of the Kyoto Protocol.

Certified Emissions Reductions (CERs)

Under the Kyoto Protocol, emissions reduction projects in fast growing countries and countries in transition not subject to a Kyoto target on emissions reduction can generate Certified Emissions Reductions (CERs). CERs represent a unit of greenhouse gas reduction that has been generated and certified by the United Nations under the Clean Development Mechanism (CDM) provisions of the Kyoto Protocol. The CDM allows industrialised countries that are committed to reducing their greenhouse gas emissions under the Kyoto protocol (so-called 'Annex 1 countries') to earn emissions reductions credits towards Kyoto targets through investment in 'green' projects in fast growing countries and countries in transition such as China, India and Brazil (so-called 'host countries'). Examples of projects include reforestation schemes and investment in clean energy technologies. Once received, the CERs have value as they will be exchangeable for EU ETS allowances and hence can be used to meet obligations under that particular scheme.

The CERs are issued by the CDM board and projects that wish to be granted CERs must undergo a rigorous review and approval process. The following is a summary of some of the main steps:

1. The proposed project is identified and feasibility study completed.
2. The proposed project must be approved by the CDM executive board, which can take up to 10 months.
3. Once approved, the project can begin implementation and operation
4. The project will be periodically reviewed by the CDM executive board to ensure that the project is proceeding as expected.
5. Once the project or particular phase of the project is complete, a return is required to be submitted to the CDM board detailing the level of emissions reductions reached and the number of CERs that are to be issued.
6. The project and associated emissions reductions are verified by the CDM executive board.
7. Receipt of CERs by the generating organisation.

Overview

The increased public focus on climate change as well as the measures introduced by national and international governments has brought the issue of carbon accounting to the fore.

The importance of clear corporate reporting

The increased public focus on climate change as well as the measures introduced by national and international governments to curb emissions has brought the issue of carbon accounting to the fore. Phase 1 of the EU ETS has brought the value of carbon onto the financial statements of companies for the first time. The introduction of Phase 2 of the EU ETS in 2008 will further widen the coverage of the scheme, as well as reduce the overall amount of emissions that can be emitted, based on the EU Kyoto targets. This will further raise the importance of carbon in terms of corporate reporting.

As we reported in *Emission Critical*[3], carbon will represent an increasing element of corporate strategy, operations and reporting.

Figure 1: the Carbon Value Cycle

As figure 1 above illustrates, addressing the EU and national government carbon strategies could have significant impacts on businesses within the scope of the various schemes in operation. For example, a company within the scope of the EU ETS and subject to a 'carbon cap', will need to consider how to address these requirements as part of its corporate strategy.

3. Emission Critical, 2004 – visit www.pwc.com/energy.

The price of carbon will increasingly figure in deal calculations as companies seek to optimise their fuel mix through acquisition and disposal.

Internal discussions with production teams will be required for management to understand whether it is practical or possible to reduce emissions. For example, detailed analysis of the carbon market prices will be required to assess the potential costs of purchasing carbon credits on the market versus costs of abatement. Depending on the group's resources, its skill set and risk appetite, it may be appropriate to trade carbon allowances for speculative gain, for economic hedging purposes or a combination of the two.

As reported in *Power Deals 2006*[4], the price of carbon will increasingly figure in deal calculations as companies seek to optimise their fuel mix through acquisition and disposal.

Opportunistic companies with access to technology may be able to extract value from companies who have been slow to capitalise on market opportunities.

The value attached to these activities is expected to be increasingly relevant in and material to corporate reporting and this is being recognised with increasing focus being placed on this area. Decisions about how to represent the impact of carbon in its reporting to management and to the Board and financial reporting to the company's shareholder and other stakeholders could have a significant impact on corporate strategy and decision making. Shareholder decisions will increasingly be influenced by the financial considerations of the carbon regulatory schemes.

The group's wider stakeholders such as customers, employees and local communities will also look to understand the impact of carbon and the corporate strategy in place to deal with it.

Increasingly the environmental and economic price of carbon is also being considered on a personal level and is a topic frequently commented on by the press and broadcasting media. Recent months have seen increased focus by political parties on 'green issues' and the concepts of 'personal carbon budgets' and 'green taxation'. Such a breadth of focus on the cost of carbon and the key role of the corporate bodies in developing carbon abatement and offsetting technologies and methodologies highlights the desire for and importance of clear communications in this area.

So, with carbon becoming increasingly material to the financial statements of companies and important to different users of financial statements for different reasons, a clear understanding of the accounting for the EU ETS and for CERs is important.

4. Power Deals 2006, – visit www.pwc.com/energy.

Survey questions
Accounting for the EU ETS

The withdrawal in June 2005 of the International Accounting Standard Board's (IASB) interpretation of how to account for the EU ETS (IFRIC 3), means there is no specific authoritative approach to the issue.

Contrary to commonly held views, IFRIC 3 complied fully with the current International Financial Reporting Standards (IFRS). The reason for its withdrawal was the often undesirable impact its adoption had on the income statement, introducing both volatility for those balances re-valued based on the prevailing market prices of allowances, and a mismatch between movements in the asset and liability as recognised through the income statement.

The withdrawal of IFRIC 3 did not however invalidate its application. Some companies across Europe have decided to continue to adopt it on the grounds that it remains compliant with existing IFRS. Other companies however have sought to adopt alternative approaches to address the shortcomings of IFRIC 3.

Guidance in relation to alternative approaches comes from IAS 8[5], the standard covering Accounting Policies, which states that 'in the absence of a Standard or Interpretation that specifically applies to a transaction other event or condition, management shall use its judgement in developing and applying an accounting policy that results in information that is:

a) Relevant to the economic decision making needs of users; and

b) Reliable, in that the financial statements:

   i. Represent faithfully the financial position, financial performance and cash flows of the entity;

   ii. Reflect the economic substance of transactions, other events and conditions and not merely the legal form;

   iii. Are neutral, i.e. free from bias;

   iv. Are prudent; and

   v. Are complete in all material respects.

5. IAS 8 refers to the International Accounting Standard 8 – Accounting Policies, Changes in Accounting Estimates and Errors.

In looking to understand how the EU ETS is being accounted for we have assessed the following key questions in our survey:

1. At what value are granted allowances initially recognised on the balance sheet?
2. Where are granted allowances initially recognised on the balance sheet?
3. Where are purchased allowances recorded on the balance sheet?
4. Are granted/purchased allowances subsequently amortised/depreciated?
5. Are granted/purchased allowances revalued subsequent to initial receipt/purchase?
6. Where granted allowances are initially recorded at fair value and deferred income is recognised, how is the deferred income released to the income statement?
7. Where granted allowances are recorded at fair value and deferred income is recognised, where in the income statement is the deferred income released to?
8. How is the obligation for emissions valued?
9. In the event granted allowances (that are recorded at nil value) are sold, how is the sale accounted for?
10. Which line item of the income statement is used to record the sale of granted allowances?

Furthermore, we also asked respondents to explain the accounting for forward contracts to purchase and sell EU ETS allowances, plus whether there are any adjustments to IFRS if the respondent reported under any other reporting standards.

Results of the survey

1. At what value are granted allowances initially recognised on the balance sheet?

76%

of respondents initially recognise granted allowances at nil value

Whereas IFRIC 3 had required companies to recognise granted allowances at fair value, with the corresponding entry recognised as deferred income on the balance sheet, only 14% of respondents apply this treatment. Three quarters of respondents instead apply an alternative which recognises the granted allowances at a nil value, as allowed by the standard on accounting for government grants, IAS 20. This is perhaps not surprising, as this approach can reduce the grossing up impact on the balance sheet and income statement that drew such criticism when IFRIC 3 was issued. Interestingly, 10% recognise the allowances at fair value with the corresponding entry recognised immediately in the income statement.

Whilst the majority of respondents recognise the allowances at nil value, it is clear that these three approaches lead to very different effects on the balance sheet and the income statement. For example, a decision to recognise granted allowances at fair value through the income statement upon receipt would clearly lead to recognising higher profit up front compared to a company that recognised them at nil value.

At fair value at date of receipt, with opposite entry recognised as deferred income on the balance sheet	14%
At fair value at date of receipt, with opposite entry recognised immediately in income statement	10%
At nil value	76%

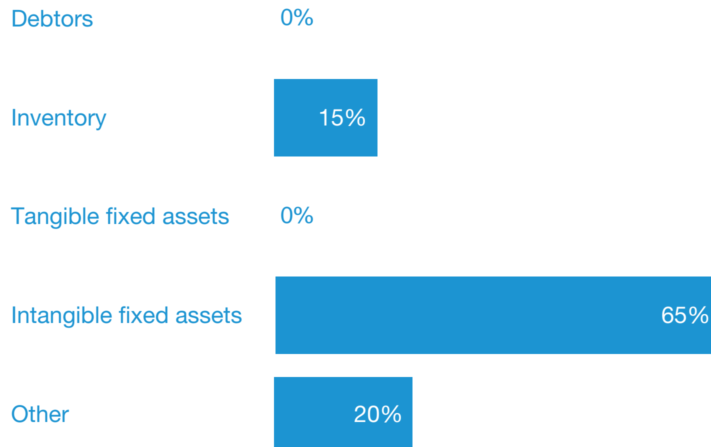
2. Where are granted allowances initially recognised on the balance sheet?

65%

of respondents recognise the granted allowance within intangible fixed assets

The majority of respondents, 65%, recognise the granted allowances within intangible fixed assets on the balance sheet, whilst 15% recognise the allowances within inventory. The balance apply alternative approaches that include 'other current assets', or not recognising them in the accounts at all.

The default presumption would be that allowances fall into scope of IAS 38 Intangible Assets, as they are 'an identifiable non monetary asset without physical substance', and it appears the majority have followed this line of thinking. However, 'intangible assets… held for sale in the ordinary course of business' are scoped out of IAS 38 and fall into IAS 2 Inventories, hence this would suggest that the 15% meeting this criteria consider they hold the granted intangibles for this purpose as opposed to for compliance purposes. Potentially this is being applied therefore to excess allowances held and expected to be sold, although establishing this number at the time of receipt of the allowances could be challenging.



Results of the survey

3. Where are purchased allowances recorded on the balance sheet?

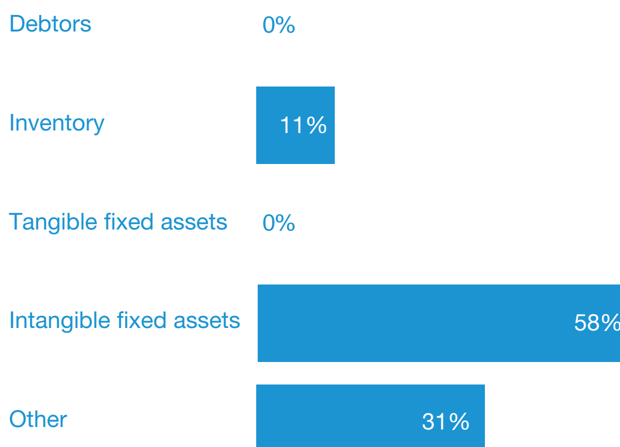
58%

of respondents recognise purchased allowances within intangible fixed assets, with the balance recognising them somewhere within current assets

Further variation in accounting practice is evident when considering where to record purchased allowances on the balance sheet. Once again there is a clear majority who recognise the purchased allowances as intangible fixed assets. However, 11% recognise purchased allowances as inventory and 31% recognise them elsewhere on the balance sheet.

As noted earlier, classifying the allowances as inventory would seem appropriate if the entity is holding them for sale 'in the ordinary course of business'. Financial institutions and traders that don't hold any physical assets and hence do not hold the allowances to meet any compliance obligations could be expected to apply this approach. Looking at the survey results, this isn't always the case however with a mix of treatment being applied by both the companies with CO2 emitting assets and those trading purely on their own account.

Amongst those who selected 'Other', a number drew distinctions in their responses between allowances that were purchased to cover expected deficits when compared to forecast emissions and those that were held for trading. Some respondents noted that allowances held for speculative trading are classified as either 'short-term financing assets' or as 'other current assets'. As ETS allowances in themselves are not financial instruments or a form of finance, classification as 'short-term financing assets' could potentially cause some confusion unless clearly described in the accounting policies or notes.



4. Are granted/purchased allowances subsequently amortised/ depreciated?

86%

of respondents do not apply amortisation/ depreciation to allowances recognised on the balance sheet

There is a clear majority of respondents who adopt an accounting policy of not amortising/ depreciating allowances recognised on the balance sheet. One respondent that had elected to amortise the allowances held did however draw distinction between granted allowances which were not amortised, and purchased allowances which were amortised. No other respondents drew such distinction in their responses.

The policy of amortising the allowances would imply the allowances are being consumed by the business over the period. However, as the allowances have a residual value, as evidenced by an actively traded market, it would appear that the majority do not recognise the cost of allowances in the income statement until settled or sold, or potentially through an impairment in value if the recoverable amount of the allowances is below their carrying value.

Looking at the results in detail, of those who amortise the allowances, some, as expected, record the allowances as intangibles, whilst an equal number record as other current assets.

Response	%
Yes, allowances are amortised / depreciated	14%
No, allowances are not amortised / depreciated	86%

Results of the survey

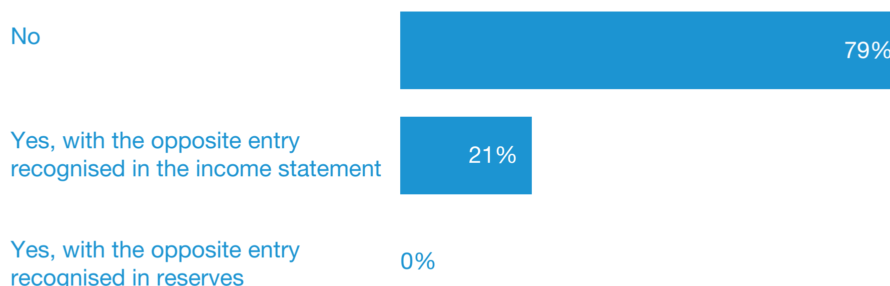
5. Are granted/purchased allowances revalued subsequent to initial receipt/purchase?

79%

of respondents do not revalue the allowances subsequent to initial receipt/ purchase

Over three quarters of respondents do not apply a policy of revaluing granted/purchased allowances following their initial recognition. Of the remaining 21% of respondents that do revalue the allowances, all recognise the corresponding entry to the revaluation directly in the income statement. Given the volatility of the market price for allowances since the scheme began in 2005, these divergent approaches can lead to very different results being reported depending on the approach applied and the underlying market price of allowances.

Of the 21% who revalue the allowances directly to the income statement, there is a mix of responses in relation to where they recognise the allowances on the balance sheet. Some recognise the allowances as inventory, whilst some as intangibles. This is against expectations as the standard on intangibles, IAS 38, specifically precludes revaluation movements to be recognised in the income statement (other than for impairments or reversals of impairments). The standard on inventory, IAS 2, requires inventory to be measured at the lower of cost and net realisable value, hence at face value revaluation to the income statement does not appear appropriate either. However, there is a reference in the scoping section IAS 2 that states the standard does not apply to the measurement of inventories held by commodity broker-traders who measure their inventories at fair value less costs to sell, and that where this policy is applied, the changes in fair value are recognised in the income statement in the period of the change. Those applying this approach would be expected therefore to be acting as 'broker/traders', in other words entities that are trading on their own account or for another party as opposed to those that hold CO2 emitting assets and need allowances to settle the obligations arising. However, we recognise that it is important that the accounting is considered in relation to each organisation's facts and circumstances and that is beyond the scope of this publication.

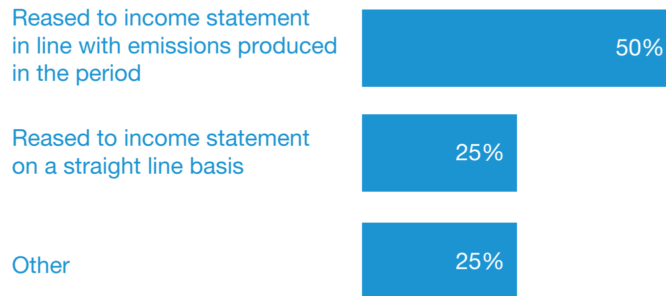


6. Where granted allowances are initially recorded at fair value and deferred income is recognised, how is the deferred income released to the income statement?

50%

of respondents who apply this approach release the deferred income to the balance sheet in line with the emissions produced in the period

As identified from question 1, only 14% of respondents adopt the IFRIC 3 approach of recognising granted allowances at fair value, with the corresponding entry recognised as deferred income on the balance sheet. Of those applying this approach, the responses show that there is no consistent approach used to release the deferred income to the income statement. Releasing the deferred income on a systematic basis in line with the production profile of the asset appears to be the favoured policy, although a quarter apply perhaps a more straight forward approach using a straight line basis.



Results of the survey

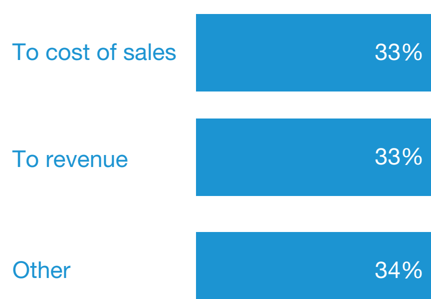
7. Where granted allowances are recorded at fair value and deferred income is recognised, where in the income statement is the deferred income released to?

Of respondents that apply this approach there is no clear consensus as to where in the income statement the deferred income should be released to

A third of respondents release the deferred income through the revenue line, a third through costs of sales and a third through some other line in the income statement. For those respondents that selected 'other', the deferred income is released through 'other income'.

At face value, recognising the deferred income as revenue is unusual as the standard on Government Grants, IAS 20, is specific in that grants should be recognised either separately or as a deduction against the related expense for which the grant has been made available.

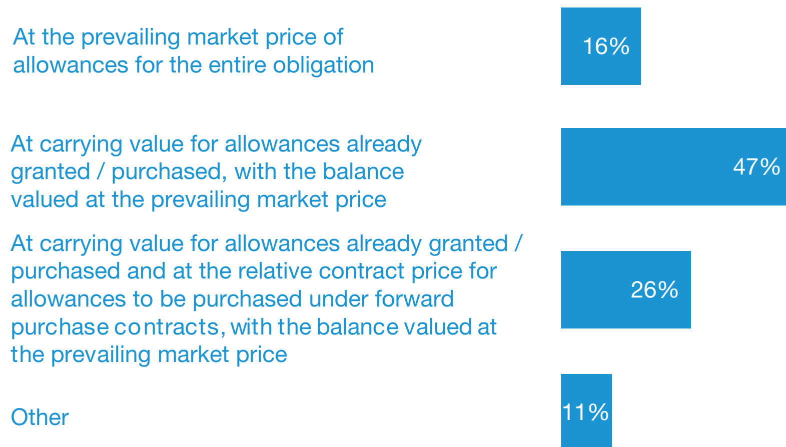
The different treatments can make comparability of performance somewhat challenging. The classification of deferred income release as revenue or cost of sales has no impact on gross margin, however revenue is often a key measure of performance and comparison. Furthermore, where gross margin profitability is used as a key financial performance metric, comparing gross margins is made more difficult given that some companies record deferred income below gross margin as other income. This highlights the need for clear disclosure in financial reporting.



8. How is the obligation for emissions valued?

The most common approach is to value the obligation based on the carrying value of those allowances already granted/purchased, with the balance of the obligation valued at the prevailing market price

The results of the survey show that there is a range of valuation treatments being applied in valuing the obligation associated with the production of emissions. Most respondents (47%) value the obligation based on the carrying value of allowances already granted (which may be nil) and purchased, and then value the balance if applicable at the prevailing market price of allowances. A further 26% apply a similar approach but value that element of the obligation hedged by forward purchases of allowances at the underlying forward contract price. This reflects a 'cost to the company' and is indicative of the expected cash flows to be incurred in order to settle the obligation. 16% of respondents simply apply the prevailing market price for the entire obligation, irrespective of how the company intends to settle it. This is akin to the approach set out in IFRIC 3 prior to its withdrawal.

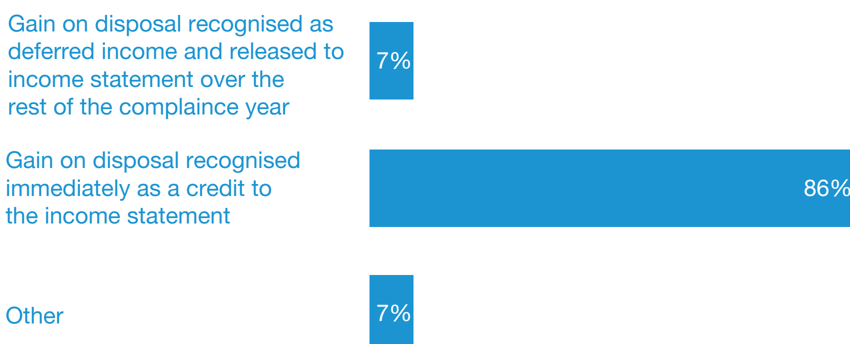


Results of the survey

9. In the event granted allowances that are recorded at nil value are sold, how is the sale accounted for?

Most respondents recognise the gain on disposal immediately in the income statement

It is clear that the majority of respondents recognise the gain on the sale directly in the income statement, whilst 7% recognise it as deferred income released over the remainder of the compliance year. In reality both approaches may lead to the same result at year-end, although should the financial year end not to be coterminous with the compliance year-end or should quarterly or half yearly reporting be involved, the income statements for two identical companies but applying the different approaches will not be directly comparable without further analysis or narrative being provided in the notes.



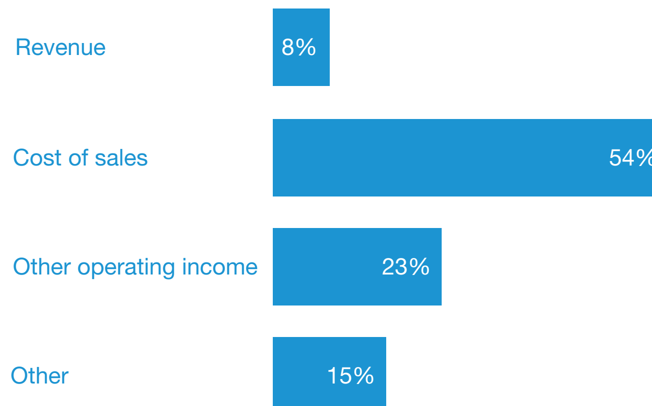
10. Which line item of the income statement is used to record the sale of granted allowances?

54%

of respondents recognise the sale of granted allowances within cost of sales

Most respondents (54%) recognise the sale of granted allowances within cost of sales. This perhaps reflects the judgement that the sale does not arise from the sale of goods or services in the ordinary course of business. Netting sales proceeds against cost of sales effectively represents a reduction in the cost of compliance with the EU ETS. Or putting this another way, for the energy utilities in particular, the inherent value of the allowances is one of the variables that drives the economic decision of whether to produce or buy from the market. This would seem to support recognition of any sale of granted allowances against cost of sales. A quarter of respondents record the sale as other operating income. This may reflect the intention of separating out the sale so as not to distort what is considered to be underlying business performance. This treatment could also be motivated by viewing the sale proceeds as profits on disposal of an asset, which would normally be disclosed under this heading.

Whatever the justification, it remains that a range of different approaches appear to be in place, potentially raising the difficulty of comparing one company's financial performance against another's, gross margins in particular.



Results of the survey

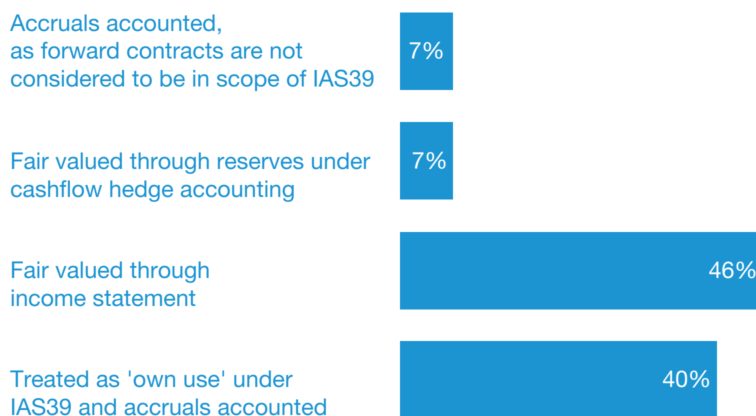
11. How are forward contracts to purchase/sell emissions allowances accounted for?

Of the total respondents to the survey, 60% have engaged in forward purchase/sale arrangements with regards to emissions allowances.
Of those, 46% deem the forward purchase/sale contracts to be within scope of IAS 39 and fair value the contracts through the income statement

Most respondents, 53%, deem the forward purchase/sale contracts to be within scope of IAS 39 and either fair value the contracts through the income statement, (46%) or fair value through reserves under cash flow hedge accounting (7%). 40% of respondents account for the contracts on an accruals basis on the premise that the forward contracts were entered into meet the company's own purchase/sales/requirements (referred to as 'own use') and hence exempt from the scope of IAS 39. 7% of respondents do not consider the contracts to be within scope of IAS 39 for other reasons.

We also asked respondents for their view on the reliability of market price information for allowances. 70% of respondents consider the market to be sufficiently active so as to provide reliable forward price curves that can be used to fair value the allowances and/or forward contracts. The remainder of respondents were unsure about the liquidity of the market, with only 6% deeming the market to be illiquid.

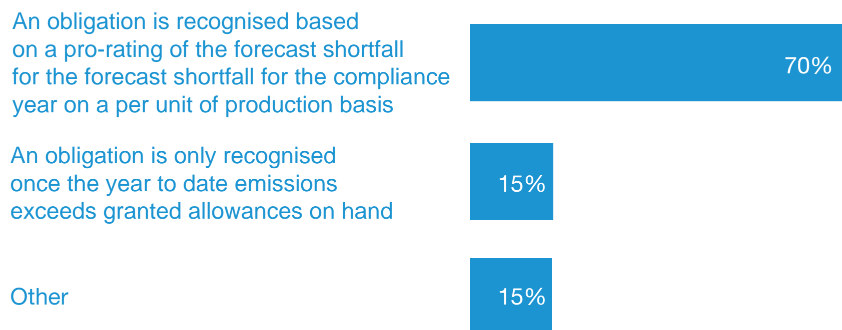
As for most emerging markets, the market for ETS allowances has been characterised by high volatility. As both participants and regulators gain more information concerning the operation of the scheme and the demand and supply fundamentals, market liquidity should increase and price volatility decline. Despite the fluctuating prices and initial uncertainty surrounding national allocations, interestingly most respondents still view the market as providing sufficiently reliable price information that allows reliable valuations of allowances on hand and forward contracts to buy or sell them.



12. For interim reporting periods, in the event expected emissions will exceed allowances held, how is the obligation for emissions recognised over the compliance year?

Most respondents recognise the obligation based on pro-rating the forecast shortfall for the compliance year on a unit of production basis

70% of respondents recognise an obligation by pro-rating the expected shortfall of allowances in the compliance year on a unit of production basis so that the cost of emissions builds up in the income statement in line with production. However 15% of respondents only recognise the obligation once the emissions exceed the equivalent allowances held. Such a difference in approach clearly has implications for interim reporting and will lead to entities with a shortfall who do pro-rate the obligation recognising a liability and cost in the income statement in advance of those that only recognise the obligation once emissions exceed allowances on hand.



Results of the survey

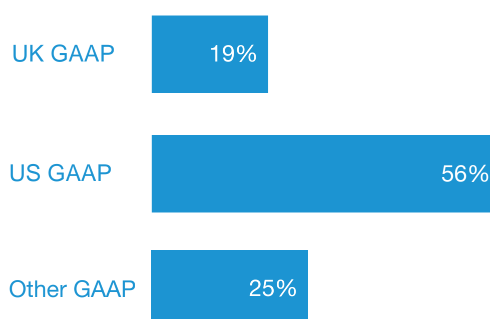
Differences in treatment between IFRS and other GAAP used by respondents

Nearly half of all respondents report under accounting standards other than just IFRS, with most also reporting under US GAAP

In general, respondents that also report under UK GAAP did not note any significant differences in the accounting for EU ETS from the treatment adopted under IFRS.

There were a few differences noted for those also reporting under US GAAP. One respondent highlighted that forward contracts are fair valued under the organisation's US GAAP reporting with the other entry recognised through the income statement but are not fair valued under IFRS. Another pointed out that although the entity reports no GAAP difference for granted allowances recorded at nil value, under US GAAP the purchased allowances recorded as intangible assets are not re-valued at fair value through the income statement, although the respondent noted that if the allowances are treated as financial assets under US GAAP this would permit revaluation. The same respondent highlighted that the issue is how exactly the same asset (i.e. granted allowances and purchased allowances) have a different treatment on the balance sheet. Finally, another respondent noted that under its national GAAP for statutory accounting (in this case the German Commercial Code) there were basically no differences in the policy compared to IFRS with the exception that the forward contracts to trade allowances are fair valued under IFRS and not under the national GAAP.

We have not considered the merits or otherwise of the observations made in respect of GAAP differences, and the consideration of GAAPs other than IFRS is outside the scope of this publication. What our survey does highlight however is that most reporters do not consider there to be many significant GAAP adjustments between IFRS and other standards.



Conclusions

In summary, of the respondents where the EU ETS is relevant, there is a wide variety of approaches being applied. In fact, it has been possible to identify as many as 15 distinct approaches being applied in practice. Ignoring differences in classification however, we have identified that there are 6 main approaches, as follows:

We have identified that there are six main approaches applied by respondents to the survey.

1. 5% of respondents apply the IFRIC 3 approach. Granted allowances are recognised at fair value when received, and the corresponding entry recognised in deferred income on the balance sheet. The obligation for emissions is recognised at market price. The allowances may or may not be re-valued.

2a. Recognise the granted allowances at nil value, with the obligation recognised at the carrying value for allowances already granted/purchased, with the balance valued at the prevailing market price. This is the most frequent approach being applied - 45% of respondents have adopted this policy.

2b. This is a slight modification to the approach in 2a. Granted allowances are recognised at nil value with the obligation recognised at the carrying value for allowances already granted/purchased, then at the relevant contract price for allowances to be purchased under forward purchase contracts, with the balance valued at the prevailing market price. Around 15% of respondents apply this policy.

3a. 10% of respondents recognise granted allowances at fair value with the obligation recognised at the carrying value for allowances already granted/ purchased, with the balance valued at the prevailing market price.

3b. This is a slight extension to 3a. 5% of respondents recognise granted allowances at fair value with the obligation recognised at the carrying value for allowances already granted/ purchased, and at the relevant contract price for allowances to be purchased under forward purchase contracts, with the balance valued at the prevailing market price. As with 3a, the allowances may or may not be re-valued.

4. 5% of respondents recognise the granted allowances at nil value with the full obligation recognised at market value.

15% of respondents have used some other approach to recognising the granted allowances and the obligation.

Conclusions

The application of different policies clearly serves to demonstrate the importance of clear accounting policies in the financial statements and clear communication to key stakeholders.

It is clear from the responses that the initial negative feedback generated by IFRIC 3 has translated into only a small minority of respondents applying the withdrawn interpretation as an accounting policy; presumably this is because of the volatility that this approach can create in the income statement. It appears that concerns that IFRIC 3 would have lead to a mismatch in income has meant that it has not been accepted by many preparers of financial statements.

The other main approaches are a close variation of each other – 60% effectively recognise granted allowances at nil value (as allowed under the standard on government grants), albeit value the obligation in different ways. The most common approach for valuing the obligation is to value it based on the carrying value of allowances on hand. Any additional obligation is then valued at contracted prices and or market prices. This seems to suggest the obligation is valued based on the expected cost to the company of ultimately settling it. Again however, there are variations to the accounting policies in use.

It is also noted that financial institutions and traders tend to favour the approach of fair valuing the EU ETS certificates received and also forward purchase/sales contracts through the income statement. Utilities on the other hand have tended to be more compliance focused and have less of an appetite for recognising movements in fair value of the assets through the income statement and have tended to apply the own use exemption or cash-flow hedge accounting for forward purchase contracts.

In preparing the report we have not distinguished between the sizes of the different entities responding or the extent of the impact of ETS or CERs on the business and its reported financial results. It can be presumed however that the more significant the scheme to the entity and the larger the volume of certificates granted, purchased or sold, the more significant the impact will be of applying the different approaches outlined above. It may be that certain of the approaches being applied by some of the smaller, or less affected entities would be reconsidered by the directors of these companies in the event the materiality on financial reporting was more significant.

Nonetheless, the application of different policies clearly serves to demonstrate the importance of clear accounting policies in the financial statements and clear communication to key stakeholders.

Accounting approaches for the EU ETS – PwC view

The withdrawal of IFRIC 3 means that under the hierarchy for selecting accounting policies in IAS 8 'Accounting policies, changes in accounting estimates and errors', other accounting models are acceptable (as long as they are consistent with underlying IFRS).

The main accounting approaches which PricewaterhouseCoopers consider to be acceptable are summarised in the following table.

	Full market value approach (IFRIC 3)	**Cost of settlement approach**	
		Alternative Approach 1	**Alternative Approach 2**
Initial recognition - Granted allowances	Recognise when able to exercise control; corresponding entry to government grant, at market value at date of grant.	Recognise when able to exercise control; corresponding entry to government grant, at market value at date of grant.	Recognise when able to exercise control; recognise at cost, which for granted allowances is a nominal amount (e.g. nil).
Initial recognition - Purchased allowances	Recognise when able to exercise control, at cost.	Recognise when able to exercise control, at cost.	Recognise when able to exercise control, at cost.
Subsequent treatment of allowances	Allowances are subsequently held at cost or re-valued amount, subject to review for impairment.	Allowances are subsequently held at cost or re-valued amount, subject to review for impairment.	Allowances are subsequently held at cost, subject to review for impairment.
Treatment of deferred income	Government grant amortised on a systematic and rational basis over compliance period.	Government grant amortised on a systematic and rational basis over compliance period.	Not applicable.
Recognition of liability	Recognise liability when incurred.	Recognise liability when incurred.	Recognise liability when incurred.
Measurement of liability	Liability is re-measured fully based on the market value of allowances at each period end, whether the allowances are on hand or would be purchased from the market.	Re-measure liability at each period end. For allowances held, re-measure to carrying amount of those allowances (i.e. market value at date of recognition if cost model is used; market value at date of revaluation if revaluation model is used) on either a FIFO or weighted average basis. A liability relating to any excess emission would be re-measured at the market value at the period end.	Re-measure liability at each period end. For allowances on hand, at the carrying amount of those allowances (nil or cost) on a FIFO or weighted average basis. A liability relating to any excess emission would be re-measured at the market value at the period end.

(Note: this summary does not deal with the accounting for emissions allowances by broker/traders).

Illustrative example

To illustrate the impact on the financial statements of these three accounting approaches consider the following scenario:

- Companies A, B and C all have financial year ends of 31 December 2006
- Each receives 150 granted allowances at the start of the year
- The market price at grant date was £20 per allowance
- Each company requires 200 allowances to cover its obligation for the 2006 compliance year to be settled in February 2007
- The market price at 31 December 2006 was £25 per allowance

Accounting policies adopted

- Company A has adopted the Alternative Approach 1
- Company B has adopted the Alternative Approach 2
- Company C has adopted the 'full market value' approach (IFRIC 3)

Table 1: The companies' financial results and balance sheet for the 2006 year-end

	Alternative approach 1	Alternative approach 2	IFRIC 3
Figures in £	Company A	Company B	Company C
Income statement			
Release of deferred income	3000 (i)		3000 (i)
Emissions cost	-4250 (ii)	-1250 (iii)	-5000 (iv)
Net result	-1250	-1250	-2000
Balance sheet			
Intangible assets	3000 (i)		3000 (i)
Liability	-4250 (ii)	-1250 (iii)	-5000 (iv)
Net assets	-1250	-1250	-2000
Current year result	-1250	-1250	-2000
Revaluation reserve	-	-	-
Shareholders funds	-1250	-1250	-2000

i) 150 allowances received measured at market value at grant date £20 per allowance (150* £20 =£3,000)

ii) liability based on allowances held measured at carrying amount, and liability related to excess emission market value at period end [(150*£20) + (50*£25) = £4,250]

iii) 50 shortfall in obligation measured at market value at period end £25 per allowance

iv) 200 obligation measured at market value at period end £25 per allowance

- The financial results show that companies A and B have identical net results. However, company A effectively has a grossed up balance sheet in comparison with Company B.
- Company C has applied the IFRIC 3 approach and has a very different net result and balance sheet.
- It is important to note that each entity, making the same level of emissions and holding the same number of allowances will ultimately be required to make up the same shortfall in allowances. In the example each company will have to finance the shortfall of allowances, which if the price of allowances remained constant would cost each company £1,250. For company C, the decision to value the entire obligation at the prevailing market price of allowances means that there is a mismatch in the timing of recognition, with the following year recognising a credit to the income statement of £750 as the liability is settled. This highlights the volatility in earnings that can arise with the use of this method.
- Further differences in results could arise when considering when the shortfall is recognised. One approach could be to recognise the expected shortfall, and associated cost and liability, over the financial year. Others, meanwhile, recognise the cost and liability only when the emissions obligation exceeds the assets held. Hence, for two identical companies receiving the same number of allowances and making the same level of emissions, whilst the liability at the year-end would be identical, the position at the half year or at each quarter would of course be very different between the two approaches.
- There is an additional consideration for entities using Alternatives 1 and 2, as the measurement of the obligation for which allowances are held will depend on whether the carrying amount of allowances is allocated to the obligation on a FIFO or on a weighted average basis. This is a particular issue where the balance sheet date is not at the end of the compliance period (for example, an interim balance sheet date, or a financial year-end which is not the same as the compliance period end).
- Entities using the FIFO method should measure the obligation at the carrying amount per unit of emissions, up to the number of allowances (if any) held at the balance sheet date, and at the expected cost (the market price at the balance sheet date) per unit for the shortfall (if any) at the balance sheet date.
- Entities using the weighted average method should measure the obligation using the weighted average cost per unit of emission expected to be incurred for the compliance period as a whole. To do this, the entity determines the expected total emissions for the compliance period and compares this with the number of allowance units granted by the government and/or purchased and still held by the entity for that compliance period, to determine the expected shortfall (if any) in allowances held for the compliance period. The weighted average cost per unit of emission for the compliance period is the carrying amount of the allowances held (which may be nil for those granted for nil consideration) plus the cost of meeting the expected shortfall (using the market price at the balance sheet date), divided by the expected total number of units of emission for the compliance period. In other words:

$$\frac{\text{Carrying amount of allowances held + Cost of meeting expected shortfall}}{\text{Expected total units of emission for the compliance period}} = \text{Weighted average cost per unit of emission for the compliance period}$$

- Organisations that choose to actively manage their emissions asset and liability face further accounting decisions. For example, consider an organisation that reports quarterly and sells all of its 2007 allowances in March 2007. Some would claim that the income from the sale should be recognised immediately as a credit to the income statement. This would of course be partially offset by a debit to the income statement to reflect emissions in the year to date not covered by any allowances held. However there is a mismatch between recognising the value of 12 months allowances against the cost of three months of emissions. Alternatively, some would claim that the credit to the income statement be deferred and released over the remainder of the compliance year.
- Differences in accounting treatment concerning recognition of emissions obligations and allowances could therefore have a significant impact on financial reporting, particularly where the organisation reports quarterly or half-yearly results or has a financial year which is not co-terminus with the compliance year.

Accounting for forward purchases / sales of emissions allowances

The following sets out the main considerations when accounting for forward purchase/sales of emissions allowances.

Is a forward purchase or sale contract for EU emissions allowances within the scope of IAS 39?

IAS 39 'Financial Instruments: recognition and measurement' applies to contracts to buy or sell a non-financial item where the contracts can be settled net in cash or another financial instrument or by exchanging financial instruments. Contracts to buy or sell EU emissions allowances could be examples of such contracts.

The default presumption is that such contracts, if they can be net settled, would be held at fair value with movements in fair value being recognised through the income statement. However the contract may be outside the scope of IAS 39 where the contract to purchase or sell the emissions allowance was entered into and continues to be for the entity's expected purchase, sale or usage requirements. This is commonly referred to as the 'own use' exemption.

An example of own use in this context would be a forward contract to purchase emissions allowances that the entity enters into and continues to hold to meet a shortfall in the entity's emissions obligation, i.e. where granted allowances and/or purchased allowances held by the entity are less than the expected number of allowances required to meet the entity's obligation for a specific period.

The host contracts that do not meet the net settlement criteria are outside the scope of IAS 39, although such contracts should still be reviewed for the existence of embedded derivatives.

For those contracts deemed in scope of IAS 39, an alternative treatment to fair valuing the contracts through the income statement may be to apply cash-flow hedge accounting, whereby the change in the fair value of the contract is recognised within equity. The adoption of this approach requires strict application criteria within IAS 39 to be met and documented at the outset of the hedge.

Results of the survey – Accounting for CERs

Unlike the accounting for the EU ETS there has never been any specific accounting guidance or interpretation provided by the IASB in relation to the accounting for Certified Emissions Reductions (CERs). There are existing standards within IFRS that deal with the accounting, however a lack of specific guidance furthers the scope for judgement to be applied by management in determining a suitable accounting approach.

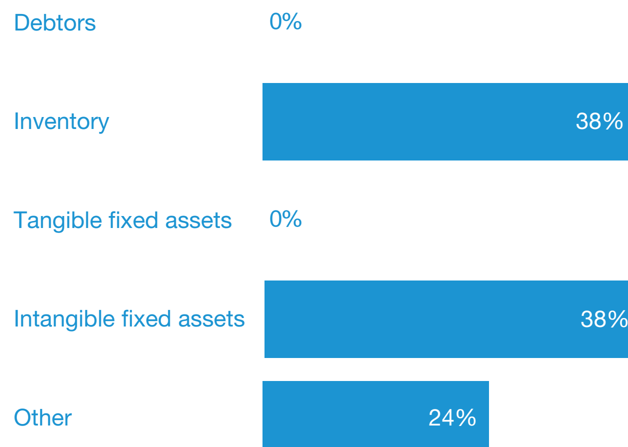
We asked the following questions in our survey:

1. How are purchased CERs initially recognised on the balance sheet?
2. How are 'self generated' CERs (i.e. issued in respect of qualifying assets held) accounted for on the balance sheet?
3. Are the self generated/purchased CERs amortised?
4. Are granted/purchased CERs re-valued subsequent to initial receipt/purchase?
5. How are 'self generated' CERs accounted for in the income statement?
6. How are the forward contracts to purchase/sell CERs accounted for?
7. Do you consider there is a sufficiently active market in CERs to provide reliable forward price curves that can be used to fair value the CERs/forward contracts?

1. How are purchased CERs initially recognised on the balance sheet?

Consistent with the classification of ETS allowances, respondents tend to classify the purchased CERs as either intangible fixed assets, inventory or some other line within current assets

The results of the survey indicate that a broad range of classifications are used in practice. 38% of respondents classify the purchased CERs as intangible fixed assets and 38% classify them as inventory. 24% of respondents classify them in other areas of the balance sheet, such as 'other current assets' or as trading securities or short term financing assets.



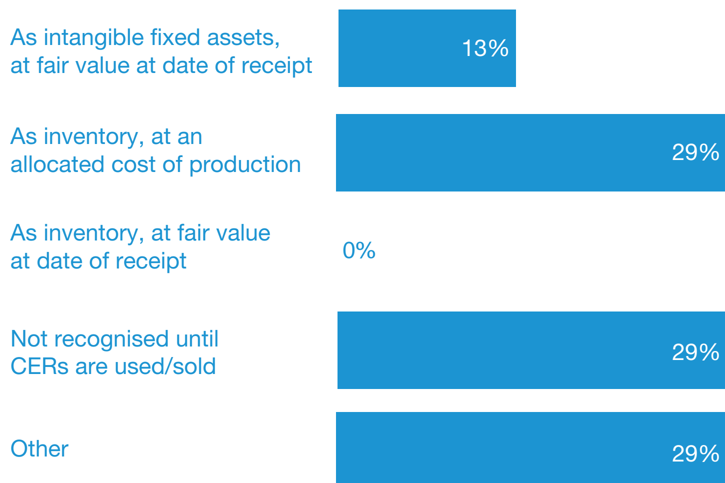
2. How are ‘self generated’ CERs (i.e. issued in respect of qualifying assets held) accounted for on the balance sheet?

A smaller number of respondents held self generated CERs - half as many as those who had purchased CERs had generated them internally through renewable energy or other carbon reduction schemes. From the responses received there appears no common balance sheet classification of self generated CERs

The results showed that 29% of respondents recognise the CERs as inventory upon generation, at an allocated cost of production. 13% of respondents record the CERs as intangible fixed assets, measured at fair value at date of receipt.

Interestingly, 29% of respondents adopt a policy of not recognising the self-generated CERs until they are sold or used in the business. This could suggest that the business sees no underlying value attached to the CERs and expects no future economic benefits to flow to the entity, at least until it can be proved otherwise. The effect of this, in the short-term at least, would be to understate the balance sheet, and potentially also the income statement, in comparison to an identical entity that recognises the CERs as assets at fair value upon generation.

Some respondents separated out the treatment for CERs that are held to meet emissions obligations, holding them as intangibles, whereas those CERs that are held for trading are classified as ‘financing assets’.



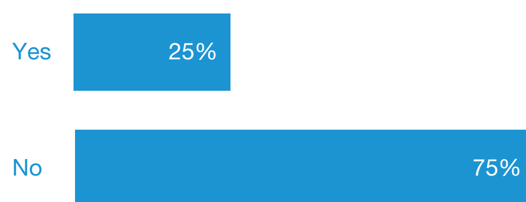
Results of the survey

3. Are the self generated/purchased CERs amortised/ depreciated?

75%

of respondents do not amortise/ depreciate CERs

As is consistent with the treatment of EU ETS allowances, most respondents do not amortise/ depreciate the CERs. This perhaps reflects the view that the CERs have a residual value that approximates book value or potentially that the CERs are expected to be used/sold within the current financial year of the entity.



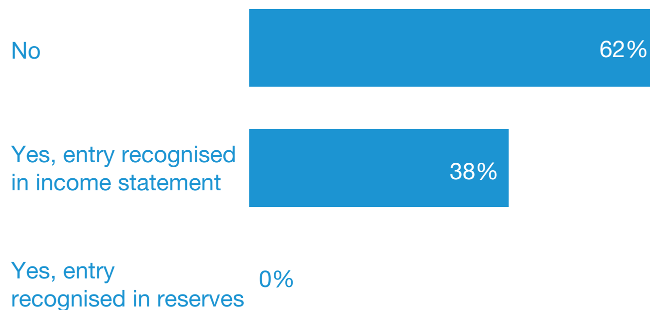
4. Are granted/purchased CERs revalued subsequent to initial receipt/purchase?

62%

of respondents do not revalue the CERs subsequent to initial receipt/purchase

The survey showed that the majority, 62%, of respondents do not apply a policy of revaluing the CERs subsequent to initial receipt/purchase. The balance, 38%, revalue the CERs through the income statement. Of these, a number classify the CERs as intangible assets and recognise the revaluation movements through the income statement. There are no respondents that recognise the revaluation movements in reserves.

It is noteworthy that the majority of respondents, as is shown later in this publication, do not consider there to be an active market for CERs, which may further explain the decision by 62% of respondents not to revalue the CERs.

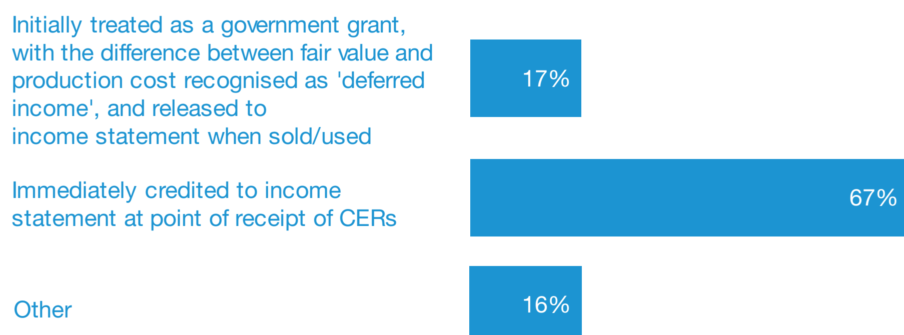


Results of the survey

5. How are ‘self generated’ CERs accounted for in the income statement?

There is a lack of consensus as to how the self-generated CERs should be accounted for in the income statement

The results of the survey show a variety of responses. 67% of respondents immediately credit the income statement at the point of receipt of the CERs. Around 17% initially record the CERs as a government grant with the difference between fair value and production cost recognised as ‘deferred income’ on the balance sheet, which is released to the income statement when the CERs are used or sold. The balance of respondents credit the income statement with the full selling price when sold.



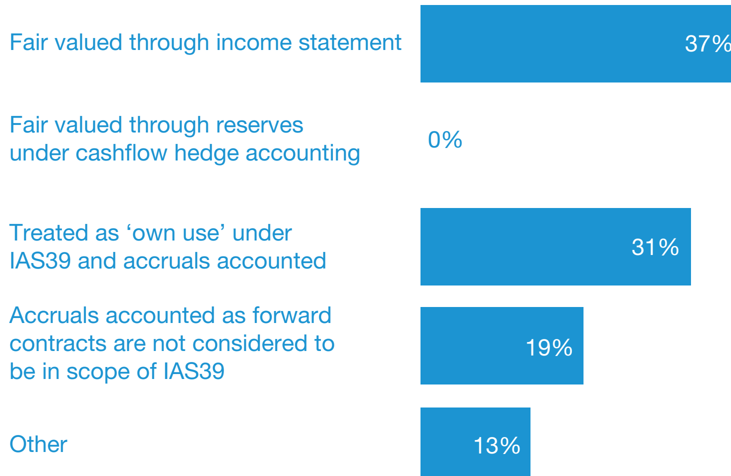
6. How are the forward contracts to purchase/sell CERs accounted for?

The majority of respondents deem the forward contracts to be within scope of IAS 39

64% of respondents to the survey had participated in forward selling/purchasing agreements for CERs.

The decision as to how to account for these forward contracts varies. 37% of respondents deem the forward contracts to be within scope of IAS 39 and apply a policy of fair valuing the contracts through the income statement. 50% of respondents account for the contracts on an accruals basis. On the whole this is because they deem the forward contracts to be outside the scope of IAS 39 on the basis that they are exempt from the standard and they are entered into and continue to be held for the entities' own purchase and sales requirements.

The different approaches used may well be justified given the facts and circumstances of the organisation, but as the accounting is so different it highlights the need for clear disclosure and sufficiently detailed accounting policies in financial reporting.

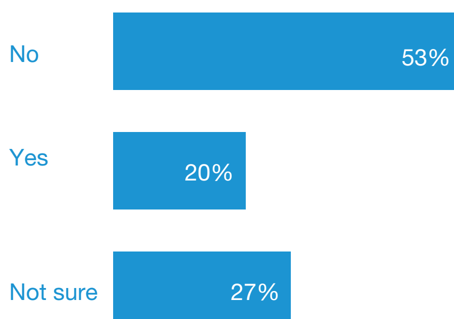


Results of the survey

7. Do you consider there is a sufficiently active market in CERs to provide reliable forward price curves that can be used to fair value the CERs/forward contracts?

Most respondents do not consider there to be a sufficiently active market for CERs so as to provide reliable forward price curves

Whilst 37% of respondents fair value the forward purchase and sales contracts through the income statement, only 20% of respondents deem there to be a sufficiently active market for CERs to provide reliable price curves for valuation purposes, with 53% considering the market not to be sufficiently active. This would suggest valuations are being based on valuation techniques and in-house curve estimates. In contrast to the market for EU ETS allowances, where 70% of respondents consider the market to be sufficiently active to provide reliable price curve data, the vast majority of those holding or trading CERs consider the market for CERs not to have reached a similar level of maturity and liquidity. This is perhaps not surprising as the various administrative steps allowing CERs to be fungible with EU ETS allowances have not yet been completed. In time, it would be expected that the price of CERs, at least in the secondary market, will shadow the market price of the more actively traded EU ETS allowances.

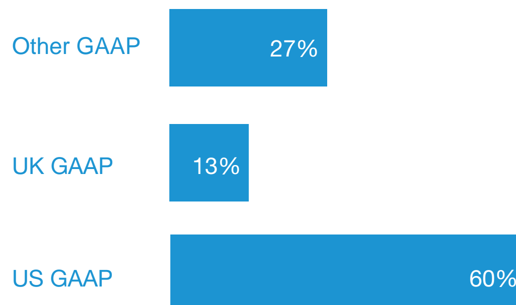


Differences in treatment between IFRS and other GAAPs used by respondents

As is consistent with the responses to EU ETS, most respondents that report under another set of accounting standards do so under US GAAP

In general, respondents reported that there were not many significant differences between their reporting under IFRS and under some other set of standards. Some respondents noted that fair value rules may be different, for example one noted that under Irish GAAP the forward contracts to buy/sell CERs are not fair valued as they are under IFRS. Another noted that whilst there are currently no differences between the IFRS and US GAAP accounting treatment for CERs, this could change in relation to the accounting for forward contracts to procure primary CERs. The respondent noted that if these forward contracts to buy primary CERs (i.e. direct from the generator) qualify for mark to market accounting under IAS 39, they may not qualify as a derivative under FAS 133 which requires financial instruments to have one or more notional amount - primary CERs may not have a notional amount if the contract is to purchase all CERs generated from a particular project.

As for the EU ETS accounting, we have not considered the merits or otherwise of the observations made in respect of GAAP differences and the consideration of GAAPs other than IFRS is outside the scope of this publication. Again, our survey highlights that most reporters do not consider there to be many significant GAAP adjustments between IFRS and other standards, however the differences that were raised seemed to be different across different respondents.



Conclusions

In summary, of the respondents where accounting for CERs is relevant, it is possible to identify a number of different approaches being applied.

In summary, of the respondents where accounting for CERs is relevant, it is possible to identify a number of different approaches being applied. Ignoring differences in classification, the survey results can be broken down into 2 approaches in accounting for purchased CERs. All initially recognise the purchased CERs at cost, but in terms of subsequent measurement:

1. 62% of respondents do not revalue the CERs subsequent to initial recognition.
2. 38% of respondents revalue the CERs subsequent to initial recognition. Of these, 20% recognise the CERs on the balance sheet within intangibles, 40% recognise the CERs within inventory and 40% within another heading in current assets.

Amongst those surveyed, most obtain CERs from the developer or in the secondary market. There were however 6 respondents to our survey that own qualifying assets and therefore need to account for 'self-generated' CERs. Of these, there are no clear accounting approaches emerging in practice for how to do this.

The approaches adopted for self generated CERs varied greatly. Whilst most respondents credit the income statement at the point of receipt of the CERs, there are differences in how they are recognised in the balance sheet – for example, one recognises the self-generated CERs within inventory at an allocated cost of production, whilst other respondents do not recognise the CERs on the balance sheet until the CERs are used/sold.

Another of the respondents recognises the self-generated CERs as intangibles and as a government grant, measured as the difference between their fair value and their production cost, with the grant being released to the income statement when the CERs are sold or used.

Nonetheless, the application of different policies to the treatment of CERs, as with the EU ETS above, underlines the importance of clear accounting policies in the financial statements and clear communication to key stakeholders.

Accounting approaches for CERs – PwC view

The key accounting approaches that PricewaterhouseCoopers consider to be suitable under IFRS are set out in the following pages. This addresses both entities that receive CERs from a qualifying asset under the CDM scheme ('self generated CERs'), and for entities that purchase CERs.

The following key questions are considered:

- Are the CERs assets?
- What is the nature of the CERs?

For entities receiving 'self generated' CERS under the CDM scheme (the 'generator'), the key accounting questions are:

- When should self generated CERs be recognised by the generator?
- What value should be ascribed to CERs that have been recognised - at initial measurement?
- What value should be ascribed to CERs that have been recognised - at subsequent measurement?
- What are the requirements around amortisation and impairment?
- Presentation in the income statement?

For entities purchasing CERs, the accounting questions are:

- When should purchased CERs be recognised?
- At what value should purchased CERs be recognised – at initial measurement and at subsequent measurement?
- What are the requirements around amortisation and impairment?

We then consider whether forward contracts to purchase or sell CERs are in scope of IAS 39: Financial Instruments: Recognition and Measurement.

Are CERs assets?

CERs meet the definition of an asset per the IASB Framework; the CER represents a resource controlled by the entity arising as a result of past events – for example, the production of 'green' energy or the completion of a reforestation project. Furthermore, future economic benefits in the form of cash or cash equivalents would be expected to flow to the entity as a consequence of the sale of the CER by the generator/intermediate purchaser or its use to offset against emissions obligations in the case of purchase by a final consumer.

What is the nature of the CERs?

CERs are intangible assets – they are identifiable non-monetary assets without physical substance (IAS 38 – Intangible Assets).

IAS 38 however does not permit such assets to be treated under the terms of this standard if they are within scope of another accounting standard, such as Inventories (IAS 2). CERs will be within scope of IAS 2 when they are held for sale in the ordinary course of business. 'Self generated' CERs held by the generating entity could in certain circumstances meet the IAS 2 definition.

Accounting for ‘self generated’ CERs

Based on the assumption that the ‘self generated’ CERs are granted by a Government as defined in IAS 20, the standard on accounting for government grants, the two key approaches we consider suitable under IFRS are set out below. Approach ‘A’ accounts for the CERs under IAS 2 ‘Inventories’. Approach ‘B’ accounts for the CERs under IAS 38 ‘Intangible Assets’.

	A) Treat as a government grant with CERs recognised as inventory under IAS 2	B) Treat as a government grant with CERs recognised as an intangible under IAS 38
When should CERs be recognised?	CERs are produced over the course of the project. However they are not received by the producing entity until the project and the associated emissions reductions meet the conditions of the grant and are verified by the CDM executive board. CERs should therefore only be recognised once there is reasonable assurance that the CERs will be received (i.e. reasonable assurance that the conditions attaching to the attribution of the CERs are met) – these conditions may be met as the entity produces the ‘green product’ (i.e upon ‘generation’) or may require fulfilment of other conditions attached to receiving the CERs.	CERs should meet the definition of intangible assets: identifiability, control over the resources and future economic benefits criteria should be met. CERs should be recognised: • When there is a reasonable assurance that the entity will comply with the conditions attached to the CERs and the grants will be received; and • If the cost of the CER can be measured reliably and it is probable that the expected future economic benefits that are attributable to the CER will flow to the entity. As approach A, this may mean the CERs are recognised upon ‘generation’ or at a later point in time.
What value should be ascribed to CERs that have been recognised - at initial measurement?	IAS 20 ‘Accounting for Government Grants and Disclosure of Government Assistance’, provides two choices in terms of initial measurement: • Fair value – CERs should be recognised at fair value and a government grant recognised for the difference between nominal amount and fair value. • Nominal amount – production costs should be allocated on a rational and consistent basis between production cost of the ‘green product’ if relevant and costs of production of the CERs.	As approach A
What value should be ascribed to CERs that have been recognised - subsequent measurement	Subsequently, the CER inventory should be valued at the lower of cost and net realisable value.	If CERs do not meet the definition of ‘non-current assets held for sale’ then they should be held at cost less any amortisation and impairment, if there is no active market. Where there is an active market for CERs, IAS 38 permits valuing them either at cost less any amortisation and impairment or at fair value. Increases and decreases in the carrying amount of the CERs should be recognised as required by IAS 38.85 and IAS 38.86. Where CERs meet the definition of ‘non-current assets held for sale’ per IFRS 5 (CERs should be immediately available for sale in their present condition and the sale is highly probable), the following treatment applies: • Treatment per IAS 38 should continue to apply up until the date at which CERs meet IFRS 5 criteria. Impairment test under IAS 36 should be performed. • Subsequently, CERs should be held at the lower of their carrying amount and fair value less costs to sell.

(Note: If CERs are not granted by a Government as defined in IAS 20 then this table will not apply)

Accounting for 'self generated' CERs

	A) Treat as government grant with CERs recognised as inventory under IAS 2	B) Treat as a government grant with CERs recognised as an intangible under IAS 38
Amortisation and impairment	N/a - CER inventory should be valued at the lower of cost and net realisable value.	CERS are deemed to have a useful life. Under IAS 38, indefinite life applies where there is no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity - this is not applicable for CERs, where the benefits will be obtained at the date they are sold, or submitted to settle the entity's obligation under the EU ETS. In principle, IAS 38 requires assets with a useful life to be amortised, however: • Where there is an active market for CERs no amortisation will be recognised because the residual value will be the same as cost and hence the depreciable amount will be zero. • Where there is no active market, CERs are assumed to have no residual value and amortisation would in principle be applied.The amortisation method should reflect the expected pattern of consumption of the future economic benefits. Since the future economic benefits will arise at the date of disposal (ie utilisation of the CER to settle a liability under the EU ETS), the CER would be amortised at this date. • If CERS are under the scope of IFRS 5 then there is no amortisation The CERs should be tested for impairment under IAS 36 Impairment of Assets.
When should income associated with CERs be recognised?	When the grant is measured at nominal amount, no income can be recognised before the date of the actual sale of the CERs. When the grant is recognised at fair value, the grant is recognised as other income but at initial recognition. Consequently there is a timing difference of recognition of income if CERs are recognised at nominal amount or at fair value under IAS 20.	As Approach A
Presentation in the income statement	CERs initial recognition is recorded as 'other income'. At disposal date, the sale of CERs is also recognised as 'other income'. An alternative presentation is: • At initial recognition, the company reduces the cost of sales to reflect the negative cost of the bi-product (i.e. the CER), • At disposal date, the company recognises revenue for the amount of the sale, and cost of sales for the carrying amount of the CER.	• CERs initial recognition is recorded as 'other income'. • At disposal date, the sale of CERs is recognised as 'other income'.

Accounting for purchased CERs

The key accounting approaches that we consider to apply to purchased CERs are set out below.

	A) Treat CERs as inventory	B) Treat CERs as intangible assets
When should purchased CERs be recognised?	CERs that are acquired are recognised as inventory when they are controlled and it is expected that they provide future economic benefits and the cost of the CERs can be measured reliably.	CERs should meet the definition of intangible assets: identifiability, control over the resources and future economic benefits criteria should be met. CERs should be recognised if the cost of the CER can be measured reliably and it is probable that the expected future economic benefits that are attributable to the CER will flow to the entity.
At what value should purchased CERs be recognised - at initial measurement?	At cost.	As approach A
At what value should purchased CERs be recognised - at subsequent measurement?	Lower of cost and net realisable value. When CERs are held by commodity broker traders, and are measured at fair value less cost to sell, the change in the fair value less costs to sell are recognised in the income statement in the period of the change. Where this is the case, CERs would not be within the measurement scope of IAS 2.	CERs should be held at cost less any amortisation and impairment, when there is no active market. Where there is an active market for CERs, IAS 38 permits to value them either at cost less any amortisation and impairment or at fair value. Increases and decreases in the carrying amount of the CERs should be recognised as required by IAS 38.85 and IAS 38.86. Where CERs meet the definition of 'non-current assets held for sale' per IFRS 5, treatments per IAS 38 and IAS 36 continue to apply up until the date at which IFRS 5 criteria is met, at which point the CERs should be held at the lower of their carrying amount and fair value less cost to sell.
Amortisation and impairment	N/a – hold at lower of cost and net realisable value.	As for self generated CERs. The CERs should be tested for impairment under IAS 36.

Accounting for forward purchase/sales contracts of CERs

Is a forward purchase or sale contract for CERs within the scope of IAS 39?

IAS 39 'Financial Instruments: recognition and measurement' applies to contracts to buy or sell a non-financial item where the contracts can be settled net in cash or another financial instrument or by exchanging financial instruments. Contracts to buy or sell CERs could be examples of such contracts.

The market for CERs is at present less active and less advanced than the market for the EU ETS. Accordingly, whether forward sales or purchases of CERs are capable of net settlement under IAS 39 is an issue that is currently being addressed by companies holding these contracts.

The default presumption is that such contracts, if they can be net settled, would be held at fair value with movements in fair value being recognised through the income statement. However the contract may be outside the scope of IAS 39 where the contract to purchase or sell the CERs was entered into and continues to be for the entity's expected purchase, sale or usage requirements. This is commonly referred to as the 'own use' exemption.

An example of own use in this context would be a forward contract to purchase CERs for delivery that the entity enters into and continues to hold to meet a shortfall in the entity's emissions obligation under the EU ETS (through converting the CER into an EU ETS allowance).

The host contracts that do not meet the net settlement criteria are outside the scope of IAS 39, although such contracts should still be reviewed for the existence of embedded derivatives.

For those contracts deemed in scope of IAS 39, an alternative treatment to fair valuing the contracts through the income statement may be to apply cash-flow hedge accounting, whereby the change in the fair value of the contract is recognised within equity. The adoption of this approach requires strict application criteria within IAS 39 to be met and documented at the outset of the hedge.

Challenges of financial reporting

'The withdrawal of IFRIC 3 meant that having developed processes to record transactions, our accounting approach to ETS had to be reworked and we had to spend more time deciding on an appropriate accounting treatment'.

'A large time commitment has been required to ensure that the accounting treatment which is used is appropriate'.

'There now is a lack of consistency with the treatment applied by our main competitor'.

'It is difficult as well to compare the business performance between the peers when accounting treatments are not clear or they vary so greatly'.

Source: Survey respondents

In our survey we gave the opportunity for respondents to elaborate on the nature and extent of issues and challenges that arose when considering the accounting for EU ETS and CERs schemes.

The most significant issue faced by 64% of respondents related to the time spent in developing appropriate accounting policies as well as reacting to alternative approaches identified. Many organisations highlighted the time spent reviewing the treatments adopted by other entities, discussing the treatment with their auditors, with some noting that they raised the issue with their trade bodies.

Another significant issue highlighted by 41% of respondents has been the concerns over the comparability of treatment and therefore of financial performance and financial position with other entities, particularly where the different accounting treatments affect the 'bottom line'. Indeed, as demonstrated in the examples in the earlier section of this publication, the effect of different approaches, especially given the volatility in the market price of EU ETS allowances, can be very significant. This makes sector and competitor comparisons and bench-marking more challenging and potentially misleading if the financial impact of the different treatments is not known by all stakeholders.

Whilst concerns have been expressed over consistency of treatments between groups, 18% of respondents expressed concern over the consistency of treatment within the same organisation. Concerns were also noted regarding differences in approaches adopted between IFRS and local GAAP accounting treatments, which can be time consuming and add further complexity to the reporting process.

Respondents also reported specific issues in connection with reporting to senior management within the organisation as well as the investment community. These issues were linked to the need to identify and justify different accounting treatments adopted by competitors and the need to reassess the suitability of the accounting policy following the withdrawal of IFRIC 3.

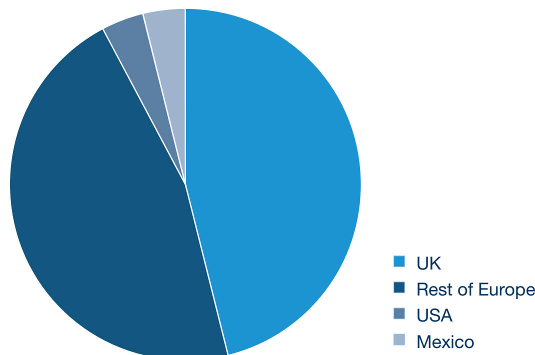
A number of respondents, 18%, also highlighted the challenges that the lack of guidance has created with regards to potential acquisitions and investment decisions. The decision as to how to account for both the EU ETS as well as CERs can have a significant impact upon company and transaction valuations as well as the structure of transactions. Respondents also highlighted the impact that different accounting treatments can have on taxation computations as well as the ability to understand the tax impact of transactions connected to the EU ETS or CERs schemes

In summary, it would appear that the lack of clear guidance over the accounting for the EU ETS and for CERs has been both a source of frustration and a drain on resources for many of those organisations affected, in addition to creating a lack of clarity that has impacted internal decision making. It is beyond the remit of this publication to assess the impact this issue has had on external stakeholders, such as investors, analysts and other current and potential stakeholders, however it would surely be an interesting insight.

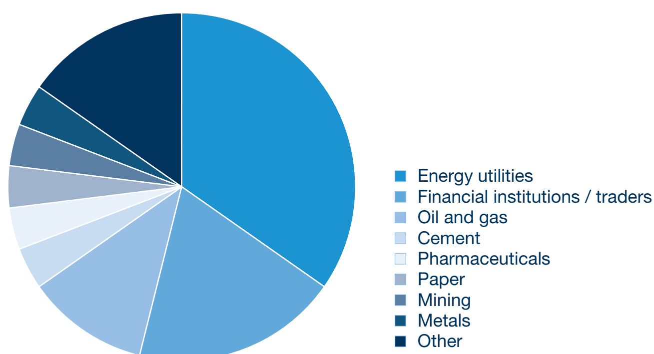
Who took part?

In initially conducting the survey, our primary focus was to target energy and utility companies, as it is those organisations that have been most heavily affected by Phase 1 of the EU ETS. As it turned out, the coverage of the survey gained momentum as interested parties shared it with their counterparts in different industries and geographical territories. In total we received 26 responses to the survey from a range of industries and geographic locations. Indeed as the analysis below shows we received responses from a range of sectors, from metals and aggregates to paper and pharmaceuticals, and from countries as far a field as the United States and Mexico. Such a broad range of respondents highlights that the impact of carbon on corporate reporting is becoming increasingly widespread across different industry sectors and is now recognised as a global financial reporting issue.

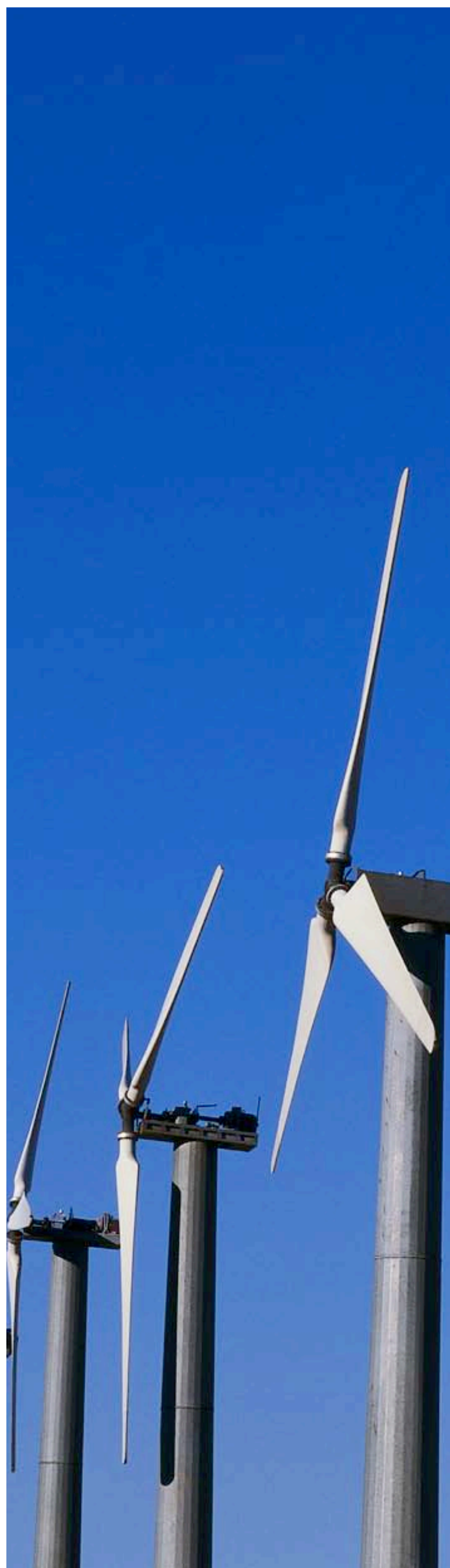
Reponse by origin



Reponse by sector



Looking ahead



IFRS focuses on principles over prescription, but in all respects is based on a framework of understandability, relevance, reliability and comparability.

The withdrawal of IFRIC 3 opened up the opportunity for organisations affected by the EU ETS scheme to re-assess the accounting approaches on a principles basis. This has also been necessary for those involved in generating or trading in CERs. In many respects, this has demonstrated the challenges that preparers have of applying principles based accounting to such complex schemes, particularly where they have such pervasive impacts on the income statement and balance sheet. However, there are standards that provide a lot of guidance in these areas, for example IAS38, IAS 2, IAS 20 and the IFRS Framework.

Of course, the impact of these schemes will affect different organisations to different degrees, and therefore preparers will apply judgement as to the extent of disclosure necessary to ensure the financial statements are consistent with the requirements of IFRS. As noted by some respondents however, different approaches being applied have inevitably raised some challenges in respect of comparability of financial reporting between different entities. Based on facts and circumstances however, it may be that the different accounting approaches, and hence different accounting outcomes, are justifiable under IFRS.

Looking forward, the IASB has stated that work on a project to address the underlying accounting for emissions trading schemes in a more comprehensive way than originally envisaged by the IFRIC is due to resume towards the end of 2007. This means that by the time clear guidance is issued, another round of financial reporting year-ends will have passed.

Until a set of firm rules are established, the emphasis must be on the preparers of financial statements, and their auditors, to ensure that the approaches adopted in respect of the accounting for the EU ETS and CERs schemes are compliant in all respects with IFRS. Stakeholders must also be provided with clear and sufficient disclosure. Such disclosure should define the accounting policy, and where it is considered material should also provide narrative to draw together the key balance sheet and income statement line items that are affected by each scheme so that stakeholders can understand their financial impact on the organisation. With climate change and carbon reporting moving further up the public and corporate agendas, the importance of transparency and comparability in this area has never been greater.

Contact us

In the event you wish to discuss the accounting issues raised in this publication, please contact Mary Dolson, Richard French or Jonathan Rose. Should you wish to discuss other matters in relation to carbon markets or transactions in general please contact Richard Gledhill.

Should you wish to discuss any matters in relation to the International Emissions Trading Association (IETA) please contact Andrei Marcu.

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