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Project	Emissions trading schemes		
Paper topic	Summary of accounting issues		
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Purpose of the paper

1. The purpose of this paper is to provide the IASB with a summary of the accounting issues that staff have identified as relevant to consider in the emissions trading schemes project. Background information about how emissions trading schemes operate is contained in Agenda Paper 6A. The staff are not seeking decisions from the IASB at this stage but, instead, are seeking preliminary input about the potential scope of the project. The staff will use the IASB's input, along with that of the ASAF, to develop a project plan to bring to the IASB at a future meeting.

2. This agenda paper includes some background about the accounting issues identified to date:

   (a) Background on previous IASB projects on emissions trading schemes.

   (b) Summary of accounting issues.

   (c) Appendix A: Summary of IFRIC 3 *Emissions Trading Schemes*.

   (d) Appendix B: Decisions made in the previous IASB project.

   (e) Appendix C: Common accounting approaches currently being used.

Background on previous IASB projects

3. The prevalence of emissions trading schemes increased as a result of the adoption of the Kyoto Protocol[1] in 1997. The main type of scheme employed was the cap and trade scheme. The European Union's Emissions Trading Scheme (the EU ETS), which started in 2005, became, and currently remains, the largest cap and trade scheme in operation.

4. In December 2004 the IASB issued IFRIC 3 *Emission Rights*. This was intended primarily to address the accounting for cap and trade schemes such as the EU ETS, with an acknowledgement that it may be relevant to other types of schemes. However, IFRIC 3 was withdrawn in 2005 because many did not think that the accounting mismatches that it created, both in recognition and measurement bases, were appropriate (see Appendix A).

5. After the withdrawal of IFRIC 3, the IASB initiated a joint project with the US Financial Accounting Standards Board (FASB) to find a better solution. This project again focused on cap and trade schemes and the Boards reached some tentative decisions about what the assets and liabilities in the scheme were, when to recognise them, and how to measure them (see Appendix B). However, the project was suspended in 2010 due to time and resource constraints.

6. In the absence of authoritative guidance from the IASB, several approaches have developed to account for the financial effects of emissions trading schemes. A 2007 survey by PwC and the International Emissions Trading Association (IETA) identified as many as fifteen variations of accounting. These variations can be categories into three main approaches, which are summarised in Appendix C.[2] Each of these approaches avoid the mismatches created by IFRIC 3 but they result in different accounting outcomes. This significantly reduces comparability between entities.

[1] An international agreement which committed its 37 industrialised countries and the European Community to setting internationally binding emission reduction targets. (*United Nations Framework Convention on Climate Change* website)

[2] See 'Trouble-entry accounting - Revisited: Uncertainty in accounting for the EU Emissions Trading Scheme and Certified Emission Reductions.' (http://www.ieta.org/assets/Reports/trouble_entry_accounting.pdf)

Summary of the main accounting issues

7. Cap and trade schemes remain the most prevalent type of emissions reduction trading mechanism and so this paper will focus primarily on them. Another common type of scheme, the baseline and credit scheme, has many similar issues. This paper just highlights the accounting issues relating to the main difference between the schemes.

8. In both types of scheme, the tradable instruments can be traded both by participants in the scheme, ie entities that emit and are covered by the scheme, and by broker/dealers who do not emit but trade the instruments for profit. This paper focuses on the accounting issues facing participants because, in the staff's view, the accounting for broker/dealers is unlikely to raise any distinct accounting issues.

9. The summary of accounting issues considers the accounting for assets and liabilities separately. However, this was the approach taken in the development of IFRIC 3 and, in the staff's view, was the driver for the mismatches that many argued did not faithfully represent the economic reality of the schemes.

10. As a result, the staff think that it is important for the IASB to consider the net position of the entity under the scheme, that is, to view the scheme as the unit of account. Any accounting model developed should, in our view, reflect the net overall effect of the scheme, even if the individual components of the scheme are presented separately. This view was strongly expressed by members of the Global Preparers Forum in their November 2014 meeting. It is also the basis for the common accounting approaches identified in practice (see Appendix C).

11. Many of the accounting issues are indicated by the information in Appendices A-C. The remainder of this paper provides more detail to those issues that the staff think will require the most detailed consideration through the project.

Cap and trade schemes

12. Cap and trade schemes employ a trading mechanism by issuing tradable instruments called emissions allowances[3], at the beginning of a compliance period. A scheme participant must remit allowances to the government in an amount equal to the amount of emissions produced.[4]

13. At the beginning of a compliance period, the designated scheme participants either receive allocated allowances free of charge and/or purchase allowances through a scheme auction. At the end of the compliance period, each participant verifies its volume of emissions and must remit the equivalent amount of allowances to the scheme administrator.

14. In the extreme, a participant could sell all of its allowances immediately after they are allocated (ie on the first day of the period), in the expectation that it will either (a) buy allowances equal to actual emissions at a later date or (b) cease to emit (eg by switching to technology that eliminates emissions or by ceasing to operate).[5]

Should the allowances be recognised as assets?

15. Participants can obtain emissions allowances by:

    (a) receiving an allocation of them free of charge, from the government;

    (b) buying them from the government, either at a fixed price or at a market price determined through an auction; or

    (c) buying them in the market, either from other participants in the scheme or from traders.

16. In the deliberations leading to the issue of IFRIC 3, the Interpretations Committee concluded that an allowance that is purchased is an asset that should be recognised.

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3 In this paper, we use the term 'allowances' (for cap and trade schemes) and 'credits' (for baseline and credit schemes) to denote the tradable instruments issued for use in the schemes. Other literature may use other terms (eg offsets, certificates, permits or rights) to mean the same.

4 In a baseline and credit scheme, the participant must remit credits to the government in an amount equal to the excess of emissions produced above the designated baseline.

5 Some schemes require that if the entity ceases to emit because of the closure of an installation, the allowances must be returned to the government (see paragraph 43).

This is because a purchased allowance is a tradable instrument that controlled by the entity and from which future economic benefit is expected to flow to the entity. The benefit will flow either through the sale of the allowance or its use to settle the entity's obligation to remit allowances equal to its emissions. The staff think that few would dispute this conclusion today.

17. The next issue to consider is whether the same conclusion applies if the allowance is allocated by the government free of charge. In issuing IFRC 3, the Interpretations Committee noted that there is no difference in the value or function of an allowance allocated by government and one that is purchased. Both can be sold by the entity or held to settle emissions obligations. The Interpretations Committee could find no reason to treat them differently. Consequently, it concluded that allocated allowances should also be recognised as assets.

18. An alternative view is that allowances issued by the government free of charge should be treated differently from purchased allowances and therefore do not warrant recognition as an asset. This view mainly arises as a result of considering the entity's position before and after the introduction of the emissions scheme. That is to say, before the introduction of the scheme the entity has a right to produce unlimited emissions at no cost, whereas afterwards the entity has been given an allowance to emit at a specified level (likely to be below its existing level of emissions). Emissions above that level will result in an additional cost. The allowances are tradable, but the entity is not 'better off'. In fact it is worse off because its previously unrestricted right to emit has been capped. This restriction may indicate that the entity's assets are impaired.

Timing of recognition

19. The staff think that purchased allowances should be recognised when the entity obtains control of them and no specific accounting issues arise. However, if emissions allowances that are allocated free of charge are recognised as assets, questions arise about which 'past event' gives rise to the entity's right to control the allowances.

20. In the EU ETS, emissions allowances are allocated to participants based on past emissions levels. The allocation plan covers a commitment period comprised of

several compliance years. The plan assumes that the participant will continue to operate the covered installation throughout the longer commitment period. The overall allocation is then divided into annual amounts of allowances, which are issued in January and delivered into the participant's registry account about two months later.

21. If the allocated allowances are recognised as assets, what triggers the timing of recognition by the participant? For example:

    (a) Should the annual allocation of emissions allowances be recognised on issue (beginning of the compliance year) or on delivery (about two months later)?

    (b) Should the allowances for future years within the commitment period, which are allocated but not yet issued, be recognised when allocated, that is, at the start of the commitment period? Generally, the receipt of future allocated instalments is conditional upon an installation continuing to operate. Consequently, one view is that an entity recognises an asset for future instalments only once the condition to receive them is resolved. This suggests that they should be recognised when the annual allocation is issued. Another view is that the allocation of allowances for the whole commitment period gives the entity an option to claim instalments for future compliance years within the longer commitment period. The option is under the entity's control. Under that view, that option—the right to receive emissions allowances in the future—may meet the criteria for recognition as an asset at the beginning of the commitment period.

    (c) Some question whether an entity should be able to recognise future allowances that it expects to be allocated for future commitment periods. For on ongoing scheme, such as the EU ETS, the 'rules' for the next commitment period (sometimes call the next phase) are announced in advance. At that time, an entity may be able to make a reasonable estimate about the number of allowances that they will receive.

Measurement

22. In cases in which a participant acquires emissions allowances in the market or through an auction, the cost is unlikely to be materially different from fair value. In such cases, it seems that there is general agreement that initial measurement at cost is an appropriate measurement basis. However, in most schemes, particularly in the early phases, at least some participants are allocated allowances free of charge. As noted in paragraph 17, some think that allocated and purchased allowances should not be accounted for differently because they are indistinguishable from each other. They suggest that not recognising allocated allowances (or recognising them at nil cost) would mean treating like items differently.

23. The following paragraphs identify possible measurement approaches that could be addressed in the project:

Model 1 – Fair value with subsequent remeasurement:

24. Some suggest that purchased and allocated allowances should be measured at fair value initially and subsequently at each reporting date because the allowances are tradable. Consequently, using fair value would provide more relevant information about the market assessment of future cash flows and risk. If there is a difference between the fair value at initial recognition and the price paid by the entity, a question arises about how the difference should be accounted for (see paragraph 29).

25. If the allowances are subsequently remeasured, an issue then arises about where revaluation gains and losses should be recognised.

    (a) If the allowances are classified as intangible assets, then changes in fair value would be recognised in other comprehensive income in accordance with IAS 38 *Intangible Assets*.

    (b) However, some suggest that that the allowances are effectively an input to the production process and, therefore, are similar to inventories or commodities. Paragraph 3(b) of IAS 2 *Inventories* refers to commodity broker-traders who measure their inventories at fair value less costs to sell, with changes in fair value less costs to sell being recognised in profit or loss. However, participants in the emissions trading schemes will hold the

majority of allowances for remitting to the government and are unlikely to be classed as broker-traders.

(c) Others suggest that the allowances would be better classified as a type of financial instrument and revalued through profit or loss in accordance with IFRS 9, because they can both be traded and be used as a form of currency to settle an obligation that has monetary value.

Model 2 – Initial measurement at fair value with no remeasurement

26. This model would require purchased and allocated allowances to be initially measured at fair value with no subsequent remeasurement for price changes in the active market for allowances at each reporting date. This would reduce the concern that recognising allowances initially at cost would result in a different treatment between purchased and allocated allowances.

27. The absence of subsequent remeasurement to would reduce the concerns of those who suggest that the allowances should be treated like inventories and should not be remeasured.

28. This model could either require impairment testing under existing standards (IAS 36 *Impairment of Assets*) or use the lower of cost (or deemed cost if fair value at initial measurement is different than cost) and net realisable value approach of IAS 2.

29. If there is a difference between the fair value at initial recognition and the price paid by the entity, a question arises about how the difference should be accounted for. Some suggest that a ‘day one’ gain should be recognised because the entity has been given a valuable, tradable, resource by the government at below its fair value.

30. Others suggest that there is no day one gain. As noted in paragraph 20, the entity receives allocated allowances only if it has previously emitted. Consequently, the entity is not in a position to realise any perceived day one gain. Even if the entity immediately sells the allocated allowances, it will need to take action to either purchase replacement allowances or reduce its emissions to such an extent that it does not need to remit allowances back to the government.

31. An alternative view is, therefore, that the allocated allowances are similar to a conditional government grant.[6] The entity must return the granted allowances to the government at the end of the compliance period unless it can reduce its emissions below the allocated cap and retain the surplus allowances. Using this view, the difference between the cost and the fair value on initial measurement would be accounted for as a government grant in accordance with IAS 20 *Acccounting for Government Grants Disclosure of Government Assistance*. This was the treatment required by IFRIC 3. This means that the grant would be recognised in profit or loss on a systematic basis over the periods in which the entity recognises as expenses the related costs for which the grant is intended to compensate.

Model 3 – Price paid with no remeasurement:

32. This model would require the initial measurement of purchased and allocated allowances to be based upon the price paid by the entity at the time of acquisition. Because allocated allowances are received for no monetary consideration, this would result in an initial measurement of nil for the allocated allowances. For purchased allowances, this model would likely result in the same *initial* measurement as the fair value models.

33. This model would be consistent with both IAS 38 and IAS 2. It is supported by the view that it is only the net cost to the entity of the emissions reduction scheme that needs to be recognised in the financial statements. If an entity has received emissions allowances free of charge, and those allowances are subsequently remitted back to the government to settle the entity's emissions obligation, there is no net cost to the entity.

34. However, this model does not address the concerns of those who view both purchased and allocated allowances as indistinguishable assets, which should be accounted for in the same way.

[6] A government grant is defined in IAS 20 as assistance by the government in the form of transfers of resources to an entity in return for past or future compliance with certain conditions relating to the operating activities of the entity.

Model 4 – Business approach

35. Some suggest that participants in an emissions trading scheme should be allowed to use different measurement approaches for allowances depending on their intended use because this could most faithfully represent the economics of these transactions. Allowances that are expected to be used to settle the obligation to remit the quantity of allowances equal to the emission produced could be treated like inventories. Any allowances that are expected to be surplus to production-related requirements could be treated as held for trading and be measured at fair value through profit or loss.

36. However, entities might find it difficult to determine the expected use of their allowances both initially and as circumstances changes over time. Guidance would also need to be developed to determine how an entity would account for a change in measurement basis when the expected use changes.

Should a liability be recognised for the obligation to remit allowances equal to the quantity of emissions produced?

37. Some participants in emissions trading scheme receive no allocation of allowances free of charge. Instead, they must purchase all of the allowances that they need to settle their obligation to remit allowances at the end of the compliance period.

38. In such cases, we think that most would accept that the entity should recognise a liability only as it emits pollutants. The liability would be measured at the best estimate of the expenditure required to settle the present obligation, in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*. This is likely to be based on the market price of allowances at the reporting date.

39. However, many participants receive an allocation of allowances free of charge, which is intended to cover at least part of their obligation to remit, at the end of the compliance period, allowances equal to the quantity of emissions produced during the period. It is this free allocation that has raised many questions about whether a liability should be recognised at the same time, and at the same financial amount, as any asset recognised for the allocated allowances.

40. Some suggest that, at the beginning of the compliance period, an entity has no present obligation to remit the allocated allowances because it has no obligation to emit. In such cases, the entity is able to benefit immediately from the allocated allowances.

41. However, the installations to which emissions allowances are allocated have histories of emitting – this is what makes them subject to the scheme. When an installation is allocated allowances, it is obliged to do one of two things:

    (a) Exit the market; or

    (b) Comply with the scheme.

Exiting the market

42. In some schemes, even if an entity closes an installation, it may be able to retain that year's allocation of allowances for that installation. Therefore, in this case, this could support the view that there is no obligation for the entity, but there is a day one gain.

43. In other schemes, the entity is obliged to return the allocated allowances for an installation if that installation closes. Therefore, there is a view that a liability arises here because the entity is obligated to return those allowances, whether it continues to emit or not.

Complying with the scheme

44. The purpose of an emissions trading scheme is to reduce the level of emissions produced by installations covered by the scheme. An entity's installations are usually allocated allowances equivalent to emissions that are *below* the installation's historical levels of emissions. Upon allocation of emissions allowances, an entity is unlikely to be in a position to immediately cease emitting from any given installation.

45. Therefore, if a particular installation is to continue to operate, the entity is expected not only to need to return its allocated allowances at the end of the compliance period but will also need either to reduce its emissions or buy additional allowances to cover excess emissions. In both cases, there are likely to be associated costs.

46. Consequently, the common accounting approaches outlined in Appendix C either:

    (a) do not recognise an asset or a liability for the allocated allowances, or

(b) recognise a liability at the same time, and at the same financial amount, as any asset recognised for the allocated allowances.

47. The recognition of a liability at the same time, and at the same amount, as the asset recognised for the allocated allowances reflects the view that it is important to reflect the scheme as a single unit of account and, therefore, reflect the net effect of the scheme (see paragraph 10). However, the separate presentation of the asset and liability raises questions as to what is the nature of the 'present obligation' to support the recognition of a separate liability and how its measurement relates to the measurement basis required by IAS 37 or other Standards that deal with the recognition and measurement of liabilities.

Buying additional allowances

48. A further issue arises when an entity expects to emit above the level of the allowances that it holds and will need to buy additional allowances.

49. Some suggest that the obligation to remit allowances is similar to a levy and, therefore, should be accounted for in accordance with IFRIC 21 *Levies*. This would mean that the entity would not recognise a liability for the excess allowances until its emissions exceed the allowances held.

50. Others suggest that this would not faithfully represent the results of the activities undertaken during the year. Instead, the entity should estimate the total level of emissions that it expects to make during the period and accrue a liability for the expected net cost through the compliance period as it emits, based on the expected pattern of emissions in the period. The net cost would be the cost of the additional allowances that the entity would need to acquire in excess of the allowances received free of charge.

Presentation: Should entities present the purchased and allocated allowances and the related liabilities on a net basis?

51. When an entity is required to return allowances to the scheme administrator, the only way it can settle this liability is by delivering the allowances. Consequently, some

suggest that the entity should report only its net position under the scheme at the reporting date.

52. The staff think that there is merit in this suggestion but there are various issues that would need to be addressed if it were to be permitted (or required). These issues relate primarily to the problems of recognition and measurement highlighted earlier it this paper. If the IASB was to decide to develop recognition and measurement requirements that applied the same bases for both the allowances held (asset) and obligation to remit allowances (liability), then some form of net presentation may be more easily achieved.

53. Alternatively, whether the asset and liability elements are recognised and measured on the same basis or not, some form of linked presentation may be suitable. This would enable participant's net position under the scheme be readily seen, with greater transparency than a net presentation to explain how that net potion is comprised.

Baseline and credit schemes

54. Baseline and credit schemes have features in common with cap and trade schemes and many of the issues highlighted above are equally applicable to recognition and measurement of issued credits in a baseline and credit scheme. Some suggest that, because a baseline and credit scheme is intended to produce the same environmental result as a cap and trade scheme, they should be accounting for in similar ways. Consequently, some suggest that the baseline should be recognised as an asset in the same way as allocated allowances. However, this would create the same problems with recognition and measurement issues for both the asset and the related obligation as the cap and trade scheme. An alternative approach is prohibit the recognition of the baseline as an asset, but this approach raises other issues.

When should credits be recognised as an asset?

55. In a baseline and credit scheme, a participant that has emitted below its baseline receives credits equal to the difference. The credits can be traded in a similar way to allowances in a cap and trade scheme and, consequently, they are a valuable resource that many argue should be recognised as an asset. Similar questions about initial and

subsequent measurement arise as those that relate to allowances allocated in a cap and trade scheme.

56. If credits are to be recognised, a further question arises about the timing of recognition. Should an entity wait until the credits are awarded (ie the compliance year has ended and the entity has verified that it has emitted below its baseline) or should it accrue for the credits based on its expected emissions? Accruing during the year based on expected emissions is, effectively, recognising part of the baseline.

Question
Does the IASB have any comments or other issues for the staff to consider?

Appendix A

IFRIC 3

IFRIC 3 *Emissions Rights* was issued in December 2004 to address the accounting by participants in a cap and trade scheme but was withdrawn soon after. We summarise the main requirements of IFRIC 3 for information.

Asset

(a) Allowances held are recognised as assets in accordance with IAS 38 *Intangible Assets*, whether government-issued (free of charge) or purchased.

(b) The allowances are measured initially at fair value.

Government grant

(a) A day one gain is not recognised. Instead, a government grant is recognised in accordance with IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*, for the difference between the amount paid for, and the fair value of, the allowances received.

(b) The grant is subsequently recognised as income on a systematic basis over the compliance period, regardless of whether the allowances are held or sold.

Liability

(a) A liability for the obligation to remit allowances equal to emissions produced is recognised only as emissions are produced, as a provision in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*.

(b) The liability is measured at best estimate of expenditure required to settle present obligation at balance sheet date. This will usually be the present market price of the number of allowances required to cover emissions made up to the balance sheet date.

Appendix B: Tentative decisions from the previous iteration of this project

Between 2005 and 2010, the project was run jointly with the US Financial Accounting Standards Board (FASB). Some of the tentative decisions made by the boards during that time were:

(a) *Scope*—the boards tentatively decided that the scope of the project would cover not only emissions trading schemes, but project-based certificates and renewable energy certificates. The guidance was expected to apply to those that buy and sell tradable rights – both participants and non-participants.

(b) *Recognition and measurement of an asset*— the boards tentatively decided that an entity should recognise emissions allowances as assets, initially and subsequently measured at fair value, whether received free of charge from the government or purchased.

(c) *Recognition and measurement of a liability*—the boards tentatively decided that the allocation of allowances creates an obligating event that meets the definition of a liability in the *Conceptual Framework* and so would be recognised as a liability, measured initially and subsequently at the fair value of the allowances received.

For the timing of recognition of a liability for allowances to be purchased to cover excess emissions, there were split views. While some Board members supported recognition of the excess liability throughout the compliance period as emissions occur, others supported recognition of the excess liability only when emissions exceed the liability for the allocation.

(d) *Presentation*—the Boards had different views on this topic. The IASB preferred gross presentation of the assets and liabilities on the balance sheet, while the FASB preferred a form of linked presentation.

Appendix C: Approaches applied in practice to account for cap & trade schemes

In the absence of authoritative guidance by the IASB, several approaches have developed that IFRS preparers apply to account for the effects of emissions trading schemes. A survey by PwC and the International Emissions Trading Association (IETA) identified as many as fifteen variations to account for the effects of EU ETS.[7] The following table highlights the three main approaches.

[7] See 'Trouble-entry accounting - Revisited: Uncertainty in accounting for the EU Emissions Trading Scheme and Certified Emission Reductions.' (http://www.ieta.org/assets/Reports/trouble_entry_accounting.pdf)

		Approach 1	Approach 2	Approach 3
Initial recognition	*Allocated* allowances	Recognise and measure at **market value** at date of issue; corresponding entry to government grant.		Recognise and measure at cost, which for granted allowances is **nil**.
	Purchased allowances	Recognise and measure at **cost**.		
Subsequent treatment	of allowances	Allowances are subsequently measured at **cost or market value**, subject to review for impairment.		Allowances are subsequently measured at **cost**, subject to review for impairment.
	of government grant	Government grant **amortised** on a systematic and rational basis **over compliance period**.		Not applicable.
Liability	Recognition	Recognise liability when incurred (ie as emissions are produced).		Recognise liability when incurred (ie as emissions are produced). However, the way in which the liability is measured (see below) means that often no liability is shown in the statement of financial position until emissions produced exceed the allowances allocated to the participant.
	Measurement	Liability is measured based on the **market value** of allowances at each period end that would be required to cover actual emissions, regardless of whether the allowances are on hand or would be purchased from the market.	Liability is measured based on: the **carrying amount** of **allowances on hand** at each period end to be used to cover actual emissions (ie 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; *plus* the **market value** of allowances at each period end that would be required to cover any **excess emissions** (ie actual emissions in excess of allowances on hand).	Liability is measured based on: the **carrying amount** of **allowances on hand** at each period end to be used to cover actual emissions (nil or cost) on a FIFO or weighted average basis; *plus* the **market value** of allowances at each period end that would be required to cover any **excess emissions** (ie actual emissions in excess of allowances on hand).