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Introduction

1 The purpose of this paper is to provide background information about how emissions reductions schemes operate in order to support the description of the related accounting issues contained in Agenda Paper AP6B. This paper does not contain any questions for the IASB.

2 This agenda paper contains:

(a) an outline description of two common types of emissions trading schemes;

(i) cap and trade scheme (¶7–¶17)

(ii) baseline and credit scheme (¶18–¶20)

(b) a comparative analysis of the schemes (¶21–¶28); and

(c) a brief note about other emissions reduction mechanisms (Appendix).

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Description of the schemes

3 In the IASB's previous Emissions Trading Schemes project, the discussions focussed on the main type of emissions reduction scheme that involves tradable instruments, that is, a cap and trade scheme. [1]

4 Another type of scheme, a baseline a credit scheme, has similarities to a cap and trade scheme but there are notable differences, which we highlight in this paper.

5 In researching how the operation of these schemes has changed since the previous project was suspended, the staff have identified other types of emissions reduction mechanisms. In some jurisdictions the alternative mechanisms are used instead of an emissions trading scheme. In other cases, the mechanisms are used to supplement a trading scheme.

6 At this time, the staff have not researched these alternative mechanisms in sufficient detail to provide an analysis of the accounting issues. Consequently, the main types of mechanisms are outlined in the Appendix for information only. We will bring a more detailed description and analysis of the related accounting issues to the IASB at a later date.

Cap and trade schemes – EU ETS[2]

7 Cap and trade schemes were, and continue to be, predominant, with the European Union Greenhouse Gas Emission Trading Scheme (EU ETS), which started in 2005, as the largest scheme in the world. The description of cap and trade schemes in this paper focuses on the EU ETS.[3]

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[1] A short summary of the project is included in Agenda Paper 6B.

[2] This document does not cover all aspects of the EU ETS and should not be taken as being a comprehensive guide. European Financial Reporting Group (EFRAG) staff have kindly contributed to the research of this scheme but any errors in the description provided are the responsibility of IASB staff.

[3] Further information about the EU ETS is available on the website of the European Commission. In particular, a fact sheet can be downloaded at http://ec.europa.eu/clima/publications/docs/factsheet_ets_en.pdf

8 In a cap and trade scheme, a ‘scheme administrator’ (eg a government body of each EU Member State) sets an overall cap on the amount of particular greenhouse gas or other emissions that may be released by participants in the scheme during specified time periods, known as ‘commitment periods’. Participants operate the factories, power plants and other installations covered by the scheme (the ‘covered installations’). Over time, the overall cap is reduced to achieve the desired reduction in overall emissions.

9 In the EU ETS, the current commitment period (known as ‘Phase III’) runs from 2013 through 2020. The commitment period is divided into annual ‘compliance years’, which run from 1 January through 31 December. At the start of the compliance year, the scheme administrator issues the number of emissions allowances that equals the volume of the overall cap. Each emissions allowance offsets or ‘pays for’ a designated unit of regulated pollutant (eg under the EU ETS, one emissions allowance is equivalent to one tonne of carbon dioxide (CO_2)). Once allowances are used and remitted back to the government, they are cancelled and cannot be used again.

10 Within the overall cap, participants receive or buy emissions allowances, which they can trade with one another as needed. The scheme administrator uses an ‘allocation plan’, which identifies the number of emissions allowances that are granted free of charge to individual participants and the number that are sold or auctioned in the market place.

11 Under the EU allocation plans, the scheme administrators currently allocate the majority of the emissions allowances free of charge to the participants. The allocation of free allowances is intended to ease the transition process for participants but the number of free allowances will reduce over time.

12 In the EU ETS, emissions allowances are allocated as at 1 January and are delivered to participants by the end of February in each respective compliance year. By April of the following year, participants have to remit emissions allowances equal to their level of emissions during the compliance year. Harsh fines are imposed for any shortfall in allowances remitted by the due

date. However, the imposition of a penalty does not remove the obligation to remit the required allowances.

13 Allowances are allocated on an annual basis but their use is not restricted to a particular year. Consequently, if a participant reduces its emissions below its cap, it can 'bank' the spare allowances to cover its future needs or sell them to another participant or trader. Alternatively, if a participant has produced emissions above its cap, it can either buy allowances in the market or it can borrow allowances from the following compliance year's allocation (ie the participant may use allowances for compliance year 2 to settle obligations for compliance year 1). This borrowing is possible because the next year's allowances are delivered in February, but the preceding year's obligation is settled in April.

14 The EU ETS also allows 'project-based certificates' to be remitted in lieu of emissions allowances in fulfilment of a limited percentage of an entity's emissions obligation. Generally, third-party providers undertake these projects to reduce emissions in regions outside the jurisdiction of the EU ETS and either use the resulting certificates to settle their own obligations or sell the resulting certificates on the open market to EU ETS scheme participants. The staff understand that certificates typically trade at a lower price than emissions allowances, primarily because of the limitation on the number of certificates that may be remitted. The use of such project-based certificates is becoming increasingly limited in the EU ETS scheme, but they are still usable in ETS schemes in other jurisdictions.[4]

Some other features of cap and trade schemes

15 This Agenda Paper focuses on the features of the EU ETS. Other cap and trade schemes have different features, which will be considered in due course later in the project.

[4] Projects-based certificates are generally issued as part of a results-based financing programme (see Appendix).

16 For example, in the United States' Acid Rain Program, allowances to emit sulphur oxides have been allocated for a period covering 30 compliance years. Each allowance has a 'vintage year' designation, indicating the first compliance year in which it may be used to offset emissions. Participants have in their accounts allowances with vintage years extending beyond the year 2030 that they may trade today, and those allowances may be carried forward ('banked') indefinitely. In contrast, in the EU ETS, allowances do not have vintage years because they only issued at the beginning of each compliance year and can be used to fulfil the current as well as future remittance obligations.

17 Some schemes allow participants to make up for a shortfall in allowances by paying into an environmental fund or making another form of a penalty payment. Again, this contrasts with the EU ETS, in which the imposition of a penalty does not remove the obligation to remit the required number of allowances.

Baseline and credit schemes

18 Baseline and credit schemes differ from cap and trade schemes in at least one important way. Instead of issuing emissions allowances equal to the cap before or near the beginning of the compliance year, the scheme administrator assigns a 'baseline' to establish the emissions limit for each covered installation in the scheme. [5]

19 A participant may emit up to the level of the baseline without incurring additional costs. At the end of the compliance year, if a covered installation's emissions:

(a) are below its baseline, 'credits' equal to the difference are issued; or

[5] The baseline may be set as a fixed quantity of emissions or it may be variable, based on some measure of output. This Agenda Paper focuses on schemes with fixed baselines, because of their similarities to cap and trade schemes.

(b) exceed its baseline, the participant has to purchase and surrender 'credits' equal to the excess.

20 The period of time between the issuance of credits and the deadline for remitting them is relatively short (usually only a few months), and thus trading activity is generally more limited than in a cap and trade scheme.

Comparative analysis of the schemes

21 Cap and trade schemes and baseline and credit schemes are both mechanisms to limit emissions. Usually, the goal of a scheme is to reduce the level of emissions produced by restricting a previously unrestricted emissions-producing activity. The initial cap or baseline that is allocated free of charge is usually set below the existing level of emissions, which is measured using historical data. The free allocation is then further reduced over time. This restriction in free emissions levels creates a new cost for activities that were previously free.

22 Under a cap and trade scheme, the free allocation of emissions allowances represents an amount of emissions that can be produced without incurring additional costs. The allocated emissions allowances can therefore be seen as establishing a baseline of emissions similar to the actual baseline in a baseline and credit scheme. Only if a participant's emissions exceed the established baseline will it incur additional costs. Hence, all other things being equal, participants in cap and trade schemes and in a comparable baseline and credit scheme are in a similar position if the level of allocated emissions allowances is equal to the assigned baseline.

23 The schemes differ in how the trading mechanisms are implemented. This affects the availability and liquidity of tradable instruments in the market. As outlined in the following paragraphs, baseline and credit schemes may have limited liquidity due to the smaller number of tradable instruments that trade for a shorter period of time. However, in a baseline and credit scheme that allows for banking of the credits to use in future compliance periods, the trading window will expand over time.

24 The number of tradable instruments issued under a baseline and credit scheme will be much smaller than under a comparable cap and trade scheme. For example, a utility with a baseline of 80,000 tonnes and actual emissions of 70,000 tonnes would receive 10,000 emission credits under a baseline and credit scheme. In contrast, in a cap and trade scheme in which the emissions cap is 80,000 tonnes, the administrator would issue 80,000 emissions allowances.

25 The scheme differences also affect the timing of when allowances or credits can be traded. In a cap and trade scheme, the emissions allowances are allocated at, or shortly after, the beginning of a compliance period. A participant may start spot trading upon receipt of the emissions allowances.[6] In a baseline and credit scheme, tradable instruments are generated only if the emissions of a participant are below its baseline. Those credits will not be issued until after the end of the compliance period.

Forward contracts

26 The availability of forward markets could make baseline and credit schemes more equivalent to cap and trade schemes. Upon receipt of its allocated allowances, a participant in a cap and trade scheme may sell the allowances in the market. If the participant is expected to continue to emit, it can simultaneously enter into forward contracts to buy back the number of allowances it expects to remit at the end of the period. If the forward rates adequately reflect the cost of carry, the agreed forward price exceeds the sale price by the financing costs. Essentially, the participant enters into a secured loan.

27 In contrast, a participant in a baseline and credit scheme cannot trade the baseline, because it is applicable only to the specific covered installation. However, a participant expecting an excess or a shortfall of credits in the

[6] EU ETS emissions allowances exist only in the form of electronic records on a single EU registry. The receipt or 'physical delivery' means the transfer of an emissions allowance on the EU registry into a participant's account.

compliance period may enter into forward contracts. A forward contract enables scheme participants to sell or buy credits at a certain date in the future, at an agreed price. Hence, participants can effectively sell (part of) their baseline. The 'physical delivery' of credits takes place when the participants receive the credits from the scheme administrator after the end of the compliance period.

28 Consequently, some consider that the accounting for baseline and credit schemes should be the same as cap and trade scheme that are designed to achieve the same objective.

Appendix: Other emissions reduction mechanisms

Some governments use other mechanisms to achieve emissions reductions, either instead of, or in addition to, schemes that use the trading of emissions allowances and credits. These mechanisms aim to reduce or mitigate emissions by putting a price on them. These are often called 'carbon pricing' instruments, but may cover other types of emissions, not just carbon dioxide. The staff will conduct further research into how these mechanisms work in order to try to identify their financial effects and what accounting issues, if any, may need to be considered.

Carbon taxes

Carbon taxes place a price on carbon, using a metric based on carbon (eg price per tonne of CO_2 or equivalent (tCO_2e)). A carbon tax guarantees the carbon price in the economic system and, if the price is high enough, will provide an incentive for entities to reduce their emissions to reduce the tax cost.

Results-based financing

Results-based financing is a financing approach employed to support development objectives and policy goals. In particular, such a financing approach is increasingly being used for the provision of international support, for example, for Reducing Emissions from Deforestation, Forest Degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+). In such cases, carbon prices elements are using carbon as a metric to channel climate finance transfers.[7]

A variety of forms of results-based financing exist. In some cases, contributors of finance receive carbon credits or allowances in exchange. Such credits or allowances may be remitted to the administrator of an emissions trading scheme to which the contributor is a participant, instead of credits or allowances issued by that scheme (see paragraph 14 for 'project-based certificates' in the EU ETS).

[7] World Bank, 2014, State and Trends of Carbon Pricing 2914, Washington, DC: World Bank.