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These notes are based on the staff papers prepared for the IASB and FASB. Paragraph numbers correspond to paragraph numbers used in the joint IASB-FASB papers. However, because these notes are less detailed, some paragraph numbers are not used.

INFORMATION FOR OBSERVERS

IASB/FASB Meeting: 21 October 2008, Norwalk

Project: Emissions Trading Schemes

Subject: Background material (Agenda Paper 9A)

INTRODUCTION

- This Agenda Paper provides background information on two types of emissions trading schemes: 'cap and trade' schemes and 'baseline and credit' schemes. The staff think resolving the complex accounting issues requires a thorough understanding of the schemes' mechanisms. Given the similarities in these two types of schemes, the staff think that the accounting issues at the outset of both types should be resolved jointly.
- The Agenda Paper describes these two types of emissions trading schemes and analyses their similarities and differences. It also outlines the allocation mechanisms, i.e. the allocation of a baseline and the allocation of emissions allowances.

- 3 The Agenda Paper is set out as follows:
 - a Description of the schemes (¶4-¶16);
 - b Comparative analysis of the schemes ($\P17-\P25$);
 - c Allocation mechanisms applied in practice (¶26-¶31).

DESCRIPTION OF THE SCHEMES

Cap and trade schemes – EU ETS

- 4 Cap and trade schemes are by far predominant, with the European Union Greenhouse Gas Emission Trading Scheme (EU ETS), which started in 2005, being the largest scheme in the world. The discussion of cap and trade schemes will focus on the EU ETS.
- In a cap and trade scheme, a 'scheme administrator' (eg a governmental body) sets an overall cap on the amount of emissions that may be released during specified time periods. In the EU ETS, the current 'commitment period' (known as 'Phase II') runs from 2008 through 2012. The commitment period is divided into annual 'compliance years'. The overall cap is implemented by issuing emission allowances to emit. Each 'emission allowance' grants a right to emit a certain amount of regulated pollutant (eg under the EU ETS, one emission allowance offsets the equivalent of one tonne of carbon dioxide (CO₂)). Before a specified deadline following the compliance year, participants must offset their emissions by remitting to the scheme administrator emission allowances equal to their actual emissions.
- The issuance of emission allowances is governed by 'allocation plans'. The allocation plans determine the number of emission allowances that are granted for free to the participants and the number that are sold or auctioned in the market place. Over time, the overall cap is reduced, in order to achieve the desired reduction in overall emissions. The allocation plans also specify the treatment of 'new entrants', ie entities that enter into the emissions regulated market after the start of the scheme. Allocation plans are discussed below in \$\quad 26-\quad 31.

- Under the EU allocation plans, the scheme administrators (government bodies of EU Member States) currently allocate the majority of the emission allowances free of charge to the participants with the remaining allowances being auctioned in the market place. Participants are free to trade their emission allowances and—as evidenced by the market activity—actively do so. The EU ETS allows Member States to auction or sell up to 10% of the emission allowances issued during the current commitment period. The free allocation is intended to smooth the transition process for the participants. It is expected that the percentage of allowances that are freely allocated will be reduced and the percentage of allowances that are auctioned will increase over time.
- In the EU ETS, emission allowances are granted/issued by the end of February in each respective compliance year (ending in December). By April of the following year, participants have to surrender emission allowances equal to their level of emissions during the compliance year to settle their emissions obligation for that year. Participants may effectively borrow allowances from the following compliance year's February allocation when settling their obligation for the preceding year (ie they may use allowances for compliance year 2 to settle obligations for compliance year 1). Unused emission allowances may be banked for use in future compliance years.
- 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 sell the resulting certificates on the open market to 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. Project based certificates will be considered in greater detail in a later stage of the project, once the Boards have decided on a basic accounting model for the schemes.

Some other features of cap and trade schemes

- Other cap and trade schemes have different features. Although these Agenda Papers, including the discussion of the accounting issues, focus on the features of EU ETS, the staff believe it is important to keep in mind that there are meaningful variations in existing cap and trade schemes.
- For example, in the United States' Acid Rain Program, allowances to emit sulphur oxides are already allocated for a period covering the next 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 currently 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.
- Additionally, it should be noted that although the markets for EU ETS allowances are active, markets for allowances issued under other schemes have varying levels activity. Markets for allowances under some schemes are undeveloped and considered illiquid.
- 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. Other schemes provide for a price cap for allowances (eg the current proposal of the Australian emissions trading scheme). Both types effectively establish a price ceiling for the offsets.

Baseline and credit schemes

- Baseline and credit schemes differ from cap and trade schemes in one important respect. Instead of issuing emission allowances equal to the cap before or near the beginning of the compliance year, the scheme administrator assigns a 'baseline' to each participant in the scheme. The baseline establishes the emissions limit.
- A participant may emit without incurring additional costs up to the level of the baseline. At the end of the compliance year, each participant's emissions for

the year are measured. If a participant's emissions are below its baseline, it receives 'credits' equal to the difference. If a participant has exceeded its baseline, it has to purchase and surrender 'credits' equal to the difference. 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 limited. The baseline itself is assigned to a specific source of emissions and is not tradable.

The baseline in a baseline and credit scheme may be set as a fixed quantity of emissions or it may be variable, based on some measure of output. These Agenda Papers focus on schemes with fixed baselines, because of their similarities to cap and trade schemes. Baseline and credit schemes with variable baselines will be considered in a later phase of the project.

COMPARATIVE ANALYSIS OF THE SCHEMES

- 17 Cap and trade schemes and baseline and credit schemes are both mechanisms to limit or cap emissions. Usually, the effect of a scheme is to restrict an activity that was previously non-restricted. Eventually, this restricts an entity in its activities, thereby creating a new cost for activities that were previously free.
- In a cap and trade scheme, the overall cap is implemented by issuing emission allowances equal to the cap. Likewise, in a baseline and credit scheme individual baselines are assigned to the participants, thereby establishing an overall cap equal to the sum of the individual baselines. In terms of regulating emissions, baseline and credit schemes may be seen as equivalent to cap and trade schemes if the cap implicit in the baseline and credit scheme is fixed and numerically equal to the fixed cap in a cap and trade scheme.
- Some commentators have noted that, in theory, a cap and trade scheme in one jurisdiction could be 'linked' to a baseline and credit scheme with a similarly strict overall emissions limit in another jurisdiction. In that case, participants would be able to trade offsets (ie emission allowances or credits) across schemes and remit offsets from either scheme to cover their emissions obligations. Proponents argue that linking of schemes lowers the overall costs

- of compliance as emissions reductions will be carried out in the sub-scheme with the lowest costs.
- 20 Given the equivalence of the schemes on an aggregate level, does this imply that participants are in a similar position when entering into one of the schemes? Primarily, this will depend upon the free allocation of emission allowances and baselines to the participants. Under a cap and trade scheme, the free allocation of emission allowances represents an amount of emissions that can be produced without incurring additional costs. The allocated emission 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 baseline and credit schemes are in a similar position if the level of allocated emission allowances is equal to the assigned baseline. Assuming that a participant does not trade its allocated emission allowances, participants will end up with the same excess number or shortfall of emission allowances (cap and trade) or credits (baseline and credit) at the end of the compliance period.
- However, the schemes achieve the emissions targets by different means. Whereas a participant in a cap and trade scheme is granted tradable emission allowances, a participant in a baseline and credit scheme receives a baseline that is, generally, tied to the source of emissions and therefore, cannot be separately transferred. In a cap and trade scheme, a linkage between the source of emissions and the allocation of emission allowances applies only to future instalments. A participant is not entitled to receive emission allowances in future compliance periods if the source of emissions is closed and/or the production falls below a specified level. Only under certain conditions do the schemes allow for a transfer of future instalments or baselines if a source of emissions has been replaced.
- The schemes differ in how the trading mechanisms are implemented. In a cap and trade scheme, a participant may start spot trading upon receipt of the emission allowances. Usually, the emissions allowances are allocated at, or

shortly after, the beginning of a compliance period. In a baseline and credit scheme, tradable instruments are generated if the emissions of a participant remain below of its baseline. Those credits will not be issued until the end of the compliance period. Further, the number of tradable instruments 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 the administrator would issue emissions allowances up to the level of the baseline, ie 80,000.

- Even though participants in a baseline and credit scheme cannot trade the baseline, in theory, the availability of forward markets would render baseline and credit schemes equivalent to cap and trade schemes. A participant expecting an excess or a shortfall of credits in the 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 virtually sell (parts of) their baseline. The physical delivery of credits takes place when the participants receive the credits after the end of the compliance period.
- Another difference relates to the potential financing element that goes along with the allocation of emission allowances. Upon receipt, a participant may sell those in the market and simultaneously enter into forward contracts to buy them back. 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. In contrast, in a baseline and credit scheme a participant may not use the baseline as source of financing.
- In practice, baseline and credit schemes often are said to be of restricted liquidity due to the smaller number of tradable instruments. Additionally, the credits are issued at the end of the compliance period and therefore are traded over a shorter period of time. In a baseline and credit scheme that allows for banking of the credits, the trading window will expand over time.

ALLOCATION MECHANISMS APPLIED IN PRACTICE

- Another consideration which the staff believe may be important to the accounting for emissions trading schemes involves the mechanisms used to allocate allowances or baselines. These mechanisms are common to both cap and trade and baseline and credit schemes.
- As noted above, under most existing cap and trade schemes, the majority of the emission allowances are currently granted to the participants for free, although the number of freely allocated allowances is expected to diminish over time. The allocation mechanisms are complex and—given the cost of acquiring allowances on the open market—highly political and controversial. Usually, the allocation of granted allowances is linked to historical emissions, either based directly on each source's specific quantities of emissions in the past (known as 'grandfathering') or based on overall industry emissions per unit of output (known as 'benchmarking').
- Importantly, the different schemes are distinctive in who can apply for emissions allowances or baselines, ie whether the scheme are open to 'new entrants'. In an 'open scheme' any entity is entitled to receive allocated emission allowances or baselines. In contrast, in a closed scheme, the scheme administrator provides allocated emission allowances or baselines only to a limited number of entities. Hence, access is restricted or limited.
- In an 'open' scheme, the scheme administrators provide for a 'new entrant reserve'. The level of the new entrant reserve usually reflects an administrator's expectations about new investments. The objective of the new entrant reserve is to attract (or not to deter) future investments in the industries regulated under a scheme. New entrants are treated in one of the following ways:
 - a New entrants may be allocated emission allowances on a first come first serve basis up to the level of the reserve.

- b The reserve is allocated on a proportionate basis to new entrants. To satisfy this condition, the allocation for each new entrant is calculated and issued only at the end of the compliance period.
- c New entrants receive emission allowances without regard to the amount of emission allowances initially held in reserve. Eventually, the scheme administrator may have to extend the reserve (eg. procure additional emission allowances).
- With regard to the allocation mechanism for new entrants, the design of the existing schemes often tries to establish a level playing field, ie the new entrant reserve is intended to mitigate entry barriers.
- 31 The implementation of a fixed cap in an open scheme may be difficult to administer. In particular, if a scheme administrator has to extend the new entrant reserve, effectively it does not control the overall cap.