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## BACKGROUND DOCUMENT 6<sup>(1)</sup>

### **Subject: “Elements to be made compatible for the linking of national schemes and the linking of national schemes with an EU scheme”**

6. At the risk of stating the obvious, if two or more emissions trading schemes are linked – like water in connected jars finding a common level – then it is generally supposed that there is a common price of allowances or credits within these schemes. However, if there is no link between the jars, the re-direction of investment, for example, may in time cause the levels in each jar to converge, but at higher cost.

Given that the cost-savings from emissions trading will increase with the number of participants, there is widespread agreement on the desirability of being able, if so decided, to link different emissions trading schemes. But for this to happen there should be agreement on what elements need to be compatible with one another, and what elements can be differentiated. If emissions trading schemes are to be linked, the trading authorities concerned must either accept each other's rules (also called “mutual recognition”) or agree on common rules between them.

It would always be possible for a “domestic” trading scheme to remain detached from others. The likelihood is that, in such a case, economic benefits are foregone, both within the scheme that is kept separate, and within the scheme or schemes with which it might have been linked. Ultimately, however, “domestic” emissions trading schemes seek to be compatible with international emissions trading under the Kyoto Protocol, so in a way, all schemes are in practice destined to be linked with a wider scheme.

The focus of this document is the potential for having linked schemes, or a common EU scheme, in the period prior to the commencement of international emissions trading under the Kyoto Protocol. Within this time-scale, the “burden sharing agreement” would not apply, and neither would the trading rules and modalities of Article 17 of the Kyoto Protocol. For EU Member States (and those of the EEA), the internal market is a reality that exists today. The inclusion of the Candidate Countries within the EU is likely to occur, or have already occurred,

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<sup>1</sup> *Measurement, reporting, verification & compliance are to be developed further in forthcoming Background Document 7: “Monitoring, reporting, verification and compliance”.*

within a similar time frame to the period that this paper focuses on (2005-2008). How emissions trading develops within the EU is relevant to its internal market, and Part 2 of this document highlights the areas that may have an important impact on the functioning of that single economic space.

Why might a trading authority *not* be willing to link its scheme with another? One reason is that the environmental integrity of one authority's scheme might be undermined by the lower standards of another scheme. Ensuring similar standards will require some things to be agreed. The dilemma of linking separate schemes is that the "lowest common denominator" tends to prevail, and the weakest link in the connected schemes becomes the determinant of the environmental outcome.

Furthermore, in the context of preserving – even enhancing – the internal market, more elements would need to be agreed than those that determine the environmental outcome. There would appear to be a correlation between the extent of "harmonisation" between different trading schemes, and the extent that the internal market is protected/strengthened.

Finally, some may be tempted to argue that the rules and modalities of international emissions trading are all that is needed. It is the Commission's opinion that the rules and modalities of trading under the Kyoto Protocol will not be sufficiently complete to impose certain design choices made within individual schemes, such as whether "domestic" schemes should be "upstream" schemes (targeted at importers and producers of fossil fuels) or "downstream" schemes (targeted at industrial energy consumers). Similarly, the choice between schemes calculating emissions on a "direct" or "indirect" basis would not be determined by the Kyoto rules, even if the Kyoto Protocol itself used a "direct" emissions basis for Parties. In this context, a good case can be made for not relying on "Kyoto" alone to enable "domestic" schemes to link. The UN rules will have to be further elaborated on, and this can be done either Member State-by-Member State, or by the EU as a whole in the context both of the internal market and European environmental policy.

#### **Part 1: List of elements in respect of which a co-ordinated response is necessary to link trading schemes**

- 6.1 The denomination of what is to be exchanged ("currency of exchange"): If there is not to be a single denomination, then there should be agreed conversion rates and a reference denomination. The Kyoto Protocol's assigned amount is denominated in tonnes of CO<sub>2</sub>-equivalent. Other greenhouse gases covered by the Protocol can be converted into CO<sub>2</sub>-equivalent according to their agreed "Global Warming Potential" (GWP).
- 6.2 Measuring "direct" or "indirect" emissions at entity level<sup>2</sup>: Common understanding must apply in respect of how emissions are counted – both at the target-setting stage and when measuring actual emissions. Of particular concern is

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<sup>2</sup> "Direct" emissions are those that occur in a production facility directly – at the source of the emissions. "Indirect" emissions in contrast are embedded emissions bought by a facility as a production factor – e.g. electricity by a chemical company. The major criterion of the indirect tonne of emissions is that it does not occur onsite, but has geographically occurred somewhere else.

whether “direct” or “indirect” emissions are being counted. Good arguments can be made for both. This issue is particularly important when the inclusion of the power-generation sector is being considered, all the more so in a context of liberalised energy markets. It may also be an issue for other energy-intensive products. Measuring “indirect” emissions is more complicated, especially if renewable electricity is not to be discriminated against. However, a “direct” emissions approach assumes that electricity users would be encouraged to improve their energy efficiency as a result of the price of electricity, rather than as a result of having to trade permits in respect of the emissions generated in the production of that electricity.

The relative merits of “direct” or “indirect” emissions trading systems do not change the fact that, if everyone does not measure emissions on the same basis, there is a real risk of double-counting (or omitting) emissions and/or reductions. For example, if a power generator switches fuel, thereby reducing its emissions, the reduction per unit of electricity produced could be claimed by the generator or by the actual user of the electricity, but not by both. Common provisions may also need to be adopted for outsourcing of activities, and mergers, acquisitions and divestments that occur during the operation of the trading schemes<sup>3</sup>.

It is to be noted that the Kyoto Protocol counts “direct” emissions for Parties. If a Party A emits more as a result of electricity exports, there is no provision in the Protocol for the emissions associated with the electricity production “imported” by Party B to be re-allocated to the purchaser (Party B). What would be traded internationally under the Protocol’s emissions trading would be “Parts of Assigned Amount”. Individual Party’s might be ready to assume the implications of attributing the emissions of its own entities on an “indirect” basis. However, the implications of such a choice would be that a Party would have to assume responsibility for the emissions of electricity exported, but consider imports of electricity as emissions-free.

If trading schemes are based on energy use – whether in absolute terms or relative to output – a formula is necessary to convert energy use into carbon emissions. This formula may well be based on carbon emissions using an average energy mix during a given period, without distinguishing between different energy types. This conversion factor will need to be adjusted periodically in line with changes in the emissions intensity of the energy use of participants. However, such a formula will introduce an extra element of uncertainty. This may make authorities responsible for schemes with targets expressed in emissions unwilling to accept allowances from schemes with targets expressed in energy use.

- 6.3 Combination of “upstream” and “downstream” schemes: In this paper, no attempt is being made to choose between “upstream” or “downstream” trading systems. However, if a mixture of these two systems were to be used, then rules would have to be agreed on combining them. The distinction is between “upstream”

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<sup>3</sup> If appropriate steps were not taken, it would be possible for an entity to take on a target covering its activities, then outsource all of those activities to other entities without targets. For further elaboration of these problems see Sections 3.10 to 3.11 of “A Greenhouse Gas Emissions Trading Scheme for the United Kingdom”, published by the DETR, November 2000.

emissions trading systems that “measure” the carbon embodied in fossil fuel products themselves, and between “downstream” systems that count the actual emissions of consuming the fossil fuels. If an “upstream” scheme has already counted embodied emissions, emissions will be double-counted if the actual emissions of users of these fuels are also measured. It would be necessary for “upstream” producers and importers to not have to account for the embodied emissions in the products that they supply in respect to the users that are included in “downstream” emissions trading systems. Otherwise, in passing on the cost of emissions allowances to users of fossil fuels, those engaged in “downstream” emissions trading would be paying twice for their emissions – obviously with adverse impact on their competitiveness. Making such distinction might be administratively cumbersome, but it would be possible. In all cases where the two systems co-exist, rules would be needed for distinguishing the scope of “upstream” elements from the “downstream”.

- 6.4 Access to project mechanism credits: If entities involved in trading can also use project mechanism credits (such as JI and CDM) then the trading “permits” that these entities hold can be sold to the extent that the entity has acquired an equivalent amount of project credits, irrespective of whether other trading schemes allow entities access to such credits. Clearly, difficulties will arise if combining trading schemes where different approaches are taken towards project eligibility (nuclear, sinks, large hydro, etc.). If one trading authority were to set lax standards for baseline methodologies, for example, or accept “environmentally controversial projects”, the credits can only be effectively excluded from other trading schemes if the authorities responsible for the more robust standards ban *all* inward acquisitions from the less robust schemes.
- 6.5 Rules about temporal flexibility – “banking” and “borrowing”: The opportunity for “gaming” exists in terms of temporal flexibility for allowance-based trading systems. If one scheme allows both banking and borrowing, and another does not, then joining the two schemes necessarily means that both schemes will have to accommodate banking and borrowing. From an environmental perspective, borrowing is undesirable, whereas “banking” is generally considered beneficial if the pollutants have global rather than local impact. Another issue that is related to temporal flexibility is the time period for which allowances or credits are valid. If different schemes use different validity periods, then companies will have to ascertain the period of validity of permits/credits. Their values over time will probably also vary according to how near they are to expiry. Such complexities may be detrimental to the efficiency of emissions trading, and burdensome to companies, but would not prevent the linking of schemes.
- 6.6 Nature of the targets: If countries face a collective cap on their emissions (as they do in the context of the “EU bubble”), then the transfer of allowances from schemes with relative targets will require agreement on some additional rules to ensure environmental integrity of the overall emissions ceiling. The simplest rule is that the participants in a scheme with relative targets face a collective absolute cap on their emissions.

Alternatively, to insure themselves against unexpectedly strong output growth by the entities in a scheme with relative targets, countries must either impose additional emission reduction measures on emitters that are not part of the scheme or be willing and able to purchase allowances that represent emission reductions

made abroad. This will ensure that transfers of allowances from schemes with relative targets do not lead to a breach in the overall emissions ceiling.

An additional measure which would help to mitigate the risk to environmental integrity posed by unexpectedly strong output growth among entities with relative targets is to require that transfers of allowances from a scheme with relative targets do not exceed transfers of allowances to the scheme. This is the “gateway” approach envisaged by the UK to link their “absolute” and “relative” sectors. This would prevent any undermining of the pre-determined “absolute” environmental outcome due to unexpectedly strong output growth among entities with relative targets.

- 6.7 Registries: Registries must be compatible with one another. The minimum information required to be kept should be harmonised. Retired permits must, of course, be definitively taken out of the registries of the combined trading systems.

**Part 2: List of elements in respect of which a co-ordinated response is not necessary to link trading schemes, but where a co-ordinated response may be desirable in the context of the internal market**

- 6.8 Many of the items listed below are both crucial elements of any emissions trading system and classic “internal market” issues. They need not necessarily be agreed in order to link different emissions trading regimes, but it may be desirable to co-ordinate these items to protect/strengthen the internal market.

- 6.9 Method of allocation: How much scope is there for different allocation methodologies in different schemes that are subsequently linked? EU experience in the field of taxation suggests that quite a lot of differentiation can be tolerated without undue impacts on the smooth functioning of the internal market. It is not because one Member State might “grandfather” and another auction that necessarily gives rise to distortions within the internal market. The two methods of allocation might be equally demanding in terms of environmental outcome and in terms of equivalent costs for firms in each Member State. It would seem possible to use different allocation methodologies in different schemes that are subsequently linked. However, this is without prejudice to the existing requirement that free allocation methodologies are scrutinised by the Commission in the context of the state aid rules. Background Documents 2 and 3 deal with this subject in more detail.

- 6.10 Base period for determining historical “grandfathering”: This is actually a variable used for allocation that, as argued in paragraph 6.10 above, does not have to be perfect to allow emissions trading systems to be linked.

- 6.11 Stringency of targets: How stringent targets are for entities involved is not an issue that either enables or prevents two or more different schemes to be linked. The level of the overall targets set for emissions trading schemes are the crucial determinant of the environmental value of emissions trading. Some Member States may wish to apply more stringent conditions for emissions trading than may be applied in other Member States. Provided that these conditions apply equally to all businesses, whether they are national or from another Member State, a Member State may do so. This greater stringency may be by imposing more restrictive caps on emissions than other Member States (or than required by any

possible future Community legislation). Alternatively, it may be claimed that the auctioning of allowances by a given Member State amounts to greater stringency against entities operating within that Member State. The way to address such concerns, however, is primarily through national political processes. The Treaty does not provide recourse for businesses to seek redress against their governments on the grounds that they are being discriminated against by their own government. This is sometimes referred to as “reverse discrimination”. While it is generally seen as potentially distortionary, the Treaty does not prohibit it.

There would appear to be two ways of addressing this concern that imbalances may occur in the internal market as a result of different degrees of stringency even within those sectors covered by emissions trading (or the partial coverage of an emissions trading system). The first is by ensuring equivalence of effort, however hard that might be to establish. The second is by preventing such regional differences and imposing a particular solution for the EU as a whole. While the former solution appears at first sight the more palatable, the practical difficulties of ensuring equivalence are considerable. Like benchmarking as a method of allocation, the advantages in terms of equity are likely to be undermined in terms of practicality and transparency.

Companies can seek to minimise the potential for this “reverse discrimination” by the promotion of greater alignment at EU level. This would impose greater certainty as well as greater uniformity on the use of emissions trading.

- 6.12 Sectoral coverage: Background Document 8 “Defining the coverage: trading population and gases” will deal further with this issue. The key question in this context would appear to be whether there could be different sectoral coverage in different schemes that are linked. The preliminary answer would be that it would appear not to prevent the linking of schemes if there were different sectoral coverage in different schemes, as long as the elements of Part 1 of this Background Document were compatible. However, treating entities in the same sector differently in different Member States of the Community could potentially distort competition between them.

What are the implications if a “European” emissions trading scheme were to cover part but not all of the Community? Those outside the scheme may be subject to other policies and measures, or to none. Such difference of treatment may give rise to distortions of competition. However, the different policies and measures may still entail an equivalent effort on the part of entities, and therefore give rise to no advantage or disadvantage for any particular actor. On the other hand, if a particular sector in a given Member State were to be required to do nothing in terms of greenhouse gas abatement, would such indulgence constitute an incompatible aid for the sector in that Member State? Could a Member State that was “doing nothing” be deemed to be favouring a particular sector in a manner incompatible with the internal market? In the absence of any Community instrument, there would appear to be no case for requiring a Member State to do anything.

- 6.13 Definition of the person/site to trade: In any emissions trading scheme, it must be clear which legal person is responsible for fulfilling the obligations that arise. The most important constraint is that geographically distinct trading schemes confine themselves to sources located within their own geographical boundaries. Linked

schemes will extend the geographical coverage. Within those geographical boundaries, most schemes will be site-specific or entity-specific (where companies have flexibility between their different sites). It would not appear to be necessary that the same option is used in geographically distinct schemes that are linked, as long as duplication is avoided.

- 6.14 Incentives: If a EU Member State makes incentives or tax exemptions available to entities participating in a domestic emissions trading scheme, these will be subject – if necessary – to state aid scrutiny in the usual way. A related issue is that of “stand-off” agreements, whereby participants are given “opt-outs” from legislative requirements. Co-ordination cannot apply if the legislative requirements are specific to national jurisdictions, but where such requirements relate to common jurisdictions, such as the EC, then such “stand-offs” would have to be negotiated and agreed at Community level.
- 6.15 Conclusions: The development of emissions trading as an instrument of environment policy is unlikely to be promoted by over-complicated rules. The more that different trading schemes are based upon a common set of rules and standards, the fewer additional constraints will be needed. And the earlier a discussion takes place on what needs to be co-ordinated, the more subsequent problems in linking evolving schemes might be avoided. The analysis in Part 1 of this document suggests that a sizeable number of elements exist in respect of which rules and standards need to be agreed in order for evolving domestic emissions trading schemes to be linked. In addition to these can be added issues of monitoring, reporting, verification and compliance that will be treated specifically in Background Document 7.

Furthermore, in the context of the internal market, there are dimensions that it may be desirable to agree, notwithstanding that it might not be strictly necessary to agree all the rules and standards on these elements for the linking of separate emissions trading schemes. Linking the UK scheme with one in New Zealand, in other words, may be different from linking the UK scheme with those that may exist in Denmark, the Netherlands or even Norway, for example. A balance needs to be struck between addressing specific national circumstances and the desired degree of simplification of the linked markets.

Part 2 lists the elements that, in the context of preserving and strengthening the internal market, a good case can be made for taking a more co-ordinated approach.

Ultimately, links can be made between any emissions trading schemes, whether “good” or “bad”, as long as the consent of competent authorities is given. Clearly, schemes that are deemed to be “good” will tend to be those that the authorities of more other schemes are willing to link with. Consensus may emerge around certain standards than provide both good environmental value and worthwhile economic benefits. This document seeks to highlight what the elements are that would determine those standards.

Clearly, companies who are to be the actors in such “bottom-up” trading schemes are in the front line of those concerned by the choices to be made. Green NGOs will obviously be mindful of the environmental consequences of such choices – of which there are many.