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Position paper on the EU Commission proposal for a directive "Establishing a framework for GHG emissions trading within the European Community and amending Council Directive 96/61/EC", COM (2001) 581, Brussels, 23.10.2001

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1. Introduction

The Hamburg Institute of International Economics strongly welcomes the Commission´s initiative on a Directive on the establishment of a Community wide greenhouse gas emissions trading scheme.
In 2001, international negotiations on the Kyoto Protocol were quite successful, although some compromises were necessary which significantly weakened the Protocol´s emissions targets and thus its environmental effectiveness. However, the Marrakech Agreements that have been reached in large part due to the insistence of the European Union will serve as a legal basis for the industrialised countries to take responsibility for the greenhouse gas emissions resulting from their economic activities. In order for the EU to reach its commitments under the Kyoto Protocol distributed to the member states in the bubble agreement, considerable efforts will be necessary within the next years. This is even more true if current emission growth, especially in the transport and household sectors and the cohesion countries, is extrapolated into the future. The efforts necessary will entail costs. Given the EU wants to remain at the vanguard of environmental policy implementation, climate policies and measures need to be chosen that minimise potential negative impacts on our economies. According to economic theory, emissions trading has the potential to reach the overall commitment at the lowest costs possible. Thus it is very positive that the EU is now embracing this instrument which it had opposed for a long time.
However, when introducing an emissions trading scheme, two crucial aspects need to be considered. First, emissions trading is a new policy instrument within the European Community. Second, the efficiency of a scheme strongly depends on its concrete design. As for the first aspect, the Commission´s early initiative allows both Member States and affected entities to thoroughly prepare themselves for the actual implementation of the Kyoto Protocol commitments from 2008. Implementing an EU wide trading scheme from 2005 onwards should give enough time to develop strategic plans, to gain experience with the new instrument and to prepare for future international competition. By implementing a trading system well before 2008, the EU would continue to play a leading role on the international level.
Concerning the second aspect – the importance of the concrete design of an emissions trading scheme – some general remarks on the "design parameters" of a trading scheme are given below. Resulting comments on the Commission´s proposal are indicated in *italics*.

2. General requirements for an efficient emissions trading system

The overall objective of the design process must be to establish an environmentally effective emissions trading system that minimises total compliance costs. Additionally, aspects of international competition and interactions with existing policies and measures targeting at greenhouse gas reduction need to be considered.

2.1 Absolute targets instead of relative ones

An emissions trading system needs to be based on *absolute emission targets* as specific targets cannot ensure the environmental objective will be met. If emissions intensities were the basis of the trading system, increased output would generate a higher amount of emissions certificates. It would nearly be impossible to establish an emissions trading scheme based on relative units, especially for inhomogeneous production processes, unless trades would only be allowed ex-post.

The Commissions proposal is based on an absolute "cap and trade" system. The Hamburg Institute of International Economics strongly welcomes this approach since it is the prerequisite to establish an environmentally credible emissions trading system.

2.2 Broad sectoral coverage

The trading scheme should cover as many relevant emitters as practicable. A trade-off between effectiveness (overall emissions covered) and an increase of transaction costs resulting from the inclusion of small emitters must be evaluated. Large industrial emitters should participate directly from the very beginning; smaller industrial emitters should also be included in the medium term. Since both transport and household sectors are characterised by a high number of very small emitters, a direct inclusion would significantly increase the system´s complexity and transaction costs. Alternatively, the transport sector could be included through an "upstream" approach, either by the inclusion of fuel importers/distributors or by means of a public institution. The latter would be responsible for the emissions of the total sector and need to cover them with sufficient emissions allowances. The household and service sector does not need to be included in the trading scheme if emissions resulting from electricity production are allocated to electricity utilities and emissions from fuel combustion are covered upstream.

Although it might be reasonable to concentrate on the industry sector in the first phase of the trading scheme in order to gain experience with this new policy instrument, an "upstream" expansion of the trading system to the transport and fuel sector, at the latest in 2008, would be very beneficial. The inclusion of further sectors can be expected to decrease eventual opposition of industry against emissions trading. Concerning the waste sector, direct measurement systems[1] for large installations should be established in order to include their emissions in the medium-term. Within the industry sector, relevant emitters from all branches, also e.g. the chemical and non-ferrous metal industry, need to be included from the start.

2.3 Mandatory participation

A high number of participants with inhomogeneous mitigation costs is essential in order to establish an efficient trading system. Consequently, participation has to be *mandatory* for relevant emitters. One might use emission thresholds to define the term "relevant". Those thresholds should be decreased after a introductory phase to increase the amount of emissions covered by the scheme. Additionally, there should be an option for a voluntary opt-in for small industrial emitters.

The Hamburg Institute of International Economics strongly welcomes the proposed mandatory participation for covered entities. A mandatory approach is the only acceptable way to establish an effective and efficient emissions trading scheme. However, the coverage of entities/activities

[1] Similar to the US continuous monitoring approach chosen in the Acid Rain Programme

could be refined: the current proposal covers about 46% of the EU CO_2 emissions. This coverage is satisfactory for the beginning, given the consideration to limit the number of participants included on a mandatory basis at a first stage. However, the medium-term objective must be to expand the emissions trading scheme to cover far more emissions. One should define emissions thresholds, as has been practiced by the Danish trading system, and periodically decrease their values. In order to give entities a long term objective, the current proposal should indicate potential expansions today.
Based on this objective, interested entities should get a chance to participate in the first phase of the trading scheme in order to gain experience with this new policy instrument. If there was not such a voluntary opt-in, entities that are excluded today would be disadvantaged compared to participating entities. This is especially true since rules, such as compliance provisions, are supposed to be strengthened in the next phase of the scheme.

2.4 Broad coverage of gases

The trading scheme should cover as many Kyoto-gases as technically feasible and economically reasonable. One prerequisite for the inclusion of a gas resulting from whatever source is that emissions can be quantified in an accurate way. As monitoring costs differ significantly for the different gases and sources, one should begin with those emissions that can be quantified accurately with low-cost measures. At the same time, both the relevance of the respective gas and its reduction potential need to be evaluated.
The trading scheme is supposed to cover CO_2 emissions only since CO_2 is by far the most important greenhouse gas within the EU. However, by excluding all other Kyoto gases many low-cost mitigation options will be missed, thus decreasing the efficiency of the system. While monitoring costs might be unproportionally high for some emission sources, especially diffusive ones, one could easily identify processes/emission sources where monitoring is possible at low cost. This is the case for N_2O in the chemical industry or PFCs and SF_6 in the aluminium industry. Those sources should be included on a mandatory basis. Additionally, a voluntary opt in for remaining sources is strongly desirable. This could be realised in a project-oriented approach.

2.5 Allocation by auctioning

The method of allocation chosen mainly results in distributional differences. When deciding on allocation one also needs to evaluate "early actions" and potential newcomers. A pure auctioning system clearly has some advantages in comparison to a grandfathering system, of which the most important one is the provision of an early price signal. However, auctioning will face severe political resistance. As a solution, one might either think of a *hybrid system* – a mix of grandfathering and auctioning - or means to redistribute generated income in a way that the net burden for the sum of participants is minimised or even zero.

The proposal envisages the allocation of allowances "free of charge". Annex III specifies criteria for allocation. We do understand and agree with the reason behind this approach: a harmonisation of allocation is essential to avoid distortions of the internal market. However, the current proposal has some significant drawbacks: first, a pure grandfathering cannot provide any early price signal – which will be an essential planning element for entities. If there is no price signal, investment decisions will need to be done in a situation of severe uncertainty. Second, the criteria defined in Annex III cannot be assumed to be stringent enough to reach a really harmonised allocation within the EU. Third, the criteria of Annex III partly conflict with each other. For example, an entity should not be given "more allowances than it is likely to need" (Annex III, (5)). At the same time, the proposal calls for an orientation on the technological potential to reduce emissions (Annex II, (3)) and to recognise early actions (Annex III, (7)). In a pure grandfathering system, it is hardly possible to honour those aspects simultaneously while not causing severe political opposition on stakeholder level at the same time.

On the contrary, all those aspects could be considered when applying an auctioning system or a hybrid model. If one part of the overall allowances available is allocated for free while another part is auctioned (income should be redistributed to the participants in order to decrease political resistance without reducing the incentive to reduce emissions), the benefits from both systems can be combined. Most important, one will get an early price signal while minimising economical impacts on participants. Also, early actions could be honoured to some extent since active entities will not need to auction/buy as many certificates due to their early actions.
We thus propose a minimum percentage of 20% of allowances to be auctioned in all member states during the period 2005-2007 rising to 30% in 2008-2012.

2.6 Monitoring and verification

A strict monitoring, verification and reporting system is needed to assure the environmental integrity of a trading system. The application of standard procedures (e.g. ISO 14000 or EMAS) might be an appropriate basis, verification needs to be done by independent third parties. Monitoring and verification procedures should be accompanied by spot-checks of the responding national/international authority.
In our view, the monitoring and verification procedures are sufficiently strict to guarantee the integrity of the system.

2.7 Direct accounting of emissions from electricity generation

Due to reasons of practicability, emissions resulting from electricity production should be attributed to the power plants ("*direct accounting*"). The liberalisation of European energy markets and current electricity trading systems do not allow to differentiate consumed electricity by the carbon intensity of their production. – In order to increase the incentive for consumers to minimise their electricity consumption, electricity companies should be obligated to itemise the environmental externalities of energy production - i.e. extra costs resulting from the need to hold allowances - on their bills.
We agree with the Commission´s proposal to account for emissions resulting from electricity production by including utilities directly.

2.8 Free market access

Market access *must not* be limited to the participants of the trading scheme as this approach would also exclude traders and financial intermediaries which help to increase market liquidity and reduces price volatility.
We agree with the Commission´s proposal not to limit market access.

2.9 Strong sanctions for non-compliance

Non-compliance provisions should be applied in a differentiated way according to the individual forms of "non-compliance": over-emitting, cheating and breaking contracts. In general, penalties must be *deterrent and environmentally effective*. Depending on the type of non-compliance, one might chose different combinations of the following sanctions: Financial penalties as a combination of fixed rates as a minimum penalty rate and variable fees in relation to average market prices of certificates, the obligation to submit missing certificates in following periods, the exclusion from future trading/usage of the Kyoto Mechanisms and public "exposure".
The financial penalties to be applied in case of over-emitting as defined in the proposal seem to be appropriate as they are deterrent and as a "two-tier" approach is chosen (connecting the level of financial penalties both to average market prices and a minimum penalty rate). Additionally, there is an obligation to submit missing certificates in next period.

A remaining question is what consequences must be expected for an entity that is non-compliant for several times in a row? One should introduce a mechanism ensuring the environmental integrity of the system, even if there are several parties over-emitting. An option would be to

ensure that as many allowances are bought and retired (financed by the income generated by financial penalties) as those entities are over-emitting.

2.10 Inclusion of the "Kyoto Mechanisms", particularly the CDM, from the outset

The overall economical efficiency of an EU-wide emissions trading system will be strongly increased by the inclusion of the project based mechanisms Clean Development Mechanism and Joint Implementation. Low-cost mitigation options abroad would generate emissions credits that should be convertible into allowances. This link should be set up as early as possible, giving the time delay due to investment decisions/cycles and the fact that an exclusion would significantly decrease the international relevance of the CDM in the long term. However, for the CDM to be included at an early stage, one should chose a *conservative* approach concerning the definition of baselines and additionality. As a starting point, the rules in the Marrakech Agreement should be used; they would have to be complemented with EU rules in those areas where no sufficient international rules exist.

CDM credits should be fully convertible into EU allowances from 2005. However, in order to assure the ecological integrity of the system, the EU should define high standards for baselines and additionality. As an example, the EU should thoroughly evaluate any forestry or land management project and develop a set of detailed rules defining safeguards. This would also be consistent with the EU´s past position in international negotiations.

3. Interaction with other policy instruments:

3.1 IPPC efficiency standards

As stated in the general remarks to the directive-proposal correctly, the IPPC should not contain efficiency standards on processes covered in the trading system (direct emissions from that installation). It is also stated that "efficiency requirements for the use of energy" (indirect emissions) shall continue to apply.

This approach seems to be reasonable since separate policy instruments are applied to different processes/emission sources. However, one needs to thoroughly check this approach for potential redundancies: one installation/process that is included in the emissions trading scheme should not be covered by IPPC efficiency standards at the same time. Otherwise, those two instruments would be counterproductive.

3.1 Voluntary agreements

Long term agreements (LTA) are a popular policy instrument in several member states, also favoured by large parts of industry. This is because LTAs in many cases do not compile any significant sanctions and as targets usually are not going business-as-usual developments. Some stakeholders might be concerned that the introduction of an emissions trading scheme is much more stringent than national LTAs. Usually it is argued that the two instruments are not compatible with each other. However, as could be shown for the case of Germany, the LTA might easily co-exist with emissions trading simply by separating the two monitoring and accounting systems. In other cases, LTAs might even be combined with emission trading.

4. Conclusion

The Hamburg Institute of International Economics strongly supports the Commission´s proposal to establish an EU-wide emissions trading scheme, although it should be tightened at some points. We support that the sketched emissions trading scheme is based on absolute targets and

mandatory participation for those activities/entities listed in Annex I. Those two points are the most crucial aspects when designing an effective and efficient trading system. Improvements are desirable concerning the definition of participants, like a gradual expansion and a voluntary opt-in for entities not covered on a mandatory basis. Moreover, the CDM should be included from the beginning, based on strict rules for baselines and additionality. Coverage of gases sholud be expanded and a minimum percentage of allowances auctioned. We think that the proposal entails effective financial sanctions in case of over-emitting, provides for sufficient public participation as well as an unlimited market access.

The medium- to long-term objective must be to expand the trading scheme to further countries and – most important – to include those nations in the Kyoto process that currently refuse the acceptance of absolute emissions targets. This will not only help to establish an effective climate regime, but also to decrease concerns regarding the competitiveness of European industry.