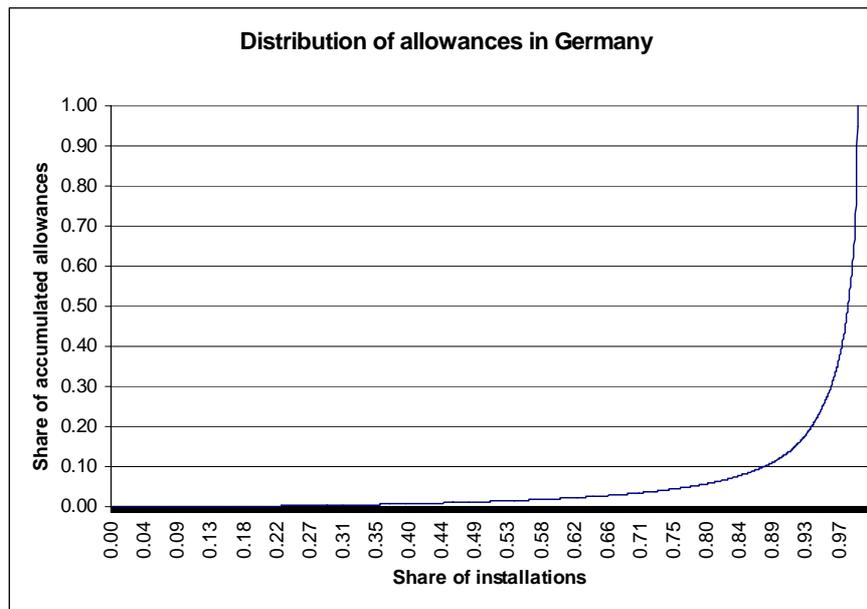


EU Emissions Trading and Transaction Costs for Small and Medium-Sized Companies

According to the EU-Directive on Emissions Trading certain installations of the energy industry and of most other carbon-intensive industries will participate in the EU-wide CO₂ trading system (EU ETS) starting in 2005. Installations covered under the EU ETS are listed in Annex I to the Directive and include combustion installations exceeding 20 MW_{th}, coke ovens, refineries and – if they exceed particular thresholds – also installations from the steel industry, the pulp and paper industry and the mineral industry (e.g. cement clinker, lime, glass or ceramics). The EU ETS requires companies to submit a number of allowances for cancellation corresponding to their actual annual CO₂ emissions. Every company can sell its surplus allowances or, if permitted, save them for future years (banking). From an economic point of view, emissions trading is expected to achieve efficiency gains in reaching the emissions target: companies which can abate their emissions at low cost have an incentive to do this to an increasing extent, since they can sell their surplus allowances at a profit to companies with high abatement costs. Since abatement measures will be realised where they are cheapest, environmental targets can – under ideal conditions – be met at minimum costs. As one of the cornerstones of the European Climate Change Programme, the EU ETS is expected to result in the world's largest emissions trading system to fulfil the EU's obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol in a cost-effective and economically efficient way. Nevertheless, those savings in overall compliance costs may, at least to some extent, be countered by two sources of transaction costs: costs for administering the system and transaction costs incurred by companies participating in the EU ETS. In some Member States costs for administering the system will be charged to the participants. In Germany, for example, there will be a fee. In Denmark, Ireland or Lithuania, where parts of the allowances will be auctioned off, revenues from the auctions will be used to cover administrative costs. In the remainder of the paper we will focus on transaction costs incurred by companies. These costs may be distinguished in two types. First there are transaction costs which are directly implied by the Directive and its national implementation such as costs for the application procedures for allocation and permits, service charges for the accounts in the registry or costs for monitoring, verification and reporting CO₂-emissions (MVR-costs). Likewise companies have to deal with national tax- or balance-sheet related issues of emission trading. Second, in order to benefit from emissions trading and in order to develop synchronised trading and emission abatement strategies, companies need to project emissions, identify and appraise abatement measures, forecast prices for allowances, conduct sensitivity analyses, find trading partners, carry out the trades, manage carbon risk, etc. Some of

these transaction costs only accrue once at the beginning of the EU ETS such as costs for application procedures for allocation and permits. Others accrue annually, such as MVR-costs, and yet others depend on the number of trades or the trading volume, such as costs for finding trading partners. Since a large share of these transaction costs is not proportional to company size transaction costs are particularly burdensome on small and medium sized enterprises (SME). This is particularly important since the criteria for installations to be included in the EU ETS as given in Annex I – in particular the threshold of 20 MW_{th} for combustion installations – imply that the vast majority of companies in the EU ETS will be SMEs. A list of installations covered by the EU ETS in each MS is part of the so-called National Allocation Plan (NAP), where Member States state (i) the total quantity of allowances to be allocated in each period, and (ii) how these allowances will be allocated to individual installations. For example, based on the (preliminary) allocated quantities in Germany, about 75 % of the installations receive less than 50,000 t of CO₂-allowances per year (see Figure 1). In addition, about 90 % of the allowances are allocated to 10 % of the installations with the highest emissions, in particular to the large power producers RWE, Vattenfall and Eon. Moreover, an analysis of the available NAPs suggests that overall allocation will be fairly generous, at least in the first phase of the EU ETS in 2005-07. As a result, companies receive many allowances compared to actual emissions and additional costs for compliance are likely to be rather low. For example, German allocation rules imply that the above mentioned installations which receive less than 50,000 t of CO₂-allowances annually will be short by less than about 1250 t per year (assuming emissions in 2005-07 will not be higher than in 2000-2002). Thus, given projected prices for allowances, which recently are well below 10 €/t CO₂, transaction costs for these companies will be high compared to costs for compliance. As a result, small companies may not even bother spending resources to identify and appraise emission abatement measures. Thus, SMEs are unlikely to invest in additional abatement measures, although some of these measures may be cost-efficient. Instead, SMEs may just buy or have someone else buy the missing allowances on the market. Since in this case, SMEs increase demand for allowances in the market for EU ETS allowances, costs for compliance for other participants may even be higher than if small emitters had been excluded from the EU ETS.



Source: Calculations are based on the list of installations published by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety on 29 April 2004, <http://www.bmu.de/de/1024/js/sachthemen/emissionshandel/oeffentlichkeit>, where the reported quantities do not include additional allocations for early actions or combined-heat-and power.

According to Article 27 of the Directive Member States may apply to the European Commission for some installations to be temporarily excluded from the EU ETS for the period 2005-07. However, Article 27 also requests that for these installations the reduction target, penalties, monitoring, verification and reporting requirements must be the same as for installations covered by the EU ETS. So far, only few Member States decided to make use of this provision. For example, the Netherlands intend to exclude small emitters with less than 25000 t of CO₂ emissions per year. These 139 installations (of the total 333 installations in the Netherlands) contribute less than 1.5% of the total CO₂-emissions of the covered installations. For the Netherlands the European Commission may accept the exclusion criteria because the installations are already covered under an existing voluntary agreement (Benchmarking Energy-Efficiency covenant) where targets have to be reached and monitoring is mandatory. So a strict application of the criteria such as equal MVR requirements would not lead to real reductions compared to the EU ETS in these types of transaction costs. In addition, since emission reduction targets have to be the same, overall costs for compliance for excluded companies are expected to be higher because they cannot trade cost savings across companies. Thus, using the opt-out provision of the Directive is likely to reduce only some transaction costs, in particular those related to the trading of allowances. But actual savings will depend on whether the European Commission applies the criteria for opt out rather

strict or not. In any case, since most Member States will not use the opt-out provision, reducing transaction costs for participating in the EU ETS will be crucial, in particular for SMEs. In general, transaction costs may be lowered by standardisation of monitoring, verification and reporting requirements. Likewise, intermediaries such as brokers may be used to reduce search and other information costs. Similarly, if the EU allowance market turns out to be sufficiently liquid, one or several exchanges are likely to emerge where allowances may be traded at low transaction costs. More specifically, SMEs may form pools to procure for services, such as for MVR or for trading allowances. Such pools may be organised for regions or they may be sector-specific.

To conclude, the significance of transaction costs in the EU ETS in general and their effect on SMEs and on the performance of SMEs should be carefully evaluated and included in the Commission's review of the EU ETS in 2006.

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