Hearing by the Select Committee on Energy Independence and Global Warming U.S. House of Representatives on "Cap, Auction and Trade: Auctions and Revenue Recycling under Carbon Cap and Trade"

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Introduction

The method to allocate allowances is one of the most important decisions to be taken in the design of a robust carbon cap and trade system. Two principal methods are at hand – some share of the needed allowances can be given away for free to regulated entities or they can be sold / auctioned. While both methods have been researched in detail, the practical experience that exists so far is largely on different ways of giving away allowances for free. For example the operational cap and trade systems to control air pollutants at federal and state level in the United States are largely based on free allocation. These free allowances were the result of significant reductions from existing emissions (about 50 to 80%) and were meant, in part, to compensate firms for the reduced value of existing capital assets. Currently, free allocations in these US systems only cover about 20 to 30% of the baseline in these programs.

In general, carbon allowances represent a much larger asset value than e.g. sulphur dioxide allowances. Allocating them for free, rather than by means of a market mechanism, is a major distributional exercise for the responsible legislator or regulatory agency. Free allocations not only involve a complex exercise but also require substantial and robust emissions and other data to avoid distributional outcomes that are perceived as unfair. Finally, regulated companies subject to the carbon cap and trade system will pass on as much of the allowance value to their customers (in the form of increased prices) as the market situation allows, even if the allowances are allocated for free. This leads to the distributional effect (dubbed windfall profits), where carbon-intensive companies actually see increased profitability due to the implementation of a robust carbon market. The more robust the system (i.e. the higher the value of the allowances), the more significant these distributional effects are likely to be.

For all these reasons, the interest in auctioning as an allocation method for carbon allowances is growing world-wide. The European Union is now discussing legislation that is likely to make auctioning the key allocation method for carbon allowances in Europe's emissions trading system (EU ETS) by 2020. For some sectors – notably power generators – free allocation will probably be phased out immediately at the start of the third trading period in 2013, while other sectors will in principle see a gradual phase-out of free allocation over the third trading period intended to run until 2020. The forthcoming regional carbon market in the US Northeast (Regional Greenhouse Gas Initiative) will see each participating state auctioning off at least 25% of the allowances it creates and some participating RGGI states have decided to auction 100% right from the start in 2009. In the discussions of other emerging carbon markets (e.g. New Zealand, Australia) a significant amount of auctioning is being considered from the beginning.

Designing and implementing auctions presents a technical challenge for this relatively new sector due to the limited practical experience with auctioning in operational emissions markets. However, governments conduct auctions of other economic assets with considerable value on a regular basis (e.g. government or treasury bonds, spectrum licenses) and these offer rich experience and institutional arrangements to draw from.

Allocation provisions in EU ETS Directive

<u>Existing rules for the first and second trading period</u>

Inspired and informed by practice in existing and well functioning US air pollutant cap and trade schemes at the time the initial rules were agreed earlier in this decade, Europe has based its allocation policy in the carbon market largely on free allocation.

The Directive[1] of 13 October 2003, setting up the EU ETS, contains provisions that fix the minimum amount of free allocation at 95% of the total amount of allowances that each Member State created in the first trading period (running from 2005 to 2007). The minimum amount of free allocation is 90% in the second trading period (running from 2008 to 2012). Thus, in the first trading period, Member States were allowed to auction up to 5% of total allowances, while for the second trading period the Directive provides for auctioning of allowances up to 10% of the total amount. The Directive does not provide for any such limit from 2013 onwards.

The current rules governing allocation in the EU ETS do set a rather loose framework at European level beyond the above mentioned provisions. Detailed rules for free allocation in the first and second trading period were set at Member State level, leading to a rich diversity of approaches that generated concerns in terms of transparency and fair competition. This has given rise to preferences expressed by Member States and a wide range of stakeholders for much more harmonisation. These have been expressed in the ongoing review of the rules for the EU ETS in the third trading period and beyond.

<u>Rules for inclusion of aviation during the second trading period</u>

A legislative process to include aviation in the EU ETS is currently in full swing. After a first reading of the Commission's proposal in the Environmental Council and European Parliament we can expect the aviation sector to be integrated into the EU ETS in 2011 or 2012, and a share of 10 to 25% of the allowances allocated for the extension to aviation to be auctioned, with the rest allocated for free. Both the European Parliament and the Council agree that revenues should be used to tackle climate change in the EU and third countries and may be used to cover the cost of administrating the EU ETS.

<u>Proposed rules for the third trading period</u>

[1] Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 98/61/EC

Today, 23 January 2008, the European Commission adopted a proposal for changes to the legal framework of the EU ETS that are intended to apply as of the start of the third trading period. This proposal will now be discussed by the Environment Council and the European Parliament, which act as co-legislators. It can be expected that the final rule changes will be set within the next two years.

A core element of the proposal is to make auctioning the basic principle of allocation because of its simplicity, transparency and economic efficiency. This is necessary in order to achieve the EU's climate change objectives in the most cost-effective way, and to eliminate the distortions of competition in the EU internal market inherent to the lack of harmonisation in the current EU ETS.

Continued free allocation has a negative impact on the efficiency of a carbon market, in particular when complemented – as in the current EU ETS rules – with special allocation rules for installations that are closed and for new entrants. Once an installation closes, it should no longer receive free allowances. Terminating free allocation upon closure, however, reduces the incentive to close old, inefficient plants. If new entrants do receive an allocation corresponding to the number of free allowances given to existing installations, it encourages investment in high-emitting activities. Such rules for closure and new entrants reduce the incentives for structural change and emission reductions would for a larger part have to be achieved by more costly operational measures. Thus, auctioning best ensures the smooth transition to a low-carbon economy. Moreover, auctioning allows to eliminate undesirable distributional effects and put new entrants and economies with higher than average growth on the same competitive footing as existing producers.

Because the power generation sector is not exposed to competition from outside the EU, it can fully pass on the value of carbon allowances. Full auctioning should therefore be the rule from 2013 onwards for the power sector. For other sectors covered, a transitional system to phase out free allocation over time should be foreseen, potentially with the exception of higher, but still limited, levels of free allocation for sectors exposed to competition from outside the EU. This implies a gradual introduction of auctioning over the period from 2013 to 2020 for these sectors.

In the third trading period, the maximum number of allowances allocated for free to those installations and sectors eligible for free allocation, will be determined by looking at actual emissions in the first trading period (2005 to 2007), and by the proportion of actual total emissions in the first trading period that came for these installations and sectors. This proportion will then be applied to the total cap for the third trading period, to determine their maximum free allocation. According to the proposal, the maximum amount of allowances distributed to installations that are for the first time included in the EU ETS from 2013 onwards shall not exceed in 2013 the total verified emissions these newly included installations emitted in 2006. Subsequently, the number of allowances given for free will decrease according to a linear path.

The proposal foresees that approximately two thirds of the total number of allowances would be auctioned at the start of the third trading period, increasing throughout the period. In terms of quantity this translates into some 1.2 billion allowances in 2013 increasing to some 1.7 billion allowances in 2020.

The proposal is that the EU's 27 Member States will carry out the auctions. The proposal contains a concrete distribution key establishing relative shares per Member State and a procedure to determine the absolute amount of allowances that is allocated to each Member State for auctioning purposes. The distribution will be largely based on emissions in sector covered by the EU ETS in 2005, with a part redistributed in order to take account of different GDP levels and differences in emissions trends across EU Member States.

However, the Commission is concerned that differing auction designs and modalities could create distortions in Europe's internal market. For instance, uncoordinated timing and volumes of auctions organised by individual Member States may result in dynamics that confuse market participants. For this reason the Commission proposes to set harmonised rules for auctioning that every Member State has to respect. These rules will be established by means of a Commission Regulation that will be elaborated by 2010 as part of the implementation process.

Use of auction revenue

Proposal for the third trading period

The proposal of 23 January 2008 includes provisions on what percentage of the auction revenues should be used to reduce greenhouse gas emissions and to adapt to impacts of climate change, to fund the development of renewable energies to meet the EU's commitment of using 20% renewable energies by 2020, for the capture and storage of greenhouse gases and for measures to avoid deforestation. The need to use part of the auction revenues to help developing countries adapt to the impacts of climate change, especially Least Developed Countries is emphasised. It is proposed that Member State earmark 20% of the revenues generated for combating climate change.

Phase 2 auction revenues

In the first trading period, four countries decided to auction or sell a minor part of the allowances (Denmark, Hungary, Ireland and Lithuania). Less than 1% of the total number of allowances was allocated in this way. The revenues generated were therefore rather limited. In Ireland the auction revenues were used to cover administrative costs for the agency charged with implementing the EU ETS.

In the second trading period, an estimated 3 to 4% of the EU-wide cap is expected to be auctioned or sold and the number of Member States making use of the option to auction will at least double.

Germany has decided to auction the largest amount of allowances in the second trading period, both in percentage terms and absolute amounts. It will auction 200 million allowances in 2008 to 2012 (40 million per year), amounting to almost 9% of the total number of allowances created in Germany. The allowances will initially be sold at the going market price via organised carbon exchanges into the secondary market on a very regular basis, whereas by 2010 the sale will switch to auctions. Detailed auction rules are currently under development. Germany is also in the process of elaborating a program to spend part of the auction revenues on measures to support climate protection, including energy efficiency measures primarily in the household sector and at municipal level.

The United Kingdom is expected to auction 7% of the allowances allocated during the second trading period, amounting to approximately 85 million allowances over the five-year period, plus those allowances from installations that close during the period and any unused surplus from the New Entrant Reserve. As the government's spending priorities are not in general determined by the way in which money is raised, revenues from auctions will go into the Consolidated Fund, a general fund for public revenues. Nonetheless, the increase in the budget of the Department for Environment, Food and Rural Affairs, based on a comprehensive spending review that ensures efficient allocation of revenues according to priorities, allows for allocation of substantial resources for climate change mitigation including the Environmental Transformation Fund and adaptation. A government consultation is ongoing on the detailed auction rules.

The Netherlands plans to auction 16 million allowances over the period, amounting to 4% of the number of allowances. The revenues are intended to be used to compensate small energy users both for the increased energy bills due to higher gas prices and for a tax to stimulate renewable energy projects.

Other countries that have decided to auction allowances in the second trading period include Austria, Belgium, Hungary and Ireland. However, no details with regard to the use of auction revenues are available at this stage.

Expected economic impacts of auctioning and revenue recycling

In order to underpin the energy and climate package of 23 January 2008 the Commission undertook a comprehensive (regulatory) impact assessment including an economic analysis of the effects of auctioning compared to free allocation of allowances.

This analysis concluded that the full auctioning of allowances has no negative macro-economic impact and is in fact preferable to other distribution methods in terms of efficiency of the emissions trading system and the elimination of any undesirable distributional effects of free allocation.

Recycling of auction revenue, if done in an efficient and smart way, has a positive impact on the overall economy: GDP growth, private consumption and employment all come out better with auctioning in comparison to free allocation. These positive effects have been found with alternative economic modelling tools both in case the auction revenue was recycled to households and where it was used for promoting research and development of low-carbon technology.

Final remarks

After commencing the European carbon market for the first eight years largely based on free allocation, Europe is likely to transition to full auctioning in the course of the next decade. The evolution of Europe's allocation policy forms part of an international trend and auctioning is a major element in forthcoming and proposed national or regional carbon trading schemes.

The European Union is fully committed to building a global carbon market as a cornerstone of an efficient and effective way to reduce global greenhouse gas emissions in the coming decades.

The European Union is actively collaborating at technical level in the International Carbon Action Partnership with other nations and regions around the world that work on the design and implementation of mandatory and robust carbon trading schemes.

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