



International Carbon Action Partnership

Summary Report of the Second Global Carbon Market Forum on Auctioning

*“Auctioning carbon allowances – towards robust
auction design and implementation”*

November 14th, 2008 - Washington, DC, USA

Table of Contents

Executive Summary	3
Introduction	4
Opening Address: A Way Forward on Climate Change	4
Plenary One: Auctions in Current Markets	5
Plenary Two: Options for Auction Design	6
Political address from US Congress	8
Plenary Three: Auction Participant Perspectives	8
Plenary Four: Outlook for the Future	9
Wrap up by the Rapporteur	10
Closing Address	11

Note:

This report summarizes the discussions held at the second Global Carbon Market Forum on Auctioning in Washington, DC on 14 November 2008. As such, it reflects the state of discussion on auctioning as an allocation method for carbon allowances at that time.

Executive Summary

The second Global Carbon Market Forum took place in Washington, DC, on November 14, 2008. Under the title “Auctioning carbon allowances – towards robust auction design and implementation” about 130 participants discussed new developments and perspectives regarding the design and implementation of auction mechanisms for allocating carbon allowances. The objective of the one-day conference was to explore the future role of auctioning in US, European and Asian-Pacific carbon markets.

Four separate sessions were held at the conference, each one involving expert presentations followed by a panel discussion:

- ◆ **Plenary One**, *Auctions in Current Markets*, examined current auctions held for environmental, energy and other government sponsored markets.
- ◆ **Plenary Two**, *Options for Auction Design*, helped delve into the specifics of some auctions and discuss the technical issues as well as the considerations for each.
- ◆ **Plenary Three**, *Auction Participant Perspectives*, provided a forum for learning from current market participants and hearing about their experience in auctions and identifying potential barriers that could prevent future linkage opportunities.
- ◆ **Plenary Four**, *Outlook for the Future*, explored the future role of auctioning in US, European and Asian-Pacific carbon markets.

Overall, the following conclusions were drawn at the end of the conference:

- ◆ Generally, conference participants supported auctioning. Reasons include that it can prevent windfall profits, that it provides revenue and, most importantly, that it is efficient.
- ◆ As input for structuring auctions, several points were named: An auction should be frequent (at least quarterly), transparent and simple. Many different auction types were presented at the conference; the UK, Germany, and RGGI, for example, are all taking different approaches.
- ◆ It seemed that most panelists preferred the idea of auctioning 100% as fast as possible instead of to gradually phasing in. This issue, however, presents major political hurdles.
- ◆ The method of auction does not seem to impact the ability to link emissions trading systems. However, the decision about auctioning or distributing allocations for free does matter. Concerning linkage, the cap level is the most important design feature along with the respective price of carbon.
- ◆ Linked policy and understanding of the best way to use proceeds appears to be an additional discussion that needs to take place as we link carbon markets.

Introduction

The second Global Carbon Market Forum took place in Washington, DC, on November 14, 2008. Under the title "Auctioning carbon allowances – towards robust auction design and implementation" about 130 participants discussed new developments and perspectives regarding the design and implementation of auction mechanisms for allocating carbon allowances.

The one-day conference aimed at exploring the future role of auctioning in US, European and Asian-Pacific carbon markets. It sought to learn from current auctions held for environmental, energy and other government sponsored markets and focused in more detail on the specifics of some auctions and discussed the technical issues and the considerations for each. The conference also shed light on current market participants' experience with auctions and identified potential barriers that could prevent future linkage opportunities.

In particular, the conference was divided into four plenary sessions with the following topics:

- ◆ Plenary One: Auctions in Current Markets
- ◆ Plenary Two: Options for Auction Design
- ◆ Plenary Three: Auction Participant Perspectives
- ◆ Plenary Four: Outlook for the Future

Expert panel members presented their views on these issues at the conference. Their presentations formed the basis for the discussions in four conference panels and with conference participants. The panel discussions were introduced by rapporteurs who summarized the presentations made by the experts and formulated questions which they felt needed to be answered or addressed in the discussion.

This report summarizes the presentations and discussions of each session.

Opening Address: A Way Forward on Climate Change

Ms. Mary Nichols, Chairman of the California Air Resources Board, opened the conference by stating that policies for addressing climate change in the US are in their infancy, but that the challenge is so great that these policies need to take shape very rapidly. The key policy actions have been taken at the state and regional level, so far filling the gap in national climate policy. She went on to discuss how these efforts will serve as the basis for federal carbon markets. The new administration will take over the process, choose the winning solutions that have been incubated at the state level and put them into action. Nevertheless, due to limited resources, Ms. Nichols pointed to the importance of a partnership between federal and state-level in the future.

Ms. Nichols continued by stressing that the allocation debate in the US is just beginning. Auctions are clearly the favored approach by economists, but industries claim that the current economic slump makes buying allowances disadvantageous or worse a constraint on growth. As for the role of key government agencies, US EPA will lead the US climate plan. It will need to engage as a partner with other agencies in the process of putting together the programs of the federal government. However, there will also need to be clear engagement with Congress for the latter to take action.

Plenary One: Auctions in Current Markets

The objective of the first plenary was to learn about and discuss current auctions held for environmental, energy and other government sponsored markets.

The following points were put forward by the various presenters:

- ◆ There appears to be consensus forming in the academic literature that auctioning allowances is much more efficient than free allocation. Against this background, government’s objectives with regard to auctioning are, *inter alia*, efficiency, revenue, and fairness. However, there is often a trade-off between these different political considerations. Auction design may help to better reconcile these political objectives. What matters with respect to auction design is first what is being sold, second the frequency of sales, and third the institutional environment. Taken together, it essentially depends on whether auctioning will be truly competitive. Key elements that should be taken into account with regard to auction design are, amongst others, ensuring competitiveness (maximize participation), monitoring outcomes, publishing government information about the attributes of what is being sold, preserving private information on bidders, and encouraging secondary (spot) markets.
- ◆ Auctioning is one of the most important and most contentious issues in designing carbon markets and ETS. Robust price discovery is the heart of emissions trading, i.e. the price should reflect the cost of abatement under a given cap. Auctions actually improve liquidity of the market and therefore enhance price discovery. From a private-investment standpoint, an accurate price signal is absolutely critical in determining whether investment makes sense or not. With regard to timing and frequency, auctions should be aimed at improving liquidity at an early phase, especially at the beginning of an ETS. This means that allowances should be auctioned in advance. Likewise, frequent auctions will improve liquidity and limit volatility – while too-frequent auctions could disrupt the secondary market. In addition, allowances from different years have different values and should be auctioned separately to avoid confusion. Most importantly, however, accurate price signals will enable investment and are absolutely critical to attract necessary private investment.
- ◆ The designers of carbon markets can certainly learn from the US Acid Rain Program. This program was put together in the 1990s to address the power sector. The goal with this program was to regulate the industry while maintaining lower electricity prices. It was the first major trading program in the US. To increase efficiency, small amounts of allowances were auctioned in a system that was largely based on free allocation. In the context of the Acid Rain Program, auctions for SO₂ allowances are held annually. Over the past 16 years, auctioning has been used as a successful instrument and allows for several observations. First, an early price signal benefits the evolving market because auctions in early years helped establish price signal for buyers and sellers and prompted more trading between parties. Second, specifying the distributions method in legislation could avoid problems, e.g. prevent implementation delays. Third, auction simplicity is desirable, and can be reached through the single-round sealed-bid format to keep entrance barriers low. Finally, auctions ensure that allowances will be available to those who need them while advance auctions provide stability in planning for capital investment. Against this background, it should be considered that the carbon market is much bigger and that there is a trend to distribute a larger portion of allowances by auction. However, the main principles still seem very appropriate (simplicity of the format, providing good customer service, availability of allowances, and sending price signals).

In the panel discussion, the following additional observations were put forward:

- ◆ Preparatory work before auctioning remains an open question for further discussion. Especially price discovery is a critical issue that needs careful consideration. There is a lot of preparatory work to be done to get the auctioning infrastructure up and running.
- ◆ There are potential differences between bidders in the auctioning process that should be kept in mind: Differences in bidding, in buying as well as differences in size and ability to raise capital.

Plenary Two: Options for Auction Design

The objective of the second plenary was to delve into the specifics of some auctions and discuss the technical issues as well as the considerations for each.

The following points were put forward by the various presenters:

- ◆ Auctioning is important as it puts a price on carbon and creates an incentive for change. The UK is auctioning 7% of all allowances (approx. 85 million allowances) in Phase II of the EU ETS and expects this will result in invaluable experience for Phase III. The allowances are deducted from the shares allocated to large electricity producers. The auction, the first of which is scheduled to take place in November 2008, will focus on this sector as it is sheltered from international competition and addresses windfall profits. A public consultation process has taken place in advance and the auction will be open to anyone with an EU ETS Registry account. A static uniform price auction model will be used because it is simple and sends strong price signals from the secondary market. There will be a competitive and a non-competitive route in the auction. As for the first, access to auctions will be granted through intermediaries called primary participants. Given the potentially large number of bidders through the EU, all bids must be placed through the primary participants. This gives them an imperative role of implementing checks against money laundering, while checking the financial standing of bidders is best carried out by approved intermediaries. In addition, there will be a non-competitive route enabling direct access to auctions for small emitters. A maximum of 30% of allowances available at auctions is reserved for these non-competitive bids.
- ◆ A service company facilitating carbon allowance auctions was hired by RGGI to facilitate their auction. 90 per cent of the work for such a project takes place before the auction itself; planning and process development are critical. The objectives in implementing an auction are to comply with all relevant procurement regulations and guidance, minimize the administrative cost to bidders, maintain transparency, generate competition and create scalable and repeatable processes. Several documents for auction documentation were prepared and a new auction platform was established. Specific training materials were developed as well as a user guide to assist bidders. This is necessary as the bidder base is very diverse and consists of experts as well as novices. The platform must cater to all of them otherwise competition and transparency suffer. While the bidding process happens online, software ensures that every bid submitted is awardable. The feedback of the participants after the first auction was excellent.

- ◆ RGGI, a regional effort among 10 northeastern and mid-Atlantic states to cap and reduce carbon dioxide emissions, aims at stabilizing emissions at current levels through 2014. By 2018 emissions should be lowered by 10 per cent. The focus is on the electric power sector. It was agreed that the majority of allowances should be auctioned rather than distributed for free. To establish an auction, the participating states conducted research, established an auction design and implemented it. A research team was hired to evaluate auction options and to present a report including auction format, participation, reserve price, and unsold allowances. For the auction design, the research results were analyzed and integrated in coordinated rulemaking. Design elements were published to provide the public with information and for purposes of clarity and transparency when dealing with participants and stakeholders. These elements included a uniform design across all member states, quarterly auctions, a uniform price, a sealed-bid and current and future allocation year sales. Participation was bound to the fulfillment of several guidelines, while an independent market monitor was hired to watch out for both the regulators and the participants. For the implementation of the auction system a private facilitator was hired, which did most of the preparatory work. All allowances were sold at the first auction and the market monitor found that the auction was conducted in a fair and open manner. In conclusion, holding the auction itself is a very small part of the entire auction process.
- ◆ In Phase I of the EU ETS, Germany experienced high windfall profits, predominantly in the power sector. However, as Germany considers auctioning the most efficient allocation method for a variety of reasons, it will start with auctioning in Phase II (i.e. from 2010 onwards) to allow companies and authorities to learn. 40 million allowances per year (about 9% of the total) are then to be sold/auctioned. Currently, while auctioning regulation is under development, about 200,000 allowances per day are sold at the carbon exchanges in Leipzig and London. So far, Germany has been the only country to sell EU allowances in 2008. Experience shows that a simple and transparent design is beneficial and using existing institutions is a cost-efficient approach as it brings down transaction costs for the government and companies. In addition, frequent auctions correspond to industry needs and access should be non-discriminatory and open to all interested participants (directly or supplied by intermediaries). The results should be published regularly to inform the public. According to this experience, the cornerstones of the German auctioning concept are a simple design (one bidding round, same price for all bidders), a high frequency of auctioning (weekly), the use of existing exchanges and a unique auctioneer, no restrictions in participation and no price cap.

The panel discussion led to following observations and conclusions:

- ◆ Despite the fact that Germany already has a functioning and successful system of sales operating, it is moving to auctioning allowances for several reasons. First, it is laid down to start with auctioning no later than in 2010 in the allocation act, but it is also considered auctioning a good price-finding mechanism. The long-term goal is to auction 100% of the allowances. Besides, many European countries will also implement auctioning systems. As time was a constraint, Germany did not initially implement an auctioning system. However, good sales experience now influences the design of the auction system and helps in implementing it.
- ◆ UK supports the harmonization of the various auction processes in EU Member States because different auctions in every country are not ideal. Harmonization should therefore be examined by all members in a collaborative way.

- ◆ The question was raised if there will be a large difference between market and auction price if no floor is set. It was stated that setting a price cap distorts the ETS, as this gives an incentive to speculate against this price cap.
- ◆ Concerning the frequency of auctions, it was stated that it is important is to avoid the extremes - very frequent or very infrequent auctions, as this would have negative effects on the price.
- ◆ There was general agreement that the simplicity of an auctioning model is by far the most important feature of a potential system.

Political address from US Congress

Gerard J. Waldron, staff member of Congressman Edward Markey, addressed the conference participants and briefly spoke about ongoing work on a cap-and-trade draft bill.

Plenary Three: Auction Participant Perspectives

The objectives of the third plenary were to learn from current market participants and hear their experience in auctions and to identify potential barriers that could prevent future linkage opportunities.

The following points were put forward by the various presenters:

- ◆ Overall, participants in RGGI have had positive experiences in the first auction round. They have been involved from the very beginning in all phases of the establishment of RGGI and could thus provide input (and will continue to do so) for the auction design. A key incentive for participating in the auction was to obtain some allowances and to become familiar with the auction process and platform. Participants welcomed that RGGI states retained a professional independent market monitor in order to observe auctions and subsequent market activity. The approval process for RGGI was easy to navigate, the platform functioned fine and the clearing price was neither too low and nor too high. Also the financial settlement and allowance transfers went well in the first auction round. With regard to setting the reserve price, participants encourage rethinking the reserve price function. Market participants need to know the logic behind setting the reserve price well in advance of the auction.
- ◆ The European power industry generally accepts auctioning as the principle method of allocation in the European ETS, provided that operators can fully pass on their costs and all sectors fairly contribute to emission reductions. Also, while CCS legislation is supported by the power industry, there should be no discrimination among electricity producers, and higher access to CDM/JI credits as the most cost-effective solution to emission reductions should be assured. The power industry suggests that the auctioning design used to release these allowances into the market should be relatively simple. Of greater importance is that auction procedures – such as timing, frequency, participation, transparency arrangements – are fair and efficient and are put in place as soon as practicable. Unnecessary increases in EUA price risk, resulting from delayed auctioning, will be avoided if the first set of auctions for Phase III allowances take place by mid-

2011 at the very latest. In addition, a common EU ETS market requires the existence of coordinated EUA auctions. A centralized common EU-auction platform is the best way to do this. At the very least, the rules for auctioning EUA should be the same in every Member State.

- ◆ Liquidity is of high importance for the carbon market: It is the point of price transparency. The price signal is important for CEOs in making (investment) decisions. Trading itself does not reduce emissions, the price signal does. From a government perspective, revenue may either be achieved by auctioning or selling. During Phase I of the EU ETS, some initial experiences with auctioning allowances were made. EU Member States could auction up to 5% of total allowances. 4 Member States – Hungary, Ireland, Lithuania and Denmark – made use of this possibility. All in all, this was a trial phase, and auctioning has not always been efficient. During Phase II of the EU ETS, experience with selling has been made, with Germany selling about 9% (40 million tons) of its allocation per year through a state-owned bank. A total of 3.77 million EU allowances, sold daily, were sold per month. From January to June 2008, this translated into revenues of 600 million euro. Trading an allowance on an exchange provides low cost, is easy and efficient, guarantees transparency and credit risk management, uses one centralized pool of liquidity and takes place in a regulated and secure market. Futures, options and spots are the types of instruments in the carbon market. There are also various benefits of selling over auctioning: It avoids price distortion, speculation, reputational damage and arbitrage while optimizing revenue income and keeping transparency and control.

Plenary Four: Outlook for the Future

The objective of the fourth plenary was to explore the future role of auctioning in US, European and Asian-Pacific carbon markets.

The following points were put forward by the various presenters:

- ◆ Greenhouse gas emission trading is a policy tool for ensuring efficient climate policy by putting a uniform price on carbon throughout the entire value chain. Carbon pricing creates significant transfers in national, regional and global carbon markets. Avoiding carbon leakage in partial schemes is the major reason for free allocation approaches. But allocation significantly matters for efficiency – a uniform price signal is distorted by free allocation approaches. Auctioning should be the ultimate goal of the allocation regime. An effective international climate policy will require funds – auctioning is the best way to raise these funds.
- ◆ Financial intermediaries are largely agnostic on methods for distributing allowances in the carbon markets. A clear carbon price signal is a critical requirement that allows the spot and derivatives market to flourish. Government's role of setting rules for carbon markets and making the initial allocation decision of allowances should not impede financial intermediary involvement unless the system has flawed design features, such as a lack of transparency, a high risk of ex-post allocation adjustment, or concerns about carbon market governance. In contrast, the primary tasks of financial intermediaries in the global carbon markets are to provide structured finance, increase liquidity, and offer risk management to market participants. Nevertheless, allocation matters. Drawbacks of free allocation (e.g. high likelihood for windfall profit and low incentive for compliance buyers to invest in emission reduction), can be overcome with auctioning. The key to expanding carbon finance is a credible long-term signal for the price of carbon.

- ◆ Auctioning might improve the current functioning of the carbon market across the three dimensions of market efficiency: static efficiency, dynamic efficiency and allocative efficiency. First, static efficiency is about ensuring the optimal short-term clearing price in the market. Free allocation of emission allowances might lead to a situation where operators only start to buy when they need to for compliance purposes. As a result, there is a risk that they may have to pay higher prices because abatement opportunities might be missed early on in the trading period. In short, the free allocation of allowances might distort the short-run clearing price and thereby make the market less efficient. Secondly, dynamic efficiency is about ensuring a long-term price signal is sent for the correct investment decisions to be made. In order to make the right investment choices for the low carbon economy, the price signal today needs to be sufficiently robust so that companies refrain from investing in CO₂-intensive infrastructure in favor of less CO₂-intensive alternatives. However, if allowances are allocated for free, the full cost of carbon may not be reflected in today's price, and the more CO₂-intensive infrastructure might be built as a consequence. In other words, the free allocation of allowances might distort the long-run price signal and thereby make the market less efficient. Thirdly, allocative efficiency is all about ensuring the carbon price is fully reflected in end-user prices so that consumers are faced with behavioral decisions. Allocating allowances to operators free of charge might result in a situation where the cost of carbon is not reflected in the price of the products of the companies subject to the cap. Consequently, consumers may not have an incentive to change their consumption patterns as there is no change in the cost of CO₂-intensive products compared to less CO₂-intensive products. However, the cost of carbon might be passed on to consumers if allowances were auctioned, thereby providing an incentive for consumers to change their consumption patterns. In sum, the free allocation of allowances might distort consumer behavior and thereby make the market less efficient.

Wrap up by the Rapporteur

The key findings of the conference were summarized by J. Jared Snyder from the New York State Department of Environmental Conservation. Many arguments supporting auctioning were heard during the conference. Reasons include that it can prevent windfall profits, that it provides revenue and, most importantly, that it is efficient.

As input for structuring auctions, several points were named: An auction should be frequent (at least quarterly), transparent and simple. A sealed-bid uniform price auction appeared to be the most important. However, many different types of auctions were presented. The UK, Germany, and RGGI, for example, are all taking different approaches.

Another question was whether directly implementing 100% auctioning or whether gradually phasing in an auctioning process is to be preferred. It seemed that most panelists preferred the idea of auctioning 100% as fast as possible. This issue, however, presents a big political hurdle. Experience in RGGI shows that 100% auctioning right from the start of the system seems to be important.

The method of auctioning does not seem to impact the ability to link these systems. However, the decision about auctioning or giving out allocations for free does matter. Concerning linkage, the cap level is the most important design feature along with the respective price of carbon.

Disclaimer:

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Closing Address

Closing the conference, Mr. Brice Lalonde, Climate Change Ambassador for France, stressed the need for a global agreement that will make reductions of greenhouse gas emissions more inexpensive. Adequately addressing the climate crisis will require all levels of government across the globe to work in partnership.

Mr. Lalonde welcomed that the environmental movement and the financial world has come together to tackle the climate crisis, i.e. by using emissions trading. He called for auctioning as the best way to allocate allowances. From a financial point of view, he believes there will be a need for a global currency for allowances in future. He went on to discuss the point that currently there are competing demands on how to use the revenues from emission trading. Many in the international community would like to see at least part of the revenues used in areas that the market cannot serve (e.g. adaptation).

Mr. Lalonde closed his address by saying that one way to achieve emission reductions efficiently is through cap and trade with auctioning as the distribution method.