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## THE AUCTIONING OF EMISSION ALLOWANCES IN GERMANY

Periodical Report January 2010

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#### 1. AUCTIONING OF EMISSION ALLOWANCES

From January 2010, the Federal Republic of Germany puts up 40 million emission allowances (EUAs) for auctioning. The proceeds go to the Federal Republic. Further allowances from the National Reserve are also auctioned to cover the costs arising from tasks taken over by the German state in the context of emissions trading. The overall volume of emissions auctioned amounts to about 9 percent of the national emissions trading budget. Auctions are held weekly at the European Energy Exchange (EEX) in Leipzig as a result of a tender carried out by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in agreement with the Federal Ministry of Finance. Over the period mentioned above, around 300,000 allowances for immediate delivery (spot contract) are auctioned every Tuesday and 570,000 allowances to be delivered by December of the current year (futures contract) are auctioned every Wednesday between January and October. From November every year, 870,000 allowances per week of the remaining allowances are auctioned on the spot market. The German Emissions Trading Authority (DEHSt) at the Federal Environment Agency as the competent authority has commissioned the state-owned bank KfW Bankengruppe to act as vendor (seller) of allowances at the EEX.

This is the first DEHSt report on the auctioning of emission allowances in Germany. Periodical reports will be published by DEHSt regularly.

#### 1.1. Participation

Weekly auctions of futures or spot contracts at EEX are part of regular exchange trading. Participation is possible either directly for EEX members or indirectly via a broker or as customers of an EEX member. This ensures that small and medium-sized enterprises that have no dedicated trading department can also benefit from the auctions. Existing exchange members who do their trading already via EEX can participate in the weekly auctions with no extra effort or cost. Transaction and clearing charges for successful bidders are below regular stock exchange fees. Further information on terms and conditions of participation is available on the EEX website<sup>1</sup>. The auction dates can be found on the EEX auction calendar<sup>2</sup>. Should an auction date be cancelled, EEX will set a replacement date within 15 days. The auction results are published within the trading system following the auction and on the EEX website the following day.<sup>3</sup>.

<sup>&</sup>lt;sup>1</sup> Vgl.: <a href="http://www.eex.com/en">http://www.eex.com/en</a>

<sup>&</sup>lt;sup>2</sup> Vgl.: http://www.eex.com/de/document/70561/2009\_12\_15\_BMU%20Auction%20Calendar001.pdf

<sup>&</sup>lt;sup>3</sup> Vgl.: http://www.eex.com/en/Download/Market%20Data/EU%20Emission%20Allowances%20-%20EEX

#### 1.2. Procedure

In auctions on the spot market, the minimum bid amount is 500 allowances, on the derivatives market 1,000 allowances. A single-round uniform price method is used in the auctions. All successful bidders pay the same price. The auction clearing price is determined by ranking all bids in order of price, starting with the highest. If two bids are equal they are ranked according to the time of receipt. Beginning with the highest bid the offered quantities are added until the quantity to be auctioned has been reached. The price at which the total amount of bids reaches or exceeds the available quantity of allowances determines the auction clearing price. As auctions are conducted with a closed order book, each bidder can only see his own bids. The following diagram illustrates the pricing procedure, using a spot market auction as an example.

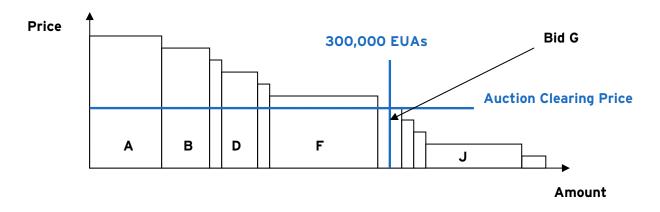


Fig. 1: Determination of the Auction Clearing Price using the Uniform Price Method

In order to guarantee the integrity of the EEX market, it is continuously monitored by an autonomous and independent market surveillance body (HÜSt) in line with German legal requirements. Being part of regulated exchange trading, German auctions are equally subject to surveillance by HÜSt. In cases of manipulative bidder behaviour aiming at a distortion of the auction clearing price, DEHSt can impose countermeasures as laid out in the Emissions Trading Auctioning Ordinance 2012 (EHVV 2012).

#### 2. REPORT: JANUARY 2010

## 2.1. Market Surveillance report by HÜSt

The market surveillance body at EEX (HÜSt) reported to DEHSt on the auctions of January 2010:

"The auctions of emission certificates at the EEX on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in January 2010 took place following the defined procedure and without any disturbances. For this period, the Market Surveillance of the EEX could not detect any irregularities, and especially no behaviour of bidders that aims at manipulating the auction price."

#### 2.2. Overview

In January 2010, a total of 3,480,000 emission allowances (EUAs) with a total value of 45,440,700 Euros were auctioned. The volume-weighted average revenue per allowance amounted to 13.06 Euros. Four auctions took place on the spot market and four on the futures market, which fulfils the legal requirements.

Of the total auction volume, 2,280,000 allowances with a value of 29,816,700 Euros (average price 13.08 Euros) were auctioned as futures contracts (MidDec2010), and 1,200,000 emission allowances with a value of 15,624,000 Euros (average price 13.02 Euros) were sold at spot market auctions.

Over the eight auction dates, bids for a total of 26,508,000 emission allowances were entered. Thus, the aggregated bidder demand in January exceeded supply by a factor of 7.26. The amount auctioned was distributed among 30 successful bidders. A total of 85 bidders took part in the auctions in January.

Date	Contract	Number of Bidders	Total Amount of Bids	Auction Volume	Cover Ratio	Auction Clearing Price	Revenue
05.01.2010	Spot	10	1,940,000	300,000	6.47	12.67 €	3,801,000 €
06.01.2010	Future	15	3,572,000	570,000	6.27	12.37 €	7,050,900 €
12.01.2010	Spot	6	1,350,000	300,000	4.50	12.71 €	3,813,000 €
13.01.2010	Future	13	3,746,000	570,000	6.57	12.81 €	7,301,700 €
19.01.2010	Spot	9	1,985,000	300,000	6.62	13.43 €	4,029,000 €
20.01.2010	Future	13	8,279,000	570,000	14.52	13.46 €	7,672,200 €
26.01.2010	Spot	9	1,770,000	300,000	5.90	13.27 €	3,981,000 €
27.01.2010	Future	10	3,866,000	570,000	6.78	13.67 €	7,791,900 €
Jan	uary	85	26,508,000	3,480,000	7.62	13.06 € *	45,440,700 €

<sup>\*</sup> Volume-weighted average revenue

Tab. 1: Overview for the Month of January 2010

### 2.3. Auctions and the Secondary Market

The emission allowances auctioned in January amounted to 3.48 million, compared to an accumulated volume of 285 million allowances traded on the secondary market<sup>4</sup>. Thus, the German auctions had an average proportion of 1.22 percent of the total relevant market. The weekly proportion of spot market auctions fluctuated only marginally between 2.76 and 2.93 percent (average 2.85 percent). In the futures market, the correspondent proportion was no more than 0.93 percent.

<sup>&</sup>lt;sup>4</sup> This review refers to transactions for immediate realisation (spot market) and futures contracts that are due in December 2010, which are traded on the exchanges ECX, BlueNext, EEX and Climex. It includes transactions that were concluded at the exchange (screen traded) or bilateral transactions that made use of the clearing mechanisms of the exchange. Options and futures contracts with different maturities have not been taken into account.

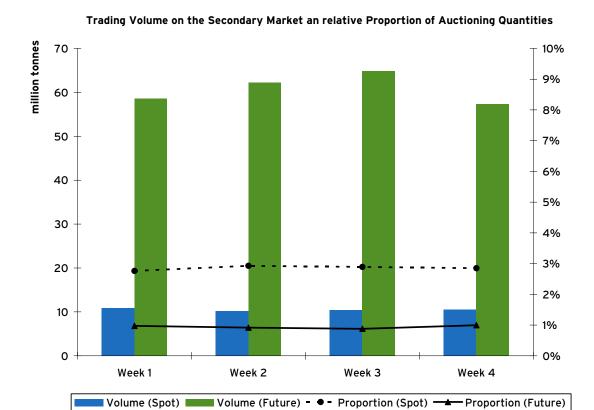


Fig. 2: Auctions and Trading Volumes on the Secondary Market in January 2010

The clearing prices achieved in January clearly showed that the auctions were executed almost in sync with the market as a whole. Reference prices of the most liquid secondary markets provide suitable benchmarks<sup>5</sup>. Table 2 shows the relative deviations from best bid<sup>6</sup> and last trade on the lead markets before the end of the bidding window<sup>7</sup>.

<sup>&</sup>lt;sup>5</sup> The lead market for the auctioning of the futures contract MidDec10 is the Dec10 Future traded at the London ECX. For spot market auctions, the reference market is the BlueNext EUA spot market.

<sup>&</sup>lt;sup>6</sup> The best bid is the highest in the current order book.

<sup>&</sup>lt;sup>7</sup> When comparing auctions with secondary markets, it must be taken into account that in auctions, relatively large quantities of allowances are sold in a single bid. The indicators best bid and last trade normally refer to smaller volumes than those in auctions.

Date	Contract	Auction Clearing	Deviation from Lead Market		
Date		Price	Best Bid	Last Trade	
05.01.2010	Spot	12.67 €	-0.158%	-0.236%	
06.01.2010	Future	12.37 €	-0.403%	-0.403%	
12.01.2010	Spot	12.71 €	0.000%	-0.079%	
13.01.2010	Future	12.81 €	0.313%	0.078%	
19.01.2010	Spot	13.43 €	0.000%	-0.149%	
20.01.2010	Future	13.46 €	0.000%	-0.222%	
26.01.2010	Spot	13.27 €	-0.075%	-0.150%	
27.01.2010	Future	13.67 €	0.147%	-0.073%	
Ja	nuary	13.06 € *	-0.011%	-0.154%	

<sup>\*</sup> Volume-weighted average revenue

Tab. 2: Auctions and Deviations from the Secondary Market in January 2010

The average deviation of clearing prices for futures contracts from the lead market reference price (best bid) was +0.014 percent. In spot market auctions, the average deviation from the reference price was -0.058 percent. The range of deviation per auction date was between -0.403 and +0.313 for both markets. The volume-weighted average for January was as low as -0.011 percent. On three out of eight dates, the auction clearing price was identical with the best bid of the reference market.

When comparing clearing prices with last trade settlement prices, the average deviation was - 0.155 percent for futures contracts and -0.154 percent for spot market auctions.

# 3. ADDENDUM: AUCTIONS IN OTHER MEMBER STATES OF THE EUROPEAN UNION IN JANUARY

On O7/O1/2010, the United Kingdom auctioned 4.9 million emission allowances in a single auction. Although the annual quantity of allowances to be auctioned in 2010<sup>8</sup> is similar, the British approach differs from the German not only in the frequency of auctions and the choice of the auctioning platform, but also in the type of contracts auctioned. Whereas in Germany, two auctions take place every week, there are only eight annual auctioning dates in the British auction calendar. In contrast to Germany where auctions are held via a regulated emissions trading exchange, auctions in the United Kingdom are held by the United Kingdom Debt Management Office via intermediate financial service providers who bundle the bids. British auctions only deal with allowances for immediate delivery (spot market), whereas in Germany, a proportion of auctioned allowances are sold as futures contracts.

In both countries, auction clearing prices were at the same level as reference prices on the secondary market in January. This shows that coordination of several auctions in Europe is possible and leads to market prices.

<sup>&</sup>lt;sup>8</sup> In 2010 Germany puts approximately 41 million allowances for auctioning while the UK volume amounts to 35.7 million EUAs. In this context it must be taken into account that British auctioning volumes in other years of the second trading period (2008 – 2012) are below the value for 2010 whereas Germany auctions a fixed volume in every year.