



AUCTIONING

Auctioning of Emission Allowances in Germany Periodical Report: Second Quarter 2012

IMPRINT

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AUCTIONING OF EMISSION ALLOWANCES IN GERMANY

Since January 2010, the Federal Republic of Germany has been offering an annual total of roughly 41 million emission allowances (EUA) for auction. Between 2010 and 2012 the auctions are held weekly on the European Energy Exchange (EEX) spot and futures markets in Leipzig (see Info Box below). The German Emissions Trading Authority (DEHSt) at the Federal Environment Agency has commissioned the KfW banking group to act as a vendor (seller) for allowances at the EEX on behalf of the Federal Government. Further updated information on participation terms and conditions can be downloaded from the [EEX website](#). Previous Periodical Reports are available on the [auction website of the DEHSt](#).

Info Box: Participation, Deadlines and Procedure

Weekly auctions of futures or spot contracts at EEX are part of normal exchange trading. Participation is possible either directly for EEX members or indirectly via a broker or as a client of an EEX member. This ensures that small and medium-sized enterprises that have no trading department of their own can also benefit from participating in the auctions. Exchange members already admitted to emissions trading at the EEX can participate in the weekly auctions at no cost or fixed charges.

In 2010 and 2011, auctions were held on separate dates between January and October – 300,000 allowances for immediate delivery (spot contract) were auctioned every Tuesday and 570,000 allowances to be delivered by December of the current year (futures) were auctioned every Wednesday. In 2012, the weekly volume of futures contracts increased to 645,000 EUAs from January and to 850,000 EUAs from June. In 2010 and 2011, 870,000 allowances were auctioned weekly on the spot market alone from November. In 2012 this volume will increase to 1,150,000 EUAs. The exact auction dates can be found in the [EEX Auction Calendar 2012](#).

The auction procedure is comprehensively set out in the Ordinance on the Auctioning of Emission Allowances (Emissionshandels-Versteigerungsverordnung, EHV 2012). A single-round, uniform-price procedure is applied at auctions. All successful bidders pay the same price. Auctions are conducted with a closed order book and bidders can only see their own bids. The minimum bid size is 500 allowances in auctions on the spot market and 1,000 allowances in auctions on the futures market.

1 CURRENT DEVELOPMENTS

German auction volumes at the EEX were increased from June:

As from June 2012, the volumes of EU allowances auctioned on behalf of the Federal Republic of Germany were slightly increased compared to previous months. Thus, the weekly quantities offered as futures contracts (F2EA) between June and October will increase from the current amount of 645,000 to 850,000 EUAs. By contrast, spot contract (T2PA) quantities offered for the same period will remain at 300,000 EUAs per week. From November 2012, the Federal Republic of Germany will not allow futures contracts to be auctioned; instead, spot market quantities will increase to 1,150,000 EUAs per week. Detailed information can be found in the [EEX Auction Calendar 2012](#). The increase shall ensure that all ETS system cost incurred by the Federal Republic will be covered.

Switch-over to the Union Registry:

The introduction of the Union Registry was decided against a background of increased European harmonisation and is in context with EU-wide standardisation and optimisation of safety precautions. With the introduction of the unified and centralised Union Registry, the registry architecture of the existing EU emissions trading system has been fundamentally changed. The safety standards were also improved. The Union Registry has been used for aviation allowances (EUAA) since January, now it has been opened to the much larger trade with EUAs. From 01 to 20 June, the National Emissions Trading Registries were transferred into the Union Registry, including all account details. On 20 June 2012, the Union Registry was opened for transactions. The accounts will continue to be managed by the Member States, i.e. for Germany by DEHSt.

2 MARKET SURVEILLANCE REPORT BY THE HÜST

In order to guarantee above-board market activities on the EEX free of manipulation, continuous surveillance is conducted by an independent Market Surveillance Office (Handelsüberwachungsstelle, HÜSt), as required under German law. HÜSt reports to the DEHSt on the results of its surveillance activities through regular internal reports. HÜSt reported on auctions in the Second Quarter of 2012 as follows (excerpt):

“Except for a shortened auction on May 8th which was completed without any problems, the auctions of emission allowances took place at the EEX on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in the Second Quarter of 2012 according to 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.”

3 OVERVIEW OF THE SECOND QUARTER 2012

Between April and June 2012, a total of 12,805,000 emission allowances (EUA) with a total value of €87,746,300 were auctioned. As a result of market price trends over the past 12 months, revenues have fallen by more than 50 percent over the comparable quarter of 2011 (€183,768,000). This is equivalent to a volume-weighted average revenue per allowance of €6.85 (€16.25).

Of the total amount of allowances auctioned, 9,205,000 allowances with a value of €63,458,300 (average price €6.89) were futures contracts (MidDec2012), while 3,600,000 emission allowances worth €24,288,000 (average price €6.75) were sold on spot-market auctions (see Table 1). The detailed results of each auction date are shown in Tables 2 (spot) and 3 (futures).

Table 1: Overview for the 2nd quarter of 2012

Contract	Date	Bid volume	Auction volume	Cover ratio	Clearing price	Revenue
Spot	12	22,485,500	3,600,000	*6.25	*6.75 €	24,288,000 €
Futures	13	50,828,000	9,205,000	**5.52	**6.89 €	63,458,300 €
Total	25	73,313,500	12,805,000	**5.73	**6.85 €	87,746,300 €

Source: EEX, DEHSt

* Period average

** Volume-weighted average

In total, valid bids were placed for auctioning more than 73 million emission allowances on 25 auction dates in the trading system. Thus the aggregated bid volume was a factor of 5.73 above the corresponding auction volume during the reporting period. The cover ratio on the spot market (6.25) was above the reference value on the futures market (5.52).

Table 2: Overview of auction data for the 2nd quarter of 2012 (spot)

Date	Number of bidders	Bid volume	Auction volume	Cover ratio	Clearing price	Revenue
03.04.2012	6	1,898,000	300,000	6.33	6.00 €	1,800,000 €
10.04.2012	4	4,035,000	300,000	13.45	6.54 €	1,962,000 €
17.04.2012	5	3,612,000	300,000	12.04	6.97 €	2,091,000 €
24.04.2012	5	1,825,000	300,000	6.08	7.06 €	2,118,000 €
08.05.2012	5	1,385,000	300,000	4.62	6.50 €	1,950,000 €
15.05.2012	8	1,211,000	300,000	4.04	6.49 €	1,947,000 €
22.05.2012	7	1,292,000	300,000	4.31	6.65 €	1,995,000 €
29.05.2012	5	1,186,000	300,000	3.95	6.55 €	1,965,000 €
05.06.2012	5	962,000	300,000	3.21	6.27 €	1,881,000 €
12.06.2012	8	1,737,000	300,000	5.79	6.54 €	1,962,000 €
19.06.2012	6	2,120,000	300,000	7.07	7.39 €	2,217,000 €
26.06.2012	6	1,222,500	300,000	4.08	8.00 €	2,400,000 €
June	25	6,041,500	1,200,000	*5.03	*7.05 €	8,460,000 €
April to June	70	22,485,500	3,600,000	*6.25	*6.75 €	24,288,000 €

Source: EEX, DEHSt

* Period average

Table 3: Overview of auction data for the 2nd quarter of 2012 (futures)

Date	Number of bidders	Bid volume	Auction volume	Cover ratio	Clearing price	Revenue
04.04.2012	5	2,904,000	645,000	4.50	6.13 €	3,953,850 €
11.04.2012	6	7,470,000	645,000	11.58	6.77 €	4,366,650 €
18.04.2012	6	7,030,000	645,000	10.90	7.26 €	4,682,700 €
25.04.2012	5	2,834,000	645,000	4.39	7.10 €	4,579,500 €
02.05.2012	4	1,417,000	645,000	2.20	7.29 €	4,702,050 €
09.05.2012	7	2,739,000	645,000	4.25	6.56 €	4,231,200 €
16.05.2012	7	2,882,000	645,000	4.47	6.46 €	4,166,700 €
23.05.2012	6	2,972,000	645,000	4.61	6.83 €	4,405,350 €
30.05.2012	5	3,117,000	645,000	4.83	6.44 €	4,153,800 €
06.06.2012	7	4,473,000	850,000	5.26	6.42 €	5,457,000 €
13.06.2012	8	3,191,000	850,000	3.75	6.68 €	5,678,000 €
20.06.2012	7	5,007,000	850,000	5.89	7.44 €	6,324,000 €
27.06.2012	9	4,792,000	850,000	5.64	7.95 €	6,757,500 €
June	31	17,463,000	3,400,000	*5.14	*7.12 €	24,216,500 €
April to June	82	50,828,000	9,205,000	**5.52	**6.89 €	63,458,300 €

Source: EEX, DEHSt

Period average

** Volume-weighted average

4 OVERVIEW OF THE CURRENT YEAR

In the first six months of the current year, a total of 25,090,000 emission allowances (EUAs) worth €183,079,100 were auctioned (average price €7.30). Of the total auction volume, 17,590,000 emission allowances worth €129,274,100 (average price €7.35) were futures contracts (MidDec2012) and 7,500,000 emission allowances worth €53,805,000 (average price €7.17) were auctioned on the spot market in accordance with legal requirements. The cumulative auction results of the current year are shown in Table 4.

Taking into account the legally fixed **basic annual amount** of 40 million emission allowances, there is a preliminary annual remainder of 14,910,000 EUAs for the current year 2012.

Every year, additional allowances from the national reserve are auctioned to cover the cost incurred by the Federal Government in exercising its duties and responsibilities in connection with emissions trading. The annual **refinancing volume** of EUAs is not yet known since it is calculated from the average auction clearing prices from January to October; it will be announced by the DEHSt in line with the legal requirements by 5 November 2012 at the latest.

Table 4: Overview of the current year 2012

Month	Contract	Dates	Bid volume	Auction volume	Cover ratio	Clearing price	Revenue
January	Spot	5	19,619,000	1,500,000	13.08	*6.88 €	10,314,000 €
	Future	4	21,075,000	2,580,000	8.17	*6.98 €	18,014,850 €
February	Spot	4	8,902,000	1,200,000	7.42	*8.44 €	10,131,000 €
	Futures	5	9,337,000	3,225,000	2.90	*8.59 €	27,709,200 €
March	Spot	4	6,624,000	1,200,000	5.52	*7.56 €	9,072,000 €
	Futures	4	12,584,000	2,580,000	4.88	*7.79 €	20,091,750 €
April	Spot	4	11,370,000	1,200,000	9.48	*6.64 €	7,971,000 €
	Futures	4	20,238,000	2,580,000	7.84	*6.82 €	17,582,700 €
May	Spot	4	5,074,000	1,200,000	4.23	*6.55 €	7,857,000 €
	Futures	5	13,127,000	3,225,000	4.07	*6.72 €	21,659,100 €
June	Spot	4	6,041,500	1,200,000	5.03	*7.05 €	8,460,000 €
	Futures	4	17,463,000	3,400,000	5.14	*7.12 €	24,216,500 €
January to June	Spot	25	57,630,500	7,500,000	*7.68	*7.17 €	53,805,000 €
	Futures	26	93,824,000	17,590,000	**5.33	**7.35 €	129,274,100 €
Total		51	151,454,500	25,090,000	**6.04	**7.30 €	183,079,100 €

Source: EEX, DEHSt

* Period average

** Volume-weighted average

5 BIDDER PARTICIPATION

The total volume auctioned during the 2nd quarter of 2012, which amounted to 12.805 million EUAs, went to 85 successful bidders. Of these bidders, 46 participated in the futures market and 39 in the spot market. Thus, the number of successful bidders slightly exceeded the level of the 2nd quarter in 2011 (70). The total number of bidders actively participating in the auctions during the reporting period was 152.¹ From a bidder's perspective, the average success rate over all 25 auction dates was just over 55 percent. The average quantity awarded per successful bidder was approximately 92,000 allowances in spot auctions and approximately 200,000 allowances in futures auctions.

Info Box: Uniform Price Auction at the EEX

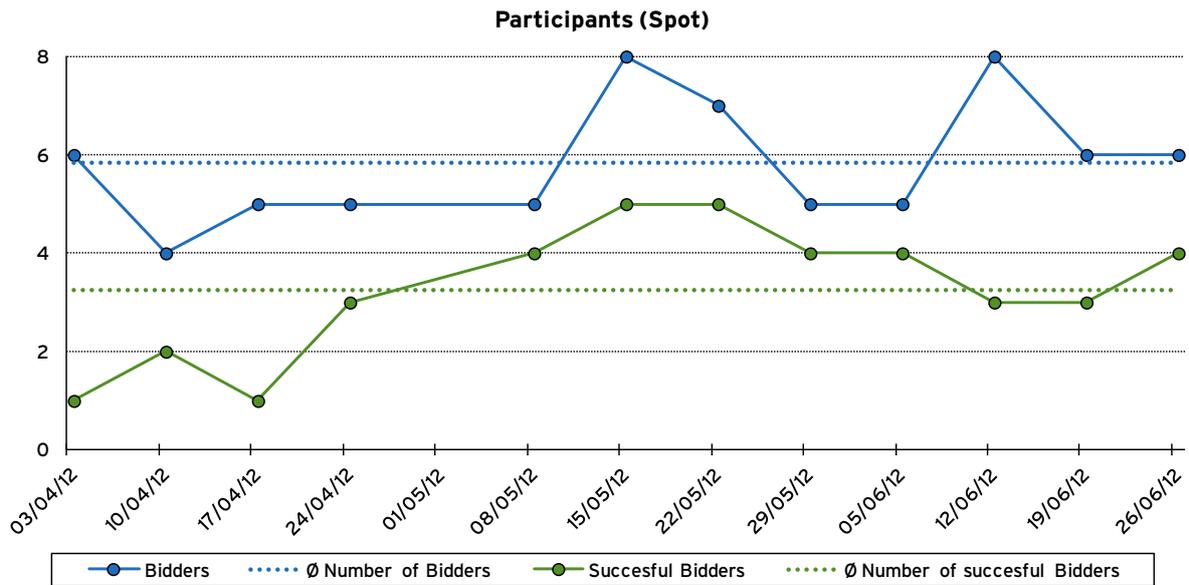
The German auctions at the EEX follow the uniform price procedure which is common practice throughout the European Union. It involves one round of bidding and a closed order book. This simple and robust procedure protects against market manipulation and will continue to be used during the third trading period and for aviation. The uniform price procedure means that all successful bidders pay the same price. The auction clearing price is determined by ranking all eligible bids, beginning with the highest bid, according to the bidding price.

In the event of equal bids, the bids are additionally ranked according to the time they were entered beginning with the earliest bid ("first-come-first-served principle"). The volumes of the bids are aggregated starting with the highest bid until the volume of emission allowances on offer (300,000 and 850,000, respectively) is reached. The bid price at which the aggregate volume of bids reaches or exceeds the offered volume of auctioned allowances determines the auction clearing price.

Bidders will thus be awarded their bid volume if their bidding price at least matches the auction clearing price. If a bid exactly matches the clearing price, the bidder may be awarded the remaining allowances which may be below the volume requested, depending on the bidding situation. If the bid from several participants matches the auction clearing price exactly, the above-mentioned „first-come-first-served“ principle applies.

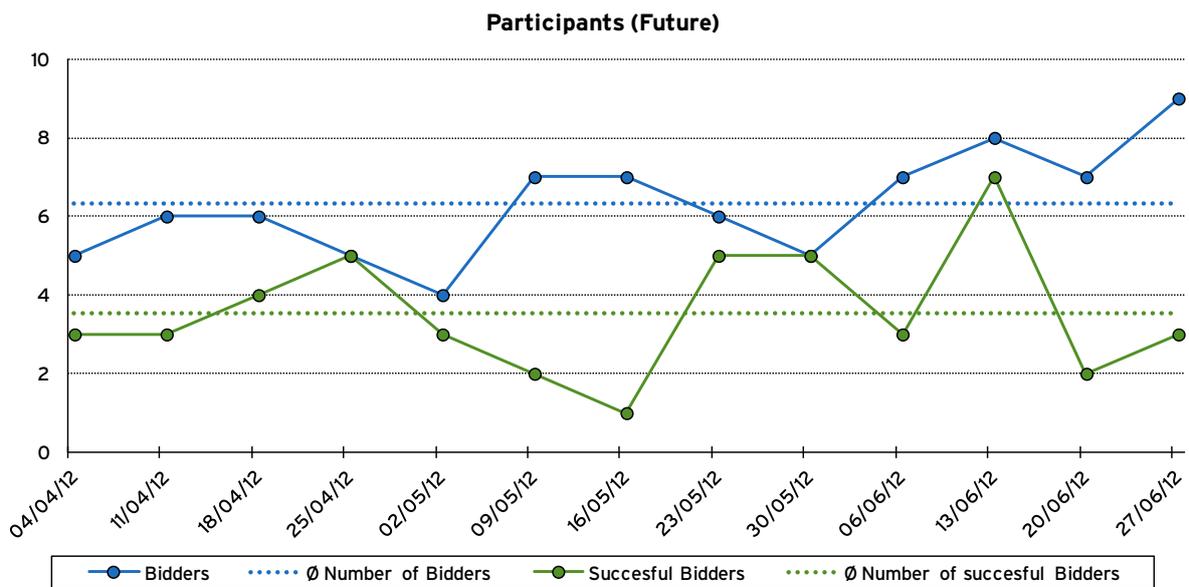
Figures 1 and 2 show the structural development of participant numbers for spot and futures markets. In both segments, bidder participation essentially fluctuated between 4 and 8 bidders. Eventually, the number of successful bidders fluctuated between 2 and 5 bidders in over 80 percent of the auctions. In only three auctions did the number of successful bidders fall below the threshold of two during the 2nd quarter of 2012.

¹ As trading participants are allowed to enter bids on several dates, the number of participating and successful bidders does not necessarily reflect the true number of different parties taking part in auctions over the reporting period. Also, it must be taken into account that bidders were able to participate indirectly via intermediaries such as banks and financial service providers which is not reflected in the quoted number of participants. Numbers only include trading participants acting as intermediaries, not indirect third-party bidders.



Source: EEX, DEHSt

Figure 1: Number of participating and successful bidders per auction date in the 2nd quarter of 2012 (spot)



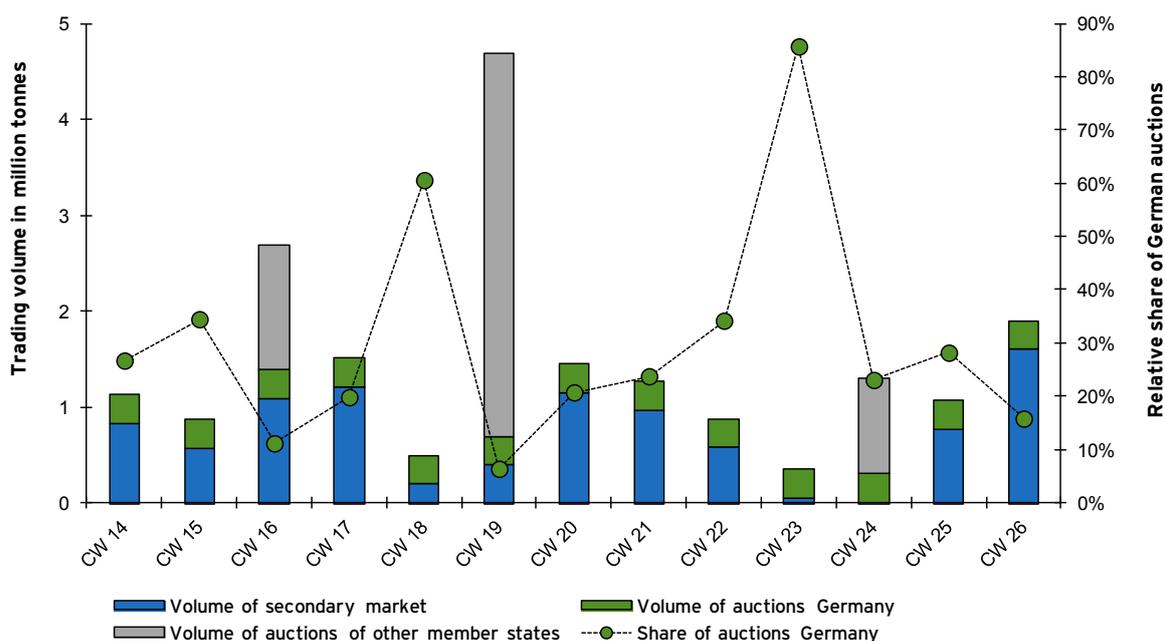
Source: EEX, DEHSt

Figure 2: Number of participating and successful bidders per auction date in the 2nd quarter of 2012 (futures)

6 AUCTIONS AND THE SECONDARY MARKET

6.1 TRADING VOLUME ON THE SECONDARY MARKET

While a total of 12.805 million emission allowances were auctioned by the Federal Republic of Germany in the 2nd quarter of 2012, the total market trading volume for the same period was around 1.48 billion allowances.² The average market share of German auctions was approximately 0.9 percent during the 2nd quarter of 2012. The share volume of futures auctions on the significantly more liquid futures market was about 0.6 percent, whereas the share in spot auctions was around 18 percent. Figures 3 and 4 show the market volumes traded during the reporting period and the corresponding share of the German auction volume per calendar week (CW) for spot and futures markets.



Source: BlueNext, EEX, Nasdaq OMX, DEHSt

Figure 3: Trading volume of the total market (spot) and relative share of German auctions (EEX) in the 2nd quarter of 2012³

² The analysis only includes transactions for immediate delivery (spot) and futures contracts maturing in December 2012 which are traded at the ICE/ECX, BlueNext, EEX, Nasdaq OMX and GreenX exchanges. Only transactions concluded at the exchange (screen-traded) or bilateral transactions that went through the exchange clearing mechanisms are included, whereas options and longer-maturing futures contracts are not included. Spot contracts auctioned by other EU Member States during the second quarter of 2012 have also been included.

³ The low trading volume on the secondary market in CW 23 and CW 24 was due to the temporary closure of the registry (switch-over to the Union Registry).

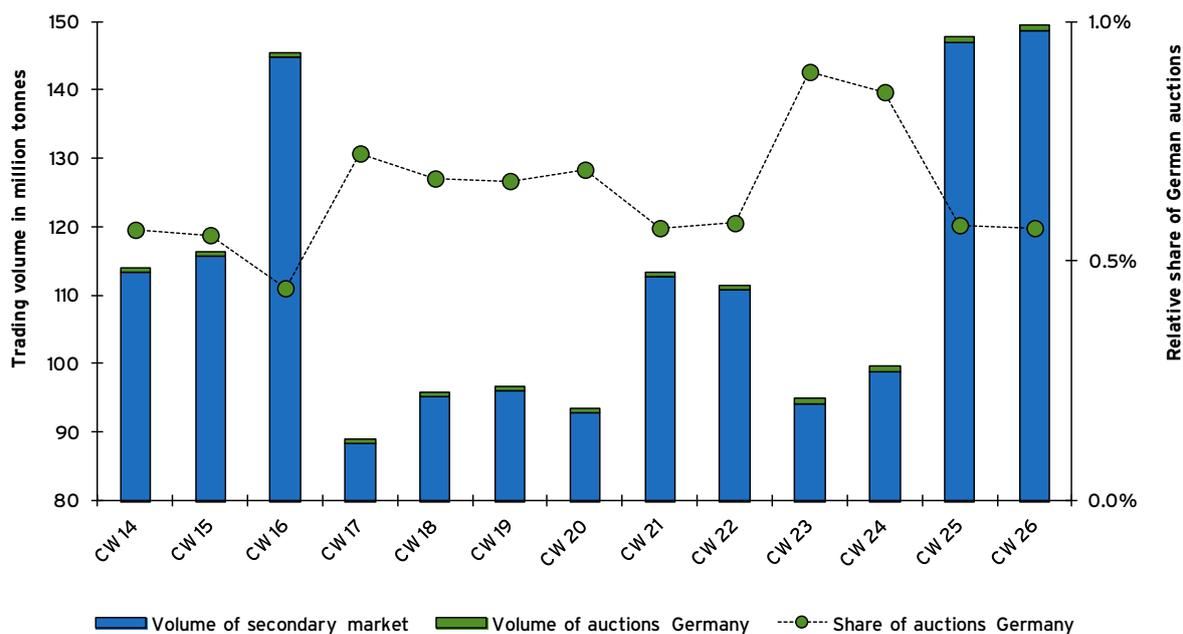


Figure 4: Trading volume of the total market (futures) and relative share of German auctions (EEX) in the 2nd quarter of 2012

6.2 CLEARING PRICES AND PRICE DEVELOPMENT ON THE SECONDARY MARKE

In order to evaluate auction clearing prices realised, reference prices from the most liquid exchanges were used as benchmarks (see next Info Box). The reference contract for the auctioning of the MidDec12 futures contract is the Dec12 Futures traded on the London ICE/ECX, whereas the BlueNext EUA spot market in Paris is the reference for spot markets.

Info Box: Reference Prices

In regular exchange trading (secondary trading), participants enter their buying and selling requests (bids and asks) into an order book which is constantly updated. As in German auctions, such buying bids in the secondary trading include quantity and price limits. The price limit is the highest price a buyer is prepared to pay for the purchase of an allowance. Sellers can also put a price limit on their bid, i.e. a minimum price per allowance sold.

The order book is open to inspection by any participant. It shows the current highest purchase offer (best bid) and the lowest sales offer (best ask) with the relevant quantities. Trading occurs where best bid and best ask overlap. The best bid is therefore a good indicator of the willingness to pay on a market. Trading price records finally show the price limits where supply equals demand.

Table 5 shows the relative differences of clearing prices at futures auctions from the London lead market just before the end of the bidding period. Differences at auction dates fluctuated between -0.73 and +0.31 percent (last best bid) and between -0.73 and +0.27 percent (last trade) during the reporting period. For statistical evaluation, the arithmetic mean of the moduli (absolute values) of the individual difference during the trading period is calculated. The average difference from the last best bid over all 13 auctions was calculated to be 0.31 percent, while the mean difference from last trade was 0.35 percent.

Table 5: Auction clearing prices (futures) and difference from secondary market prices (ICE/ECX Dec12) in the 2nd quarter of 2012

Date	Contract	Clearing price	Difference from lead market (ICE/ECX Dec12)	
			Last best bid	Last trade
04.04.2012	Futures	6.13 €	0.16%	-0.16%
11.04.2012	Futures	6.77 €	0.30%	0.15%
18.04.2012	Futures	7.26 €	-0.41%	-0.41%
25.04.2012	Futures	7.10 €	-0.14%	-0.14%
02.05.2012	Futures	7.29 €	-0.41%	-0.41%
09.05.2012	Futures	6.56 €	0.00%	-0.46%
16.05.2012	Futures	6.46 €	0.31%	0.16%
23.05.2012	Futures	6.83 €	-0.73%	-0.73%
30.05.2012	Futures	6.44 €	-0.31%	-0.31%
06.06.2012	Futures	6.42 €	0.00%	-0.31%
13.06.2012	Futures	6.68 €	-0.60%	-0.60%
20.06.2012	Futures	7.44 €	0.27%	0.27%
27.06.2012	Futures	7.95 €	-0.38%	-0.50%
Mean deviation (futures)			0.31%	0.35%

Source: KfW, DEHSt

Table 6 shows clearing price differences at spot auctions from the reference price at the BlueNext exchange (last best bid), complemented by those from the ICE/ECX (Dec12 Futures) market. Differences fluctuated between -0.46 and 0.86 percent (Table 6). The average difference of clearing prices from the secondary trading price at BlueNext was 0.51 percent during the reporting period.

In addition, Table 6 also shows differences in the clearing price at spot auctions from the respective last best bid at the ICE/ECX (Dec12) futures market. Over the entire reporting period, differences were between -2.64 and -1.21 percent, which is usual in functioning markets where spot contracts are normally rated lower than front-year contracts.

Table 6: Auction clearing prices (spot) and differences from the secondary market price (BlueNext and ICE/ECX) in the 2nd quarter of 2012

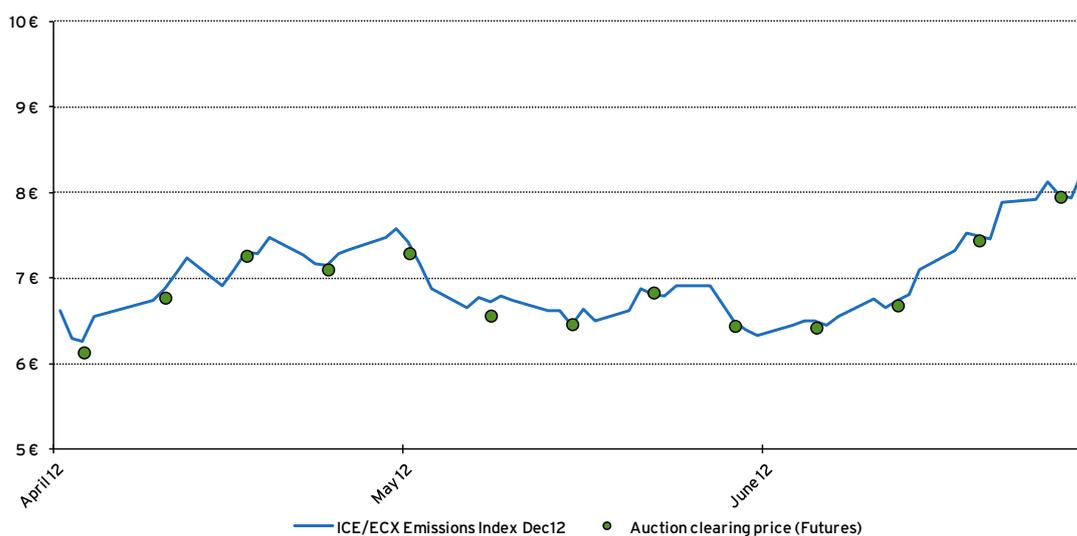
Date	Contract	Clearing price	Difference from lead market	
			Last best bid spot (BlueNext)	Last best bid futures Dec12 (ICE/ECX)
03.04.2012	Spot	6.00 €	0.67%	-1.80%
10.04.2012	Spot	6.54 €	0.62%	-1.36%
17.04.2012	Spot	6.97 €	0.72%	-1.27%
24.04.2012	Spot	7.06 €	0.86%	-1.26%
08.05.2012	Spot	6.50 €	-0.31%	-2.11%
15.05.2012	Spot	6.49 €	-0.46%	-2.26%
22.05.2012	Spot	6.65 €	-0.45%	-2.21%
29.05.2012	Spot	6.55 €	-0.15%	-2.38%
05.06.2012	Spot	6.27 €	*	-2.64%
12.06.2012	Spot	6.54 €	*	-1.21%
19.06.2012	Spot	7.39 €	*	-1.47%
26.06.2012	Spot	8.00 €	0.38%	-1.60%
Mean deviation (spot)			0.51%	1.80%

Source: KfW, DEHSt

* No EUA trading at BlueNext due to switch-over to Union Registry

To complement the snapshot of the markets during call phases on auction days, Figures 5 (futures) and 6 (spot) give an overview of the clearing prices in German auctions in the context of historical price developments on the relevant lead markets during the calendar year. Rather than following the common practice of just looking at settlement prices, our analysis takes into account all trades completed at the exchanges during the reporting period.⁴

As a useful measure for evaluating the sale prices achieved in the futures sales, a price index is used for the Dec12 futures contract which is published daily by ICE („ICE Emissions Index“⁵). The following figure clearly shows that the German futures contract prices of the auctions were in sync with the development on the lead market without large outliers over the entire reporting period.



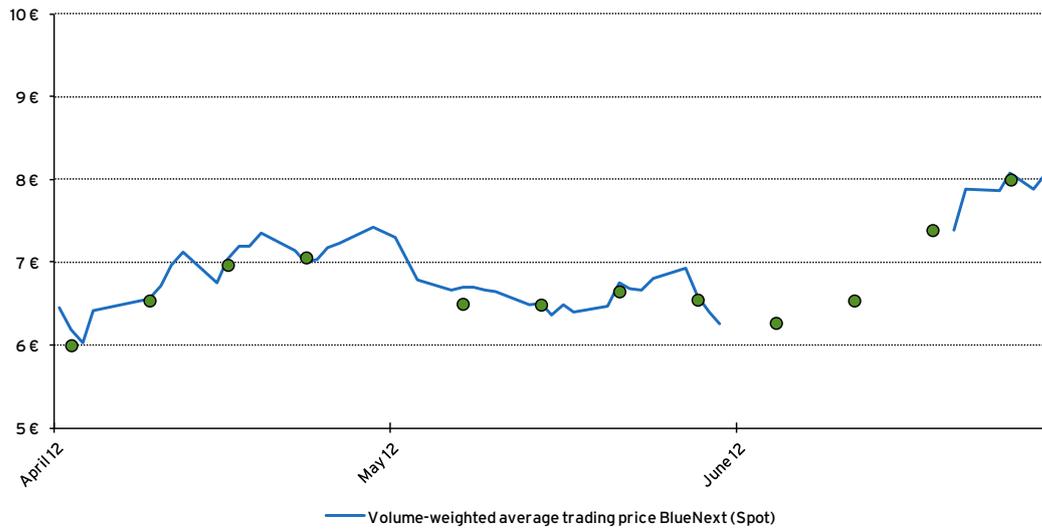
Source: ICE/ECX, EEX, DEHSt

Figure 5: Futures clearing prices and ICE Emissions Index (Dec12 futures) in the 2nd quarter of 2012

Volume-weighted daily average prices at the BlueNext are used as a benchmark on the spot market auctions. In comparison to the procedure on the futures market, the following figure shows the German spot clearing prices of auctions together with the benchmark curve at the lead stock exchange. In this segment the development also ran synchronously and without abnormalities. Between 01 and 20 June, trading with EUA was stopped on the BlueNext due to the switch-over to the Union Registry and therefore no reliable reference price could be determined.

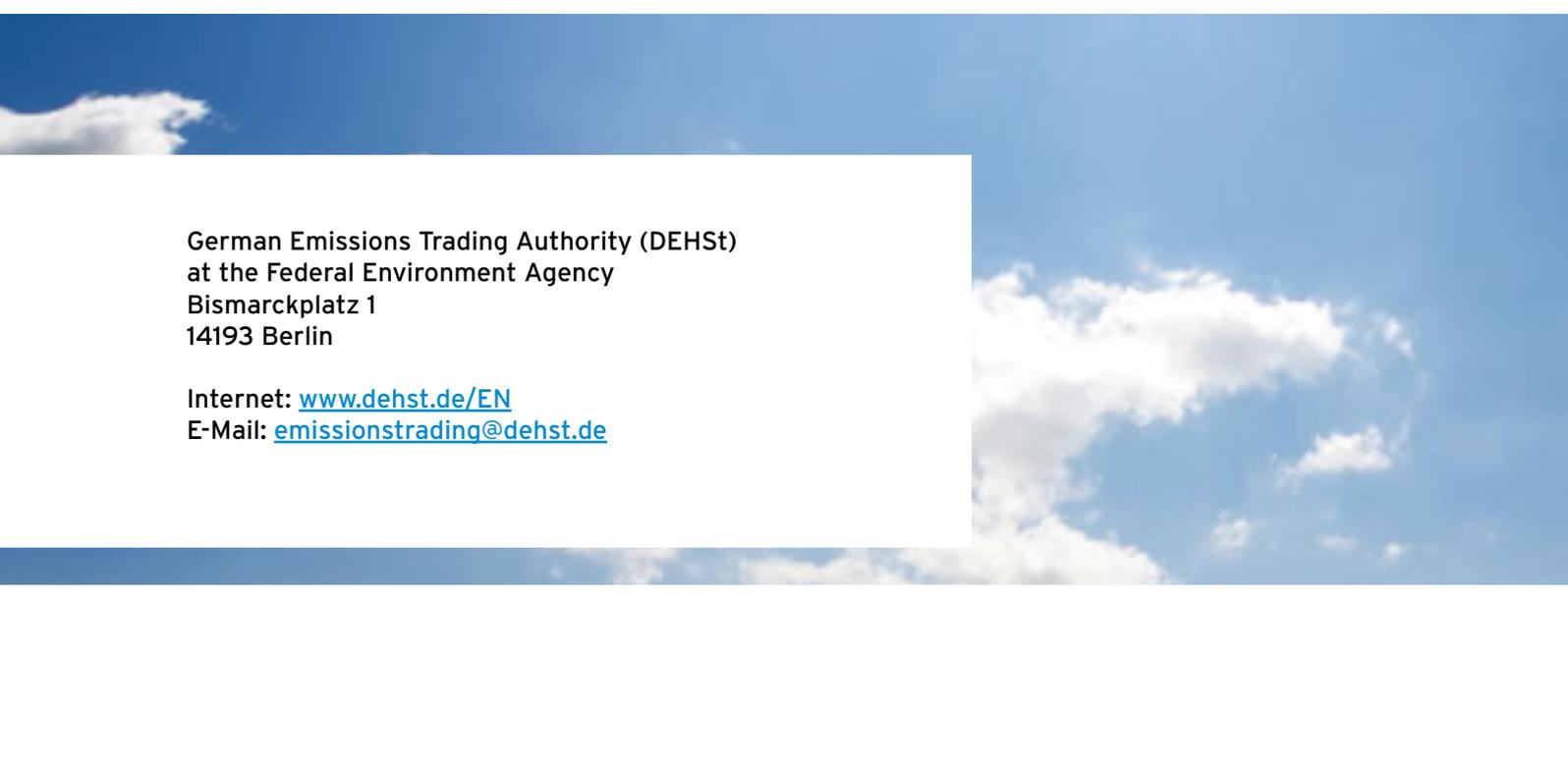
4 Settlement prices are set by the exchanges at the end of the trading day. They usually reflect trade activity only immediately before closure of the exchange and are thus not always a true reflection of the secondary market.

5 [ICE/ECX Emissions Index](#): The index is calculated from the volume-weighted prices within a trading day, making it a suitable indicator of the trend in the market segment considered.



Source: BlueNext, EEX, DEHSt

Figure 6: Spot clearing prices and daily average BlueNext spot market price in the 2nd quarter of 2012



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