



# AUCTIONING

## Auctioning of Emission Allowances in Germany Periodical Report: First 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 around 41 million emission allowances (EUAs) for auctioning. Between 2010 and 2012 the auctions are held weekly at the spot and futures markets of the European Energy Exchange EEX 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 vendor (seller) of allowances at the EEX on behalf of the Federal Government. Further up-to-date information on the terms and conditions of participation is found on the [EEX website](#), while earlier periodical reports are available on the [DEHSt auctioning webpage](#).

### 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 dedicated trading department can also benefit from the auctions. Exchange members already admitted to emissions trading on 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 contracts) are auctioned every Tuesday and 570,000 allowances to be delivered by December (futures) are auctioned every Wednesday. In 2012, the weekly volume of futures contracts has been increased to 645,000 EUAs. While in 2010 and 2011, 870,000 allowances were auctioned weekly on the spot market only, from November, the volume will increase to 945,000 EUAs in 2012. The exact auction dates are published in the [EEX Auction Calendar 2012](#).

The auction procedure largely follows specifications in the Ordinance on the Auctioning of Emission Allowances (Emissionshandels-Versteigerungsverordnung, EHVV 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 is 500 allowances in auctions on the spot market and 1,000 allowances in auctions on the futures market.

## 1 CURRENT DEVELOPMENTS

### EEX held 200<sup>th</sup> primary auction for Germany:

By 3.00 p.m. on March 7<sup>th</sup>, the 200<sup>th</sup> successful primary market auction in Germany drew to a close at the futures market of the EEX. Of the 201 auctions that had been scheduled up to that date, only one spot auction on February 1<sup>st</sup> 2011 had to be postponed due to force majeure. The postponement was caused by a two-week suspension of all transactions in all European emissions trading registries. Since the beginning of auctions on January 5<sup>th</sup> 2010, a revenue of 1.25 billion Euros has been generated by EUA auctions in Germany.

### Federal Environment Agency commissions the German auctioning platform for 2012/2013:

The European Energy Exchange AG (EEX) in Leipzig won the tender for the transitional German auctioning platform. Until at least March 2013, all emission allowances assigned to Germany for the third trading period (2013-2020) will be auctioned on this preliminary platform. In 2012, the platform will also be used for what is known as “early auctions” for the third trading period and for German aviation allowances. These do not affect other EUA auctions for the current trading period, which will continue at the spot and futures markets at the Leipzig energy exchange EEX in 2012.

On April 25<sup>th</sup>, the EU’s Climate Change Committee (CCC) approved Germany’s proposal to appoint the EEX as its transitional auction platform. The EU Commission has found the proposed appointment compatible with the requirements of the Auctioning Regulation and the objectives of the ETS Directive. However, before auctions resume, the transitional platform must undergo a further three month scrutinising and approval procedures by the European Parliament and the Council. Following the approval, EEX will be included into the annex of the EU Auctioning Regulation.

A permanent auctioning platform will be operating from 2013. It is expected that the Federal Environment Agency will launch another Europe-wide procurement process still in 2012. The legal framework for auctions during the third trading period has been established at European level by the EU Auctioning Regulation that came into force on 19/11/2010. Especially for competitive reasons, Germany decided not to be part of a common European auctioning platform.

## 2 MARKET SURVEILLANCE REPORT BY THE HÜST

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

*„The auctions of emission allowances at the EEX on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in the first quarter of 2012 took place following the defined procedure and without any disturbances. During its surveillance duties, the trade surveillance body at the EEX could not detect any irregularities and especially no behaviour of bidders that aims at manipulating the auction price.“*

## 3 OVERVIEW OF THE FIRST QUARTER 2012

Between January and March 2012, a total of 12,285,000 emission allowances (EUAs) worth 95,332,800 Euros were auctioned. Due to market developments in the past twelve months, revenues fell by around 45 percent compared to the corresponding quarter in 2011 (172,548,600 Euros). The volume-weighted average revenue per allowance was 7.76 Euros (15.26 Euros).

Of the total volume auctioned, 8,835,000 emission allowances worth 65,815,800 Euros (average price 7.85 Euros) were futures contracts (MidDec2012) and 3,900,000 emission allowances worth 29,517,000 Euros (average price 7.57 Euros) were sold at spot auctions (see Table 1). Auction results per auction date are shown in detail in Tables 2 (spot) and 3 (futures).

Table 1: Overview of the 1<sup>st</sup> quarter 2012

Contract	Number of Auctions	Amount of Bids	Auction Volume	Cover Ratio	Clearing Price	Revenue
Spot	13	35,145,000	3,900,000	*9.01	*7.57 €	29,517,000 €
Futures	13	42,996,000	8,385,000	*5.13	*7.85 €	65,815,800 €
<b>Total</b>	<b>26</b>	<b>78,141,000</b>	<b>12,285,000</b>	<b>**6.36</b>	<b>**7.76 €</b>	<b>95,332,800 €</b>

Source: EEX, DEHSt

\* Period average

\*\* Volume-weighted average

In total, at 26 auction dates, valid bids for over 78 million allowances were entered into the trading system. Aggregated bidder demand during the reporting period exceeded supply by a factor of 6.36. The spot market cover ratio (9.01) clearly exceeded the cover ratio of the futures market (5.13).

Table 2: Overview of auction data for the 1<sup>st</sup> quarter 2012 (spot)

Date	Number of Bidders	Bid Volume	Auction Volume	Cover Ratio	Clearing Price	Revenue
03/01/2012	5	944,000	300,000	3.15	6.31 €	1,893,000 €
10/01/2012	7	7,735,000	300,000	25.78	6.83 €	2,049,000 €
17/01/2012	8	4,515,000	300,000	15.05	6.68 €	2,004,000 €
24/01/2012	7	4,088,000	300,000	13.63	6.90 €	2,070,000 €
31/01/2012	6	2,337,000	300,000	7.79	7.66 €	2,298,000 €
07/02/2012	4	2,630,000	300,000	8.77	8.42 €	2,526,000 €
14/02/2012	4	1,573,000	300,000	5.24	7.60 €	2,280,000 €
21/02/2012	5	1,125,000	300,000	3.75	8.58 €	2,574,000 €
28/02/2012	4	3,574,000	300,000	11.91	9.17 €	2,751,000 €
06/03/2012	4	1,499,000	300,000	5.00	8.44 €	2,532,000 €
13/03/2012	4	2,155,000	300,000	7.18	7.65 €	2,295,000 €
20/03/2012	4	1,220,000	300,000	4.07	7.25 €	2,175,000 €
27/03/2012	6	1,750,000	300,000	5.83	6.90 €	2,070,000 €
<b>March</b>	<b>18</b>	<b>6,624,000</b>	<b>1,200,000</b>	<b>*5.52</b>	<b>*7.56 €</b>	<b>9,072,000 €</b>
<b>January to March</b>	<b>68</b>	<b>35,145,000</b>	<b>3,900,000</b>	<b>*9.01</b>	<b>*7.57 €</b>	<b>29,517,000 €</b>

Source: EEX, DEHSt

\* Period average

Table 3: Overview of auction data for the 1<sup>st</sup> quarter 2012 (futures)

Date	Number of Bidders	Bid Volume	Auction Volume	Cover Ratio	Clearing Price	Revenue
04/01/2012	5	2,371,000	645,000	3.68	6.40 €	4,128,000 €
11/01/2012	8	5,750,000	645,000	8.91	7.08 €	4,566,600 €
18/01/2012	5	4,086,000	645,000	6.33	6.93 €	4,469,850 €
25/01/2012	7	8,868,000	645,000	13.75	7.52 €	4,850,400 €
01/02/2012	5	2,276,000	645,000	3.53	8.29 €	5,347,050 €
08/02/2012	6	1,246,000	645,000	1.93	8.41 €	5,424,450 €
15/02/2012	5	1,975,000	645,000	3.06	8.23 €	5,308,350 €
22/02/2012	4	1,560,000	645,000	2.42	9.18 €	5,921,100 €
29/02/2012	5	2,280,000	645,000	3.53	8.85 €	5,708,250 €
07/03/2012	3	4,440,000	645,000	6.88	8.61 €	5,553,450 €
14/03/2012	5	2,367,000	645,000	3.67	8.10 €	5,224,500 €
21/03/2012	5	2,550,000	645,000	3.95	7.21 €	4,650,450 €
28/03/2012	3	3,227,000	645,000	5.00	7.23 €	4,663,350 €
<b>March</b>	<b>16</b>	<b>12,584,000</b>	<b>2,580,000</b>	<b>*4.88</b>	<b>*7.79 €</b>	<b>20,091,750 €</b>
<b>January to March</b>	<b>66</b>	<b>42,996,000</b>	<b>8,385,000</b>	<b>*5.13</b>	<b>*7.85 €</b>	<b>65,815,800 €</b>

Source: EEX, DEHSt

\* Period average

## 4 BIDDER PARTICIPATION

The total volume auctioned during the 1<sup>st</sup> quarter of 2012 amounted to 12.285 million EUAs went to 81 successful bidders. Of these bidders, 48 participated in the futures market and 33 in the spot market. Thus, the number of successful bidders fell slightly below the levels of the first quarter in 2011 (87). The total number of bidders actively participating in the auctions during the reporting period was 134.<sup>1</sup> From a bidder's perspective, the average success rate over all twenty-six auction dates was just over 60 percent. The average quantity awarded per successful bidder was approximately 118,000 allowances in spot auctions and approximately 174,000 allowances in futures-auctions.

### Info Box: Uniform Price Auction at the EEX

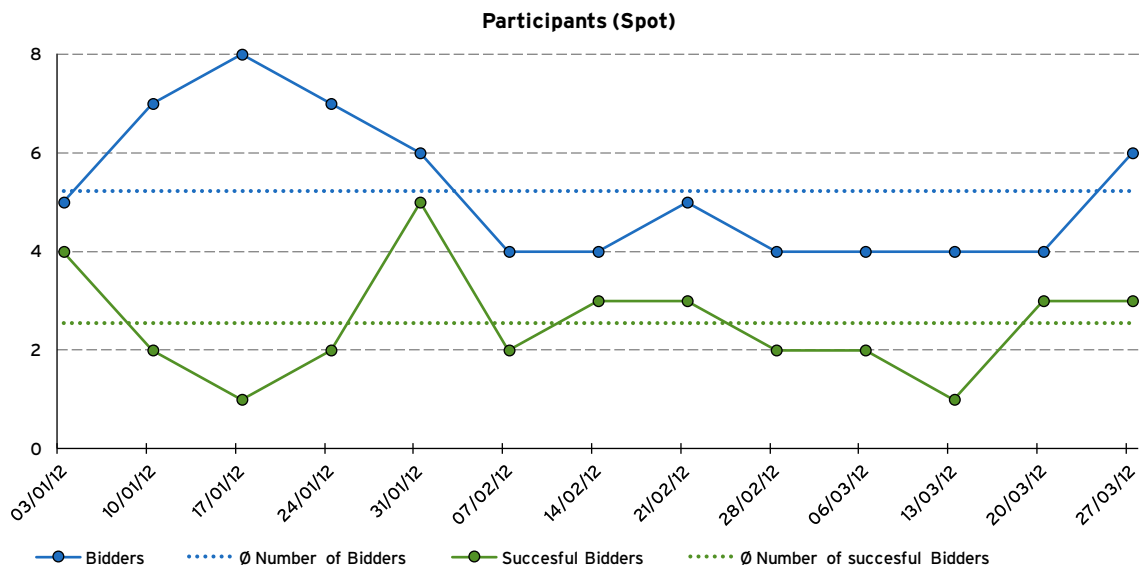
The German auctions at the EEX follow the uniform price procedure, which is common practice throughout the European Union. It involves one round of bidding and a closed order book. This simple and robust procedure protects against market manipulation and will continue to be used during the third trading 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 a tied bid, the bids are additionally ranked according to the time they were entered, beginning with the earliest bid („first-come-first-served principle“). Starting with the highest bid, the volumes of the bids are aggregated until the volume of emission allowances on offer (300,000 (spot) and 645,000 (futures)) 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 demanded, depending on the bidding situation. If several participants' bid exactly matches the auction clearing price, the above-mentioned „first-come-first-served“ principle applies.

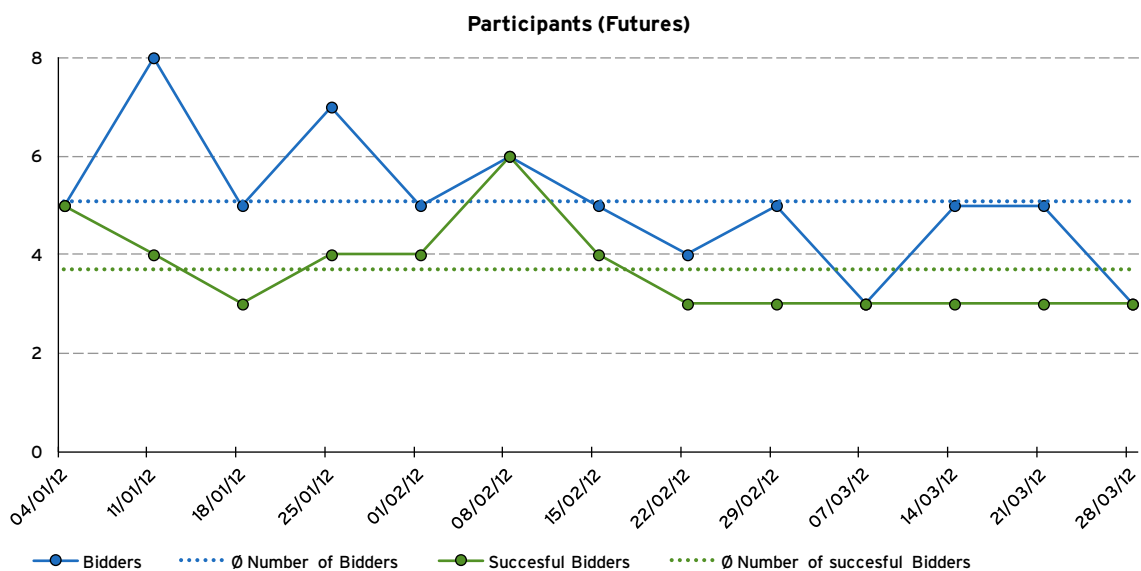
Figures 1 and 2 show the structural development of participant numbers for spot and futures markets respectively. In both segments, bidder participation essentially fluctuated between 4 and 8 bidders. Only 2 out of 26 auction dates saw fewer than 4 bidders. The number of eventually successful bidders fluctuated between 2 and 4 bidders in 80 percent of all auctions. Only in two spot market auctions did the number of successful bidders fall below the threshold of two during the 1<sup>st</sup> quarter of 2012.

<sup>1</sup> As trading participants are allowed to enter bids on several successive 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. It must also 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 1<sup>st</sup> quarter 2012 (spot)



Source: EEX, DEHSt

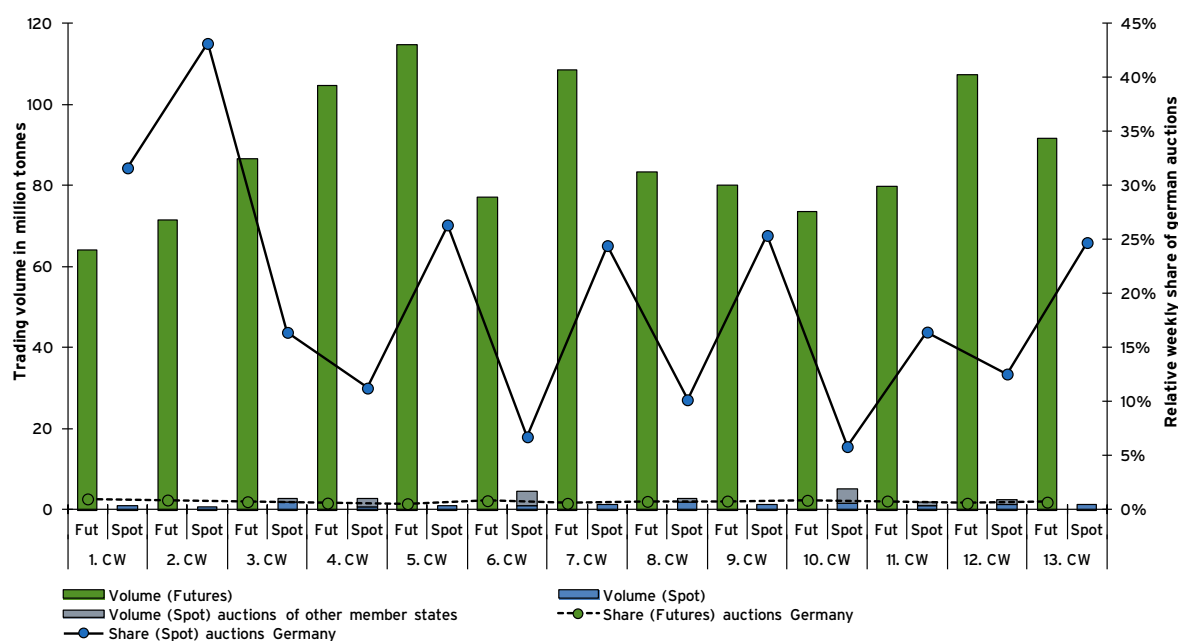
Figure 2: Number of participating and successful bidders per auction date in the 1<sup>st</sup> quarter 2012 (futures)



## 5 AUCTIONS AND THE SECONDARY MARKET

### 5.1 TRADING VOLUME ON THE SECONDARY MARKET

While a total of 12.285 million emission allowances were auctioned by the Federal Republic of Germany in the 1<sup>st</sup> quarter of 2012, the total market trading volume for the same period was around 1.17 billion allowances (844 million in Q1 2011).<sup>2</sup> The average market share of German auctions was approximately 1.1 percent during the 1<sup>st</sup> quarter of 2012. The volume share of futures auctions on the significantly more liquid futures market was about 0.8 percent, whereas the share in spot auctions was around 16 percent. Figure 3 shows the market volumes traded during the reporting period and the corresponding share of the German auction volume per calendar week (CW).



Source: ICE/ECX, GreenX, BlueNext, EEX, Nasdaq OMX, DEHSt

Figure 3: Trading volume of the total market and relative weekly share of German auctions (EEX) in the 1<sup>st</sup> quarter of 2012

### 5.2 CLEARING PRICES AND PRICE DEVELOPMENT ON THE SECONDARY MARKET

For the evaluation of 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 at the London ICE/ECX, whereas the BlueNext EUA spot market in Paris is the reference for spot markets.

<sup>2</sup> The analysis only includes transactions for immediate delivery (spot) and futures contracts maturing in December 2012, which are traded at the ICE/ECX, GreenX, BlueNext, EEX and Nasdaq OMX 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 first quarter of 2012 have also been included.

### Info Box: Reference Prices

In regular exchange 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 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, too, can 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 currently 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 for the willingness to pay on a market. Trading price records finally show at what price limits supply equals demand.

Table 4 shows the relative deviations of clearing prices at futures auctions from the London lead market just before the end of the bidding period. Deviations at auction dates fluctuated between -0.33 and +0.35 percent (Last Best Bid) respective -0.62 and +0.29 percent (Last Trade) during the reporting period. The median is obtained by calculating the arithmetic mean of individual nominal deviations during the trading period. The average deviation from the last best bid over all 13 auctions was calculated at 0.17 percent, while the mean deviation from last trade was 0.24 percent.

**Table 4:** Auction clearing prices (futures) and deviations from secondary market prices (ICE/ECX Dec12) in the 1<sup>st</sup> quarter of 2012

Auction Date	Contract	Clearing Price	Deviation from Lead Market (ICE/ECX Dec12)	
			Last Best Bid	Last Trade
04/01/2012	Futures	6.40 €	-0.16%	-0.62%
11/01/2012	Futures	7.08 €	0.00%	0.00%
18/01/2012	Futures	6.93 €	0.29%	0.29%
25/01/2012	Futures	7.52 €	0.27%	0.00%
01/02/2012	Futures	8.29 €	-0.12%	-0.24%
08/02/2012	Futures	8.41 €	0.00%	-0.24%
15/02/2012	Futures	8.23 €	-0.24%	-0.24%
22/02/2012	Futures	9.18 €	-0.33%	-0.33%
29/02/2012	Futures	8.85 €	0.11%	0.11%
07/03/2012	Futures	8.61 €	0.35%	-0.35%
14/03/2012	Futures	8.10 €	-0.25%	-0.37%
21/03/2012	Futures	7.21 €	0.14%	0.14%
28/03/2012	Futures	7.23 €	0.00%	-0.14%
<b>Mean Deviation (Futures)</b>			<b>0.17%</b>	<b>0.24%</b>

Source: KfW, DEHSt

Table 5 shows clearing price deviations at spot auctions from the reference price at the BlueNext exchange (last best bid), complemented by those from the ICE/ECX (Dec12 Futures) market.

Deviations fluctuated between -0.39 and 0.44 percent (Table 5). The average deviation of clearing prices from the secondary trading price at BlueNext was 0.30 percent during the reporting period. In addition, Table 5 also shows deviations in the clearing price at spot auctions from the respective best bid at the ICE/ECX futures market (Dec12). Over the entire reporting period, deviations were between -6.38 and -2.34 percent, which is usual in functioning markets, where spot contracts are normally rated lower than front-year contracts.

Table 5: Auction clearing prices (spot) and deviations from the secondary market price (BlueNext and ICE/ECX) in the 1<sup>st</sup> quarter of 2012

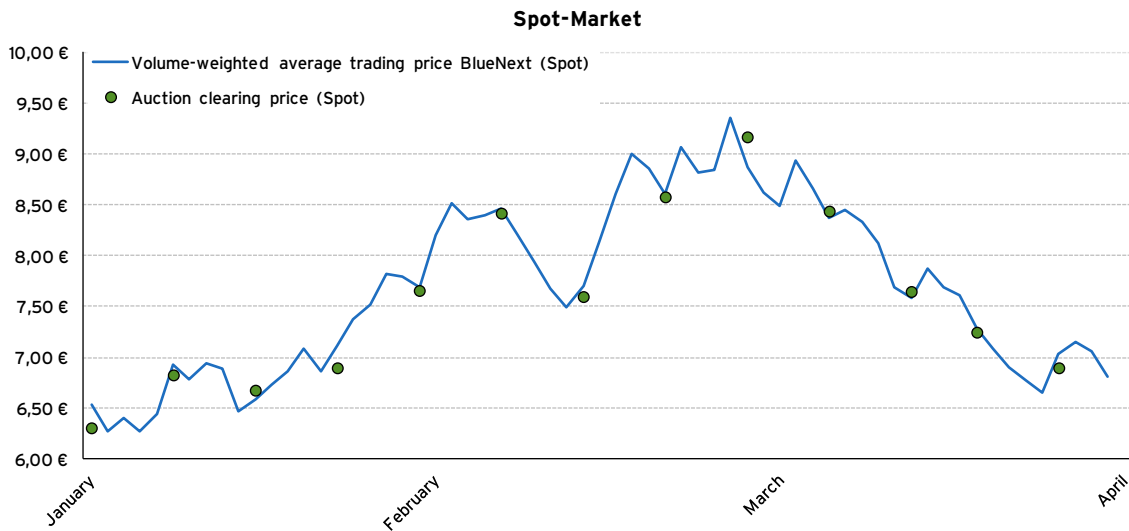
Auction Date	Contract	Clearing Price	Deviation from Lead Market	
			Last Best Bid Spot (BlueNext)	Last Best Bid Futures Dec12 (ICE/ECX)
03/01/2012	Spot	6.31 €	-0.32%	-6.38%
10/01/2012	Spot	6.83 €	0.74%	-4.21%
17/01/2012	Spot	6.68 €	0.45%	-3.19%
24/01/2012	Spot	6.90 €	0.44%	-3.09%
31/01/2012	Spot	7.66 €	0.13%	-2.67%
07/02/2012	Spot	8.42 €	0.12%	-2.66%
14/02/2012	Spot	7.60 €	-0.39%	-3.06%
21/02/2012	Spot	8.58 €	-0.23%	-3.05%
28/02/2012	Spot	9.17 €	0.44%	-2.34%
06/03/2012	Spot	8.44 €	0.00%	-2.88%
13/03/2012	Spot	7.65 €	0.39%	-2.42%
20/03/2012	Spot	7.25 €	0.14%	-2.68%
27/03/2012	Spot	6.90 €	-0.14%	-2.68%
<b>Mean Deviation (Spot)</b>			<b>0.30%</b>	<b>3.18%</b>

Source: KfW, DEHSt

To complement the snapshot of the markets during call phases on auction days, Figures 4 (spot) and 5 (futures) give an overview of the clearing prices in German auctions in the context of historical price developments on the relevant lead markets during the first quarter. 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.<sup>3</sup> The following graphics are based on volume-weighted average trading prices.

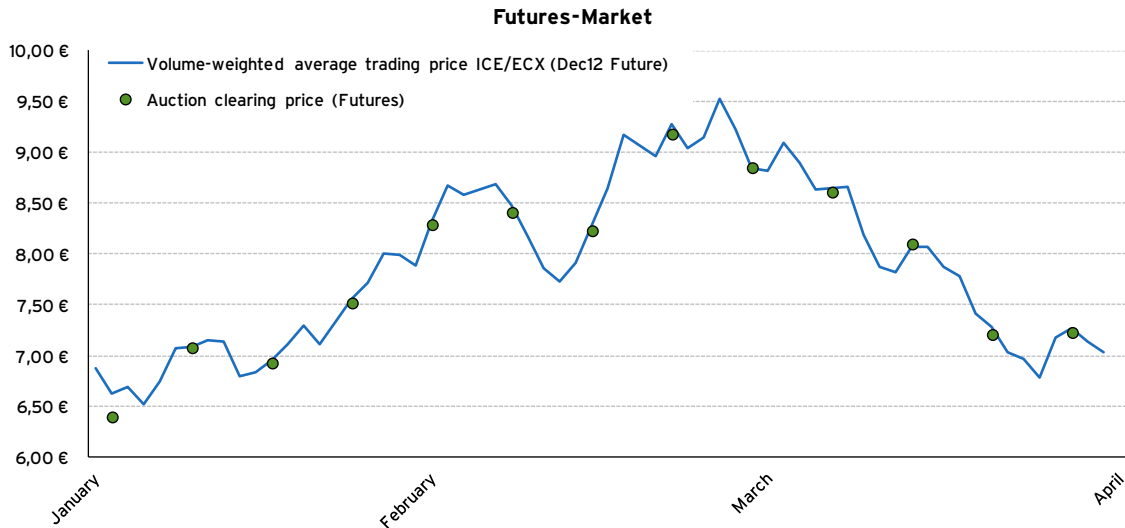
Trading prices at the ICE/ECX for the delivery of an emission allowance as a futures contract due in December 2012 fluctuated considerably during the first quarter, as did spot market trading prices at the BlueNext. As Figures 4 and 5 show, auctions over the entire reporting period were held almost in parallel to the London and Paris lead markets.

<sup>3</sup> Settlement prices are set by the exchanges at the end of the trading day. They usually only reflect trade activity immediately before closure of the exchange and are thus not always a true reflection of the secondary market.



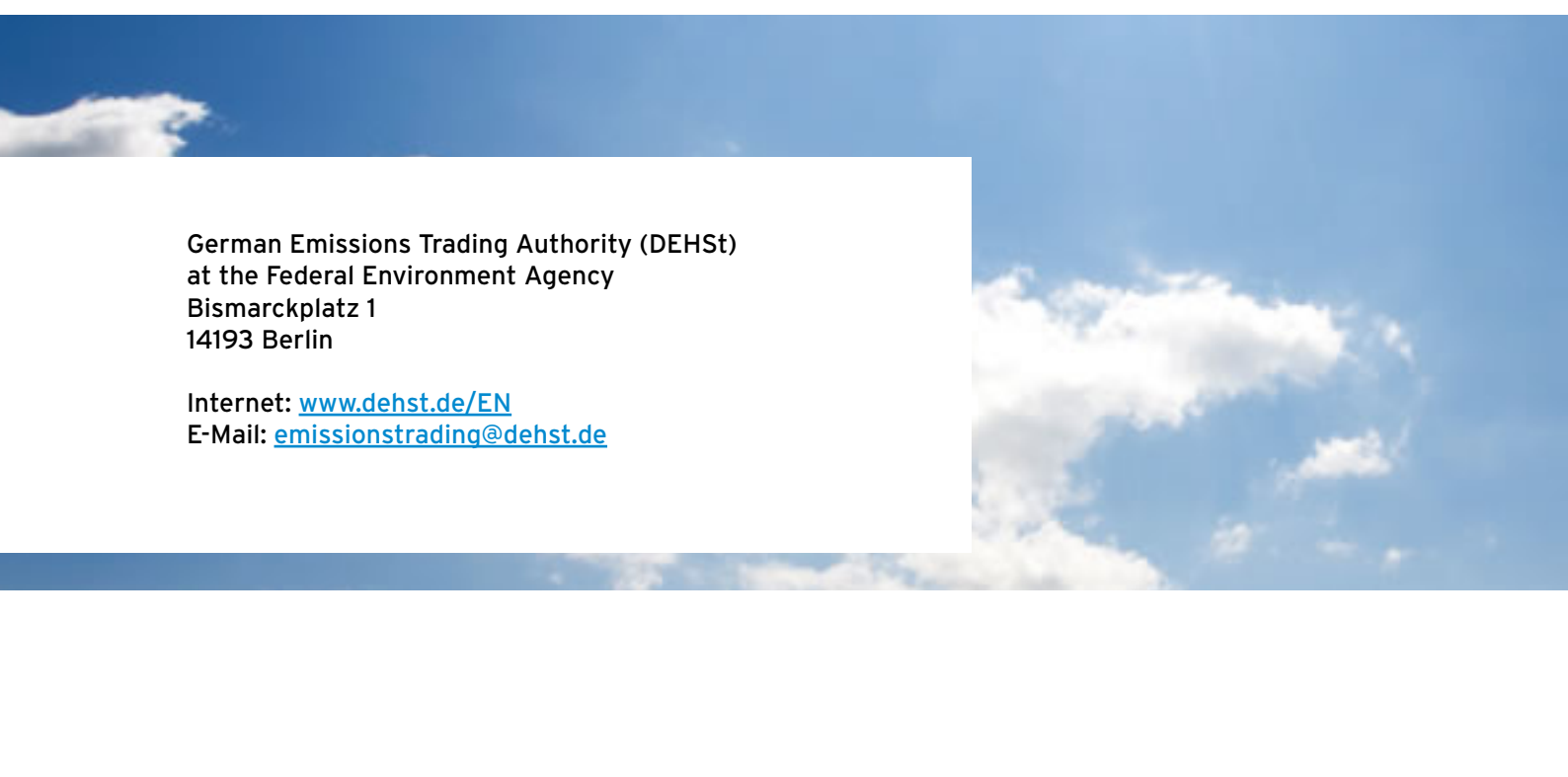
Source: BlueNext, EEX, DEHSt

Figure 4: Clearing prices on the spot market and volume weighted daily average prices at the BlueNext spot market in the 1<sup>st</sup> quarter of 2012



Source: ICE/ECX, EEX, DEHSt

Figure 5: Clearing prices on the futures market and volume weighted daily average price at the ICE/ECX (Dec12 Futures) in the 1<sup>st</sup> quarter of 2012



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