



# Auctioning

**German Auctioning of Emission Allowances**  
**Periodical Report: November 2014**

## Impressum

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## German Auctioning of Emission Allowances

The German auctions of the third trading period are held weekly on the European Energy Exchange (EEX) spot market. The German Emissions Trading Authority (DEHSt) at the Federal Environment Agency is the competent authority for the German auctions. Further updated information on the third trading period auctions can be downloaded from the [EEX website](#). Reports on the second and third trading period auction results are available on the [DEHSt auction website](#). The [2014](#) and [2015](#) auction calendars are published on the EEX website.<sup>1</sup>

The following tables summarise the key data of the German auctions on the EEX in 2014 and 2015:

2014		
<b>Auction product</b>	Third trading period <b>EUA spot contracts</b>	
<b>Period</b>	10/01/2014 to 12/12/2014	
<b>Auction volume entire year</b>	127,127,500 EUA	
<b>Auction volume per auction</b>	10/01/2014 to 14/03/2014	<b>21/03/2014 to 12/12/2014</b>
	4.6 million EUA	<b>2.352 million EUA</b> (1.176 million EUA in August; 2.3355 million EUA on 12/12/2014)
<b>Auction frequency</b>	Weekly (Fridays, 09:00 to 11:00 a.m. CET)	
<b>Bid volume</b>	500 EUA	
<b>Auction mode</b>	Single-round, uniform-price procedure with a closed order book	
2015		
<b>Auction product</b>	Third trading period <b>EUA spot contracts</b>	Third trading period <b>EUAA spot contracts</b>
<b>Period</b>	09/01/2015 to 11/12/2015	25/02/2015 and 07/10/2015
<b>Auction volume entire year</b>	143,893,500 EUA	2,229,000 EUAA
<b>Auction volume per auction</b>	<b>3.198 million EUA</b> (1.599 million EUA in August; 3.1815 million EUA on 11/12/2015)	<b>1.4475 million EUAA on 25/02/2015</b> <b>0.7815 million EUAA on 07/10/2015</b>
<b>Auction frequency</b>	Weekly (Fridays, 09:00 to 11:00 a.m. CET)	On 25/02/2015 and 07/10/2015 (09:00 to 11:00 a.m. CET)
<b>Bid volume</b>	500 EUA/EUAA	
<b>Auction mode</b>	Single-round, uniform-price procedure with a closed order book	

## 1 Overview

### 1.1 November 2014

In November **9,408,000 EUA** of the third trading period (3rd TP) with a total value of **€63,974,400** were auctioned for Germany at the EEX. This results in a volume-weighted average price per allowance of **€6.80** (+9 percent compared to the previous month). The highest price this year to date (€7.02) was reached during the auction on 28th November. The deviations of the clearing prices from the current prices on the lead market fluctuated between -0.15 and 0.30 percent (see also Section 3.3).

<sup>1</sup> In the adjusted auction calendar 2014 EUA volume reductions based on the so-called back-loading decision are taken into account. The first German auction with reduced amounts was carried out on 21/03/2014.

Overall, valid bids totaling about 34 million allowances were entered in the trading system across the four auction dates. Thus the average cover ratio in the reporting period was 3.57 (see also Section 2.2). The average participation number of 15 bidders was almost at the level of the previous month (16). This also applies to the average number of 12 (12) successful bidders (see also Section 2.1).

The following table gives an overview of the most important auction figures from the auctions performed during the reporting period.

**Table 1: Overview of auction data for November 2014**

Date	Auction volume	Bid volume	Cover ratio	Bidders	Successful bidders	Price	Revenue
07/11/2014	2,352,000	5,579,000	2.37	16	9	€6.60	€15,523,200
14/11/2014	2,352,000	17,345,000	7.37	17	15	€6.70	€15,758,400
21/11/2014	2,352,000	6,458,000	2.75	15	14	€6.88	€16,181,760
28/11/2014	2,352,000	4,230,000	1.80	11	9	€7.02	€16,511,040
<b>November</b>	<b>9,408,000</b>	<b>33,612,000</b>	<b>*3.57</b>	<b>*15</b>	<b>*12</b>	<b>*€6.80</b>	<b>€63,974,400</b>

Source: EEX, DEHSt  
\* Average

## 1.2 Overview of the current year 2014

In the first eleven month of 2014 a total of **122,440,000 EUA** of the third trading period with a total value of **€718,801,840** were auctioned at the EEX for Germany. This results in a volume-weighted average price per allowance of **€5.87**. The amount of emission allowances of the third trading period to be auctioned by Germany in 2014 totals **127,127,500 EUA**. Volume reductions based on the so-called back-loading decision are already taken into account (the previously calculated auction volume for Germany in 2014 amounted to 204,534,500 EUA).

This means that around **96 percent** of the auction budget for 2014 has been auctioned to date, taking into account the total annual amount. The following table summarises the auction results on a monthly basis.

**Table 2: Overview of the current year 2014**

Month	Auction volume	Bid volume	Cover ratio	Bidders	Suc- cessful bidders	Price	Revenue
January	18,400,000	63,698,000	*3.46	*19	*12	*€5.02	€92,276,000
February	18,400,000	81,969,500	*4.46	*21	*15	*€6.61	€121,624,000
March	13,904,000	88,552,500	**6.37	*18	*11	**€6.17	€85,728,400
April	7,056,000	56,648,000	*8.03	*16	*10	*€5.18	€36,526,560
May	11,760,000	62,757,500	*5.34	*17	*12	*€5.06	€59,458,560
June	9,408,000	47,656,000	*5.07	*16	*12	*€5.58	€52,449,600
July	9,408,000	42,405,000	*4.51	*14	*11	*€5.89	€55,366,080
August	5,880,000	36,846,000	*6.27	*12	*8	*€6.23	€36,620,640
September	9,408,000	41,709,000	*4.43	*16	*12	*€5.96	€56,071,680
October	9,408,000	43,545,000	*4.63	*16	*12	*€6.24	€58,705,920
November	9,408,000	33,612,000	*3.57	*15	*12	*€6.80	€63,974,400
<b>Total</b>	<b>122,440,000</b>	<b>599,398,500</b>	<b>**4.90</b>	<b>*16</b>	<b>*11</b>	<b>**€5.87</b>	<b>€718,801,840</b>

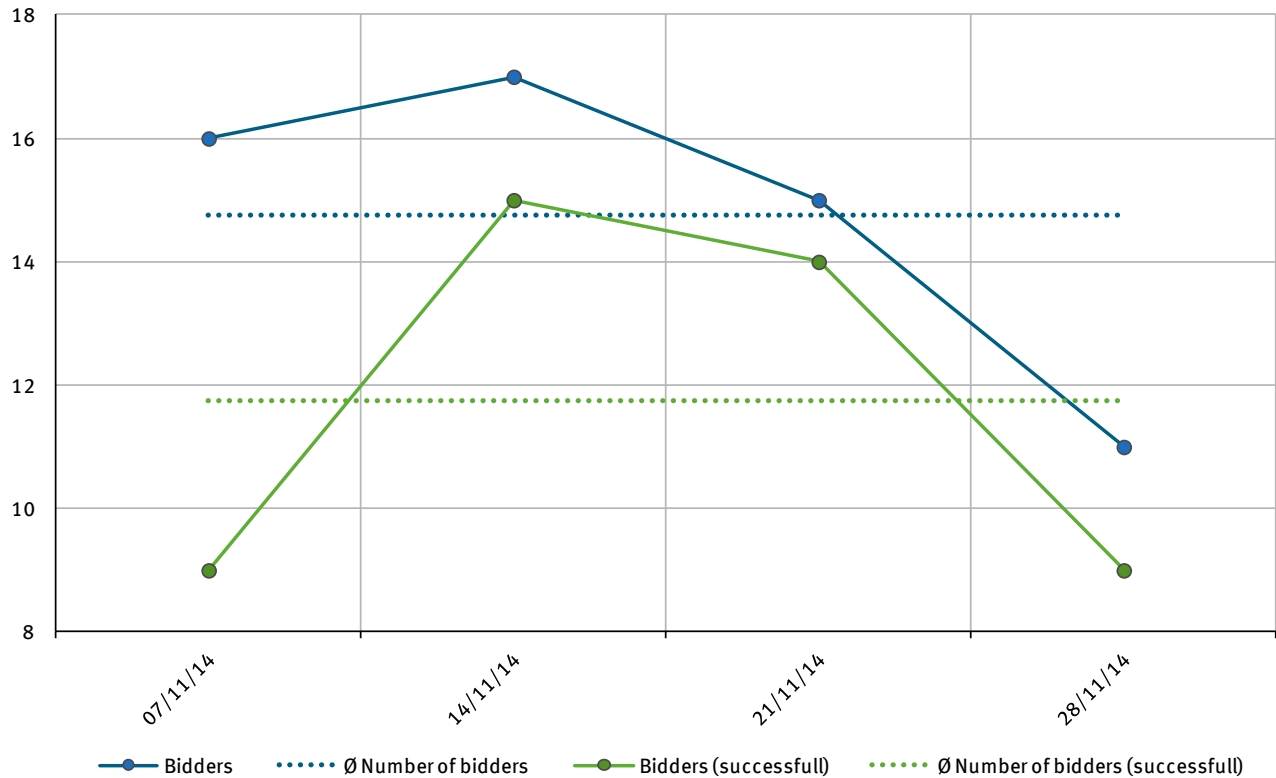
Source: EEX, DEHSt  
\* Average  
\*\* Volume-weighted average

## 2 Bidder Participation

### 2.1 Participation

The number of participants in the German auctions in November averaged across all dates was 15 bidders. The average number of successful bidders was 12.

Participation in the auctions fluctuated between 11 and 17 bidders during the reporting period. The number of successful participants ranged from 9 to 15 bidders. There was no such auction where all participating bidders were successful. The following figure illustrates auction participation over time.

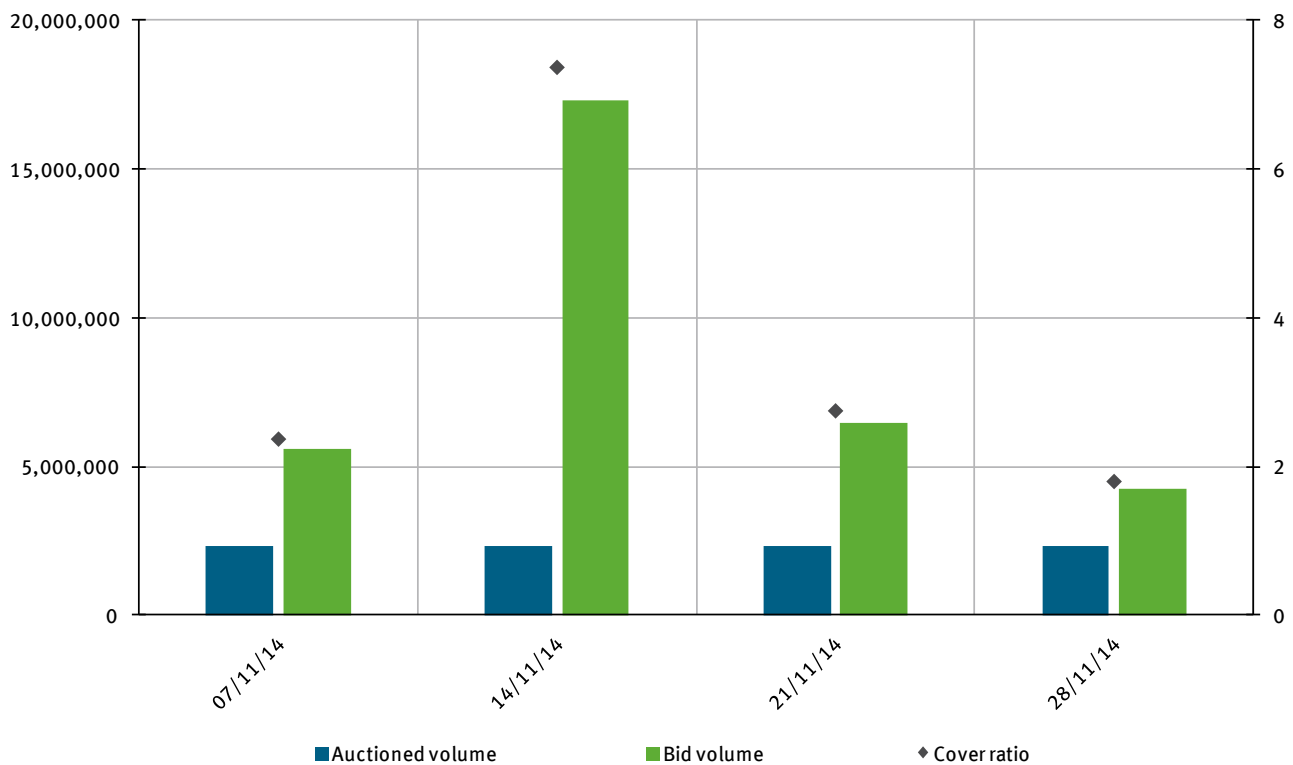


Source: EEX, DEHSt

Figure 1: Number of participating and successful bidders per auction date

### 2.2 Volume Demand

During the reporting period, the aggregated bid volumes per auction date fluctuated from 4.2 to 17.3 million allowances. Overall, valid bids totaling about 34 million allowances were entered in the trading system in November. The resulting cover ratios during the reporting period ranged between 1.80 and 7.37 (3.57 on average). The figure below summarises the results of each auction date.



Source: EEX, DEHSt

Figure 2: Auctioned and bid volume and cover ratio (secondary axis) for each auction date

Thus, the average bid volume per auction participant in November was about 570,000 allowances. The average volume awarded to each successful bidder was about 200,000 allowances. Awarding allowances at the auctions is based on the EU-wide applicable uniform price procedure with one prescribed round of bidding (also see Info box below).

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

The 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 was used already for German auctions during the second trading period. 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.

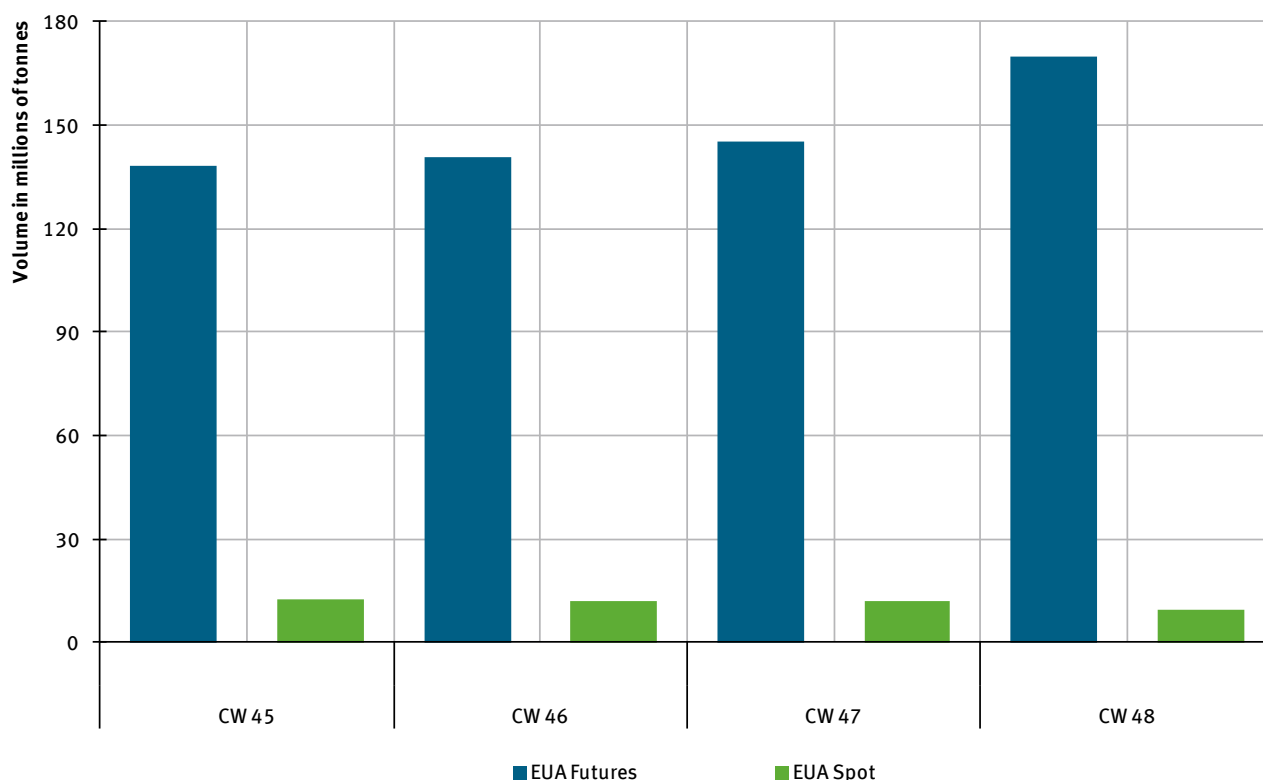
In the event of equal bids, the bids are sorted by a random process. The bid volumes are aggregated starting with the highest bid until the volume of emission allowances on offer (e.g. 2.352 million EUA) is reached. The bid price at which the aggregate volume of bids reaches or exceeds the offered volume 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 matches the clearing price exactly, 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 random process applies.

## 3 Auctions and the Secondary Market

### 3.1 Trading Volume EUA

In November 2014, a total of 9.4 million EUA of the third trading period were auctioned at the EEX for Germany. During the reporting period, the cumulative trading volume in the relevant total market was about 640 million EUA.<sup>2</sup> This market volume was divided into approximately 46 million allowances which were completed as contracts for immediate delivery (spot) and about 594 million allowances for delivery in the future (futures). Thus, about 93 percent of the traded volume was handled on the dominant futures market. The figure below illustrates the trading volumes separately for spot and futures segments based on calendar weeks (CW).



Source: ICE, EEX, CME, Nasdaq OMX, Thomson Reuters, DEHSt

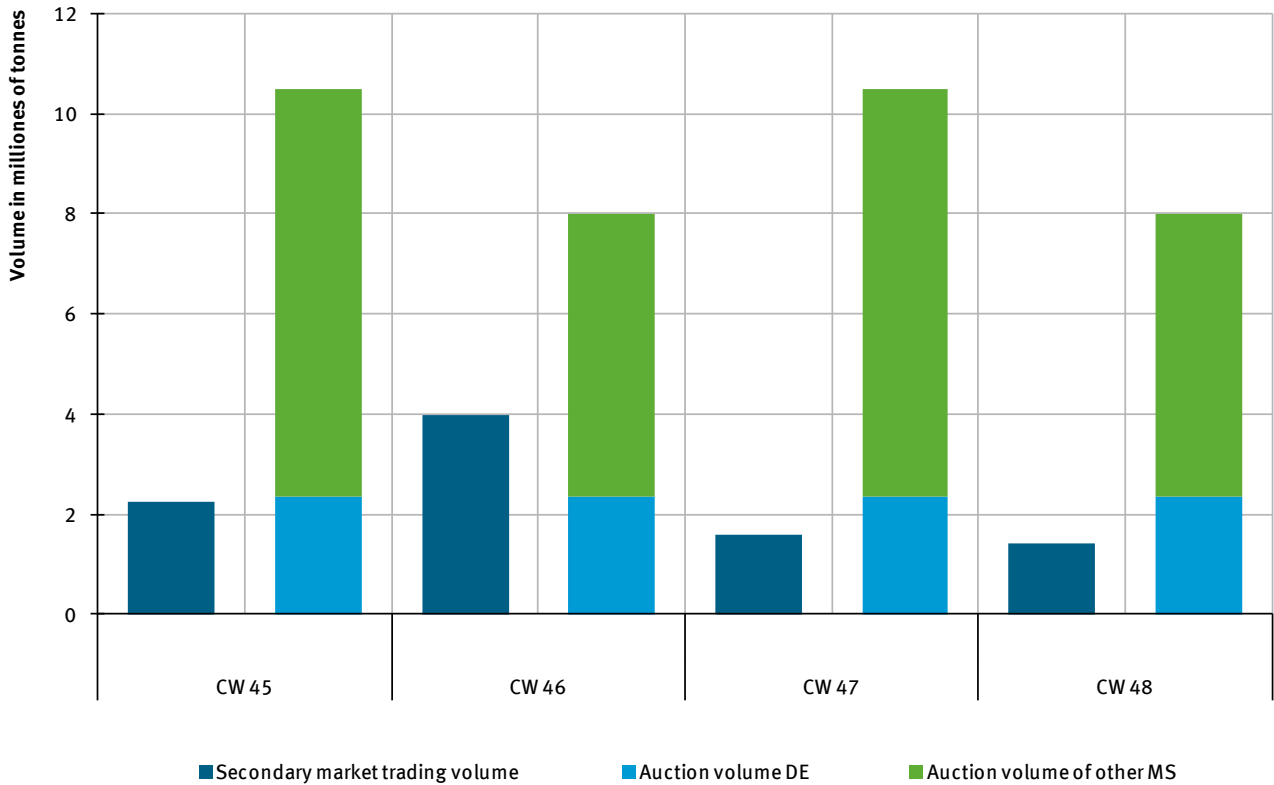
Figure 3: Trading volumes differentiated by spot and futures in November 2014

In November 2014, a total of about 37 million allowances were auctioned by Member States on the primary market as spot contracts. On the spot secondary market about 9 million allowances were traded. This means that around 80 percent of traded spot contracts have been purchased in primary market auctions. With respect to the relevant total market for EUA, around 6 percent of the traded volume was related to auctions.

Figure 4 shows the trading volume in the spot secondary market and the auction volumes on the primary market per calendar week (CW). In addition to the German auctions, aggregated auction volumes of other EU Member States are also included in the figure.

<sup>2</sup> All emission allowances (EUA) of the third trading period traded on the spot and futures markets on the ICE/ECX, CME/NYMEX, EEX and Nasdaq OMX exchanges are considered. Transactions completed directly on the stock exchange (screen traded) or those bilateral transactions that at least used the stock exchange clearing mechanism are included. Option contracts are not involved. The EUA spot contracts auctioned in November 2014 are also considered.





Source: ICE, EEX, CME, Nasdaq OMX, Thomson Reuters, DEHSt  
DE = Germany, MS = EU Member State

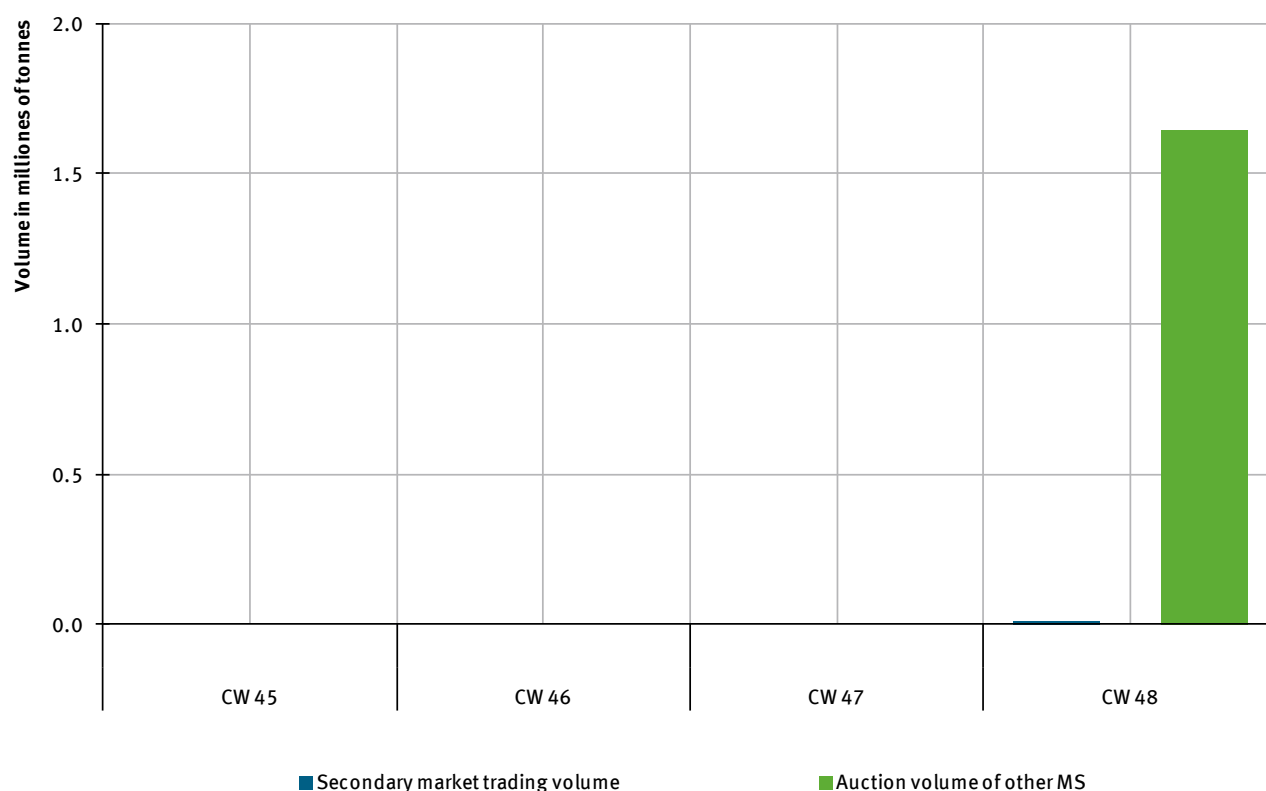
Figure 4: Trading volume on the secondary market (spot) and volume of auctions conducted in November 2014

### 3.2 Trading Volume EUAA

In November 2014, a total of only 9,000 aviation allowances (EUAA)<sup>3</sup> were traded on the secondary market (transaction took place in CW 48; however the bar in the diagram below is hardly discernible due to the axis scaling). During the reporting period, a total of about 1.64 million EUAA were auctioned by Member States on the primary market as spot contracts. Germany already auctioned the aviation allowances for the calendar year 2012 on 31/10/2012 and will, hence, conduct no further aviation auction in 2014.

Figure 5 shows the trading volume in the secondary market and the auction volumes on the primary market per calendar week (CW).

<sup>3</sup> All aviation allowances (EUAA) of the third trading period traded on the spot and futures markets on the ICE/ECX and EEX exchanges are considered. Transactions completed directly on the stock exchange (screen traded) or those bilateral transactions that at least used the stock exchange clearing mechanism are included.



Source: ICE, EEX, Thomson Reuters, DEHSt  
MS = EU Member State

Figure 5: Trading volume on the secondary market and volume of auctions conducted in November 2014

### 3.3 Clearing Prices and Price Development on the Secondary Market

Reference prices from the most liquid trading venues served as appropriate benchmarks for evaluating the auction clearing prices achieved on the EUA spot auctions. The reference contract for the auctions is the daily futures traded on the London ICE, whose product specifications are comparable with the spot-product of the auctions. The trade price immediately before the end of the bidding period was used as a reference price. If no trades take place immediately before the end of the bidding period, the last best bid was used as a reference price (see also Info box below).

Table 3 shows the relative deviations of the clearing price from the London lead market. The deviation on each auction date just before the end of the bidding period (11 a.m. CET) varied over the reporting period between €-0.01 (-0.15 percent) and €0.02 (0.30 percent).

For a mean value analysis, the arithmetic mean of the absolute values of individual deviations over the reporting period is calculated. The average deviation from the last best bid was 0.15 percent or €0.01 averaged over all dates.

#### 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 auctions, such buying bids in 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.

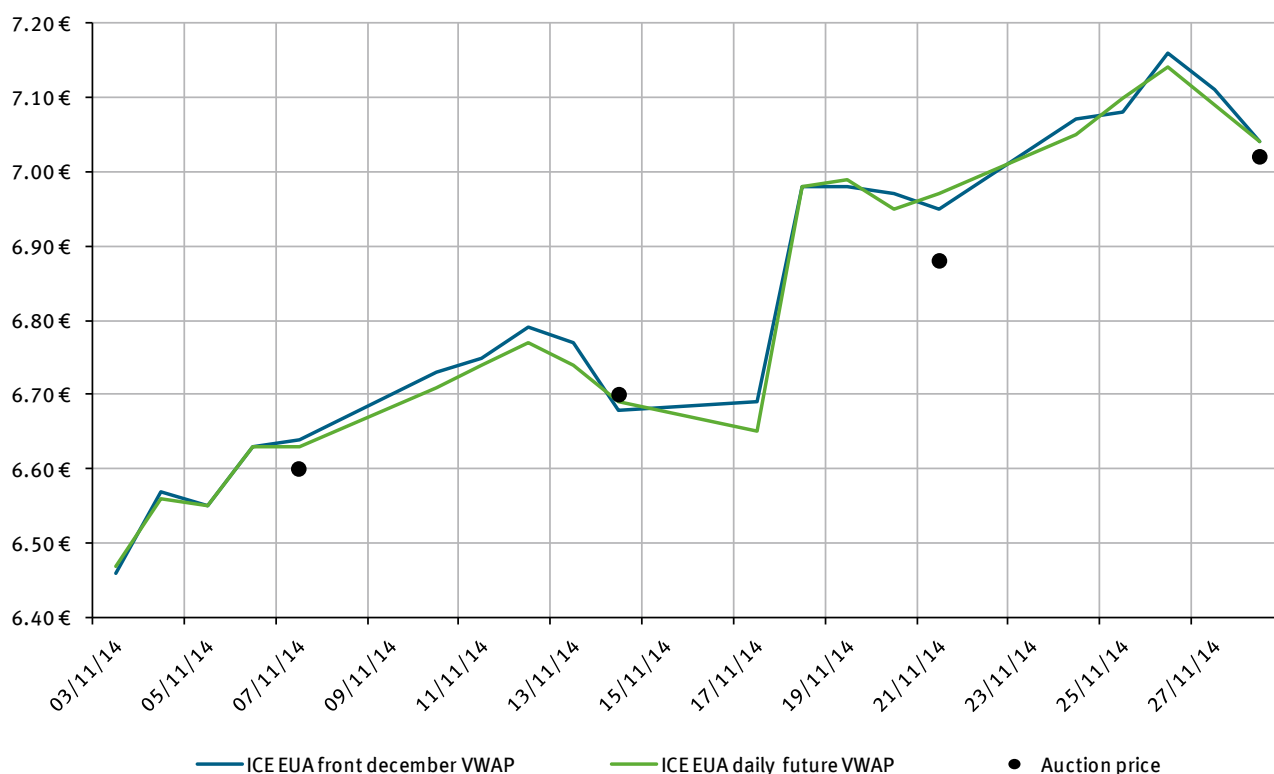
The order book is open to inspection by any participant. It shows the current highest purchase offer (best bid) and the lowest sales offer (best ask) with the relevant quantities. Trading occurs where best bid and best ask overlap. Trading price records finally show the price limits where supply equals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

Table 3: Auctions and deviations from secondary market prices in November 2014

Date	Contract	Clearing price	Deviation from ICE Daily Future	
			Absolute	%
07/11/2014	EUA Spot 3rd TP	€6.60	€0.02	0.30%
14/11/2014	EUA Spot 3rd TP	€6.70	**€-0.01	** -0.15%
21/11/2014	EUA Spot 3rd TP	€6.88	*€0.00	*0.00%
28/11/2014	EUA Spot 3rd TP	€7.02	*€-0.01	* -0.14%
<b>Mean absolute deviation</b>			<b>€0.01</b>	<b>0.15%</b>

Source: ICE, EEX, Thomson Reuters, DEHSt  
 \* best bid  
 \*\*best bid EEX Spot

The following figure shows an overview of the price development for emission allowances of the third trading period on the London lead market. In addition to the daily futures the development of futures for December delivery of the current year is also shown (so-called „front-december future“ which expires on 15th December). 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>4</sup> The following graphics are based on volume-weighted average trading prices (VWAP), which fluctuated in November 2014 in an interval between around €6.40 to €7.20.<sup>5</sup>



Source: ICE, EEX, Thomson Reuters, DEHSt

Figure 6: ICE secondary market prices and EEX auction clearing prices

- Settlement prices are determined by the exchanges at the end of the trading day. Hence, they only reflect trade activity immediately before closure of the exchange and are, thus, not always an adequate reflection of the prevailing intra-day prices in the secondary market.
- The volume-weighted average price (VWAP) for the ICE EUA Dec14 futures is [published](#) on a daily basis by the ICE. The VWAP for the ICE daily future contract is based on the calculations of Thomson Reuters.

## 4 Implementation of Valid Regulations

### 4.1 Surveillance Report by HÜSt

In order to guarantee above-board market activities are free of manipulation on the EEX 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 November 2014 as follows (excerpt):

*“Within their surveillance for the auctioning of emission allowances on behalf of the Federal Environment Agency at the EEX in November 2014 the Market Surveillance Office of the EEX could not detect any irregularities and especially no behaviour of bidders that was targeted at manipulating the auction price.”*

### 4.2 Fair and Open Access

The implementation of the provisions of the EU Auctioning Regulation guarantees a fair and open access for all auction participants at EEX. Current access options can be found at [EEX Website \(Access\)](#).

More information about the auction process is also available on the EEX auction hotline. EEX can be reached by phone from Mondays to Fridays from 8:00 a.m. to 6:00 p.m. CET at +49 341 2156-331 or by email at [auctions@eex.com](mailto:auctions@eex.com).

### 4.3 Auction Result Publication

All auction results and accompanying data were made publicly available during the reporting period within a 15-minute time window directly linked to the respective auction at [EEX Website \(2014 auction results\)](#).

### 4.4 Other Events

There are no matters relating to the implementation of the existing rules to be reported during the reporting period. The current regulations can be downloaded from [EEX Website \(Regulations\)](#).

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