German Auctioning of Emission Allowances
Periodical Report: October 2013
IMPRINT

German Emissions Trading Authority (DEHSt)
at the Federal Environment Agency
Bismarckplatz 1
14193 Berlin

Phone: +49 (0) 30 8903 5050
Fax: +49 (0) 30 8903 5010

Internet: www.dehst.de/EN
E-mail: emissionstrading@dehst.de

Status: 11/2013

Responsible Editors: Section E 2.3
German Auctioning of Emission Allowances

1 Current Developments ...........................................................................................................5
2 Overview ..................................................................................................................................6
   2.1 Overview for October 2013 .............................................................................................6
   2.2 Overview of the Current Year 2013 ................................................................................6
3 Bidder Participation ..................................................................................................................8
   3.1 Participation .....................................................................................................................8
   3.2 Volume Demand ...............................................................................................................8
4 Auctions and the Secondary Market ......................................................................................10
   4.1 Trading Volume...............................................................................................................10
   4.2 Clearing Prices and Price Development on the Secondary Market.............................11
5 Implementation of Valid Regulations ..................................................................................13
   5.1 Surveillance Report by HÜSt .......................................................................................13
   5.2 Fair and Open Access .................................................................................................13
   5.3 Auction Result Publication ...........................................................................................13
   5.4 Other Events ..................................................................................................................13

LIST OF TABLES
Table 1: Overview of auction data for October 2013 ................................................................6
Table 2: Overview of the current year 2013 ............................................................................7
Table 3: Auctions and deviations from secondary market prices over the reporting period ....12

LIST OF FIGURES
Figure 1: Number of participating and successful bidders per auction date...............................8
Figure 2: Auctioned and bid volume and cover ratio (secondary axis) for each auction date....9
Figure 3: Trading volumes differentiated by spot and futures in October 2013 ......................10
Figure 4: Trading volume on the secondary market (spot) and volume of auctions conducted in
   October 2013 ......................................................................................................................11
Figure 5: ICE secondary market prices and EEX auction clearing prices ...............................12
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. In December 2012, the 2013 auction calendar, created and coordinated with EEX and the European Commission, was published on the EEX website.

The following table summarises the key data of the German auctions on the EEX in 2013:

<table>
<thead>
<tr>
<th>Auction segment</th>
<th>Third trading period auctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auction product</td>
<td>Third trading period EUA spot contracts</td>
</tr>
<tr>
<td>Period</td>
<td>11/01/2013 to 13/12/2013</td>
</tr>
<tr>
<td>Auction frequency</td>
<td>Weekly (Fridays, 09:00 to 11:00 am CET)</td>
</tr>
<tr>
<td>Auction volume per auction</td>
<td>4.02 million EUA (2.01 million EUA in August; 3.67 million EUA on 13/12/2013)</td>
</tr>
<tr>
<td>Bid volume</td>
<td>500 EUA</td>
</tr>
<tr>
<td>Auction mode</td>
<td>Single-round, uniform-price procedure with a closed order book</td>
</tr>
</tbody>
</table>

1 CURRENT DEVELOPMENTS

EEX has published the 2014 auction calendar

In agreement with the German authorities, the European Commission and the participating Member States, EEX published the 2014 auction calendar for the third trading period of EU emission allowances (EUA) on 18/11/2013. The amount to be auctioned by Germany in 2014 totals 204,534,500 EUA. Detailed information is available from the Auction calendar 2014.

The following table summarises the key data of the German auctions on the EEX in 2014:

<table>
<thead>
<tr>
<th>Auction segment</th>
<th>Third trading period auctions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auction product</td>
<td>Third trading period EUA spot contracts</td>
</tr>
<tr>
<td>Period</td>
<td>08/01/2014 to 10/12/2014</td>
</tr>
<tr>
<td>Auction frequency</td>
<td>Weekly (Fridays, 09:00 to 11:00 am CET)</td>
</tr>
<tr>
<td>Auction volume per auction</td>
<td>4.6 million EUA (2.3 million EUA in August; 4.43 million EUA on 10/12/2014)</td>
</tr>
<tr>
<td>Bid volume</td>
<td>500 EUA</td>
</tr>
<tr>
<td>Auction mode</td>
<td>Single-round, uniform-price procedure with a closed order book</td>
</tr>
</tbody>
</table>

EEX listed as definitive German auction platform

For the commissioning of a definitive auction platform, the Federal Environment Agency has initiated a Europe-wide tender in autumn 2012, and again the EEX received the order. Following the necessary notification and approval procedures with the relevant EU bodies, EEX has been included in annex III of the EU Auctioning Regulation. On 14th November the relevant annex has been published in the Official Journal of the European Union. It is envisaged to officially implement the German definitive platform as of the beginning of 2014. As of then, EEX will continue to conduct the auctions for the next three years with the possibility of an extension for a further two years.
2 OVERVIEW

2.1 OVERVIEW FOR OCTOBER 2013

In October 16,080,000 EUA of the third trading period (3rd TP) with a total value of €78,189,000 were auctioned for Germany at the EEX. This results in a volume-weighted average price per allowance of €4.86. The deviations of the clearing prices from the current prices on the lead market fluctuated between -0.43 and +0.22 percent (see also Section 4.2).

Overall, valid bids totalling about 67 million allowances were entered in the trading system across the four auction dates. Thus the average cover ratio in the reporting period was 4.19 (see also Section 3.2). The average participation number of 19 bidders was at the level of the previous month (20). This also applies to the average number of 16 (16) successful bidders (see also Section 3.1).

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 October 2013

<table>
<thead>
<tr>
<th>Date</th>
<th>Contract</th>
<th>Auction volume</th>
<th>Bid volume</th>
<th>Cover ratio</th>
<th>Bidders</th>
<th>Successful bidders</th>
<th>Price</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>04/10/2013</td>
<td>Spot</td>
<td>4,020,000</td>
<td>11,654,000</td>
<td>2.90</td>
<td>17</td>
<td>15</td>
<td>€5.12</td>
<td>€20,582,400</td>
</tr>
<tr>
<td>11/10/2013</td>
<td>Spot</td>
<td>4,020,000</td>
<td>17,440,000</td>
<td>4.34</td>
<td>22</td>
<td>18</td>
<td>€4.58</td>
<td>€18,411,600</td>
</tr>
<tr>
<td>18/10/2013</td>
<td>Spot</td>
<td>4,020,000</td>
<td>17,571,000</td>
<td>4.37</td>
<td>18</td>
<td>15</td>
<td>€5.14</td>
<td>€20,662,800</td>
</tr>
<tr>
<td>25/10/2013</td>
<td>Spot</td>
<td>4,020,000</td>
<td>20,627,000</td>
<td>5.13</td>
<td>19</td>
<td>14</td>
<td>€4.61</td>
<td>€18,532,200</td>
</tr>
</tbody>
</table>

| October    | 16,080,000 | 67,292,000 | **4.19**   | **19**     | **16**  | ***€4.86*** | **€78,189,000** |

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

2.2 OVERVIEW OF THE CURRENT YEAR 2013

In the first ten month of 2013 a total of 154,770,000 allowances (EUA) of the third trading period with a total value of €663,300,000 were auctioned at the EEX for Germany. This results in a volume-weighted average price per allowance of €4.29. The amount of emission allowances of the third trading period to be auctioned by Germany in 2013 totals 182,560,500 EUA. This is merely a preliminary estimate made in 2012 by the European Commission. The previously made publication of the European Commission on the free allocation amounts in the third trading period allowed for the update of the relevant auctioning amounts for 2013. However the additional volume to be auctioned will only be accounted for in the auctioning calendars for 2014.

This means that around 85 percent of the auction budget for 2013 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 2013

<table>
<thead>
<tr>
<th>Month</th>
<th>Auction volume</th>
<th>Bid volume</th>
<th>Cover ratio</th>
<th>Bidders</th>
<th>Successful bidders</th>
<th>Price</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>9,045,000</td>
<td>23,962,000</td>
<td>**2.71</td>
<td>*15</td>
<td>*12</td>
<td>**€4.71</td>
<td>€42,612,000</td>
</tr>
<tr>
<td>February</td>
<td>15,075,000</td>
<td>40,245,000</td>
<td>*2.67</td>
<td>*16</td>
<td>*11</td>
<td>*€4.14</td>
<td>€62,460,750</td>
</tr>
<tr>
<td>March</td>
<td>20,100,000</td>
<td>44,931,000</td>
<td>*2.24</td>
<td>*19</td>
<td>*14</td>
<td>*€4.12</td>
<td>€82,862,250</td>
</tr>
<tr>
<td>April</td>
<td>16,080,000</td>
<td>33,578,000</td>
<td>*2.09</td>
<td>*18</td>
<td>*11</td>
<td>*€3.88</td>
<td>€62,310,000</td>
</tr>
<tr>
<td>May</td>
<td>20,100,000</td>
<td>53,848,000</td>
<td>*2.68</td>
<td>*18</td>
<td>*13</td>
<td>*€3.46</td>
<td>€69,465,600</td>
</tr>
<tr>
<td>June</td>
<td>16,080,000</td>
<td>42,437,000</td>
<td>*2.64</td>
<td>*17</td>
<td>*11</td>
<td>*€4.29</td>
<td>€68,983,200</td>
</tr>
<tr>
<td>July</td>
<td>16,080,000</td>
<td>43,575,500</td>
<td>*2.71</td>
<td>*18</td>
<td>*14</td>
<td>*€4.17</td>
<td>€67,093,800</td>
</tr>
<tr>
<td>August</td>
<td>10,050,000</td>
<td>42,789,000</td>
<td>*4.26</td>
<td>*17</td>
<td>*11</td>
<td>*€4.43</td>
<td>€44,501,400</td>
</tr>
<tr>
<td>September</td>
<td>16,080,000</td>
<td>43,883,000</td>
<td>*2.73</td>
<td>*20</td>
<td>*16</td>
<td>*€5.28</td>
<td>€84,822,000</td>
</tr>
<tr>
<td>October</td>
<td>16,080,000</td>
<td>67,292,000</td>
<td>*4.19</td>
<td>*19</td>
<td>*16</td>
<td>*€4.86</td>
<td>€78,189,000</td>
</tr>
<tr>
<td>Total</td>
<td>154,770,000</td>
<td>436,540,500</td>
<td>**2.82</td>
<td>*18</td>
<td>*13</td>
<td>**€4.29</td>
<td>€663,300,000</td>
</tr>
</tbody>
</table>

Source: EEX, DEHSt
* Average
** Volume-weighted average
3 BIDDER PARTICIPATION

3.1 PARTICIPATION

The number of participants in the German auctions in the October 2013 averaged across all dates was 19 bidders, the number of successful bidders averaged 16. The bidder participation was at the level of the previous month (20 and 16).

Participation in the auctions fluctuated between 17 and 22 bidders during the reporting period. The number of successful participants ranged from 14 to 18 bidders. There was no such auction where all participating bidders were successful. The following figure illustrates auction participation over time.

![Graph showing auction participation over time]

Source: EEX, DEHSt

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

3.2 VOLUME DEMAND

During the reporting period, the aggregated bid volumes per auction date fluctuated quite markedly from 11.6 to 20.6 million allowances. Overall, valid bids totaling 67,292,000 allowances were entered in the trading system in October. The resulting cover ratios ranged between 2.90 and 5.13 (4.19 on average). The figure below summarises the results of each auction date.
Thus, the average bid volume per auction participant in October was about 885,000 allowances. The average volume awarded to each successful bidder was about 260,000 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. 4.02 million EUAs) 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.
4 AUCTIONS AND THE SECONDARY MARKET

4.1 TRADING VOLUME

In October 2013, a total of 16.08 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 746 million EUA. This market volume was divided into approximately 95 million allowances which were completed as contracts for immediate delivery (spot) and about 651 million allowances for delivery in the future (futures). Thus, about 87 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).

![Trading volumes differentiated by spot and futures in October 2013](source: ICE, EEX, CME, Nasdaq OMX, Thomson Reuters, DEHSt)

In October, a total of about 84 million allowances were auctioned by Member States on the primary market as spot contracts. On the spot secondary market about 11 million allowances were traded. This means that around 89 percent of traded spot contracts have been purchased in primary market auctions. With respect to the relevant total market for EUA, around 11 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.

---

1 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 spot contracts auctioned in October 2013 are also considered.
4.2 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 last best bid immediately before the end of the bidding period was used as a reference price (see also Info box below).

Table 3 shows the relative deviations of the clearing price of the London lead market. The deviation from the best bid made on each auction date just before the end of the bidding period (11 a.m. CET) varied over the reporting period between €-0.02 (-0.43%) and €0.01 (+0.22%).

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 0.31 percent or €0.02 averaged over all dates.
Table 3: Auctions and deviations from secondary market prices over the reporting period

<table>
<thead>
<tr>
<th>Date</th>
<th>Contract</th>
<th>Clearing price</th>
<th>Deviation from Lead Market</th>
<th>Best Bid ICE Daily Future</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Absolute</td>
<td>%</td>
</tr>
<tr>
<td>04/10/2013</td>
<td>EUA Spot 3rd TP</td>
<td>€5.12</td>
<td>€0.01</td>
<td>-0.19%</td>
</tr>
<tr>
<td>11/10/2013</td>
<td>EUA Spot 3rd TP</td>
<td>€4.58</td>
<td>€0.02</td>
<td>-0.43%</td>
</tr>
<tr>
<td>18/10/2013</td>
<td>EUA Spot 3rd TP</td>
<td>€5.14</td>
<td>€0.02</td>
<td>-0.39%</td>
</tr>
<tr>
<td>25/10/2013</td>
<td>EUA Spot 3rd TP</td>
<td>€4.61</td>
<td>€0.01</td>
<td>0.22%</td>
</tr>
<tr>
<td></td>
<td>Mean absolute deviation</td>
<td></td>
<td>€0.02</td>
<td>0.31%</td>
</tr>
</tbody>
</table>

Source: ICE, EEX, Thomson Reuters, DEHSt

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-year future“)\(^2\). The daily London closing prices fluctuated in the reporting period in an interval between around €4.60 to €5.30.

\(^2\) The presentation is based on daily closing prices (so-called „settlement prices“), as these are available for the same time and thus a price comparability can be ensured.
5 IMPLEMENTATION OF VALID REGULATIONS

5.1 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 October 2013 as follows (excerpt):

“Within their surveillance for the auctioning of emission allowances on behalf of the Federal Environment Agency at the EEX in October 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.”

5.2 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.

5.3 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 (2013 auction results).

5.4 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).