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# AUCTIONS BY THE TRANSITIONAL COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

November 2015

# Auctions by the *Transitional Common Auction Platform*

## November 2015

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**Auction platform:** European Energy Exchange (EEX)

**Auction dates/reporting period:**

*General Allowances:*

2, 3, 5, 9, 10, 12, 16, 17, 18(PL)<sup>1</sup>, 19, 23, 24, 26, 30 November 2015;

*Aviation Allowances:*

4 November 2015

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Auctioning is the default method of allocating allowances within the EU emissions trading system (EU ETS). Since the start of the *Third trading period* in 2013 over 1.4 billions of allowances allocated under the EU ETS have been auctioned. Auctioning of emission allowances at that scale is unprecedented and delivers valuable experience for auction design in other carbon markets and for other environmental assets.

Auctioning is the most transparent and efficient method of allocating allowances and puts into practice the principle that the polluter should pay.

The auctions are conducted pursuant to the modalities stipulated in the *Auctioning Regulation*. Two auction platforms are in place. The European Energy Exchange (EEX) in Leipzig is the common platform for the large majority of countries participating in the EU ETS. EEX also acts as Germany's auction platform. The second auction platform is ICE Futures Europe (ICE) in London, which acts as the United Kingdom's platform. Poland may appoint an opt-out auction platform but is using for the time being the common auction platform.

The numbers of *General Allowances* to be auctioned by each State on behalf of which they are auctioned are determined on the basis of their historical share of emissions from installations covered by the EU ETS, taking into account the free allocation volumes. Up to 2020 ten per cent are allocated to the least wealthy EU Member States and the remaining two per cent is given as a 'Kyoto bonus' to nine EU Member States which by 2005 had reduced their greenhouse gas emissions by at least 20% of levels in their Kyoto Protocol base year or period.

At least half of auctioning revenues, or the equivalent in financial value, and all of the revenues from auctioning allowances to the aviation sector, should be used by the Member States to combat climate change in Europe or other countries.

For further information: [http://ec.europa.eu/clima/policies/ets/cap/auctioning/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/cap/auctioning/index_en.htm)

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<sup>1</sup> Auctions conducted by EEX for Poland

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**Editor's note:** This report has been prepared by the Commission on behalf of the following Member States: Austria, Belgium, Bulgaria, Republic of Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden. The report complies with the requirement laid down in the fourth paragraph of Article 10(4) of the *ETS Directive*.

**Methodology:** The report is based on the reports submitted by EEX, on the discussions in regular meetings between the Commission, its advisors and EEX and on any further relevant information available to the Commission. The authors of the report did not actively verify EEX's compliance with the specific rules and provisions applicable under European or national law. EEX has supplied the data used in this report and been consulted before its publication, whereas the *participating Member States* have been consulted on its template.

For reasons of confidentiality and proper enforcement of the applicable rules, the report refers to reporting on the auctions held based on information provided by EEX. Any data not directly related to the auctions is based only on public reports.

**Disclaimer:** The authors have made every effort to ensure that the information provided is complete, correct and precise for the reporting period. Nevertheless, the report is based on limited information available to the authors in a market context where much information has to remain confidential. The authors did not actively verify the information. Therefore, the authors and the Member States on whose behalf this report was drafted deny any responsibility or liability whatsoever for its contents, regardless of the nature of such contents. Any reliance by any person or entity on the information provided in this report is solely at that person's or entity's own risk. Monthly averages provided are weighted by each auction's auction volume, unless otherwise indicated.

**Glossary:** terms and expressions written in *italics* are included in the glossary.

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## Executive summary

This report covers the auctioning of emission allowances in the period November 2015. In that period, EEX, in its capacity as the common auction platform, auctioned a total of 37 934 000 *general allowances* in 13 auctions and 935 000 *aviation allowances* in 1 auction for the *third trading period* on behalf of those EU Member States (*participating Member States*) that participate in the *Transitional Common Auction Platform (TCAP)*. EEX also auctioned for Poland 2 855 500 *general allowances* in one auction.

All auctions were held successfully and no irregularities or deviations from the requirements were observed. The table below contains a summary of the information concerning the conducted auctions.

### ***The November 2015 auctions at a glance:***

	<b><i>General Allowances November</i></b>	<b><i>Aviation Allowances November</i></b>
<b>General</b>		
Number of auctions	14	1
Total volume auctioned	40 789 500	933 000
Amount raised from the auctions (€)	346 009 805	7 697 250
Average Auction Clearing Price (€/allowance)	8.48	8.25
Total bid volume	130 488 000	3 754 000
Average <i>Cover ratio</i>	3.2	4.0
<b>Participation</b>		
Number of eligible bidders	69	69
Number of participating bidders <sup>(1)</sup>	30	11
Number of successful bidders <sup>(1)</sup>	26	3
Average number of bidders per auction	19.6	11.0
Average number of successful bidders per auction	13.1	3.0
<b>Auction data</b>		
Average total volume bid per bidder per auction	483 238	341 273
Average bid size (volume per bid)	142 930	101 459
Average volume won per bidder per auction	237 529	311 000
Average range of bids (€)	0.41	0.37

(1): Number of unique individual bidders or unique successful bidders present in a whole month

## Introduction

All the *participating Member States* were participating in the auctions as from January 2015.

In accordance with the second subparagraph of Article 30(7) of the *Auctioning Regulation*, pending the procurement, appointment and listing of its opt-out auction platform, Poland contracted EEX to auction its share of allowances to be auctioned. These auctions started on 16 September 2013. Due to the *Back-loading*, no auctions were held for Poland from April to December 2014, the auctions restarted in January 2015.

Accordingly, the present report includes data on the auctions performed by the common auction platform on behalf of the *participating Member States* and Poland.

The Member States of the European Free Trade Association (EFTA) that are Party to the European Economic Area (EEA)<sup>2</sup> have also stated their intention to make use of the *Transitional Common Auction Platform* by aggregating their volumes to those auctioned on behalf of the *participating Member States*. The preparations for this are on-going.

## 1. Results of the auctions

The total revenues from auctions of *general allowances* accrued to the *participating Member States* and Poland from the start of the *Third trading period* auctions (November 2012) to November 2015 are EUR 7 651 977 375. The total revenues from auctions of *aviation allowances* accrued to the *participating Member States* and Poland from the start of the *Third trading period* auctions (November 2012) to November 2015 are EUR 121 301 215. The revenues per each *participating Member State* in the reporting period as well as cumulative data are provided in Annex 1.

Information on *general allowances'* auctions is provided in section 1.1, and on *aviation allowances* in section 1.2 hereafter. Detailed information on the auctions held in the reporting period November 2015, including results per auction, is provided in Annex 2.

Please note that in all parts of this report monthly averages provided are weighted by each auction's auction volume, unless otherwise indicated.

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<sup>2</sup> Iceland, Liechtenstein and Norway.

## 1.1. General allowances auctions

### 1.1.1. Clearing prices and participation - general allowances

An overview of the auction results for the *participating Member States* and Poland from November 2014 to November 2015 is provided in Table 1.

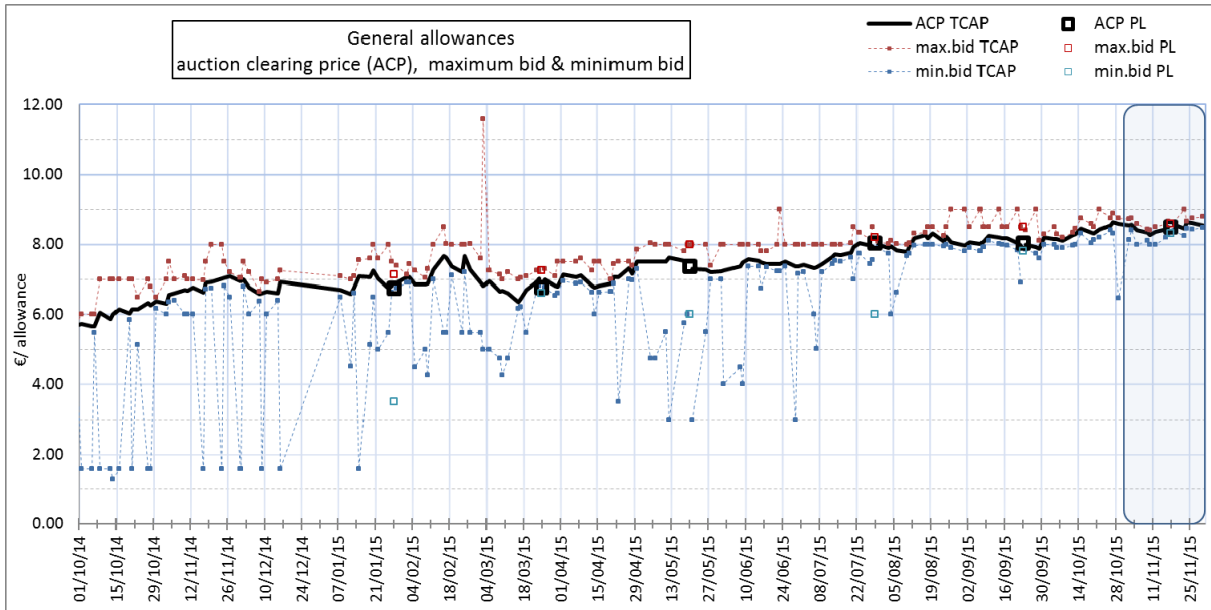
**Table 1:** General allowances - main statistics on the results of the auctions per month

Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>3</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
November 2015	40 789 500	130 488 000	346 009 805	3.2	19.6	13.1	8.48
October 2015	37 934 000	116 213 500	316 690 540	3.1	19.7	13.4	8.35
September 2015	40 788 000	126 790 000	328 635 840	3.1	18.7	14.3	8.06
August 2015	17 508 000	65 808 500	141 085 300	3.8	15.4	9.3	8.06
July 2015	40 788 000	114 643 000	315 388 760	2.8	16.5	11.9	7.73
June 2015	37 934 000	117 971 500	281 645 360	3.1	16.8	12.3	7.42
May 2015	29 116 000	101 910 000	216 422 620	3.5	17.8	13.8	7.43
April 2015	35 016 000	83 493 500	247 358 860	2.4	19.5	15.2	7.06
March 2015	43 706 000	155 841 500	295 627 000	3.6	19.2	13.5	6.76
February 2015	35 016 000	140 319 500	253 340 760	4.0	17.8	13.3	7.24
January 2015	32 034 000	118 905 000	220 605 860	3.7	18.5	13.6	6.89
Dec. 2014	14 838 500	68 610 000	100 283 525	4.6	15.4	11.5	6.76
Nov. 2014	22 476 000	91 484 000	152 218 710	4.1	15.4	11.3	6.77
<b>2014 total</b>	<b>335 052 000</b>	<b>1 796 711 000</b>	<b>1 977 712 120</b>	<b>5.4</b>	<b>17.6</b>	<b>11.9</b>	<b>5.90</b>
<b>2013 total</b>	<b>530 488 000</b>	<b>1 761 639 500</b>	<b>2 349 853 340</b>	<b>3.3</b>	<b>18.4</b>	<b>13.2</b>	<b>4.43</b>

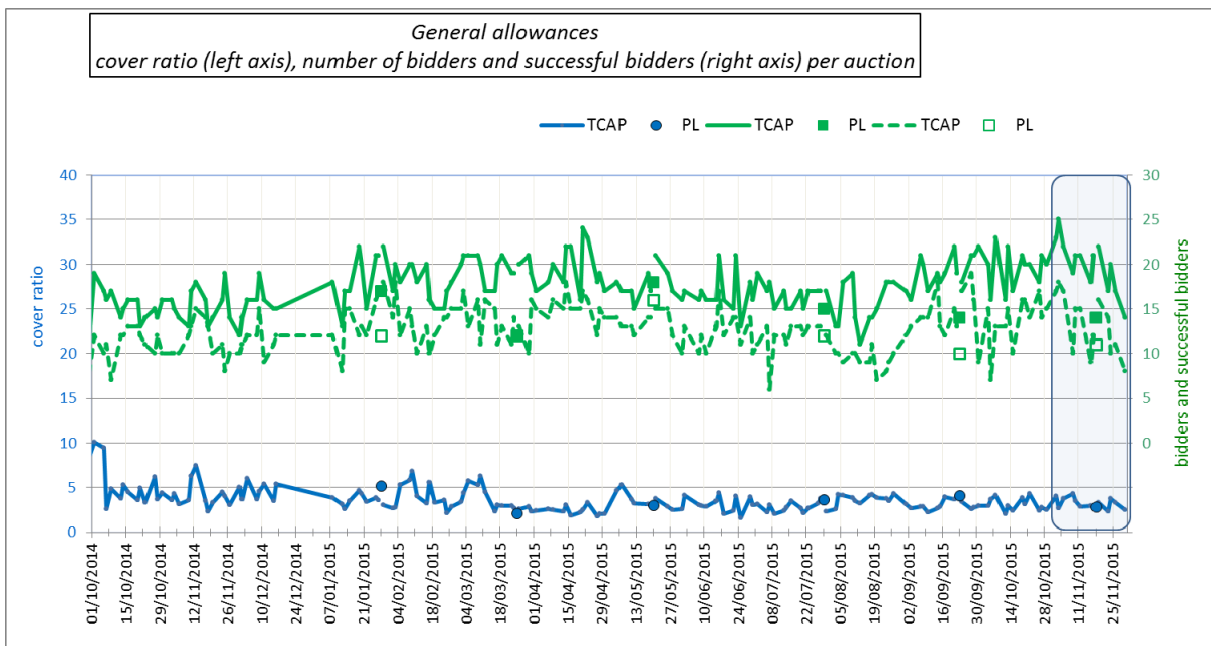
During November 2015, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for *general allowances* at the closure of the auction *bidding window* was on average EUR 0.00, and this difference had a standard deviation of EUR 0.04.

<sup>3</sup> Cover ratio is the ratio between the total bid volume and the auction volume.

**Graph 1: General allowances - auction clearing price (ACP), maximum bid & minimum bid<sup>4</sup>**



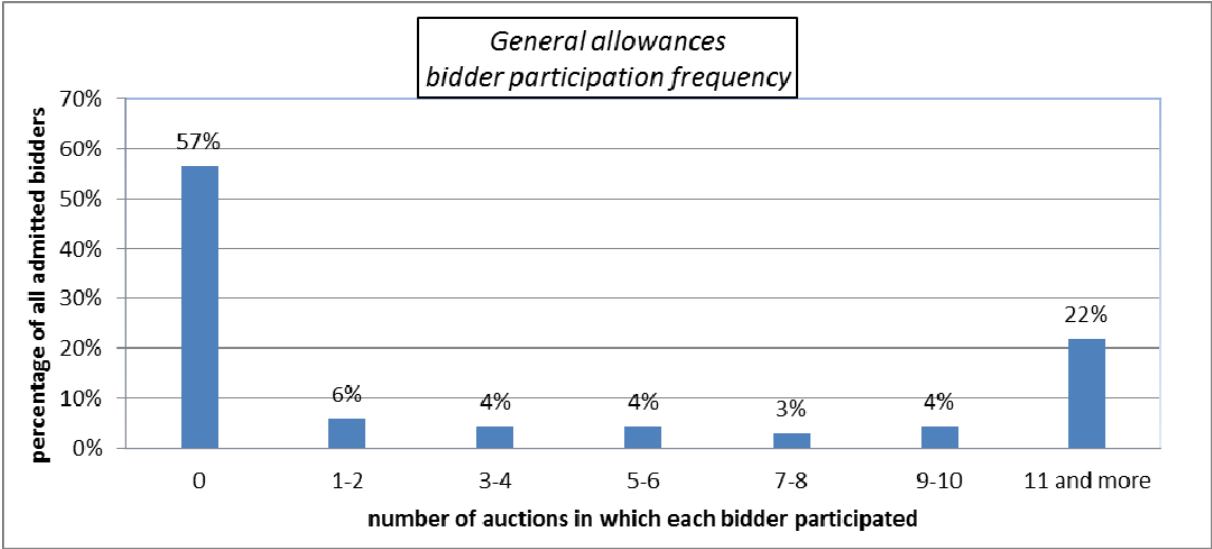
**Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



There were 69 eligible bidders in November 2015. Out of these, 30 different bidders participated in the auctions in November 2015. Graph 3A indicates the participation frequency in November 2015.

<sup>4</sup> Auctions on behalf of Poland were held on the following days: 8/1/2014, 5/2/2014, 5/3/2014, 28/1/2015, 25/3/2015, 20/5/2015, 29/7/2015, 23/9/2015 and 18/11/2015.

**Graph 3A:** General allowances -bidder participation frequency in November 2015





### 1.1.2. Bidding behaviour - general allowances

Table 2 provides monthly data on the bids submitted from November 2014 to November 2015. See also Graph 4.

**Table 2: General Allowances - monthly statistics on the submitted bids**

Month	Nr of auctions	Nr of bidders <sup>(1)</sup>	Total volume of bids	Average total volume bid per bidder per auction <sup>5</sup>	Average total volume bid per bidder per auction over the month <sup>6</sup>	standard deviation of total volume bid per bidder per auction over the month <sup>7</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>8</sup>	Average bid size <sup>9</sup>
November 2015	14	30	130 488 000	483 238	476 234	628 078	923	3.4++	142 930
October 2015	13	32	116 213 500	455 083	453 959	576 354	862	3.4++	134 450
September 2015	14	30	126 790 000	492 634	483 931	641 235	917	3.5++	138 422
August 2015	12	27	65 808 500	362 597	355 722	410 715	630	3.5 <sup>++</sup>	104 910
July 2015	14	29	114 643 000	498 144	496 290	590 569	932	4.1 <sup>++</sup>	122 445
June 2015	13	27	117 971 500	534 698	541 154	668 622	826	3.8 <sup>++</sup>	142 270
May 2015	10	29	101 910 000	576 652	572 528	1 126 584	619	3.5 <sup>++</sup>	170 179
April 2015	12	29	83 493 500	358 748	356 810	453 453	798	3.4 <sup>++</sup>	104 562
March 2015	15	29	155 841 500	539 041	541 116	997 195	1108	3.9 <sup>++</sup>	138 843
Feb 2015	12	27	140 319 500	656 261	655 699	1 209 247	756	3.5 <sup>++</sup>	184 555
Jan 2015	11	29	118 905 000	594 654	585 739	850 655	809	4.1 <sup>++</sup>	147 380
Dec 2014	8	26	68 610 000	565 380	557 805	880 324	541	4.5 <sup>++</sup>	138 240
Nov 2014	12	27	91 484 000	487 754	494 508	823 645	702	3.8 <sup>++</sup>	132 316

++: indicates simple average

(1): Number of unique individual bidders or unique successful bidders present in a whole month

<sup>5</sup> Monthly weighted average of the average bid volume per bidder in each auction (total bid volume in each auction divided by number of bidders participating in that auction), weighted by volume auctioned in each auction.

<sup>6</sup> Average over the whole month of the volume bid by bidders each time they are present in an auction (computed as total volume bid for the month / sum over whole month of number of bidders present in each auction).

<sup>7</sup> Standard deviation of total volume bid per bidder in each auction over the month.

<sup>8</sup> Monthly simple average of the average number of bids per bidder in each auction (total number of bids in each auction divided by number of bidders participating in that auction).

<sup>9</sup> Monthly weighted average of the average bid size per bidder in each auction (total bid volume in each auction divided by number of bids in that auction), weighted by volume auctioned in each auction.

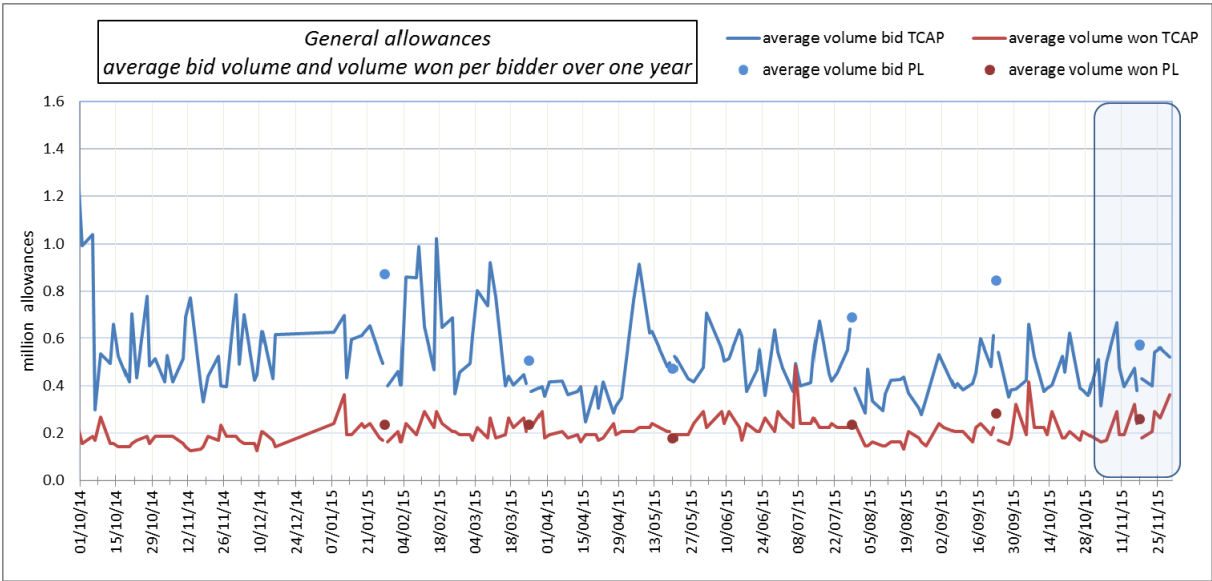
Table 3 provides monthly data on successful bids from November 2014 to November 2015. See also Graph 4.

**Table 3: General Allowances - monthly statistics on successful bids**

Month	Nr of auctions	Nr of successful bidders <sup>(1)</sup>	Total auction volume	Average volume won per bidder per auction <sup>10</sup>	Average volume won per bidder per auction over the month <sup>11</sup>	Standard deviation of volume won per bidder per auction over the month <sup>12</sup>	Total monthly nr of successful bids
November 2015	14	26	40 789 500	237 529	222 893	253 845	311
October 2015	13	26	37 934 000	232 204	218 011	244 823	302
September 2015	14	27	40 788 000	209 499	203 940	218 967	378
August 2015	12	23	17 508 000	158 449	156 321	187 135	173
July 2015	14	24	40 788 000	255 324	245 711	314 528	334
June 2015	13	24	37 934 000	243 436	237 088	345 804	284
May 2015	10	28	29 116 000	212 874	210 986	232 455	267
April 2015	12	26	35 016 000	194 267	192 396	224 960	305
March 2015	15	29	43 706 000	220 982	215 300	270 467	362
Feb. 2015	12	24	35 016 000	224 610	218 850	227 190	256
Jan. 2015	11	25	32 034 000	223 767	213 560	238 463	249
Dec. 2014	8	25	14 838 500	164 821	161 288	182 952	172
Nov. 2014	12	23	22 476 000	170 316	165 265	173 792	206

(1): Number of unique individual bidders or unique successful bidders present in a whole month

**Graph 4: General allowances - average bid volume and volume won per bidder over one year<sup>13</sup>**



<sup>10</sup> Monthly weighted average of the average volume won per bidder in each auction (total volume won in each auction divided by the number of successful bidders in that auction), weighted by volume auctioned in each auction.

<sup>11</sup> Average over the whole month of the volume won per bidder each time they are successful in an auction (computed as total volume auctioned for the month / sum over whole month of number of bidders successful in each auction).

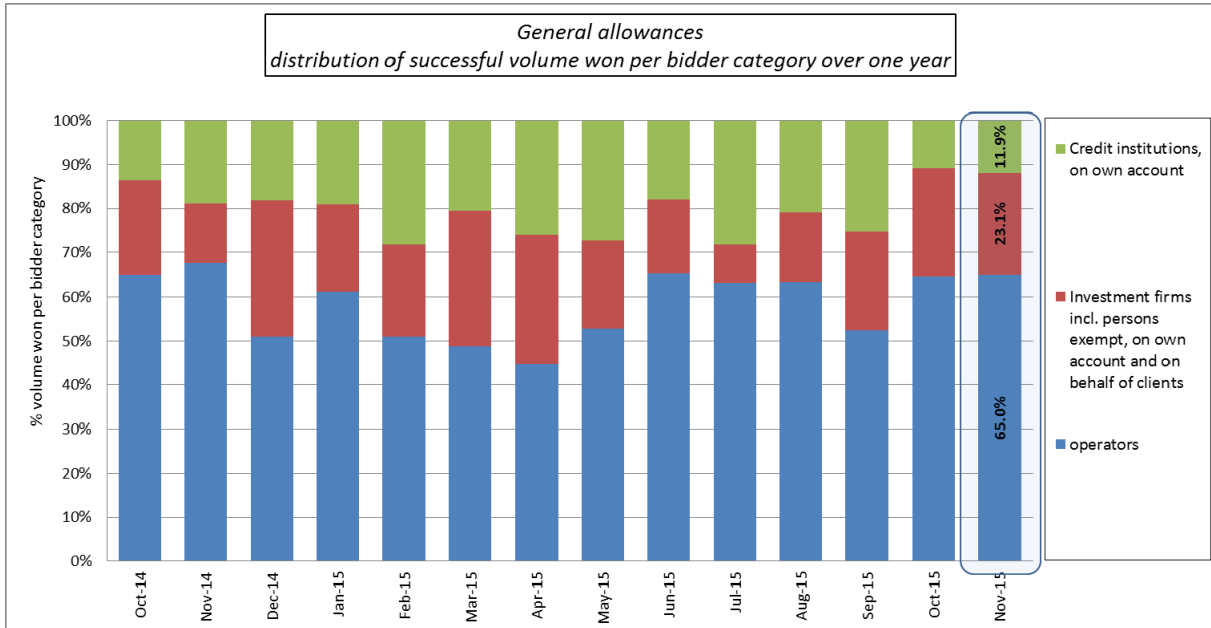
<sup>12</sup> Standard deviation of volume won per bidder in each auction over the month.

<sup>13</sup> Auctions on behalf of Poland were held on the following days: 8/1/2014, 5/2/2014, 5/3/2014, 28/1/2015, 25/3/2015, 20/5/2015, 29/7/2015, 23/9/2015 and 18/11/2015.

### 1.1.3. Type of bidders - general allowances

In November 2015, almost all volume bid was done on own account, with only 0.07% of the volume submitted by intermediaries on behalf of a client. The shares in the total successful bid volume per bidder category are indicated in graph 5 and in table 4.

**Graph 5:** General allowances - distribution of successful won volume per bidder category over one year



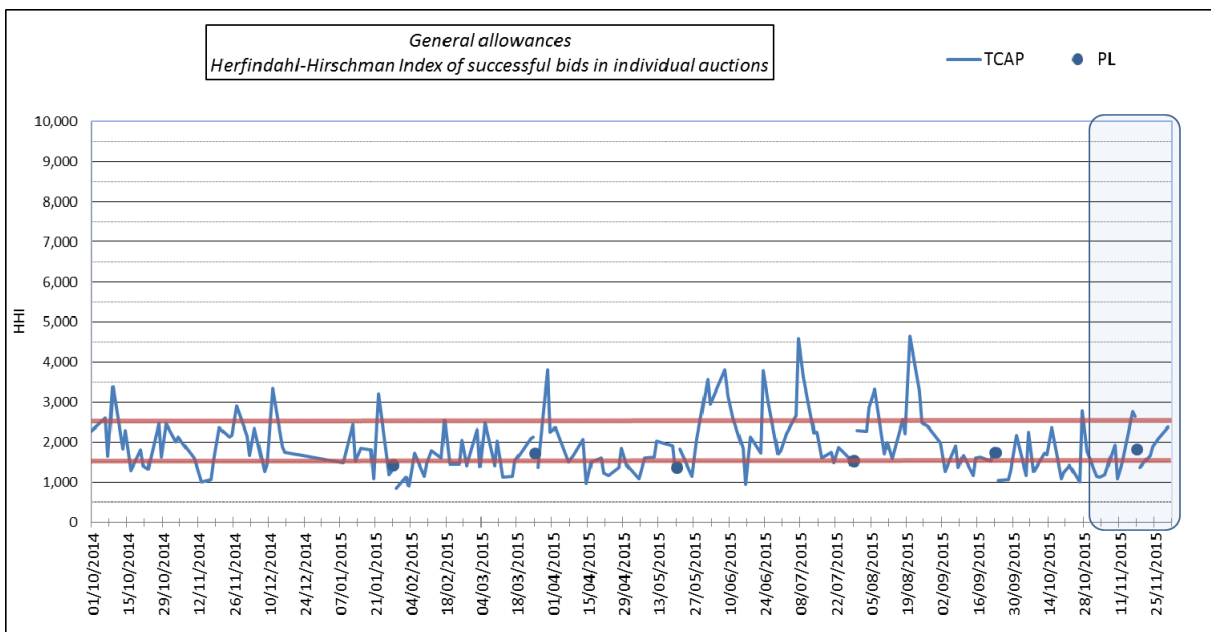
**Table 4:** General allowances – distribution of volume won per bidder category and their standard deviations

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
November 2015	0.21%	Operators (including Business groupings)	65.0%	10.2 % points
		Investment firms (including persons exempt)	23.1%	8.9 % points
		Credit institutions	11.9%	11.4 % points

### 1.1.4. Concentration - general allowances

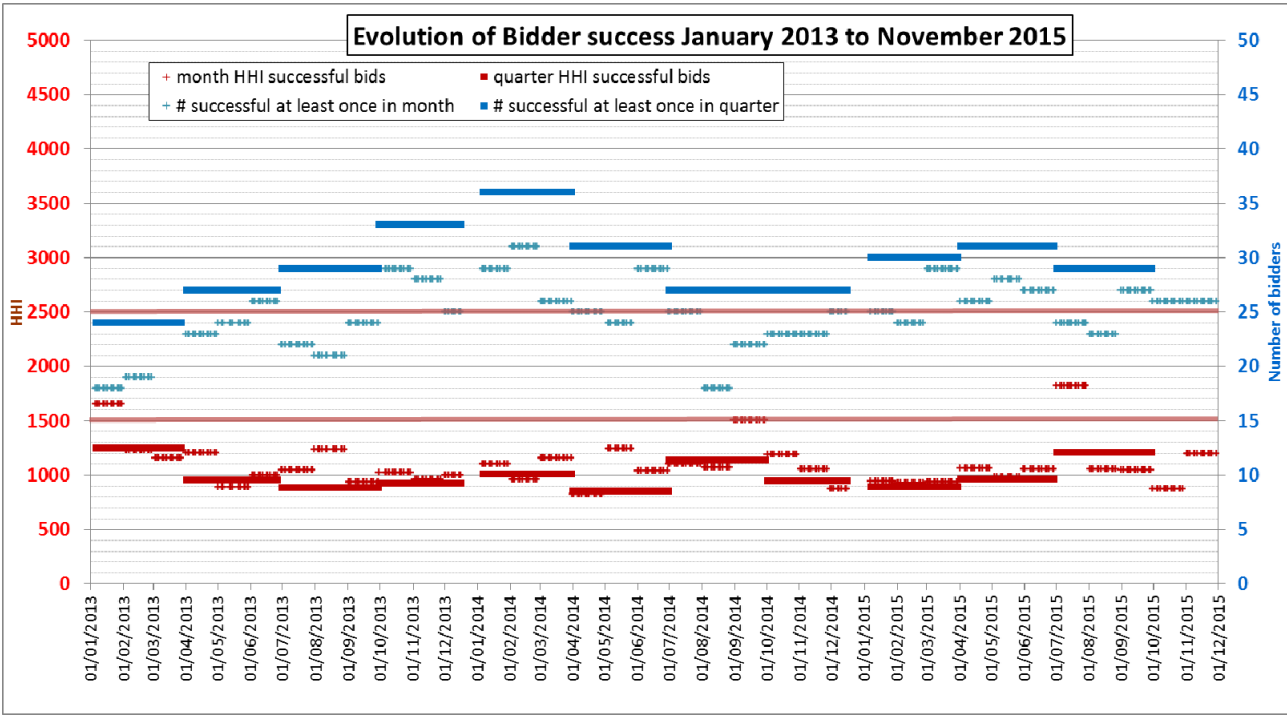
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration<sup>14</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 is 'moderately concentrated,' and above 2 500 is 'highly concentrated' – these thresholds are indicated in Graphs 6 and 7. Graph 6 indicates the HHI of the individual auctions. Graph 7 indicates the monthly and quarterly HHI and successful bidder participation (number of bidders successful at least once in the period of interest) so as to show the variation over different periods, due to the turnover of participants in the auctions.

**Graph 6:** General allowances - Herfindahl-Hirschman Index of successful bids in individual auctions



<sup>14</sup> The HHI is calculated as the sum of the squares of all successful bidders' shares (in % points) of the total auctioned volume over the period of interest.

**Graph 7: General allowances - Herfindahl-Hirschman Index of successful bids and successful bidder participation at monthly and quarterly level**



## 1.2 Aviation allowances auctions

The auctioning of *aviation allowances* restarted as of November 2014<sup>15</sup>. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014<sup>16</sup>; the *aviation allowances* for the calendar years 2013-2015 are auctioned in 2015, in accordance with the published 2015 *auction calendar*. Poland decided to aggregate the *aviation allowances* for the calendar years 2012 to 2015 in a single auction held in March 2015.

### 1.2.1 Clearing prices and participation – aviation allowances

An overview of the auction results from November 2014 to November 2015 is provided in Table 5.

**Table 5:** Aviation allowances – main statistics on the results of the auctions per month

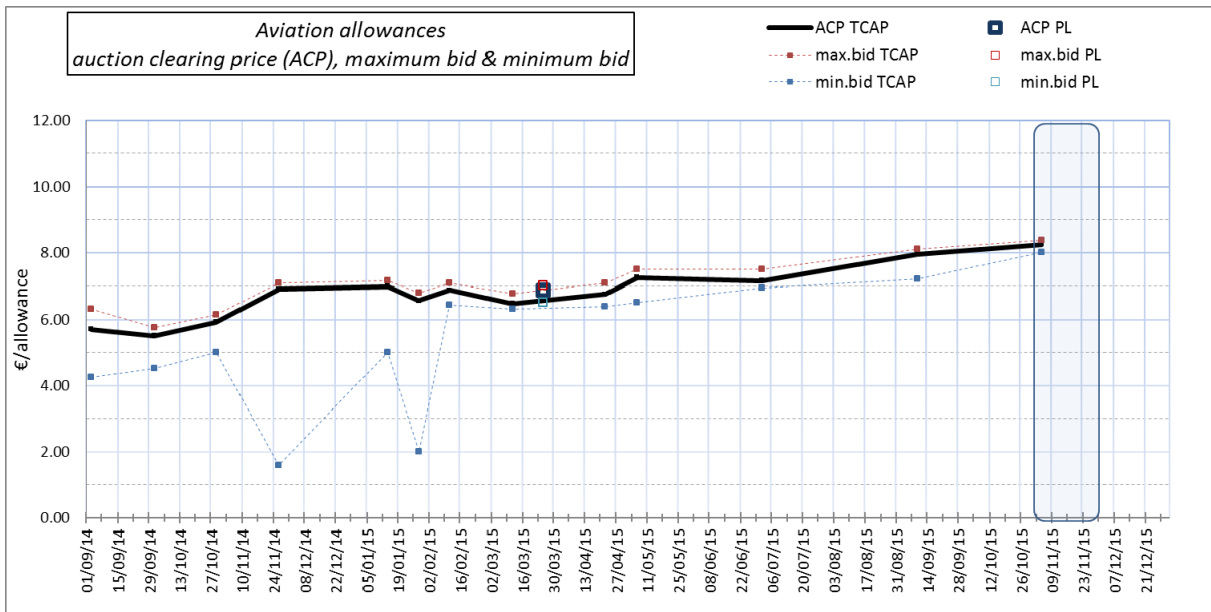
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>17</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
November 2015	933 000	3 754 000	7 697 250	4.0	11.0	3.0	8.25
October 2015	-	-	-	-	-	-	-
September 2015	935 000	4 683 000	7 423 900	5.0	12.0	5.0	7.94
August 2015	-	-	-	-	-	-	-
July 2015	935 000	4 095 000	6 694 600	4.4	12.0	6.0	7.16
June 2015	-	-	-	-	-	-	-
May 2015	935 000	2 008 000	6 778 750	2.2	11.0	6.0	7.25
April 2015	1 493 500	3 475 500	10 081 125	2.3	11.0	11.0	6.75
March 2015	1 927 500	6 016 500	12 663 600	3.1	11.0	6.7	6.57
February 2015	1 494 000	3 750 000	10 263 780	2.5	9.0	8.0	6.87
January 2015	2 988 000	11 244 000	20 243 700	3.8	11.5	9.0	6.78
Dec. 2014	-	-	-	-	-	-	-
Nov. 2014	1 641 500	7 665 500	11 326 350	4.7	14.0	7.0	6.90
<b>2014 total</b>	<b>6 570 500</b>	<b>28 201 500</b>	<b>39 454 510</b>	<b>4.3</b>	<b>13.0</b>	<b>8.0</b>	<b>6.00</b>

<sup>15</sup> The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 [http://ec.europa.eu/clima/news/articles/news\\_2012111601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2012111601_en.htm).

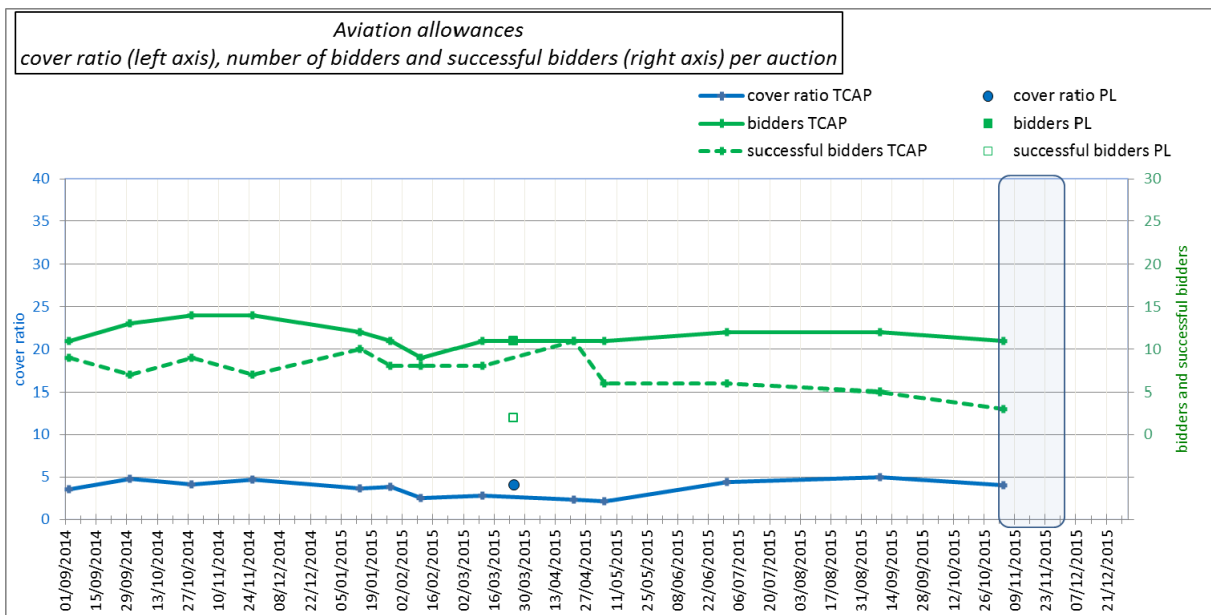
<sup>16</sup> See also the regulatory update published by the Commission on 29 July 2014; [http://ec.europa.eu/clima/news/articles/news\\_2014072901\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm).

<sup>17</sup> The cover ratio is the ratio between the total bid volume and the auction volume.

**Graph 8: Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid<sup>18</sup>**



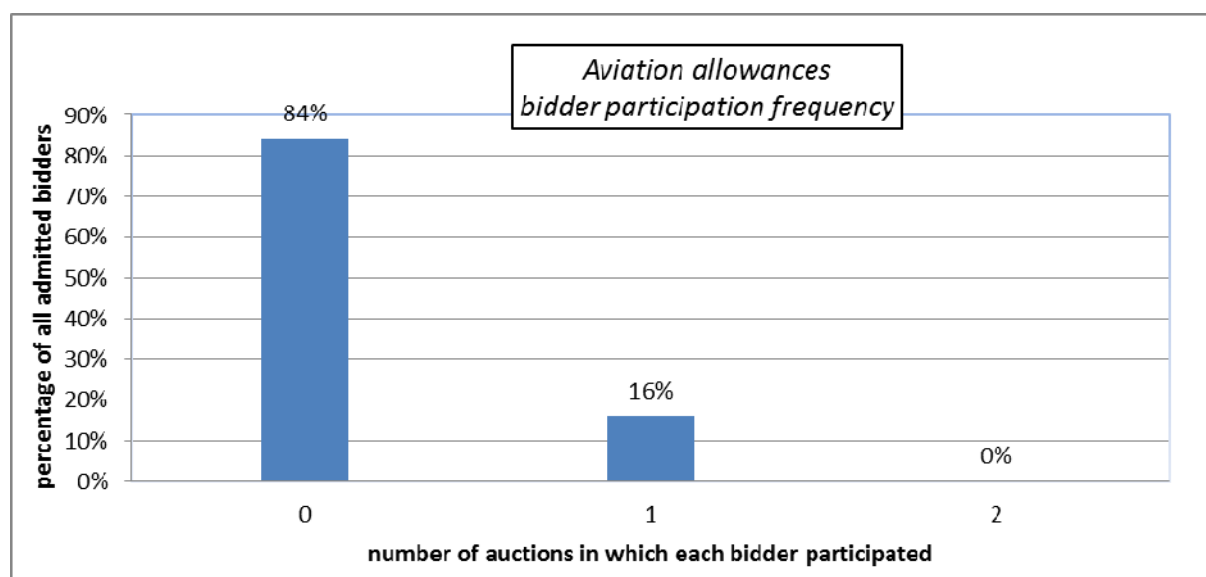
**Graph 9: Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



There were 69 eligible bidders in November 2015. Out of these, 11 different bidders participated in the auctions in November 2015. Graph 10 indicates the participation frequency in November 2015.

<sup>18</sup> Auctions on behalf of Poland were held on the following days: 25/3/2015.

**Graph 10** Aviation allowances - bidders participation frequency in November 2015



### 1.2.2 Bidding behaviour – aviation allowances

Table 6 provides monthly data on the bids submitted from November 2014 to November 2015. See also Graph 11.

**Table 6:** Aviation allowances – monthly statistics on the submitted bids

Month	Nr of auctions	Nr of bidders <sup>(1)</sup>	Total volume of bids	Average total volume bid per bidder per auction <sup>19</sup>	Average total volume bid per bidder over the month <sup>20</sup>	standard deviation of total volume bid per bidder over the month <sup>21</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>22</sup>	Average bid size <sup>23</sup>
November 2015	1	11	3 754 000	341 273	341 273	271 392	37	3.4 <sup>++</sup>	101 459
October 2015	-	-	-	-	-	-	-	-	-
September 2015	1	12	4 683 000	390 250	390 250	259 804	49	4.1 <sup>++</sup>	95 571
August 2015	-	-	-	-	-	-	-	-	-
July 2015	1	12	4 095 000	341 250	341 250	219 603	42	3.5 <sup>++</sup>	97 500
June 2015	-	-	-	-	-	-	-	-	-
May 2015	1	11	2 008 000	182 545	182 545	80 364	28	2.5 <sup>++</sup>	71 714
April 2015	1	11	3 475 500	315 955	315 955	400 818	35	3.2 <sup>++</sup>	99 300
March 2015	2	13	6 016 500	333 461	273 477	290 869	60	2.7 <sup>++</sup>	122 269
Feb. 2015	1	9	3 750 000	416 667	416 667	434 388	39	4.3 <sup>++</sup>	96 154
Jan. 2015	2	12	11 244 000	490 432	488 870	512 660	70	3.0 <sup>++</sup>	168 321
Dec. 2014	-	-	-	-	-	-	-	-	-
Nov. 2014	1	14	7 665 500	547 536	547 536	654 163	63	4.5 <sup>++</sup>	121 675

++: indicates simple average

(1): Number of unique individual bidders or unique successful bidders present in a whole month

<sup>19</sup> Monthly weighted average of the average bid volume per bidder in each auction (total bid volume in each auction divided by number of bidders participating in that auction), weighted by volume auctioned in each auction.

<sup>20</sup> Average over the whole month of the volume bid by bidders each time they are present in an auction (computed as total volume bid for the month / sum over the whole month of number of bidders present in each auction).

<sup>21</sup> Standard deviation of total volume bid per bidder in each auction over the month.

<sup>22</sup> Monthly simple average of the average number of bids per bidder in each auction (total number of bids in each auction divided by number of bidders participating in that auction).

<sup>23</sup> Monthly weighted average of the average bid size per bidder in each auction (total bid volume in each auction divided by number of bids in that auction), weighted by volume auctioned in each auction.



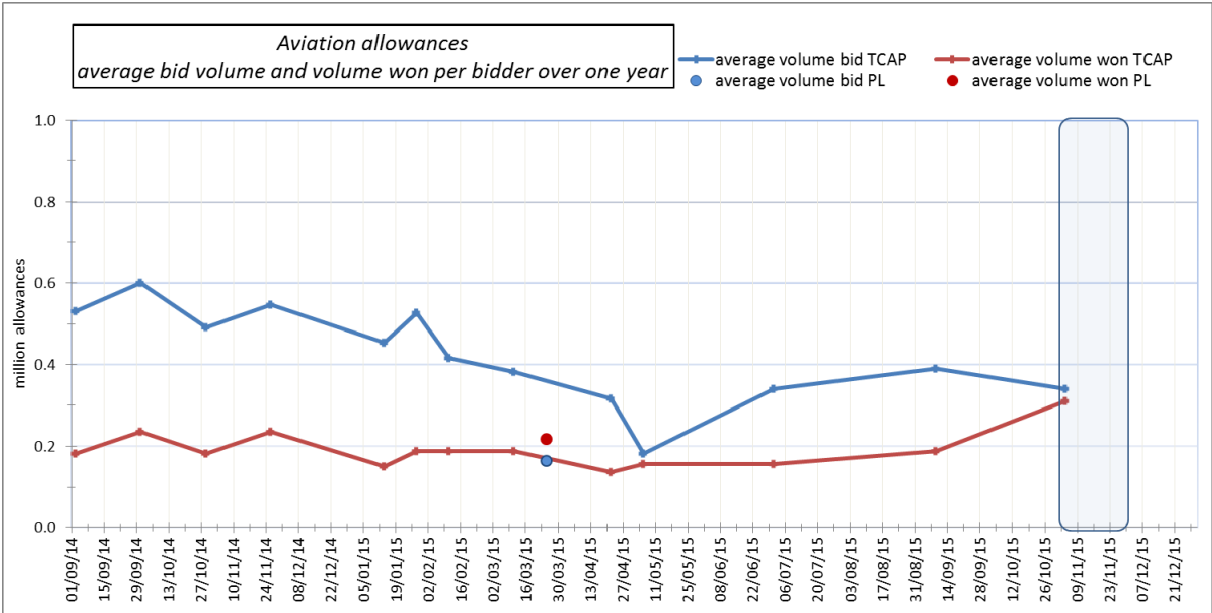
Table 7 provides monthly data on successful bids from November 2014 to November 2015. See also Graph 11.

**Table 7: Aviation Allowances – Monthly statistics on successful bids**

Month	Nr of auctions	Nr of successful bidders <sup>(1)</sup>	Total auction volume	Average volume won per bidder per auction <sup>24</sup>	Average volume won per bidder per auction over the month <sup>25</sup>	Standard deviation of volume won per bidder per auction over the month <sup>26</sup>	Total monthly nr of successful bids
November 2015	1	3	933 000	311 000	311 000	212 228	8
October 2015	-	-	-	-	-	-	-
September 2015	1	5	935 000	187 000	187 000	99 615	8
August 2015	-	-	-	-	-	-	-
July 2015	1	6	935 000	155 833	155 833	100 847	11
June 2015	-	-	-	-	-	-	-
May 2015	1	11	935 000	155 833	155 833	91 750	13
April 2015	1	11	1 493 500	135 773	135 773	132 536	20
March 2015	2	9	1 927 500	193 497	192 750	176 192	18
Feb. 2015	1	8	1 494 000	186 750	186 750	136 102	17
Jan. 2015	2	10	2 988 000	168 075	166 000	170 471	24
Dec. 2014	-	-	-	-	-	-	-
Nov. 2014	1	7	1 641 500	234 500	234 500	171 897	9

(1): Number of unique individual bidders or unique successful bidders present in a whole month

**Graph 11: Aviation allowances - average bid volume and volume won per bidder over one year**



<sup>24</sup> Monthly weighted average of the average volume won per bidder in each auction (total volume won in each auction divided by the number of successful bidders in that auction), weighted by volume auctioned in each auction.

<sup>25</sup> Average over the whole month of the volume won per bidder each time they are successful in an auction (computed as total volume auctioned for the month / sum over the whole month of number of bidders present in each auction).

<sup>26</sup> Standard deviation of volume won per bidder in each auction over the month.

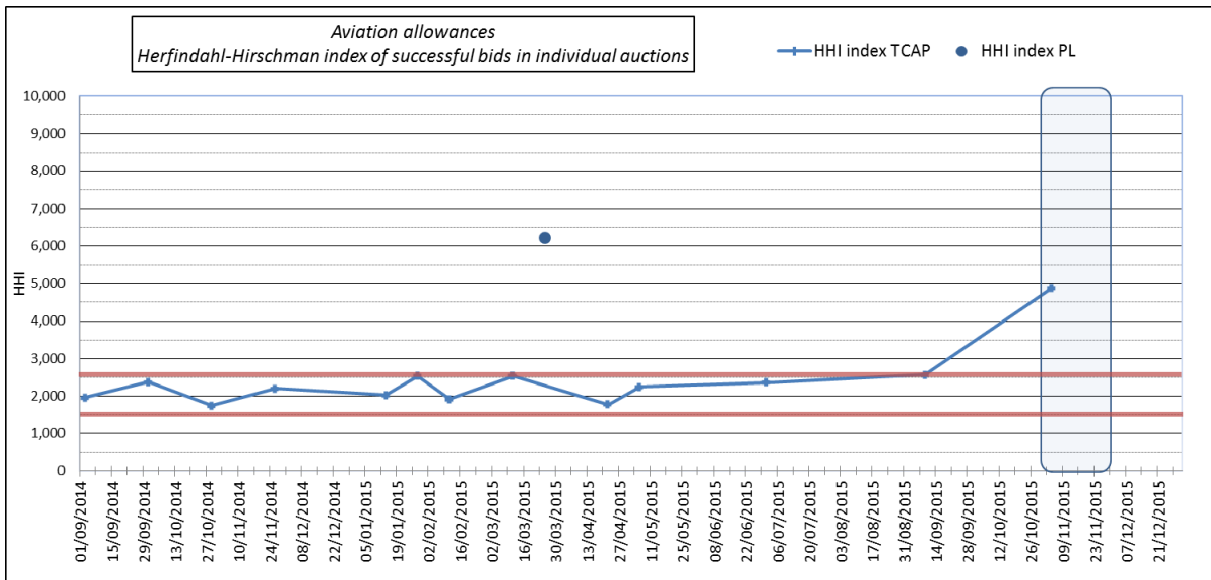
### 1.2.3 Type of bidders – aviation allowances

In November 2015, all volume bid was done on own account.

### 1.2.4 Concentration – aviation allowances

The HHI of successful bids is used to measure market concentration<sup>27</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is ‘not-concentrated’, between 1 500 and 2 500 is ‘moderately concentrated,’ and above 2 500 is ‘highly concentrated’. Graph 12 indicates the HHI of the individual auctions.

**Graph 12:** Aviation allowances - Herfindahl-Hirschman index of successful bids in individual auctions



<sup>27</sup> The HHI is calculated as the sum of the squares of all successful bidders' shares (in % points) of the total auctioned volume over the period of interest.

## 2. Implementation of and compliance with the applicable rules

### Fair and open access

EEX verified that each auction participant belonged to one of the categories of eligible bidders set out in Article 18 of the *Auctioning Regulation*. Table 9 presents the number of eligible bidders under each category in November 2015

Most of the active participants in the secondary carbon market are assumed to also have been admitted to bid in the auctions<sup>28</sup>.

**Table 8:** Eligible participants to the auctions in November 2015, by category

Number of participants	Operator		Investment firm	Credit Institution	Business grouping	Person exempt from MiFID requirements	Total
	Stationary	Aircraft					
Participants admitted to EEX's emissions <i>spot secondary market</i>							114
Participants eligible to bid in the auctions	47	1	11	4	0	6	69
(Of which:) Participants eligible to bid in the auctions on behalf of clients	-	-	2	2	-	1	5
(Of which:) <i>Auction-only access</i>	2	0	1	0	0	0	3

Throughout the period, EEX actively promoted the auctions in view of attracting bidders.

No irregularities or deviations from the admission and access requirements were found.

### Transparency

With the exemption of the 09/11/2015 auction, the results for each auction were published in accordance with Article 61 of the *Auctioning Regulation*, not later than 15 minutes after the close of the *bidding window*. For the 09/11/2015 auction the auction clearing price was published within 15 minutes after the close of the bidding window, and the delay concerned information other than the price.

EEX revised its webpage on auctioning where necessary for keeping it up to date.

### Technical and operational aspects

No irregularities or deviations from the requirements were found as regards the auctions themselves or the *clearing* and *settlement* processes.

EEX's Market Surveillance department surveyed all auctions with a view to detecting any *market abuse*, money laundering, terrorist financing or other criminal activities. No such wrongdoing was

<sup>28</sup> This assessment is based on the auction participants' activity in EEX's secondary market and general market knowledge of EEX.

publicly reported. EEX's Market Surveillance department takes its instructions only from SMWA (Saxony's Ministry for Economy and Employment) and is independent of the exchange itself.

No infringements of the confidentiality requirements were identified.

#### **Other aspects**

No problems or issues were identified as regards coordination of the auctions between the various auction platforms.

A new auctioneer was appointed by Greece in November 2014 and by Hungary in January 2015.

### **3. Overview of, and any updates on breaches of provisions or ongoing proceedings**

No breaches or problems of non-conformity were reported. There were no proceedings on such breaches or problems of non-conformity dating from before the reporting period.

#### **Comments of the auction platform on the draft of this report and the way they have been taken into account**

EEX made no comments on the report.

**Date of publication: 18/02/2016**

## Glossary

Auction calendar	Document setting out the <i>bidding windows</i> , individual volumes and auction dates of the auctions in a given calendar year. See Articles 11, 13 and 32 of the <i>Auctioning Regulation</i> .
Auction Clearing Price	Price determined upon closure of the <i>bidding window</i> .
Auction-only access	Access to the auctions without becoming a member of or participant in other markets organised by the auction platform.
Auctioning Regulation	Commission Regulation (EU) No 1031/2010 — Timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowances trading within the Community, Official Journal L 302, 18.11.2010, p. 1, as subsequently amended. See: <a href="http://ec.europa.eu/clima/policies/ets/cap/auctioning/documentation_en.htm">http://ec.europa.eu/clima/policies/ets/cap/auctioning/documentation_en.htm</a> .
Auctioneer	Entity appointed by a Member State that offers the allowances to be auctioned to the auction platform and receives the auction proceeds due to the appointing Member State. See Articles 22 and 23 of the <i>Auctioning Regulation</i> .
Back-loading	Proposal by the Commission to postpone, as a short-term measure, the auctioning of 900 million allowances from the years 2013-2015 until 2019-2020. See: <a href="http://ec.europa.eu/clima/policies/ets/reform/index_en.htm">http://ec.europa.eu/clima/policies/ets/reform/index_en.htm</a> .
Best-bid and best-ask prices	The best-bid price is the highest price any buyer is willing to pay and the best-ask price is the lowest price any seller is willing to accept.
Business groupings	Groupings of operators or aircraft operators. See Article 18(1)(d) of the <i>Auctioning Regulation</i> .
Bidding window	Time during which bidders can submit bids. See Article 8(1) of the <i>Auctioning Regulation</i> .
Clearing	Processes preceding the opening of the <i>Bidding window</i> , during the <i>Bidding window</i> and following the closure of the <i>Bidding window</i> until <i>Settlement</i> , involving the management of any risks arising during that interval including margining, netting or novation or any other services carried out possibly by a <i>Clearing</i> or <i>Settlement</i> system. See Article 3(31) of the <i>Auctioning Regulation</i> .
Cover ratio	Total bid volume divided by the available volume in the auction.
Credit institution	Credit institution as defined in EU legislation on credit institutions (Article 4(1) of Directive 2006/48/EC).
ETS Directive	Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive

96/61/EC, OJ L 275, 25.10.2003, p. 32, as subsequently amended. See: [http://ec.europa.eu/clima/policies/ets/documentation\\_en.htm](http://ec.europa.eu/clima/policies/ets/documentation_en.htm).

General Allowance	Allowance to emit one tonne of CO <sub>2</sub> -equivalent, see Article 3(a) of the <i>ETS Directive</i> , also referred to as <i>EUA</i> .
Aviation Allowance	Allowance to emit one tonne of CO <sub>2</sub> -equivalent that can be used by aircraft operators, also referred to as <i>EUA</i> . See Article 12(2a) and (3) of the <i>ETS Directive</i> .
Investment firms	Investment firms as defined in EU financial markets legislation (point (1) of Article 4(1) of Directive 2004/39/EC).
Market abuse	Insider dealing and market manipulation. See Article 36 of the <i>Auctioning Regulation</i> and Article 1 of Directive 2003/6/EC ('Market Abuse Directive').
Participating Member States	All EU Member States except Germany, Poland and the UK, which decided to opt out from the joint procurement of a common auction platform pursuant to Article 30 of the <i>Auctioning Regulation</i> .
Persons exempt from MiFID	Natural or legal persons exempt from the authorisation requirements in EU financial law because their trading and investment services activities are only ancillary to their main business (Article 2(1)(i) of Directive 2004/39/EC) and that have been authorised under national legislation implementing the rules laid down in the <i>Auctioning Regulation</i> to bid for allowances in the auctions. See Article 18(2) of the <i>Auctioning Regulation</i> .
Secondary market	Market in which persons buy or sell allowances either before or after they are allocated either free of charge or through auctioning. To be distinguished from the 'primary market', consisting of the auctions of allowances.
Settlement	Payment on delivery of the allowances. See Article 3(34) of the <i>Auctioning Regulation</i> .
Spot secondary market	<i>Secondary market</i> for allowances with delivery within 5 days from the transaction.
Transitional common auction platform	Auction platform appointed pursuant to Article 26(2) of the <i>Auctioning Regulation</i> , also referred to as <i>TCAP</i> .
Third trading period	The period 2013-2020, including the allowances referred to in Article 10(1) of the <i>Auctioning Regulation</i> auctioned in 2012. Allowances are valid during a given period without distinction as regards the year within that period. See Article 13 of the <i>ETS Directive</i> .

## Annex 1 Auction revenues per Member State until November 2015 (reported in euros)

(The data used in this annex can also be obtained directly from the EEX website.)

	General Allowances		Aviation Allowances		All Allowances
	12 November 2012 – October 2015	November 2015	12 November 2012 – October 2015	November 2015	12 November 2012 – November 2015
Austria	182,656,285	8,158,500	3,310,280	226,875	194,351,940
Belgium	325,344,050	14,773,500	4,483,325	259,875	344,860,750
Bulgaria	211,650,575	12,899,250	1,047,730	86,625	225,684,180
Croatia	71,430,630	9,150,750	432,400	57,750	81,071,530
Cyprus	2,359,150	-	1,586,960	132,000	4,078,110
Czech Republic	227,153,060	11,686,500	1,543,455	119,625	240,502,640
Denmark	160,850,860	7,276,500	3,608,160	268,125	172,003,645
Estonia	42,694,875	2,205,000	179,965	12,375	45,092,215
Finland	218,662,380	9,702,000	2,731,480	210,375	231,306,235
France	717,583,085	31,972,500	21,042,130	1,188,000	771,785,715
Greece	450,798,065	20,286,000	5,599,920	490,875	477,174,860
Hungary	162,778,990	8,709,750	1,189,040	90,750	172,768,530
Ireland	118,957,215	5,402,250	2,799,895	218,625	127,377,985
Italy	1,262,637,635	56,227,500	18,258,310	1,398,375	1,338,521,820
Latvia	35,053,195	1,543,500	614,645	57,750	37,269,090
Lithuania	63,781,745	2,976,750	307,190	37,125	67,102,810
Luxemburg	15,396,625	661,500	843,195	12,375	16,913,695
Malta	12,856,340	551,250	619,380	49,500	14,076,470
The Netherlands	438,668,615	19,624,500	8,801,810	350,625	467,445,550
Poland	427,572,375	24,300,305	2,982,480	-	454,855,160
Portugal	229,292,600	10,253,250	3,873,585	288,750	243,708,185
Romania	420,947,040	20,616,750	1,763,380	156,750	443,483,920
Slovak Republic	201,195,945	8,930,250	217,140	24,750	210,368,085
Slovenia	57,638,510	2,535,750	180,190	4,125	60,358,575
Spain	1,131,475,630	50,384,250	21,285,885	1,600,500	1,204,746,265
Sweden	116,532,095	5,181,750	4,302,035	354,750	126,370,630
<b>TOTAL</b>	<b>7,305,967,570</b>	<b>346,009,805</b>	<b>113,603,965</b>	<b>7,697,250</b>	<b>7,773,278,590</b>

## Annex 2 Results of individual auctions on behalf of participating Member States and Poland in November 2015

(The data used in the highlighted subsection of the tables presented in this annex can also be obtained directly from the EEX website.)

General Allowances - November 2015																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
02/11/2015	8.54	8.13	8.73	8.52	8.52	2,918,000	11,786,000	4.04	23	17	24,919,720	75	24	3.3	157,147	512,435	668,954	171,647	168,670
03/11/2015	8.58	8.40	8.75	8.58	8.57	2,918,000	7,905,500	2.71	25	18	25,036,440	63	25	2.5	125,484	316,220	378,366	162,111	165,956
05/11/2015	8.40	7.99	8.60	8.38	8.40	2,918,000	10,969,000	3.76	22	17	24,511,200	75	31	3.4	146,253	498,591	691,568	171,647	174,607
09/11/2015	8.35	8.11	8.43	8.31	8.32	2,918,000	12,636,000	4.33	19	10	24,365,300	76	19	4.0	166,263	665,053	822,485	291,800	280,622
10/11/2015	8.28	7.99	8.40	8.27	8.28	2,918,000	10,097,000	3.46	21	15	24,161,040	70	27	3.3	144,243	480,810	690,135	194,533	154,666
12/11/2015	8.36	7.99	8.50	8.33	8.35	2,918,000	8,361,000	2.87	21	15	24,394,480	70	30	3.3	119,443	398,143	520,560	194,533	216,894
16/11/2015	8.43	8.20	8.60	8.38	8.38	2,918,000	8,567,000	2.94	18	9	24,598,740	65	14	3.6	131,800	475,944	511,079	324,222	394,797
17/11/2015	8.49	8.31	8.66	8.47	8.47	2,918,000	7,974,000	2.73	21	12	24,773,820	60	15	2.9	132,900	379,714	497,856	243,167	358,103
18/11/2015	8.51	8.32	8.60	8.48	8.49	2,855,500	8,035,000	2.81	14	11	24,300,305	68	20	4.9	118,162	573,929	470,249	259,591	259,559
19/11/2015	8.57	8.38	8.65	8.55	8.56	2,918,000	9,519,000	3.26	22	16	25,007,260	75	23	3.4	126,920	432,682	651,056	182,375	200,188
23/11/2015	8.46	8.25	9.00	8.48	8.47	2,918,000	6,826,000	2.34	17	14	24,686,280	55	33	3.2	124,109	401,529	489,740	208,429	240,279
24/11/2015	8.63	8.45	8.66	8.58	8.59	2,918,000	10,915,000	3.74	20	10	25,182,340	66	18	3.3	165,379	545,750	689,617	291,800	273,934
26/11/2015	8.61	8.42	8.76	8.58	8.59	2,918,000	9,559,000	3.28	17	11	25,123,980	69	18	4.1	138,536	562,294	741,114	265,273	303,010
30/11/2015	8.55	8.48	8.80	8.56	8.54	2,918,000	7,338,500	2.51	14	8	24,948,900	36	14	2.6	203,847	524,179	741,012	364,750	345,128
<b>Monthly Value</b>	-	-	-	-	-	40,789,500	130,488,000	-	30 <sup>(1)</sup>	26 <sup>(1)</sup>	346,009,805	923	311	3.4 <sup>(2)</sup>	141,374 <sup>(3)</sup>	476,234 <sup>(4)</sup>	628,078 <sup>(5)</sup>	222,893 <sup>(6)</sup>	253,845 <sup>(7)</sup>
<b>Monthly minimum</b>	8.28	7.99	8.40	-	-	2,855,500	6,826,000	2.34	14	8	24,161,040	36	14	2.5	118,162	316,220	-	162,111	-
<b>Monthly average</b>	8.48	8.24	8.65	8.46 <sup>++</sup>	-	2,913,536 <sup>++</sup>	9,322,541	3.20	19.6	13.1	24,714,986 <sup>++</sup>	65.9	22.2	3.4 <sup>++</sup>	142,930	483,238	-	237,529	-
<b>Monthly maximum</b>	8.63	8.48	9.00	-	-	2,918,000	12,636,000	4.33	25	18	25,182,340	76	33	4.9	203,847	665,053	-	364,750	-

Note: volume variables reported in tCO<sub>2</sub>, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month.

++: indicates simple average



**Aviation Allowances – November 2015**

Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
4-11-2015	8.25	8.01	8.38	8.19	8.20	933,000	3,754,000	4.02	11	3	7,697,250	37	8	3.4	101,459	341,273	271,392	311,000	212,228
<b>Monthly Value</b>	-	-	-	-	-	933,000	3,754,000	-	11 <sup>(1)</sup>	3 <sup>(1)</sup>	7,697,250	37	8	3.4 <sup>(2)</sup>	101,459 <sup>(3)</sup>	341,273 <sup>(4)</sup>	271,392 <sup>(5)</sup>	311,000 <sup>(6)</sup>	212,228 <sup>(7)</sup>
<b>Monthly minimum</b>	8.25	8.01	8.38	-	-	933,000	3,754,000	4.02	11	3	7,697,250	37	8	3.4	101,459	341,273	-	311,000	-
<b>Monthly average</b>	8.25	8.01	8.38	8.19 <sup>++</sup>	-	933,000 <sup>++</sup>	3,754,000	4.02	11	3	7,697,250 <sup>++</sup>	37.0	8.0	3.4 <sup>++</sup>	101,459	341,273	-	311,000	-
<b>Monthly maximum</b>	8.25	8.01	8.38	-	-	933,000	3,754,000	4.02	11	3	7,697,250	37	8	3.4	101,459	341,273	-	311,000	-

Note: volume variables reported in tCO<sub>2</sub>, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6) :Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month.

++: indicates simple average

The data for previous auctions can be downloaded from EEX's website: <https://www.eex.com/en/market-data/emission-allowances/auction-market/european-emission-allowances-auction/european-emission-allowances-auction-download>

