



# AUCTIONS BY THE TRANSITIONAL COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

September 2016

# Auctions by the *Common Auction Platform*

## September 2016

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

**Auction dates/reporting period:**

*General Allowances:*

5, 6, 8, 12, 13, 15, 19, 20, 22, 26, 27 and 29 September 2016;

*Aviation Allowances:*

28 September 2016

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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 2 billion 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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**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 September 2016. In that period, EEX, in its capacity as the *Common Auction Platform*, auctioned a total of 43 968 000 *general allowances* in 12 auctions for the *third trading period* and 683 500 *aviation allowances* in one auction on behalf of those EU Member States (*participating Member States*) that participate in the *Common Auction Platform*. During this period no auctions were held by EEX on behalf of Poland.

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 September 2016 auctions at a glance:**

	<b>General Allowances September</b>	<b>Aviation Allowances September</b>
<b>General</b>		
Number of auctions	12	1
Total volume auctioned	43 968 000	683 500
Amount raised from the auctions (€)	185 984 640	3 123 595
Average Auction Clearing Price (€/allowance)	4.23	4.57
Total bid volume	92 219 000	1 993 000
Average <i>Cover ratio</i>	2.1	2.9
<b>Participation</b>		
Number of eligible bidders	68	68
Number of participating bidders <sup>(1)</sup>	27	11
Number of successful bidders <sup>(1)</sup>	27	5
Average number of bidders per auction	18.4	11.0
Average number of successful bidders per auction	13.9	5.0
<b>Auction data</b>		
Average total volume bid per bidder per auction	420 765	181 182
Average bid size (volume per bid)	114 146	64 290
Average volume won per bidder per auction	277 426	136 700
Average range of bids (€)	1.01	0.48

(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. The auctions for the *participating Member States* were conducted by EEX in its capacity as *Common Auction Platform* appointed pursuant to Article 26(2) of the Auctioning Regulation (also referred to as transitional common auction platform or TCAP) until 18 August 2016 and then by EEX appointed as *Common Auction Platform* pursuant to Article 26(1) of the Auctioning Regulation (also referred to as second common auction platform or CAP2).

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 were held on the Transitional Common Auction Platform between 16 September 2013 and 18 August 2016 (due to the *Back-loading*, no auctions were held for Poland from May to December 2014, the auctions restarted in January 2015). The continuation of the auctions by CAP2 for Poland is subject to the conclusion of a bilateral agreement between EEX and Poland.

Accordingly, the present report includes data on the auctions performed by the *common auction platform* on behalf of the *participating Member States* and Poland. However, during this period no auctions were held by EEX on behalf of Poland.

The Member States of the European Free Trade Association (EFTA) that are Party to the European Economic Area (EEA)<sup>1</sup> have also stated their intention to make use of the *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 September 2016 are EUR 9 729 684 370. 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 September 2016 are EUR 139 846 430. 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 September 2016, 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>1</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 September 2015 to September 2016 is provided in Table 1.

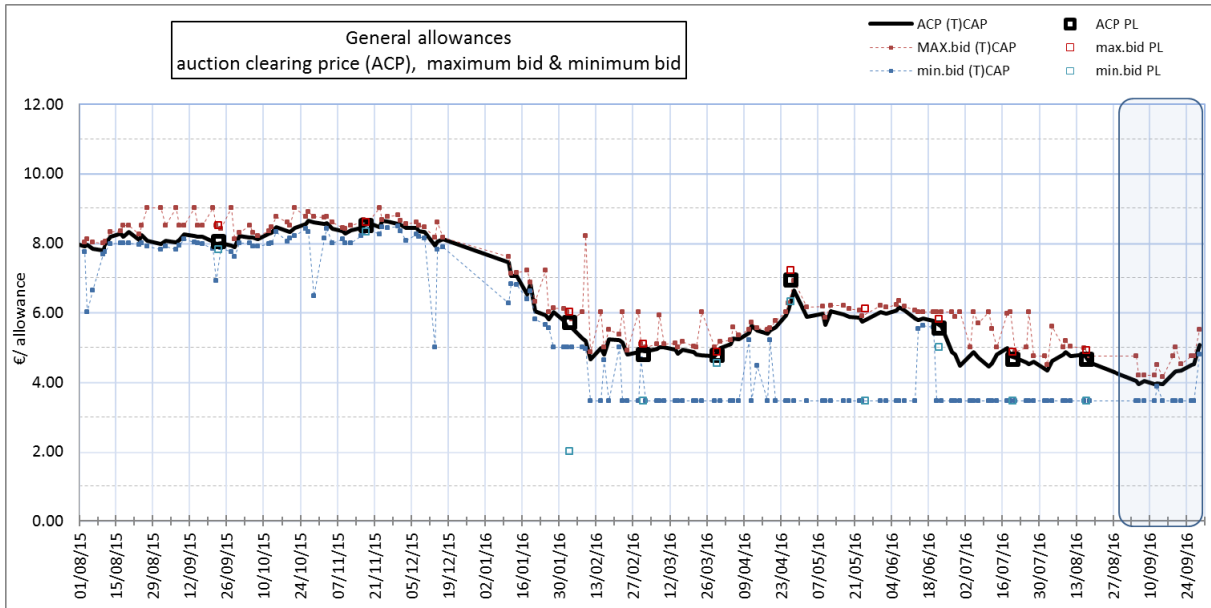
**Table 1:** General allowances - main statistics on the results of the auctions per month

Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>2</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
September 2016	43 968 000	92 219 000	185 984 640	2.1	18.4	13.9	4.23
August 2016	16 344 500	50 355 000	75 727 925	3.1	16.7	10.6	4.63
July 2016	45 507 500	103 410 500	212 877 125	2.3	18.1	12.2	4.68
June 2016	48 932 500	119 140 000	273 801 625	2.4	19.2	13.2	5.60
May 2016	30 825 000	56 918 000	181 251 000	1.8	16.8	13.0	5.88
April 2016	44 626 000	93 734 000	254 493 440	2.1	18.8	13.0	5.70
March 2016	51 577 000	117 768 000	251 299 820	2.3	20.7	14.8	4.87
February 2016	48 051 000	106 282 000	249 230 700	2.2	22.7	17.2	5.19
January 2016	30 825 000	74 934 000	200 910 500	2.4	21.6	14.1	6.52
December 2015	23 244 500	64 626 500	192 130 220	2.8	18.9	14.1	8.27
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
<b>2015 total</b>	<b>413 874 000</b>	<b>1 337 010 500</b>	<b>3 154 940 925</b>	<b>3.2</b>	<b>18.3</b>	<b>13.3</b>	<b>7.62</b>
<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>

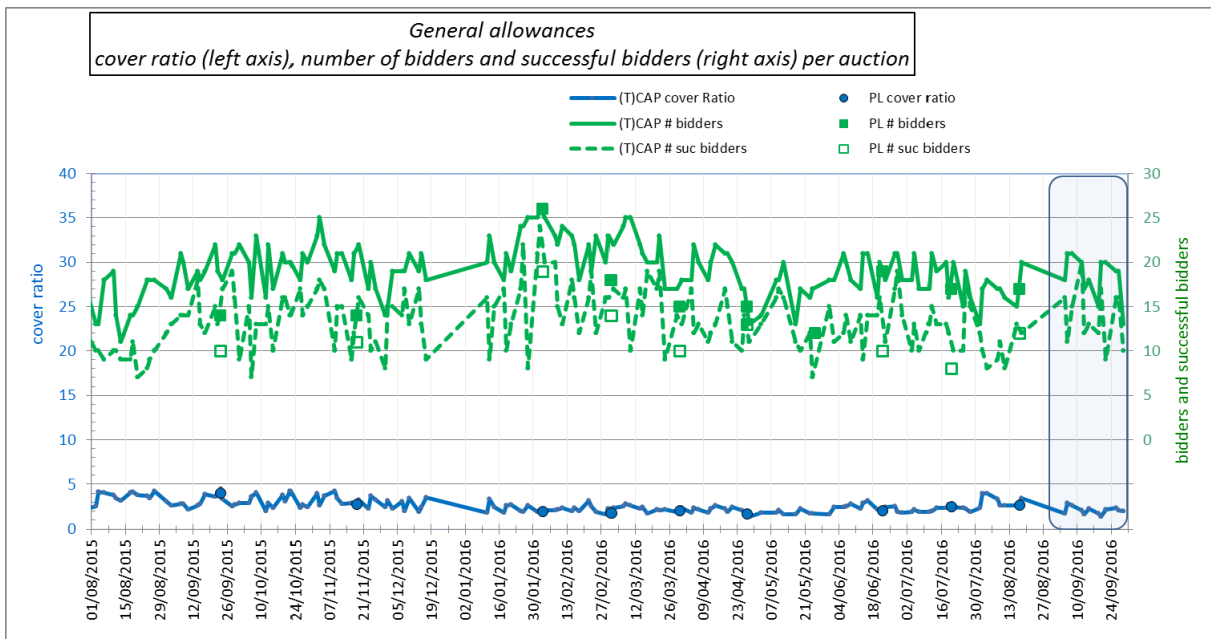
During September 2016, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for *general allowances* at the closure of the auction *bidding window* was on average EUR -0.02, and this difference had a standard deviation of EUR 0.03.

<sup>2</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>3</sup>



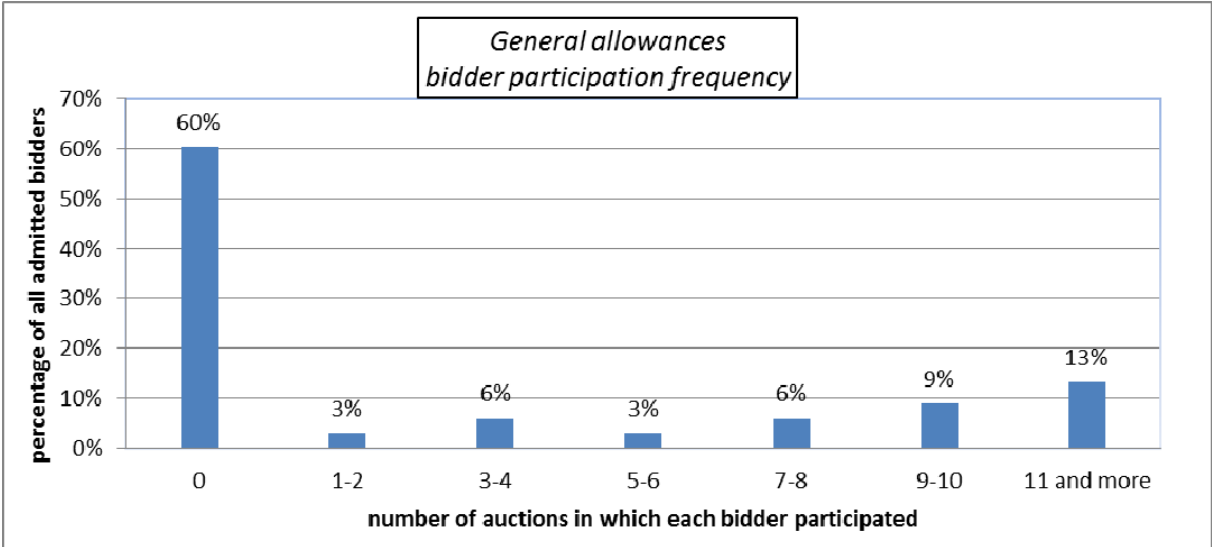
**Graph 2:** General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



There were 68 eligible bidders in September 2016. Out of these, 27 different bidders participated in the auctions in September 2016. Graph 3A indicates the participation frequency in September 2016.

<sup>3</sup> Auctions on behalf of Poland were held on the following days: 23/9/2015, 18/11/2015, 3/2/2016, 2/3/2016, 30/3/2016, 27/4/2016, 25/5/2016, 22/6/2016, 20/7/2016 and 17/8/2016.

**Graph 3A:** General allowances -bidder participation frequency in September 2016





### 1.1.2. Bidding behaviour - general allowances

Table 2 provides monthly data on the bids submitted from September 2015 to September 2016. 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>4</sup>	Average total volume bid per bidder per auction over the month <sup>5</sup>	standard deviation of total volume bid per bidder per auction over the month <sup>6</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>7</sup>	Average bid size <sup>8</sup>
<b>September 2016</b>	12	27	92 219 000	420 765	417 281	584 075	823	3.7 <sup>++</sup>	114 146
<b>August 2016</b>	9	27	50 355 000	339 877	335 700	404 083	531	3.5 <sup>++</sup>	95 870
<b>July 2016</b>	13	28	103 410 500	443 747	438 180	493 818	970	4.1 <sup>++</sup>	107 529
<b>June 2016</b>	14	29	119 140 000	445 334	442 900	537 011	979	3.7 <sup>++</sup>	121 595
<b>May 2016</b>	9	28	56 918 000	382 049	376 940	435 872	507	3.4 <sup>++</sup>	113 975
<b>April 2016</b>	13	29	93 734 000	384 877	384 156	468 364	850	3.5 <sup>++</sup>	111 049
<b>March 2016</b>	15	35	117 768 000	384 552	379 897	457 186	1147	3.7 <sup>++</sup>	105 729
<b>February 2016</b>	14	30	106 282 000	338 333	334 220	461 502	1104	3.5 <sup>++</sup>	98 299
<b>January 2016</b>	9	32	74 394 000	386 086	383 474	547 998	692	3.6 <sup>++</sup>	110 917
<b>December 2015</b>	8	31	64 626 500	433 690	427 990	543 279	538	3.6 <sup>++</sup>	119 573
<b>November 2015</b>	14	30	130 488 000	483 238	476 234	628 078	923	3.4 <sup>++</sup>	142 930
<b>October 2015</b>	13	32	116 213 500	455 083	453 959	576 354	862	3.4 <sup>++</sup>	134 450
<b>September 2015</b>	14	30	126 790 000	492 634	483 931	641 235	917	3.5 <sup>++</sup>	138 422

++: indicates simple average

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

<sup>4</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>5</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>6</sup> Standard deviation of total volume bid per bidder in each auction over the month.

<sup>7</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>8</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.

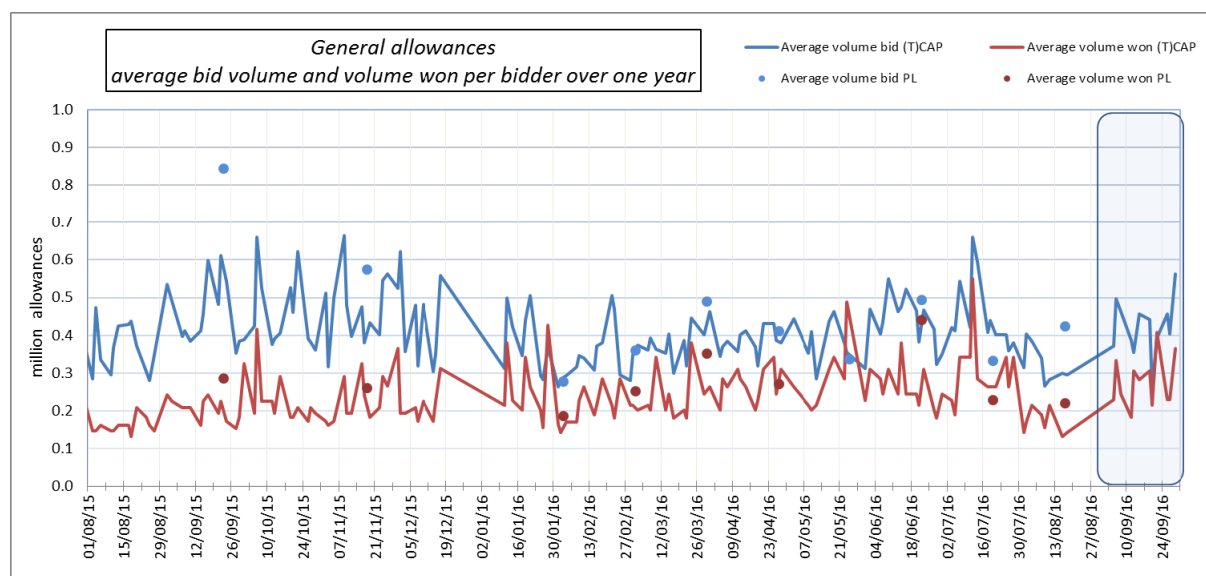
Table 3 provides monthly data on successful bids from September 2015 to September 2016. See also Graph 4.

**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>9</sup>	Average volume won per bidder per auction over the month <sup>10</sup>	Standard deviation of volume won per bidder per auction over the month <sup>11</sup>	Total monthly nr of successful bids
September 2016	12	27	43 968 000	277 426	263 281	339 773	355
August 2016	9	24	16 344 500	178 411	172 047	211 858	152
July 2016	13	28	45 507 500	305 955	284 422	328 532	262
June 2016	14	29	48 932 500	279 016	263 078	300 660	326
May 2016	9	26	30 825 000	283 328	263 462	292 574	256
April 2016	13	24	44 626 000	270 885	264 059	255 486	287
March 2016	15	31	51 577 000	245 210	232 329	256 557	416
February 2015	14	27	48 051 000	207 756	199 382	213 657	468
January 2016	9	30	30 825 000	268 407	242 717	293 170	264
December 2015	8	29	23 244 500	212 431	205 704	218 453	219
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

(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>12</sup>**



<sup>9</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>10</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).

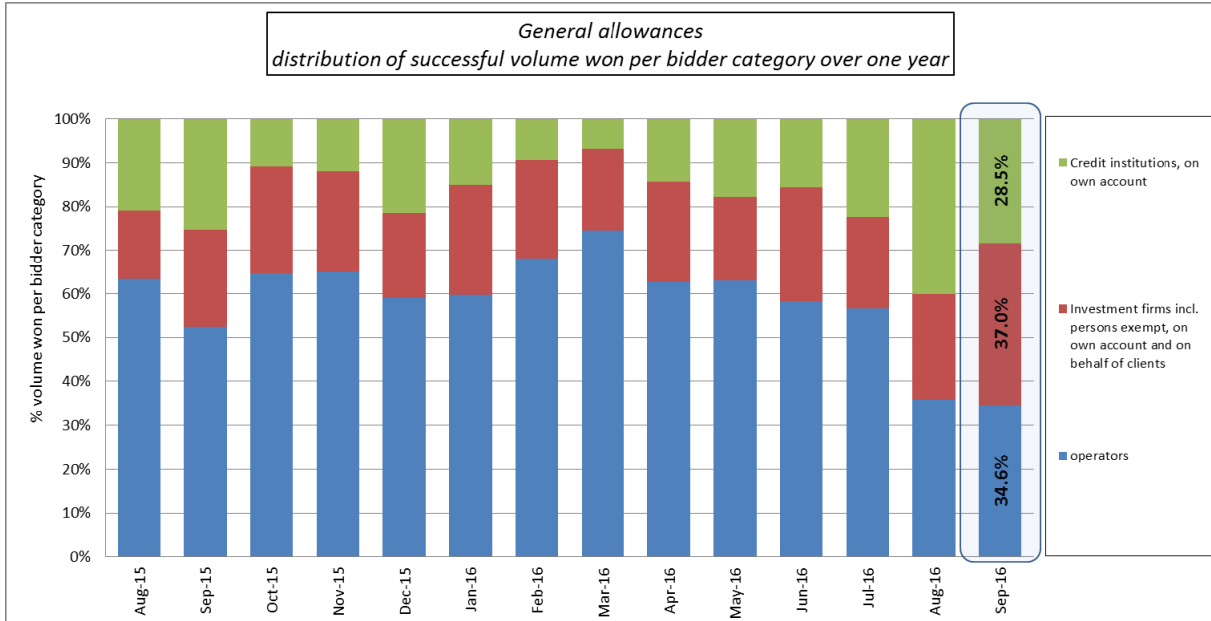
<sup>11</sup> Standard deviation of volume won per bidder in each auction over the month.

<sup>12</sup> Auctions on behalf of Poland were held on the following days: 23/9/2015, 18/11/2015, 3/2/2016, 2/3/2016, 30/3/2016, 27/4/2016, 25/5/2016, 22/6/2016, 20/7/2016 and 17/8/2016.

### 1.1.3. Type of bidders - general allowances

In September 2016, almost all volume bid was done on own account, with 2.61% of the volume submitted by intermediaries on behalf of a client<sup>13</sup>. 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

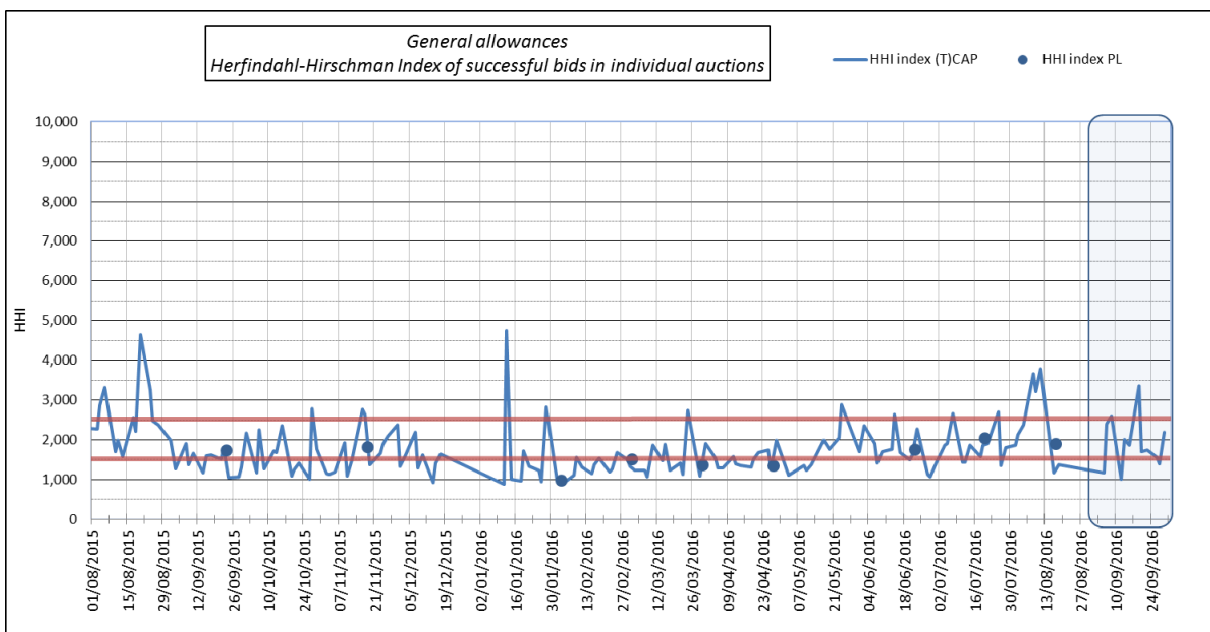
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
September 2016	5.47%	Operators (including Business groupings)	34.6%	12.6 % points
		Investment firms (including persons exempt)	37.0%	14.1 % points
		Credit institutions	28.5%	21.2 % points

<sup>13</sup> The data related to bidding on behalf of clients reflects the self-assessment of the respective trader.

### 1.1.4. Concentration - general allowances

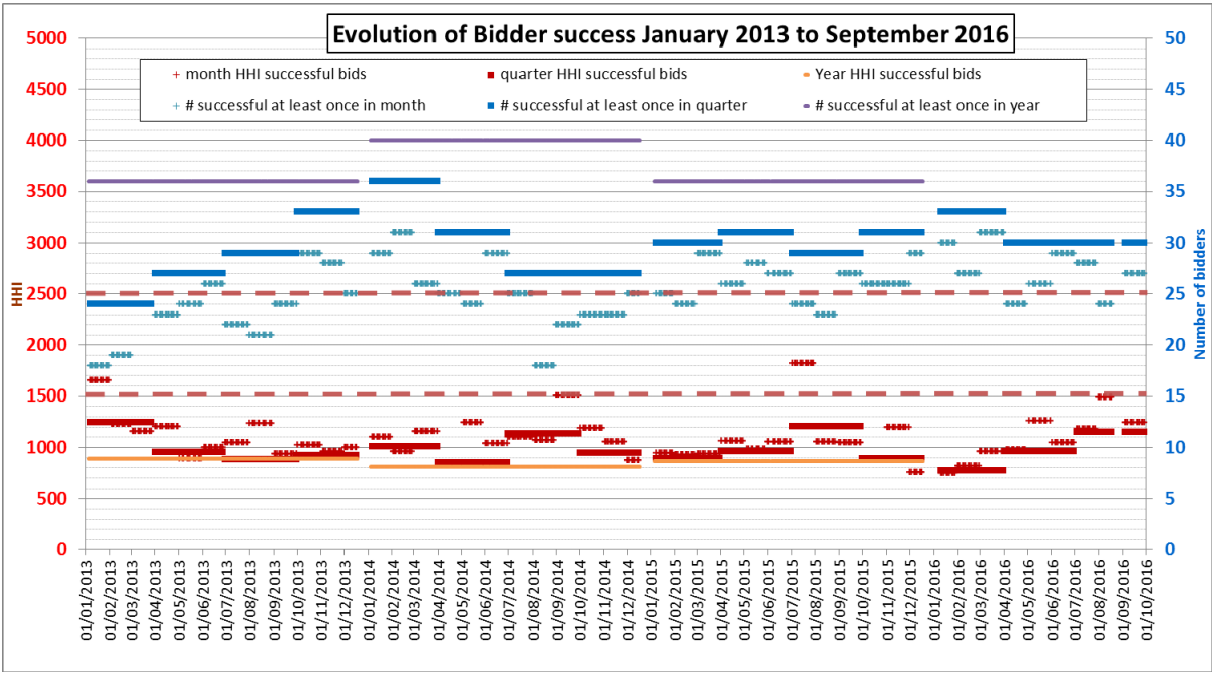
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration<sup>14</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 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, quarterly and yearly 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 were 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 May 2015.

### 1.2.1 Clearing prices and participation – aviation allowances

An overview of the auction results from September 2015 to September 2016 is provided in Table 5.

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

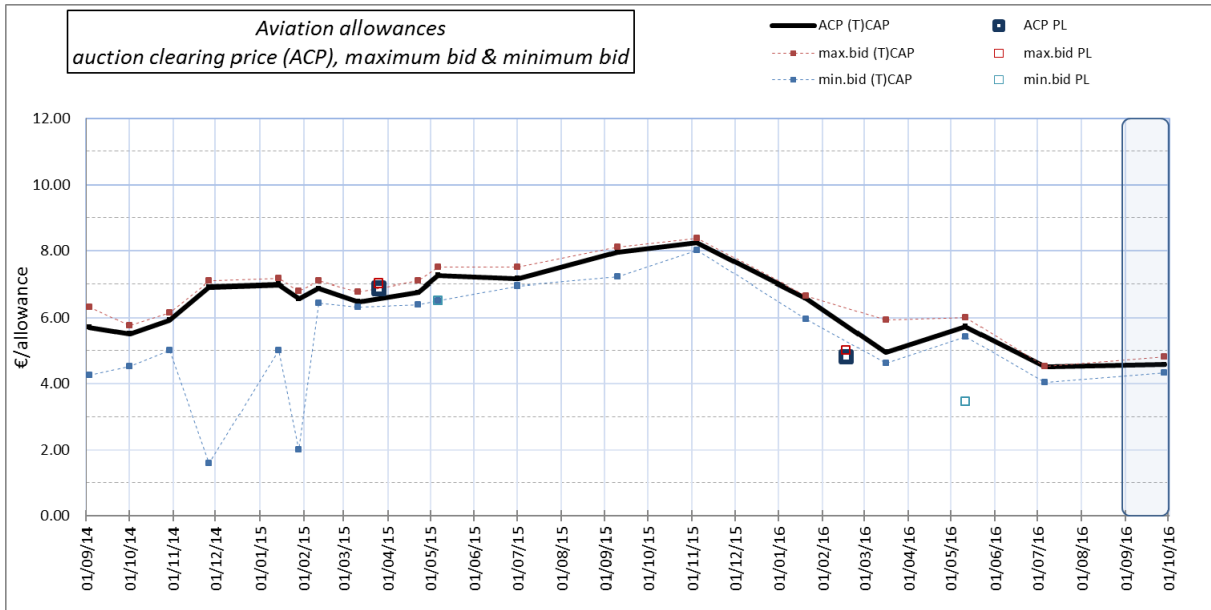
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>17</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
September 2016	683 500	1 993 000	3 123 595	2.9	11.0	5.0	4.57
August 2016	-	-	-	-	-	-	-
July 2016	683 500	2 539 000	3 068 915	3.7	10.0	4.0	4.49
June 2016	-	-	-	-	-	-	-
May 2016	683 500	3 140 500	3 909 620	4.6	11.0	5.0	5.72
April 2016	-	-	-	-	-	-	-
March 2016	683 500	2 625 500	3 376 490	3.8	8.0	3.0	4.94
February 2016	120 000	1 663 000	576 000	13.9	12.0	2.0	4.80
January 2016	683 500	3 866 000	4 490 595	5.7	12.0	5.0	6.57
December 2015	-	-	-	-	-	-	-
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
<b>2015 total</b>	<b>11,641,000</b>	<b>39,026,000</b>	<b>81,846,705</b>	<b>3.4</b>	<b>11.0</b>	<b>7.5</b>	<b>7.03</b>
<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).

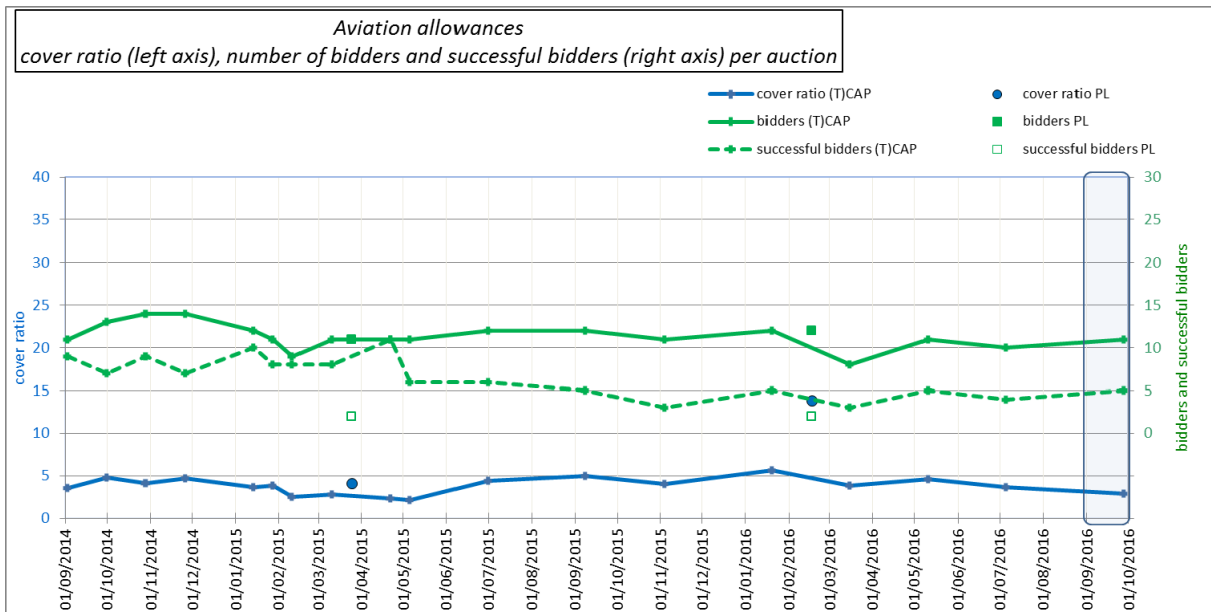
<sup>16</sup> See also the regulatory update published by the Commission on 29 July 2014; [http://ec.europa.eu/clima/news/articles/news\\_2014072901\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm).

<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>**

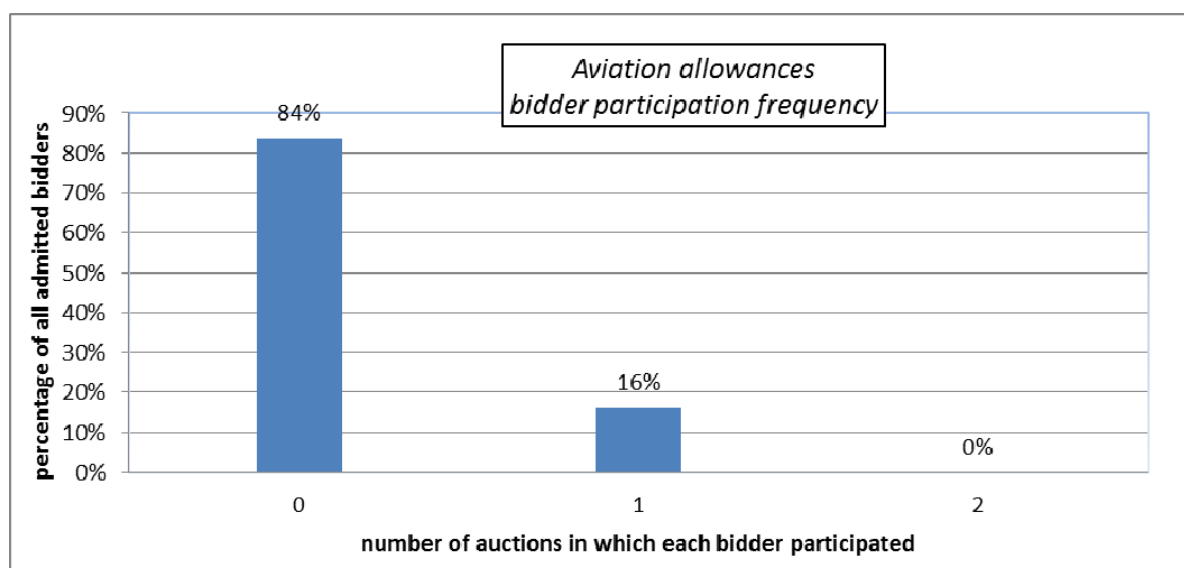


**Graph 9: Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



<sup>18</sup> Auctions on behalf of Poland were held on the following days: 25/3/2015 and 17/2/2016.

**Graph 10: Aviation allowances – bidder participation frequency in September 2016**



### 1.2.2 Bidding behaviour – aviation allowances

Table 6 provides monthly data on the bids submitted from September 2015 to September 2016. 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 per auction over the month <sup>20</sup>	standard deviation of total volume bid per bidder per auction 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>
September 2016	1	11	1 993 000	181 182	181 182	139 137	31	2.8 <sup>++</sup>	64 290
August 2016	-	-	-	-	-	-	-	-	-
July 2016	1	10	2 539 000	253 900	253 900	194 273	25	2.5 <sup>++</sup>	101 560
June 2016	-	-	-	-	-	-	-	-	-
May 2016	1	11	3 140 500	285 500	285 500	277 449	41	3.7 <sup>++</sup>	76 598
April 2016	-	-	-	-	-	-	-	-	-
March 2016	1	8	2 625 500	328 188	328 187	271 282	33	4.1 <sup>++</sup>	79 561
February 2016	1	12	1 663 000	138 583	138 583	126 140	40	3.3 <sup>++</sup>	41 575
January 2016	1	12	3 866 000	322 167	322 167	234 168	45	3.8 <sup>++</sup>	85 911
December 2015	-	-	-	-	-	-	-	-	-
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

++: 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.



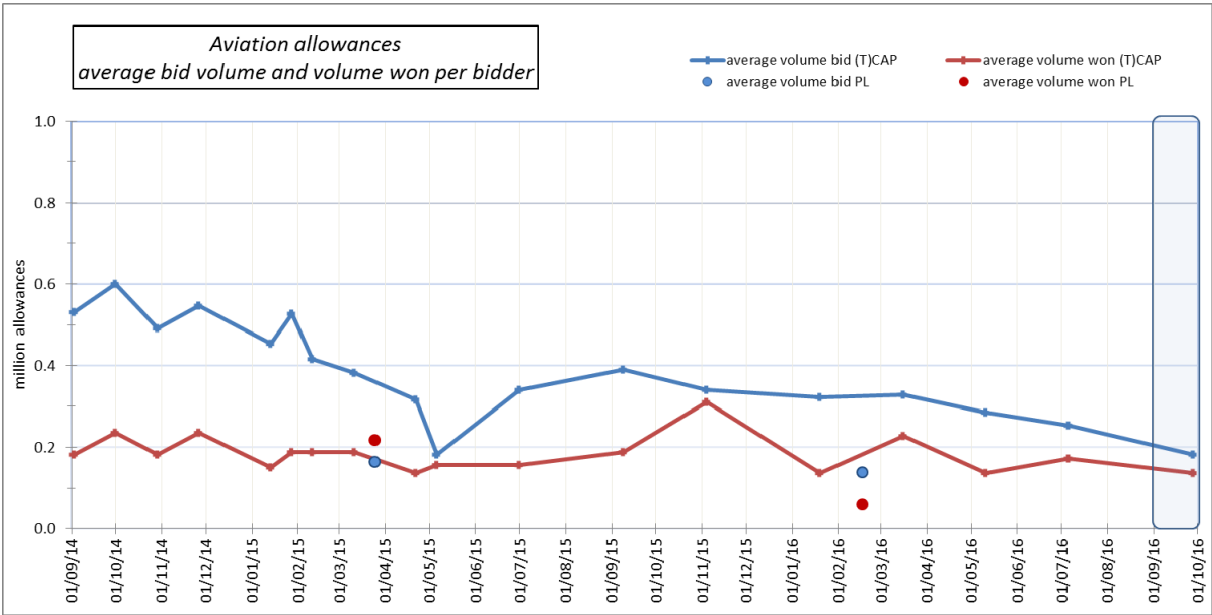
Table 7 provides monthly data on successful bids from September 2015 to September 2016. See also Graph 11.

**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
September 2016	1	5	683 500	136 700	136 700	73 380	8
August 2016	-	-	-	-	-	-	-
July 2016	1	4	683 500	170 875	170 875	106 277	4
June 2016	-	-	-	-	-	-	-
May 2016	1	5	683 500	136 700	136 700	87 650	8
April 2016	-	-	-	-	-	-	-
March 2016	1	3	683 500	227 833	227 833	199 581	7
February 2016	1	2	120 000	60 000	60 000	40 000	2
January 2016	1	5	683 500	136 700	136 700	32 366	6
December 2015	-	-	-	-	-	-	-
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

(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**



<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.

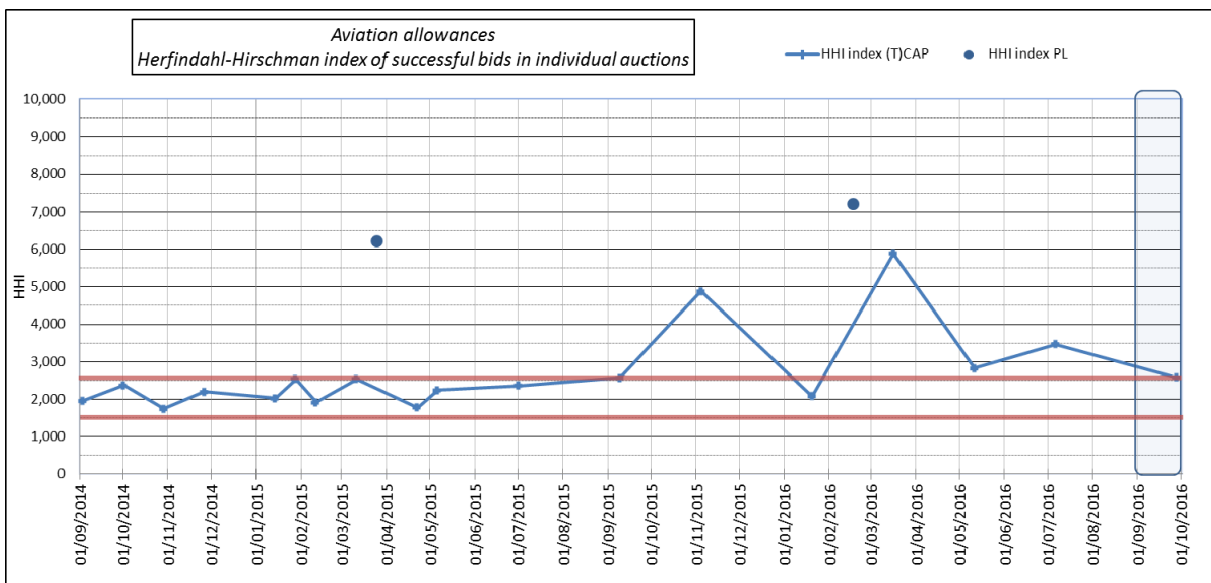
### 1.2.3 Type of bidders – aviation allowances

In September 2016 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 September 2016

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 September 2016, 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>							111
Participants eligible to bid in the auctions	49	1	9	4	0	5	68
(Of which:) Participants eligible to bid in the auctions on behalf of clients	-	-	1	2	-	1	4
(Of which:) <i>Auction-only access</i>	2	0	1	0	0	1	4

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

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*.

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 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.

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

#### **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: 30/01/2017**

## 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	A short-term measure to postpone 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.
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> .
Common auction platform	Auction platform appointed pursuant to Article 26(1) or (2) of the <i>Auctioning Regulation</i> . The <i>common auction platform</i> appointed pursuant to Article 26(2) of the <i>Auctioning Regulation</i> (also referred to as transitional common auction platform or TCAP) conducted auctions until 18 August 2016. The <i>common auction platform</i> referred to as the second common auction platform or CAP2 was appointed pursuant to Article 26(1) of the <i>Auctioning Regulation</i> on 13 July 2016 until July 2021.

## Annex 1 Auction revenues per Member State until September 2016 (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 – August 2016	September 2016	12 November 2012 – August 2016	September 2016	12 November 2012 – September 2016
Austria	234 023 535	4 669 920	3 982 415	93 685	242 769 555
Belgium	419 758 380	8 476 920	5 253 620	107 395	433 596 315
Bulgaria	288 035 635	6 751 080	1 308 115	36 560	296 131 390
Croatia	99 641 050	1 598 940	598 750	22 850	101 861 590
Cyprus	2 359 150	-	1 990 460	57 125	4 406 735
Czech Republic	324 313 010	9 238 320	1 891 140	47 985	335 490 455
Denmark	207 848 210	4 162 320	4 386 705	107 395	216 504 630
Estonia	62 134 075	1 878 120	224 920	6 855	64 243 970
Finland	281 142 880	5 608 980	3 343 675	84 545	290 180 080
France	921 377 145	18 172 080	24 521 590	482 135	964 552 950
Greece	579 879 175	11 522 520	7 024 755	196 510	598 622 960
Hungary	219 081 300	4 999 860	1 464 410	38 845	225 584 415
Ireland	154 131 835	3 147 120	3 420 340	84 545	160 783 840
Italy	1 622 080 935	31 928 040	22 371 685	571 250	1 676 951 910
Latvia	45 068 315	939 060	770 135	20 565	46 798 075
Lithuania	82 373 155	1 649 700	398 615	11 425	84 432 895
Luxemburg	20 049 275	431 460	899 010	9 140	21 388 885
Malta	16 908 450	355 320	777 480	22 850	18 064 100
The Netherlands	562 660 725	11 217 960	9 847 475	146 240	583 872 400
Poland	587 438 565	-	3 558 480	-	590 997 045
Portugal	294 895 470	5 837 400	4 705 335	114 250	305 552 455
Romania	581 950 500	15 228 000	2 224 210	63 980	599 466 690
Slovak Republic	258 723 695	5 126 760	274 470	6 855	264 131 780
Slovenia	74 454 930	1 472 040	206 035	4 570	76 137 575
Spain	1 453 603 445	28 628 640	25 948 905	644 370	1 508 825 360
Sweden	149 766 890	2 944 080	5 330 105	141 670	158 182 745
<b>TOTAL</b>	<b>9 543 699 730</b>	<b>185 984 640</b>	<b>136 722 835</b>	<b>3 123 595</b>	<b>9 869 530 800</b>

## Annex 2 Results of individual auctions on behalf of participating Member States and Poland in September 2016

(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 - September 2016																			
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
05/09/2016	4.02	3.45	4.75	4.02	4.03	3 664 000	6 705 000	1.8	18	16	14 729 280	81	47	4.5	82 778	372 500	402 801	229 000	212 908
06/09/2016	3.94	3.45	4.20	3.89	3.89	3 664 000	10 449 000	2.9	21	11	14 436 160	81	22	3.9	129 000	497 571	789 935	333 091	425 181
08/09/2016	4.02	3.45	4.20	3.97	3.97	3 664 000	9 723 000	2.7	21	15	14 729 280	75	22	3.6	129 640	463 000	811 588	244 267	415 321
12/09/2016	3.94	3.45	4.18	3.96	3.96	3 664 000	7 730 000	2.1	20	20	14 436 160	68	46	3.4	113 676	386 500	682 752	183 200	185 107
13/09/2016	3.97	3.86	4.49	3.99	3.97	3 664 000	6 035 000	1.7	17	12	14 546 080	58	29	3.4	104 052	355 000	350 301	305 333	361 672
15/09/2016	3.94	3.45	4.15	3.92	3.92	3 664 000	8 230 000	2.3	18	13	14 436 160	69	24	3.8	119 275	457 222	784 850	281 846	337 554
19/09/2016	4.23	3.45	4.75	4.22	4.22	3 664 000	6 616 000	1.8	15	12	15 498 720	54	20	3.6	122 519	441 067	465 551	305 333	531 286
20/09/2016	4.30	3.45	5.00	4.31	4.31	3 664 000	5 192 000	1.4	20	17	15 755 200	54	31	2.7	96 148	259 600	311 251	215 529	295 525
22/09/2016	4.33	3.45	4.51	4.27	4.28	3 664 000	7 875 000	2.2	20	9	15 865 120	59	17	3.0	133 475	393 750	405 940	407 111	308 786
26/09/2016	4.50	3.45	4.75	4.45	4.48	3 664 000	8 694 000	2.4	19	16	16 488 000	98	43	5.2	88 714	457 579	474 482	229 000	279 358
27/09/2016	4.51	3.45	4.75	4.45	4.50	3 664 000	7 663 000	2.1	19	16	16 524 640	78	38	4.1	98 244	403 316	460 901	229 000	255 368
29/09/2016	5.06	4.80	5.50	5.05	5.04	3 664 000	7 307 000	2.0	13	10	18 539 840	48	16	3.7	152 229	562 077	625 632	366 400	399 748
<b>Monthly Value</b>	-	-	-	-	-	43 968 000	92 219 000	-	27 <sup>(1)</sup>	27 <sup>(1)</sup>	185 984 640	823	355	3.7 <sup>(2)</sup>	112 052 <sup>(3)</sup>	417 281 <sup>(4)</sup>	584 075 <sup>(5)</sup>	263 281 <sup>(6)</sup>	339 773 <sup>(7)</sup>
<b>Monthly minimum</b>	3.94	3.45	4.15	-	-	3 664 000	5 192 000	1.4	13	9	14 436 160	48	16	2.7	82 778	259 600	-	183 200	-
<b>Monthly average</b>	4.23	3.60	4.60	4.21 <sup>++</sup>	-	3 664 000 <sup>++</sup>	7 684 917	2.1	18.4	13.9	15 498 720 <sup>++</sup>	68.6	29.6	3.7 <sup>++</sup>	114 146	420 765	-	277 426	-
<b>Monthly maximum</b>	5.06	4.80	5.50	-	-	3 664 000	10 449 000	2.9	21	20	18 539 840	98	47	5.2	152 229	562 077	-	407 111	-

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 – September 2016

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
28/09/2016	4.57	4.32	4.80	4.50	4.50	683 500	1 993 000	2.9	11	5	3 123 595	31	8	2.8	64 290	181 182	139 137	136 700	73 380
<b>Monthly Value</b>	-	-	-	-	-	683 500	1 993 000	2.9	11 <sup>(1)</sup>	5 <sup>(1)</sup>	3 123 595	31	8	2.8 <sup>(2)</sup>	64 290 <sup>(3)</sup>	181 182 <sup>(4)</sup>	139 137 <sup>(5)</sup>	136 700 <sup>(6)</sup>	73 380 <sup>(7)</sup>
<b>Monthly minimum</b>	4.57	4.32	4.80	4.50	-	683 500	1 993 000	2.9	11	5	3 123 595	31	8	2.8	64 290	181 182	-	136 700	-
<b>Monthly average</b>	4.57	4.32	4.80	4.50 <sup>++</sup>	-	683 500 <sup>++</sup>	1 993 000	2.9	11.0	5.0	3 123 595	31.0	8.0	2.8	64 290	181 182	-	136 700	-
<b>Monthly maximum</b>	4.57	4.32	4.80	4.50	-	683 500	1 993 000	2.9	11	5	3 123 595	31	8	2.8	64 290	181 182	-	136 700	-

Note: volume variables reported in tCO2, 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>

