



# AUCTIONS BY THE TRANSITIONAL COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

May 2016

# Auctions by the *Transitional Common Auction Platform*

## May 2016

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

**Auction dates/reporting period:**

*General Allowances:*

3, 9, 10, 12, 17, 19, 23, 24, 25(PL)<sup>1</sup>, 31 May 2016;

*Aviation Allowances:*

11 May 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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<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 May 2016. In that period, EEX, in its capacity as the common auction platform, auctioned a total of 30 825 000 *general allowances* in 9 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 *Transitional Common Auction Platform (TCAP)*. During this period EEX held one auction on behalf of Poland for 3 526 000 *general allowances* which, in accordance with the rules, EEX had to cancel because it would have cleared below the price on the secondary market prevailing during and immediately before the bidding window.

All auctions were held successfully, except for the auction of 25 May which was cancelled due to the reserve price not being met, and no irregularities or deviations from the requirements were observed. The table below contains a summary of the information concerning the conducted auctions<sup>2</sup>.

### ***The May 2016 auctions at a glance:***

	<b><i>General Allowances</i></b> May	<b><i>Aviation Allowances</i></b> May
<b>General</b>		
Number of auctions	9	1
Total volume auctioned	30 825 000	683 500
Amount raised from the auctions (€)	181 251 000	3 909 620
Average Auction Clearing Price (€/allowance)	5.88	5.72
Total bid volume	56 918 000	3 140 500
Average <i>Cover ratio</i>	1.85	4.59
<b>Participation</b>		
Number of eligible bidders	69	69
Number of participating bidders <sup>(1)</sup>	28	11
Number of successful bidders <sup>(1)</sup>	26	5
Average number of bidders per auction	16.8	11
Average number of successful bidders per auction	13.0	5
<b>Auction data</b>		
Average total volume bid per bidder per auction	382 049	285 500
Average bid size (volume per bid)	113 975	76 598
Average volume won per bidder per auction	283 328	136 700
Average range of bids (€)	2.64	0.60

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

<sup>2</sup> The data pertaining to the cancelled auction of 25 May was not considered when presenting monthly figures.

## 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 May 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>3</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 May 2016 are EUR 8 981 293 055. 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 May 2016 are EUR 133 653 920. 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 May 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<sup>4</sup>.

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<sup>3</sup> Iceland, Liechtenstein and Norway.

<sup>4</sup> The data pertaining to the cancelled auction of 25 May was not considered when presenting monthly figures.

## 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 May 2015 to May 2016 is provided in Table 1.

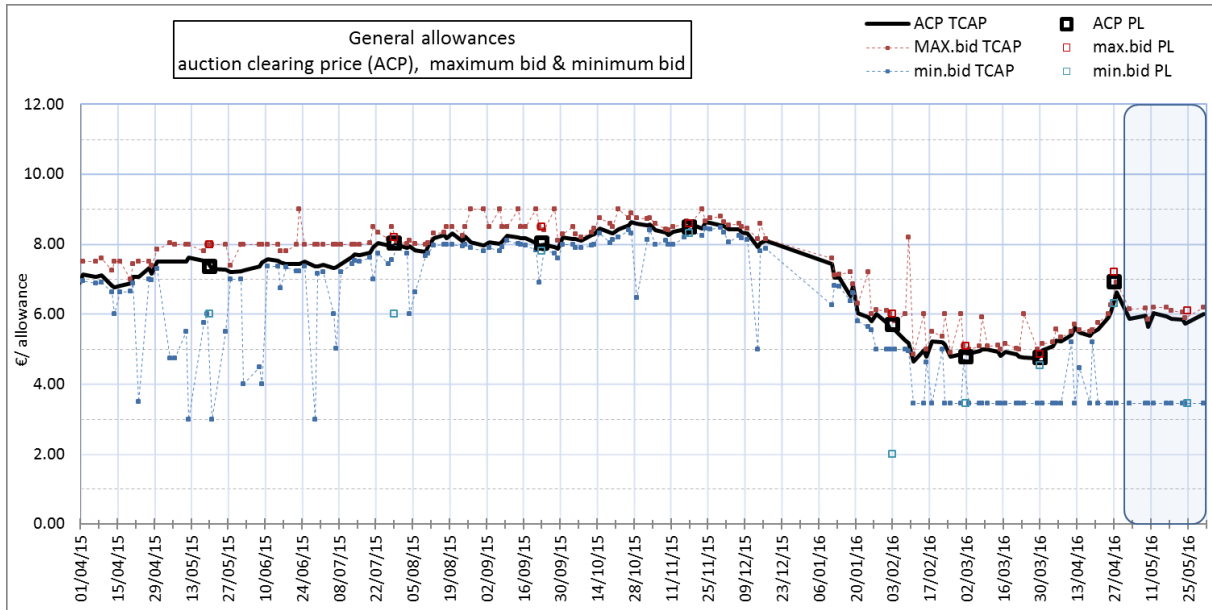
**Table 1:** General allowances - main statistics on the results of the auctions per month

Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>5</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
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
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
<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>

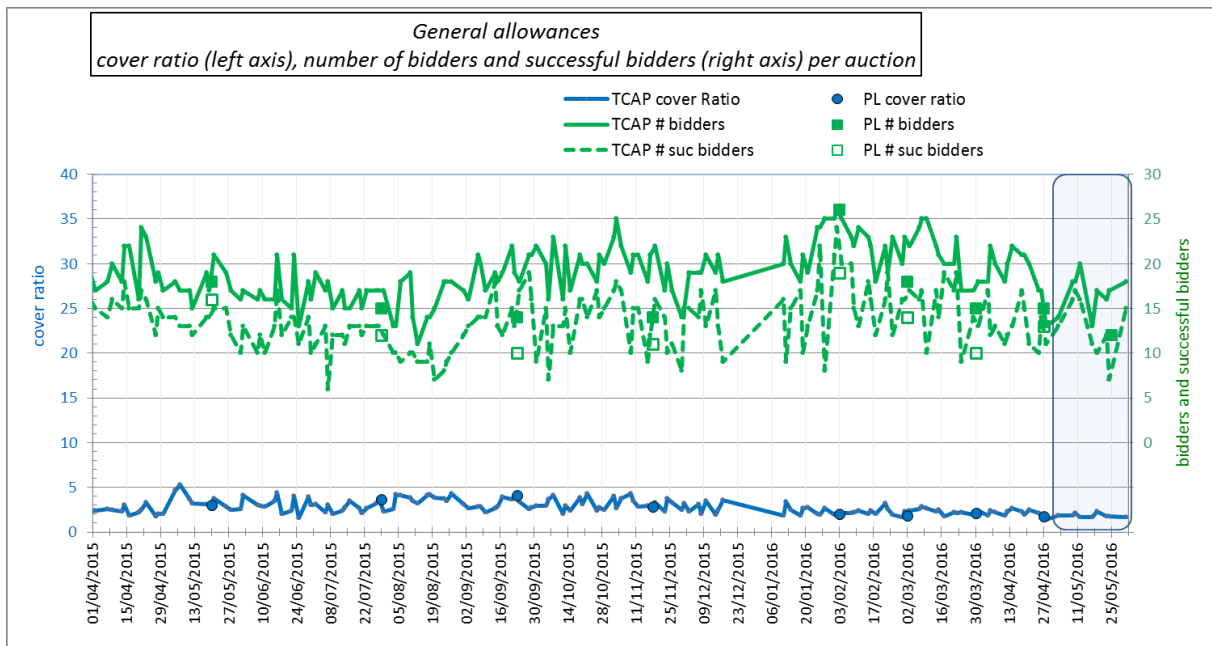
During May 2016, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for *general allowances* at the closure of the auction *bidding window* was on average EUR -0.03, and this difference had a standard deviation of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

<sup>5</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>6</sup>



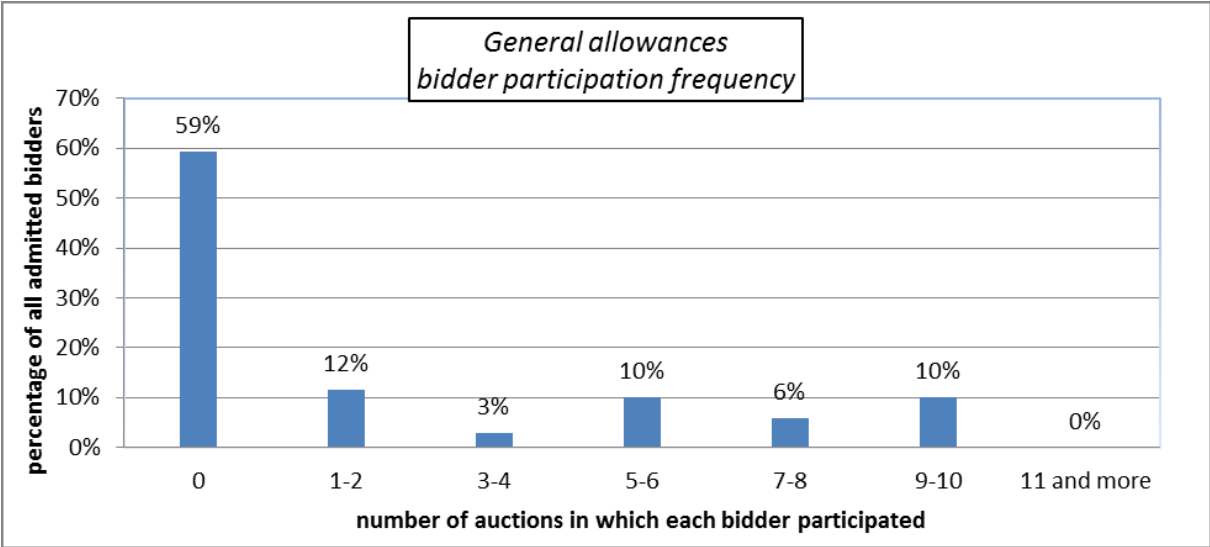
**Graph 2:** General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



There were 69 eligible bidders in May 2016. Out of these, 28 different bidders participated in the auctions in May 2016. Graph 3A indicates the participation frequency in May 2016.

<sup>6</sup> Auctions on behalf of Poland were held on the following days: 20/5/2015, 29/7/2015, 23/9/2015, 18/11/2015, 3/2/2016, 2/3/2016, 30/3/2016, 27/4/2016 and 25/5/2016.

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





### 1.1.2. Bidding behaviour - general allowances

Table 2 provides monthly data on the bids submitted from May 2015 to May 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>7</sup>	Average total volume bid per bidder per auction over the month <sup>8</sup>	standard deviation of total volume bid per bidder per auction over the month <sup>9</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>10</sup>	Average bid size <sup>11</sup>
May 2016	9	28	56 918 000	382 049	376 940	435 872	507	3.4 <sup>++</sup>	113 975
April 2016	13	29	93 734 000	384 877	384 156	468 364	850	3.5 <sup>++</sup>	111 049
March 2016	15	35	117 768 000	384 552	379 897	457 186	1147	3.7 <sup>++</sup>	105 729
February 2016	14	30	106 282 000	338 333	334 220	461 502	1104	3.5 <sup>++</sup>	98 299
January 2016	9	32	74 394 000	386 086	383 474	547 998	692	3.6 <sup>++</sup>	110 917
December 2015	8	31	64 626 500	433 690	427 990	543 279	538	3.6 <sup>++</sup>	119 573
November 2015	14	30	130 488 000	483 238	476 234	628 078	923	3.4 <sup>++</sup>	142 930
October 2015	13	32	116 213 500	455 083	453 959	576 354	862	3.4 <sup>++</sup>	134 450
September 2015	14	30	126 790 000	492 634	483 931	641 235	917	3.5 <sup>++</sup>	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

++: indicates simple average

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

<sup>7</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>8</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>9</sup> Standard deviation of total volume bid per bidder in each auction over the month.

<sup>10</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>11</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.

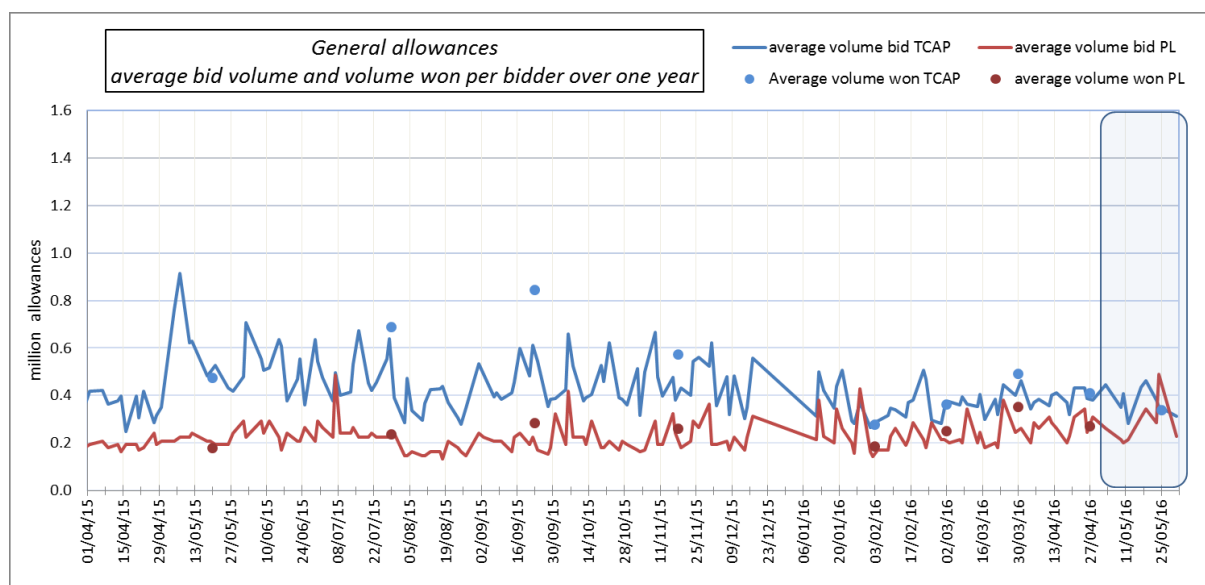
Table 3 provides monthly data on successful bids from May 2015 to May 2016. See also Graph 4.

**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>12</sup>	Average volume won per bidder per auction over the month <sup>13</sup>	Standard deviation of volume won per bidder per auction over the month <sup>14</sup>	Total monthly nr of successful bids
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
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

(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>15</sup>



<sup>12</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>13</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).

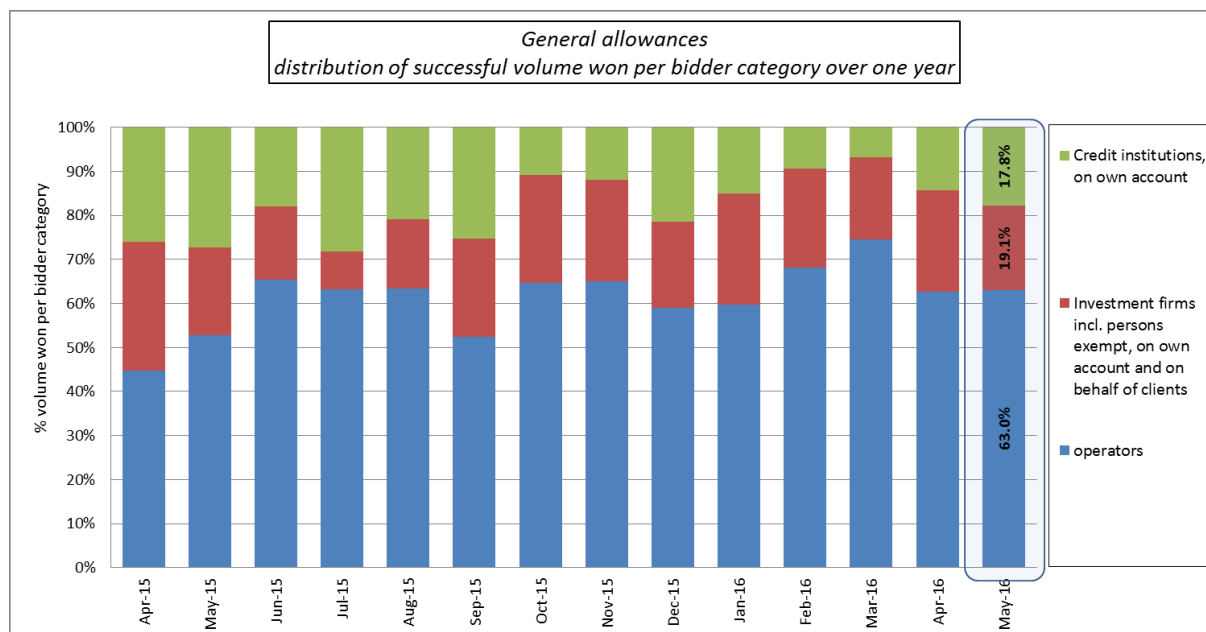
<sup>14</sup> Standard deviation of volume won per bidder in each auction over the month.

<sup>15</sup> Auctions on behalf of Poland were held on the following days: 20/5/2015, 29/7/2015, 23/9/2015, 18/11/2015, 3/2/2016, 2/3/2016, 30/3/2016, 27/4/2016 and 25/5/2016.

### 1.1.3. Type of bidders - general allowances

In May 2016, almost all volume bid was done on own account, with 2.76% of the volume submitted by intermediaries on behalf of a client<sup>16</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

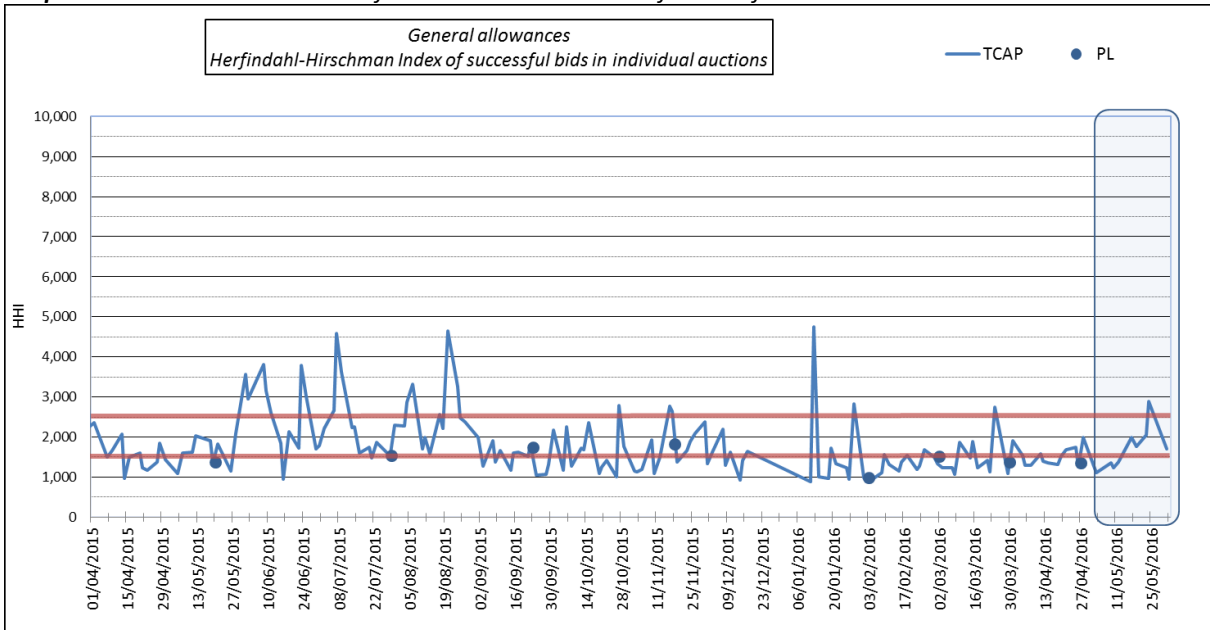
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
May 2016	5.09%	Operators (including Business groupings)	63.0%	8.0 % points
		Investment firms (including persons exempt)	19.1%	11.2 % points
		Credit institutions	17.8%	11.7 % points

<sup>16</sup> The data related to bidding on behalf of clients reflects the self-assessment of the respective trader.

### 1.1.4. Concentration - general allowances

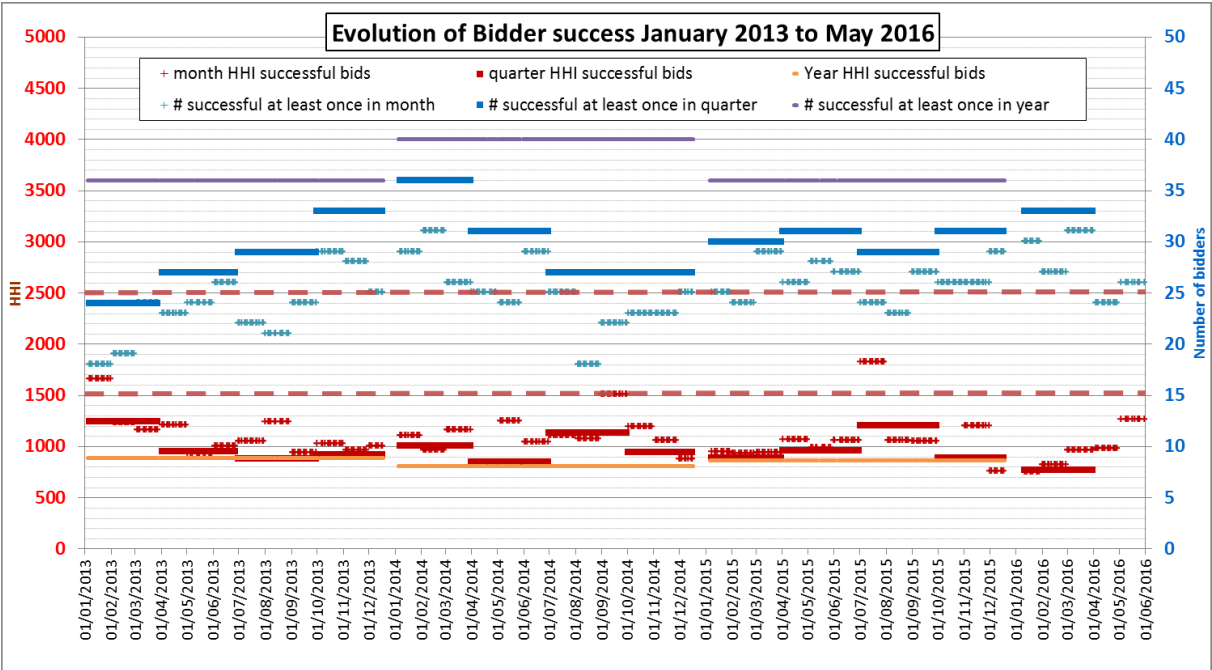
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration<sup>17</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is ‘not-concentrated’, between 1 500 and 2 500 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>17</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>18</sup>. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014<sup>19</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 May 2015 to May 2016 is provided in Table 5.

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

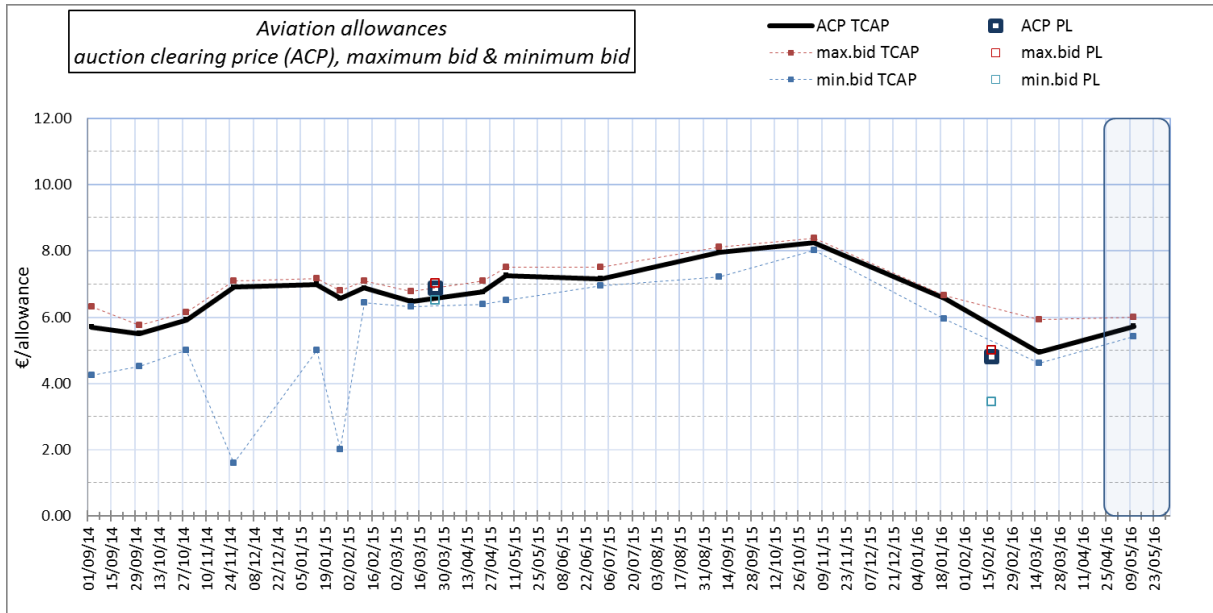
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>20</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
May 2016	683 500	3 140 500	3 909 620	4.6	11.0	5.0	5.72
April 2016	-	-	-	-	-	-	-
March 2016	683 500	2 625 500	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
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
<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>18</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).

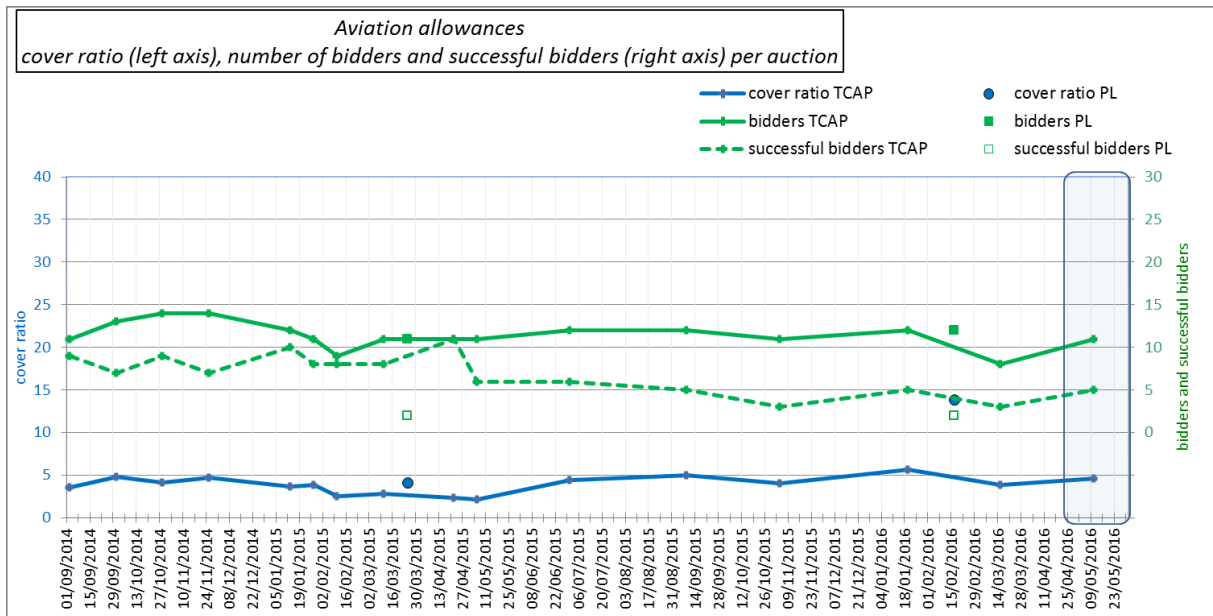
<sup>19</sup> See also the regulatory update published by the Commission on 29 July 2014; [http://ec.europa.eu/clima/news/articles/news\\_2014072901\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm).

<sup>20</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>21</sup>**

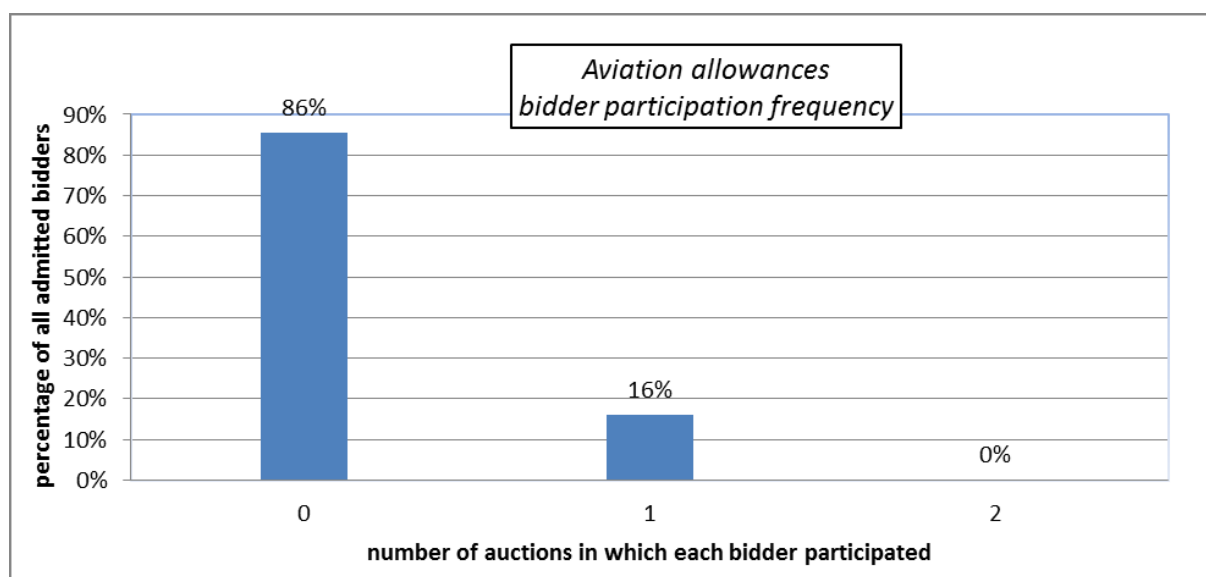


**Graph 9: Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



<sup>21</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 May 2016**



### 1.2.2 Bidding behaviour – aviation allowances

Table 6 provides monthly data on the bids submitted from May 2015 to May 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>22</sup>	Average total volume bid per bidder per auction over the month <sup>23</sup>	standard deviation of total volume bid per bidder per auction over the month <sup>24</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>25</sup>	Average bid size <sup>26</sup>
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
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

++: indicates simple average

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

<sup>22</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>23</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>24</sup> Standard deviation of total volume bid per bidder in each auction over the month.

<sup>25</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>26</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.



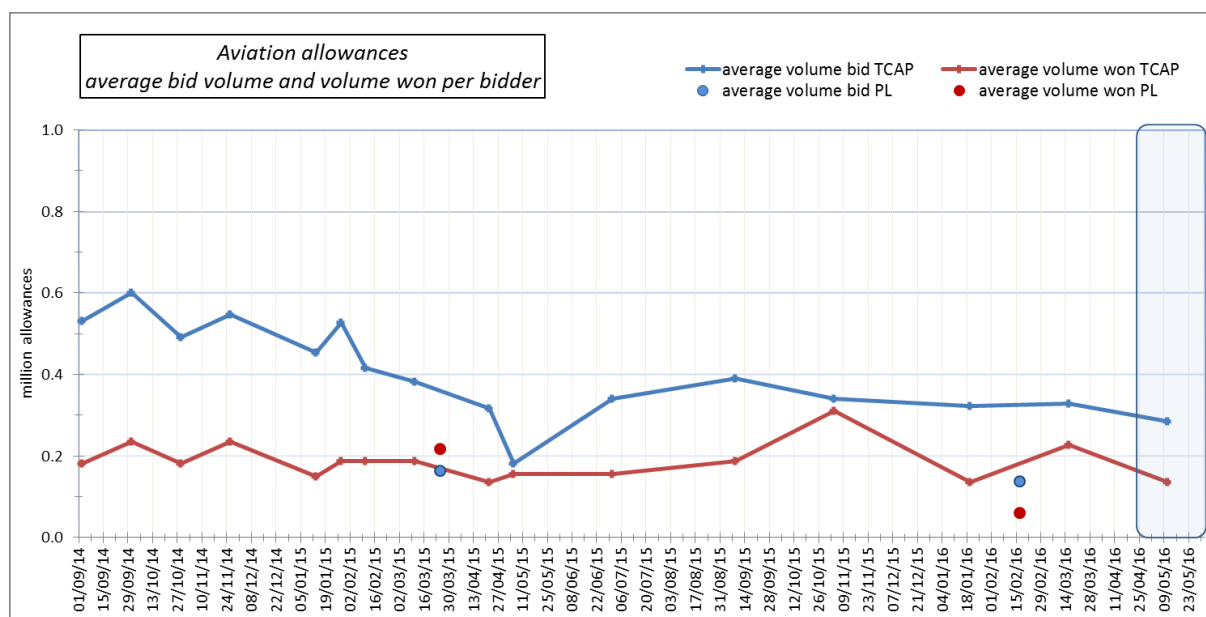
Table 7 provides monthly data on successful bids from May 2015 to May 2016. See also Graph 11.

**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>27</sup>	Average volume won per bidder per auction over the month <sup>28</sup>	Standard deviation of volume won per bidder per auction over the month <sup>29</sup>	Total monthly nr of successful bids
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
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

(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>27</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>28</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>29</sup> Standard deviation of volume won per bidder in each auction over the month.

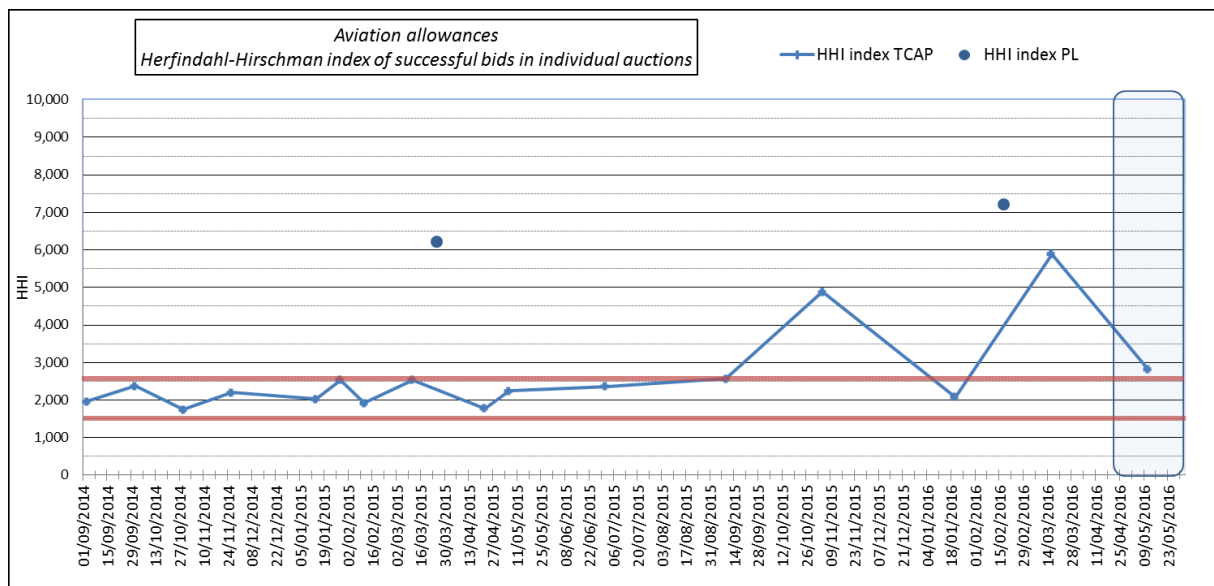
### 1.2.3 Type of bidders – aviation allowances

In May 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>30</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>30</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 May 2016

Most of the active participants in the secondary carbon market are assumed to also have been admitted to bid in the auctions<sup>31</sup>.

*Table 8: Eligible participants to the auctions in May 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	47	1	10	5	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

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>31</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.

The auction of 25 May was cancelled due to the reserve price not being met.

### **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: 16/09/2016**

## 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 May 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 – April 2016	May 2016	12 November 2012 – April 2016	May 2016	12 November 2012 – May 2016
Austria	216 988 685	4 498 200	3 773 110	117 260	225 377 255
Belgium	388 694 830	8 202 600	5 013 685	134 420	402 045 535
Bulgaria	263 385 205	6 509 160	1 226 435	45 760	271 166 560
Croatia	93 829 160	1 534 680	547 700	28 600	95 940 140
Cyprus	2 359 150	-	1 862 835	71 500	4 293 485
Czech Republic	290 042 900	9 049 320	1 783 935	60 060	300 936 215
Denmark	192 416 640	4 074 840	4 146 770	134 420	200 772 670
Estonia	55 320 135	1 799 280	209 605	8 580	57 337 600
Finland	260 701 060	5 397 840	3 154 790	105 820	269 359 510
France	854 039 385	17 781 120	23 444 435	603 460	895 868 400
Greece	537 191 845	11 271 960	6 585 725	245 960	555 295 490
Hungary	200 643 580	4 868 640	1 377 625	48 620	206 938 465
Ireland	142 708 465	3 016 440	3 231 455	105 820	149 062 180
Italy	1 503 419 695	31 328 640	21 095 435	715 000	1 556 558 770
Latvia	41 861 755	846 720	724 190	25 740	43 458 405
Lithuania	76 360 855	1 587 600	373 090	14 300	78 335 845
Luxemburg	18 646 405	370 440	878 590	11 440	19 906 875
Malta	15 705 990	317 520	726 430	28 600	16 778 540
The Netherlands	521 576 675	10 848 600	9 520 755	183 040	542 129 070
Poland	530 185 140	-	3 558 480	-	533 743 620
Portugal	273 251 190	5 715 360	4 450 085	143 000	283 559 635
Romania	525 635 290	14 870 520	2 081 270	80 080	542 667 160
Slovak Republic	239 885 155	4 974 480	259 155	8 580	245 127 370
Slovenia	69 043 860	1 428 840	195 825	5 720	70 674 245
Spain	1 347 313 720	28 074 060	24 509 295	806 520	1 400 703 595
Sweden	138 835 285	2 884 140	5 013 595	177 320	146 910 340
<b>TOTAL</b>	<b>8 800 042 055</b>	<b>181 251 000</b>	<b>129 744 300</b>	<b>3 909 620</b>	<b>9 114 946 975</b>

## Annex 2 Results of individual auctions on behalf of participating Member States and Poland in May 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 - May 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
03/05/2016	5.88	3.45	6.15	5.72	5.92	3 425 000	6 225 000	1.8	14	13	20 139 000	54	39	3.9	115 278	444 643	534 398	263 462	174 021
09/05/2016	5.96	3.45	6.18	5.80	5.97	3 425 000	6 332 000	1.8	18	16	20 413 000	59	35	3.3	107 322	351 778	431 200	214 063	232 169
10/05/2016	5.65	3.45	5.85	5.52	5.64	3 425 000	7 371 000	2.2	18	17	19 351 250	69	32	3.8	106 826	409 500	522 956	201 471	209 707
12/05/2016	6.04	3.45	6.20	5.88	6.04	3 425 000	5 681 000	1.7	20	16	20 687 000	68	32	3.4	83 544	284 050	250 641	214 063	236 100
17/05/2016	5.94	3.45	6.20	5.78	5.95	3 425 000	5 677 000	1.7	13	11	20 344 500	58	35	4.5	97 879	436 692	492 750	311 364	338 896
19/05/2016	5.87	3.45	6.10	5.65	5.84	3 425 000	7 887 000	2.3	17	10	20 104 750	53	17	3.1	148 811	463 941	565 222	342 500	301 426
23/05/2016	5.85	3.45	6.05	5.65	5.84	3 425 000	6 096 000	1.8	16	12	20 036 250	48	22	3.0	127 000	381 000	363 260	285 417	345 016
24/05/2016	5.73	3.45	5.90	5.51	5.68	3 425 000	6 018 000	1.8	17	7	19 625 250	46	14	2.7	130 826	354 000	393 136	489 286	493 059
31/05/2016	6.00	3.45	6.20	5.80	6.00	3 425 000	5 631 000	1.6	18	15	20 550 000	52	30	2.9	108 288	312 833	269 959	228 333	283 431
<b>Monthly Value</b>	-	-	-	-	-	30 825 000	56 918 000	-	28 <sup>(1)</sup>	26 <sup>(1)</sup>	181 251 000	507	256	3.4 <sup>(2)</sup>	112 264 <sup>(3)</sup>	376 940 <sup>(4)</sup>	435 872 <sup>(5)</sup>	263 462 <sup>(6)</sup>	292 574 <sup>(7)</sup>
<b>Monthly minimum</b>	5.65	3.45	5.85	-	-	3 425 000	5 631 000	1.6	13	7	19 351 250	30	14	2.7	83 544	284 050	-	201 471	-
<b>Monthly average</b>	5.88	3.45	6.09	5.70 <sup>++</sup>	-	3 425 000 <sup>++</sup>	6 324 222	1.8	16.8	13.0	20 139 000 <sup>++</sup>	56.3	28.4	3.4 <sup>++</sup>	113 975	382 049	-	283 328	-
<b>Monthly maximum</b>	6.04	3.45	6.20	-	-	3 425 000	7 887 000	2.3	20	17	20 687 000	69	39	4.5	148 811	463 941	-	342 500	-

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 – May 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
11/05/2016	5.72	5.40	6.00	5.64	5.64	683 500	3 140 500	4.59	11	5	3 909 620	41	8	3.7	76 598	285 500	277 449	136 700	87 650
<b>Monthly Value</b>	-	-	-	-	-	683 500	3 140 500	-	11 <sup>(1)</sup>	5 <sup>(1)</sup>	3 909 620	41	8	3.7 <sup>(2)</sup>	76 598 <sup>(3)</sup>	285 500 <sup>(4)</sup>	277 449 <sup>(5)</sup>	136 700 <sup>(6)</sup>	87 650 <sup>(7)</sup>
<b>Monthly minimum</b>	5.72	5.40	6.00	5.64	-	683 500	3 140 500	4.59	11	5	3 909 620	41	8	3.7	76 598	285 500	-	136 700	-
<b>Monthly average</b>	5.72	5.40	6.00	5.64 <sup>++</sup>	-	683 500 <sup>++</sup>	3 140 500	4.59	11.0	5.0	3 909 620 <sup>++</sup>	41	8.0	3.7 <sup>++</sup>	76 598	285 500	-	136 700	-
<b>Monthly maximum</b>	5.72	5.40	6.00	5.64	-	683 500	3 140 500	4.59	11	5	3 909 620	41	8	3.7	76 598	285 500	-	136 700	-

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>

