



# AUCTIONS BY THE COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

July to September 2017

# Auctions by the *Common Auction Platform*

## July, August, September 2017

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

**Member States:** This report has been prepared on behalf of the following Member States participating in the joint action: Austria, Belgium, Bulgaria, Republic of Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden (participating Member States), and Poland.

**Auction dates/reporting period:**

*General Allowances:*

3, 4, 5(PL)<sup>1</sup>, 6, 10, 11, 13, 17, 18, 19(PL), 20, 24, 25, 27 and 31 July 2017;

1, 2(PL), 3, 7, 8, 10, 14, 16(PL), 17, 21, 22, 24, 29, 30(PL) and 31 August 2017;

4, 5, 11, 12, 13(PL), 14, 18, 19, 21, 25, 26, 27(PL) and 28 September 2017;

*Aviation Allowances:*

27 September 2017

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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 2.8 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.

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

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 participating Member States and Poland assembling for publication the information provided by the common auction platform on a monthly basis for those Member States, in accordance with Article 10(4) of the ETS Directive.

**Methodology:** 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. EEX is consulted before each publication. Any data not directly related to the auctions is based only on public reports.

The report is in accordance with the template agreed with the participating Member States.

**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 and EEX's compliance with the specific rules and provisions applicable under European or national law. 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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## Introduction

The reports include data on the auctions performed by the *common auction platforms* on behalf of the *participating Member States* and Poland.

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 since 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<sup>2</sup>. Auctioning by CAP2 for Poland started as from 19 March 2017 following the conclusion of a bilateral agreement between EEX 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 *Common Auction Platform* by aggregating their volumes to those auctioned on behalf of the *participating Member States*. The preparations for this are on-going.

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<sup>2</sup> Due to the back-loading, no auctions were held for Poland from May to December 2014, the auctions restarted in January 2015. Due to transition between common auction platforms, no auctions were held for Poland between September 2016 and mid-March 2017.

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

## Executive summary

In the reporting period, EEX, in its capacity as the *Common Auction Platform (CAP2)*, conducted auctions of *general allowances* and *aviation allowances* for the *third trading period* on behalf of the *participating Member States*. During this period EEX held auctions for *general allowances* on behalf of Poland.

All auctions were held successfully, other than the auction of 7 September 2017 which has been cancelled pursuant to Article 7(6) of the Auctioning Regulation, and no irregularities or deviations from the requirements were observed. The table below contains a summary of the information concerning the conducted auctions.

### ***The July, August, September 2017 auctions at a glance:***

	<b>General Allowances</b>			<b>Aviation Allowances</b>		
	Jul	Aug	Sep	Jul	Aug	Sep
<b>General</b>				-	-	
Number of auctions	15	15	13	-	-	1
Total volume auctioned	65 113 500	32 863 500	60 852 000	-	-	1 078 000
Amount raised from the auctions (€)	341 754 690	185 438 370	410 530 020	-	-	7 233 380
Average Auction Clearing Price (€/allowance)	5.2	5.6	6.7	-	-	6.7
Total bid volume	185 402 000	108 340 500	157 826 500	-	-	2 875 000
Average <i>Cover ratio</i>	2.8	3.3	2.6	-	-	2.7
Monthly HHI	1 585	1 751	1 264	-	-	1 933
<b>Participation</b>				-	-	
Number of eligible bidders	67	68	69	-	-	69
Number of participating bidders <sup>(1)</sup>	33	32	33	-	-	7
Number of successful bidders <sup>(1)</sup>	29	29	32	-	-	6
Average number of bidders per auction	20.1	20.5	23.5	-	-	7
Average number of successful bidders per auction	14.1	12.1	16,8	-	-	6
<b>Auction data</b>						
Average total volume bid per bidder per auction	612 288	357 506	517 342	-	-	410 714
Average bid size (volume per bid)	156 480	86 606	126 746	-	-	65 341
Average volume won per bidder per auction	316 540	314 448	285 160	-	-	179 667
Average range of bids (€)	2.00	2.05	2.83	-	-	1.31

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

## 1. Results of the auctions

The total revenues from the auctions of *general allowances* accrued to the *participating Member States* and Poland from the start of the *Third trading period* auctions (November 2012) to June 2017 are EUR 12 812 520 000, and of *aviation allowances* EUR 150 800 800. Further 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 per auction covered by the present report is available in the EEX website<sup>4</sup>.

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>4</sup> <https://www.eex.com/en/products/environmental-markets/emissions-auctions/overview>

## 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 is provided in Table 1.

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

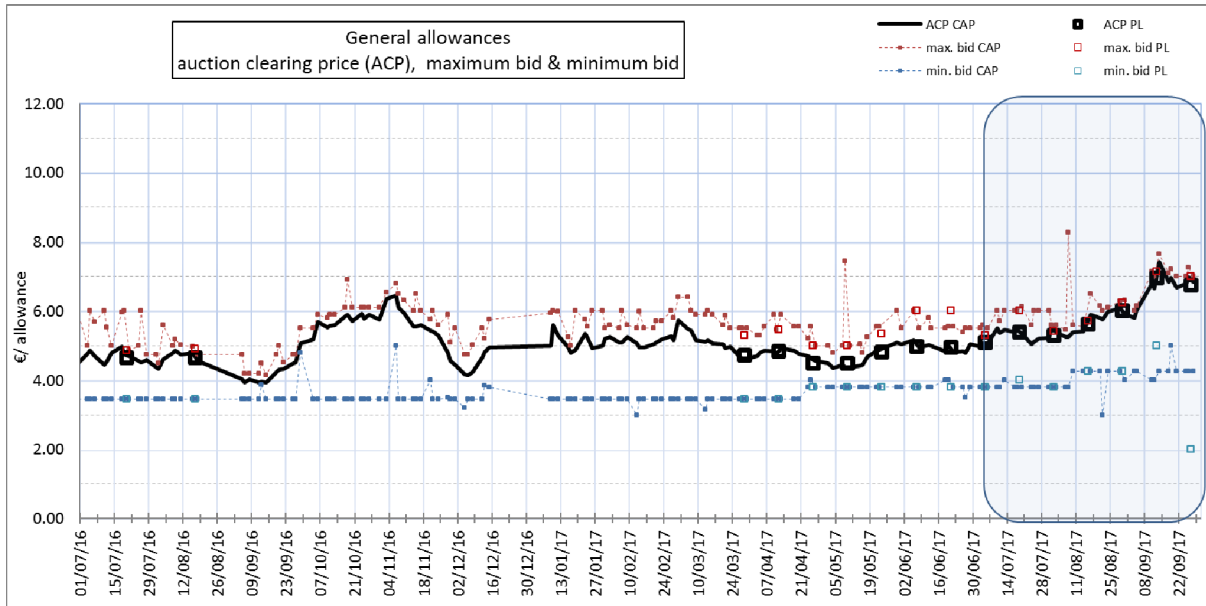
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>5</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
September 2017	60 852 000	157 826 500	410 530 020	2.6	23.5	16.8	6.75
August 2017	32 863 500	108 340 500	185 438 370	3.3	20.5	12.1	5.64
July 2017	65 113 500	185 402 000	341 754 690	2.9	20.1	14.1	5.25
June 2017	56 590 500	161 725 000	280 518 420	2.9	23.2	14.8	4.96
May 2017	56 590 500	133 833 000	259 992 315	2.4	20.2	14.8	4.59
April 2017	56 590 500	148 327 000	268 533 180	2.6	21.2	15.3	4.75
March 2017	61 138 000	168 711 500	239 624 145	2.8	21.1	15.6	5.05
February 2017	51 138 000	140 724 500	261 528 255	2.8	19.8	15.0	5.11
January 2017	46 876 500	142 746 000	308 415 180	3.0	19.7	13.1	5.11
December 2016	25 668 500	62 485 500	115 187 920	2.4	17.6	10.7	4.49
November 2016	43 968 000	100 554 000	245 707 840	2.3	17.3	13.6	5.59
October 2016	43 968 000	115 140 000	250 397 760	2.6	18.1	11.3	5.70
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
<b>2016 total</b>	<b>474,261,000</b>	<b>1,092,400,000</b>	<b>2,496,870,295</b>	<b>2.3</b>	<b>19.0</b>	<b>13.4</b>	<b>5.26</b>
<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 July, August, September 2017, 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 - 0.01, 0.02, - 0.03 respectively, and this difference had a standard deviation of EUR 0.03, 0.1, 0.06 respectively.

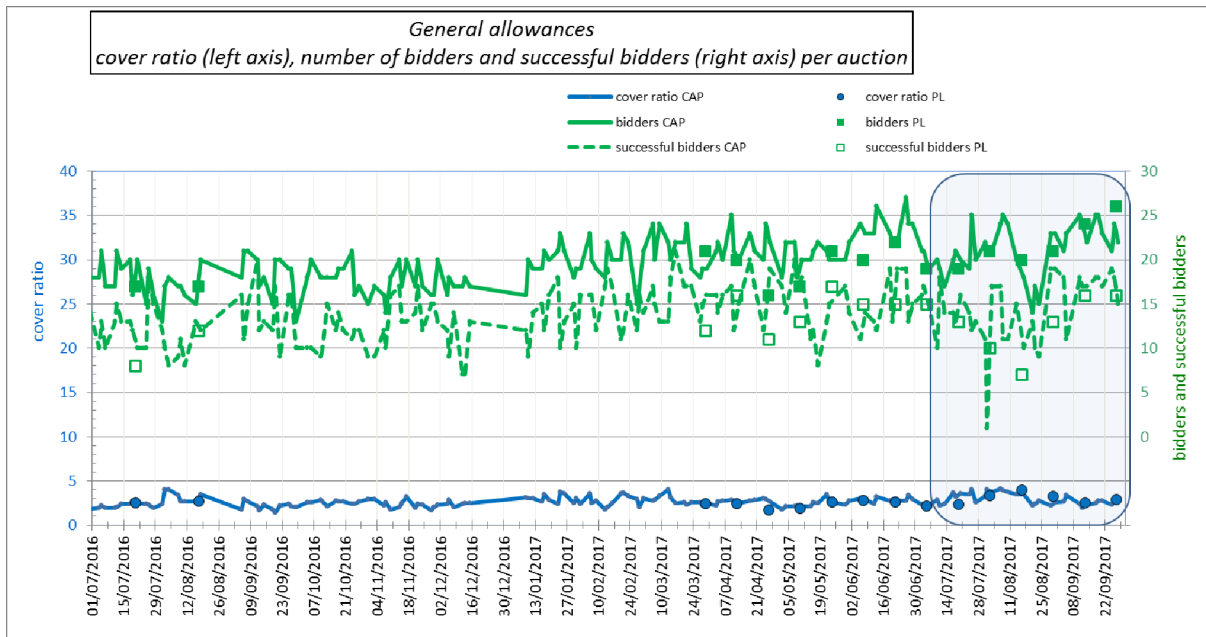
<sup>5</sup> Cover ratio is the ratio between the total bid volume and the auction volume.



**Graph 1: General allowances - auction clearing price (ACP), maximum bid & minimum bid<sup>6</sup>**



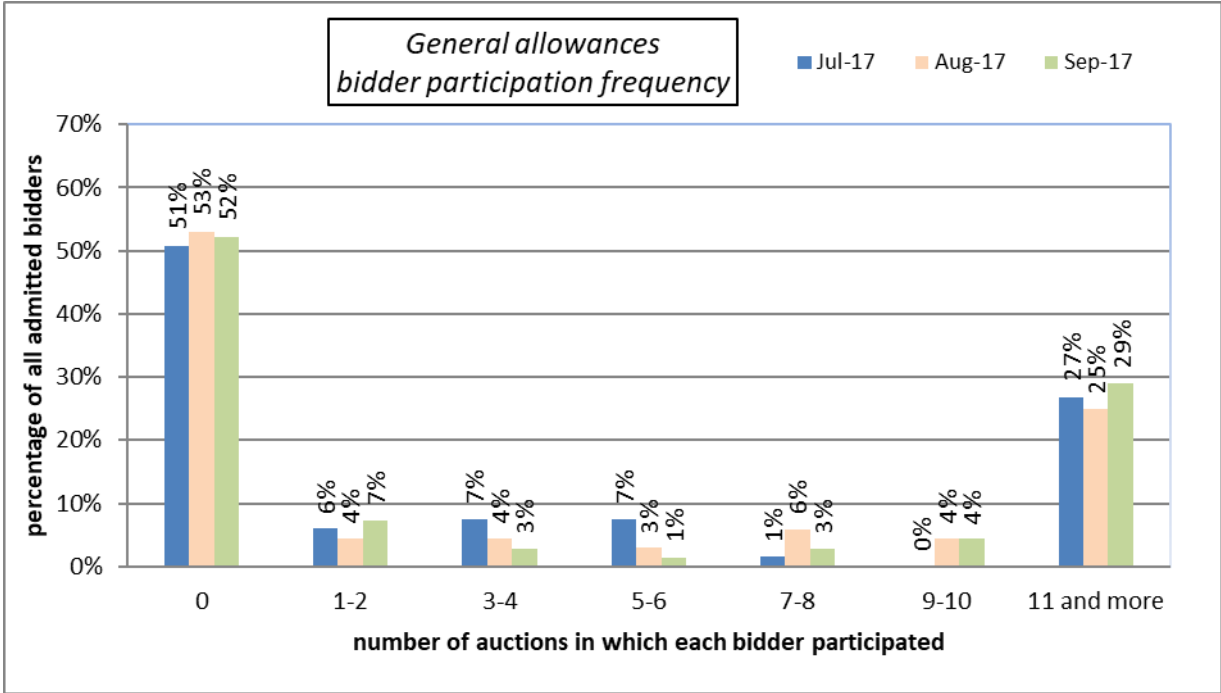
**Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



The number of eligible bidders is provided in Section 2. Out of these, 33, 32 and 33 different bidders participated in the auctions in respectively July, August, September 2017. Graph 3A indicates the participation frequency over these months.

<sup>6</sup> Auctions on behalf of Poland were held on the following days: 20/7/2016, 17/8/2016, 29/3/2017, 12/4/2017, 26/4/2017, 10/5/2017, 24/5/2017, 7/6/2017, 21/6/2017, 5/7/2017, 19/7/2017, 2/8/2017, 16/8/2017, 30/8/2017, 13/9/2017 and 27/9/2017.

**Graph 3A:** General allowances -bidder participation frequency



### 1.1.2. Bidding behaviour - general allowances

Table 2 provides monthly data on the bids submitted over 15 months. 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>
September 2017	13	33	157 826 500	517 342	517 464	755 314	1 257	4.1 <sup>++</sup>	126 746
August 2017	15	32	108 340 500	357 506	352 901	571 949	1 267	4.2 <sup>++</sup>	86 606
July 2017	15	33	185 402 000	612 288	613 914	931 114	1 179	3.9 <sup>++</sup>	156 480
June 2017	13	31	161 725 000	540 819	535 513	827 231	1 011	3.4 <sup>++</sup>	163 244
May 2017	13	32	133 833 000	512 940	510 813	799 002	999	3.8 <sup>++</sup>	135 663
April 2017	13	34	148 327 000	541 994	539 371	817 874	1 140	4.2 <sup>++</sup>	130 958
March 2017	14	35	168 711 500	576 767	571 903	823 774	1 219	4.1 <sup>++</sup>	139 940
February 2017	12	31	140 724 500	593 065	591 279	860 695	1 138	4.8 <sup>++</sup>	124 050
January 2017	11	27	142 746 000	660 048	657 816	893 912	1 057	4.9 <sup>++</sup>	135 614
December 2016	7	26	62 485 500	509 661	508 012	707 571	531	4.3 <sup>++</sup>	121 257
November 2016	12	31	100 554 000	487 443	483 433	662 613	837	4.0 <sup>++</sup>	120 567
October 2016	12	26	115 140 000	535 857	530 599	788 774	865	4.0 <sup>++</sup>	134 484
September 2016	12	27	92 219 000	420 765	417 281	584 075	823	3.7 <sup>++</sup>	114 146
August 2016	9	27	50 355 000	339 877	335 700	404 083	531	3.5 <sup>++</sup>	95 870
July 2016	13	28	103 410 500	443 747	438 180	493 818	970	4.1 <sup>++</sup>	107 529

++: 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.

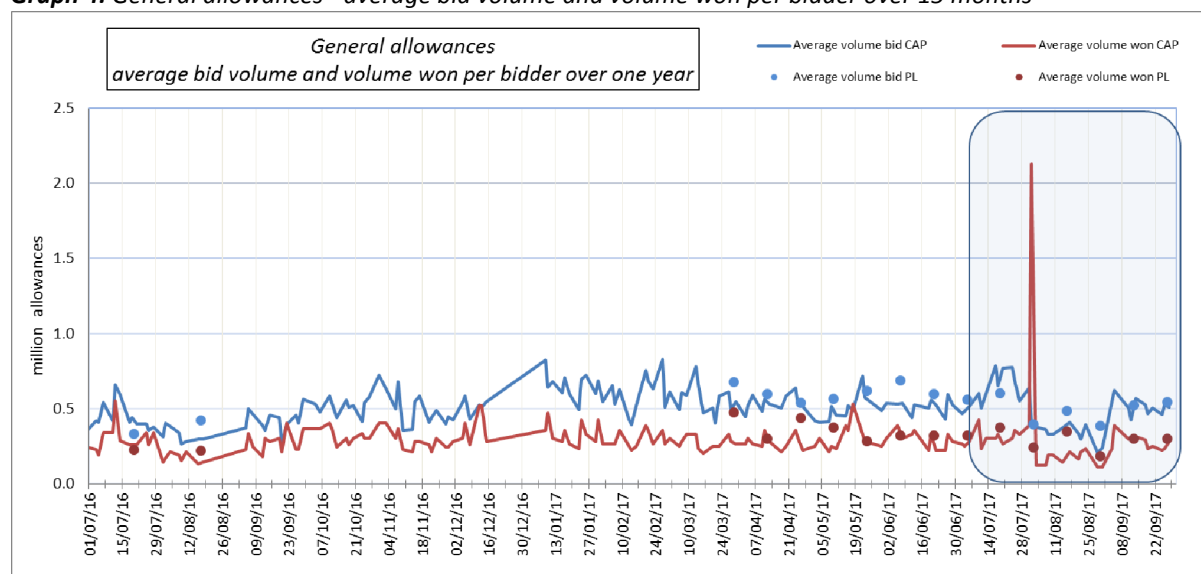
Table 3 provides monthly data on successful bids over 15 months. See also Graph 4.

**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 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
September 2017	13	32	60 852 000	285 160	279 138	354 784	410
August 2017	15	29	32 863 500	314 448	180 569	298 189	304
July 2017	15	29	65 113 500	316 540	308 595	424 080	407
June 2017	13	27	56 590 500	303 461	294 742	386 283	326
May 2017	13	29	56 590 500	312 123	294 742	433 987	361
April 2017	13	32	56 590 500	295 476	284 374	365 324	418
March 2017	14	31	61 138 000	293 359	280 450	344 970	465
February 2017	12	27	51 138 000	292 512	284 100	366 068	455
January 2017	11	24	46 876 500	339 959	325 531	431 829	334
December 2016	7	22	25 668 500	369 401	342 247	514 424	160
November 2016	12	30	43 968 000	279 848	269 742	366 801	353
October 2016	12	23	43 968 000	331 152	323 294	401 178	260
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

(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 15 months<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).

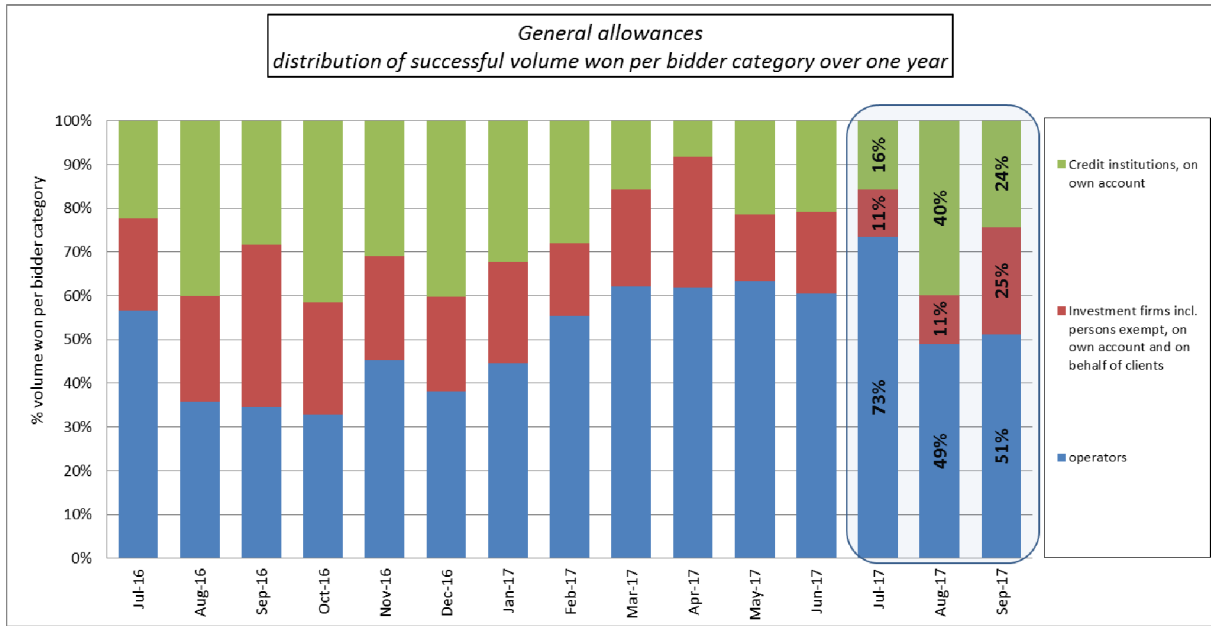
<sup>14</sup> Standard deviation of volume won per bidder in each auction over the month.

<sup>15</sup> Auctions on behalf of Poland were held on the following days: 20/7/2016, 17/8/2016, 29/3/2017, 12/4/2017, 26/4/2017, 10/5/2017, 24/5/2017, 7/6/2017, 21/6/2017, 5/7/2017, 19/7/2017, 2/8/2017, 16/8/2017, 30/8/2017, 13/9/2017 and 27/9/2017.

### 1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client<sup>16</sup> in July, August and September 2017 was respectively 0.22 %, 0.00 % and 0.00 %, the remaining volume bid was done on own account. 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 15 months



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

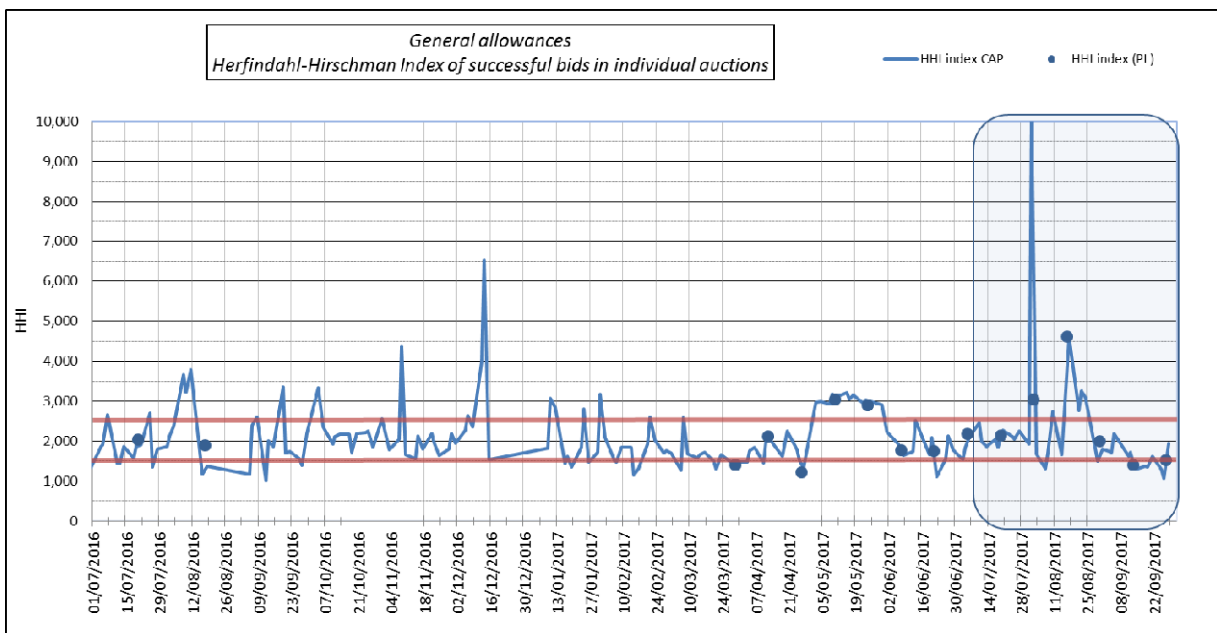
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
July 2017	0.62 %	Operators (including Business groupings)	73.4 %	9.9 % points
		Investment firms (including persons exempt)	10.8 %	5.9 % points
		Credit institutions	15.8 %	11.2 % points
August 2017	0 %	Operators (including Business groupings)	48.9 %	18.2 % points
		Investment firms (including persons exempt)	11.2 %	12.9 % points
		Credit institutions	39.9 %	19.4 % points
September 2017	0 %	Operators (including Business groupings)	51.1 %	10.9 % points
		Investment firms (including persons exempt)	24.6 %	9.3 % points
		Credit institutions	24.3 %	7.8 % 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

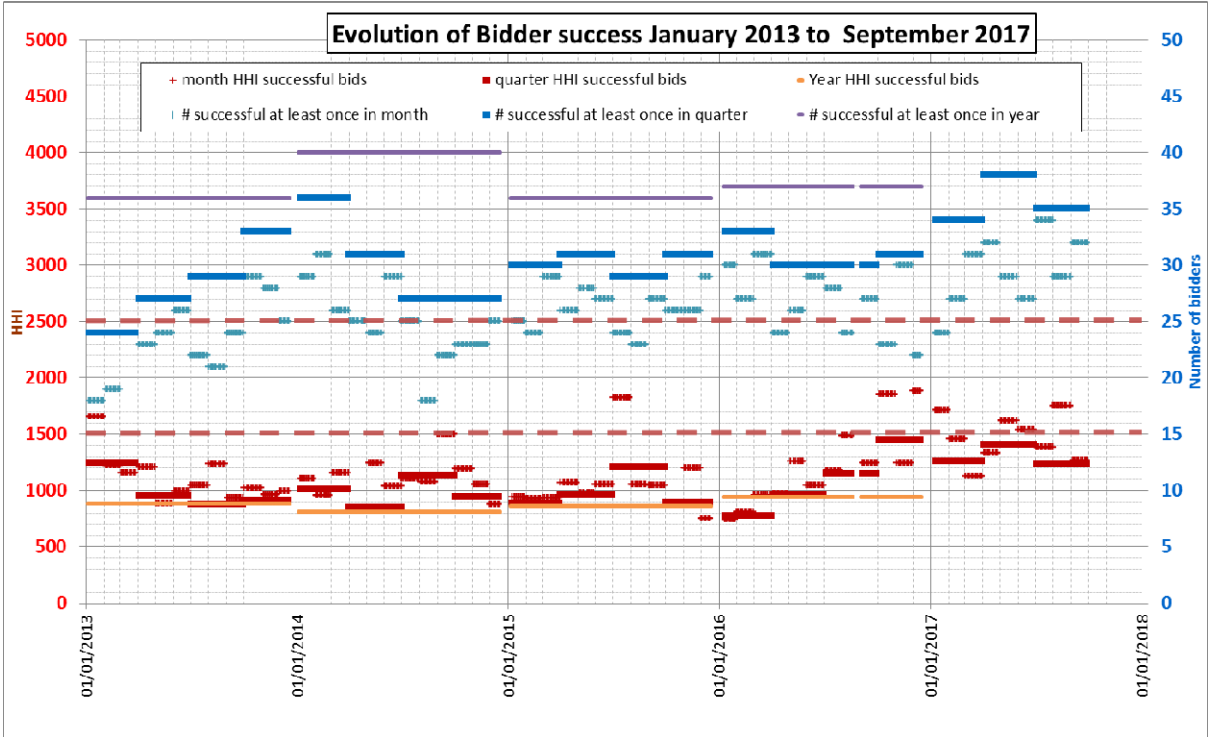
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration<sup>17</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 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 over 15 months



<sup>17</sup> The HHI is calculated as the sum of the squares of all successful bidders' shares (in percentage 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 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 (€)
September 2017	1 078 000	2 875 000	7 233 380	2.7	7	6	6.71
August 2017	-	-	-	-	-	-	-
July 2017	-	-	-	-	-	-	-
June 2017	-	-	-	-	-	-	-
May 2017	-	-	-	-	-	-	-
April 2017	-	-	-	-	-	-	-
March 2017	-	-	-	-	-	-	-
February 2017	-	-	-	-	-	-	-
January 2017	-	-	-	-	-	-	-
December 2016	-	-	-	-	-	-	-
November 2016	681 500	2 146 500	3 720 990	3.2	10.0	6.0	5.46
October 2016	-	-	-	-	-	-	-
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
<b>2016 total</b>	<b>4 219 000</b>	<b>17 973 500</b>	<b>22 266 205</b>	<b>4.3</b>	<b>10.4</b>	<b>4.6</b>	<b>5.28</b>
<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>

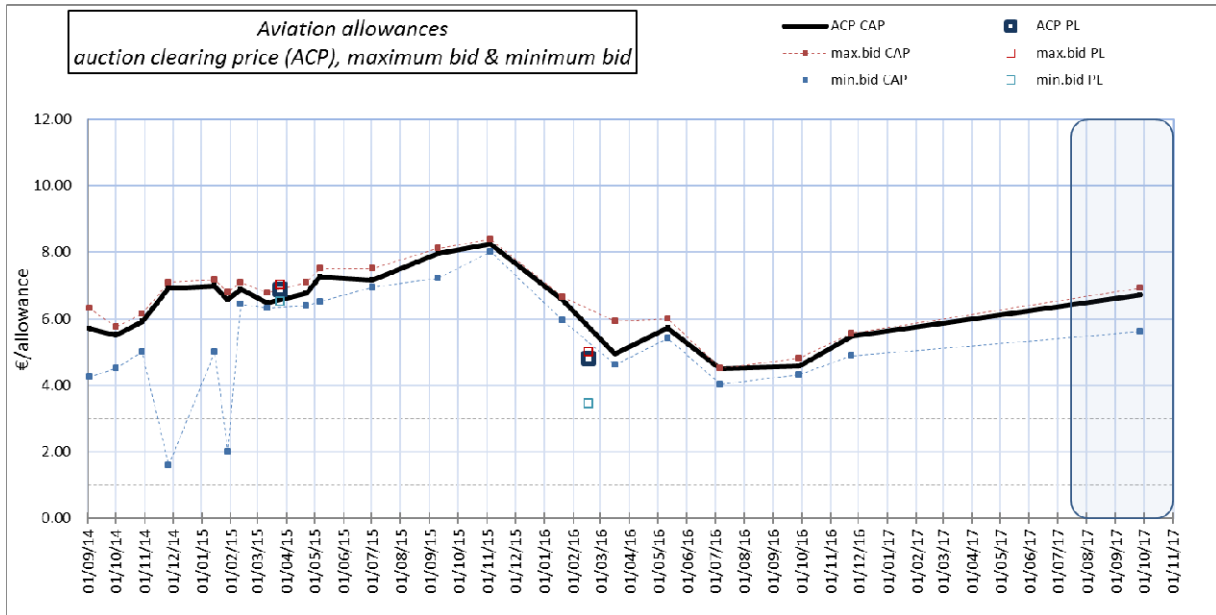
<sup>18</sup> The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 [http://ec.europa.eu/clima/news/articles/news\\_2012111601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2012111601_en.htm).

<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).

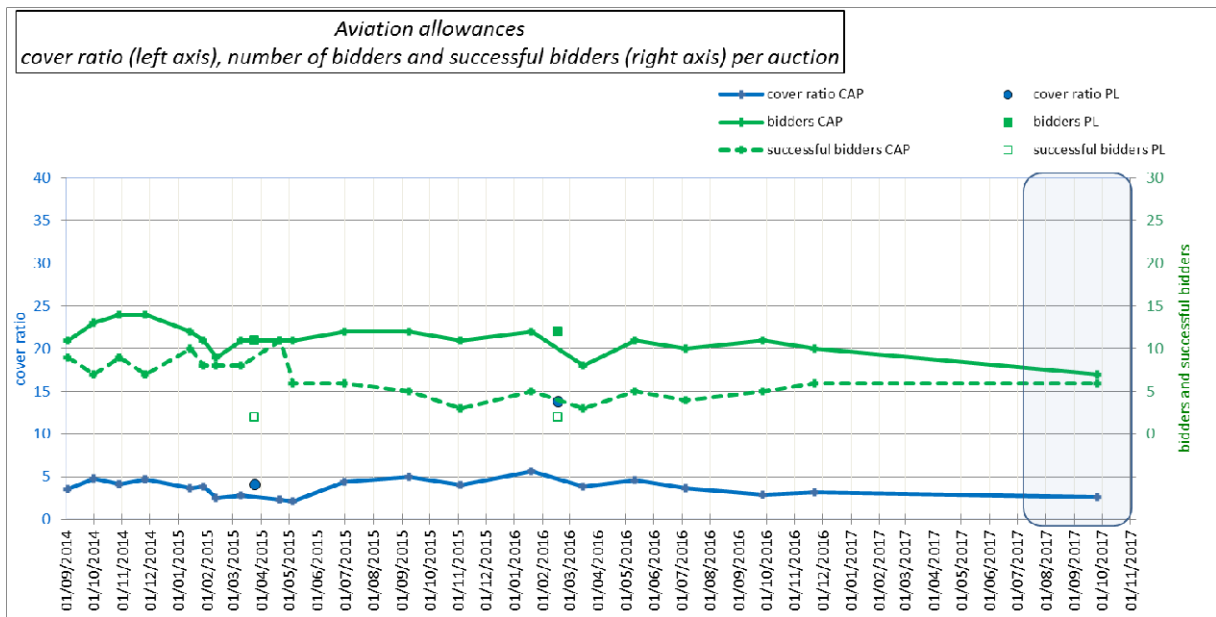
<sup>20</sup> The cover ratio is the ratio between the total bid volume and the auction volume.



**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**

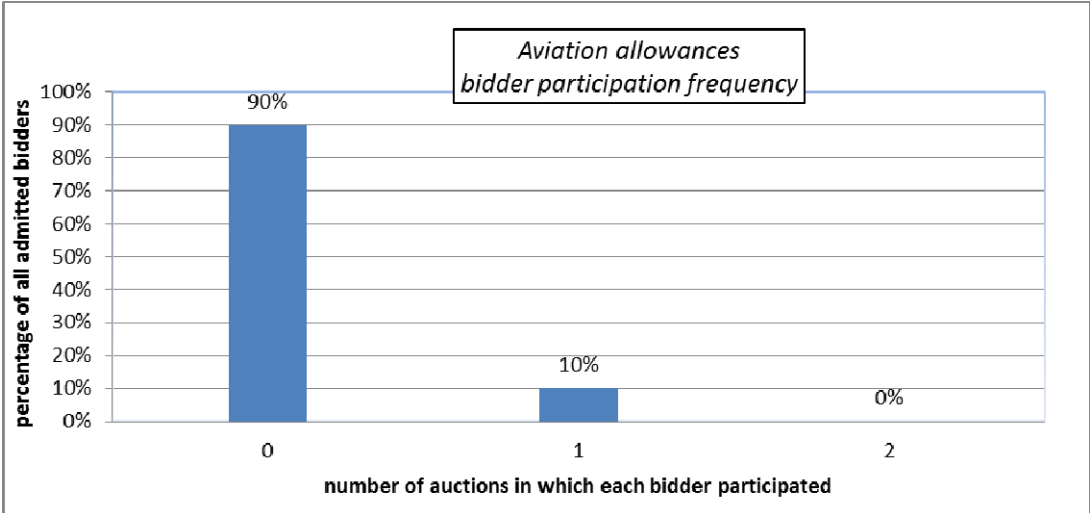
July

No aviation allowances have been auctioned in July 2017.

August

No aviation allowances have been auctioned in August 2017.

September



### 1.2.2 Bidding behaviour – aviation allowances

Table 6 provides monthly data on the bids submitted over 15 months. 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>
September 2017	1	7	2 875 000	410 714	410 714	419 578	44	6.3	65 341
August 2017	-	-	-	-	-	-	-	-	-
July 2017	-	-	-	-	-	-	-	-	-
June 2017	-	-	-	-	-	-	-	-	-
May 2017	-	-	-	-	-	-	-	-	-
April 2017	-	-	-	-	-	-	-	-	-
March 2017	-	-	-	-	-	-	-	-	-
February 2017	-	-	-	-	-	-	-	-	-
January 2017	-	-	-	-	-	-	-	-	-
December 2016	-	-	-	-	-	-	-	-	-
November 2016	1	10	2 146 500	214 650	214 650	245 137	44	4.4 <sup>++</sup>	48 784
October 2016	-	-	-	-	-	-	-	-	-
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

++: 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.

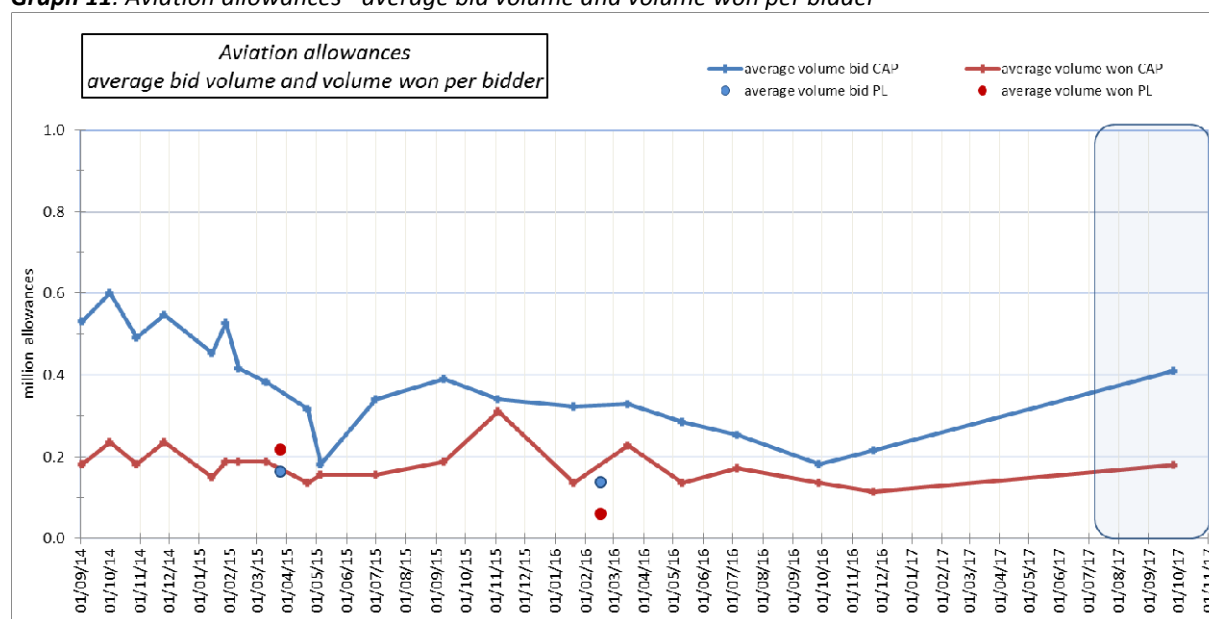
Table 7 provides monthly data on successful bids over 15 months. See also Graph 11.

**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
September 2017	1	6	1 078 000	179 667	179 667	71 825	17
August 2017	-	-	-	-	-	-	-
July 2017	-	-	-	-	-	-	-
June 2017	-	-	-	-	-	-	-
May 2017	-	-	-	-	-	-	-
April 2017	-	-	-	-	-	-	-
March 2017	-	-	-	-	-	-	-
February 2017	-	-	-	-	-	-	-
January 2017	-	-	-	-	-	-	-
December 2016	-	-	-	-	-	-	-
November 2016	1	6	681 500	113 583	113 583	83 332	8
October 2016	-	-	-	-	-	-	-
September 2016	1	5	683 500	136 700	136 700	73 380	8
August 2015	-	-	-	-	-	-	-
July 2016	1	4	683 500	170 875	170 875	106 277	4

(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.

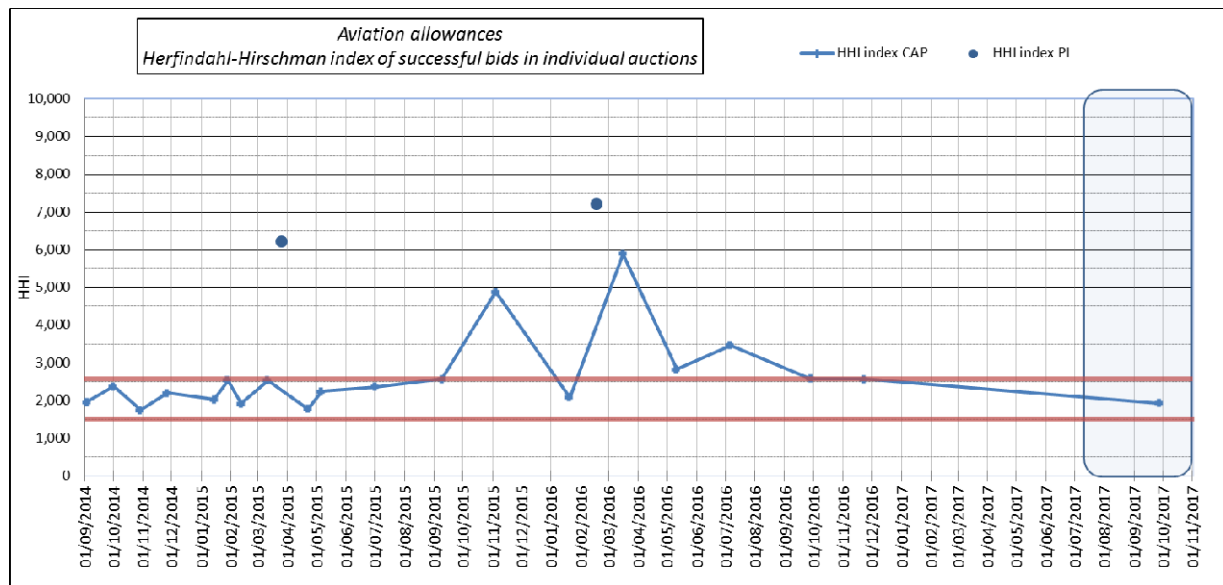
### 1.2.3 Type of bidders – aviation allowances

In September, 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 percentage 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 the reporting months.

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 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 spot secondary market	July 2017							110
	August 2017	-						111
	Sept 2017							
Participants eligible to bid in the auctions	July 2017	49			4		5	67
	August 2017	50	1	8	5	0	5	68
	Sept 2017	50						69
(Of which:) Participants eligible to bid in the auctions on behalf of clients	July 2017							5
	August 2017	-	-	1	2	-	2	
	Sept 2017							
(Of which:) Auction-only access	July 2017							4
	August 2017	2	0	1	0	0	1	
	Sept 2017							

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

### Transparency

Information on the auctions was published by EEX in accordance with Chapter XVI of the *Auctioning Regulation*. With regard to the results of the auctions, EEX reported a delay in the publication of information other than the price and volume on 31 July 2018 later than 15 minutes after the close of the *bidding window* as provided for in Article 61 of the *Auctioning Regulation*.

No infringements of the confidentiality requirements were identified.

### Technical and operational aspects

With regard to the operational performance of the auctions, no irregularities or deviations from the requirements were found.

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.

<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 other problems or issues were identified.

### **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**

EEX reviewed the auction data presented in the report.

**Date of publication: 28/01/2019**

## 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> .
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: <a href="http://ec.europa.eu/clima/policies/ets/documentation_en.htm">http://ec.europa.eu/clima/policies/ets/documentation_en.htm</a> .



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>EUAA</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 common auction platform 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 CAP2 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 from 12 November 2012 until September 2017 (reported in euros)

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

	General allowances	Aviation allowances	General and aviation allowances
Austria	308 451 840	4 400 020	312 851 860
Belgium	555 107 145	5 729 405	560 836 550
Bulgaria	406 509 830	1 466 770	407 976 600
Croatia	124 816 090	711 395	125 527 485
Cyprus	6 549 190	2 241 220	8 790 410
Czech Republic	501 080 000	2 101 710	503 181 710
Denmark	274 321 365	4 867 950	279 189 315
Estonia	97 167 075	247 925	97 415 000
Finland	370 423 630	3 721 090	374 144 720
France	1 212 971 645	26 690 885	1 239 662 530
Greece	764 418 675	7 920 515	772 339 190
Hungary	299 157 625	1 642 980	300 800 605
Ireland	204 303 865	3 806 570	208 110 435
Italy	2 135 013 355	24 938 490	2 159 951 845
Latvia	59 593 260	864 970	60 458 230
Lithuania	110 908 295	447 800	111 356 095
Luxemburg	26 642 255	936 470	27 578 725
Malta	22 416 250	878 580	23 294 830
The Netherlands	741 580 765	10 498 475	752 079 240
Poland	911 739 585	3 558 480	915 298 065
Portugal	388 480 885	5 221 130	393 702 015
Romania	826 352 285	2 504 060	828 856 345
Slovak Republic	341 021 930	314 480	341 336 410
Slovenia	98 107 975	234 945	98 342 920
Spain	1 913 124 670	28 867 655	1 941 992 325
Sweden	197 052 980	5 986 830	203 039 810
<b>TOTAL</b>	<b>12 897 312 465</b>	<b>150 800 800</b>	<b>13 048 113 265</b>

## Annex 2 Results of individual auctions on behalf of participating Member States and Poland in July – September 2017

(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 – July 2017																			
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
03/07/2017	4.98	3.8	5.5	4.88	4.96	4,261,500	9,810,000	2.3	21	16	21 222 270	72	25	3.43	136 250	467 143	705 647	266 344	323 461
04/07/2017	5.06	3.8	5.6	4.97	5.05	4,261,500	10,163,000	2.38	21	17	21 563 190	81	32	3.86	125 469	483 952	745 178	250 676	366 915
05/07/2017	5.1	3.8	5.3	4.99	5.08	4,857,000	10,632,000	2.19	19	15	24 770 700	81	31	4.26	131 259	559 579	816 378	323 800	488 240
06/07/2017	5.07	3.8	5.5	4.97	5.05	4,261,500	9,767,000	2.29	19	15	21 605 805	71	31	3.74	137 563	514 053	761 980	284 100	418 130
10/07/2017	5.5	3.8	6.0	5.27	5.4	4,261,500	11,980,000	2.81	20	10	23 438 250	74	17	3.7	161 892	599 000	843 553	426 150	515 340
11/07/2017	5.37	3.8	5.7	5.26	5.39	4,261,500	9,600,000	2.25	19	18	22 884 255	76	49	4	126 316	505 263	845 766	236 750	379 898
13/07/2017	5.46	4.0	6.0	5.45	5.46	4,261,500	10,186,000	2.39	17	14	23 267 790	61	29	3.59	166 984	599 176	826 174	304 393	386 128
17/07/2017	5.4	3.8	6.0	5.24	5.37	4,261,500	15,724,000	3.69	20	14	23 012 100	83	27	4.15	189 446	786 200	1 341 998	304 393	416 822
18/07/2017	5.46	3.8	6.0	5.28	5.41	4,261,500	13,776,000	3.23	21	13	23 267 790	83	23	3.95	165 976	656 000	912 228	327 808	389 478
19/07/2017	5.39	4.0	6.0	5.37	5.36	4,857,000	11,498,000	2.37	19	13	26 179 230	75	25	3.95	153 307	605 158	876 979	373 615	498 112
20/07/2017	5.35	3.8	6.13	5.21	5.34	4,261,500	15,368,000	3.61	20	16	22 799 025	82	34	4.1	187 415	768 400	1 210 283	266 344	433 234
24/07/2017	5.04	3.8	5.6	4.93	5.01	4,261,500	14,724,000	3.46	19	14	21 477 960	77	27	4.05	191 221	774 947	1 133 537	304 393	424 264
25/07/2017	5.12	3.8	6.0	4.98	5.05	4,261,500	17,099,000	4.01	25	12	21 818 880	100	17	4	170 990	683 960	988 641	355 125	429 601
27/07/2017	5.2	3.8	6.0	5.09	5.14	4,261,500	11,017,000	2.59	20	13	22 159 800	80	24	4	137 713	550 850	734 056	327 808	455 496
31/07/2017	5.23	3.8	6.0	5.07	5.15	4,261,500	14,058,000	3.3	22	11	22 287 645	83	16	3.77	169 373	639 000	864 859	387 409	411 550

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, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

General Allowances – August 2017

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
01/08/2017	5.6	3.8	5.6	5.13	5.22	2,131,500	8,598,000	4.03	21	1	11 936 400	80	2	3.81	107 475	409 429	669 805	2 131 500	0
02/08/2017	5.29	3.8	5.41	5.11	5.22	2,428,500	8,277,000	3.41	21	10	12 846 765	79	14	3.76	104 772	394 143	693 660	242 850	346 826
03/08/2017	5.38	3.8	5.6	5.22	5.34	2,131,500	7,921,000	3.72	21	17	11 467 470	87	24	4.14	91 046	377 190	707 631	125 382	170 654
07/08/2017	5.24	3.8	5.45	5.12	5.21	2,131,500	8,671,000	4.07	24	17	11 169 060	88	29	3.67	98 534	361 292	598 154	125 382	139 583
08/08/2017	5.26	3.8	8.27	5.17	5.2	2,131,500	8,292,000	3.89	25	11	11 211 690	96	17	3.84	86 375	331 680	613 585	193 773	181 779
10/08/2017	5.4	4.25	5.6	5.28	5.35	2,131,500	7,968,000	3.74	24	11	11 510 100	93	16	3.88	85 677	332 000	437 819	193 773	275 688
14/08/2017	5.41	4.25	5.55	5.28	5.36	2,131,500	7,455,000	3.5	20	15	11 531 415	93	24	4.65	80 161	372 750	623 308	142 100	173 245
16/08/2017	5.62	4.25	5.7	5.41	5.5	2,428,500	9,757,500	4.02	20	7	13 648 170	95	10	4.75	102 711	487 875	728 447	346 929	518 226
17/08/2017	5.9	4.25	6.5	5.67	5.82	2,131,500	7,405,000	3.47	18	10	12 575 850	79	17	4.39	93 734	411 389	589 859	213 150	405 083
21/08/2017	5.81	4.25	6.15	5.64	5.79	2,131,500	4,670,000	2.19	14	13	12 384 015	72	31	5.14	64 861	333 571	447 173	163 962	264 722
22/08/2017	5.75	3	6	5.69	5.74	2,131,500	5,069,000	2.38	17	10	12 256 125	48	16	2.82	105 604	298 176	496 331	213 150	320 658
24/08/2017	5.98	4.25	6.1	5.74	5.94	2,131,500	5,933,000	2.78	15	9	12 746 370	72	15	4.8	82 403	395 533	536 342	236 833	315 748
29/08/2017	6.07	4.25	6.29	5.85	6.05	2,131,500	4,742,000	2.22	23	19	12 938 205	84	31	3.65	56 452	206 174	293 485	112 184	152 138
30/08/2017	6.02	4.25	6.25	5.81	5.98	2,428,500	8,112,000	3.34	21	13	14 619 570	100	24	4.76	81 120	386 286	527 266	186 808	236 326
31/08/2017	5.91	4	6.3	5.73	5.89	2,131,500	5,470,000	2.57	23	19	12 597 165	101	34	4.39	54 158	237 826	332 329	112 184	174 867

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, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

General Allowances – September 2017

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
04/09/2017	5.8	4.25	6.0	5.64	5.78	4,261,500	11,557,000	2.71	21	18	24 716 700	98	34	4.67	117 929	550 333	810 109	236 750	344 081
05/09/2017	6.04	4.25	6.15	5.79	5.96	4,261,500	14,312,000	3.36	23	11	25 739 460	95	19	4.13	150 653	622 261	869 050	387 409	459 451
11/09/2017	6.8	4.0	7.15	6.34	6.77	5,329,500	12,599,000	2.36	25	18	36 240 600	81	35	3.24	155 543	503 960	857 123	296 083	411 646
12/09/2017	6.65	4.0	7.0	6.27	6.64	5,329,500	10,178,000	1.91	24	17	35 441 175	88	34	3.67	115 659	424 083	500 282	313 500	436 963
13/09/2017	6.95	5.0	7.15	6.85	6.92	4,857,000	12,608,000	2.6	24	16	33 756 150	85	29	3.54	148 329	525 333	830 732	303 563	339 787
14/09/2017	7.42	4.25	7.65	6.92	7.39	5,329,500	12,534,000	2.35	22	17	39 544 890	99	37	4.5	126 606	569 727	706 239	313 500	345 267
18/09/2017	6.85	4.25	7.1	6.49	6.82	5,319,000	13,158,000	2.47	25	18	36 435 150	109	38	4.36	120 716	526 320	694 147	295 500	359 334
19/09/2017	6.95	5.0	7.2	6.88	6.9	4,261,500	11,641,500	2.73	25	18	29 617 425	88	31	3.52	132 290	465 660	808 202	236 750	284 657
21/09/2017	6.68	4.25	7.0	6.36	6.62	4,261,500	11,624,000	2.73	23	17	28 466 820	98	28	4.26	118 612	505 391	829 798	250 676	332 007
25/09/2017	6.8	4.25	7.0	6.41	6.79	4,261,500	9,741,000	2.29	21	19	28 978 200	88	37	4.19	110 693	463 857	627 071	224 289	271 905
26/09/2017	6.97	4.25	7.25	6.57	6.92	4,261,500	12,582,000	2.95	24	18	29 702 655	104	33	4.33	120 981	524 250	696 507	236 750	228 789
27/09/2017	6.75	2.0	7.0	6.3	6.66	4,857,000	14,105,000	2.9	26	16	32 784 750	121	26	4.65	116 570	542 500	844 633	303 563	364 435
28/09/2017	6.83	4.25	7.0	6.46	6.78	4,261,500	11,187,000	2.63	22	15	29 106 045	103	29	4.68	108 612	508 500	783 390	284 100	393 448

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, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

**Aviation Allowances – July 2017**

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
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

**Aviation Allowances – August 2017**

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
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

**Aviation Allowances – September 2017**

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
27/09/2017	6.71	5.6	6.91	6.43	6.53	1,078,000	2,875,000	2.67	7	6	7 233 380	44	17	6.29	65 341	410 714	419 578	179 667	71 825

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, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

The data for previous auctions can be downloaded from EEX's website: <https://www.eex.com/en/products/environmental-markets/emissions-auctions/overview>



