



# AUCTIONS BY THE COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

April to June 2018

# Auctions by the *Common Auction Platform*

## April, May, June 2018

---

**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, 5, 9, 10, 11(PL)<sup>1</sup>, 12, 16, 17, 19, 23, 24, 25(PL), 26 and 30 April 2018;

3, 8, 9(PL), 14, 15, 17, 22, 23(PL), 24, 29 and 31 May 2018;

4, 5, 6(PL), 7, 11, 12, 14, 18, 19, 20(PL), 21, 25, 26 and 28 June 2018;

*Aviation Allowances:*

23 May 2018;

20 June 2018 (PL);

---

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 3.7 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.

---

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

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)

---

**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. 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.

---

## 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 ongoing.

---

<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* and *aviation allowances* on behalf of Poland.

All auctions were held successfully, in line with the Auctioning Regulation. No irregularities or deviations from the requirements were observed. The table below contains a summary of the information concerning the conducted auctions.

### **The April, May, June 2018 auctions at a glance:**

	<b>General Allowances</b>			<b>Aviation Allowances</b>		
	Apr	May	Jun	Apr	May	Jun
<b>General</b>						
Number of auctions	14	11	14	-	1	1
Total volume auctioned	61 863 000	45 011 000	57 650 000	-	958 000	112 000
Amount raised from the auctions (€)	817 157 360	669 952 180	874 353 320	-	15 078 920	1 591 520
Average Auction Clearing Price (€/allowance)	13.2	14.9	15.2	-	15.7	14.2
Total bid volume	117 729 000	105 676 000	131 660 500	-	3 938 000	170 000
Average Cover ratio	1.9	2.3	2.3	-	4.1	1.5
Monthly HHI	762	747	903	-	2316	6162
<b>Participation</b>						
Number of eligible bidders	75	78	77	-	78	77
Number of participating bidders <sup>(1)</sup>	40	38	40	-	11	2
Number of successful bidders <sup>(1)</sup>	40	37	35	-	5	2
Average number of bidders per auction	26.1	26.2	25.9	-	11	2
Average number of successful bidders per auction	19.3	20.5	17.6	-	5	2
<b>Auction data</b>						
Average total volume bid per bidder per auction	328 154	365 298	363 573	-	358 000	85 000
Average bid size (volume per bid)	83 345	89 889	92 844	-	75 731	18 889
Average volume won per bidder per auction	247 803	202 060	242 955	-	191 600	56 000
Average range of bids (€)	8.65	11.69	10.93	-	0.83	0.24

(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 2018 are EUR 18 095 903 985 , and of *aviation allowances* EUR 184 009 320. 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.

---

<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

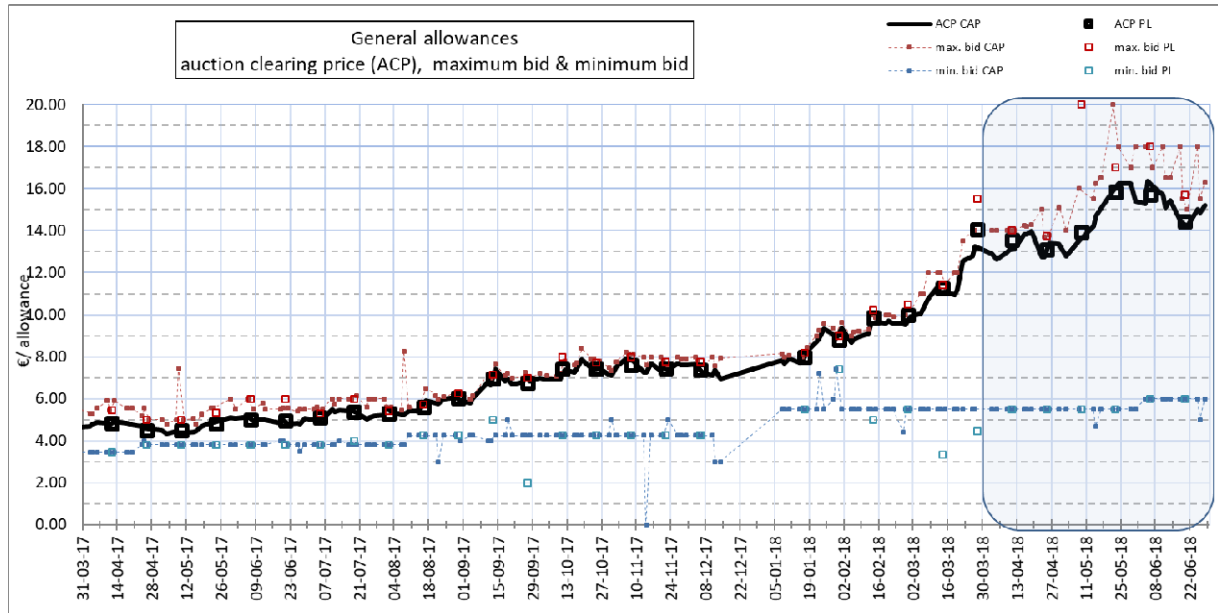
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>5</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
June 2018	57 650 000	131 660 500	874 353 320	2.3	25.9	17.6	15.17
May 2018	45 011 000	105 676 000	669 952 180	2.3	26.2	20.5	14.88
April 2018	61 863 000	117 729 000	817 157 360	1.9	26.1	19.3	13.21
March 2018	57 650 000	150 726 000	659 294 570	2.6	27.3	16.4	11.44
February 2018	57 650 000	152 580 500	542 292 760	2.6	23.6	15.6	9.41
January 2018	53 437 000	132 613 000	447 037 060	2.5	21.2	14.9	8.37
December 2017	30 435 500	73 929 500	222 478 410	2.4	20.7	14.7	7.31
November 2017	65 113 500	162 391 500	492 532 545	2.5	21.1	13.9	7.56
October 2017	65 113 500	177 255 000	473 493 315	2.7	22.0	14.2	7.27
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
<b>2017 total</b>	<b>648 415 500</b>	<b>1 761 212 000</b>	<b>3 744 838 845</b>	<b>2.7</b>	<b>21.2</b>	<b>14.6</b>	<b>5.78</b>
<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 April, May, June 2018, 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 - 0.07, - 0.08, - 0.06 respectively, and this difference had a standard deviation of EUR 0.11, 0.13, 0.28 respectively.

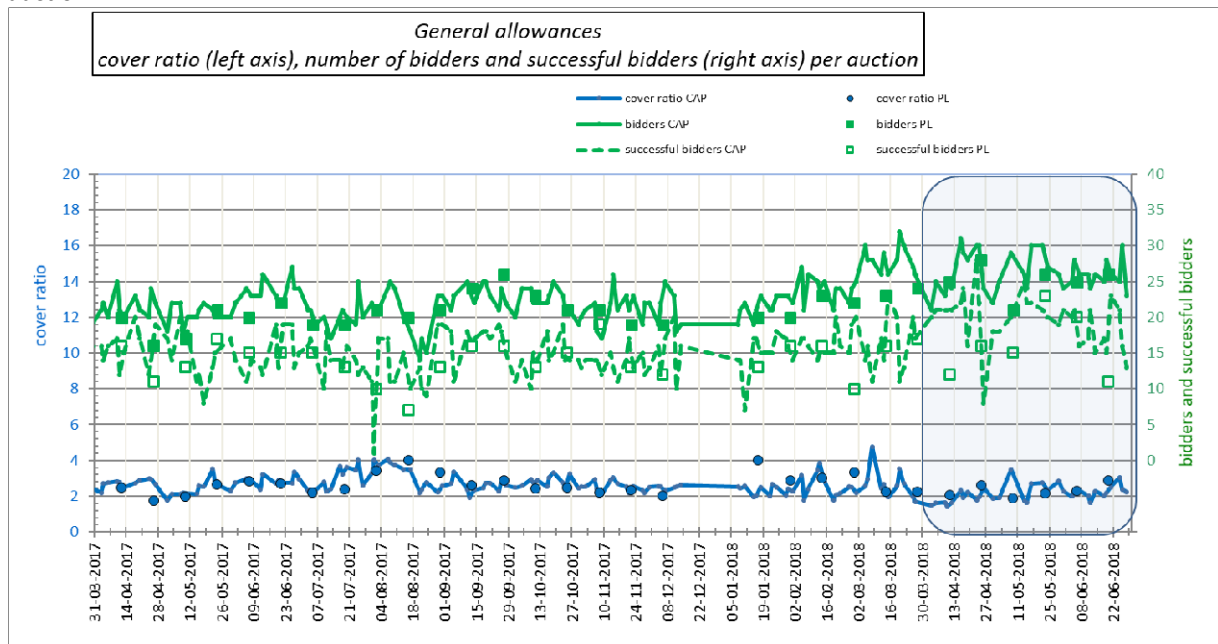
<sup>5</sup> Cover ratio is the ratio between the total bid volume and the auction volume.



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



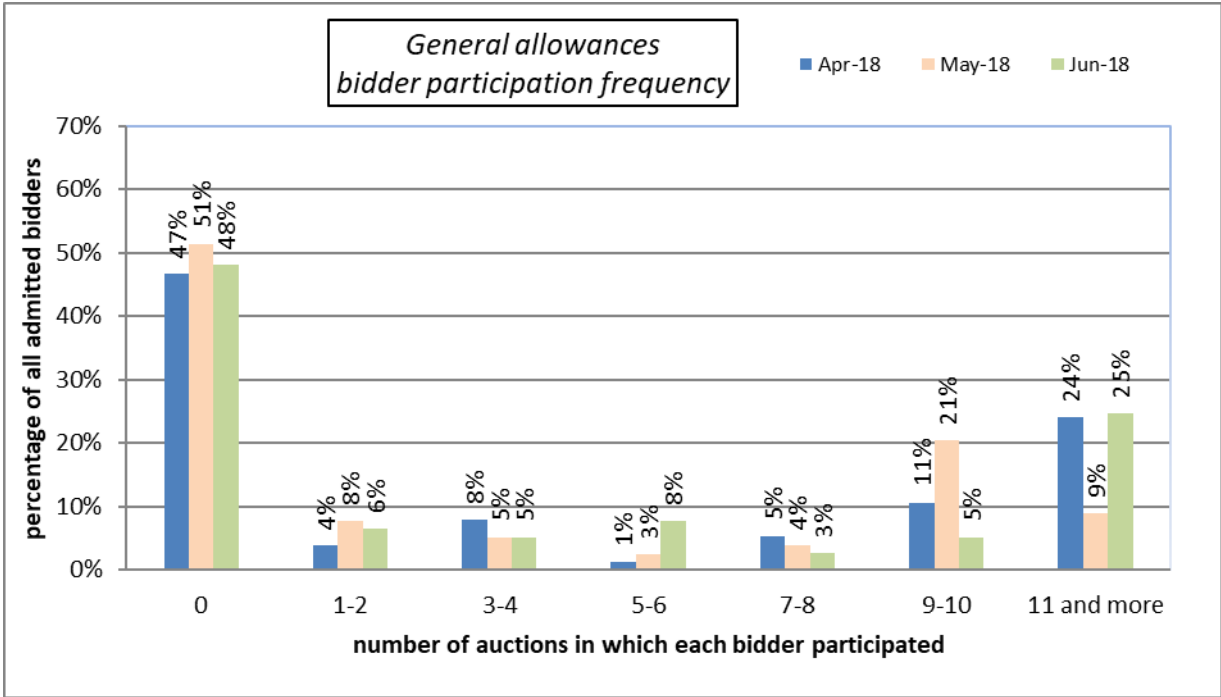
**Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



The number of eligible bidders is provided in Section 2. Out of these, 40, 38 and 40 different bidders participated in the auctions in respectively April, May, June 2018. Graph 3A indicates the participation frequency over these months.

<sup>6</sup> Auctions on behalf of Poland were held on the following days: 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, 27/9/2017, 11/10/2017, 25/10/2017, 8/11/2017, 22/11/2017, 6/12/2017, 17/1/2018, 31/1/2018, 14/2/2018, 28/2/2018, 14/3/2018, 28/3/2018, 11/4/2018, 25/4/2018, 9/5/2018, 23/5/2018, 6/6/2018 and 20/6/2018.

**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 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>
June 2018	14	40	131 660 500	363 573	362 701	492 632	1 449	4.0	92 844
May 2018	11	38	105 676 000	365 298	366 931	568 540	1 171	4.1	89 889
April 2018	14	40	117 729 000	328 154	322 545	453 292	1 441	4.0	83 345
March 2018	14	39	150 726 000	392 674	394 571	746 269	1468	3.8	101 809
February 2018	14	36	152 580 500	459 684	462 365	765 564	1297	3.9	118 027
January 2018	13	33	132 613 000	479 767	480 482	699 468	1034	3.8	127 675
December 2017	7	31	73 929 500	517 558	509 859	676 667	695	4.9	106 770
November 2017	15	32	162 391 500	515 072	512 276	790 627	1 568	5.0	104 084
October 2017	15	35	177 255 000	538 042	537 136	760 748	1 599	4.9	111 259
September 2017	13	33	157 826 500	517 342	517 464	755 314	1 257	4.1	126 746
August 2017	15	32	108 340 500	357 506	352 901	571 949	1 267	4.2	86 606
July 2017	15	33	185 402 000	612 288	613 914	931 114	1 179	3.9	156 480
June 2017	13	31	161 725 000	540 819	535 513	827 231	1 011	3.4	163 244
May 2017	13	32	133 833 000	512 940	510 813	799 002	999	3.8	135 663
April 2017	13	34	148 327 000	541 994	539 371	817 874	1 140	4.2	130 958

(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.

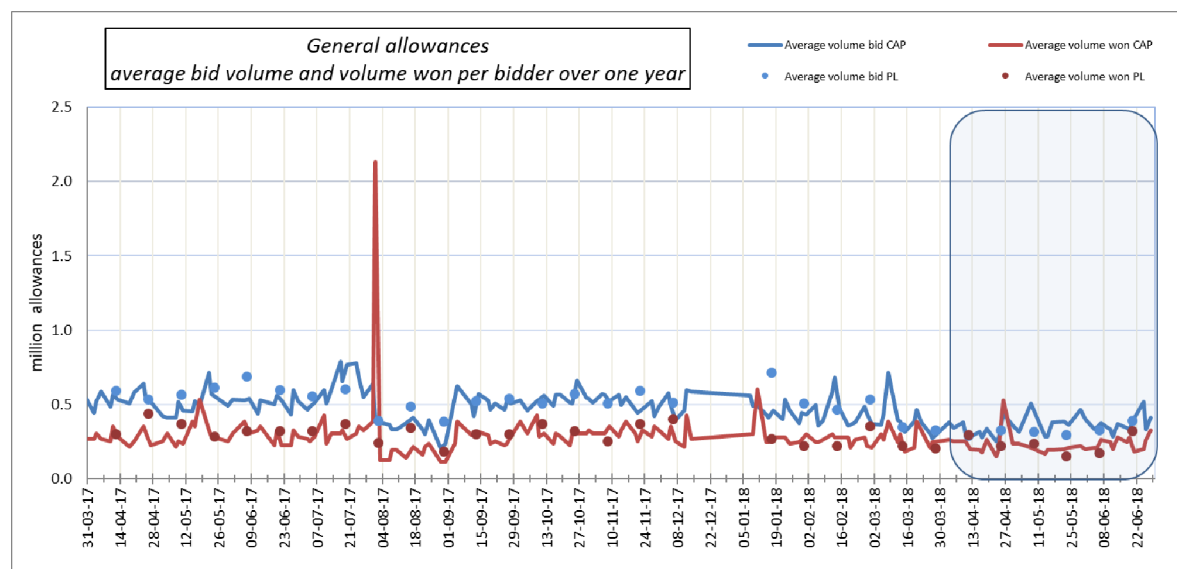
Table 3 provides monthly data on successful bids over 15 months. See also Graph 4.

**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 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
June 2018	14	35	57 650 000	242 955	234 350	266 266	531
May 2018	11	37	45 011 000	202 060	199 164	208 690	492
April 2018	14	40	61 863 000	247 803	229 122	290 603	620
March 2018	14	33	57 650 000	265 154	251 747	302 989	400
February 2018	14	35	57 650 000	267 853	263 242	315 411	445
January 2018	13	31	53 437 000	291 987	275 448	376 892	384
December 2017	7	27	30 435 500	313 651	295 490	412 417	216
November 2017	15	27	65 113 500	316 418	311 548	441 629	438
October 2017	15	28	65 113 500	313 612	305 697	387 758	390
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

(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).

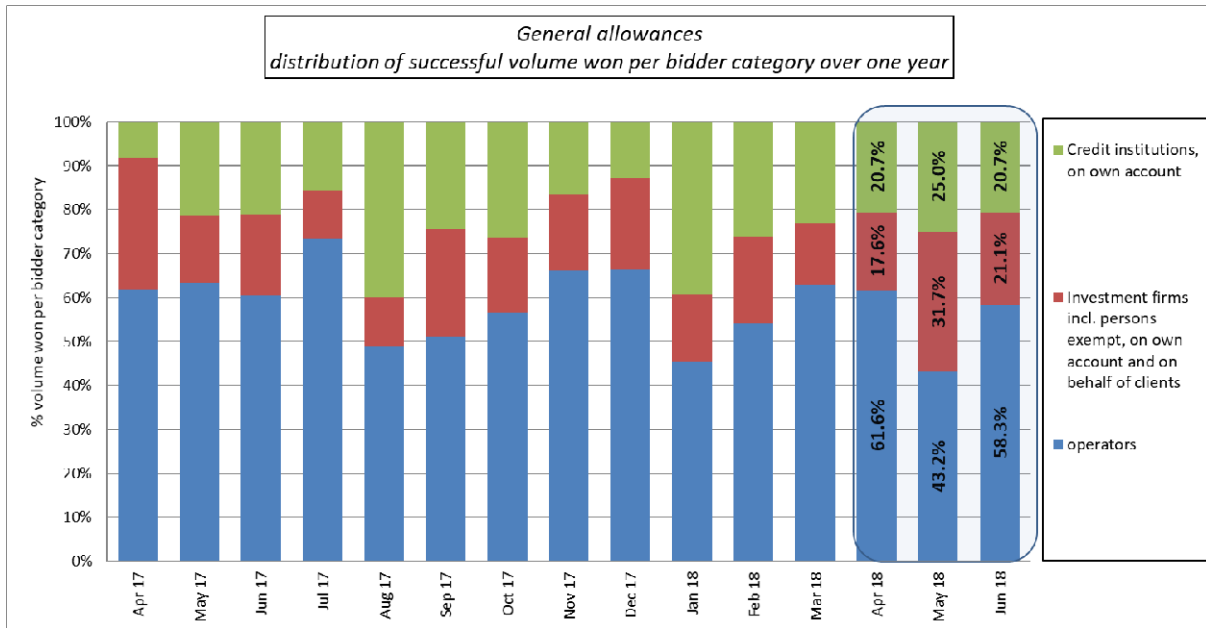
<sup>14</sup> Standard deviation of volume won per bidder in each auction over the month.

<sup>15</sup> Auctions on behalf of Poland were held on the following days: 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, 27/9/2017, 11/10/2017, 25/10/2017, 8/11/2017, 22/11/2017, 6/12/2017, 17/1/2018, 31/1/2018, 14/2/2018, 28/2/2018, 14/3/2018, 28/3/2018, 11/4/2018, 25/4/2018, 9/5/2018, 23/5/2018, 6/6/2018 and 20/6/2018.

### 1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client<sup>16</sup> in April, May and June 2018 was respectively 0%, 0% and 0%, 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

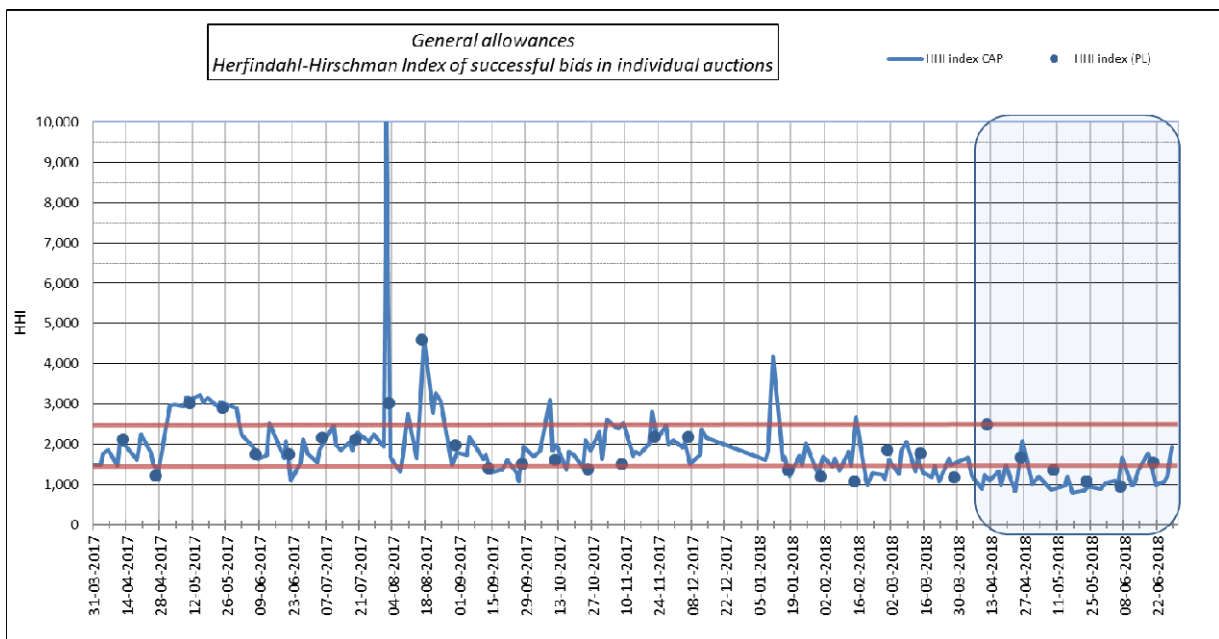
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
April 2018	0%	Operators (including Business groupings)	61.6%	13.1% points
		Investment firms (including persons exempt)	17.6%	11.1% points
		Credit institutions	20.7%	11.6% points
May 2018	0%	Operators (including Business groupings)	43.2%	8.6% points
		Investment firms (including persons exempt)	31.7%	5.9% points
		Credit institutions	25.0%	6.8% points
June 2018	0%	Operators (including Business groupings)	58.3%	11.9% points
		Investment firms (including persons exempt)	21.1%	10.3% points
		Credit institutions	20.7%	9.8% 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

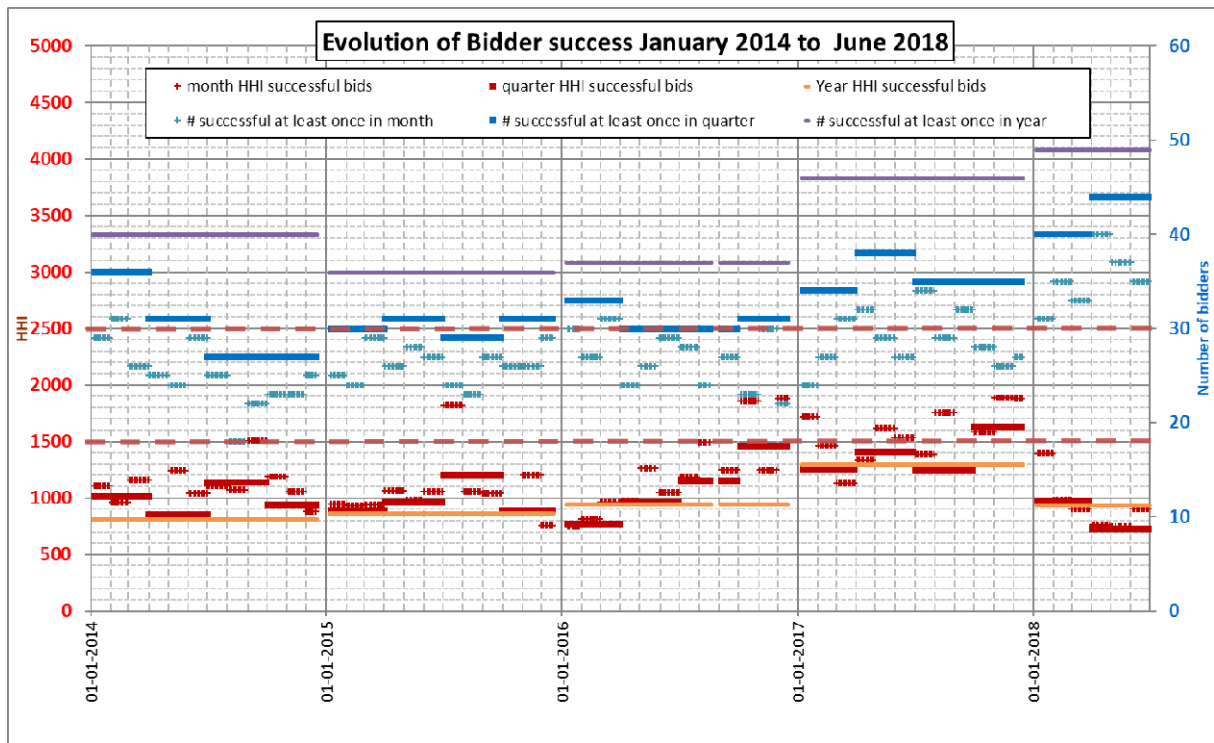
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration<sup>17</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated,' between 1 500 and 2 500 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 (€)
June 2018	112 000	170 000	1 591 520	1.5	2	2	14.21
May 2018	958 000	3 938 000	15 078 920	4.1	11	5	15.74
April 2018	-	-	-	-	-	-	-
March 2018	-	-	-	-	-	-	-
February 2018	-	-	-	-	-	-	-
January 2018	-	-	-	-	-	-	-
December 2017	95 000	285 000	687 800	3.0	3	2	7.24
November 2017	1 078 500	3 414 000	7 937 760	3.2	8	7	7.36
October 2017	1 078 000	3 726 000	7 912 520	3.5	8	7	7.34
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	-	-	-	-	-	-	-
<b>2017 total</b>	<b>3 329 500</b>	<b>10 300 000</b>	<b>23 771 460</b>	<b>3.1</b>	<b>7.5</b>	<b>6.5</b>	<b>7.14</b>
<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>

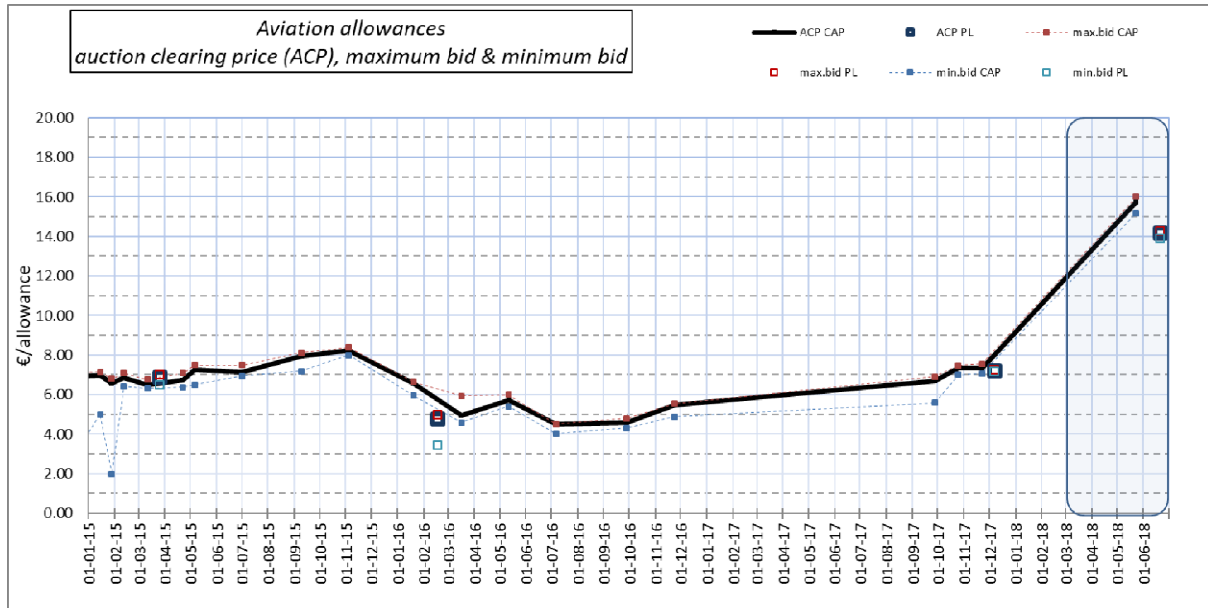
<sup>18</sup> The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 [http://ec.europa.eu/clima/news/articles/news\\_2012111601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2012111601_en.htm).

<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).

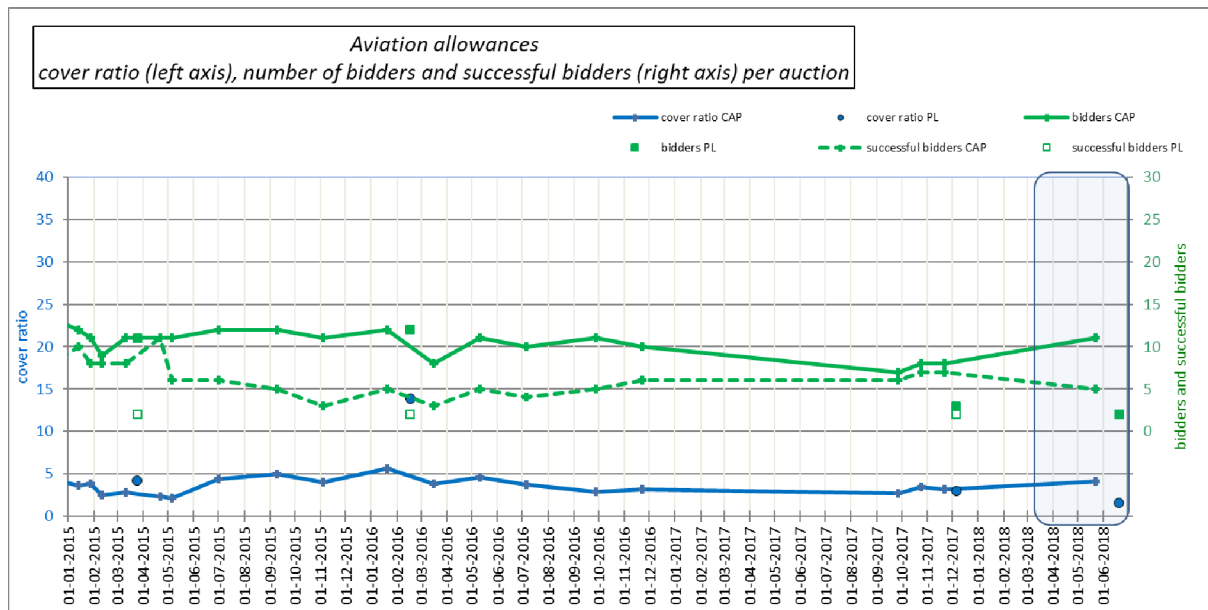
<sup>20</sup> The cover ratio is the ratio between the total bid volume and the auction volume.



**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**



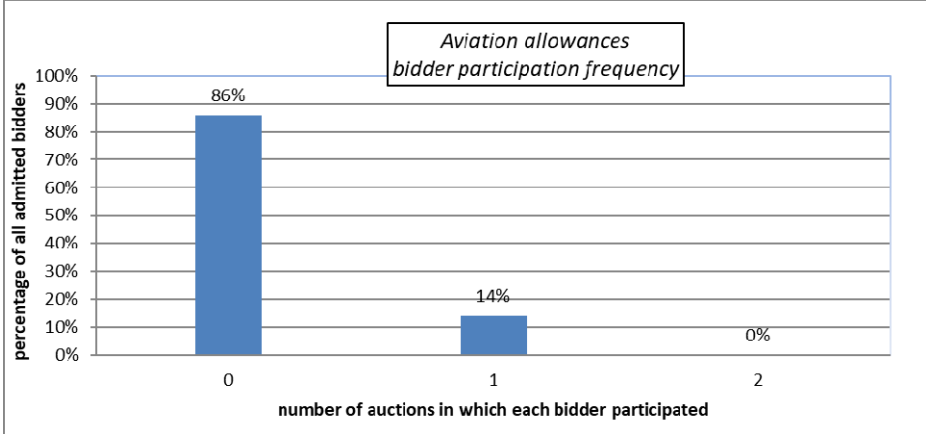
<sup>21</sup> Auctions on behalf of Poland were held on the following days: 25/3/2015, 17/2/2016, 6/12/2017 and 20/6/2018.

**Graph 10: Aviation allowances – bidder participation frequency**

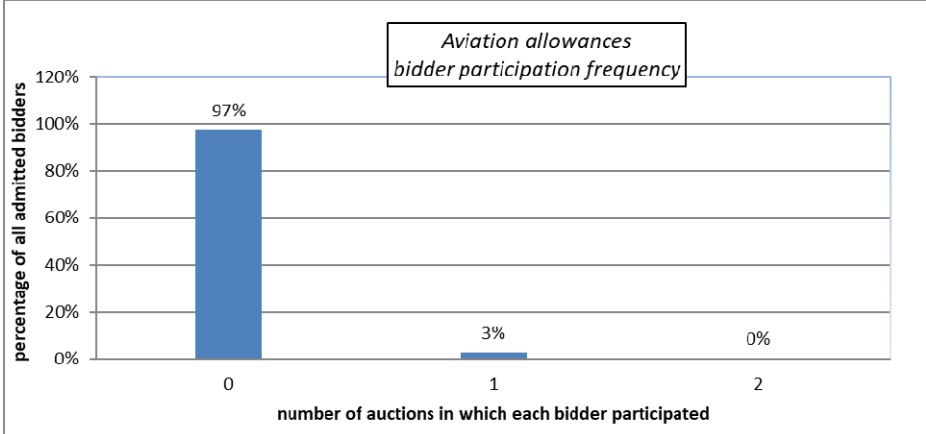
April

No aviation allowances have been auctioned in January 2018.

May



June



### 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>
June 2018	1	2	170 000	85 000	85 000	27 000	9	4.5	18 889
May 2018	1	11	3 938 000	358 000	358 000	280 602	52	4.7	75 731
April 2018	-	-	-	-	-	-	-	-	-
March 2018	-	-	-	-	-	-	-	-	-
February 2018	-	-	-	-	-	-	-	-	-
January 2018	-	-	-	-	-	-	-	-	-
December 2017	1	3	285 000	95 000	95 000	0	10	3.3	28 500
November 2017	1	8	3 414 000	426 750	426 750	360 364	48	6.0	71 125
October 2017	1	8	3 726 000	465 750	465 750	374 869	45	5.6	82 800
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	-	-	-	-	-	-	-	-	-

(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.

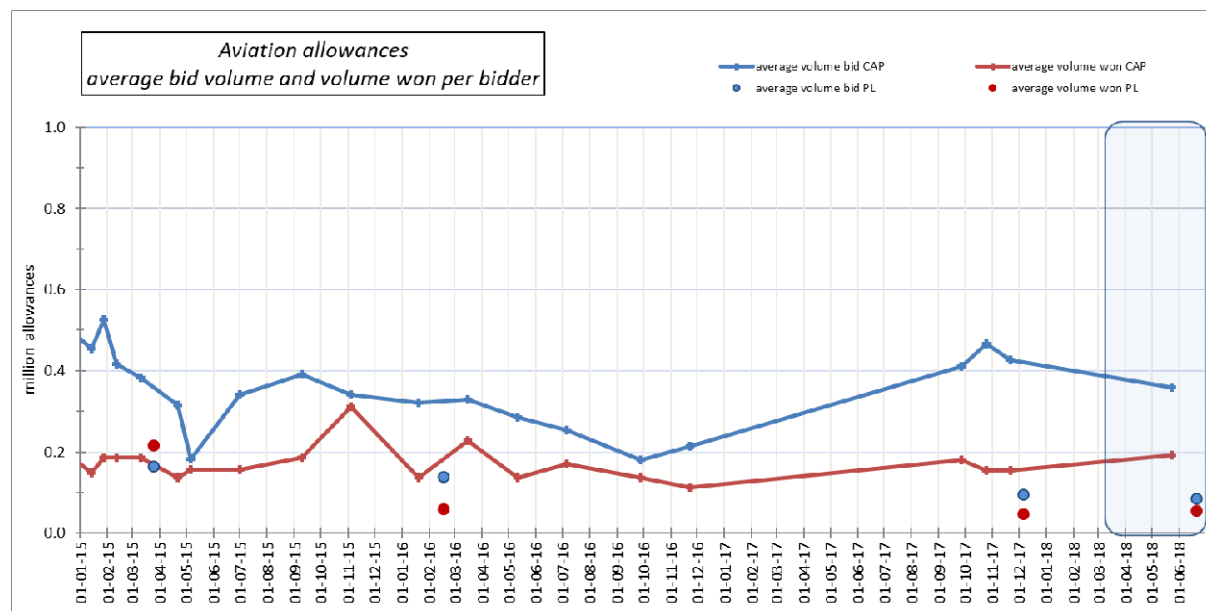
Table 7 provides monthly data on successful bids over 15 months. See also Graph 11.

**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
June 2018	1	2	112 000	56 000	56 000	27 000	3
May 2018	1	5	958 000	191 600	112 000	76 107	11
April 2018	-	-	-	-	-	-	-
March 2018	-	-	-	-	-	-	-
February 2018	-	-	-	-	-	-	-
January 2018	-	-	-	-	-	-	-
December 2017	1	2	95 000	47 500	47 500	22 500	4
November 2017	1	7	1 078 500	154 071	154 071	114 369	16
October 2017	1	7	1 078 000	154 000	154 000	64 717	16
September 2017	1	6	1 078 000	179 667	179 667	71 825	17
August 2017	-	-	-	-	-	-	-
July 2017	-	-	-	-	-	-	-
June 2017	-	-	-	-	-	-	-
May 2017	-	-	-	-	-	-	-
April 2017	-	-	-	-	-	-	-

(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.

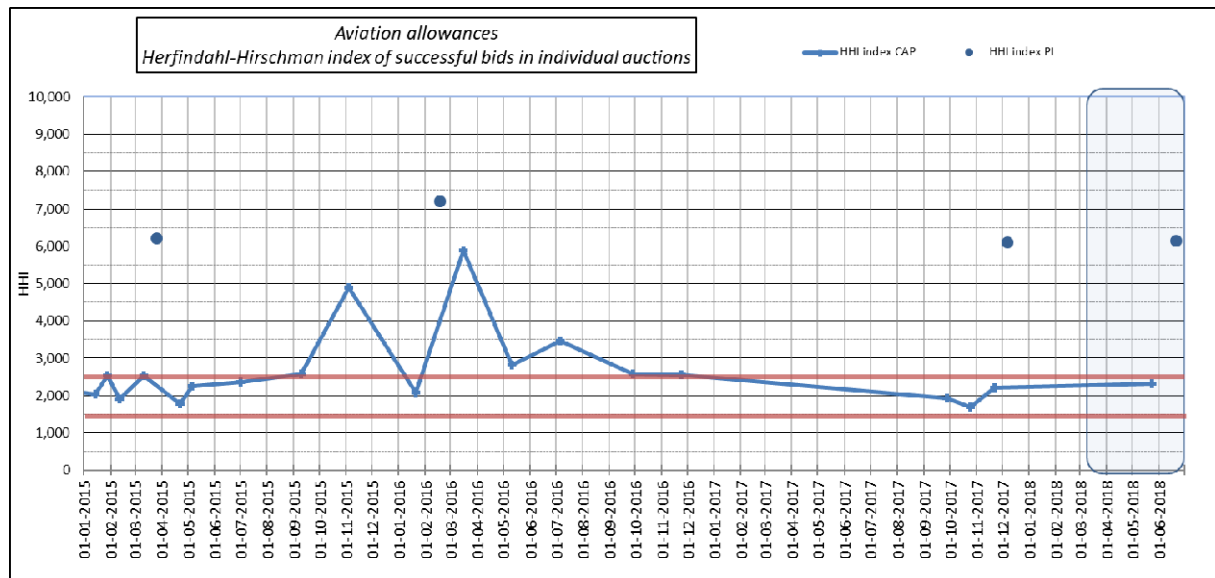
### 1.2.3 Type of bidders – aviation allowances

In April, May, June 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	Apr 2018							116
	May 2018							118
	Jun 2018							118
Participants eligible to bid in the auctions	Apr 2018	56	1	8	5	0	5	75
	May 2018	57		8				76
	Jun 2018	56		10				77
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Apr 2018							5
	May 2018	-	-	1	2	-	2	
	Jun 2018							
(Of which:) Auction-only access	Apr 2018							3
	May 2018	1	0	1	0	0	1	
	Jun 2018							

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*.

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.

### Other aspects

No other problems or issues 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.

### **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.

## 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 June 2018 (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	415,855,240	5,322,690	421,177,930
Belgium	751,369,755	6,781,175	758,150,930
Bulgaria	594,279,315	1,823,660	596,102,975
Croatia	161,985,725	950,715	162,936,440
Cyprus	18,432,340	2,799,640	21,231,980
Czech Republic	796,456,505	2,568,810	799,025,315
Denmark	371,374,260	5,931,270	377,305,530
Estonia	165,711,005	312,485	166,023,490
Finland	499,888,265	4,556,630	504,444,895
France	1,636,564,595	31,452,735	1,668,017,330
Greece	1,033,401,155	9,876,065	1,043,277,220
Hungary	415,150,645	2,030,310	417,180,955
Ireland	276,386,585	4,645,780	281,032,365
Italy	2,880,723,590	30,585,220	2,911,308,810
Latvia	80,479,780	1,073,860	81,553,640
Lithuania	152,695,900	561,690	153,257,590
Luxemburg	35,763,385	1,023,600	36,786,985
Malta	30,456,740	1,102,680	31,559,420
The Netherlands	1,000,787,760	11,937,585	1,012,725,345
Poland	1,619,261,895	5,837,800	1,625,099,695
Portugal	524,384,135	6,352,680	530,736,815
Romania	1,194,400,645	3,130,710	1,197,531,355
Slovak Republic	459,992,360	394,260	460,386,620
Slovenia	132,333,975	287,955	132,621,930
Spain	2,581,505,500	35,258,595	2,616,764,095
Sweden	266,262,930	7,410,720	273,673,650
<b>TOTAL</b>	<b>18,095,903,985</b>	<b>184,009,320</b>	<b>18,279,913,305</b>

## Annex 2 Results of individual auctions on behalf of participating Member States and Poland in April – June 2018

(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 – April 2018																			
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
03/04/2018	12.90	5.50	14.00	12.34	12.98	5,271,500	7,927,000	1.50	21	20	68,002,350	86	61	4.10	92 174	377 476	573 720	263 575	404 045
05/04/2018	12.65	5.50	14.00	12.13	12.65	5,267,000	8,582,500	1.63	25	21	66,627,550	95	49	3.80	90 342	343 300	449 071	250 810	308 235
09/04/2018	12.96	5.50	14.00	12.34	12.97	5,264,500	8,671,000	1.65	23	21	68,227,920	92	47	4.00	94 250	377 000	433 012	250 690	238 287
10/04/2018	13.10	5.50	14.00	12.50	13.17	5,262,000	7,622,500	1.45	25	21	68,932,200	91	60	3.64	83 764	304 900	418 222	250 571	316 466
11/04/2018	13.55	5.50	14.00	12.72	13.35	3,547,000	7,349,000	2.07	25	12	48,061,850	101	19	4.04	72 762	293 960	475 971	295 583	417 103
12/04/2018	13.15	5.50	14.00	12.56	13.23	4,213,000	6,862,500	1.63	24	21	55,400,950	99	70	4.13	69 318	285 938	375 775	200 619	231 127
16/04/2018	13.84	5.50	14.25	13.23	13.82	4,213,000	9,794,000	2.32	31	22	58,307,920	128	57	4.13	76 516	315 935	559 699	191 500	264 083
17/04/2018	13.82	5.50	14.20	13.19	13.80	4,213,000	8,146,500	1.93	29	24	58,223,660	126	53	4.34	64 655	280 914	373 686	175 542	209 185
19/04/2018	13.99	5.50	14.30	13.15	13.85	4,213,000	9,429,500	2.24	28	16	58,939,870	113	26	4.04	83 447	336 768	417 441	263 313	310 966
23/04/2018	12.75	5.50	15.00	12.30	12.79	4,213,000	7,540,000	1.79	30	28	53,715,750	105	62	3.50	71 810	251 333	374 599	150 464	173 360
24/04/2018	12.73	5.50	13.70	12.24	12.67	4,213,000	8,156,000	1.94	30	22	53,631,490	117	48	3.90	69 709	271 867	369 805	191 500	239 585
25/04/2018	13.09	5.50	13.75	12.33	12.94	3,547,000	9,233,000	2.60	28	16	46,430,230	94	20	3.36	98 223	329 750	477 023	221 688	288 628
26/04/2018	13.39	5.50	13.80	12.65	13.19	4,213,000	10,506,000	2.49	24	8	56,412,070	119	16	4.96	88 286	437 750	548 002	526 625	431 542
30/04/2018	13.35	5.50	15.10	12.52	13.31	4,213,000	7,909,500	1.88	22	18	56,243,550	75	32	3.41	105 460	359 523	422 969	234 056	213 691

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 – May 2018

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
03/05/2018	12.77	5.50	14.00	12.18	12.75	4,213,000	7,962,000	1.89	25	18	53,800,010	89	39	3.56	89 461	318 480	429 418	234 056	253 573
08/05/2018	13.51	5.50	16.00	12.96	13.45	4,213,000	14,772,500	3.51	29	20	56,917,630	116	39	4.00	127 349	509 397	1187 472	210 650	183 669
09/05/2018	13.92	5.50	20.00	13.15	13.88	3,547,000	6,639,500	1.87	21	15	49,374,240	89	38	4.24	74 601	316 167	413 193	236 467	245 541
14/05/2018	14.20	5.50	15.50	13.41	14.24	4,213,000	7,318,500	1.74	26	25	59,824,600	99	62	3.81	73 924	281 481	378 610	168 520	201 865
15/05/2018	14.70	4.70	16.25	13.77	14.76	4,213,000	6,876,000	1.63	24	22	61,931,100	97	60	4.04	70 887	286 500	418 245	191 500	245 822
17/05/2018	15.05	5.50	16.50	14.26	14.99	4,213,000	11,416,500	2.71	30	22	63,405,650	126	36	4.20	90 607	380 550	460 167	191 500	165 832
22/05/2018	15.88	5.50	20.00	15.02	15.75	4,213,000	11,573,500	2.75	30	21	66,902,440	118	35	3.93	98 081	385 783	499 870	200 619	180 738
23/05/2018	15.81	5.50	17.00	14.74	15.80	3,547,000	7,680,500	2.17	26	23	56,078,070	101	47	3.88	76 045	295 404	393 896	154 217	190 336
24/05/2018	16.23	5.50	18.00	15.24	16.19	4,213,000	9,858,000	2.34	27	20	68,376,990	122	45	4.52	80 803	365 111	459 686	210 650	202 072
29/05/2018	16.25	5.50	17.00	15.24	16.21	4,213,000	12,022,000	2.85	26	19	68,461,250	122	46	4.69	98 541	462 385	472 763	221 737	187 861
31/05/2018	15.40	5.50	18.00	14.28	15.40	4,213,000	9,557,000	2.27	24	21	64,880,200	92	45	3.83	103 880	398 208	466 546	200 619	219 988

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 – June 2018*

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
04/06/2018	15.28	6.00	18.00	14.48	15.23	4,213,000	8,332,000	1.98	25	20	64,374,640	101	39	4.04	82 495	333 280	429 176	210 650	232 867
05/06/2018	16.35	6.00	18.00	15.50	16.33	4,213,000	9,623,000	2.28	28	21	68,882,550	118	53	4.21	81 551	343 679	408 342	200 619	186 639
06/06/2018	15.70	6.00	18.00	14.79	15.68	3,547,000	8,210,000	2.31	25	20	55,687,900	106	45	4.24	77 453	328 400	367 609	177 350	170 901
07/06/2018	16.14	6.00	17.00	15.16	15.99	4,213,000	9,763,000	2.32	26	16	67,997,820	108	29	4.15	90 398	375 500	485 462	263 313	342 011
11/06/2018	15.70	6.00	18.00	14.82	15.59	4,213,000	8,561,500	2.03	26	17	66,144,100	110	31	4.23	77 832	329 288	423 394	247 824	199 901
12/06/2018	15.08	6.00	16.51	14.49	15.13	4,213,000	6,868,500	1.63	24	21	63,532,040	123	80	5.13	55 841	286 188	380 900	200 619	213 350
14/06/2018	15.44	6.00	16.50	14.67	15.30	4,213,000	9,578,500	2.27	26	15	65,048,720	128	30	4.92	74 832	368 404	450 208	280 867	289 341
18/06/2018	14.52	6.00	18.00	13.59	14.39	4,213,000	8,538,000	2.03	25	17	61,172,760	79	27	3.16	108 076	341 520	468 194	247 824	351 992
19/06/2018	14.35	6.00	15.50	13.63	14.24	4,213,000	9,220,000	2.19	28	15	60,456,550	102	30	3.64	90 392	329 286	464 181	280 867	331 884
20/06/2018	14.43	6.00	15.70	13.56	14.28	3,547,000	10,172,000	2.87	26	11	51,183,210	91	20	3.50	111 780	391 231	504 897	322 455	274 748
21/06/2018	14.20	6.00	15.00	13.56	14.20	4,213,000	10,521,000	2.50	26	23	59,824,600	100	50	3.85	105 210	404 654	599 057	183 174	207 617
25/06/2018	15.03	6.00	18.00	14.21	15.00	4,213,000	12,908,000	3.06	25	21	63,321,390	102	40	4.08	126 549	516 320	754 043	200 619	226 692
26/06/2018	14.86	5.00	15.50	13.96	14.76	4,213,000	9,943,000	2.36	30	16	62,605,180	104	31	3.47	95 606	331 433	453 190	263 313	253 712
28/06/2018	15.22	6.00	16.30	14.16	15.17	4,213,000	9,422,000	2.24	23	13	64,121,860	77	26	3.35	122 364	409 652	553 257	324 077	401 211

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 – April 2018																			
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 – May 2018**

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
23/05/2018	15.74	15.18	16.01	15.56	15.58	958,000	3,938,000	4.11	11	5	15,078,920	52	11	4.73	75 731	358 000	280 602	191 600	76 107

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 – June 2018																			
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
20/06/2018	14.21	13.90	14.27	14.10	14.09	112,000	170,000	1.52	2	2	1,591,520	9	3	4.50	18 889	85 000	27 000	56 000	27 000

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

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



