



AUCTIONS BY THE COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

July to September 2018

Auctions by the *Common Auction Platform*

July, August, September 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:

2, 3, 4(PL)¹, 5, 9, 10, 12, 16, 17, 18(PL), 19, 23, 24, 26, 30 and 31 July 2018;

1(PL), 2, 6, 7, 9, 13, 14, 16, 20, 21, 23, 28, 29(PL) and 30 August 2018;

3, 4, 10, 11, 12(PL), 13, 17, 18, 20, 24, 25, 26(PL) and 27 September 2018;

Aviation Allowances:

18 July 2018;

12 September 2018;

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.

¹ 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

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 2016². 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)³ 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.

² 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.

³ 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 July, August, September 2018 auctions at a glance:

	General Allowances			Aviation Allowances		
	Jul	Aug	Sep	Jul	Aug	Sep
General						
Number of auctions	16	14	13	1		1
Total volume auctioned	66 076 000	28 795 000	53 437 000	958 000		958 000
Amount raised from the auctions (€)	1 070 680 240	537 691 740	1 163 471 730	15 337 580		22 752 500
Average Auction Clearing Price (€/allowance)	16.2	18.7	21.8	16.0		23.8
Total bid volume	217 971 000	118 920 000	137 998 000	1 236 000		1 906 000
Average <i>Cover ratio</i>	3.3	4.1	2.6	1.3		2.0
Monthly HHI	1220	952	1191	1900		2019
Participation						
Number of eligible bidders	77	77	77	77		77
Number of participating bidders ⁽¹⁾	40	37	38	6		9
Number of successful bidders ⁽¹⁾	39	36	38	6		7
Average number of bidders per auction	26.4	24.7	25.9	6		9
Average number of successful bidders per auction	18.1	16.5	19.7	6		7
Auction data						
Average total volume bid per bidder per auction	519 872	343 427	409 090	206 000		211 778
Average bid size (volume per bid)	123 820	100 930	126 527	45 778		37 373
Average volume won per bidder per auction	240 954	129 177	219 901	159 667		136 857
Average range of bids (€)	10.81	12.42	15.36	0.50		1.10

(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 September 2018 are EUR 20 867 747 695, and of *aviation allowances* EUR 223 690 920. 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 website⁴.

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

⁴ <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.

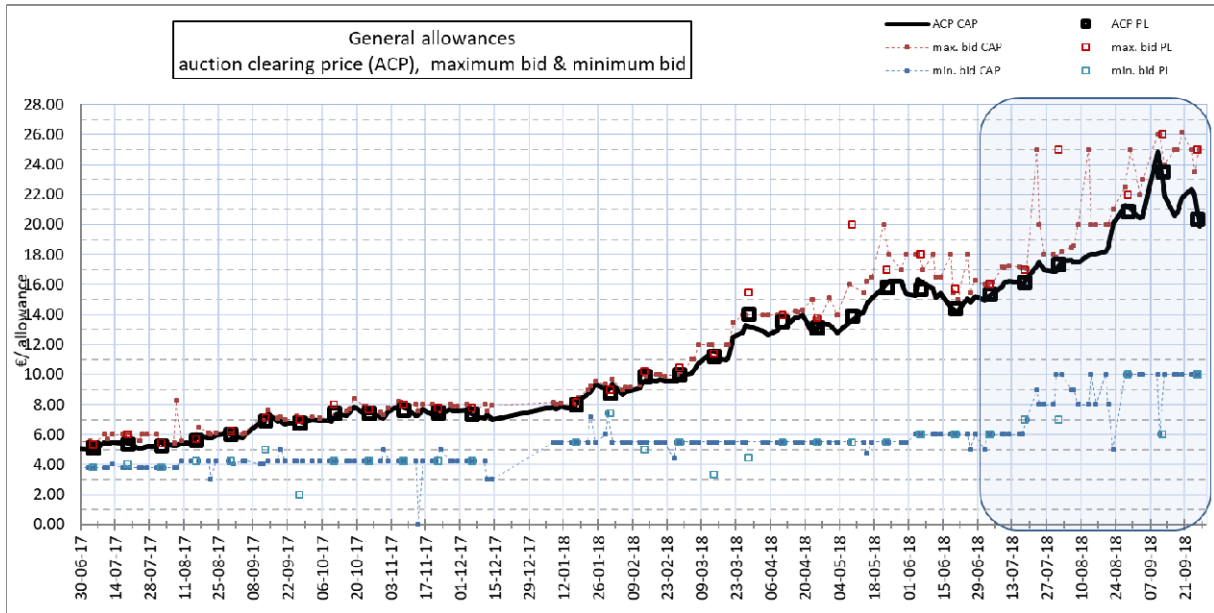
Table 1: General allowances - main statistics on the results of the auctions per month

Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ⁵	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
September 2018	53 437 000	137 998 000	1 163 471 730	2.6	25.9	19.7	21.77
August 2018	28 795 000	118 920 000	537 691 740	4.1	24.7	16.5	18.67
July 2018	66 076 000	217 971 000	1 070 680 240	3.3	26.4	18.1	16.20
June 2018	57 650 000	131 660 500	874 353 320	2.0	26	18.0	15.17
May 2018	45 011 000	105 676 000	669 952 180	2.3	26	20.5	14.88
April 2018	61 863 000	117 729 000	817 157 360	2.0	26	19.0	13.21
March 2018	57 650 000	150 726 000	659 294 570	2.6	27	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
2017 total	648 415 500	1 761 212 000	3 744 838 845	2.7	21.2	14.6	5.78
2016 total	474 261 000	1 092 400 000	2 496 870 295	2.3	19.0	13.4	5.26
2015 total	413 874 000	1 337 010 500	3 154 940 925	3.2	18.3	13.3	7.62
2014 total	335 052 000	1 796 711 000	1 977 712 120	5.4	17.6	11.9	5.90
2013 total	530 488 000	1 761 639 500	2 349 853 340	3.3	18.4	13.2	4.43

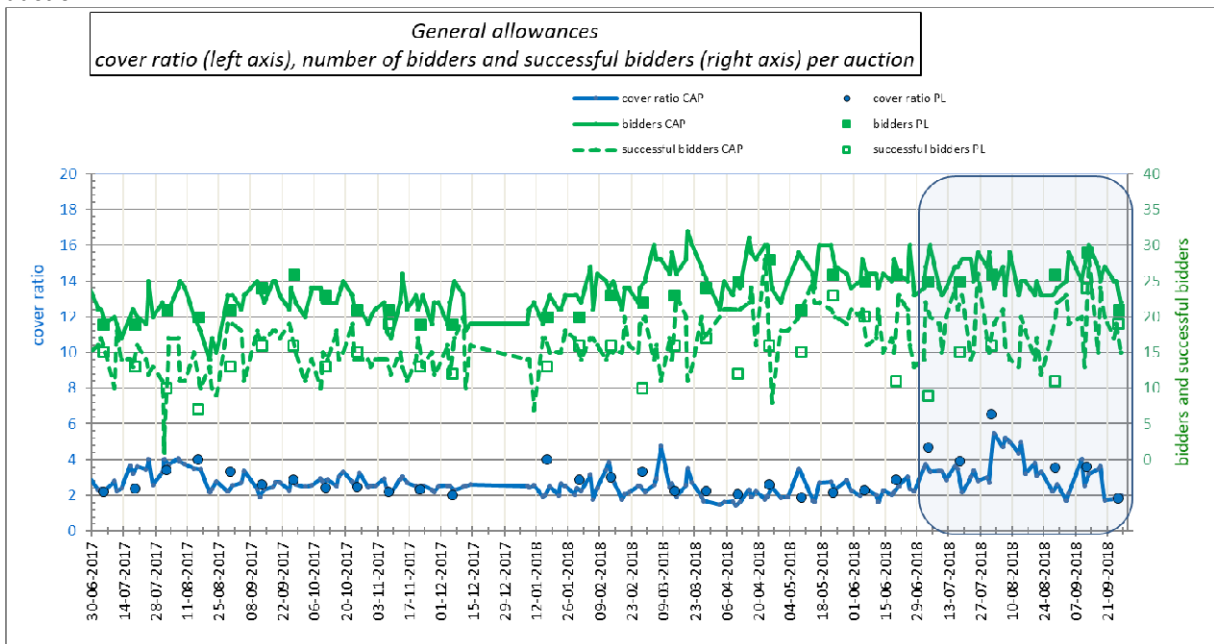
During July, August, September 2018, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for general allowances at the closure of the auction *bidding window* was on average EUR - 0.03, - 0.03, - 0.15 respectively, and this difference had a standard deviation of EUR 0.08, 0.19, 0.17 respectively.

⁵ 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 bid⁶



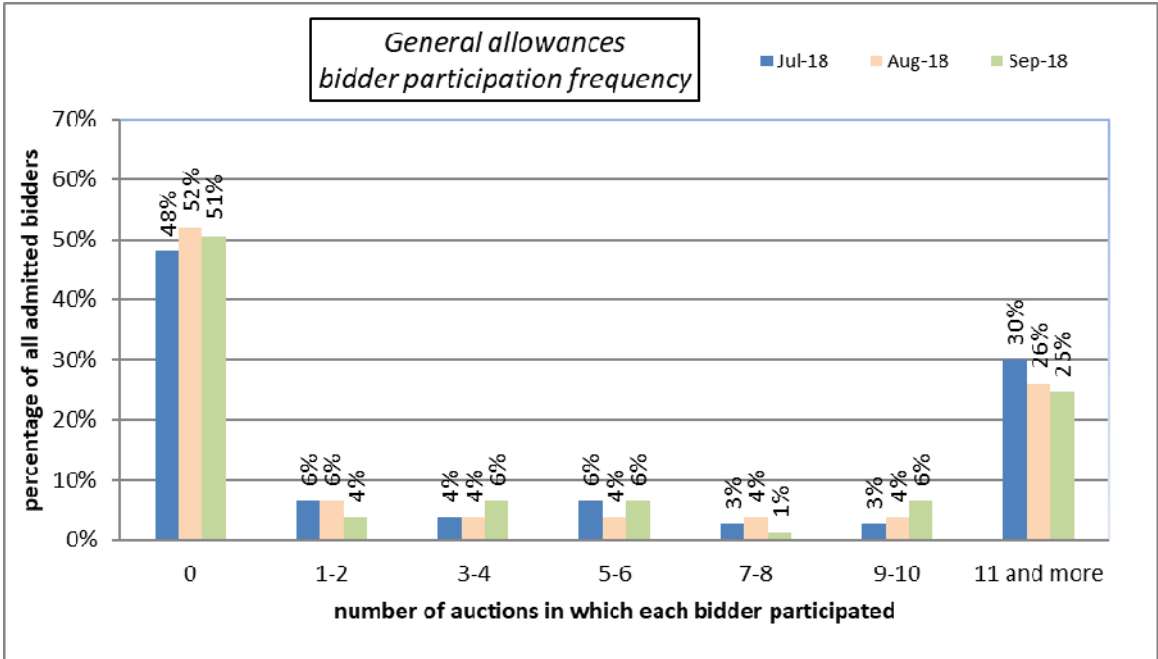
Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these, 40, 37 and 38 different bidders participated in the auctions in respectively in July, August, September 2018. Graph 3A indicates the participation frequency over these months.

⁶ Auctions on behalf of Poland were held on the following days: 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, 20/6/2018, 4/7/2018, 18/7/2018, 1/8/2018, 29/8/2018, 12/9/2018 and 26/9/2018.

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 ⁽¹⁾	Total volume of bids	Average total volume bid per bidder per auction ⁷	Average total volume bid per bidder per auction over the month ⁸	standard deviation of total volume bid per bidder per auction over the month ⁹	Total monthly nr of bids	Average nr. of bids per bidder per auction ¹⁰	Average bid size ¹¹
September 2018	13	38	137 998 000	409 090	409 490	1 019 008	1 095	3.2	126 527
August 2018	14	37	118 920 000	343 427	343 699	604 447	1 169	3.4	100 930
July 2018	16	40	217 971 000	519 872	516 519	979 991	1 760	4.2	123 820
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

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

⁷ 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.

⁸ 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).

⁹ Standard deviation of total volume bid per bidder in each auction over the month.

¹⁰ 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).

¹¹ 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 ⁽¹⁾	Total auction volume	Average volume won per bidder per auction ¹²	Average volume won per bidder per auction over the month ¹³	Standard deviation of volume won per bidder per auction over the month ¹⁴	Total monthly nr of successful bids
September 2018	13	38	53 437 000	219 901	208 738	329 342	513
August 2018	14	36	28 795 000	129 177	124 654	152 306	347
July 2018	16	39	66 076 000	240 954	228 637	329 842	568
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

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

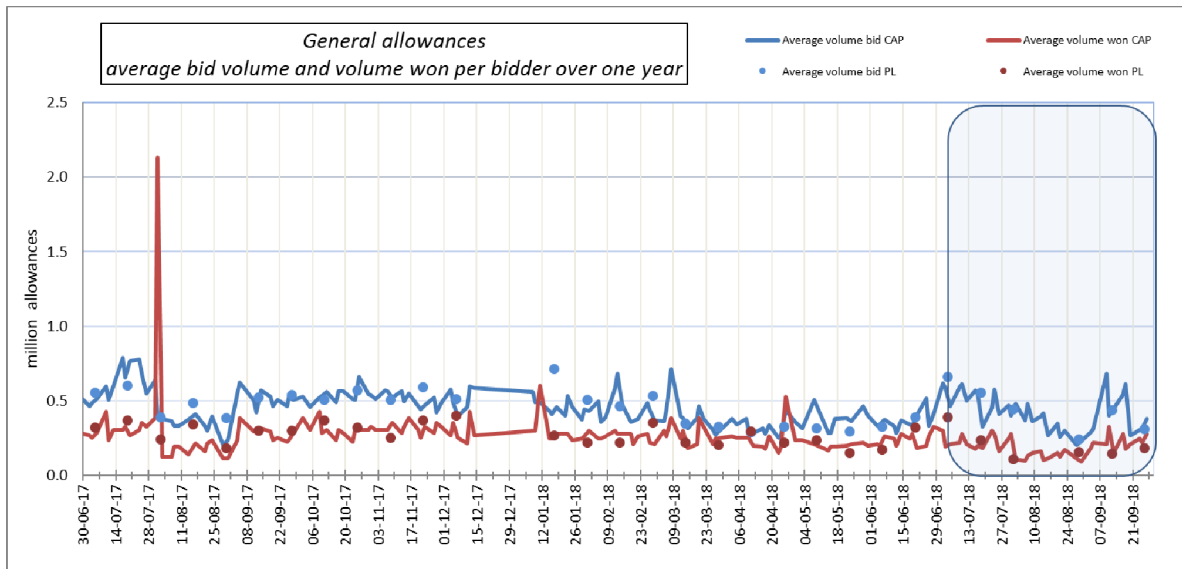
Graph 4: General allowances - average bid volume and volume won per bidder over 15 months¹⁵

¹² 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.

¹³ 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).

¹⁴ Standard deviation of volume won per bidder in each auction over the month.

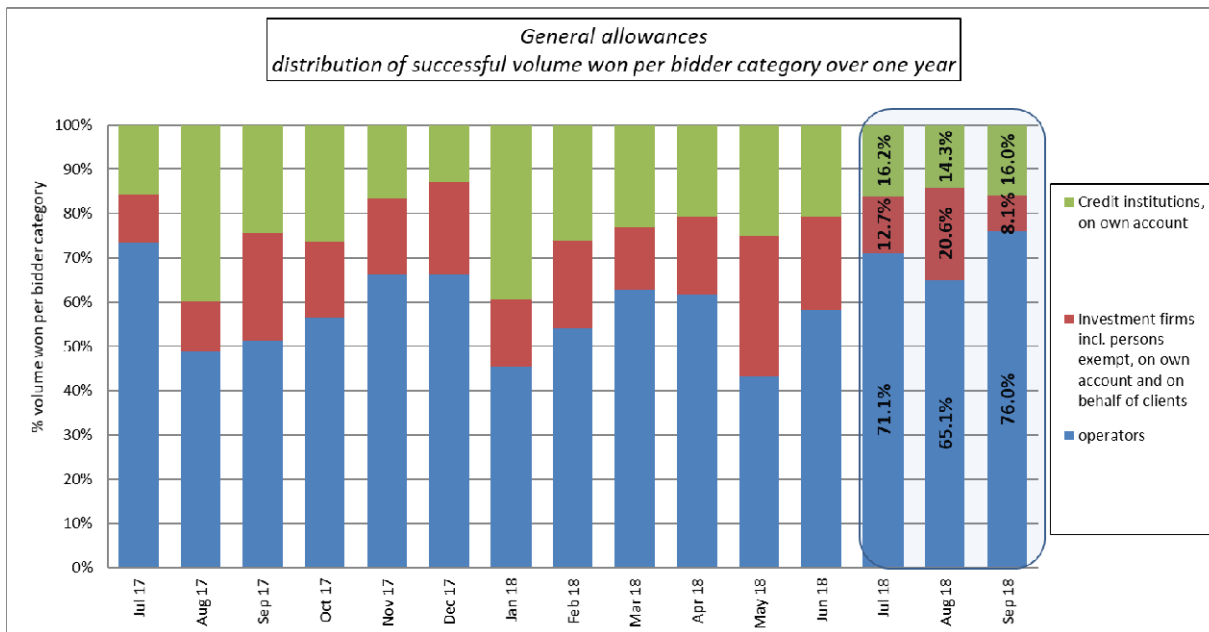
¹⁵ Auctions on behalf of Poland were held on the following days: 5/7/2017, 19/7/2017, 2/8/2017, 16/8/2017, 30/8/2017, 13/9/2017, 27/9/2017, 11/10/2017, 25/10/2017, 8/11/2017, 22/11/2017, 6/12/2017, 17/1/2018, 31/1/2018, 14/2/2018, 28/2/2018, 14/3/2018, 28/3/2018, 11/4/2018, 25/4/2018, 9/5/2018, 23/5/2018, 6/6/2018, 20/6/2018, 4/7/2018, 18/7/2018, 1/8/2018, 29/8/2018, 12/9/2018 and 26/9/2018.



1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client¹⁶ in July, August and September 2018 was respectively 0%, 0.02% 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



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

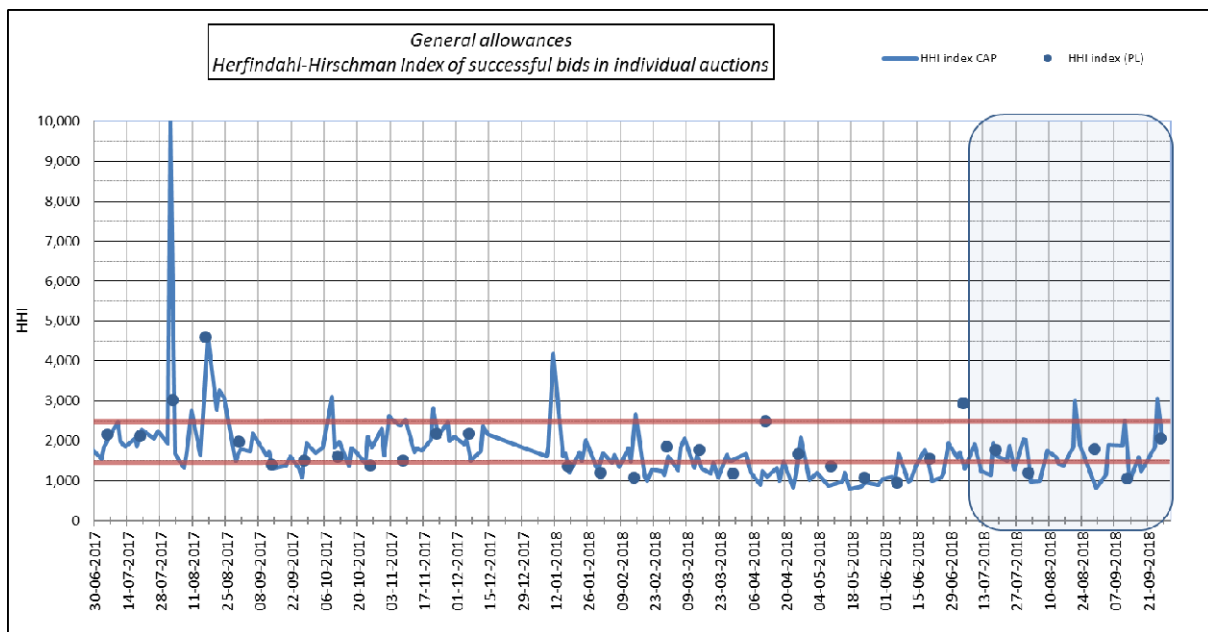
Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
July 2018	0%	Operators (including Business groupings)	71.1%	9.0% points
		Investment firms (including persons exempt)	12.7%	8.2% points
		Credit institutions	16.2%	7.5% points
August 2018	0.02%	Operators (including Business groupings)	65.1%	9.2% points
		Investment firms (including persons exempt)	20.6%	7.1% points
		Credit institutions	14.3%	9.4% points
September 2018	0%	Operators (including Business groupings)	76.0%	13.5% points
		Investment firms (including persons exempt)	8.1%	6.3% points
		Credit institutions	16.0%	13.1% points

1.1.4. Concentration - general allowances

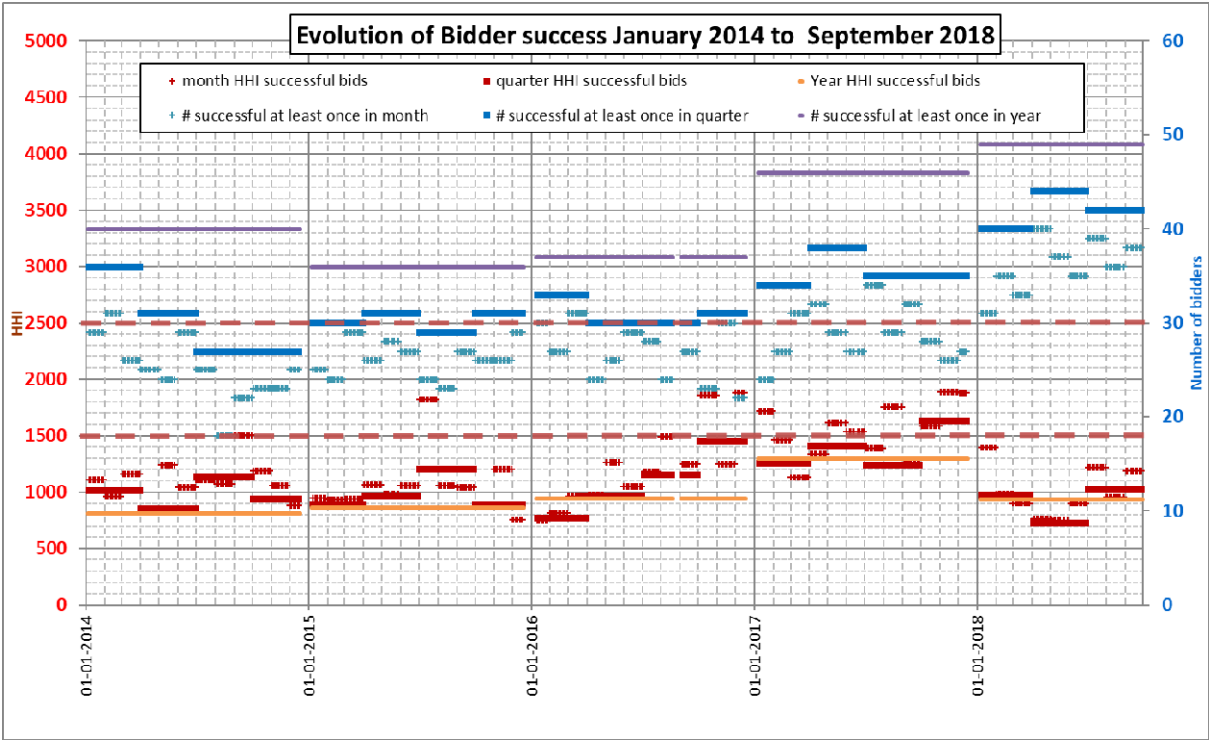
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration¹⁷. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated,' between 1 500 and 2 500 is 'moderately 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



¹⁷ 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 2014¹⁸. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014¹⁹; 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

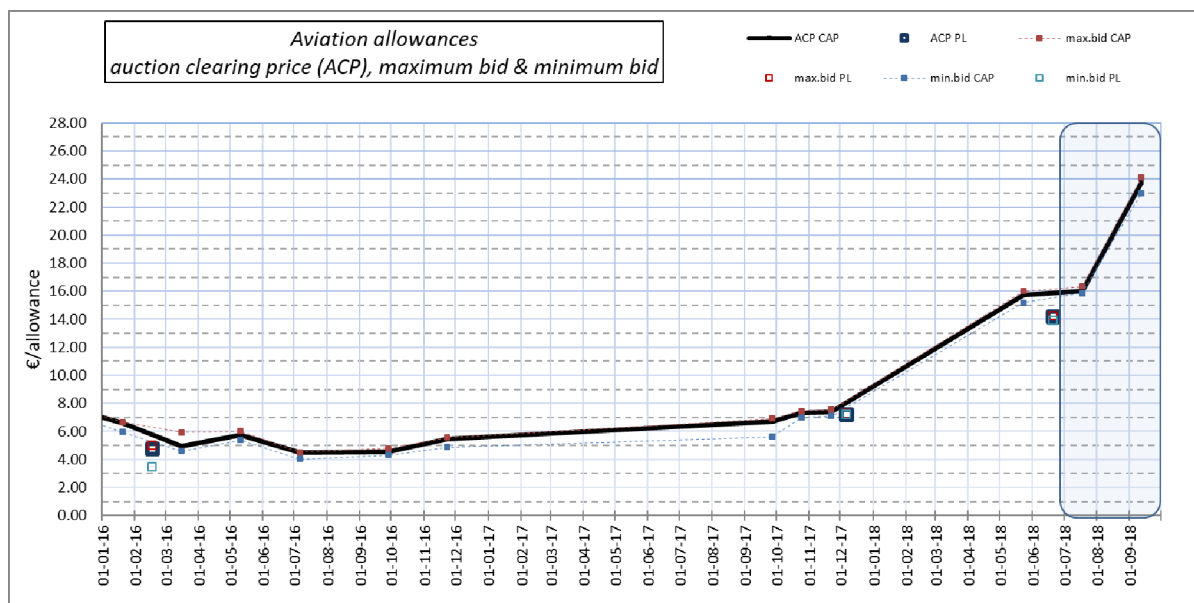
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ²⁰	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
September 2018	958 000	1 906 000	22 752 500	2.0	9	7	23.75
August 2018	-	-	-	-	-	-	-
July 2018	958 000	1 236 000	15 337 580	1.3	6	6	16.01
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	-	-	-	-	-	-	-
2017 total	3 329 500	10 300 000	23 771 460	3.1	7.5	6.5	7.14
2016 total	4 219 000	17 973 500	22 266 205	4.3	10.4	4.6	5.28
2015 total	11 641 000	39 026 000	81 846 705	3.4	11.0	7.5	7.03
2014 total	6 570 500	28 201 500	39 454 510	4.3	13.0	8.0	6.00

¹⁸ 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.

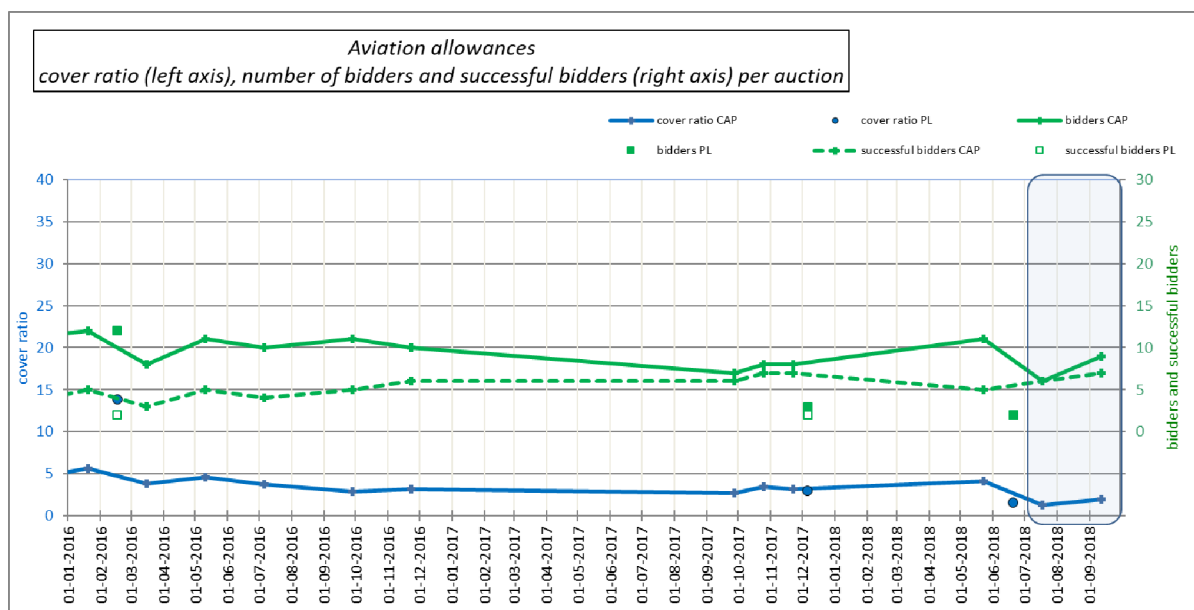
¹⁹ See also the regulatory update published by the Commission on 29 July 2014: http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm.

²⁰ 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 bid²¹



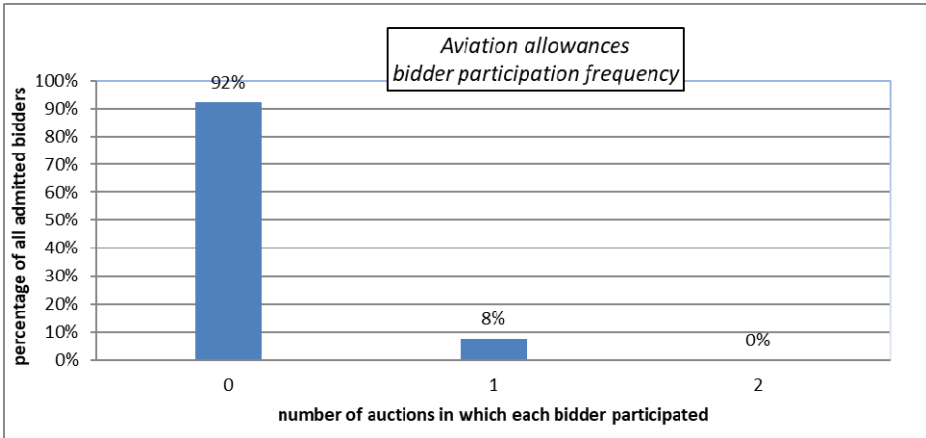
Graph 9: Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



²¹ 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

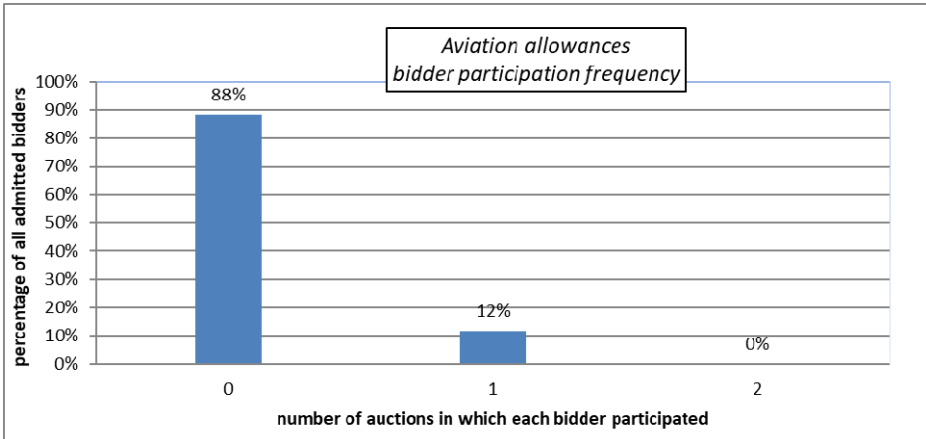
July



August

No aviation allowances have been auctioned in August 2018.

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 ⁽¹⁾	Total volume of bids	Average total volume bid per bidder per auction ²²	Average total volume bid per bidder per auction over the month ²³	standard deviation of total volume bid per bidder per auction over the month ²⁴	Total monthly nr of bids	Average nr. of bids per bidder per auction ²⁵	Average bid size ²⁶
September 2018	1	9	1 906 000	211 778	211 778	168 779	51	5.67	37 373
August 2018	-	-	-	-	-	-	-	-	-
July 2018	1	6	1 236 000	206 000	206 000	114 588	27	4.5	45 778
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	4.73	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	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	-	-	-	-	-	-	-	-	-

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

²² 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.

²³ 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).

²⁴ Standard deviation of total volume bid per bidder in each auction over the month.

²⁵ 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).

²⁶ 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.

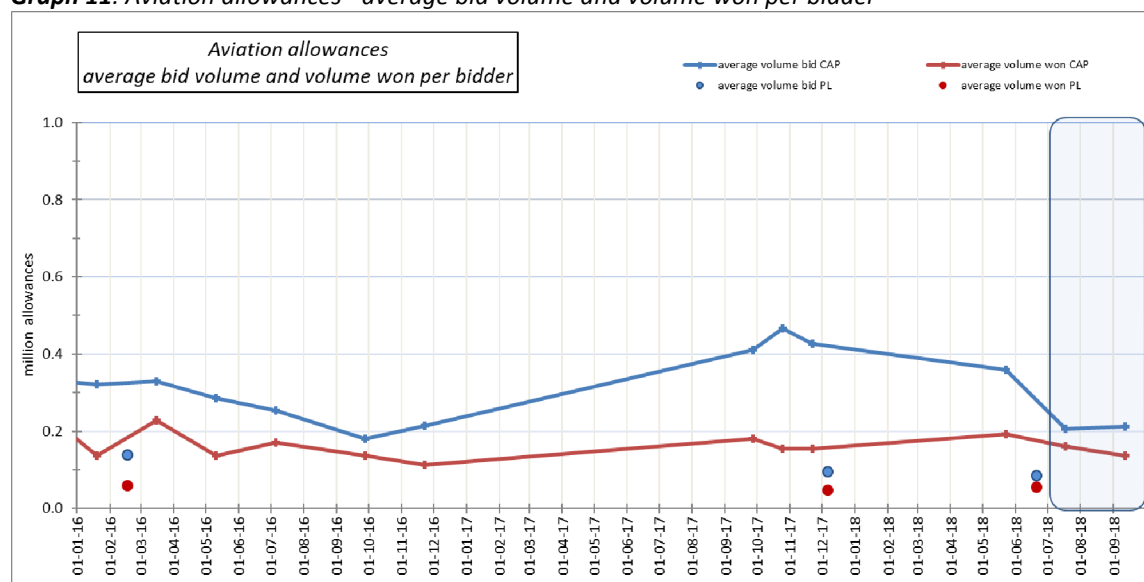
Table 7 provides monthly data on successful bids over 15 months. See also Graph 11.

Table 7: Aviation Allowances – Monthly statistics on successful bids

Month	Nr of auctions	Nr of successful bidders ⁽¹⁾	Total auction volume	Average volume won per bidder per auction ²⁷	Average volume won per bidder per auction over the month ²⁸	Standard deviation of volume won per bidder per auction over the month ²⁹	Total monthly nr of successful bids
September 2018	1	7	958 000	136 857	136 857	88 006	20
August 2018	-	-	-	-	-	-	-
July 2018	1	6	958 000	159 667	159 667	59 779	21
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	-	-	-	-	-	-	-

(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



²⁷ 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.

²⁸ 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).

²⁹ Standard deviation of volume won per bidder in each auction over the month.

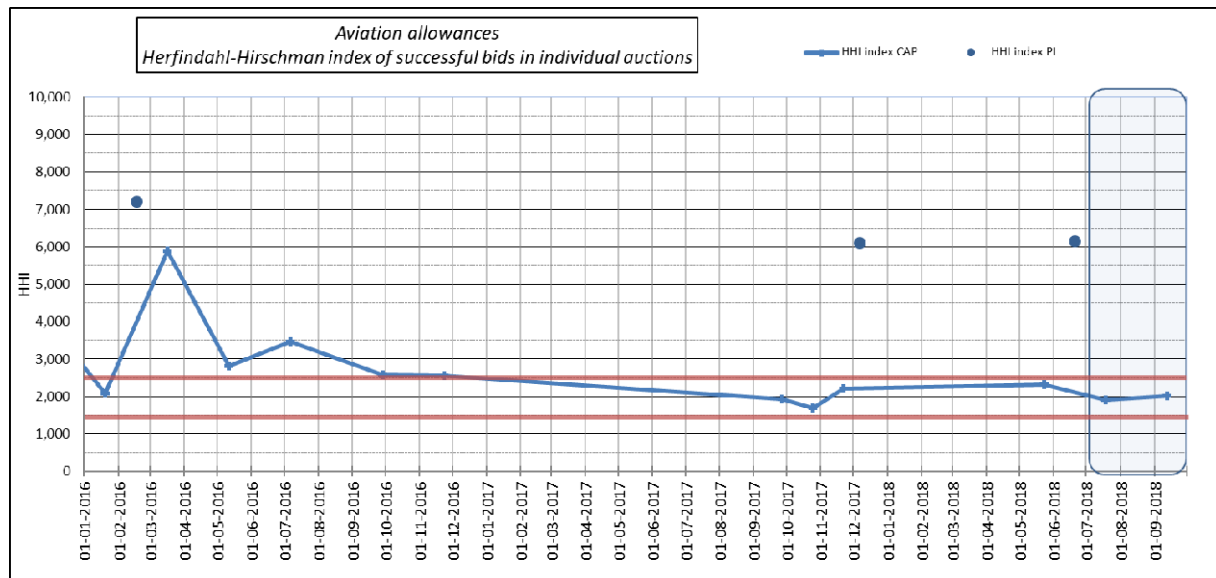
1.2.3 Type of bidders – aviation allowances

In July, August, 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 concentration³⁰. 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



³⁰ 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 auctions³¹.

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	Jul 2018							118
	Aug 2018	-						119
	Sep 2018							119
Participants eligible to bid in the auctions	Jul 2018							77
	Aug 2018	56	1	10	5	0	5	
	Sep 2018							
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Jul 2018							5
	Aug 2018	-	-	1	2	-	2	
	Sep 2018							
(Of which:) Auction-only access	Jul 2018							3
	Aug 2018	1	0	1	0	0	1	
	Sep 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.

³¹ 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: http://ec.europa.eu/clima/policies/ets/cap/auctioning/documentation_en.htm .
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: http://ec.europa.eu/clima/policies/ets/documentation_en.htm .

General Allowance	Allowance to emit one tonne of CO ₂ -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 ₂ -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 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	474,152,410	6,455,850	480,608,260
Belgium	857,451,250	8,073,375	865,524,625
Bulgaria	697,235,405	2,261,020	699,496,425
Croatia	181,884,875	1,248,915	183,133,790
Cyprus	25,261,555	3,495,440	28,756,995
Czech Republic	959,566,715	3,145,330	962,712,045
Denmark	423,664,090	7,243,350	430,907,440
Estonia	205,042,545	392,005	205,434,550
Finland	569,875,270	5,590,390	575,465,660
France	1,865,389,685	37,317,335	1,902,707,020
Greece	1,178,580,810	12,281,545	1,190,862,355
Hungary	477,851,765	2,507,430	480,359,195
Ireland	315,484,745	5,679,540	321,164,285
Italy	3,283,425,295	37,543,220	3,320,968,515
Latvia	91,702,855	1,332,300	93,035,155
Lithuania	175,131,960	700,850	175,832,810
Luxemburg	41,182,230	1,123,000	42,305,230
Malta	34,515,665	1,381,000	35,896,665
The Netherlands	1,140,995,150	13,706,905	1,154,702,055
Poland	1,954,843,565	7,429,320	1,962,272,885
Portugal	597,841,570	7,744,280	605,585,850
Romania	1,395,218,825	3,906,030	1,399,124,855
Slovak Republic	524,317,050	493,660	524,810,710
Slovenia	150,842,935	347,595	151,190,530
Spain	2,942,775,245	43,131,075	2,985,906,320
Sweden	303,514,230	9,160,160	312,674,390
TOTAL	20,867,747,695	223,690,920	21,091,438,615

Annex 2 Results of individual auctions on behalf of participating Member States and Poland in July – September 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 – July 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
02/07/2018	14.95	5.00	16.00	14.06	14.80	4,213,000	14,845,000	3.52	24	14	62,984,350	113	23	4.71	131 372	618 542	910 577	300 929	329 764
03/07/2018	15.15	6.00	16.00	14.43	15.10	4,213,000	15,773,000	3.74	27	22	63,826,950	134	48	4.96	117 709	584 185	1032 275	191 500	317 778
04/07/2018	15.35	6.00	16.00	14.33	15.10	3,547,000	16,626,000	4.69	25	9	54,446,450	116	17	4.64	143 328	665 040	1165 094	394 111	506 970
05/07/2018	15.40	6.00	16.16	14.56	15.31	4,213,000	13,926,000	3.31	30	20	64,880,200	117	32	3.90	119 026	464 200	909 675	210 650	265 828
09/07/2018	15.85	6.00	17.20	14.89	15.80	4,213,000	14,212,000	3.37	24	19	66,776,050	107	40	4.46	132 822	592 167	1317 369	221 737	361 752
10/07/2018	16.15	6.00	17.15	15.13	16.06	4,213,000	14,127,000	3.35	23	15	68,039,950	113	28	4.91	125 018	614 217	1006 941	280 867	346 799
12/07/2018	16.22	6.00	17.25	15.19	16.20	4,213,000	12,078,000	2.87	24	20	68,334,860	108	50	4.50	111 833	503 250	817 860	210 650	257 054
16/07/2018	16.14	6.00	17.20	15.25	16.11	4,213,000	15,341,500	3.64	27	24	67,997,820	115	48	4.26	133 404	568 204	1286 482	175 542	231 530
17/07/2018	15.87	6.00	17.10	14.94	15.82	4,213,000	14,655,500	3.48	27	21	66,860,310	110	39	4.07	133 232	542 796	1367 477	200 619	352 615
18/07/2018	16.17	7.00	17.00	15.58	16.09	3,547,000	13,980,500	3.94	25	15	57,354,990	98	28	3.92	142 658	559 220	1078 291	236 467	305 484
19/07/2018	16.46	7.00	17.05	15.98	16.45	4,213,000	9,157,500	2.17	28	23	69,345,980	99	49	3.54	92 500	327 054	399 744	183 174	301 202
23/07/2018	17.20	9.00	25.01	16.60	17.00	4,213,000	12,737,500	3.02	28	14	72,463,600	104	22	3.71	122 476	454 911	647 895	300 929	318 834
24/07/2018	17.45	8.00	20.00	16.90	17.41	4,213,000	14,353,000	3.41	25	15	73,516,850	109	34	4.36	131 679	574 120	1016 841	280 867	378 344
26/07/2018	16.99	8.00	18.00	16.58	16.97	4,213,000	11,919,000	2.83	29	26	71,578,870	129	56	4.45	92 395	411 000	663 761	162 038	248 494
30/07/2018	16.90	8.00	18.00	16.35	16.87	4,213,000	12,675,500	3.01	27	17	71,199,700	96	33	3.56	132 036	469 463	913 453	247 824	390 740
31/07/2018	16.87	10.00	17.80	16.28	16.70	4,213,000	11,564,000	2.74	29	15	71,073,310	92	21	3.17	125 696	398 759	635 591	280 867	399 177

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 – August 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
01/08/2018	17.38	7.00	25.01	16.67	17.31	1,773,500	11,632,000	6.56	26	16	30,823,430	99	23	3.81	117 495	447 385	656 920	110 844	108 020
02/08/2018	17.58	10.00	18.20	17.43	17.52	2,104,000	11,568,000	5.50	24	19	36,988,320	86	24	3.58	134 512	482 000	947 153	110 737	103 611
06/08/2018	17.62	9.00	18.50	16.93	17.57	2,104,000	9,894,000	4.70	27	21	37,072,480	91	31	3.37	108 725	366 444	601 214	100 190	104 623
07/08/2018	17.47	9.00	18.60	16.76	17.44	2,104,000	11,007,000	5.23	23	16	36,756,880	85	28	3.70	129 494	478 565	889 085	131 500	131 313
09/08/2018	17.47	8.00	20.00	16.82	17.32	2,104,000	10,517,000	5.00	29	14	36,756,880	102	19	3.52	103 108	362 655	585 763	150 286	182 268
13/08/2018	17.93	8.00	25.01	17.09	17.81	2,104,000	9,144,000	4.35	23	13	37,724,720	79	17	3.43	115 747	397 565	647 604	161 846	166 316
14/08/2018	18.03	10.00	20.00	17.29	18.00	2,104,000	10,427,000	4.96	25	20	37,935,120	88	32	3.52	118 489	417 080	810 563	105 200	144 078
16/08/2018	18.00	8.00	20.00	17.11	17.94	2,104,000	6,732,000	3.20	25	18	37,872,000	75	22	3.00	89 760	269 280	451 647	116 889	143 132
20/08/2018	18.20	10.00	20.00	17.25	18.10	2,104,000	8,032,500	3.82	23	14	38,292,800	73	18	3.17	110 034	349 239	456 917	150 286	190 652
21/08/2018	18.55	8.00	20.00	17.64	18.48	2,104,000	6,498,500	3.09	25	17	39,029,200	82	22	3.28	79 250	259 940	411 817	123 765	251 239
23/08/2018	20.05	5.00	21.00	19.53	19.91	2,104,000	6,954,000	3.31	23	12	42,185,200	72	16	3.13	96 583	302 348	480 219	175 333	198 156
28/08/2018	21.30	10.00	22.50	19.97	21.33	2,104,000	4,663,500	2.22	23	18	44,815,200	80	43	3.48	58 294	202 761	308 048	116 889	113 241
29/08/2018	20.90	10.00	22.00	19.43	20.62	1,773,500	6,344,500	3.58	26	11	37,066,150	77	14	2.96	82 396	244 019	342 938	161 227	160 693
30/08/2018	21.09	10.00	25.00	20.08	21.09	2,104,000	5,506,000	2.62	24	22	44,373,360	80	38	3.33	68 825	229 417	306 173	95 636	84 016

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 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
03/09/2018	20.45	10.00	22.00	19.61	20.54	4,213,000	7,207,000	1.71	25	23	86,155,850	81	56	3.24	88 975	288 280	409 685	183 174	236 155
04/09/2018	20.50	10.00	23.00	19.67	20.36	4,213,000	9,008,000	2.14	29	19	86,366,500	105	34	3.62	85 790	310 621	406 769	221 737	357 257
10/09/2018	24.85	10.00	26.00	23.21	24.86	4,213,000	17,032,000	4.04	25	20	104,693,050	72	37	2.88	236 556	681 280	2135 230	210 650	348 801
11/09/2018	24.15	6.00	26.00	22.45	23.91	4,213,000	10,756,000	2.55	27	13	101,743,950	85	26	3.15	126 541	398 370	671 282	324 077	488 671
12/09/2018	23.55	6.00	26.00	22.17	23.55	3,547,000	12,831,000	3.62	29	24	83,531,850	88	45	3.03	145 807	442 448	1096 689	147 792	184 132
13/09/2018	21.90	10.00	24.00	20.88	21.97	4,213,000	13,508,000	3.21	30	28	92,264,700	100	64	3.33	135 080	450 267	949 431	150 464	200 559
17/09/2018	20.60	10.00	25.00	19.41	20.20	4,213,000	14,636,500	3.47	27	15	86,787,800	88	21	3.26	166 324	542 093	1317 904	280 867	331 909
18/09/2018	20.75	10.00	25.00	20.04	20.76	4,213,000	15,323,500	3.64	25	24	87,419,750	94	49	3.76	163 016	612 940	1750 474	175 542	247 909
20/09/2018	21.80	10.00	26.12	20.75	21.78	4,213,000	7,281,000	1.73	27	20	91,843,400	84	39	3.11	86 679	269 667	351 362	210 650	290 351
24/09/2018	22.39	10.00	25.00	21.06	22.32	4,213,000	7,629,500	1.81	25	17	94,329,070	82	34	3.28	93 043	305 180	416 616	247 824	363 989
25/09/2018	21.90	10.00	23.50	20.71	21.85	4,213,000	7,843,500	1.86	25	19	92,264,700	77	36	3.08	101 864	313 740	502 909	221 737	486 152
26/09/2018	20.40	10.00	25.00	19.38	20.50	3,547,000	6,582,000	1.86	21	19	72,358,800	65	40	3.10	101 262	313 429	433 941	186 684	320 220
27/09/2018	19.87	10.00	25.00	19.03	19.80	4,213,000	8,360,000	1.98	22	15	83,712,310	74	32	3.36	112 973	380 000	525 995	280 867	406 683

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 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
18/07/2018	16.01	15.85	16.35	16.11	16.12	958 000	1 236 000	1.29	6	6	15 337 580	27	21	4.50	45 778	206 000	114 588	159 667	59 779

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 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 – September 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
12/09/2018	23.75	23.01	24.11	23.66	23.69	958 000	1 906 000	1.99	9	7	22 752 500	51	20	5.67	37 373	211 778	168 779	136 857	88 006

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.

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

