

Auctions by the *Common Auction Platform*

July, August, September 2021

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:

1, 5, 6, 7(PL), 8, 12, 13, 14(PL), 15, 19, 20, 21(PL), 22, 26, 27, 28(PL), 29 July 2021;

2, 3, 4(PL), 5, 9, 10, 11(PL), 12, 16, 17, 18(PL), 19, 23, 24, 25(PL), 26, 31 August 2021;

1(PL), 6, 7, 8(PL), 9, 13, 14, 15(PL), 16, 20, 21, 22(PL), 23, 27, 28, 29(PL), 30 September 2021;

Aviation Allowances:

7 July 2021;

No auctions in August 2021;

15 September 2021;

Cancelled auctions:

No auctions in July 2021;

No auctions in August 2021;

No auctions in September 2021;

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 6 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*. 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. Poland may appoint an opt-out auction platform but is using for the time being the common auction platform. Allowances for Northern Ireland are also auctioned on EEX.

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.

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

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

Disclaimer: The authors have made every effort to ensure that the information provided is complete, correct and precise for the reporting period. Nevertheless, the report is based on limited information available to the authors in a market context where much information has to remain confidential. The authors did not actively verify the information and EEX's compliance with the specific rules and provisions applicable under European or national law. Therefore, the authors and the Member States on whose behalf this report was drafted deny any responsibility or liability whatsoever for its contents, regardless of the nature of such contents. Any reliance by any person or entity on the information provided in this report is solely at that person's or entity's own risk. Monthly averages provided are weighted by each auction's auction volume, unless otherwise indicated.

Glossary: terms and expressions written in *italics* are included in the glossary.

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). On 4 November 2020, the European Commission signed a five-year contract with EEX and its clearing system for the services of the third common auction platform (CAP3) under the EU Emissions Trading System (EU ETS).

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 concluded in December 2020 an agreement with EEX to make use of the common auction platform to auction its share of allowances in the absence of listing of its auction platform.

The member states of the European Free Trade Association (EFTA) that are Party to the European Economic Area (EEA)¹ started on 3 June 2019 making use of the *Common Auction Platform* by aggregating their volumes to those auctioned on behalf of the *participating Member States*.

¹ Iceland, Liechtenstein and Norway.

Executive summary

In the reporting period, EEX, in its capacity as the *Common Auction Platform (CAP3)*, conducted auctions of *general allowances* and *aviation allowances* for the *fourth 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 2021 auctions at a glance:

	General Allowances			Aviation Allowances		
	Jul	Aug	Sep	Jul	Aug	Sep
General						
Number of auctions	17	17	17	1	-	1
Total volume auctioned	53 050 500	26 656 500	40 527 000	614 500	-	614 500
Amount raised from the auctions (€)	2 834 823 470	1 502 176 915	2 489 433 875	32 660 675	-	36 870 000
Average Auction Clearing Price (€/allowance)	53.44	56.35	61.43	53.15	-	60.00
Total bid volume	78 671 000	58 272 500	64 777 000	1 486 000	-	1 044 500
Average Cover ratio	1.5	2.2	1.6	2.4	-	1.7
Monthly HHI	1 268	2 023	1 488	3 948	-	5 083
Participation						
Number of eligible bidders	91	91	92	91	91	92
Number of participating bidders ⁽¹⁾	41	34	33	5	-	7
Number of successful bidders ⁽¹⁾	35	31	29	4	-	5
Average number of bidders per auction	24.9	22.0	21.3	5.0	-	7.0
Average number of successful	20.0	15.9	16.8	4.0	-	5.0

bidders per auction							
Auction data							
Average total volume bid per bidder per auction	187 375	157 063	179 524		297 200	-	149 214
Average bid size (volume per bid)	56 336	45 182	48 842		82 556	-	31 652
Average volume won per bidder per auction	160 072	109 081	146 820		153 625	-	122 900
Average range of bids (€)	9.28	9.85	9.86		2.00	-	3.00
Cancelled Auctions	0	0	0		0	-	0

(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 2021 are EUR 67,410,076,695, and of aviation allowances EUR 613,947,175. Looking exclusively at the Fourth trading period (January 2021 - September 2021) the total revenues from the auctions of general allowances are EUR 18,326,341,340 and of aviation allowances EUR 133,558,835. Further data is 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 website².

² <https://www.eex.com/en/market-data/environmental-markets/auction-market>

1.1. General allowances auctions

1.1.1. Clearing prices and participation - general allowances

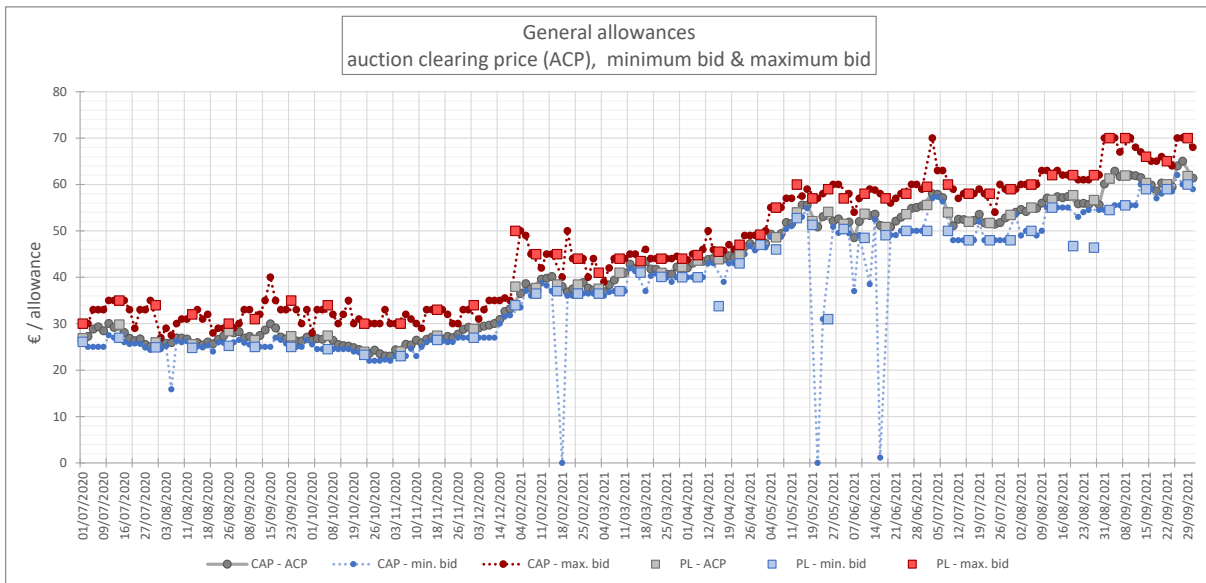
An overview of the auction results for the *participating Member States* and Poland is provided in Table 1.

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

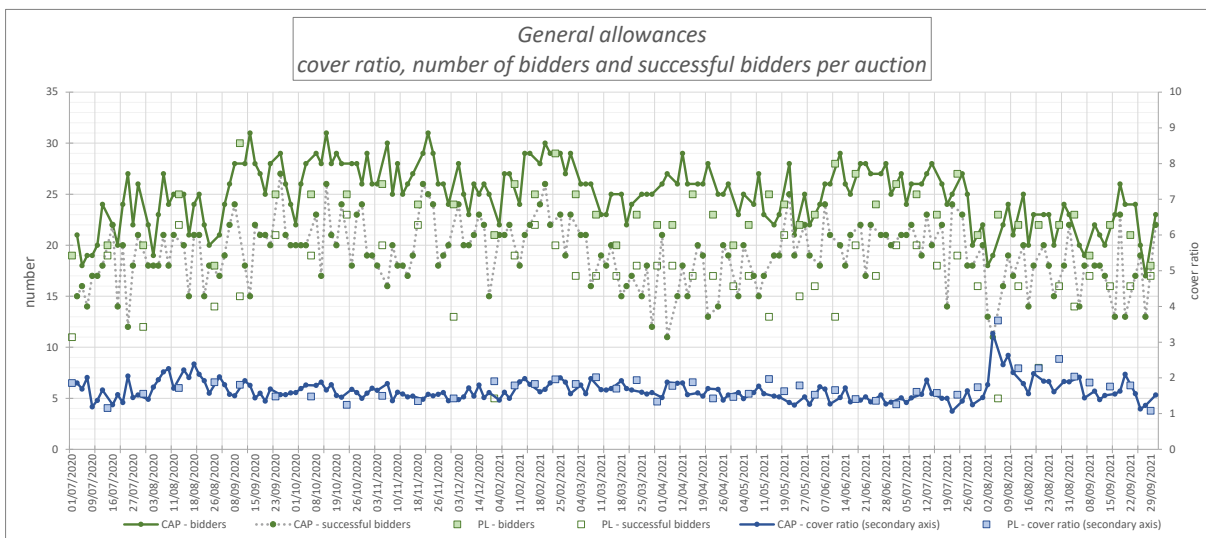
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio[1]	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
Sep 21	40 527 000	64 777 000	2 489 433 875	1.6	21.3	16.8	61.43
Aug 21	26 656 500	58 272 500	1 502 176 915	2.2	22.0	15.9	56.35
Jul 21	53 050 500	78 671 000	2 834 823 470	1.5	24.9	20.0	53.44
Jun 21	55 627 000	80 288 000	2 933 509 560	1.4	26.1	19.6	52.74
May 21	39 896 500	61 722 500	2 080 915 820	1.5	24.0	18.5	52.16
Apr 21	49 762 000	81 098 000	2 230 370 115	1.6	25.3	16.7	44.82
Mar 21	58 915 500	101 135 000	2 384 370 530	1.7	24.5	17.8	40.47
Feb 21	49 762 000	86 028 000	1 870 741 055	1.7	26.7	20.4	37.59
Jan 21	-	-	-	-	-	-	-
Dec 20	30 115 500	45 640 500	890 427 730	1.5	24.9	19.6	29.57
Nov 20	64 166 500	98 183 000	1 680 636 490	1.5	26.8	20.0	26.19
Oct 20	64 172 500	102 287 000	1 617 594 100	1.6	27.2	21.1	25.21
Sep 20	60 221 000	97 108 000	1 652 727 680	1.6	27.1	20.2	27.44
Aug 20	27 002 500	53 053 500	717 255 960	2.0	22.7	18.5	26.56
Jul 20	57 456 000	88 777 000	1 572 416 810	1.5	21.4	16.3	27.37
2020 total	560 046 500	951 992 500	13 723 091 055	1.7	24.3	18.2	24.50
2019 total	460 978 500	906 546 500	11 357 236 835	2.0	24.1	17.2	24.64
2018 total	642 477 000	1 662 693 000	9 917 590 730	2.6	25.6	18.0	15.44
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 2021, 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 -0.10, -0.07, -0.11 respectively, and this difference had a standard deviation of EUR 0.21, 0.30, 0.21 respectively.

Graph 1: General allowances - auction clearing price (ACP), maximum bid & minimum bid

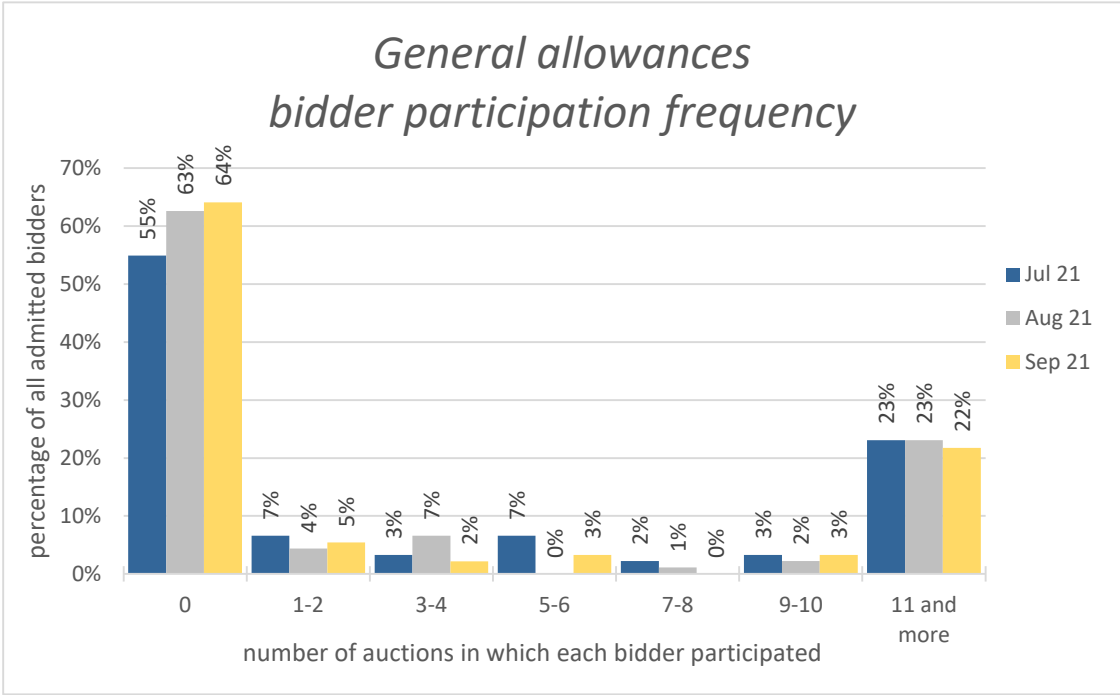


Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these 41, 34 and 33 different bidders participated in the auctions in respectively during the reporting period. Graph 3 indicates the participation frequency over these months.

Graph 3: 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[1]	Average total volume bid per bidder per auction over the month[2]	Standard deviation of total volume per bidder per auction over the month[3]	Total monthly nr of bids	Average nr. of bids per bidder per auction[4]	Average bid size[5]
Sep 21	17	33	64 777 000	179 524	178 942	256 547	1 335	3.7	48 842
Aug 21	17	34	58 272 500	157 063	155 809	257 972	1 295	3.5	45 182
Jul 21	17	41	78 671 000	187 375	185 983	317 457	1 407	3.3	56 336
Jun 21	18	39	80 288 000	173 524	171 190	291 658	1 487	3.2	54 646
May 21	13	35	61 722 500	199 572	198 465	340 064	1 049	3.4	59 136
Apr 21	16	35	81 098 000	201 640	201 236	334 619	1 460	3.6	55 620
Mar 21	19	38	101 135 000	219 296	217 963	320 113	1 662	3.6	60 872
Feb 21	16	40	86 028 000	203 245	201 944	300 469	1 508	3.5	57 512
Jan 21	-	-	-	-	-	-	-	-	-
Dec 20	7	33	45 640 500	272 617	260 803	411 236	674	3.9	68 921
Nov 20	15	38	98 183 000	254 149	243 027	394 064	1 404	3.5	72 130
Oct 20	15	35	102 287 000	259 306	249 480	397 654	1 430	3.5	73 311
Sep 20	14	39	97 108 000	266 879	256 222	457 614	1 298	3.4	76 570
Aug 20	14	37	53 053 500	172 502	166 312	255 369	1 073	3.4	50 628
Jul 20	16	33	88 777 000	280 052	258 825	452 807	1 145	3.3	82 137

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

[1] 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.

[2] 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).

[3] Standard deviation of total volume bid per bidder in each auction over the month

[4] 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).

[5] 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[1]	Average volume won per bidder per auction over the month[2]	Standard deviation of volume won per bidder per auction over the month[3]	Total monthly nr of successful bids
Sep 21	17	29	40 527 000	146 820	142 200	224 108	615
Aug 21	17	31	26 656 500	109 081	100 212	185 608	519
Jul 21	17	35	53 050 500	160 072	156 954	253 238	668
Jun 21	18	37	55 627 000	161 071	158 934	251 871	716
May 21	13	35	39 896 500	171 028	166 931	291 217	489
Apr 21	16	32	49 762 000	193 896	185 679	294 286	564
Mar 21	19	34	58 915 500	180 245	174 823	237 097	710
Feb 21	16	36	49 762 000	170 363	154 062	233 780	645
Jan 21	-	-	-	-	-	-	-
Dec 20	7	28	30 115 500	251 273	213 585	337 965	325
Nov 20	15	35	64 166 500	224 324	214 604	340 736	590
Oct 20	15	33	64 172 500	213 031	202 437	332 633	597
Sep 20	14	34	60 221 000	230 019	210 563	332 460	592
Aug 20	14	34	27 002 500	109 953	104 257	144 589	506
Jul 20	16	31	57 456 000	252 224	217 636	331 763	555

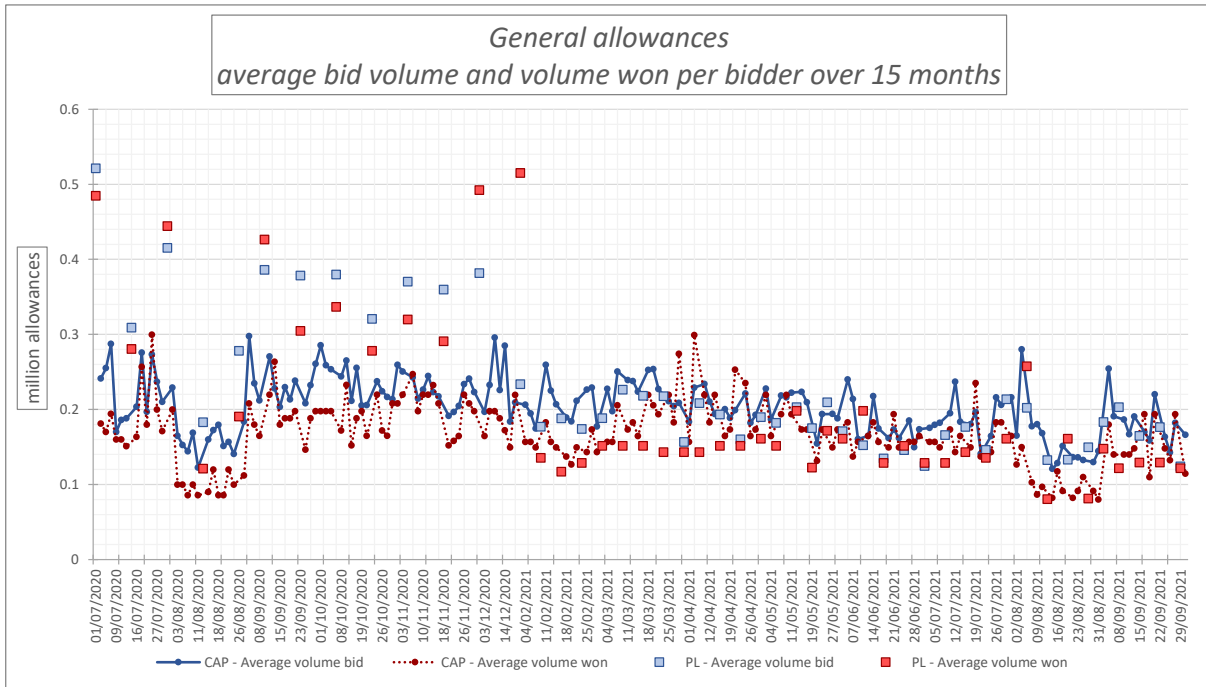
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[1] 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.

[2] 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).

[3] Standard deviation of volume won per bidder in each auction over the month

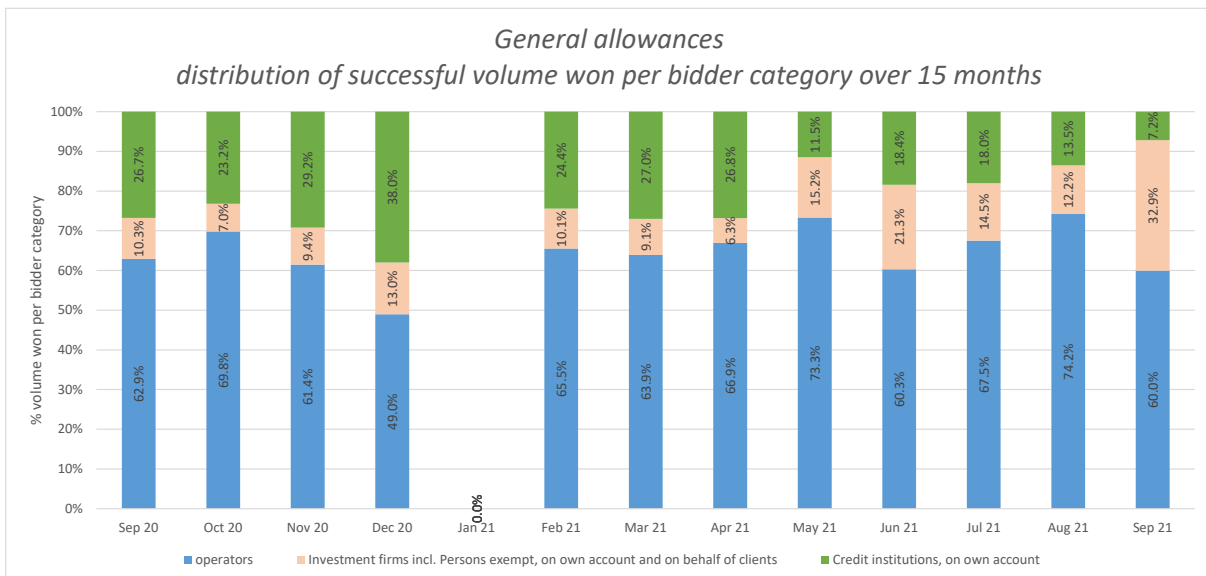
Graph 4: General allowances - average bid volume and volume won per bidder over 15 months



1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client³ during the reporting period 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



³ The data related to bidding on behalf of clients reflects the self-assessment of the respective trader.

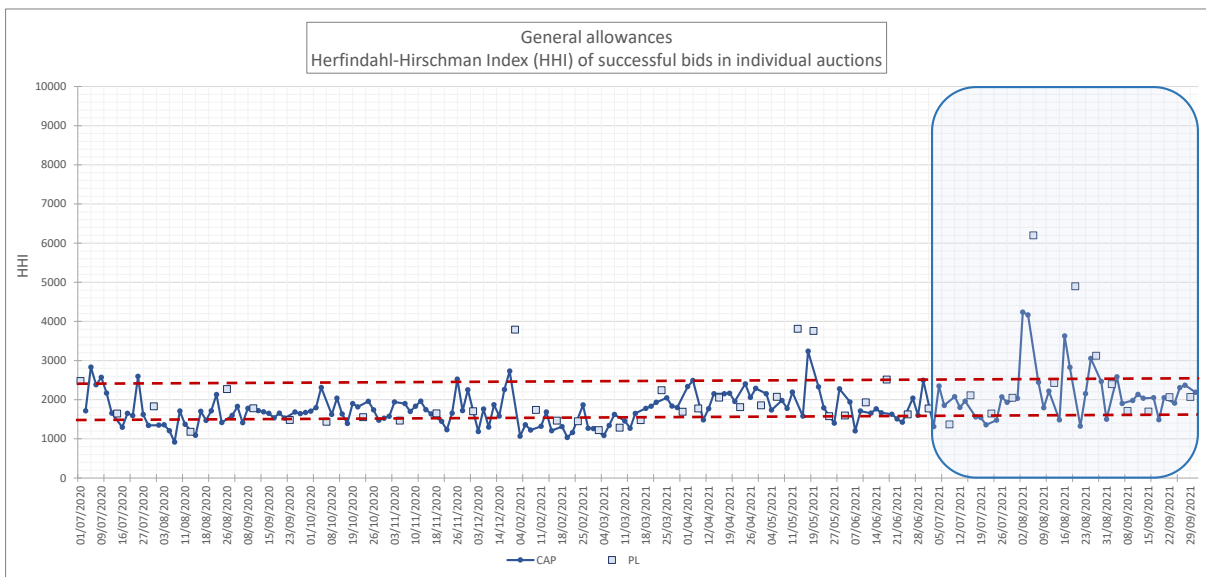
Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
Jul 21	0%	Operators (including Business groupings)	67.51%	12.2% points
		Investment firms (including persons exempt)	14.45%	9.7% points
		Credit institutions	18.04%	11.5% points
Aug 21	0%	Operators (including Business groupings)	74.21%	15.7% points
		Investment firms (including persons exempt)	12.24%	8.8% points
		Credit institutions	13.54%	14.0% points
Sep 21	0%	Operators (including Business groupings)	59.97%	15.5% points
		Investment firms (including persons exempt)	32.86%	15.2% points
		Credit institutions	7.17%	5.2% points

1.1.4. Concentration - general allowances

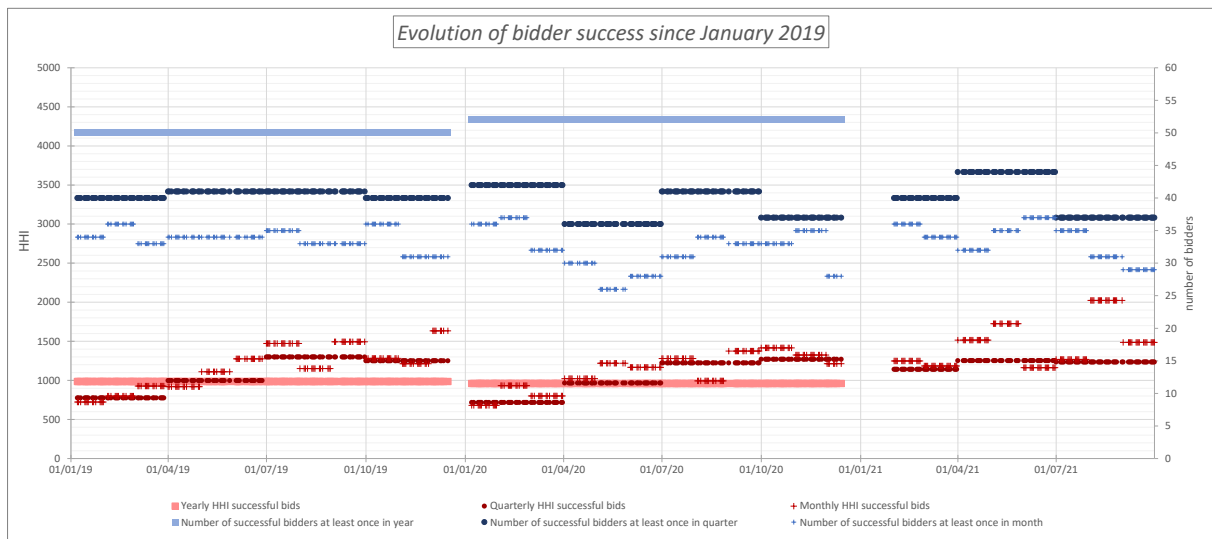
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration⁴. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is ‘not-concentrated’, between 1 500 and 2 500 is ‘moderately 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



⁴ 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 2014⁵. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014⁶; 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

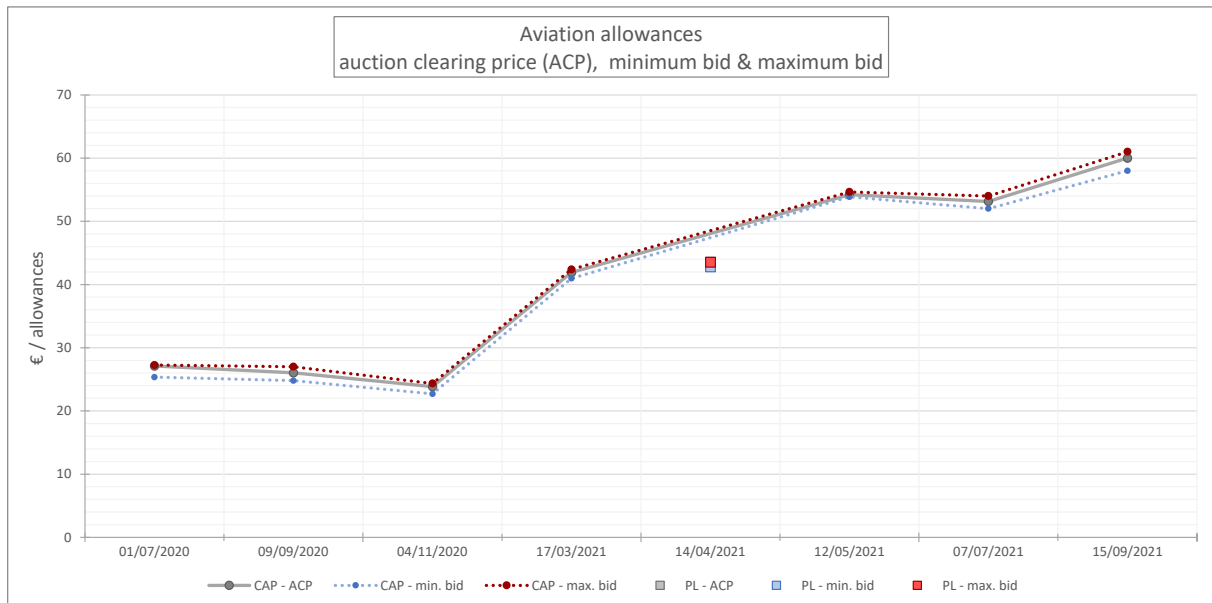
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio[1]	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
Sep 21	614 500	1 044 500	36 870 000	1.7	7.0	5.0	60.00
Aug 21	-	-	-	-	-	-	-
Jul 21	614 500	1 486 000	32 660 675	2.4	5.0	4.0	53.15
Jun 21	-	-	-	-	-	-	-
May 21	614 500	1 949 500	33 318 190	3.2	6.0	5.0	54.22
Apr 21	114 000	508 000	4 962 420	4.5	7.0	2.0	43.53
Mar 21	614 500	1 104 500	25 747 550	1.8	7.0	6.0	41.90
Feb 21	-	-	-	-	-	-	-
Jan 21	-	-	-	-	-	-	-
Dec 20	-	-	-	-	-	-	-
Nov 20	891 500	2 026 000	21 244 445	2.3	10.0	6.0	23.83
Oct 20	-	-	-	-	-	-	-
Sep 20	810 500	1 868 000	21 089 210	2.3	10.0	8.0	26.02
Aug 20	-	-	-	-	-	-	-
Jul 20	810 500	2 453 500	21 964 550	3.03	8.0	4.0	27.10
2020 total	5 049 500	13 474 500	119 509 185	2.7	8.0	5.0	23.67
2019 total	4 701 000	13 172 500	119 584 255	2.8	8.7	5.9	25.44
2018 total	3 941 000	10 830 000	73 956 020	2.7	8.8	6.1	18.77
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

[1] The cover ratio is the ratio between the total bid volume and the auction volume.

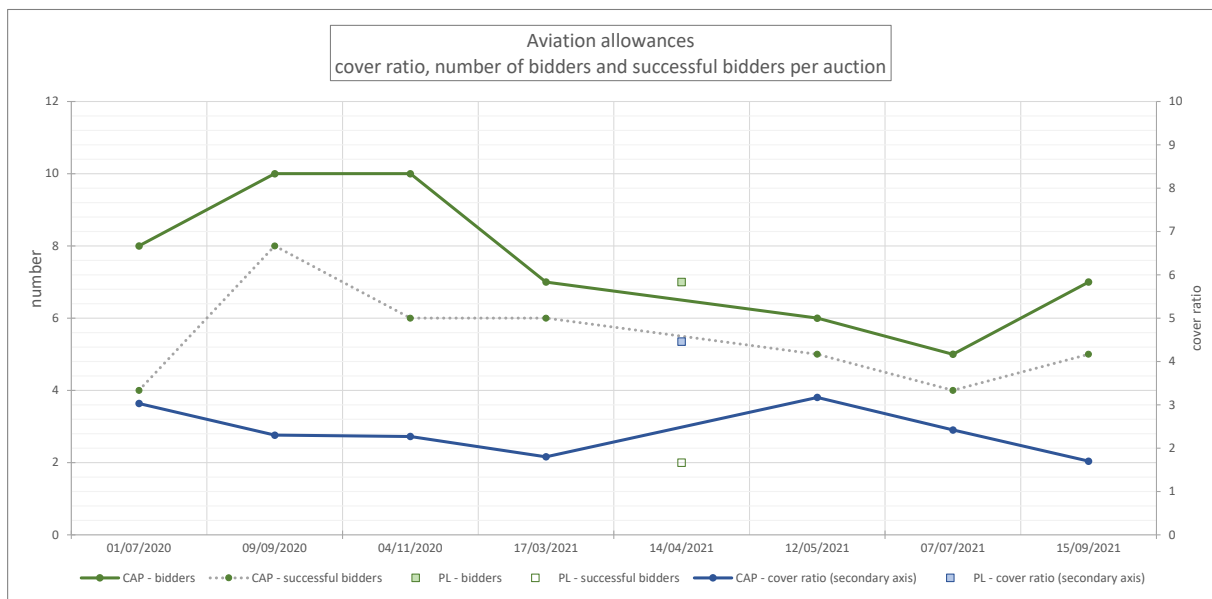
⁵ The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 http://ec.europa.eu/clima/news/articles/news_2012111601_en.htm.

⁶ See also the regulatory update published by the Commission on 29 July 2014: http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm.

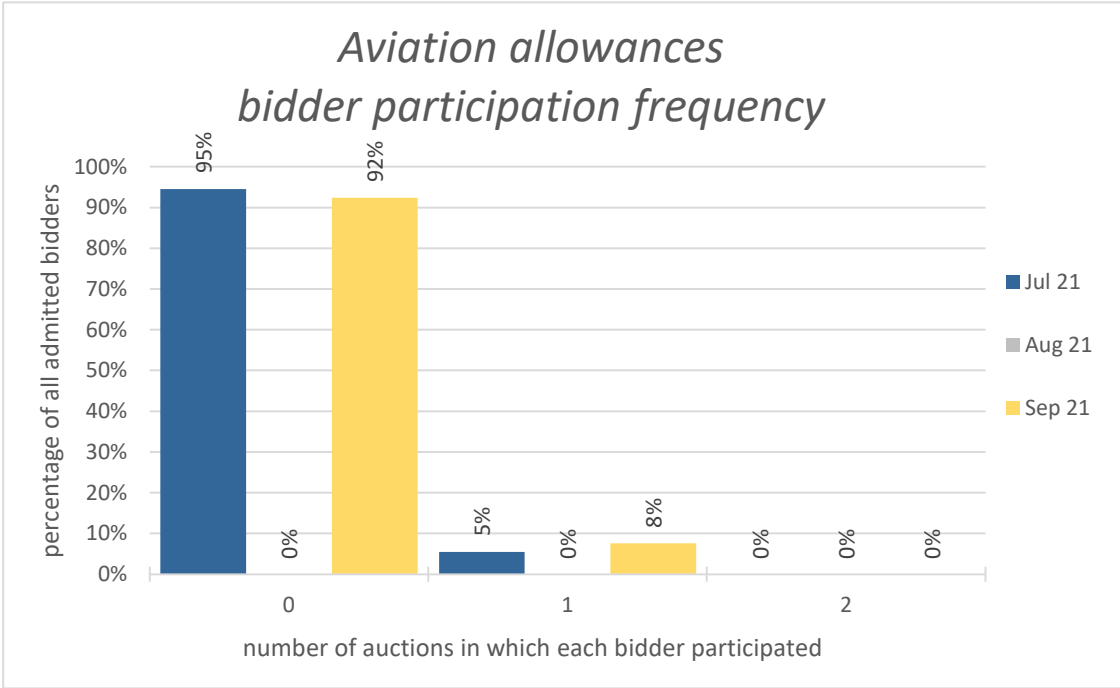
Graph 8: Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid



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



Graph 10: Aviation allowances – bidder participation frequency



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[1]	Average total volume bid per bidder per auction over the month[2]	standard deviation of total volume bid per bidder per auction over the month [3]	Total monthly nr of bids	Average nr. of bids per bidder per auction[4]	Average bid size[5]
Sep 21	1	7	1 044 500	149 214	149 214	137 952	33	4.7	31 652
Aug 21	-	-	-	-	-	-	-	-	-
Jul 21	1	5	1 486 000	297 200	297 200	206 783	18	3.6	82 556
Jun 21	-	-	-	-	-	-	-	-	-
May 21	1	6	1 949 500	324 917	324 917	213 955	26	4.3	74 981
Apr 21	1	7	508 000	72 571	72 571	48 341	25	3.6	20 320
Mar 21	1	7	1 104 500	157 786	157 786	195 077	29	4.1	38 086
Feb 21	-	-	-	-	-	-	-	-	-
Jan 21	-	-	-	-	-	-	-	-	-
Dec 20	-	-	-	-	-	-	-	-	-
Nov 20	1	10	2 026 000	202 600	202 600	246 771	34	3.4	59 588
Oct 20	-	-	-	-	-	-	-	-	-
Sep 20	1	10	1 868 000	186 800	186 800	226 053	31	3.1	60 258
Aug 20	-	-	-	-	-	-	-	-	-
Jul 20	1	8	2 453 500	306 688	306 688	259 914	28	3.5	87 625

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

[1] 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.

[2] 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).

[3] Standard deviation of total volume bid per bidder in each auction over the month

[4] 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).

[5] 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[1]	Average volume won per bidder per auction over the month[2]	Standard deviation of volume won per bidder per auction over the month [3]	Total monthly nr of successful bids
Sep 21	1	5	614 500	122 900	122 900	152 587	21
Aug 21	-	-	-	-	-	-	-
Jul 21	1	4	614 500	153 625	153 625	116 936	7
Jun 21	-	-	-	-	-	-	-
May 21	1	5	614 500	122 900	122 900	61 471	9
Apr 21	1	2	114 000	57 000	57 000	44 000	2
Mar 21	1	6	614 500	102 417	102 417	74 683	11
Feb 21	-	-	-	-	-	-	-
Jan 21	-	-	-	-	-	-	-
Dec 20	-	-	-	-	-	-	-
Nov 20	1	6	891 500	148 583	148 583	156 098	15
Oct 20	-	-	-	-	-	-	-
Sep 20	1	8	810 500	101 313	101 313	81 322	17
Aug 20	-	-	-	-	-	-	-
Jul 20	1	4	810 500	202 625	202 625	219 071	7

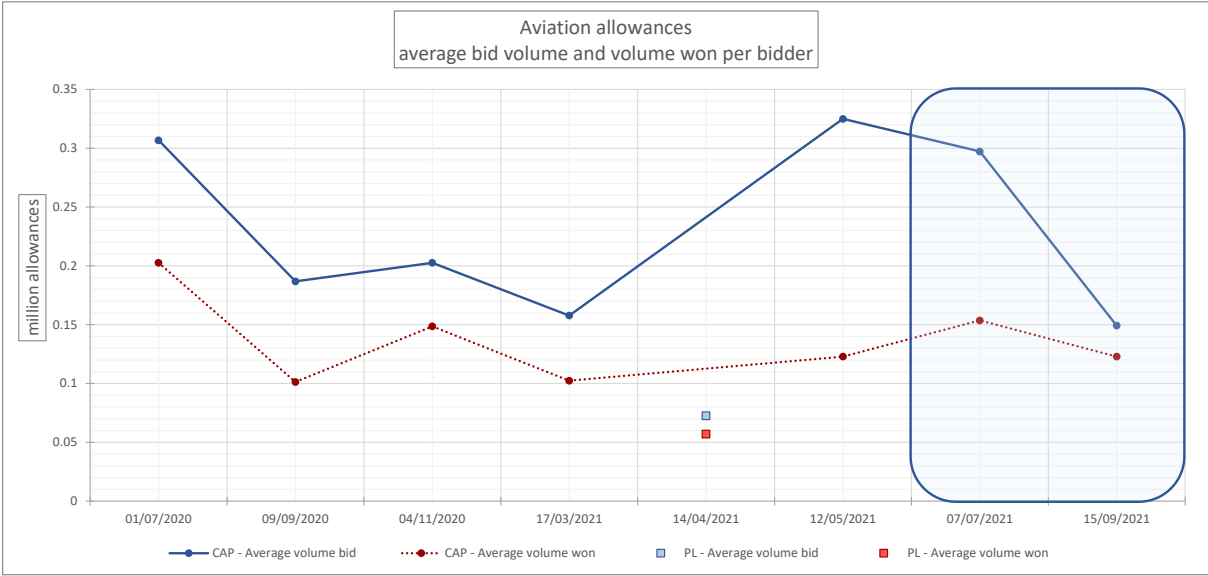
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[1] 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.

[2] 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).

[3] Standard deviation of volume won per bidder in each auction over the month

Graph 11: Aviation allowances - average bid volume and volume won per bidder



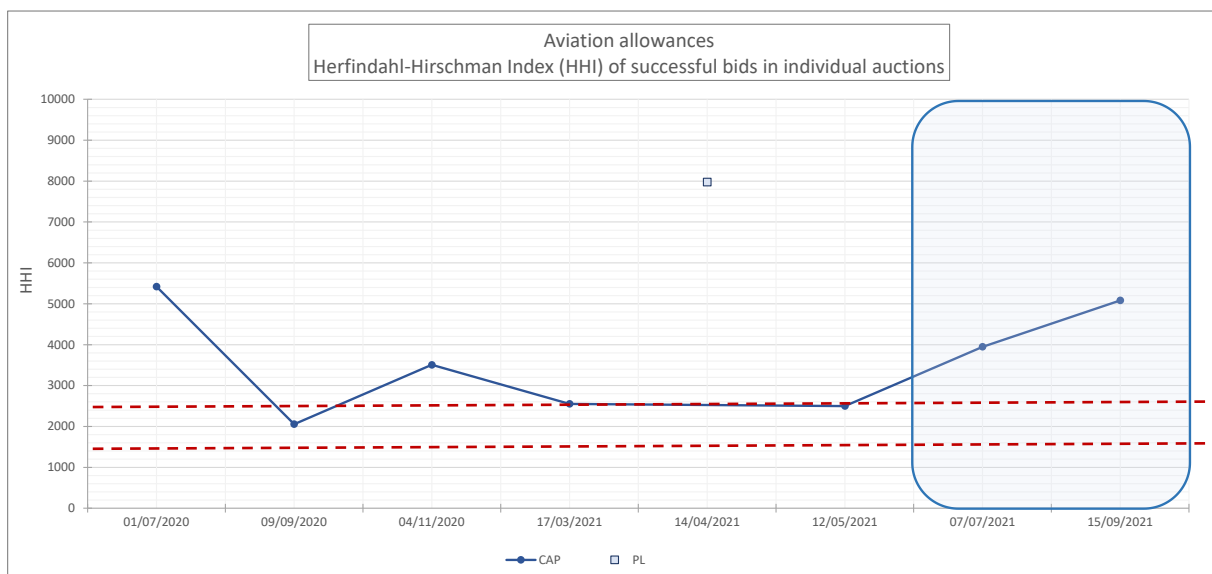
1.2.3 Type of bidders – aviation allowances

The volume submitted by intermediaries on behalf of a client⁷ during the reporting period was respectively 0, - and 0, the remaining volume bid was done on own account.

1.2.4 Concentration – aviation allowances

The HHI of successful bids is used to measure market concentration⁸. 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



⁷ The data related to bidding on behalf of clients reflects the self-assessment of the respective trader.

⁸ 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.

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 auctions⁹.

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 21	-	-	-	-	-	-	153
	Aug 21	-	-	-	-	-	-	154
	Sep 21	-	-	-	-	-	-	156
Participants eligible to bid in the auctions	Jul 21	66	1	10	4	-	10	91
	Aug 21	66	1	10	4	-	10	91
	Sep 21	66	1	11	4	-	10	92
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Jul 21	-	-	2	2	-	2	6
	Aug 21	-	-	2	2	-	2	6
	Sep 21	-	-	2	2	-	2	6
(Of which:) Auction-only access	Jul 21	2	-	-	-	-	1	3
	Aug 21	2	-	-	-	-	1	3
	Sep 21	2	-	-	-	-	1	3

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

⁹ This assessment is based on the auction participants' activity in EEX's secondary market and general market knowledge of EEX.

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.

2. Overview of, and any updates on breaches of provisions or ongoing proceedings

No breaches or problems of non-conformity were reported. There were no proceedings on such breaches or problems of non-conformity dating from before the reporting period.

Comments of the auction platform on the draft of this report

EEX reviewed the auction data presented in the report.

Date of publication: 28/10/2021

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> .
Common auction platform	The auction platform appointed pursuant to Article 26(1) of the <i>Auctioning Regulation</i> . The <i>common auction platform</i> referred to as the third common auction platform, or CAP3, was appointed pursuant to Article 26(1) of the <i>Auctioning Regulation</i> , on 4 November 2020 for a period of 5 years.
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 .
Fourth trading period	The period 2021-2030.
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>EUA</i> . See Article 12(2a) and (3) of the <i>ETS Directive</i> .
Investment firms	Investment firms as defined in EU financial markets legislation (point (1) of Article 4(1) of Directive 2004/39/EC).
Market abuse	Insider dealing and market manipulation. See Article 36 of the <i>Auctioning Regulation</i> and Article 1 of Directive 2003/6/EC ('Market Abuse Directive').
Participating Member States	All EU Member States except Germany and Poland, 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> .

**Annex 1a Auction revenues per Member State and for Poland from 12 November 2012 to the end of Quarter 3 2021
(reported in euros)**

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

<i>Cumulated Revenues since November 2012 (start of Phase III)</i>	General allowances	Aviation allowances	General and aviation allowances
Austria	1 129 628 340	15 870 485	1 145 498 825
Belgium	2 072 662 580	19 619 555	2 092 282 135
Bulgaria	2 291 944 045	6 168 820	2 298 112 865
Croatia	428 504 830	4 042 990	432 547 820
Cyprus	151 635 515	8 282 715	159 918 230
Czech Republic	2 945 347 485	7 889 405	2 953 236 890
Denmark	1 021 639 915	18 280 810	1 039 920 725
Estonia	711 152 080	1 208 485	712 360 565
Finland	1 381 797 900	14 407 825	1 396 205 725
France	4 608 393 940	86 543 050	4 694 936 990
Greece	3 073 348 795	33 403 170	3 106 751 965
Hungary	1 271 328 425	6 631 115	1 277 959 540
Iceland	63 510 095	6 153 285	69 663 380
Innovation Fund	2 769 541 375	-	2 769 541 375
Ireland	714 332 915	14 229 960	728 562 875
Italy	8 110 991 465	94 097 395	8 205 088 860
Latvia	231 735 250	3 536 555	235 271 805
Liechtenstein	1 514 945	-	1 514 945
Lithuania	432 981 180	2 154 935	435 136 115
Luxembourg	86 560 930	2 232 650	88 793 580
Malta	91 070 420	3 787 605	94 858 025
Modernisation Fund	2 490 764 260	-	2 490 764 260
The Netherlands	2 819 718 415	29 980 075	2 849 698 490
Norway	1 325 665 165	52 131 890	1 377 797 055
Poland	12 071 807 395	15 873 915	12 087 681 310
Portugal	1 553 596 780	21 340 510	1 574 937 290
Romania	3 551 855 210	10 928 425	3 562 783 635
Slovak Republic	1 284 937 600	1 196 045	1 286 133 645
Slovenia	395 616 400	915 120	396 531 520
Spain	7 576 099 355	108 669 175	7 684 768 530
Sweden	750 393 690	24 371 210	774 764 900
TOTAL	67 410 076 695	613 947 175	68 024 023 870

Annex 1b Auction revenues per Member State and for Poland from 12 November 2012 to the end of Quarter 3 2021

(reported in euros)

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

<i>Cumulated Revenues since January 2021 (start of Phase IV)</i>	General allowances	Aviation allowances	General and aviation allowances
Austria	226 105 220	3 348 320	229 453 540
Belgium	387 484 280	4 603 940	392 088 220
Bulgaria	590 767 170	1 569 525	592 336 695
Croatia	80 588 770	1 255 620	81 844 390
Cyprus	55 563 890	1 150 985	56 714 875
Czech Republic	451 685 145	1 674 160	453 359 305
Denmark	211 525 515	4 080 765	215 606 280
Estonia	176 867 175	418 540	177 285 715
Finland	296 546 190	3 348 320	299 894 510
France	1 054 581 410	17 892 585	1 072 473 995
Greece	724 028 630	8 266 165	732 294 795
Hungary	269 393 040	1 569 525	270 962 565
Iceland	3 317 950	1 464 890	4 782 840
Innovation Fund	1 435 718 370	-	1 435 718 370
Ireland	109 852 180	3 034 415	112 886 595
Italy	1 820 585 320	19 462 110	1 840 047 430
Latvia	43 537 595	837 080	44 374 675
Liechtenstein	202 680	-	202 680
Lithuania	62 018 100	732 445	62 750 545
Luxembourg	6 199 885	523 175	6 723 060
Malta	21 289 505	941 715	22 231 220
Modernisation Fund	2 490 764 260	-	2 490 764 260
The Netherlands	645 628 135	6 801 275	652 429 410
Norway	128 310 230	6 696 640	135 006 870
Poland	4 067 698 625	4 962 420	4 072 661 045
Portugal	365 075 485	6 173 465	371 248 950
Romania	377 518 935	2 929 780	380 448 715
Slovak Republic	201 067 525	209 270	201 276 795
Slovenia	93 535 865	209 270	93 745 135
Spain	1 772 379 310	23 542 875	1 795 922 185
Sweden	156 504 950	5 859 560	162 364 510
TOTAL	18 326 341 340	133 558 835	18 459 900 175

Annex 2 Results of individual auctions on behalf of participating Member States and Poland during the reporting period

(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 2021																			
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
01/07/2021	58.01	57.00	70.00	58.12	57.81	3 288 500	4 736 000	1.44	27	21	190 765 885	82	31	3.04	57 756	175 407	252 919	156 595	207 536
05/07/2021	57.91	57.34	63.00	58.09	57.93	3 288 500	4 306 000	1.31	24	21	190 437 035	76	42	3.17	56 658	179 417	321 226	156 595	310 542
06/07/2021	57.15	56.33	63.00	57.38	57.13	3 288 500	4 737 500	1.44	26	22	187 937 775	79	38	3.04	59 968	182 212	310 030	149 477	262 425
07/07/2021	53.98	50.00	60.00	53.90	53.89	2 575 000	4 149 500	1.61	25	20	138 998 500	93	41	3.72	44 618	165 980	211 783	128 750	169 923
08/07/2021	51.09	48.00	59.00	51.20	51.02	3 288 500	5 067 500	1.54	26	19	168 009 465	91	42	3.50	55 687	194 904	327 952	173 079	297 134
12/07/2021	52.50	48.00	57.00	52.49	52.57	3 288 500	6 396 000	1.94	27	23	172 646 250	93	52	3.44	68 774	236 889	621 240	142 978	253 748
13/07/2021	52.44	48.00	58.00	52.25	52.21	3 288 500	5 136 000	1.56	28	20	172 448 940	93	33	3.32	55 226	183 429	305 781	164 425	281 276
14/07/2021	52.00	48.00	58.00	51.99	51.94	2 575 000	4 064 500	1.58	23	18	133 900 000	75	32	3.26	54 193	176 717	295 879	143 056	239 426
15/07/2021	52.28	48.00	58.00	52.28	52.22	3 288 500	4 689 000	1.43	26	22	171 922 780	97	45	3.73	48 340	180 346	288 926	149 477	233 302
19/07/2021	53.55	52.00	59.00	53.53	53.26	3 288 500	4 716 500	1.43	24	14	176 099 175	71	22	2.96	66 430	196 521	269 462	234 893	252 968
20/07/2021	51.74	48.00	58.00	52.13	51.96	3 288 500	3 526 000	1.07	25	24	170 146 990	75	63	3.00	47 013	141 040	208 984	137 021	205 915
21/07/2021	51.70	48.00	58.00	51.65	51.54	2 575 000	3 943 500	1.53	27	19	133 127 500	85	31	3.15	46 394	146 056	203 694	135 526	197 856

22/07/2021	51.44	48.00	54.00	51.51	51.46	3 288 500	4 444 000	1.35	27	23	169 160 440	87	45	3.22	51 080	164 593	246 777	142 978	221 464
26/07/2021	51.79	48.00	60.00	51.91	51.72	3 288 500	5 401 500	1.64	25	18	170 311 415	84	37	3.36	64 304	216 060	329 336	182 694	301 737
27/07/2021	52.80	48.00	59.00	53.13	52.91	3 288 500	4 117 500	1.25	20	18	173 632 800	73	48	3.65	56 404	205 875	314 841	182 694	287 701
28/07/2021	53.45	48.00	59.00	53.45	53.32	2 575 000	4 487 500	1.74	21	16	137 633 750	72	27	3.43	62 326	213 690	286 003	160 938	243 020
29/07/2021	54.02	53.51	59.00	54.20	54.01	3 288 500	4 752 500	1.45	22	20	177 644 770	81	39	3.68	58 673	216 023	337 862	164 425	288 013

General Allowances - August 2021

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
02/08/2021	54.60	49.00	59.99	54.70	54.52	1 644 500	2 971 500	1.81	18	13	89 789 700	69	24	3.83	43 065	165 083	260 758	126 500	268 618
03/08/2021	54.17	50.00	60.00	54.08	54.01	1 644 500	5 322 500	3.24	19	11	89 082 565	71	21	3.74	74 965	280 132	483 242	149 500	282 858
04/08/2021	55.00	50.00	60.01	54.48	54.40	1 287 500	4 650 000	3.61	23	5	70 812 500	72	6	3.13	64 583	202 174	373 218	257 500	373 256
05/08/2021	54.84	49.00	60.00	54.82	54.71	1 644 500	3 904 500	2.37	22	16	90 184 380	83	25	3.77	47 042	177 477	237 355	102 781	175 356
09/08/2021	56.00	50.00	63.00	55.80	55.90	1 644 500	4 329 000	2.63	24	19	92 092 000	80	35	3.33	54 113	180 375	318 299	86 553	134 352
10/08/2021	57.10	55.00	63.00	57.21	57.03	1 644 500	3 537 500	2.15	21	17	93 900 950	70	31	3.33	50 536	168 452	202 144	96 735	160 960
11/08/2021	56.69	55.00	62.00	56.81	56.66	1 287 500	2 917 000	2.27	22	16	72 988 375	68	31	3.09	42 897	132 591	193 552	80 469	136 746
12/08/2021	57.36	55.00	63.00	57.40	57.36	1 644 500	3 019 000	1.84	25	20	94 328 520	69	35	2.76	43 754	120 760	154 205	82 225	115 252

16/08/2021	57.18	55.00	62.00	57.27	57.13	1 644 500	2 569 000	1.56	20	14	94 032 510	70	29	3.50	36 700	128 450	234 103	117 464	237 292
17/08/2021	57.40	55.00	62.00	57.44	57.33	1 644 500	3 481 000	2.12	23	18	94 394 300	85	32	3.70	40 953	151 348	228 480	91 361	184 758
18/08/2021	57.70	46.71	62.00	57.19	57.27	1 287 500	2 927 000	2.27	22	8	74 288 750	82	14	3.73	35 695	133 045	228 308	160 938	274 991
19/08/2021	55.81	53.00	61.00	55.97	55.79	1 644 500	3 135 500	1.91	23	20	91 779 545	80	40	3.48	39 194	136 326	201 316	82 225	105 698
23/08/2021	55.95	54.00	61.00	56.05	55.98	1 644 500	3 130 500	1.90	23	18	92 009 775	75	45	3.26	41 740	136 109	188 731	91 361	155 022
24/08/2021	55.72	54.50	61.00	55.95	55.72	1 644 500	2 649 500	1.61	20	15	91 631 540	76	38	3.80	34 862	132 475	216 596	109 633	207 428
25/08/2021	56.63	46.41	62.00	56.51	56.60	1 300 500	3 291 000	2.53	22	16	73 647 315	80	34	3.64	41 138	149 591	237 381	81 281	162 618
26/08/2021	55.61	54.50	62.00	55.89	55.59	1 644 500	3 116 500	1.90	24	18	91 450 645	82	38	3.42	38 006	129 854	222 565	91 361	169 377
31/08/2021	60.11	54.50	70.00	60.32	60.11	1 759 500	3 321 500	1.89	23	22	105 763 545	83	41	3.61	40 018	144 413	211 086	79 977	121 325

General Allowances - September 2021

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
01/09/2021	61.29	54.50	70.00	61.11	61.03	2 066 500	4 214 000	2.04	23	14	126 655 785	82	24	3.57	51 390	183 217	254 415	147 607	226 702
06/09/2021	62.87	55.50	70.01	62.79	62.71	2 515 500	5 087 500	2.02	20	14	158 149 485	85	28	4.25	59 853	254 375	375 110	179 679	290 512
07/09/2021	61.71	55.50	67.00	61.80	61.71	2 515 500	3 626 000	1.44	19	18	155 231 505	81	40	4.26	44 765	190 842	242 551	139 750	217 830
08/09/2021	61.93	55.50	70.00	61.97	61.83	2 066 500	3 857 000	1.87	19	17	127 978 345	87	31	4.58	44 333	203 000	252 274	121 559	168 143

09/09/2021	61.98	55.50	70.01	62.06	61.91	2 515 500	4 100 500	1.63	22	18	155 910 690	85	32	3.86	48 241	186 386	295 422	139 750	223 881
13/09/2021	61.91	55.50	68.00	61.93	61.88	2 515 500	3 506 500	1.39	21	18	155 734 605	86	40	4.10	40 773	166 976	250 820	139 750	235 709
14/09/2021	61.51	60.00	67.00	61.73	61.55	2 515 500	3 808 500	1.51	20	17	154 728 405	69	39	3.45	55 196	190 425	253 300	147 971	232 182
15/09/2021	60.32	59.00	66.00	60.36	60.22	2 066 500	3 627 500	1.76	22	16	124 651 280	73	27	3.32	49 692	164 886	182 530	129 156	169 260
16/09/2021	59.89	59.00	65.00	59.94	59.64	2 515 500	3 911 000	1.55	23	13	150 653 295	78	25	3.39	50 141	170 043	248 335	193 500	249 577
20/09/2021	58.56	57.00	65.00	58.83	58.57	2 524 000	4 125 500	1.63	26	23	147 805 440	81	42	3.12	50 932	158 673	218 930	109 739	170 740
21/09/2021	60.31	58.00	66.00	60.23	60.03	2 515 500	5 281 000	2.10	24	13	151 709 805	112	27	4.67	47 152	220 042	268 349	193 500	249 637
22/09/2021	60.02	59.00	65.00	60.16	60.02	2 066 500	3 708 000	1.79	21	16	124 031 330	76	34	3.62	48 789	176 571	229 626	129 156	196 214
23/09/2021	59.45	58.48	64.00	59.45	59.31	2 515 500	3 922 000	1.56	24	17	149 546 475	80	27	3.33	49 025	163 417	253 077	147 971	221 946
27/09/2021	64.00	62.00	70.00	64.39	64.23	2 515 500	2 849 000	1.13	20	19	160 992 000	69	61	3.45	41 290	142 450	238 692	132 395	243 443
28/09/2021	65.00	60.00	70.01	65.20	64.99	2 515 500	3 098 500	1.23	17	13	163 507 500	56	28	3.29	55 330	182 265	282 133	193 500	279 116
29/09/2021	61.83	60.00	70.00	62.43	62.33	2 066 500	2 235 000	1.08	18	17	127 771 695	69	62	3.83	32 391	124 167	190 313	121 559	192 907
30/09/2021	61.37	59.00	68.00	61.65	61.53	2 515 500	3 819 500	1.52	23	22	154 376 235	66	48	2.87	57 871	166 065	253 126	114 341	223 461

Aviation Allowances - July 2021

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
07/07/2021	53.15	52.00	54.00	53.00	53.07	614 500	1 486 000	2.42	5	4	32 660 675	18	7	3.60	82 556	297 200	206 783	153 625	116 936

Aviation Allowances - August 2021

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

Aviation Allowances - September 2021

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
15/09/2021	60.00	58.00	61.00	59.87	60.10	614 500	1 044 500	1.70	7	5	36 870 000	33	21	4.71	31 652	149 214	137 952	122 900	152 587

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.