

Auctions by the *Common Auction Platform*

April, May, June 2022

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:

4, 5, 7, 11, 12, 13(PL), 14, 19, 21, 25, 26, 27(PL), 28 April 2022;

2, 3, 5, 9, 10, 11(PL), 11, 12, 16, 17, 19, 23, 24, 25(PL), 25, 30, 31 May 2022;

7, 8(PL), 8, 9, 13, 14, 16, 20, 21, 22(PL), 22, 23, 27, 28, 30 June 2022;

Aviation Allowances:

6 April 2022;

18 May 2022 (PL)

15 June 2022;

Cancelled auctions:

No auctions in April 2022;

No auctions in May 2022;

No auctions in June 2022;

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: https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/auctioning_en

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 April, May, June 2022 auctions at a glance:

	General Allowances			Aviation Allowances		
	Apr	May	Jun	Apr	May	Jun
General						
Number of auctions	13	15	13	1	1	1
Total volume auctioned	34,216,500	37,900,500	30,567,500	600,000	109,500	600,000
Amount raised from the auctions (€)	2,736,312,345	3,220,253,025	2,530,757,385	47,004,000	9,553,875	50,670,000
Average Auction Clearing Price (€/allowance)	79.97	84.97	82.79	78.34	87.25	84.45
Total bid volume	74,920,000	87,512,000	69,774,000	1,541,500	488,000	1,250,000
Average Cover ratio	2.2	2.3	2.3	2.6	4.5	2.1
Monthly HHI	1,346	1,787	1,441	0	0	0
Participation						
Number of eligible bidders	93	89	89	93	89	89
Number of participating bidders ⁽¹⁾	36	34	36	8	9	8
Number of successful bidders ⁽¹⁾	33	32	29	7	4	7
Average number of bidders per auction	23.0	21.6	20.4	8.0	9.0	8.0

Average number of successful bidders per auction	15.7	16.2	14.3	7.0	4.0	7.0
Auction data						
Average total volume bid per bidder per auction	252,763	273,166	265,331	192,688	54,222	156,250
Average bid size (volume per bid)	65,407	68,583	64,157	41,662	16,828	36,765
Average volume won per bidder per auction	177,858	167,751	170,683	85,714	27,375	85,714
Average range of bids (€)	34.11	43.10	46.56	34.30	47.75	4.99
Cancelled Auctions	0	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, Poland and Northern Ireland from the start of the Third trading period auctions (November 2012) to June 2022 are EUR 91,707,297,445, and of aviation allowances EUR 816,841,705. Looking exclusively at the Fourth trading period (January 2021 - June 2022) the total revenues from the auctions of general allowances are EUR 42,623,562,090 and of aviation allowances EUR 336,453,365. 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.

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

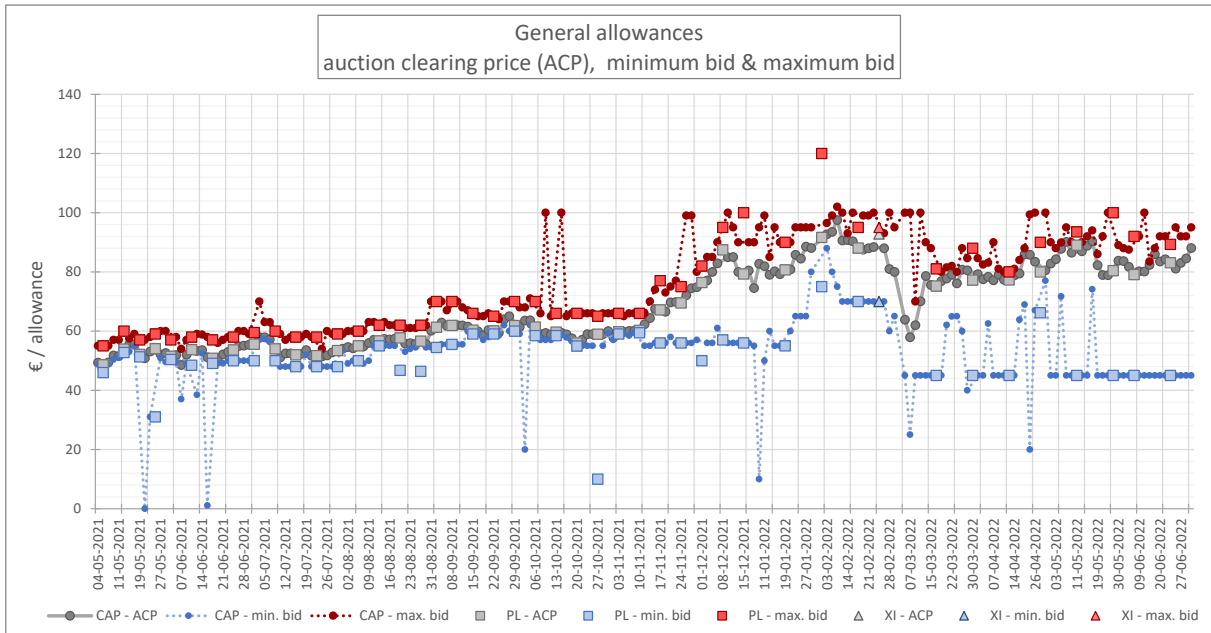
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio[1]	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
Jun 22	30,567,500	69,774,000	2,530,757,385	2.3	20.4	14.3	82.79
May 22	37,900,500	87,512,000	3,220,253,025	2.3	21.6	16.2	84.97
Apr 22	34,216,500	74,920,000	2,736,312,345	2.2	23.0	15.7	79.97
Mar 22	41,277,000	92,255,000	3,076,655,035	2.2	21.7	16.0	74.54
Feb 22	35,812,500	48,004,000	3,229,534,010	1.3	22.4	19.2	90.18
Jan 22	27,148,000	39,669,000	2,248,786,940	1.5	24.1	19.9	82.83
Dec 21	26,358,000	37,589,000	2,127,412,425	1.4	19.5	16.8	80.71
Nov 21	43,483,000	63,439,500	2,843,456,625	1.5	20.7	17.4	65.39
Oct 21	38,452,000	62,101,000	2,284,052,960	1.6	21.9	17.5	59.40
Sep 21	40,527,000	64,777,000	2,489,433,875	1.6	21.3	16.8	61.43

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

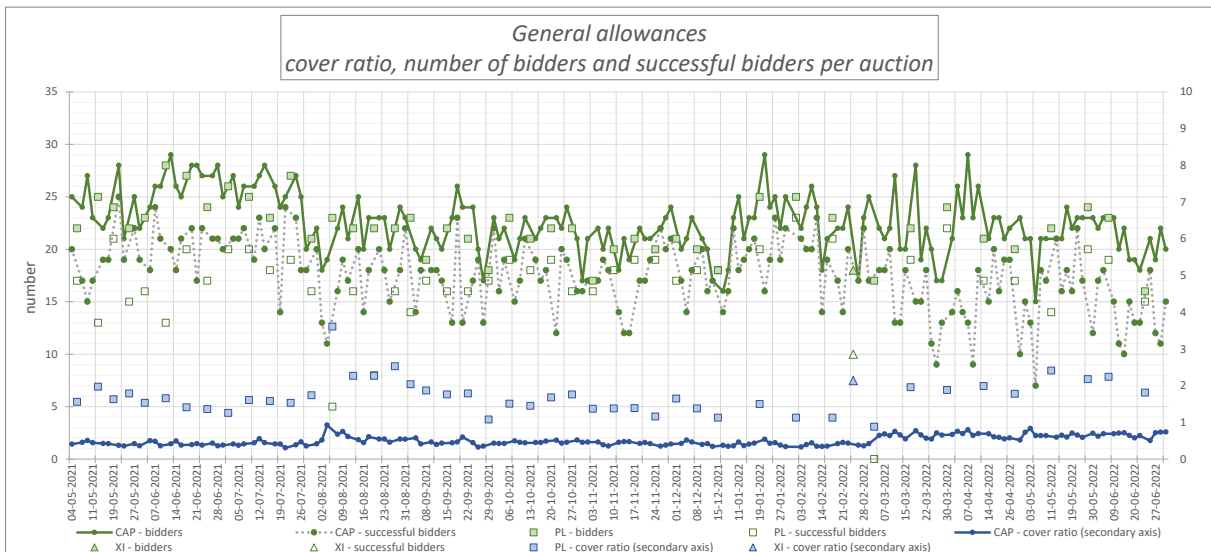
Aug 21	26,656,500	58,272,500	1,502,176,915	2.2	22.0	15.9	56.35
Jul 21	53,050,500	78,671,000	2,834,823,470	1.5	24.9	20.0	53.44
Jun 21	55,627,000	80,288,000	2,933,509,560	1.4	26.1	19.6	52.74
May 21	39,896,500	61,722,500	2,080,915,820	1.5	24.0	18.5	52.16
Apr 21	49,762,000	81,098,000	2,230,370,115	1.6	25.3	16.7	44.82
2021 total	482,490,000	775,121,500	25,581,263,350	1.6	23.4	17.9	53.02
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 April, May, June 2022, 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 -0.02, -0.24, -0.04 respectively, and this difference had a standard deviation of EUR 0.40, 0.33, 0.30 respectively.

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

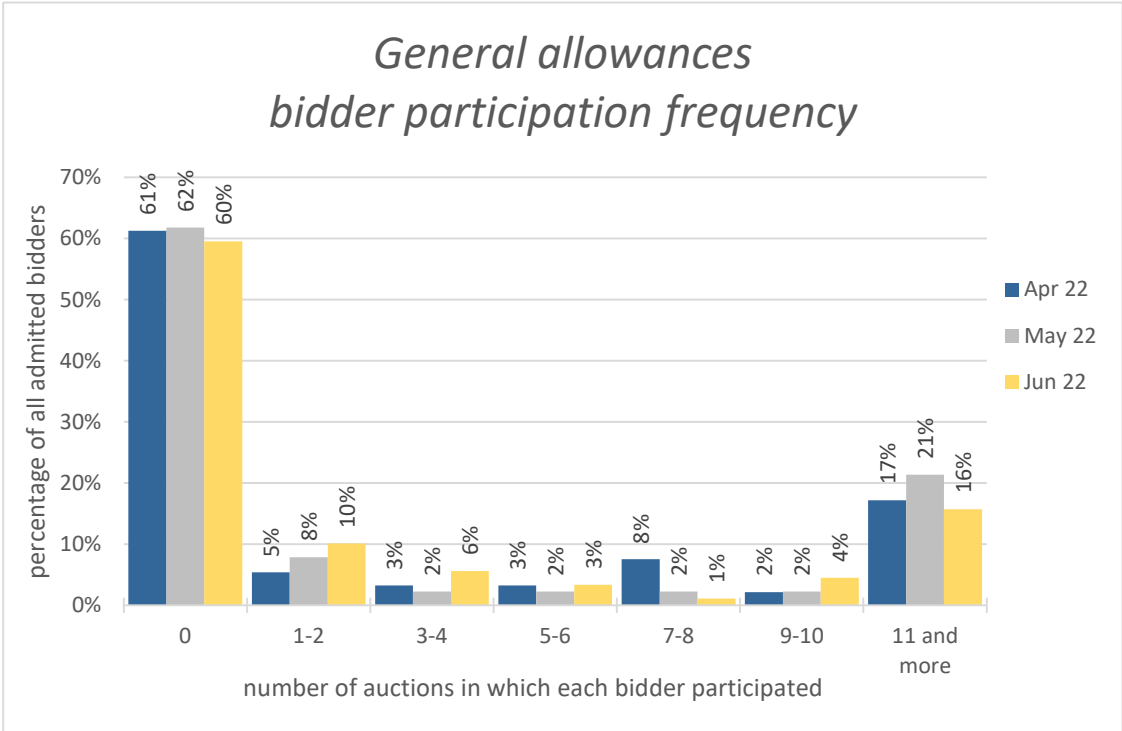


Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these 36, 34 and 36 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]
Jun 22	13	36	69,774,000	265,331	263,298	465,003	1,091	4.1	64,157
May 22	15	34	87,512,000	273,166	270,099	480,515	1,283	4.0	68,583
Apr 22	13	36	74,920,000	252,763	248,904	448,783	1,154	3.8	65,407
Mar 22	17	41	92,255,000	264,682	253,448	459,116	1,362	3.7	68,754
Feb 22	15	37	48,004,000	157,110	155,353	246,505	1,044	3.4	46,580
Jan 22	11	33	39,669,000	149,589	149,694	207,912	979	3.7	40,751
Dec 21	11	32	37,589,000	176,366	174,833	231,424	830	3.9	45,502
Nov 21	18	33	63,439,500	173,816	170,996	268,268	1,424	3.8	45,101
Oct 21	16	32	62,101,000	179,384	177,431	257,777	1,211	3.5	51,746
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

(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
Jun 22	13	29	30,567,500	170,683	165,230	259,834	399
May 22	15	32	37,900,500	167,751	155,969	270,326	591
Apr 22	13	33	34,216,500	177,858	168,554	266,019	448
Mar 22	17	34	41,277,000	170,244	163,150	268,614	524
Feb 22	15	36	35,812,500	139,838	137,213	231,500	560
Jan 22	11	32	27,148,000	125,231	123,963	189,178	457
Dec 21	11	31	26,358,000	145,810	142,476	218,273	424
Nov 21	18	32	43,483,000	144,139	138,923	230,916	675
Oct 21	16	29	38,452,000	140,606	136,840	216,414	537
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

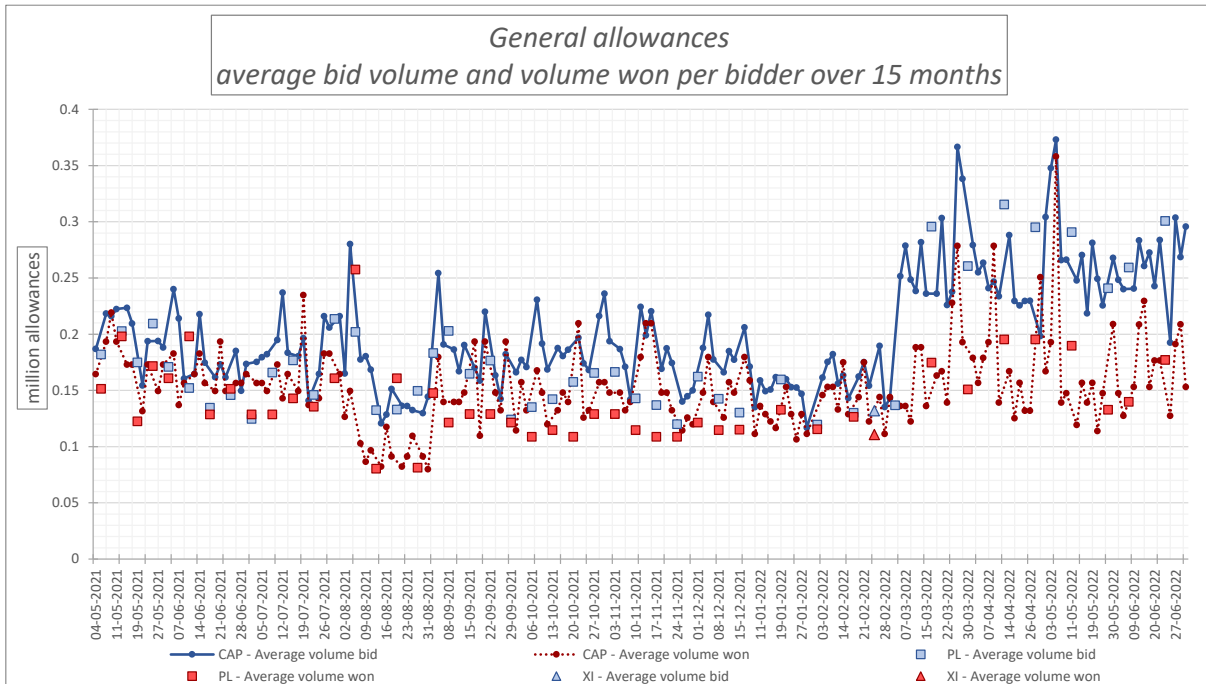
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[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

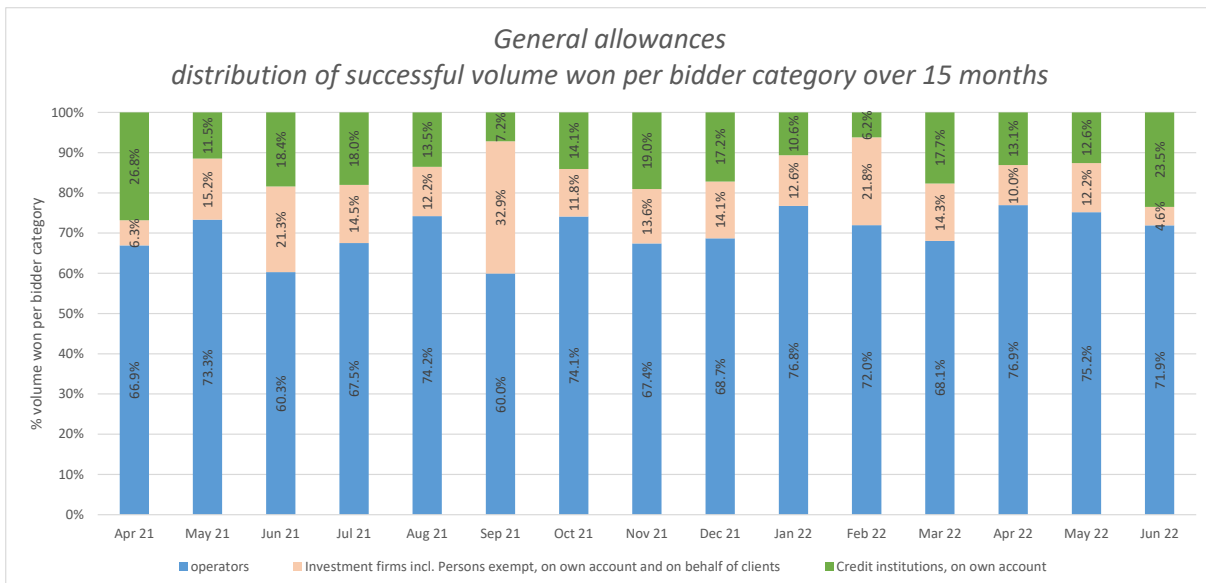
Graph 4: General allowances - average bid volume and volume won per bidder over 15 months



1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client³ during the reporting period was 0.58% in April, 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.

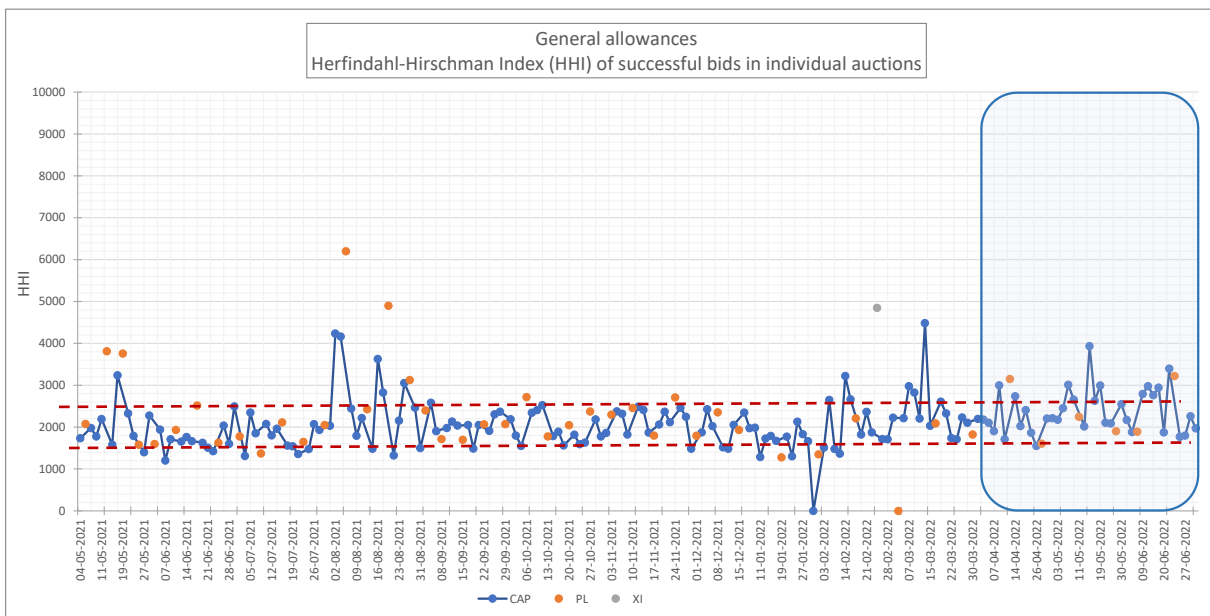
Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
Apr 22	0.58%	Operators (including Business groupings)	76.93%	18.4% points
		Investment firms (including persons exempt)	9.98%	7.0% points
		Credit institutions	13.10%	15.0% points
May 22	0.00%	Operators (including Business groupings)	75.20%	9.4% points
		Investment firms (including persons exempt)	12.22%	7.2% points
		Credit institutions	12.59%	12.8% points
Jun 22	0.00%	Operators (including Business groupings)	71.93%	20.4% points
		Investment firms (including persons exempt)	4.57%	3.2% points
		Credit institutions	23.49%	19.2% points

1.1.4. Concentration - general allowances

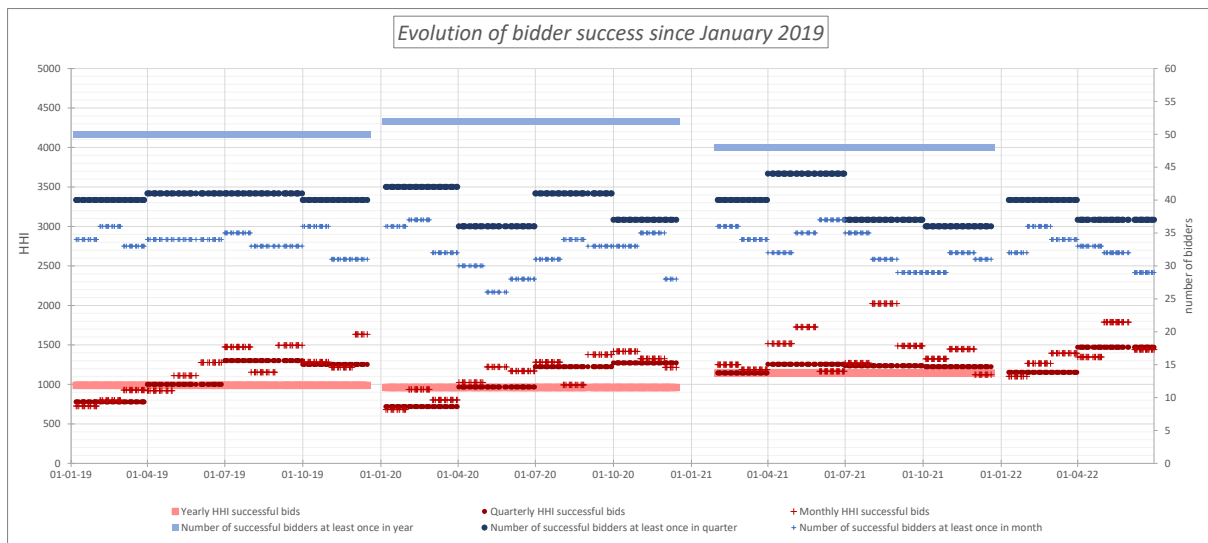
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration⁴. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 is 'moderately 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 (€)
Jun 22	600,000	1,250,000	50,670,000	2.1	8.0	7.0	84.45
May 22	109,500	488,000	9,553,875	4.5	9.0	4.0	87.25
Apr 22	600,000	1,541,500	47,004,000	2.6	8.0	7.0	78.34
Mar 22	-	-	-	-	-	-	-
Feb 22	600,000	1,130,500	57,918,000	1.9	7.0	6.0	96.53
Jan 22	-	-	-	-	-	-	-
Dec 21	-	-	-	-	-	-	-
Nov 21	613,500	1,370,500	37,748,655	2.2	7.0	5.0	61.53
Oct 21	-	-	-	-	-	-	-
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

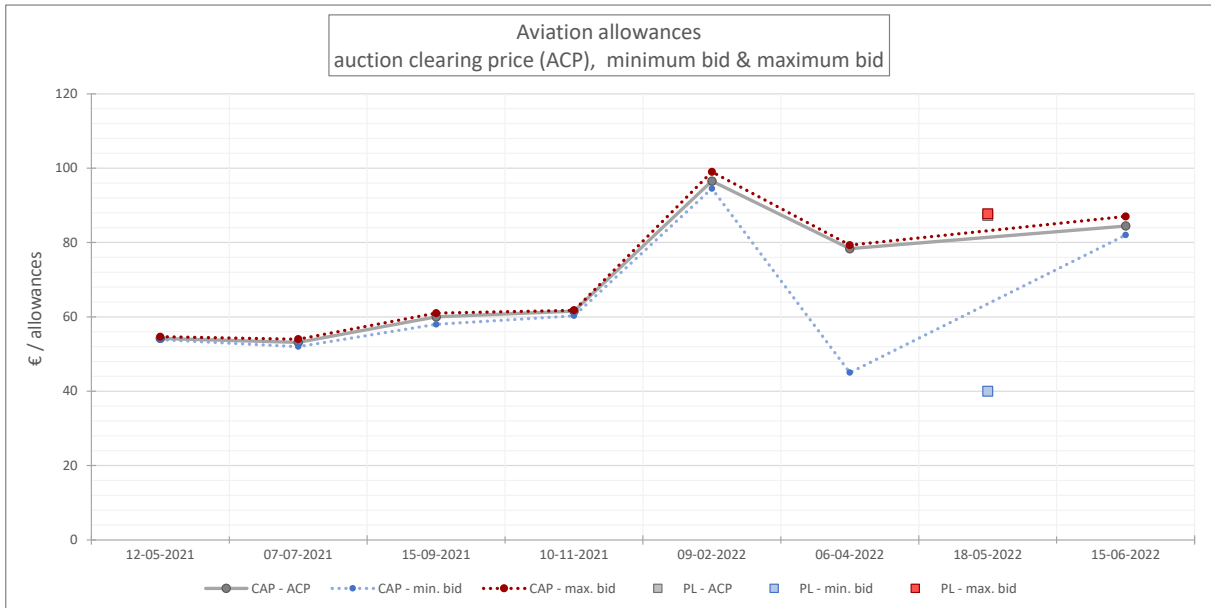
⁵ The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012: https://ec.europa.eu/clima/news-your-voice/news/auctions-2012-aviation-allowances-put-hold-2012-11-16_en

⁶ See also the regulatory update published by the Commission on 29 July 2014: https://ec.europa.eu/clima/news-your-voice/news/2014-aviation-auction-calendars-published-2014-07-29_en

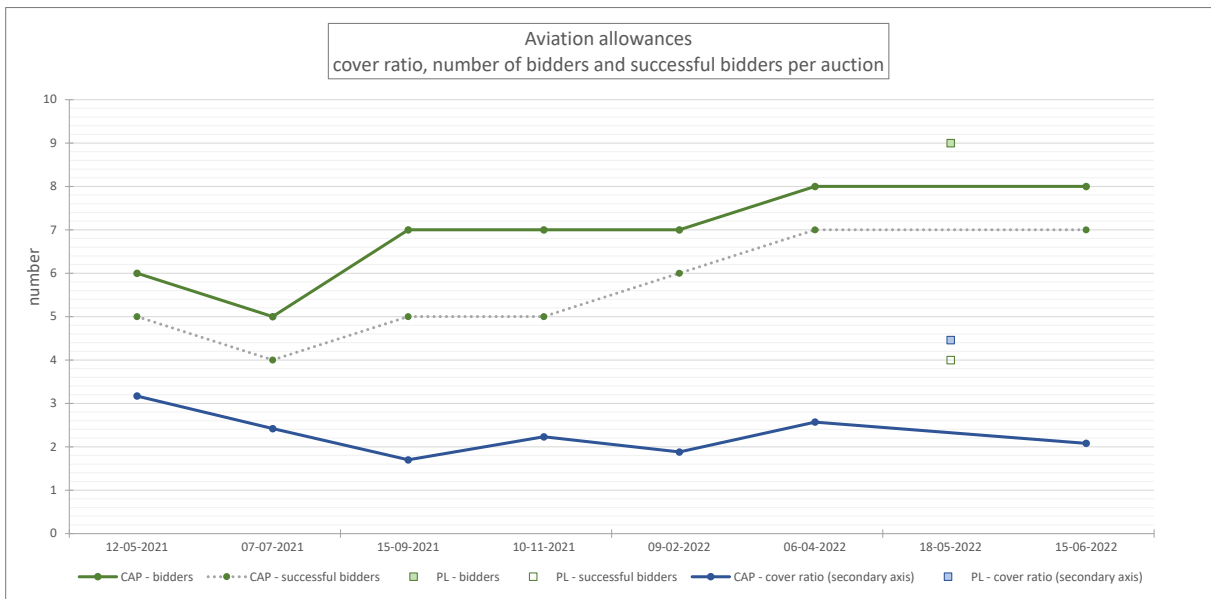
Apr 21	114,000	508,000	4,962,420	4.5	7.0	2.0	43.53
2021 total	3,185,500	7,463,000	171,307,490	2.6	6.5	4.5	53.78
2020 total	5,049,500	13,474,500	119,509,185	2.7	8.0	5.0	23.67
2019 total	4,701,000	13,172,500	119,584,255	2.8	8.7	5.9	25.44
2018 total	3,941,000	10,830,000	73,956,020	2.7	8.8	6.1	18.77
2017 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.

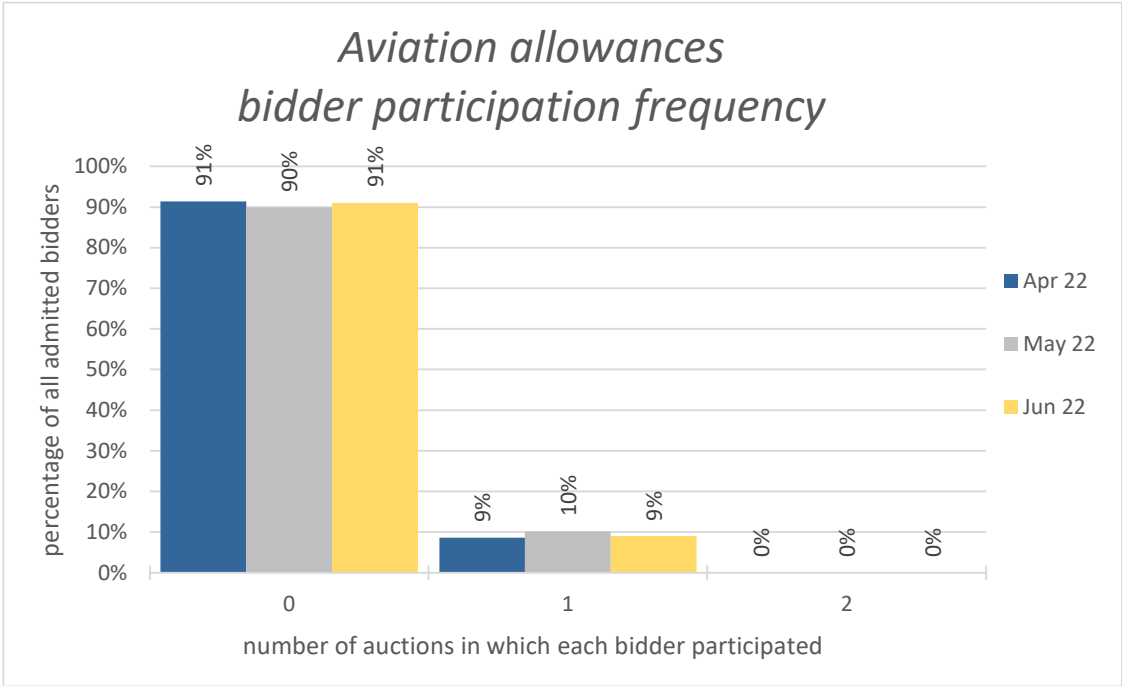
Graph 8: Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid



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]
Jun 22	1	8	1,250,000	156,250	156,250	175,619	34	4.3	36,765
May 22	1	9	488,000	54,222	54,222	39,075	29	3.2	16,828
Apr 22	1	8	1,541,500	192,688	192,688	231,790	37	4.6	41,662
Mar 22	-	-	-	-	-	-	-	-	-
Feb 22	1	7	1,130,500	161,500	161,500	215,120	24	3.4	47,104
Jan 22	-	-	-	-	-	-	-	-	-
Dec 21	-	-	-	-	-	-	-	-	-
Nov 21	1	7	1,370,500	195,786	195,786	210,922	27	3.9	50,759
Oct 21	-	-	-	-	-	-	-	-	-
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

(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
Jun 22	1	7	600,000	85,714	85,714	98,321	17
May 22	1	4	109,500	27,375	27,375	13,681	6
Apr 22	1	7	600,000	85,714	85,714	128,544	24
Mar 22	-	-	-	-	-	-	-
Feb 22	1	6	600,000	100,000	100,000	127,577	10
Jan 22	-	-	-	-	-	-	-
Dec 21	-	-	-	-	-	-	-
Nov 21	1	5	613,500	122,700	122,700	123,118	9
Oct 21	-	-	-	-	-	-	-
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

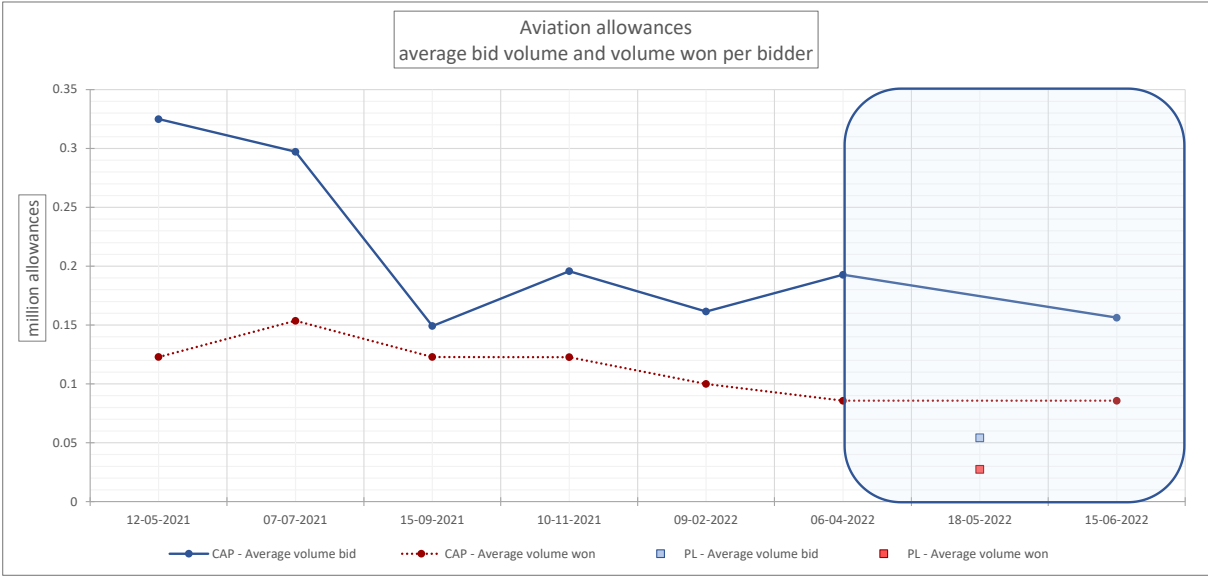
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[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

No bids for aviation allowances were submitted by intermediaries on behalf of a client⁷ during the reporting period, the remaining volume bid was done on own account.

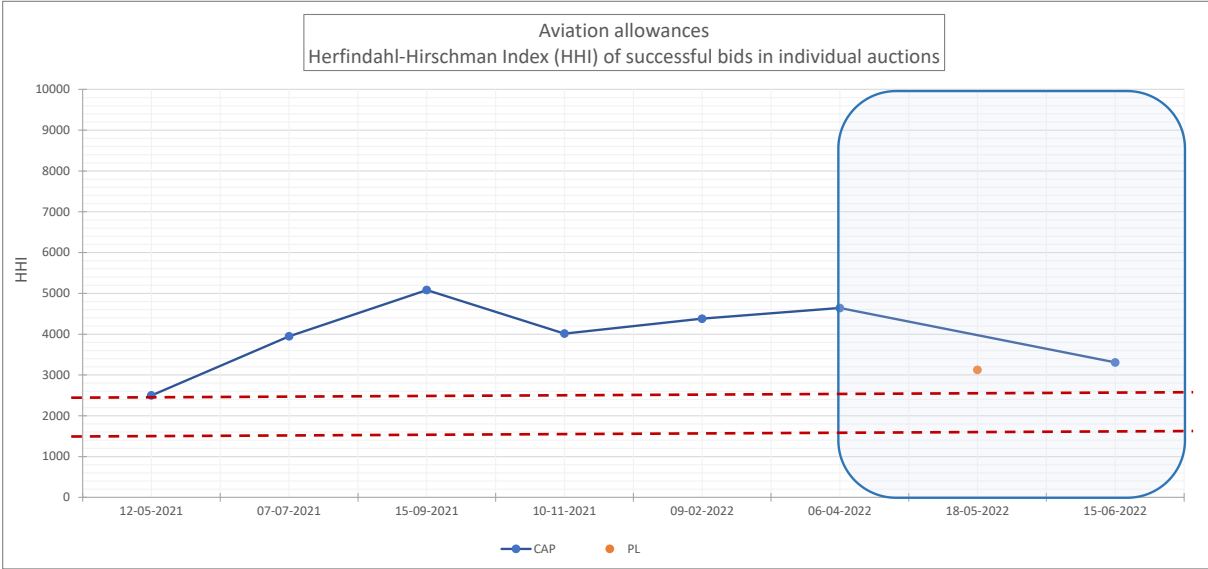
1.2.4 Concentration – aviation allowances

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.

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.

Graph 12: Aviation allowances - Herfindahl-Hirschman index of successful bids in individual auctions



Implementation of and compliance with the applicable rules

Fair and open access

Table 8: Eligible participants to the auctions by category

Number of participants		Operator		Investment firm	Credit Institution	Business grouping	Person exempt from MiFID requirements	Total
		Stationary	Aircraft					
Participants admitted to EEX's emissions spot secondary market	Apr 22	-	-	-	-	-	-	166
	May 22	-	-	-	-	-	-	167
	Jun 22	-	-	-	-	-	-	165
Participants eligible to bid in the auctions	Apr 22	67	1	11	4	-	10	93
	May 22	67	1	9	4	-	8	89
	Jun 22	67	1	9	4	-	8	89
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Apr 22	-	-	2	2	-	2	6
	May 22	-	-	2	2	-	1	5
	Jun 22	-	-	2	2	-	1	5
(Of which:) Auction-only access	Apr 22	2	-	1	-	-	1	4
	May 22	2	-	1	-	-	1	4
	Jun 22	2	-	1	-	-	1	4

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.

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.

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

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: 05/08/2022

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 2 2022
(reported in euros)**

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

Cumulated Revenues since November 2012 (start of Phase III)	General allowances	Aviation allowances	General and aviation allowances
Austria	1,406,209,560	20,905,190	1,427,114,750
Belgium	2,624,389,355	26,487,065	2,650,876,420
Bulgaria	3,086,229,970	8,384,005	3,094,613,975
Croatia	531,764,815	5,776,900	537,541,715
Cyprus	225,744,935	9,856,200	235,601,135
Czech Republic	3,440,915,300	10,265,015	3,451,180,315
Denmark	1,321,889,395	24,438,490	1,346,327,885
Estonia	960,884,810	1,880,950	962,765,760
Finland	1,786,829,725	19,602,955	1,806,432,680
France	5,968,562,075	113,395,555	6,081,957,630
Greece	4,052,764,380	45,817,425	4,098,581,805
Hungary	1,495,942,835	8,846,300	1,504,789,135
Iceland	73,947,340	8,368,470	82,315,810
Innovation Fund	5,218,042,330	-	5,218,042,330
Ireland	959,669,380	18,913,050	978,582,430
Italy	10,457,386,720	123,417,805	10,580,804,525
Latvia	293,437,510	4,850,720	298,288,230
Liechtenstein	1,712,920	-	1,712,920
Lithuania	508,959,125	3,247,145	512,206,270
Luxembourg	117,334,170	3,096,305	120,430,475
Malta	119,338,665	5,231,430	124,570,095
Modernisation Fund	6,687,313,755	-	6,687,313,755
The Netherlands	3,650,492,185	40,148,380	3,690,640,565
Northern Ireland	102,868,800	-	102,868,800

Norway	1,509,982,455	62,109,005	1,572,091,460
Poland	16,195,254,390	25,427,790	16,220,682,180
Portugal	2,045,682,865	30,645,160	2,076,328,025
Romania	3,900,285,705	15,451,090	3,915,736,795
Slovak Republic	1,538,237,460	1,578,425	1,539,815,885
Slovenia	522,621,670	1,235,970	523,857,640
Spain	9,950,764,830	144,178,030	10,094,942,860
Sweden	951,838,015	33,286,880	985,124,895
TOTAL	42,623,562,090	336,453,365	42,960,015,455

**Annex 1b Auction revenues per Member State and for Poland from January 2021 to the end of Quarter 2 2022
(reported in euros)**

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

Cumulated Revenues since January 2021 (start of Phase IV)	General allowances	Aviation allowances	General and aviation allowances
Austria	502,686,440	8,383,025	511,069,465
Belgium	939,211,055	11,471,450	950,682,505
Bulgaria	1,385,053,095	3,784,710	1,388,837,805
Croatia	183,848,755	2,989,530	186,838,285
Cyprus	129,673,310	2,724,470	132,397,780
Czech Republic	947,252,960	4,049,770	951,302,730
Denmark	511,774,995	10,238,445	522,013,440
Estonia	426,599,905	1,091,005	427,690,910
Finland	701,578,015	8,543,450	710,121,465
France	2,414,749,545	44,745,090	2,459,494,635
Greece	1,703,444,215	20,680,420	1,724,124,635
Hungary	494,007,450	3,784,710	497,792,160
Iceland	13,755,195	3,680,075	17,435,270
Innovation Fund	3,884,219,325	-	3,884,219,325
Ireland	355,188,645	7,717,505	362,906,150
Italy	4,166,980,575	48,782,520	4,215,763,095
Latvia			

	105,239,855	2,151,245	107,391,100
Liechtenstein	400,655	-	400,655
Lithuania	137,996,045	1,824,655	139,820,700
Luxembourg	36,973,125	1,386,830	38,359,955
Malta	49,557,750	2,385,540	51,943,290
Modernisation Fund	6,687,313,755	-	6,687,313,755
The Netherlands	1,476,401,905	16,969,580	1,493,371,485
Northern Ireland	102,868,800	-	102,868,800
Norway	312,627,520	16,673,755	329,301,275
Poland	8,191,145,620	14,516,295	8,205,661,915
Portugal	857,161,570	15,478,115	872,639,685
Romania	725,949,430	7,452,445	733,401,875
Slovak Republic	454,367,385	591,650	454,959,035
Slovenia	220,541,135	530,120	221,071,255
Spain	4,147,044,785	59,051,730	4,206,096,515
Sweden	357,949,275	14,775,230	372,724,505
TOTAL	49,083,735,355	480,388,340	48,230,300,690

Annex 2 Results of individual auctions on behalf of participating Member States and Poland in April, May and June

(The data used in the highlighted subsection of the tables presented in this annex can also be obtained directly from the EEX website.)

General Allowances - April 2022																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
04-04-22	77.50	45.00	82.50	77.02	77.20	2,506,500	6,633,500	2.65	26	16	194,253,750	107	36	4.12	61,995	255,135	436,163	156,656	247,285
05-04-22	78.33	62.53	83.10	78.05	77.96	2,506,500	6,060,500	2.42	23	14	196,334,145	102	30	4.43	59,417	263,500	454,923	179,036	249,672
07-04-22	77.13	45.00	90.00	76.01	76.23	2,506,500	6,988,000	2.79	29	13	193,326,345	96	18	3.31	72,792	240,966	436,328	192,808	233,982
11-04-22	79.02	45.00	81.00	77.71	78.16	2,506,500	5,676,500	2.26	23	9	198,063,630	84	13	3.65	67,577	246,804	390,047	278,500	363,043
12-04-22	77.36	45.00	80.00	76.67	77.13	2,506,500	6,079,000	2.43	26	18	193,902,840	91	32	3.50	66,802	233,808	429,819	139,250	200,673
13-04-22	77.27	45.00	80.00	76.41	77.12	3,322,500	6,624,500	1.99	21	17	256,729,575	87	36	4.14	76,144	315,452	581,101	195,441	407,837
14-04-22	78.80	45.00	81.00	77.43	78.21	2,506,500	6,051,500	2.41	21	15	197,512,200	78	21	3.71	77,583	288,167	508,738	167,100	294,684
19-04-22	79.40	63.82	84.00	79.25	79.35	2,506,500	5,279,000	2.11	23	20	199,016,100	91	44	3.96	58,011	229,522	447,347	125,325	218,781
21-04-22	85.90	68.97	88.00	85.47	85.83	2,506,500	5,188,000	2.07	23	16	215,308,350	76	36	3.30	68,263	225,565	464,359	156,656	264,631
25-04-22	85.81	19.99	99.35	84.88	86.12	2,506,500	4,820,000	1.92	21	19	215,082,765	83	57	3.95	58,072	229,524	460,889	131,921	210,402
26-04-22	83.43	67.03	100.00	83.69	83.48	2,506,500	5,053,000	2.02	22	19	209,117,295	85	46	3.86	59,447	229,682	409,962	131,921	183,919
27-04-22	79.99	66.20	90.00	80.46	80.36	3,322,500	5,904,000	1.78	20	17	265,766,775	88	56	4.40	67,091	295,200	490,049	195,441	257,239
28-04-22	80.55	77.00	100.00	80.71	80.08	2,506,500	4,562,500	1.82	23	10	201,898,575	86	23	3.74	53,052	198,370	277,085	250,650	275,058

General Allowances - May 2022

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
02-05-22	82.84	45.00	90.00	81.68	82.71	2,506,500	6,389,500	2.55	21	15	207,638,460	87	34	4.14	73,443	304,262	486,507	167,100	254,655
03-05-22	84.25	45.00	88.00	82.58	83.69	2,506,500	7,303,000	2.91	21	13	211,172,625	84	19	4.00	86,940	347,762	483,498	192,808	260,715
05-05-22	87.80	71.70	89.90	87.10	87.18	2,506,500	5,596,000	2.23	15	7	220,070,700	73	17	4.87	76,658	373,067	539,421	358,071	303,217
09-05-22	90.11	45.00	95.00	89.52	90.24	2,506,500	5,584,500	2.23	21	18	225,860,715	76	46	3.62	73,480	265,929	500,660	139,250	292,666
10-05-22	86.50	45.00	90.00	85.27	86.50	2,506,500	5,591,500	2.23	21	17	216,812,250	83	41	3.95	67,367	266,262	491,836	147,441	276,582
11-05-22	89.00	45.00	93.50	87.89	88.50	2,658,000	6,399,000	2.41	22	14	236,562,000	102	35	4.64	62,735	290,864	477,440	189,857	278,171
12-05-22	86.95	45.00	90.00	86.43	87.32	2,506,500	5,206,000	2.08	21	21	217,940,175	88	64	4.19	59,159	247,905	465,255	119,357	214,802
16-05-22	88.81	45.00	92.00	87.62	88.77	2,506,500	5,679,000	2.27	21	16	222,602,265	80	37	3.81	70,988	270,429	526,388	156,656	360,587
17-05-22	90.33	74.15	94.00	90.04	90.03	2,506,500	5,247,000	2.09	24	18	226,412,145	90	34	3.75	58,300	218,625	460,976	139,250	268,934
19-05-22	82.28	45.00	86.00	81.75	82.33	2,506,500	6,186,500	2.47	22	16	206,234,820	92	50	4.18	67,245	281,205	483,805	156,656	305,009
23-05-22	78.96	45.00	92.00	79.11	79.15	2,506,500	5,732,500	2.29	23	22	197,913,240	84	57	3.65	68,244	249,239	459,269	113,932	217,088
24-05-22	78.88	45.00	100.00	79.00	78.82	2,506,500	5,188,000	2.07	23	17	197,712,720	80	39	3.48	64,850	225,565	453,519	147,441	235,440
25-05-22	80.43	45.00	100.00	80.78	80.55	2,658,000	5,782,000	2.18	24	20	213,782,940	81	49	3.38	71,383	240,917	446,248	132,900	222,769
30-05-22	83.75	45.00	89.00	83.07	83.40	2,506,500	6,162,000	2.46	23	12	209,919,375	103	33	4.48	59,825	267,913	467,803	208,875	299,798
31-05-22	83.63	45.00	88.00	83.02	83.59	2,506,500	5,465,500	2.18	22	17	209,618,595	80	36	3.64	68,319	248,432	462,942	147,441	242,003

General Allowances - June 2022

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
07-06-22	81.69	45.00	87.50	80.81	81.46	2,295,500	5,522,000	2.41	23	18	187,519,395	83	31	3.61	66,530	240,087	442,120	127,528	197,125
08-06-22	79.11	45.00	92.00	79.07	79.01	2,658,000	5,964,000	2.24	23	19	210,274,380	88	38	3.83	67,773	259,304	464,437	139,895	225,289
09-06-22	80.21	45.00	92.00	79.56	79.74	2,295,500	5,532,500	2.41	23	15	184,122,055	81	25	3.52	68,302	240,543	473,202	153,033	273,440
13-06-22	80.10	45.00	100.00	79.29	79.49	2,295,500	5,668,000	2.47	20	11	183,869,550	75	16	3.75	75,573	283,400	510,259	208,682	314,668
14-06-22	82.31	45.00	83.50	81.16	81.76	2,295,500	5,735,500	2.50	22	10	188,942,605	79	19	3.59	72,601	260,705	472,771	229,550	304,825
16-06-22	85.95	45.00	88.00	84.64	85.52	2,295,500	5,180,500	2.26	19	15	197,298,225	75	23	3.95	69,073	272,658	506,512	153,033	282,752
20-06-22	83.51	45.00	92.00	82.55	83.01	2,295,500	4,612,500	2.01	19	13	191,697,205	76	24	4.00	60,691	242,763	350,746	176,577	211,609
21-06-22	84.26	45.00	92.00	83.63	84.00	2,295,500	5,109,000	2.23	18	13	193,418,830	77	27	4.28	66,351	283,833	538,584	176,577	326,373
22-06-22	83.06	45.00	89.30	83.35	83.71	2,658,000	4,813,000	1.81	16	15	220,773,480	87	64	5.44	55,322	300,813	569,006	177,200	346,886
23-06-22	81.07	45.00	95.00	81.22	81.29	2,295,500	4,041,000	1.76	21	18	186,096,185	83	48	3.95	48,687	192,429	264,041	127,528	188,563
27-06-22	83.01	45.00	92.00	82.35	82.61	2,295,500	5,770,500	2.51	19	12	190,549,455	94	27	4.95	61,388	303,711	468,309	191,292	205,919
28-06-22	84.54	45.00	92.00	83.48	83.72	2,296,500	5,911,000	2.57	22	11	194,146,110	98	21	4.45	60,316	268,682	459,809	208,773	254,551
30-06-22	88.02	45.00	95.00	87.11	87.74	2,295,500	5,914,500	2.58	20	15	202,049,910	95	36	4.75	62,258	295,725	471,265	153,033	214,014

Aviation Allowances - April 2022

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
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06-04-22	78.34	45.00	79.30	77.62	78.50	600,000	1,541,500	2.57	8	7	47,004,000	37	24	4.63	41,662	192,688	231,790	85,714	128,544
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Aviation Allowances - May 2022

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
18-05-22	87.25	40.00	87.75	85.12	86.83	109,500	488,000	4.46	9	4	9,553,875	29	6	3.22	16,828	54,222	39,075	27,375	13,681

Aviation Allowances - June 2022

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
15-06-22	84.45	82.01	87.00	84.45	84.43	600,000	1,250,000	2.08	8	7	50,670,000	34	17	4.25	36,765	156,250	175,619	85,714	98,321

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.