

Auctions by the *Common Auction Platform*

July, August, September 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, 6(PL), 6, 7, 11, 12, 14, 18, 19, 20(PL), 20, 21, 25, 26, 28 July 2022;

1, 2, 3(PL), 3, 4, 8, 9, 11, 15, 16, 17(PL), 17, 18, 22, 23, 25, 29, 30, 31(PL), 31 August 2022;

1, 5, 6, 12, 13, 14(PL), 14, 15, 19, 20, 21(XI), 22, 26, 27, 28(PL), 28, 29 September 2022;

Aviation Allowances:

No auctions in July 2022;

No auctions in August 2022;

7 September 2022;

Cancelled auctions:

No auctions in July 2022;

No auctions in August 2022;

No auctions in September 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 July, August, September 2022 auctions at a glance:

	General Allowances				Aviation Allowances		
	Jul	Aug	Sep		Jul	Aug	Sep
General							
Number of auctions	14	17	15		-	-	1
Total volume auctioned	32,862,000	20,192,500	37,259,000		-	-	600,000
Amount raised from the auctions (€)	2,674,980,145	1,759,853,265	2,583,969,930		-	-	41,436,000
Average Auction Clearing Price (€/allowance)	81.40	87.15	69.35		-	-	69.06
Total bid volume	73,215,500	63,544,000	71,870,500		-	-	634,000
Average Cover ratio	2.2	3.1	1.9		-	-	1.1
Monthly HHI	1,983	1,892	1,848		-	-	0
Participation							
Number of eligible bidders	89	90	91		89	90	91
Number of participating bidders ⁽¹⁾	34	29	30		-	-	6
Number of successful bidders ⁽¹⁾	31	25	24		-	-	6
Average number of bidders per auction	20.8	16.4	18.6		-	-	6.0

Average number of successful bidders per auction		14.8	9.4	13.8		-	-	6.0
Auction data								
Average total volume bid per bidder per auction		251,452	230,907	264,361		-	-	105,667
Average bid size (volume per bid)		63,396	61,754	63,503		-	-	27,565
Average volume won per bidder per auction		162,674	137,299	194,737		-	-	100,000
Average range of bids (€)		41.06	41.41	33.54		-	-	27.00
Cancelled Auctions		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 September 2022 are EUR 98,726,100,785, and of aviation allowances EUR 858,277,705. Looking exclusively at the Fourth trading period (January 2021 - September 2022) the total revenues from the auctions of general allowances are EUR 49,642,365,430 and of aviation allowances EUR 377,889,365. 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 (€)[2]
Sep 22	37,259,000	71,870,500	2,583,969,930	1.9	18.6	13.8	69.35
Aug 22	20,192,500	63,544,000	1,759,853,265	3.1	16.4	9.4	87.15
Jul 22	32,862,000	73,215,500	2,674,980,145	2.2	20.8	14.8	81.4
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	15.7	79.97
Mar 22	41,277,000	92,255,000	3,076,655,035	2.2	21.7	16	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

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

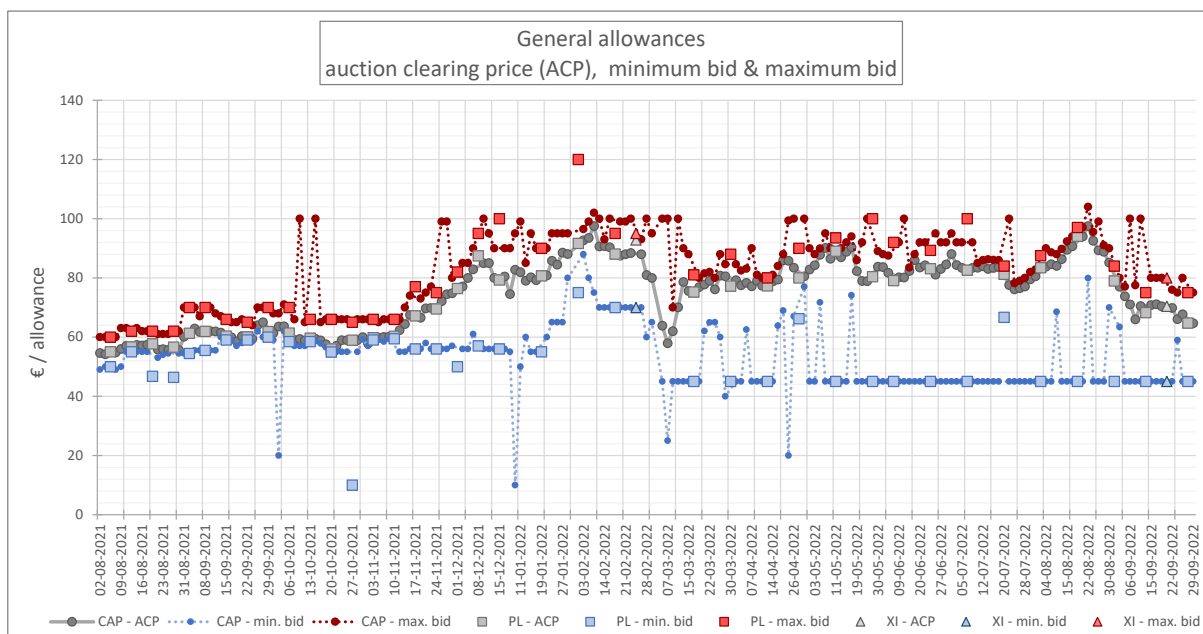
Nov 21	43,483,000	63,439,500	2,843,456,625	1.5	20.7	17.4	65.39
Oct 21	38,452,000	62,101,000	2,284,052,960	1.6	21.9	17.5	59.4
Sep 21	40,527,000	64,777,000	2,489,433,875	1.6	21.3	16.8	61.43
Aug 21	26,656,500	58,272,500	1,502,176,915	2.2	22	15.9	56.35
Jul 21	53,050,500	78,671,000	2,834,823,470	1.5	24.9	20	53.44
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	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	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	5.9
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 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 -0.12, 0.11, -0.23 respectively, and this difference had a standard deviation of EUR 0.32, 0.63, 0.31 respectively.

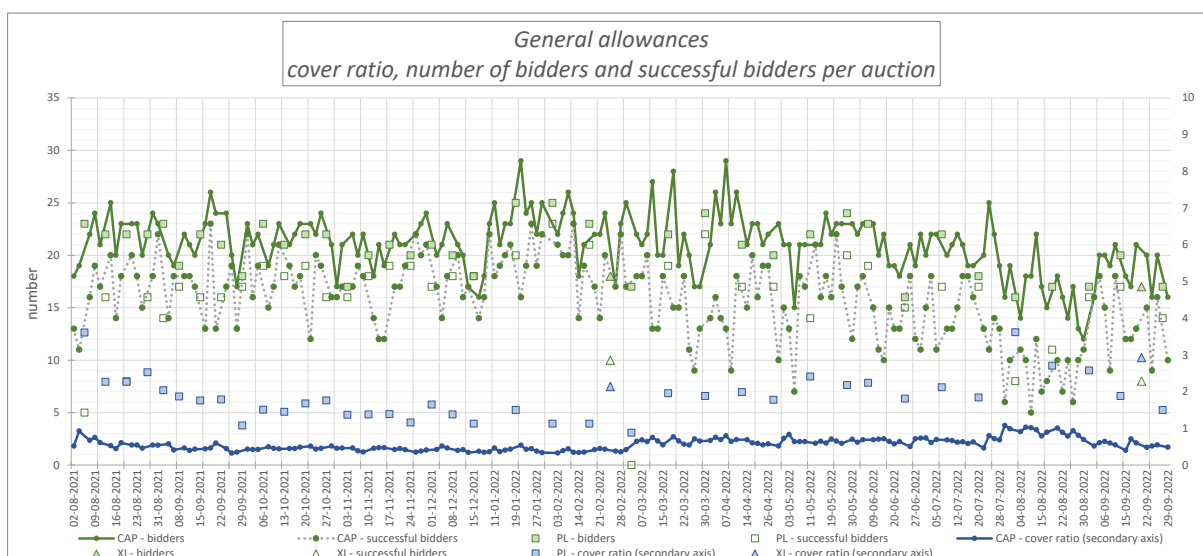
[1] Cover ratio is the ratio between the total bid volume and the auction volume.

[2] The average auction clearing price is weighted by the volumes of the respective auctions.

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

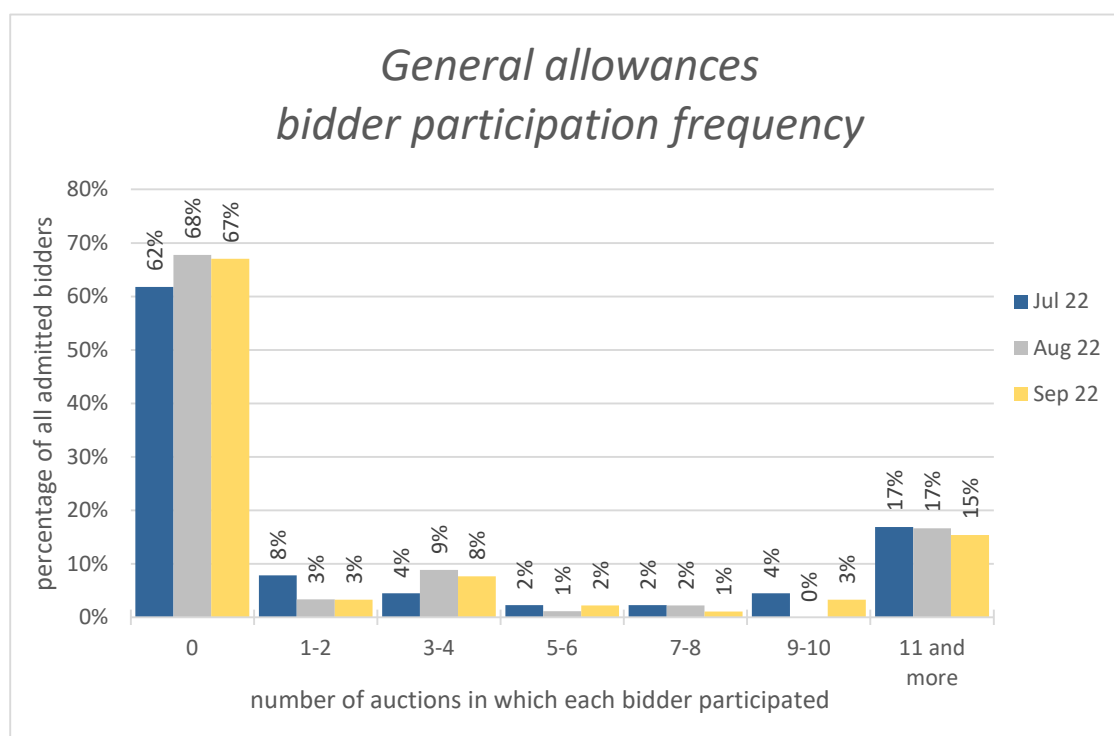


Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these 34, 29 and 30 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 22	15	30	71,870,500	264361	258527	403897	1150	4.1	63,503
Aug 22	17	29	63,544,000	230907	227756	439575	1043	3.7	61,754
Jul 22	14	34	73,215,500	251452	250738	459989	1161	4	63,396
Jun 22	13	36	69,774,000	265331	263298	465003	1091	4.1	64,157
May 22	15	34	87,512,000	273166	270099	480515	1283	4	68,583
Apr 22	13	36	74,920,000	252763	248904	448783	1154	3.8	65,407
Mar 22	17	41	92,255,000	264682	253448	459116	1362	3.7	68,754
Feb 22	15	37	48,004,000	157110	155353	246505	1044	3.4	46,580
Jan 22	11	33	39,669,000	149589	149694	207912	979	3.7	40,751
Dec 21	11	32	37,589,000	176366	174833	231424	830	3.9	45,502
Nov 21	18	33	63,439,500	173816	170996	268268	1424	3.8	45,101
Oct 21	16	32	62,101,000	179384	177431	257777	1211	3.5	51,746
Sep 21	17	33	64,777,000	179524	178942	256547	1335	3.7	48,842
Aug 21	17	34	58,272,500	157063	155809	257972	1295	3.5	45,182
Jul 21	17	41	78,671,000	187,375	185,983	317,457	1,407	3.3	56,336

(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 22	15	24	37,259,000	194,737	184,450	261,447	485
Aug 22	17	25	20,192,500	137,299	127,801	149,570	351
Jul 22	14	31	32,862,000	162,674	158,754	241,835	478
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

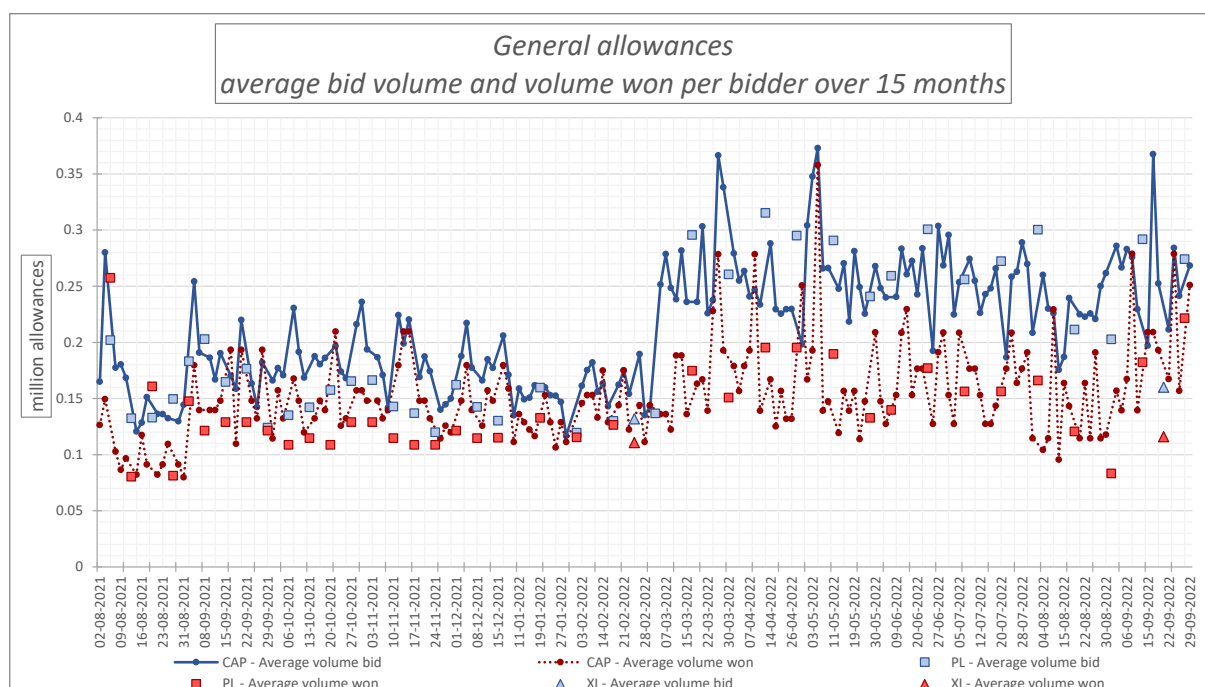
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[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 0.03% in September, the remaining volume bid was done on own account. The shares in the total successful bid volume per bidder category are indicated in Graph 5 and in Table 4.

Graph 5: General allowances - distribution of successful won volume per bidder category over 15 months

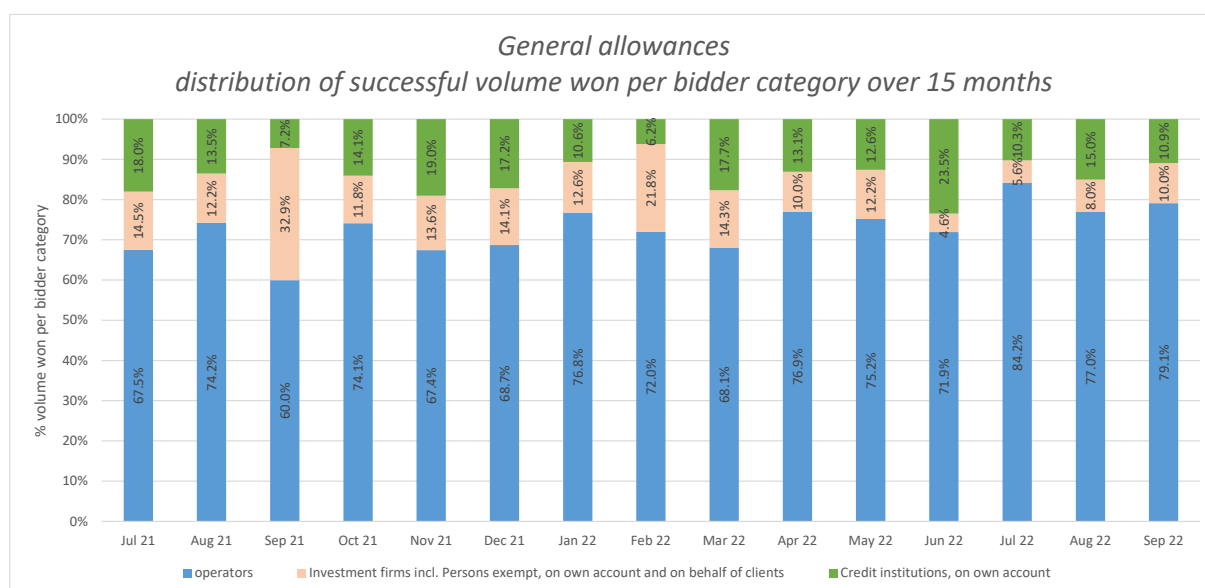


Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

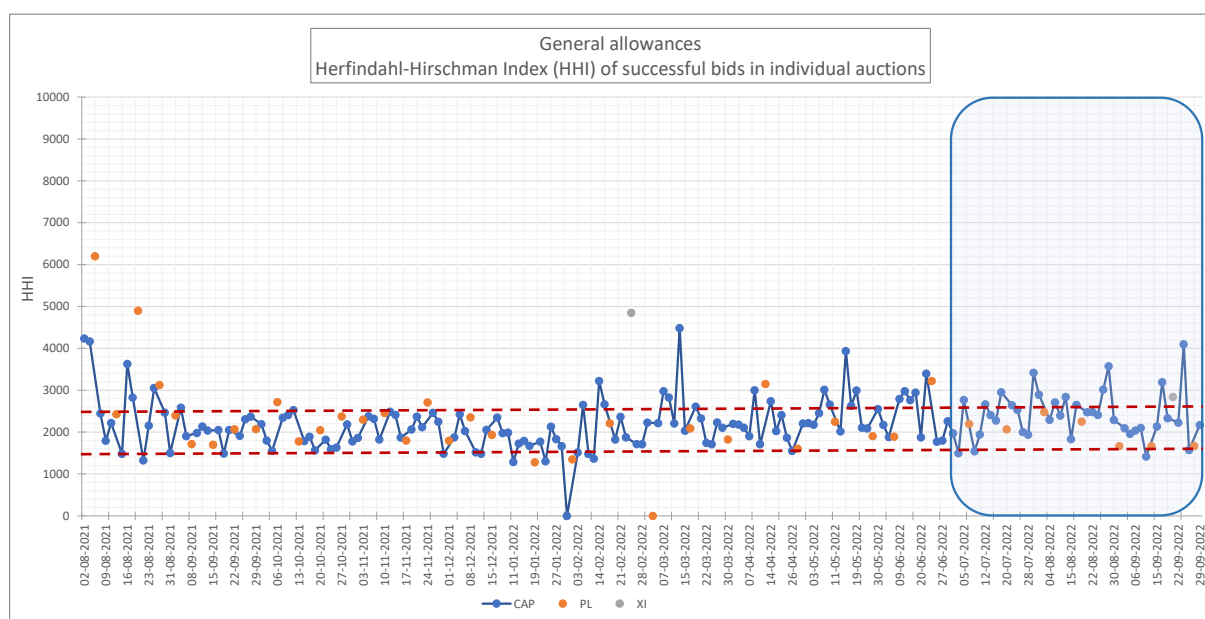
³ The data related to bidding on behalf of clients reflects the self-assessment of the respective trader.

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
Jul 22	0.00%	Operators (including Business groupings)	84.15%	6.9% points
		Investment firms (including persons exempt)	5.59%	4.5% points
		Credit institutions	10.26%	5.8% points
Aug 22	0.00%	Operators (including Business groupings)	76.99%	13.5% points
		Investment firms (including persons exempt)	7.98%	7.7% points
		Credit institutions	15.03%	15.8% points
Sep 22	0.03%	Operators (including Business groupings)	79.10%	9.1% points
		Investment firms (including persons exempt)	9.97%	4.8% points
		Credit institutions	10.93%	8.0% points

1.1.4. Concentration - general allowances

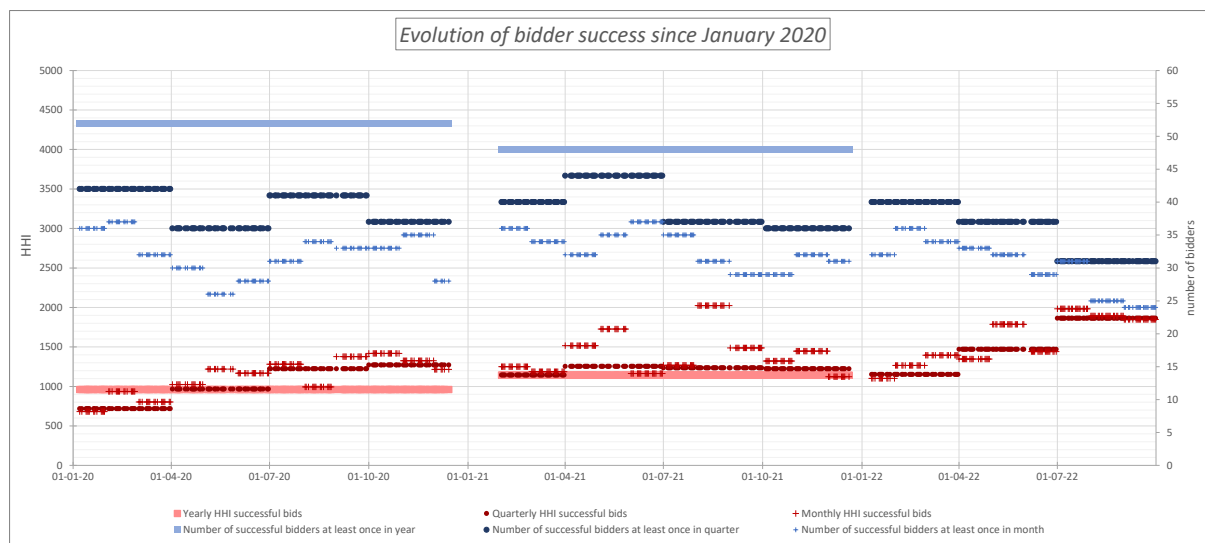
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration⁴. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 is 'moderately 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 (€)[2]
Sep 22	600,000	634,000	41,436,000	1.1	6.0	6.0	69.06
Aug 22	-	-	-	-	-	-	-
Jul 22	-	-	-	-	-	-	-
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

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

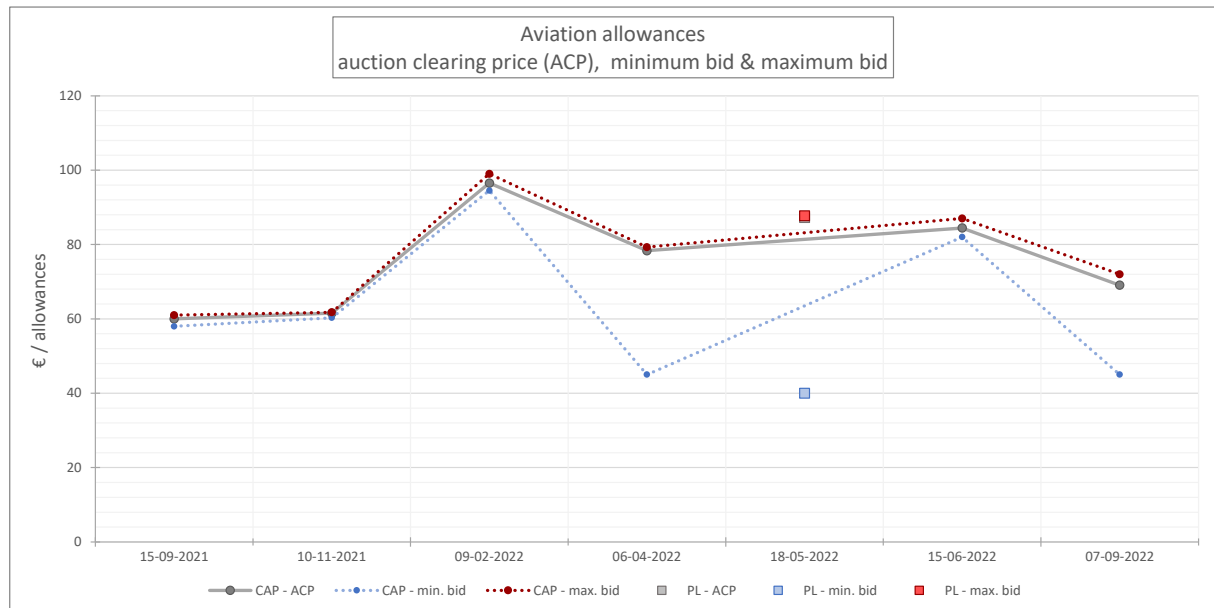
⁶ See also the regulatory update published by the Commission on 29 July 2014: https://ec.europa.eu/clima/news-your-voice/news/2014-aviation-auction-calendars-published-2014-07-29_en

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

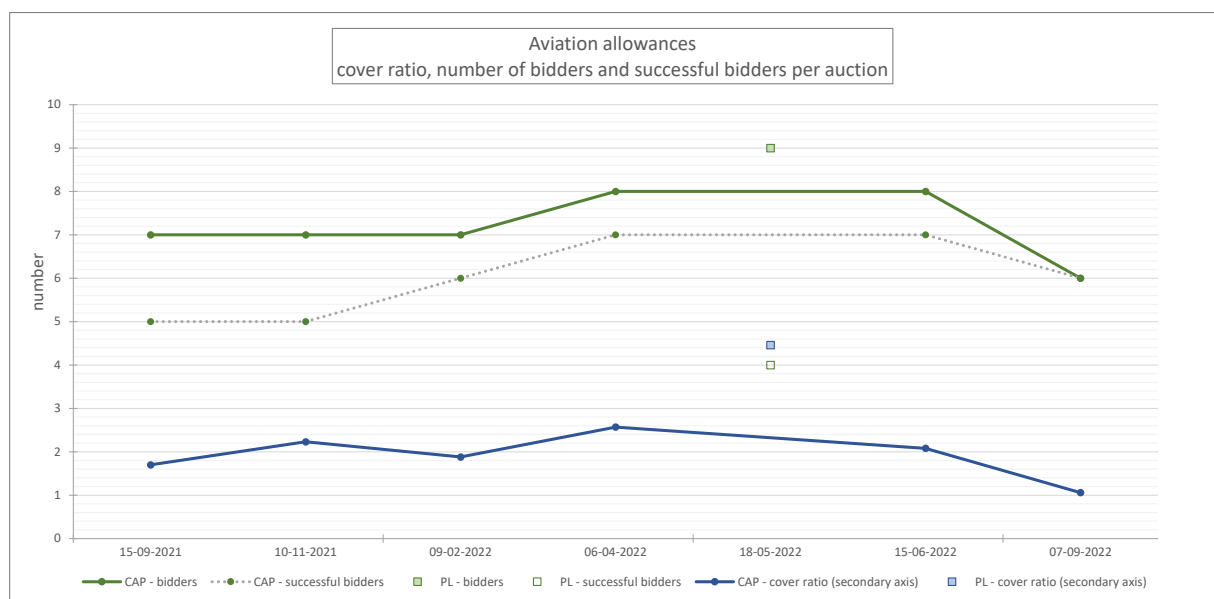
[1] The cover ratio is the ratio between the total bid volume and the auction volume.

[2] The average auction clearing price is weighted by the volumes of the respective auctions.

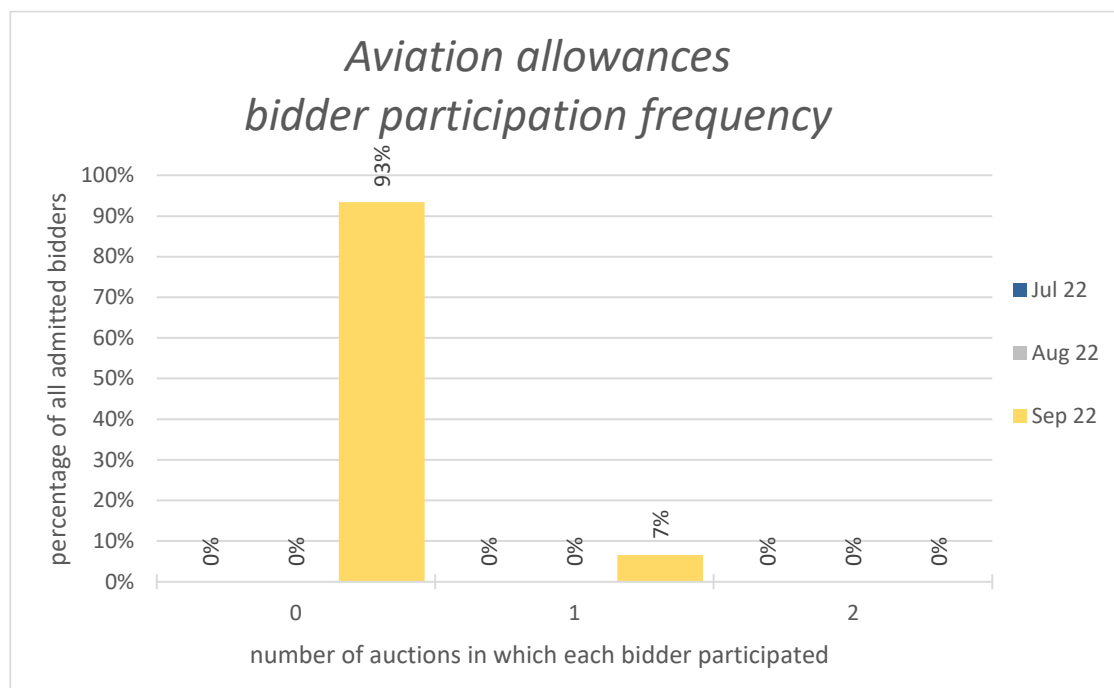
Graph 8: Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid



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 22	1	6	634,000	105,667	105,667	96,965	23	3.8	27,565
Aug 22	-	-	-	-	-	-	-	-	-
Jul 22	-	-	-	-	-	-	-	-	-
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

(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 22	1	6	600,000	100,000	100,000	96,334	22
Aug 22	-	-	-	-	-	-	-
Jul 22	-	-	-	-	-	-	-
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

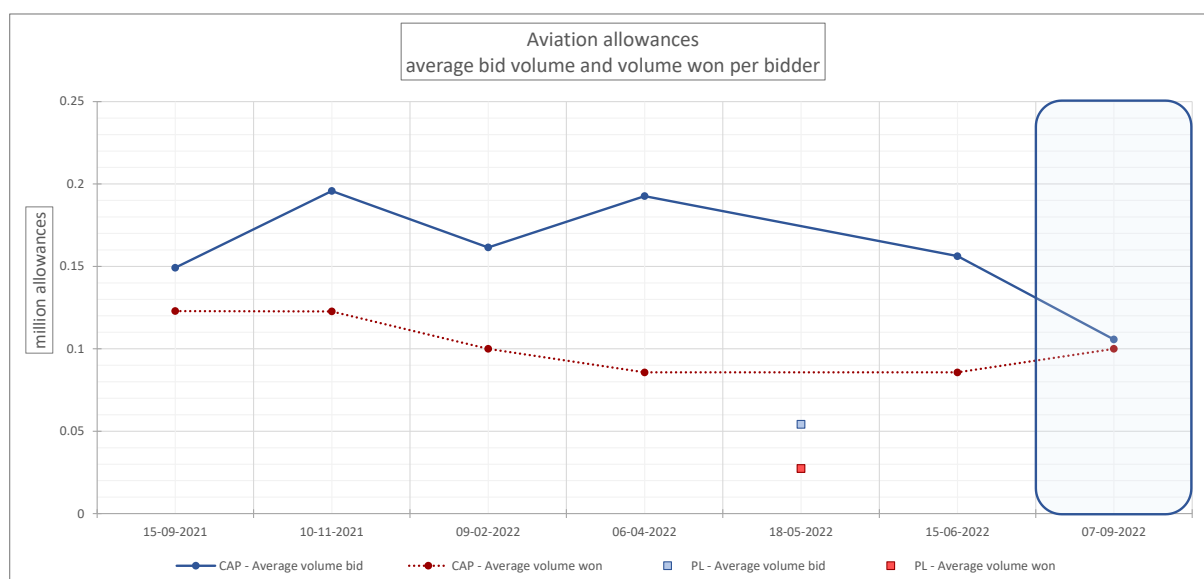
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[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, and all the volume bid was done on own account.

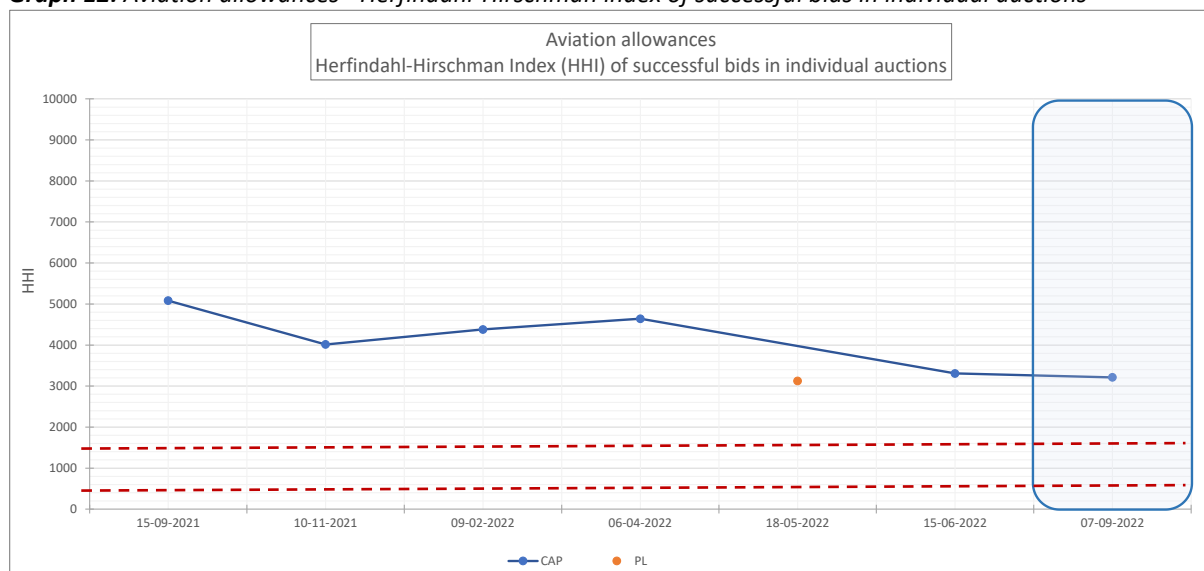
1.2.4 Concentration – aviation allowances

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

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.

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

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 22	-	-	-	-	-	-	165
	Aug 22	-	-	-	-	-	-	165
	Sep 22	-	-	-	-	-	-	166
Participants eligible to bid in the auctions	Jul 22	67	1	9	4	-	8	89
	Aug 22	67	1	9	5	-	8	90
	Sep 22	67	1	10	5	-	8	91
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Jul 22	-	-	2	2	-	1	5
	Aug 22	-	-	2	2	-	1	5
	Sep 22	-	-	3	2	-	1	6
(Of which:) Auction-only access	Jul 22	2	-	1	-	-	1	4
	Aug 22	2	-	1	-	-	1	4
	Sep 22	2	-	1	-	-	1	4

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.

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: 06/12/2022

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>EUAA</i> . See Article 12(2a) and (3) of the <i>ETS Directive</i> .
Investment firms	Investment firms as defined in EU financial markets legislation (point (1) of Article 4(1) of Directive 2004/39/EC).
Market abuse	Insider dealing and market manipulation. See Article 36 of the <i>Auctioning Regulation</i> and Article 1 of Directive 2003/6/EC ('Market Abuse Directive').
Participating Member States	All EU Member States except Germany 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 2022
(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	1,491,269,870	21,975,620	1,513,245,490
Belgium	2,698,311,400	27,971,855	2,726,283,255
Bulgaria	3,360,468,540	8,867,425	3,369,335,965
Croatia	564,864,380	6,156,730	571,021,110
Cyprus	249,179,100	10,201,500	259,380,600
Czech Republic	3,591,996,900	10,782,965	3,602,779,865
Denmark	1,362,865,135	25,750,630	1,388,615,765
Estonia	1,035,271,010	2,019,070	1,037,290,080
Finland	1,868,205,815	20,707,915	1,888,913,730
France	6,379,097,405	119,162,065	6,498,259,470
Greece	4,345,831,350	48,476,235	4,394,307,585
Hungary	1,601,377,595	9,329,720	1,610,707,315
Iceland	73,947,340	8,851,890	82,799,230
Innovation Fund	5,931,752,320	-	5,931,752,320
Ireland	959,669,380	19,914,420	979,583,800
Italy	11,167,007,415	129,702,265	11,296,709,680
Latvia	312,036,085	5,126,960	317,163,045
Liechtenstein	1,782,800	-	1,782,800
Lithuania	533,596,105	3,488,855	537,084,960
Luxembourg	117,334,170	3,268,955	120,603,125
Malta	128,164,755	5,542,200	133,706,955
Modernisation Fund	7,905,279,955	-	7,905,279,955
The Netherlands	3,903,800,165	42,323,770	3,946,123,935
Northern Ireland	168,261,110	-	168,261,110

Norway	1,531,792,125	64,249,865	1,596,041,990
Poland	17,384,563,390	25,427,790	17,409,991,180
Portugal	2,194,195,125	32,647,900	2,226,843,025
Romania	4,010,025,650	16,417,930	4,026,443,580
Slovak Republic	1,616,895,940	1,647,485	1,618,543,425
Slovenia	560,532,380	1,305,030	561,837,410
Spain	10,663,487,680	151,774,630	10,815,262,310
Sweden	1,013,238,395	35,186,030	1,048,424,425
TOTAL	98,726,100,785	858,277,705	99,584,378,490

Annex 1b Auction revenues per Member State and for Poland from January 2021 to the end of Quarter 3 2022
(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	587,746,750	9,453,455	597,200,205
Belgium	1,013,133,100	12,956,240	1,026,089,340
Bulgaria	1,659,291,665	4,268,130	1,663,559,795
Croatia	216,948,320	3,369,360	220,317,680
Cyprus	153,107,475	3,069,770	156,177,245
Czech Republic	1,098,334,560	4,567,720	1,102,902,280
Denmark	552,750,735	11,550,585	564,301,320
Estonia	500,986,105	1,229,125	502,215,230
Finland	782,954,105	9,648,410	792,602,515
France	2,825,284,875	50,511,600	2,875,796,475
Greece	1,996,511,185	23,339,230	2,019,850,415
Hungary	599,442,210	4,268,130	603,710,340
Iceland	13,755,195	4,163,495	17,918,690
Innovation Fund	4,597,929,315	-	4,597,929,315
Ireland	355,188,645	8,718,875	363,907,520
Italy	4,876,601,270	55,066,980	4,931,668,250
Latvia	123,838,430	2,427,485	126,265,915
Liechtenstein	470,535	-	470,535
Lithuania	162,633,025	2,066,365	164,699,390
Luxembourg	36,973,125	1,559,480	38,532,605
Malta	58,383,840	2,696,310	61,080,150
Modernisation Fund	7,905,279,955	-	7,905,279,955
The Netherlands	1,729,709,885	19,144,970	1,748,854,855
Northern Ireland	168,261,110	-	168,261,110

Norway	334,437,190	18,814,615	353,251,805
Poland	9,380,454,620	14,516,295	9,394,970,915
Portugal	1,005,673,830	17,480,855	1,023,154,685
Romania	835,689,375	8,419,285	844,108,660
Slovak Republic	533,025,865	660,710	533,686,575
Slovenia	258,451,845	599,180	259,051,025
Spain	4,859,767,635	66,648,330	4,926,415,965
Sweden	419,349,655	16,674,380	436,024,035
TOTAL	49,642,365,430	377,889,365	50,020,254,795

Annex 2 Results of individual auctions on behalf of participating Member States and Poland in July, August, September 2022

(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 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
04-07-22	84.34	45.00	92.00	83.64	84.39	2,295,500	4,946,000	2.15	22	18	193,602,470	94	51	4.27	52,617	224,818	433,500	127,528	165,971
05-07-22	83.38	45.00	92.00	82.61	82.78	2,295,500	5,578,000	2.43	22	11	191,398,790	102	26	4.64	54,686	253,545	484,174	208,682	298,445
06-07-22	82.63	45.00	100.00	82.14	82.48	2,658,000	5,634,500	2.12	22	17	219,630,540	100	42	4.55	56,345	256,114	472,929	156,353	258,346
07-07-22	83.36	45.00	92.00	82.67	82.91	2,295,500	5,486,500	2.39	20	13	191,352,880	82	29	4.10	66,909	274,325	458,470	176,577	177,141
11-07-22	83.40	45.00	85.00	81.91	82.88	2,295,500	5,351,000	2.33	21	13	191,444,700	84	24	4.00	63,702	254,810	452,229	176,577	218,072
12-07-22	83.89	45.00	86.00	83.05	83.80	2,295,500	4,977,500	2.17	22	15	192,569,495	73	34	3.32	68,185	226,250	472,900	153,033	264,885
14-07-22	83.00	45.00	86.25	82.36	83.25	2,295,500	5,102,500	2.22	21	18	190,526,500	73	49	3.48	69,897	242,976	470,403	127,528	232,841
18-07-22	83.33	45.00	86.05	82.25	83.40	2,295,500	4,714,500	2.05	19	18	191,284,015	71	41	3.74	66,401	248,132	488,261	127,528	224,453
19-07-22	83.61	45.00	86.00	82.74	83.51	2,295,500	5,050,500	2.20	19	16	191,926,755	77	32	4.05	65,591	265,816	505,201	143,469	276,877
20-07-22	81.22	66.70	84.00	81.26	81.47	2,658,000	4,902,000	1.84	18	17	215,882,760	72	48	4.00	68,083	272,333	503,373	156,353	247,926
21-07-22	77.60	45.00	100.00	77.07	77.43	2,295,500	3,735,000	1.63	20	13	178,130,800	70	27	3.50	53,357	186,750	268,725	176,577	275,391
25-07-22	76.09	45.00	78.20	74.95	75.43	2,295,500	6,461,000	2.81	25	11	174,664,595	90	17	3.60	71,789	258,440	452,826	208,682	279,016
26-07-22	76.51	45.00	79.00	75.50	76.22	2,295,500	5,784,500	2.52	22	14	175,628,705	87	32	3.95	66,489	262,932	459,930	163,964	219,928
28-07-22	77.08	45.00	80.00	76.25	76.63	2,295,500	5,492,000	2.39	19	13	176,937,140	86	26	4.53	63,860	289,053	468,687	176,577	217,498

General Allowances - August 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
01-08-22	79.50	45.00	82.00	78.02	78.64	1,146,500	4,318,500	3.77	16	6	91,146,750	66	11	4.13	65,432	269,906	500,405	191,083	195,856
02-08-22	80.51	45.00	82.80	79.45	80.08	1,146,500	3,964,500	3.46	19	10	92,304,715	76	23	4.00	52,164	208,658	458,141	114,650	157,806
03-08-22	83.45	45.00	87.50	81.76	82.70	1,329,000	4,807,500	3.62	16	8	110,905,050	67	14	4.19	71,754	300,469	489,364	166,125	164,714
04-08-22	83.81	45.00	90.00	82.71	83.84	1,146,500	3,642,000	3.18	14	11	96,088,165	47	25	3.36	77,489	260,143	517,300	104,227	128,630
08-08-22	84.60	45.00	88.60	83.70	84.40	1,146,500	4,141,000	3.61	18	10	96,993,900	72	25	4.00	57,514	230,056	468,257	114,650	149,911
09-08-22	84.06	68.57	88.00	83.52	83.38	1,146,500	4,066,000	3.55	18	5	96,374,790	70	15	3.89	58,086	225,889	465,483	229,300	101,667
11-08-22	86.35	45.00	89.75	84.60	86.05	1,146,500	3,863,000	3.37	22	12	99,000,275	65	18	2.95	59,431	175,591	370,905	95,542	148,307
15-08-22	89.50	45.00	92.30	88.08	89.01	1,146,500	3,180,000	2.77	17	7	102,611,750	60	12	3.53	53,000	187,059	255,535	163,786	87,284
16-08-22	90.64	45.00	94.00	88.96	90.16	1,146,500	3,591,500	3.13	15	8	103,918,760	52	12	3.47	69,067	239,433	436,141	143,313	151,627
17-08-22	94.07	45.00	97.00	92.20	94.04	1,329,000	3,595,500	2.71	17	11	125,019,030	53	26	3.12	67,840	211,500	417,103	120,818	146,852
18-08-22	94.00	45.00	97.00	91.93	93.40	1,146,500	4,051,500	3.53	18	10	107,771,000	75	15	4.17	54,020	225,083	400,757	114,650	139,254
22-08-22	97.50	79.93	104.00	97.42	97.07	1,146,500	3,565,500	3.11	16	7	111,783,750	67	21	4.19	53,216	222,844	421,774	163,786	140,406
23-08-22	92.52	45.00	95.50	91.28	92.69	1,146,500	3,161,500	2.76	14	10	106,074,180	50	30	3.57	63,230	225,821	453,708	114,650	136,214
25-08-22	89.30	45.00	99.00	86.68	88.11	1,146,500	3,756,000	3.28	17	6	102,382,450	61	9	3.59	61,574	220,941	422,349	191,083	171,830
29-08-22	88.81	45.00	91.00	87.63	88.79	1,146,500	3,253,000	2.84	13	10	101,820,665	56	28	4.31	58,089	250,231	477,082	114,650	183,911
30-08-22	85.13	70.00	90.00	85.00	85.42	1,295,500	3,140,000	2.42	12	11	110,285,915	47	34	3.92	66,809	261,667	480,175	117,773	145,091
31-08-22	78.96	45.00	84.00	78.43	79.02	1,334,500	3,447,000	2.58	17	16	105,372,120	59	33	3.47	58,424	202,765	413,321	83,406	107,636

General Allowances - September 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
01-09-22	77.01	63.41	80.00	77.10	77.05	2,510,500	4,576,500	1.82	16	16	193,333,605	69	43	4.31	66,326	286,031	463,455	156,906	240,601
05-09-22	73.75	45.00	77.00	73.16	73.81	2,510,500	5,335,000	2.13	20	18	185,149,375	72	40	3.60	74,097	266,750	430,312	139,472	221,500
06-09-22	71.05	45.00	100.00	70.95	70.98	2,510,500	5,663,000	2.26	20	15	178,371,025	74	34	3.70	76,527	283,150	425,804	167,367	240,113
12-09-22	65.96	45.00	77.50	65.83	65.55	2,510,500	5,241,500	2.09	19	9	165,592,580	78	23	4.11	67,199	275,868	446,277	278,944	263,028
13-09-22	70.48	45.00	100.00	70.45	70.61	2,510,500	4,820,000	1.92	21	18	176,940,040	87	49	4.14	55,402	229,524	395,025	139,472	173,860
14-09-22	68.29	45.00	75.00	68.24	68.22	3,101,500	5,838,500	1.88	20	17	211,801,435	83	39	4.15	70,343	291,925	419,520	182,441	246,809
15-09-22	70.84	45.00	80.00	70.34	70.58	2,510,500	3,550,500	1.41	18	12	177,843,820	84	36	4.67	42,268	197,250	240,667	209,208	261,319
19-09-22	71.11	45.00	80.00	70.71	70.88	2,510,500	6,251,000	2.49	17	12	178,521,655	90	35	5.29	69,456	367,706	661,058	209,208	351,974
20-09-22	70.38	45.00	80.00	69.82	69.98	2,510,500	5,304,500	2.11	21	13	176,688,990	81	22	3.86	65,488	252,595	439,275	193,115	275,286
21-09-22	70.39	45.00	80.00	69.38	69.91	929,000	2,724,000	2.93	17	8	65,392,310	66	18	3.88	41,273	160,235	238,017	116,125	130,967
22-09-22	69.88	45.00	76.00	69.52	69.71	2,511,500	4,229,000	1.68	20	15	175,503,620	73	28	3.65	57,932	211,450	314,356	167,433	256,313
26-09-22	66.02	58.98	75.00	65.55	65.45	2,510,500	4,546,500	1.81	16	9	165,743,210	67	13	4.19	67,858	284,156	438,621	278,944	457,267
27-09-22	67.70	45.00	80.00	67.43	67.57	2,510,500	4,831,500	1.92	20	16	169,960,850	81	36	4.05	59,648	241,575	274,427	156,906	193,158
28-09-22	64.71	45.00	75.00	64.82	64.83	3,101,500	4,663,000	1.50	17	14	200,698,065	76	44	4.47	61,355	274,294	304,113	221,536	256,101
29-09-22	64.70	45.00	75.00	64.18	64.28	2,510,500	4,296,000	1.71	16	10	162,429,350	69	25	4.31	62,261	268,500	336,423	251,050	271,479

Aviation Allowances - July 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
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Aviation Allowances - August 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
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Aviation Allowances - September 2022																		
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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
07-09-22	69.06	45.00	72.00	68.84	69.76	600,000	634,000	1.06	6	6	41,436,000	23	22	3.83	27,565	105,667	96,965	100,000	96,334

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.