

Auctions by the *Common Auction Platform*

January, February, March 2024

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:

15, 16, 17(PL), 18, 22, 23, 25, 29, 30, 31(PL) January 2024;

1, 5, 6, 8, 12, 13, 14(PL), 15, 19, 20, 22, 26, 27, 28(PL), 29 February 2024;

4, 5, 7, 11, 12, 13(PL), 14, 18, 19, 21, 25, 26, 27(PL), 28 March 2024;

Aviation Allowances:

24 January 2024;

No auctions in February 2024;

20 March 2024;

Cancelled auctions:

No auctions in January 2024;

No auctions in February 2024;

No auctions in March 2024;

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 7 billion allowances allocated under the EU ETS have been auctioned. Auctioning of emission allowances at that scale is unprecedented and delivers valuable experience for auction design in other carbon markets and for other environmental assets.

Auctioning is the most transparent and efficient method of allocating allowances and puts into practice the principle that the polluter should pay.

The auctions are conducted pursuant to the modalities stipulated in the *Auctioning Regulation*. 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 29(6) 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 January, February, March 2024 auctions at a glance:

	General Allowances			Aviation Allowances		
	Jan	Feb	Mar	Jan	Feb	Mar
General						
Number of auctions	10	15	14	1	-	1
Total volume auctioned	29,416,000	44,913,500	41,819,000	906,000	-	906,000
Amount raised from the auctions (€)	1,810,670,875	2,482,957,180	2,412,987,625	56,172,000	-	52,457,400
Average Auction Clearing Price (€/allowance)	61.55	55.28	57.70	62.00	-	57.90
Total bid volume	48,676,000	73,215,500	67,513,000	1,674,000	-	1,537,000
Average Cover ratio	1.7	1.6	1.6	1.9	-	1.7
Monthly HHI	1,018	968	1,033	2,230	-	1,355
Participation						
Number of eligible bidders	102	104	105	102	104	105
Number of participating bidders ⁽¹⁾	34	37	37	13	-	14
Number of successful bidders ⁽¹⁾	32	34	34	11	-	14
Average number of bidders per auction	24.8	24.7	26.6	13.0	-	14.0

Average number of successful bidders per auction		18.1	19.3	18.6		11.0	-	14.0
Auction data								
Average total volume bid per bidder per auction		198,043	200,047	182,447		128,769	-	109,786
Average bid size (volume per bid)		50,386	48,433	47,146		28,373	-	25,197
Average volume won per bidder per auction		166,924	164,865	176,290		82,364	-	64,714
Average range of bids (€)		57.61	66.60	67.27		3.50	-	5.71
Cancelled Auctions		0	0	0		0	-	0

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

1. Results of the auctions

The total revenues from the auctions of general allowances accrued to the participating Member States, Poland and Northern Ireland from the start of the third trading period auctions (November 2012) to March 2024 are EUR 148,574,648,695, and of aviation allowances EUR 1,406,251,495. Looking exclusively at the fourth trading period (January 2021 - March 2024) the total revenues from the auctions of general allowances are EUR 99,490,913,340 and of aviation allowances EUR 925,863,155. 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

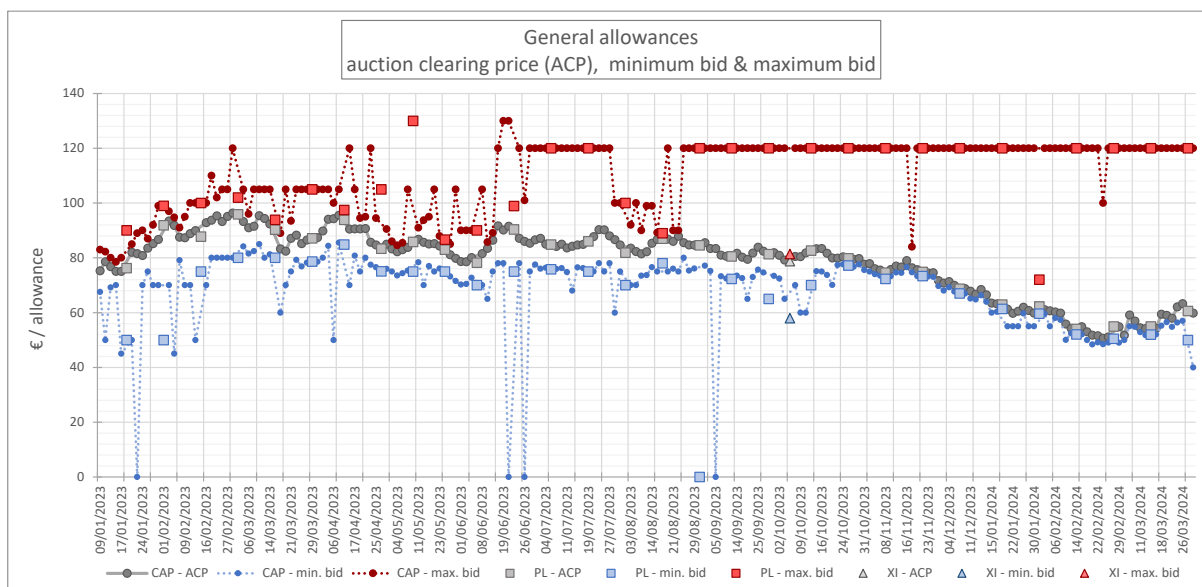
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ^[1]	Average number of bidders	Average number of successful bidders	Average auction clearing price (€) ^[2]
Mar 24	41,819,000	67,513,000	2,412,987,625	1.6	26.6	18.6	57.70
Feb 24	44,913,500	73,215,500	2,482,957,180	1.6	24.7	19.3	55.28
Jan 24	29,416,000	48,676,000	1,810,670,875	1.7	24.8	18.1	61.55
Dec 23	24,604,500	38,313,500	1,686,160,400	1.6	21.4	18.4	68.53
Nov 23	46,156,500	69,632,000	3,479,368,685	1.5	21.2	17.5	75.38
Oct 23	50,192,000	82,938,500	4,048,501,990	1.7	20.7	17.0	80.66
Sep 23	40,086,500	73,748,500	3,273,588,055	1.8	20.9	16.4	81.66
Aug 23	22,879,000	63,291,000	1,939,207,975	2.8	18.3	11.5	84.76
Jul 23	39,906,000	75,292,000	3,438,886,200	1.9	21.3	15.3	86.17
Jun 23	36,670,000	70,987,000	3,118,311,030	1.9	20.3	14.4	85.04

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

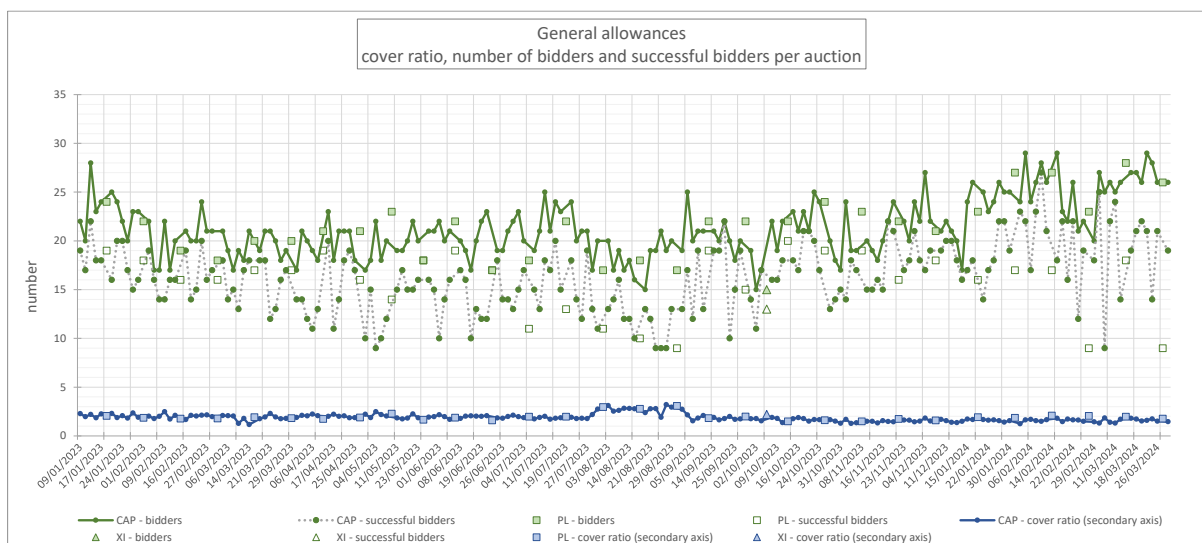
May 23	31,851,000	63,620,000	2,668,676,670	2.0	20.1	14.4	83.79
Apr 23	31,851,000	64,478,500	2,862,689,280	2.0	19.9	15.0	89.88
Mar 23	39,346,500	72,309,000	3,521,771,655	1.8	19.3	15.8	89.51
Feb 23	34,260,000	68,040,000	3,144,208,740	2.0	20.2	16.4	91.77
Jan 23	29,175,000	60,749,500	2,325,458,580	2.1	23.2	18.1	79.71
2023 total	426,978,000	803,399,500	35,506,829,260	1.9	20.6	15.9	83.16
2022 total	398,159,000	828,646,000	31,696,205,050	2.1	20.4	15.1	79.61
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

During January, February, March 2024, the difference between the Auction Clearing Prices and the mean of the best-ask and best-bid prices on the EEX spot secondary market for general allowances at the closure of the auction bidding window was on average EUR -0.07, -0.04, -0.02 respectively, and this difference had a standard deviation of EUR 0.16, 0.38, 0.42 respectively.

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

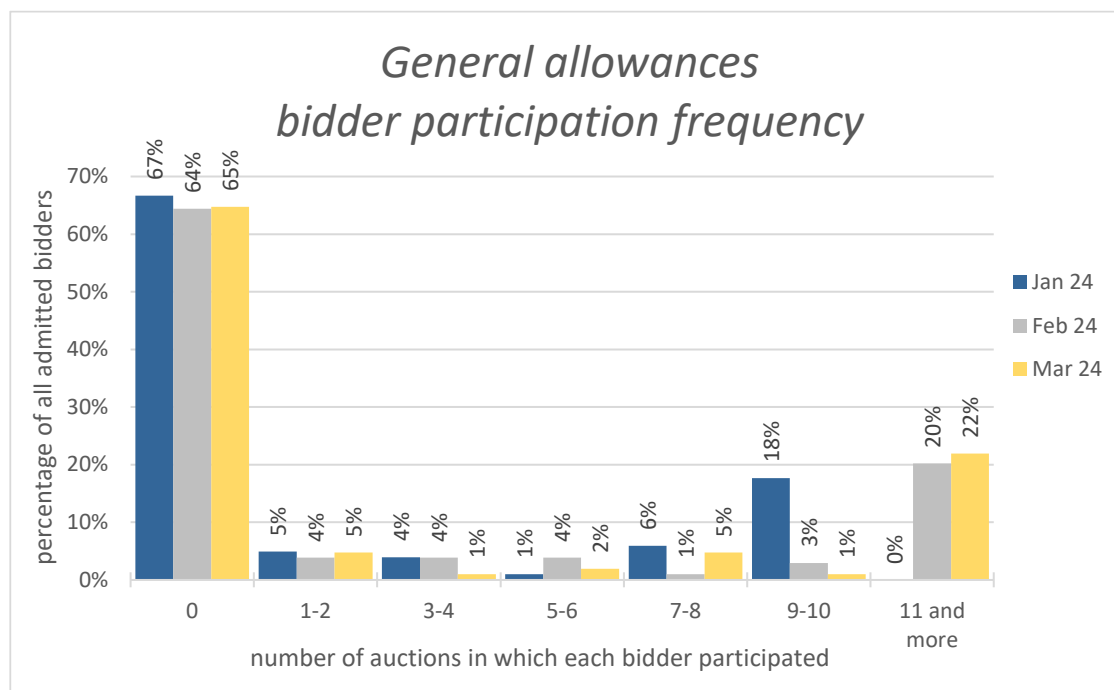


Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these 34, 37 and 37 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]
Mar 24	14	37	67,513,000	182,447	181,487	236,283	1,444	3.9	47,146
Feb 24	15	37	73,215,500	200,047	197,880	233,197	1,523	4.1	48,433
Jan 24	10	34	48,676,000	198,043	196,274	229,537	968	3.9	50,386
Dec 23	8	32	38,313,500	226,194	224,056	303,570	717	4.2	53,643
Nov 23	15	33	69,632,000	220,146	218,969	245,568	1,282	4.0	54,585
Oct 23	17	32	82,938,500	244,123	238,329	311,320	1,506	4.3	56,338
Sep 23	13	28	73,748,500	272,633	272,135	391,170	1,183	4.4	62,413
Aug 23	17	31	63,291,000	205,254	203,508	335,640	1,258	4.0	50,436
Jul 23	15	33	75,292,000	239,078	236,025	350,571	1,250	3.9	60,517
Jun 23	15	30	70,987,000	234,781	233,510	355,596	1,264	4.2	56,493
May 23	13	30	63,620,000	243,965	243,755	376,281	1,174	4.5	54,897
Apr 23	13	32	64,478,500	250,996	248,952	344,835	1,301	5.0	49,791
Mar 23	16	28	72,309,000	236,297	234,769	350,777	1,450	4.7	50,115
Feb 23	14	30	68,040,000	241,622	240,424	364,634	1,300	4.6	52,788
Jan 23	12	33	60,749,500	219,518	218,523	314,965	1,321	4.8	46,263

(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
Mar 24	14	34	41,819,000	176,290	162,089	235,928	503
Feb 24	15	34	44,913,500	164,865	157,040	218,262	514
Jan 24	10	32	29,416,000	166,924	163,422	222,609	303
Dec 23	8	27	24,604,500	168,543	167,378	285,837	261
Nov 23	15	31	46,156,500	179,458	176,170	229,769	518
Oct 23	17	29	50,192,000	183,013	175,497	224,251	616
Sep 23	13	27	40,086,500	197,289	188,200	297,163	449
Aug 23	17	26	22,879,000	120,052	116,730	177,980	327
Jul 23	15	29	39,906,000	178,830	173,504	212,177	437
Jun 23	15	25	36,670,000	175,945	170,558	242,356	472
May 23	13	26	31,851,000	176,424	170,326	268,674	465
Apr 23	13	30	31,851,000	171,999	164,180	210,176	560
Mar 23	16	24	39,346,500	158,032	155,520	231,259	777
Feb 23	14	27	34,260,000	150,878	148,957	239,198	600
Jan 23	12	29	29,175,000	135,948	134,447	195,200	583

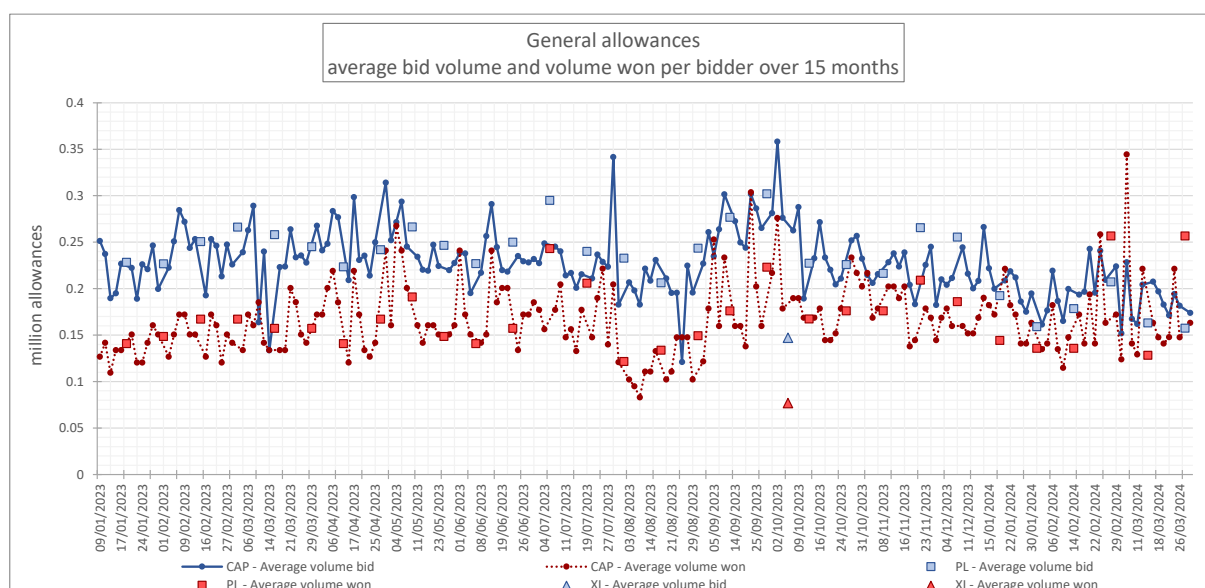
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[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

No successful bids for aviation allowances were submitted by intermediaries, the remaining successful bids were done on own account. The shares in the total successful bid volume per bidder category are indicated in Graph 5 and in Table 4.

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

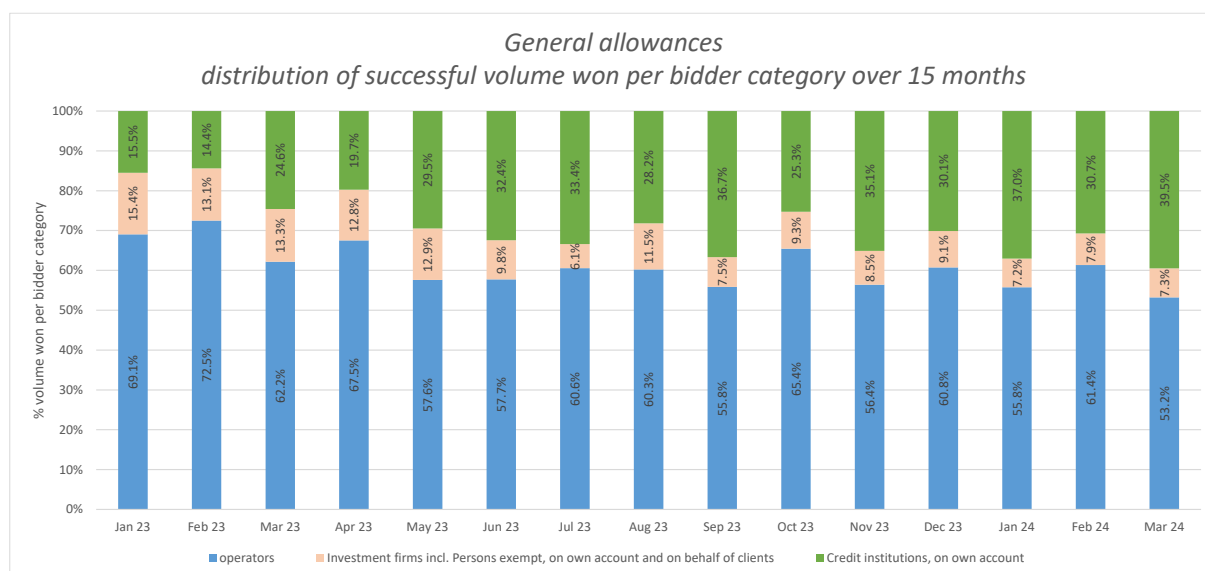


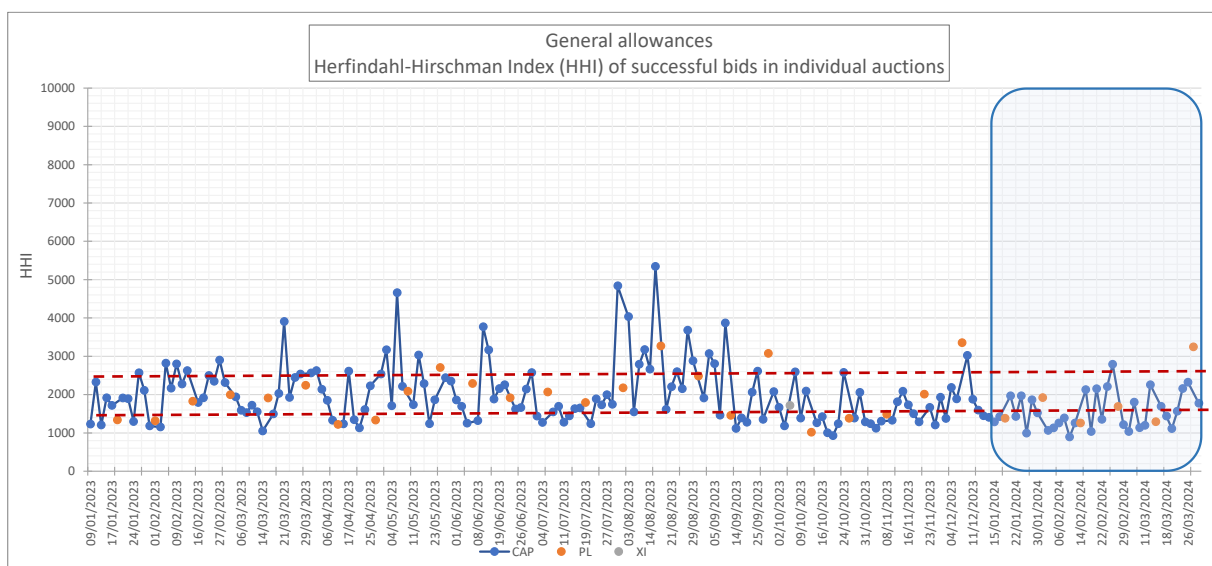
Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
Jan 24	0.00%	Operators (including Business groupings)	55.77%	12.7% points
		Investment firms (including persons exempt)	7.19%	2.9% points
		Credit institutions	37.04%	12.3% points
Feb 24	0.00%	Operators (including Business groupings)	61.37%	12.6% points
		Investment firms (including persons exempt)	7.93%	4.1% points
		Credit institutions	30.69%	13.5% points
Mar 24	0.00%	Operators (including Business groupings)	53.22%	12.9% points
		Investment firms (including persons exempt)	7.32%	4.3% points
		Credit institutions	39.46%	14.2% points

1.1.4. Concentration - general allowances

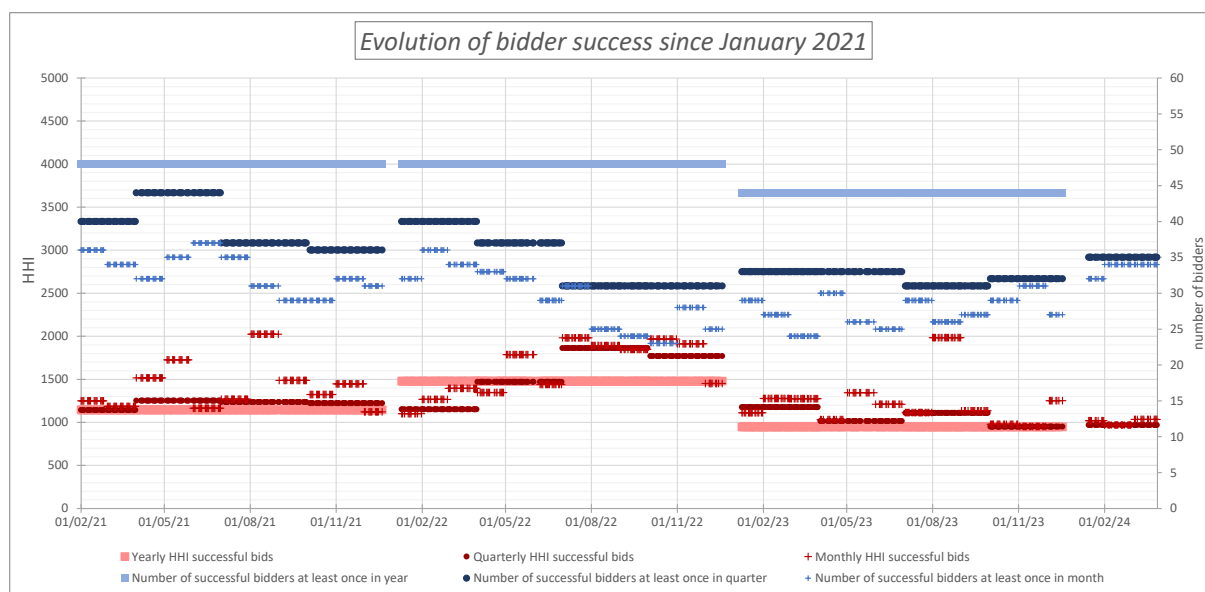
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration³. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 is 'moderately 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



³ 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 2014⁴. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014⁵; 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]
Mar 24	906,000	1,537,000	52,457,400	1.7	14.0	14.0	57.90
Feb 24	-	-	-	-	-	-	-
Jan 24	906,000	1,674,000	56,172,000	1.9	13.0	11.0	62.00
Dec 23	169,500	810,000	11,814,150	4.8	10.0	4.0	69.70
Nov 23	766,500	1,973,000	60,898,425	2.6	10.0	8.0	79.45
Oct 23	-	-	-	-	-	-	-
Sep 23	775,500	2,398,000	61,884,900	3.1	12.0	6.0	79.80
Aug 23	-	-	-	-	-	-	-
Jul 23	775,500	1,645,000	66,165,660	2.1	13.0	9.0	85.32
Jun 23	-	-	-	-	-	-	-
May 23	775,500	2,362,500	66,367,290	3.1	15.0	7.0	85.58
Apr 23	-	-	-	-	-	-	-
Mar 23	775,500	1,894,000	66,801,570	2.4	10.0	8.0	86.14
Feb 23	-	-	-	-	-	-	-

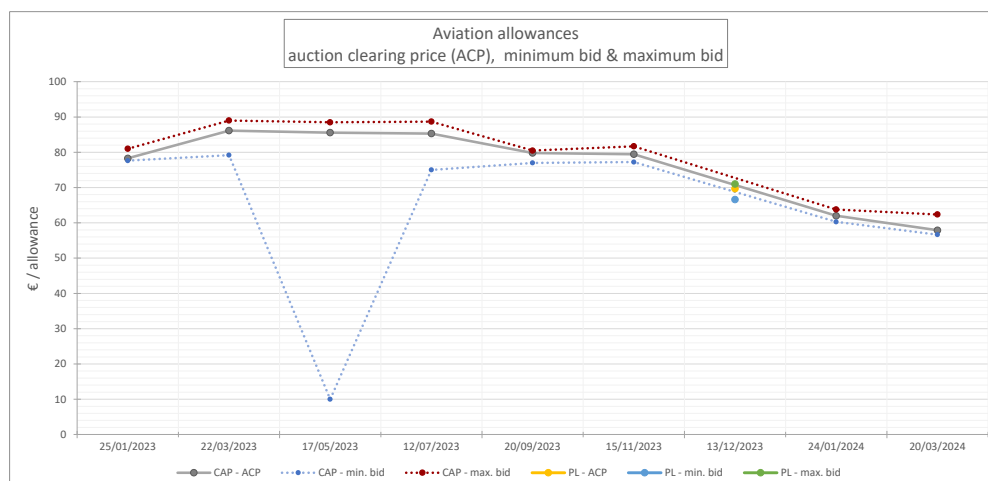
⁴ The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012: https://ec.europa.eu/clima/news-your-voice/news/auctions-2012-aviation-allowances-put-hold-2012-11-16_en

⁵ 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

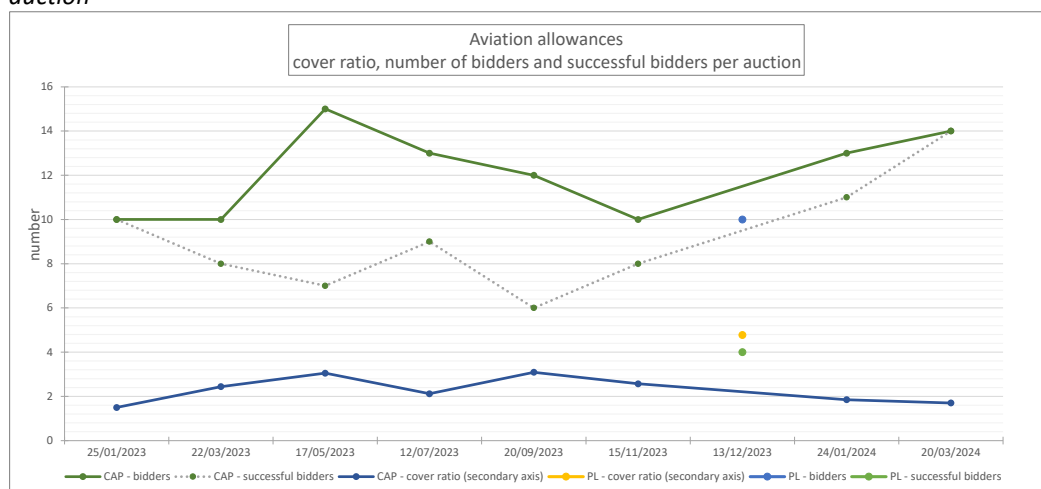
Jan 23	775,500	1,160,000	60,713,895	1.5	10.0	10.0	78.29
2023 total	4,813,500	12,242,500	394,645,890	2.8	11.4	7.4	81.99
2022 total	3,111,500	5,998,000	251,280,375	2.3	7.5	5.8	80.76
2021 total	3,185,500	7,463,000	171,307,490	2.6	6.5	4.5	53.78
2020 total	5,049,500	13,474,500	119,509,185	2.7	8.0	5.0	23.67
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

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

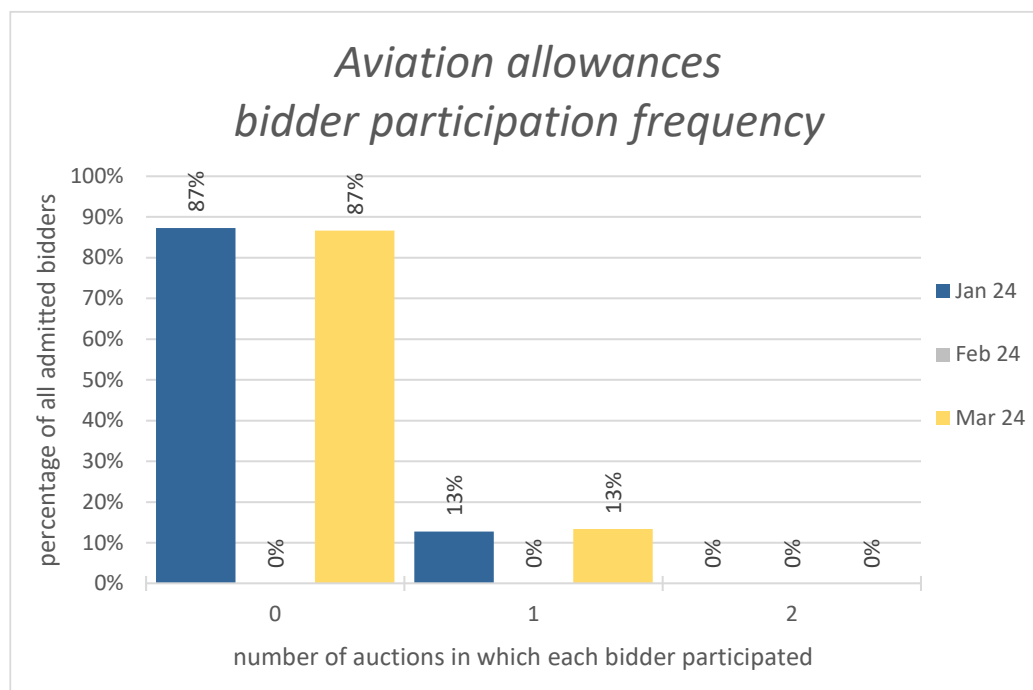
Graph 8: Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid



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 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]
Mar 24	1	14	1,537,000	109,786	109,786	94,304	61	4.4	25,197
Feb 24	-	-	-	-	-	-	-	-	-
Jan 24	1	13	1,674,000	128,769	128,769	119,421	59	4.5	28,373
Dec 23	1	10	810,000	81,000	81,000	42,811	40	4.0	20,250
Nov 23	1	10	1,973,000	197,300	197,300	208,808	60	6.0	32,883
Oct 23	-	-	-	-	-	-	-	-	-
Sep 23	1	12	2,398,000	199,833	199,833	216,624	63	5.3	38,063
Aug 23	-	-	-	-	-	-	-	-	-
Jul 23	1	13	1,645,000	126,538	126,538	193,424	48	3.7	34,271
Jun 23	-	-	-	-	-	-	-	-	-
May 23	1	15	2,362,500	157,500	157,500	193,106	58	3.9	40,733
Apr 23	-	-	-	-	-	-	-	-	-
Mar 23	1	10	1,894,000	189,400	189,400	228,597	54	5.4	35,074
Feb 23	-	-	-	-	-	-	-	-	-
Jan 23	1	10	1,160,000	116,000	116,000	108,312	38	3.8	30,526

(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
Mar 24	1	14	906,000	64,714	64,714	61,301	37
Feb 24	-	-	-	-	-	-	-
Jan 24	1	11	906,000	82,364	82,364	99,300	26
Dec 23	1	4	169,500	42,375	42,375	12,920	4
Nov 23	1	8	766,500	95,813	95,813	125,641	10
Oct 23	-	-	-	-	-	-	-
Sep 23	1	6	775,500	129,250	129,250	96,248	13
Aug 23	-	-	-	-	-	-	-
Jul 23	1	9	775,500	86,167	86,167	115,250	21
Jun 23	-	-	-	-	-	-	-
May 23	1	7	775,500	110,786	110,786	83,735	14
Apr 23	-	-	-	-	-	-	-
Mar 23	1	8	775,500	96,938	96,938	87,683	20
Feb 23	-	-	-	-	-	-	-
Jan 23	1	10	775,500	77,550	77,550	82,704	30

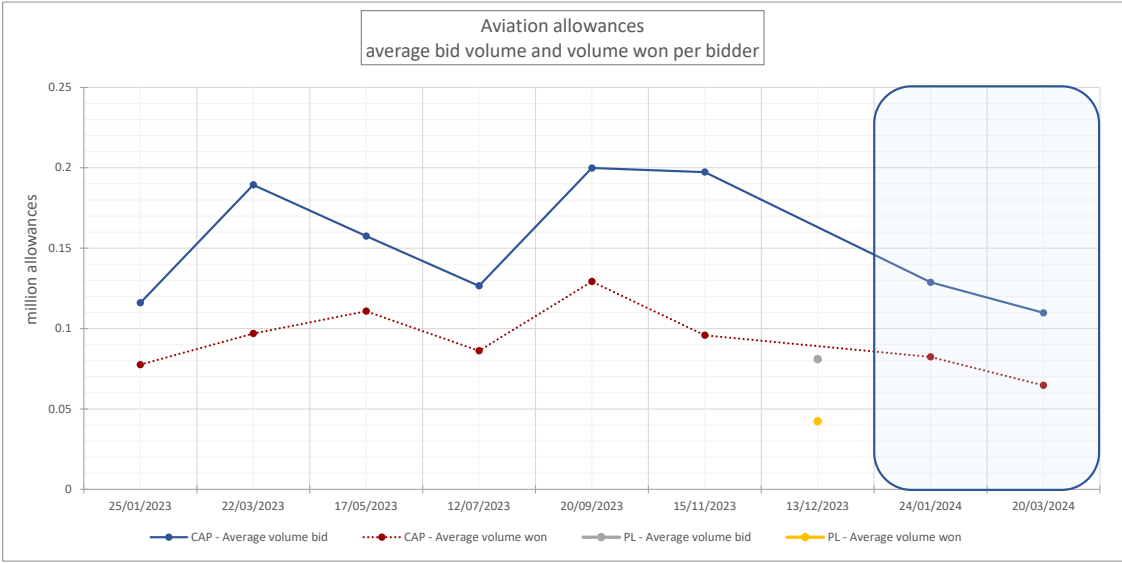
(1): Number of unique individual bidders or unique successful bidders present in a whole month.

[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



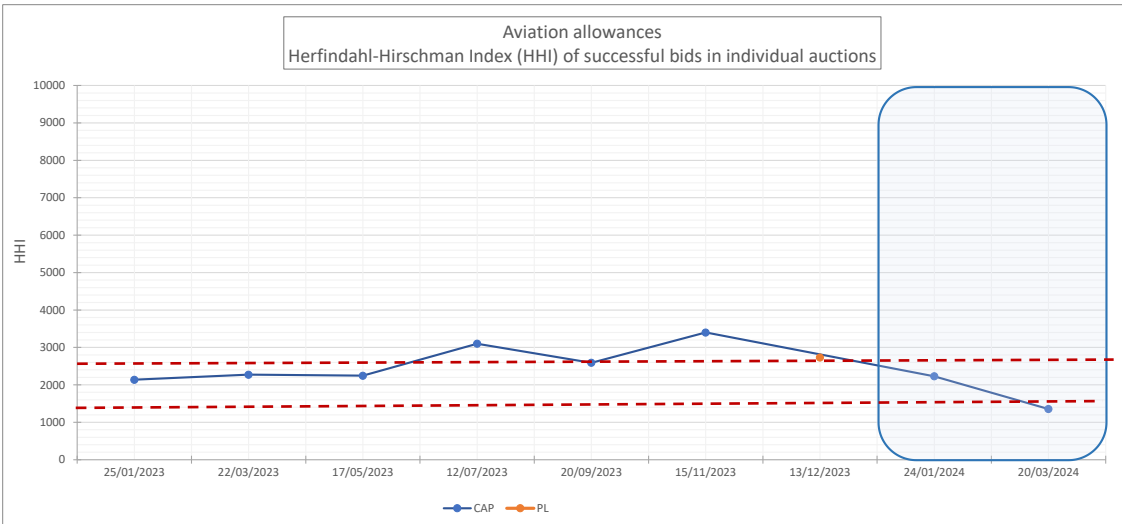
1.2.3 Type of bidders – aviation allowances

No bids for aviation allowances were submitted by intermediaries, 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 concentration⁶. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is ‘not-concentrated’, between 1 500 and 2 500 is ‘moderately concentrated,’ and above 2 500 is ‘highly concentrated’. Graph 12 indicates the HHI of the individual auctions.

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



⁶ The HHI is calculated as the sum of the squares of all successful bidders' shares (in percentage points) of the total auctioned volume over the period of interest.

Implementation of and compliance with the applicable rules

Fair and open access

EEX verified that each auction participant belonged to one of the categories of eligible bidders set out in Article 18 of the *Auctioning Regulation*. Table 9 presents the number of eligible bidders under each category in the reporting months.

Most of the active participants in the secondary carbon market are assumed to also have been admitted to bid in the auctions⁷.

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	Jan 24	-	-	-	-	-	-	188
	Feb 24	-	-	-	-	-	-	191
	Mar 24	-	-	-	-	-	-	191
Participants eligible to bid in the auctions	Jan 24	72	1	11	8	1	9	102
	Feb 24	74	1	11	8	1	9	104
	Mar 24	74	2	11	8	1	9	105
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Jan 24	-	-	3	2	-	1	6
	Feb 24	-	-	3	2	-	1	6
	Mar 24	-	-	3	2	-	1	6
(Of which:) Auction-only access	Jan 24	2	-	2	1	-	1	6
	Feb 24	2	-	2	1	-	1	6
	Mar 24	2	-	2	1	-	1	6

⁷ This assessment is based on the auction participants' activity in EEX's secondary market and general market knowledge of EEX.

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: 30/04/2024

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 12, 13 and 31 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 Delegated Regulation (EU) 2023/2830 of 17 October 2023 supplementing Directive 2003/87/EC of the European Parliament and of the Council by laying down rules on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances, <i>OJ L</i> , 2023/2830, 20.12.2023, ELI: http://data.europa.eu/eli/reg_del/2023/2830/oj .
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) 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(32) 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, extendable for a period of maximum 7 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 1 2024
(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	2,075,734,940	36,038,110	2,111,773,050
Belgium	3,709,019,345	46,931,730	3,755,951,075
Bulgaria	4,958,517,765	15,273,870	4,973,791,635
Croatia	777,779,400	11,288,405	789,067,805
Cyprus	402,242,805	14,900,420	417,143,225
Czech Republic	4,670,598,650	17,545,315	4,688,143,965
Denmark	1,914,081,270	42,909,390	1,956,990,660
Estonia	1,525,731,510	3,766,320	1,529,497,830
Finland	2,649,747,965	34,798,430	2,684,546,395
France	9,197,178,260	193,676,415	9,390,854,675
Greece	6,326,946,865	82,975,735	6,409,922,600
Hungary	2,275,500,700	15,821,955	2,291,322,655
Iceland	74,150,340	14,779,770	88,930,110
InnoFund RRF	2,228,749,490	-	2,228,749,490
Innovation Fund	8,975,914,080	-	8,975,914,080
Ireland	1,135,496,045	32,564,925	1,168,060,970
Italy	16,020,064,000	210,879,290	16,230,943,290
Latvia	432,739,170	8,695,710	441,434,880
Liechtenstein	2,244,630	-	2,244,630
Lithuania	687,427,255	6,331,750	693,759,005
Luxembourg	117,334,170	5,662,610	122,996,780
Malta	187,064,090	9,466,855	196,530,945
Modernisation Fund	16,109,299,645	-	16,109,299,645
MS RRF	1,761,276,535	-	1,761,276,535
The Netherlands	5,628,090,250	70,730,150	5,698,820,400
Northern Ireland	247,041,110	-	247,041,110
Norway	1,864,935,400	92,172,480	1,957,107,880
Poland	24,773,749,625	37,241,940	24,810,991,565
Portugal	3,188,372,420	58,242,010	3,246,614,430
Romania	4,805,687,035	28,684,345	4,834,371,380
Slovak Republic	2,138,611,815	2,777,655	2,141,389,470
Slovenia	815,501,035	2,144,700	817,645,735
Spain	15,466,962,835	250,189,865	15,717,152,700
Sweden	1,430,858,245	59,761,345	1,490,619,590
TOTAL	148,574,648,695	1,406,251,495	149,980,900,190

Annex 1b Auction revenues per Member State and for Poland from January 2021 to the end of Quarter 1 2024

(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	1,172,211,820	23,515,945	1,195,727,765
Belgium	2,023,841,045	31,916,115	2,055,757,160
Bulgaria	3,257,340,890	10,674,575	3,268,015,465
Croatia	429,863,340	8,501,035	438,364,375
Cyprus	306,171,180	7,768,690	313,939,870
Czech Republic	2,176,936,310	11,330,070	2,188,266,380
Denmark	1,103,966,870	28,709,345	1,132,676,215
Estonia	991,446,605	2,976,375	994,422,980
Finland	1,564,496,255	23,738,925	1,588,235,180
France	5,643,365,730	125,025,950	5,768,391,680
Greece	3,977,626,700	57,838,730	4,035,465,430
Hungary	1,273,565,315	10,760,365	1,284,325,680
Iceland	13,958,195	10,091,375	24,049,570
InnoFund RRF	2,228,749,490	-	2,228,749,490
Innovation Fund	7,642,091,075	-	7,642,091,075
Ireland	531,015,310	21,369,380	552,384,690
Italy	9,729,657,855	136,244,005	9,865,901,860
Latvia	244,541,515	5,996,235	250,537,750
Liechtenstein	932,365	-	932,365
Lithuania	316,464,175	4,909,260	321,373,435
Luxembourg	36,973,125	3,953,135	40,926,260
Malta	117,283,175	6,620,965	123,904,140
Modernisation Fund	16,109,299,645	-	16,109,299,645
MS RRF	1,761,276,535	-	1,761,276,535
The Netherlands	3,453,999,970	47,551,350	3,501,551,320
Northern Ireland	247,041,110	-	247,041,110
Norway	667,580,465	46,737,230	714,317,695
Poland	16,769,640,855	26,330,445	16,795,971,300
Portugal	1,999,851,125	43,074,965	2,042,926,090
Romania	1,631,350,760	20,685,700	1,652,036,460
Slovak Republic	1,054,741,740	1,790,880	1,056,532,620
Slovenia	513,420,500	1,438,850	514,859,350
Spain	9,663,242,790	165,063,565	9,828,306,355
Sweden	836,969,505	41,249,695	878,219,200
TOTAL	99,490,913,340	925,863,155	100,416,776,495

Annex 2 Results of individual auctions on behalf of *participating Member States* and Poland in January, February, March 2024

(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 - January 2024																			
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
15/01/2024	63.50	60.00	120.00	64.25	62.96	3,099,500	5,324,000	1.72	24	17	196,818,250	106	30	4.42	50,226	221,833	223,655	182,324	198,819
16/01/2024	63.20	60.28	120.00	63.45	62.69	3,099,500	5,198,000	1.68	26	18	195,888,400	104	26	4.00	49,981	199,923	214,911	172,194	215,000
17/01/2024	62.96	61.32	120.00	63.87	62.66	2,310,000	4,431,000	1.92	23	16	145,437,600	80	24	3.48	55,388	192,652	169,007	144,375	158,958
18/01/2024	61.28	55.00	120.00	61.88	60.84	3,099,500	5,220,000	1.68	25	14	189,937,360	93	20	3.72	56,129	208,800	271,090	221,393	293,005
22/01/2024	59.74	55.00	120.00	60.80	59.39	3,099,500	5,031,000	1.62	23	17	185,164,130	99	26	4.30	50,818	218,739	224,324	182,324	218,000
23/01/2024	60.55	55.00	120.00	61.17	60.25	3,099,500	5,086,500	1.64	24	18	187,674,725	93	27	3.88	54,694	211,938	287,575	172,194	274,725
25/01/2024	61.95	59.72	120.00	62.70	61.72	3,099,500	4,840,000	1.56	26	22	192,014,025	105	37	4.04	46,095	186,154	190,052	140,886	153,366
29/01/2024	60.81	55.00	120.00	62.88	60.83	3,099,500	4,379,500	1.41	25	22	188,480,595	98	53	3.92	44,689	175,180	250,419	140,886	248,061
30/01/2024	59.82	55.00	120.00	61.26	59.62	3,099,500	4,870,500	1.57	25	19	185,412,090	100	36	4.00	48,705	194,820	234,851	163,132	224,521
31/01/2024	62.27	59.59	72.00	62.10	61.78	2,310,000	4,295,500	1.86	27	17	143,843,700	90	24	3.33	47,728	159,093	197,580	135,882	204,534

General Allowances - February 2024																			
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
01/02/2024	61.09	59.55	120.00	63.16	61.50	3,099,500	3,874,000	1.25	24	23	189,348,455	93	69	3.88	41,656	161,417	176,200	134,761	162,123
05/02/2024	60.68	55.00	120.00	61.18	60.41	3,099,500	5,122,000	1.65	29	22	188,077,660	112	35	3.86	45,732	176,621	199,038	140,886	172,035
06/02/2024	60.25	58.01	120.00	61.63	60.00	3,099,500	5,260,500	1.70	24	17	186,744,875	96	24	4.00	54,797	219,188	217,695	182,324	194,407
08/02/2024	59.85	57.36	120.00	60.68	59.67	3,099,500	4,854,000	1.57	26	23	185,505,075	107	37	4.12	45,364	186,692	220,042	134,761	199,787
12/02/2024	55.84	50.07	120.00	57.41	55.84	3,099,500	4,626,000	1.49	28	27	173,076,080	116	58	4.14	39,879	165,214	173,787	114,796	136,753
13/02/2024	54.24	52.48	120.00	55.54	53.95	3,099,500	5,189,000	1.67	26	21	168,116,880	114	34	4.38	45,518	199,577	207,037	147,595	189,203
14/02/2024	54.07	52.03	120.00	54.34	53.57	2,310,000	4,822,500	2.09	27	17	124,901,700	112	23	4.15	43,058	178,611	171,567	135,882	144,747
15/02/2024	54.87	52.06	120.00	55.30	54.40	3,099,500	5,614,500	1.81	29	18	170,069,565	103	27	3.55	54,510	193,603	266,539	172,194	289,718
19/02/2024	53.00	50.00	120.00	53.89	52.90	3,099,500	4,520,000	1.46	23	22	164,273,500	92	41	4.00	49,130	196,522	192,074	140,886	159,502
20/02/2024	51.80	48.36	120.00	52.44	51.32	3,099,500	5,340,000	1.72	22	16	160,554,100	92	24	4.18	58,043	242,727	313,154	193,719	302,882
22/02/2024	51.55	49.12	120.00	52.23	51.15	3,099,500	5,084,000	1.64	26	22	159,779,225	106	30	4.08	47,962	195,538	222,864	140,886	198,235
26/02/2024	50.65	48.46	100.00	50.95	50.20	3,099,500	5,055,500	1.63	21	12	156,989,675	89	17	4.24	56,803	240,738	325,371	258,292	332,008
27/02/2024	51.12	49.08	120.00	51.95	51.03	3,099,500	4,607,000	1.49	22	19	158,446,440	102	40	4.64	45,167	209,409	342,305	163,132	338,421
28/02/2024	54.94	50.46	120.00	56.09	53.75	2,310,000	4,768,000	2.06	23	9	126,911,400	96	13	4.17	49,667	207,304	195,322	256,667	184,960
29/02/2024	54.90	49.00	120.00	55.85	54.85	3,099,500	4,478,500	1.44	20	18	170,162,550	93	42	4.65	48,156	223,925	204,753	172,194	187,744

General Allowances - March 2024																			
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
04/03/2024	51.76	49.99	120.00	53.72	52.00	3,099,500	4,100,500	1.32	27	25	160,430,120	107	71	3.96	38,322	151,870	179,907	123,980	156,379
05/03/2024	59.14	55.01	120.00	60.01	57.66	3,099,500	5,711,500	1.84	25	9	183,304,430	100	16	4.00	57,115	228,460	249,683	344,389	271,533
07/03/2024	56.94	54.83	120.00	57.76	57.03	3,099,500	4,351,000	1.40	26	22	176,485,530	94	55	3.62	46,287	167,346	185,485	140,886	172,423
11/03/2024	54.43	52.88	120.00	55.39	54.49	3,099,500	4,050,500	1.31	25	24	168,705,785	104	57	4.16	38,947	162,020	196,662	129,146	176,609
12/03/2024	54.21	51.76	120.00	54.16	53.54	3,099,500	5,310,500	1.71	26	14	168,023,895	121	24	4.65	43,888	204,250	286,380	221,393	325,292
13/03/2024	54.92	51.94	120.00	55.13	54.48	2,310,000	4,569,500	1.98	28	18	126,865,200	121	29	4.32	37,764	163,196	171,198	128,333	147,666
14/03/2024	54.25	52.01	120.00	54.47	53.72	3,099,500	5,603,500	1.81	27	19	168,147,875	118	24	4.37	47,487	207,537	268,907	163,132	242,785
18/03/2024	59.42	55.20	120.00	60.49	59.13	3,099,500	5,318,000	1.72	27	21	184,172,290	104	31	3.85	51,135	196,963	236,764	147,595	209,680
19/03/2024	59.00	56.50	120.00	59.86	58.91	3,099,500	4,753,500	1.53	26	22	182,870,500	100	46	3.85	47,535	182,827	182,475	140,886	169,119
21/03/2024	58.00	54.80	120.00	58.61	57.77	3,104,500	4,966,500	1.60	29	21	180,061,000	100	35	3.45	49,665	171,259	232,653	147,833	223,512
25/03/2024	62.09	56.35	120.00	62.24	61.55	3,099,500	5,437,000	1.75	28	14	192,447,955	104	23	3.71	52,279	194,179	281,655	221,393	314,619
26/03/2024	63.25	56.99	120.00	63.99	63.16	3,099,500	4,721,500	1.52	26	21	196,043,375	94	39	3.62	50,229	181,596	286,576	147,595	290,498
27/03/2024	60.56	50.00	120.00	60.55	59.62	2,310,000	4,096,000	1.77	26	9	139,893,600	84	19	3.23	48,762	157,538	246,936	256,667	355,533
28/03/2024	59.86	40.00	120.00	61.10	59.66	3,099,500	4,523,500	1.46	26	19	185,536,070	93	34	3.58	48,640	173,981	241,256	163,132	251,131

Aviation Allowances - January 2024																			
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
24/01/2024	62.00	60.28	63.78	61.85	61.90	906,000	1,674,000	1.85	13	11	56,172,000	59	26	4.54	28,373	128,769	119,421	82,364	99,300

Aviation Allowances - February 2024																			
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 - March 2024																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
20/03/2024	57.90	56.66	62.37	58.13	58.01	906,000	1,537,000	1.70	14	14	52,457,400	61	37	4.36	25,197	109,786	94,304	64,714	61,301

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.