

Auctions by the *Common Auction Platform*

April, May, June 2020

Auction platform: European Energy Exchange (EEX)

Member States: This report has been prepared on behalf of the following Member States participating in the joint action: Austria, Belgium, Bulgaria, Republic of Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden (participating Member States), and Poland.

Auction dates/reporting period:

General Allowances:

2, 6, 7, 8(PL)¹, 9, 14, 16, 20, 21, 22(PL), 23, 27, 28, 30 April 2020;

5, 6(PL), 7, 11, 12, 14, 18, 19, 20(PL), 26, 28 May 2020;

2, 3(PL), 4, 8, 9, 11, 15, 16, 17(PL), 18, 22, 23, 25, 29, 30 June 2020;

Aviation Allowances:

8 (PL) April 2020;

6 May 2020.

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

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

The auctions are conducted pursuant to the modalities stipulated in the *Auctioning Regulation*. Two auction platforms are in place. The European Energy Exchange (EEX) in Leipzig is the common platform for the large majority of countries participating in the EU ETS. EEX also acts as Germany's auction platform. The second auction platform is ICE Futures Europe (ICE) in London, which acts as the United Kingdom's platform. Poland may appoint an opt-out auction platform but is using for the time being the common auction platform.

The numbers of *General Allowances* to be auctioned by each State on behalf of which they are auctioned are determined on the basis of their historical share of emissions from installations covered by the EU ETS, taking into account the free allocation volumes. Up to 2020 ten per cent are allocated to the least wealthy EU Member States and the remaining two per cent is given as a 'Kyoto bonus' to nine EU Member States, which by 2005 had reduced their greenhouse gas emissions by at least 20% of levels in their Kyoto Protocol base year or period.

¹ Auctions conducted by EEX for Poland.

At least half of auctioning revenues, or the equivalent in financial value, and all of the revenues from auctioning allowances to the aviation sector, should be used by the Member States to combat climate change in Europe or other countries.

For further information: http://ec.europa.eu/clima/policies/ets/cap/auctioning/index_en.htm

Editor's note:

This report has been prepared by the Commission on behalf of the participating Member States and Poland assembling for publication the information provided by the common auction platform on a monthly basis for those Member States, in accordance with Article 10(4) of the ETS Directive.

Methodology: For reasons of confidentiality and proper enforcement of the applicable rules, the report refers to reporting on the auctions held based on information provided by EEX. 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).

In accordance with the second subparagraph of Article 30(7) of the *Auctioning Regulation*, pending the procurement, appointment and listing of its opt-out auction platform, Poland contracted EEX to auction its share of allowances to be auctioned. These auctions were held on the Transitional Common Auction Platform between 16 September 2013 and 18 August 2016². Auctioning by CAP2 for Poland started as from 19 March 2017 following the conclusion of a bilateral agreement between EEX and Poland.

The States member of the European Free Trade Association (EFTA) that are Party to the European Economic Area (EEA)³ 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*.

² Due to the back-loading, no auctions were held for Poland from May to December 2014, the auctions restarted in January 2015. Due to transition between common auction platforms, no auctions were held for Poland between September 2016 and mid-March 2017.

³ Iceland, Liechtenstein and Norway.

Executive summary

In the reporting period, EEX, in its capacity as the *Common Auction Platform (CAP2)*, conducted auctions of *general allowances* and *aviation allowances* for the *third trading period* on behalf of the *participating Member States*. During this period, EEX held auctions for *general allowances* and *aviation allowances* on behalf of Poland.

All auctions were held successfully, in line with the Auctioning Regulation. No irregularities or deviations from the requirements were observed. The table below contains a summary of the information concerning the conducted auctions.

The April, May, June 2020 auctions at a glance:

	General Allowances			Aviation Allowances		
	Apr	May	Jun	Apr	May	Jun
General						
Number of auctions	14	11	15	1	1	-
Total volume auctioned	43 271 000	35 117 000	45 985 000	105 500	810 500	-
Amount raised from the auctions (€)	866 904 870	684 921 430	1 062 777 700	2 188 070	14 386 375	-
Average Auction Clearing Price (€/allowance)	20.03	19.50	23.11	20.74	17.75	-
Total bid volume	76 593 500	56 002 000	73 944 000	422 000	1 729 500	-
Average Cover ratio	1.8	1.6	1.6	4.0	2.1	-
Monthly HHI	1 024	1 220	1 168	3 363	3 275	-
Participation						
Number of eligible bidders	89	91	90	89	91	-
Number of participating bidders ⁽¹⁾	32	29	29	7	6	-
Number of successful bidders ⁽¹⁾	30	26	28	4	4	-
Average number of bidders per auction	21.5	21.9	20.6	7.0	6.0	-
Average number of successful bidders per auction	15.9	15.6	14.3	4.0	4.0	-
Auction data						
Average total volume bid per bidder per auction	274 245	257 521	253 535	60 286	288 250	-
Average bid size (volume per bid)	75 611	77 226	88 162	21 100	101 735	-
Average volume won per bidder per auction	213 328	245 553	237 237	26 375	202 625	-
Average range of bids (€)	3.96	6.13	3.58	11.00	4.70	-

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

1. Results of the auctions

The total revenues from the auctions of *general allowances* accrued to the *participating Member States* and Poland from the start of the *Third trading period* auctions (November 2012) to June 2020 are EUR 40 952 676 585, and of *aviation allowances* EUR 416 090 135. 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 website⁴.

⁴ <https://www.eex.com/en/products/environmental-markets/emissions-auctions/overview>

1.1. General allowances auctions

1.1.1. Clearing prices and participation - general allowances

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

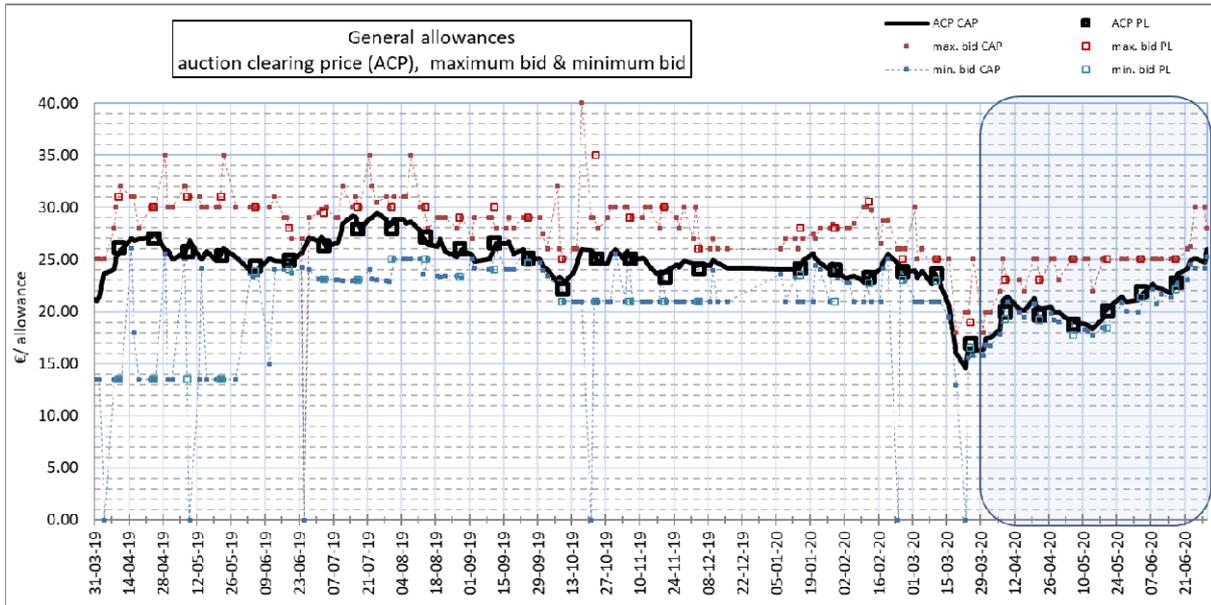
Table 1: General allowances - main statistics on the results of the auctions per month

Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ⁵	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
June 2020	45 985 000	73 944 000	1 062 777 700	1.6	20.6	14.3	23.11
May 2020	35 117 000	56 002 000	684 921 430	1.6	21.9	15.6	19.50
April 2020	43 271 000	76 593 500	866 904 870	1.8	21.5	15.9	20.03
March 2020	48 709 000	92 013 000	960 193 830	1.9	22.1	16.8	19.71
February 2020	43 274 000	95 448 000	1 030 723 300	2.2	25.4	17.8	23.82
January 2020	40 556 500	72 943 000	986 511 155	1.8	26.5	20.3	24.32
December 2019	24 194 500	45 831 000	591 458 800	1.9	21.4	14.4	24.45
November 2019	42 357 000	72 818 000	1 037 136 940	1.7	22.1	16.7	24.49
October 2019	47 850 500	86 964 500	1 166 555 660	1.8	23.2	15.6	24.38
September 2019	42 363 000	74 616 500	1 089 560 710	1.8	22.7	15.9	25.72
August 2019	21 197 000	53 781 500	573 418 415	2.5	24.4	16.6	27.05
July 2019	54 221 000	109 326 500	1 509 916 775	2.0	24.7	18.1	27.85
June 2019	37 305 500	66 210 500	929 466 145	1.8	24.5	17.4	24.91
May 2019	33 807 000	67 074 000	862 703 470	2.0	24.9	18.5	25.52
April 2019	41 292 000	80 075 000	1 054 762 705	1.9	21.6	14.7	25.54
2019 total	460 978 500	906 546 500	11 357 236 835	2.0	24.1	17.2	24.64
2018 total	642 477 000	1 662 693 000	9 917 590 730	2.6	25.6	18.0	15.44
2017 total	648 415 500	1 761 212 000	3 744 838 845	2.7	21.2	14.6	5.78
2016 total	474 261 000	1 092 400 000	2 496 870 295	2.3	19.0	13.4	5.26
2015 total	413 874 000	1 337 010 500	3 154 940 925	3.2	18.3	13.3	7.62
2014 total	335 052 000	1 796 711 000	1 977 712 120	5.4	17.6	11.9	5.90
2013 total	530 488 000	1 761 639 500	2 349 853 340	3.3	18.4	13.2	4.43

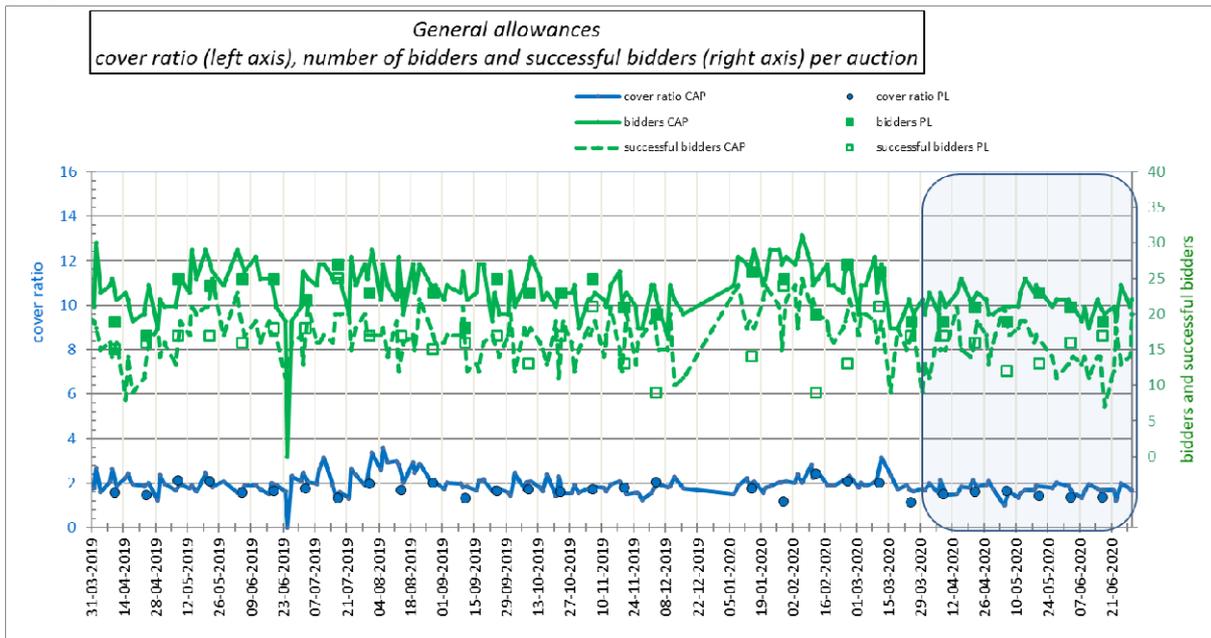
During April, May, June 2020, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for *general allowances* at the closure of the auction *bidding window* was on average EUR 0.00, - 0.05, 0.02 respectively, and this difference had a standard deviation of EUR 0.08, 0.15, 0.15 respectively.

⁵ Cover ratio is the ratio between the total bid volume and the auction volume.

Graph 1: General allowances - auction clearing price (ACP), maximum bid & minimum bid⁶



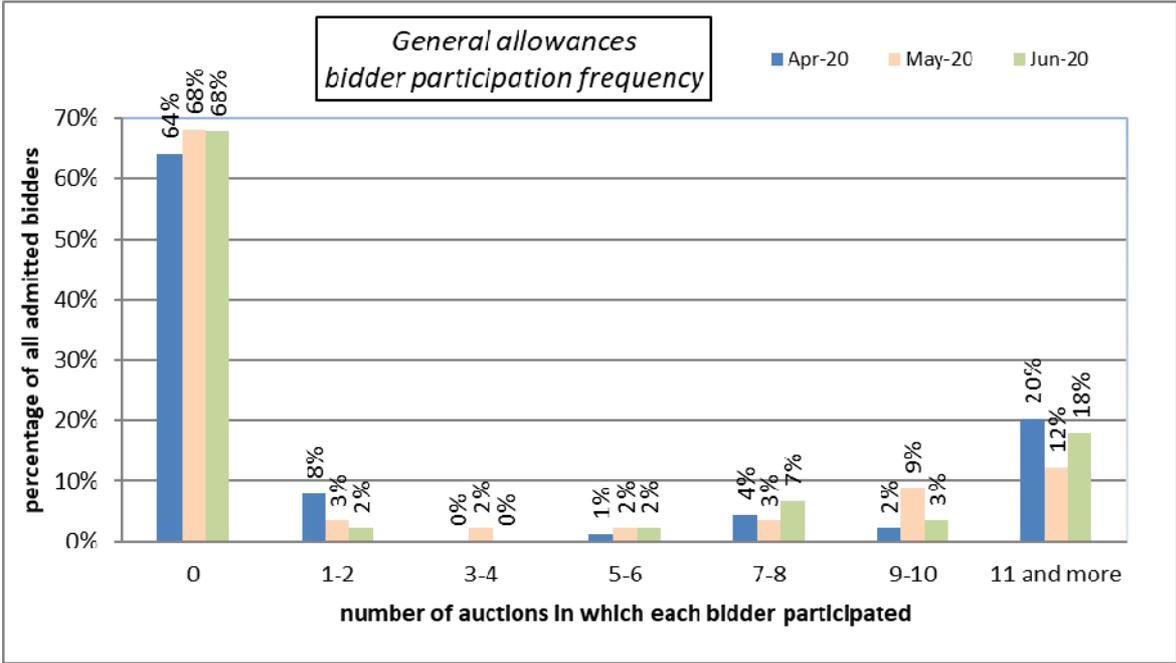
Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these 32, 29 and 29 different bidders participated in the auctions in respectively in April, May, June 2020. Graph 3 indicates the participation frequency over these months.

⁶ Auctions on behalf of Poland were held on the following days: 10/4/2019, 24/4/2019, 8/5/2019, 22/5/2019, 5/6/2019, 19/6/2019, 3/7/2019, 17/7/2019, 31/7/2019, 14/8/2019, 28/8/2019, 11/9/2019, 25/9/2019, 9/10/2019, 23/10/2019, 6/11/2019, 20/11/2019, 4/12/2019, 15/1/2020, 29/1/2020, 12/2/2020, 26/2/2020, 11/3/2020, 25/3/2020, 8/4/2020, 22/4/2020, 6/5/2020, 20/5/2020, 3/6/2020, 17/6/2020.

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 ⁷	Average total volume bid per bidder per auction over the month ⁸	standard deviation of total volume bid per bidder per auction over the month ⁹	Total monthly nr of bids	Average nr. of bids per bidder per auction ¹⁰	Average bid size ¹¹
June 2020	15	29	73 944 000	253 535	237 762	338 289	877	2.8	88 162
May 2020	11	29	56 002 000	257 521	230 461	340 214	751	3.1	77 226
April 2020	14	32	76 593 500	274 245	251 952	292 851	1 052	3.5	75 611
March 2020	15	35	92 013 000	289 186	277 148	384 788	1 139	3.4	86 054
February 2020	14	41	95 448 000	303 101	265 133	420 541	1 454	4.1	70 987
January 2020	13	37	72 943 000	223 330	210 210	290 750	1 266	3.7	61 347
December 2019	8	33	45 831 000	289 107	266 459	443 330	744	4.3	64 230
November 2019	14	35	72 818 000	247 825	236 422	347 222	1 254	4.1	59 514
October 2019	16	37	86 964 500	244 505	233 776	367 655	1 419	3.8	62 856
September 2019	14	39	74 616 500	244 214	233 908	350 009	1 152	3.6	66 033
August 2019	14	37	53 781 500	158 458	156 797	236 796	1 150	3.4	47 633
July 2019	17	38	109 326 500	268 249	259 683	489 432	1 446	3.4	75 903
June 2019	12	39	66 210 500	239 687	224 442	362 906	939	3.2	73 349
May 2019	12	36	67 074 000	242 995	223 580	331 705	1 064	3.6	65 957
April 2019	15	37	80 075 000	258 784	243 389	312 826	1 156	3.5	71 640

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

⁷ Monthly weighted average of the average bid volume per bidder in each auction (total bid volume in each auction divided by number of bidders participating in that auction), weighted by volume auctioned in each auction.

⁸ Average over the whole month of the volume bid by bidders each time they are present in an auction (computed as total volume bid for the month / sum over whole month of number of bidders present in each auction).

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

¹⁰ Monthly simple average of the average number of bids per bidder in each auction (total number of bids in each auction divided by number of bidders participating in that auction).

¹¹ Monthly weighted average of the average bid size per bidder in each auction (total bid volume in each auction divided by number of bids in that auction), weighted by volume auctioned in each auction.

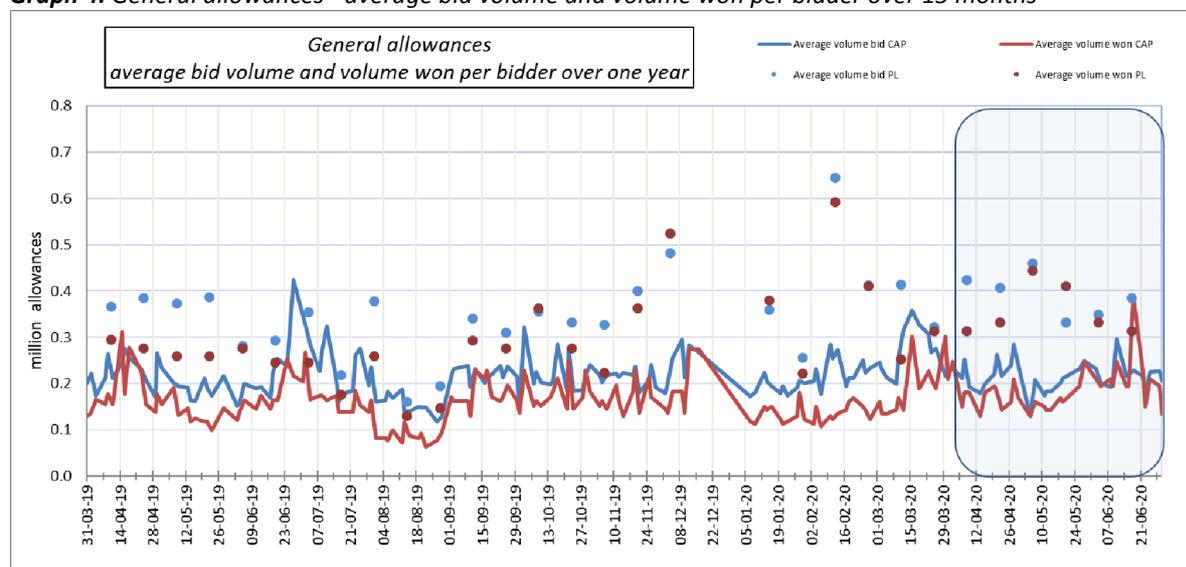
Table 3 provides monthly data on successful bids over 15 months. See also Graph 4.

Table 3: General Allowances - monthly statistics on successful bids

Month	Nr of auctions	Nr of successful bidders ⁽¹⁾	Total auction volume	Average volume won per bidder per auction ¹²	Average volume won per bidder per auction over the month ¹³	Standard deviation of volume won per bidder per auction over the month ¹⁴	Total monthly nr of successful bids
June 2020	15	28	45 985 000	237 237	218 976	301 271	368
May 2020	11	26	35 117 000	245 553	198 401	321 182	325
April 2020	14	30	43 271 000	213 328	194 914	254 656	368
March 2020	15	32	48 709 000	213 914	197 202	233 879	455
February 2020	14	37	43 274 000	227 273	164 540	239 696	533
January 2020	13	36	40 556 500	177 466	151 897	196 407	536
December 2019	8	31	24 194 500	256 429	203 315	292 584	238
November 2019	14	31	42 357 000	197 454	181 790	248 526	452
October 2019	16	36	47 850 500	207 552	190 639	271 944	446
September 2019	14	33	42 363 000	203 307	191 688	285 320	390
August 2019	14	33	21 197 000	96 530	90 974	125 087	326
July 2019	17	35	54 221 000	185 658	177 193	273 721	608
June 2019	12	34	37 305 500	191 381	178 495	268 648	353
May 2019	12	34	33 807 000	168 151	150 924	206 238	402
April 2019	15	34	41 292 000	205 955	188 548	244 195	431

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

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



¹² Monthly weighted average of the average volume won per bidder in each auction (total volume won in each auction divided by the number of successful bidders in that auction), weighted by volume auctioned in each auction.

¹³ Average over the whole month of the volume won per bidder each time they are successful in an auction (computed as total volume auctioned for the month / sum over whole month of number of bidders successful in each auction).

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

¹⁵ Auctions on behalf of Poland were held on the following days: 10/4/2019, 24/4/2019, 8/5/2019, 22/5/2019, 5/6/2019, 19/6/2019, 3/7/2019, 17/7/2019, 31/7/2019, 14/8/2019, 28/8/2019, 11/9/2019, 25/9/2019, 9/10/2019, 23/10/2019, 6/11/2019, 20/11/2019, 4/12/2019, 15/01/2020, 29/01/2020, 12/02/2020, 26/02/2020, 11/03/2020, 25/03/2020, 8/04/2020, 22/04/2020, 6/05/2020, 20/05/2020, 3/06/2020, 17/06/2020.

1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client¹⁶ in April, May, June 2020 was 0%, the remaining volume bid was done on own account. The shares in the total successful bid volume per bidder category are indicated in Graph 5 and in Table 4.

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

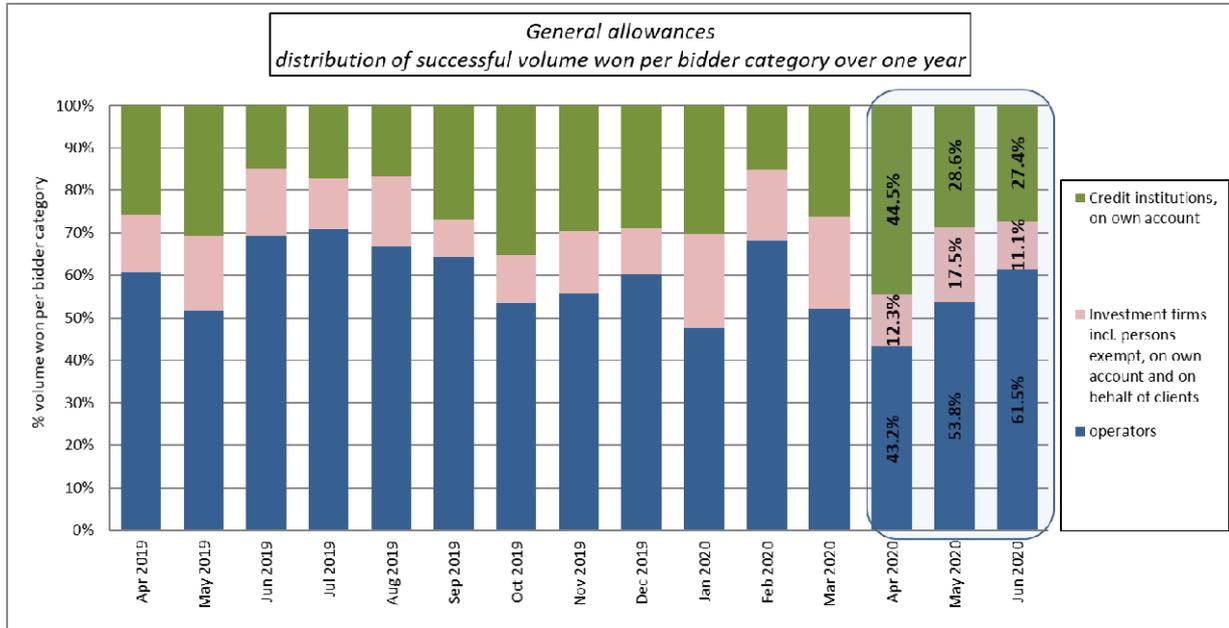


Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

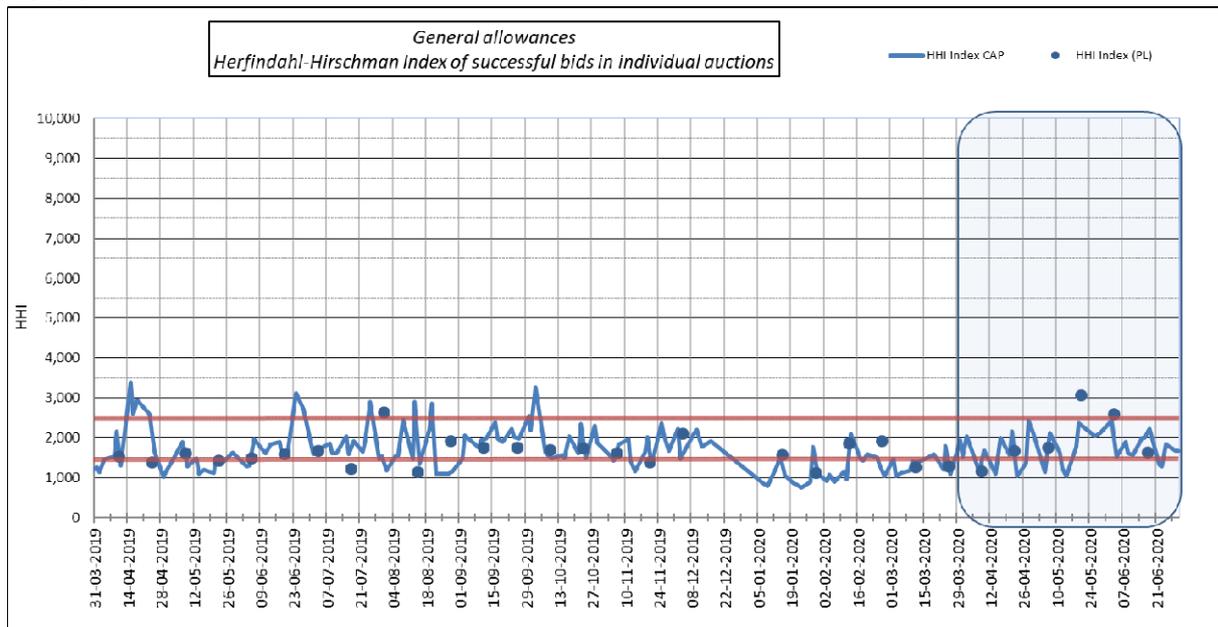
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
April 2020	0%	Operators (including Business groupings)	43.2%	17.0% points
		Investment firms (including persons exempt)	12.3%	6.4% points
		Credit institutions	44.5%	16.6% points
May 2020	0%	Operators (including Business groupings)	53.8%	15.1% points
		Investment firms (including persons exempt)	17.5%	6.9% points
		Credit institutions	28.6%	17.4% points
June 2020	0%	Operators (including Business groupings)	61.5%	18.5% points
		Investment firms (including persons exempt)	11.1%	11.2% points
		Credit institutions	27.4%	16.7% points

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

1.1.4. Concentration - general allowances

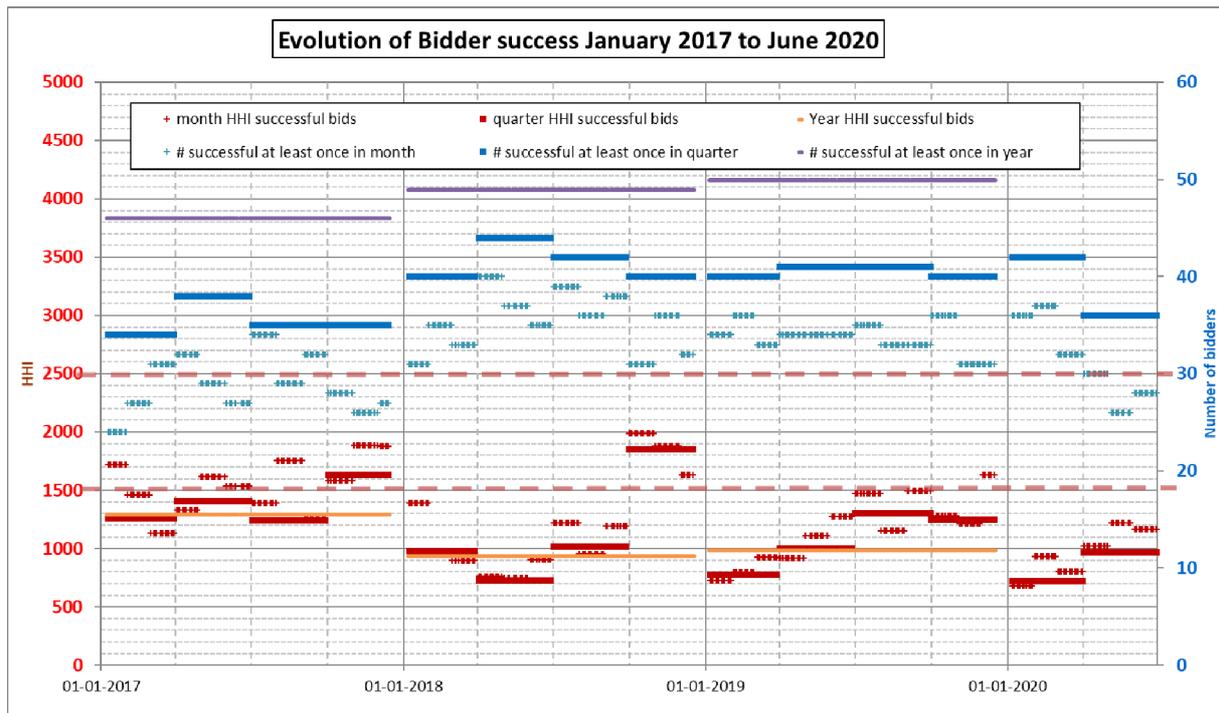
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration¹⁷. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated,' between 1 500 and 2 500 is 'moderately concentrated,' and above 2 500 is 'highly concentrated' – these thresholds are indicated in Graphs 6 and 7. Graph 6 indicates the HHI of the individual auctions. Graph 7 indicates the monthly and quarterly HHI and successful bidder participation (number of bidders successful at least once in the period of interest) so as to show the variation over different periods, due to the turnover of participants in the auctions.

Graph 6: General allowances - Herfindahl-Hirschman Index of successful bids in individual auctions over 15 months



¹⁷ The HHI is calculated as the sum of the squares of all successful bidders' shares (in percentage points) of the total auctioned volume over the period of interest.

Graph 7: General allowances - Herfindahl-Hirschman Index of successful bids and successful bidder participation at monthly, quarterly and yearly level



1.2 Aviation allowances auctions

The auctioning of *aviation allowances* restarted as of November 2014¹⁸. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014¹⁹; the *aviation allowances* for the calendar years 2013-2015 were auctioned in 2015, in accordance with the published 2015 *auction calendar*. Poland decided to aggregate the *aviation allowances* for the calendar years 2012 to 2015 in a single auction held in May 2015.

1.2.1 Clearing prices and participation – aviation allowances

An overview of the auction results is provided in Table 5.

Table 5: Aviation allowances – main statistics on the results of the auctions per month

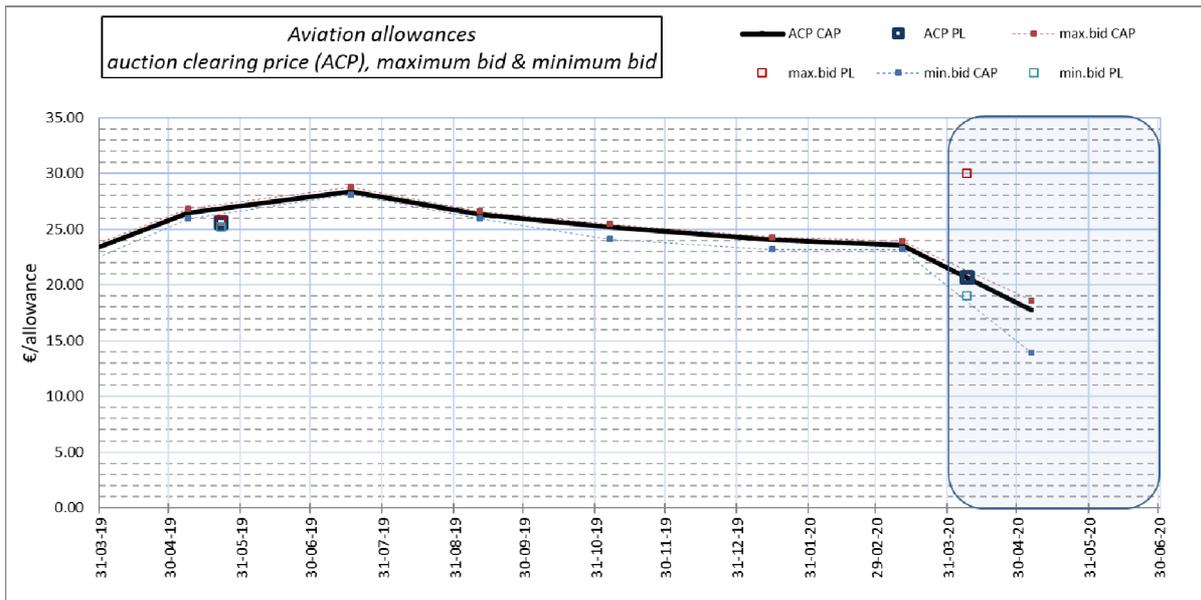
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ²⁰	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
June 2020	-	-	-	-	-	-	-
May 2020	810 500	1 729 500	14 386 375	2.1	6	4	17.75
April 2020	105 500	422 000	2 188 070	4.0	7	4	20.74
March 2020	810 500	1 825 000	19 119 695	2.3	6	4	23.59
February 2020	-	-	-	-	-	-	-
January 2020	810 500	3 150 500	19 516 840	3.9	8	4	24.08
December 2019	-	-	-	-	-	-	-
November 2019	884 500	3 202 500	22 271 710	3.6	10	5	25.18
October 2019	-	-	-	-	-	-	-
September 2019	892 000	1 320 000	23 495 280	1.5	8	7	26.34
August 2019	-	-	-	-	-	-	-
July 2019	892 000	1 512 000	25 306 040	1.7	7	6	28.37
June 2019	-	-	-	-	-	-	-
May 2019	752 500	2 626 000	19 845 625	3.5	8	4.5	26.37
April 2019	-	-	-	-	-	-	-
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

¹⁸ The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 http://ec.europa.eu/clima/news/articles/news_2012111601_en.htm.

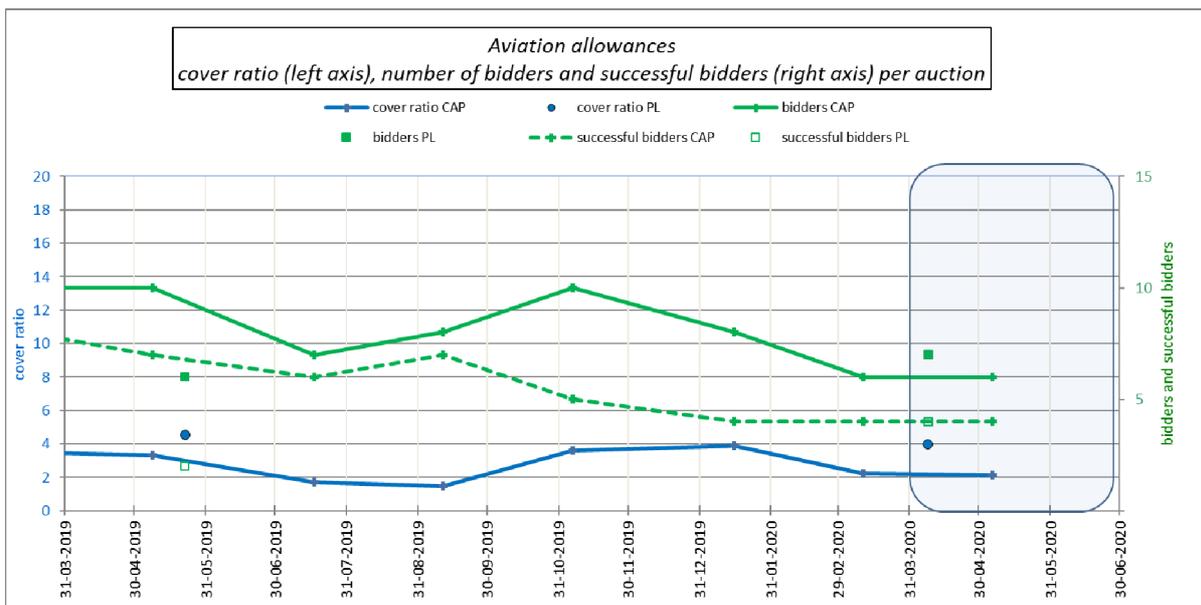
¹⁹ See also the regulatory update published by the Commission on 29 July 2014: http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm.

²⁰ The cover ratio is the ratio between the total bid volume and the auction volume.

Graph 8: Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid²¹

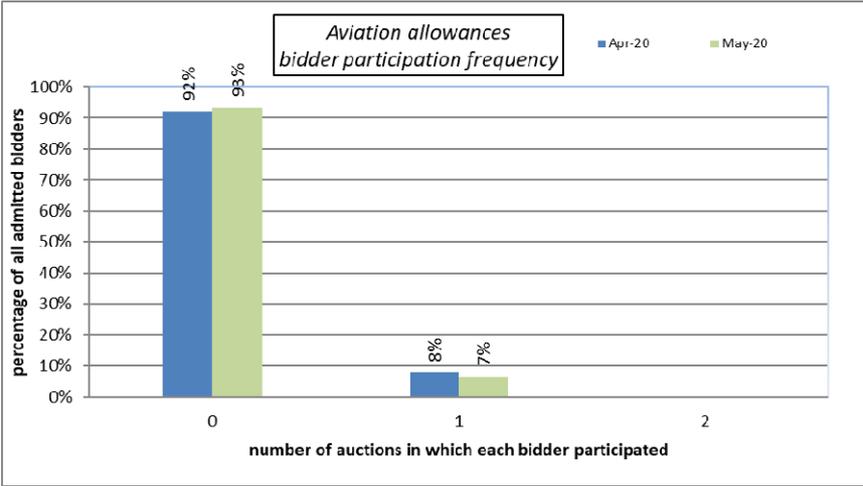


Graph 9: Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



²¹ Auctions on behalf of Poland were held on the following days: 22/5/2019, 8/4/2020.

Graph 10: Aviation allowances – bidder participation frequency



No aviation allowances have been auctioned in June 2020.

1.2.2 Bidding behaviour – aviation allowances

Table 6 provides monthly data on the bids submitted over 15 months. See also Graph 11.

Table 6: Aviation allowances – monthly statistics on the submitted bids

Month	Nr of auctions	Nr of bidders ⁽¹⁾	Total volume of bids	Average total volume bid per bidder per auction ²²	Average total volume bid per bidder per auction over the month ²³	standard deviation of total volume bid per bidder per auction over the month ²⁴	Total monthly nr of bids	Average nr. of bids per bidder per auction ²⁵	Average bid size ²⁶
June 2020	-	-	-	-	-	-	-	-	-
May 2020	1	6	1 729 500	288 250	288 250	253 121	17	2.8	101 735
April 2020	1	7	422 000	60 286	60 286	41 562	20	2.9	21 100
March 2020	1	6	1 825 000	304 167	304 167	253 483	28	4.7	65 179
February 2020	-	-	-	-	-	-	-	-	-
January 2020	1	8	3 150 500	393 813	393 813	290 528	52	6.5	60 587
December 2019	-	-	-	-	-	-	-	-	-
November 2019	1	10	3 202 500	320 250	320 250	290 402	75	7.5	42 700
October 2019	-	-	-	-	-	-	-	-	-
September 2019	1	8	1 320 000	165 000	165 000	163 917	36	4.5	36 667
August 2019	-	-	-	-	-	-	-	-	-
July 2019	1	7	1 512 000	216 000	216 000	141 690	24	3.4	63 000
June 2019	-	-	-	-	-	-	-	-	-
May 2019	2	11	2 626 000	192 523	164 125	138 496	75	4.7	41 719
April 2019	-	-	-	-	-	-	-	-	-

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

²² Monthly weighted average of the average bid volume per bidder in each auction (total bid volume in each auction divided by number of bidders participating in that auction), weighted by volume auctioned in each auction.

²³ Average over the whole month of the volume bid by bidders each time they are present in an auction (computed as total volume bid for the month / sum over the whole month of number of bidders present in each auction).

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

²⁵ Monthly simple average of the average number of bids per bidder in each auction (total number of bids in each auction divided by number of bidders participating in that auction).

²⁶ Monthly weighted average of the average bid size per bidder in each auction (total bid volume in each auction divided by number of bids in that auction), weighted by volume auctioned in each auction.

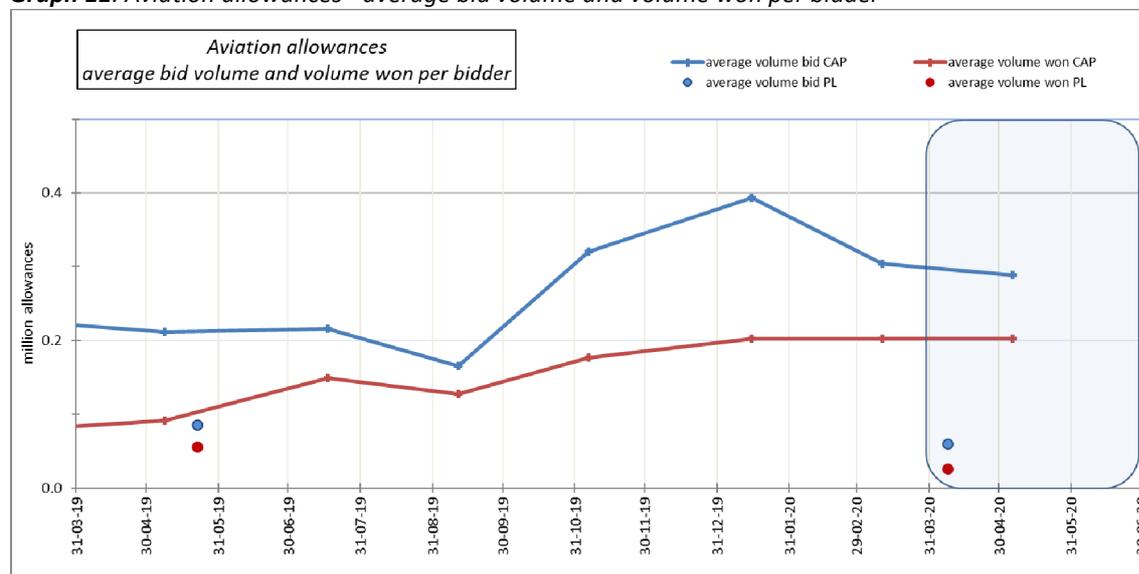
Table 7 provides monthly data on successful bids over 15 months. See also Graph 11.

Table 7: Aviation Allowances – Monthly statistics on successful bids

Month	Nr of auctions	Nr of successful bidders ⁽¹⁾	Total auction volume	Average volume won per bidder per auction ²⁷	Average volume won per bidder per auction over the month ²⁸	Standard deviation of volume won per bidder per auction over the month ²⁹	Total monthly nr of successful bids
June 2020	-	-	-	-	-	-	-
May 2020	1	4	810 500	202 625	202 625	112 786	7
April 2020	1	4	105 500	26 375	26 375	15 497	5
March 2020	1	4	810 500	202 625	202 625	93 652	9
February 2020	-	-	-	-	-	-	-
January 2020	1	4	810 500	202 625	202 625	126 800	12
December 2019	-	-	-	-	-	-	-
November 2019	1	5	884 500	176 900	176 900	93 504	10
October 2019	-	-	-	-	-	-	-
September 2019	1	7	892 000	127 429	127 429	138 949	24
August 2019	-	-	-	-	-	-	-
July 2019	1	6	892 000	148 667	148 667	78 754	14
June 2019	-	-	-	-	-	-	-
May 2019	2	7	752 500	86 169	83 611	77 997	18
April 2019	-	-	-	-	-	-	-

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

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



²⁷ Monthly weighted average of the average volume won per bidder in each auction (total volume won in each auction divided by the number of successful bidders in that auction), weighted by volume auctioned in each auction.

²⁸ Average over the whole month of the volume won per bidder each time they are successful in an auction (computed as total volume auctioned for the month / sum over the whole month of number of bidders present in each auction).

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

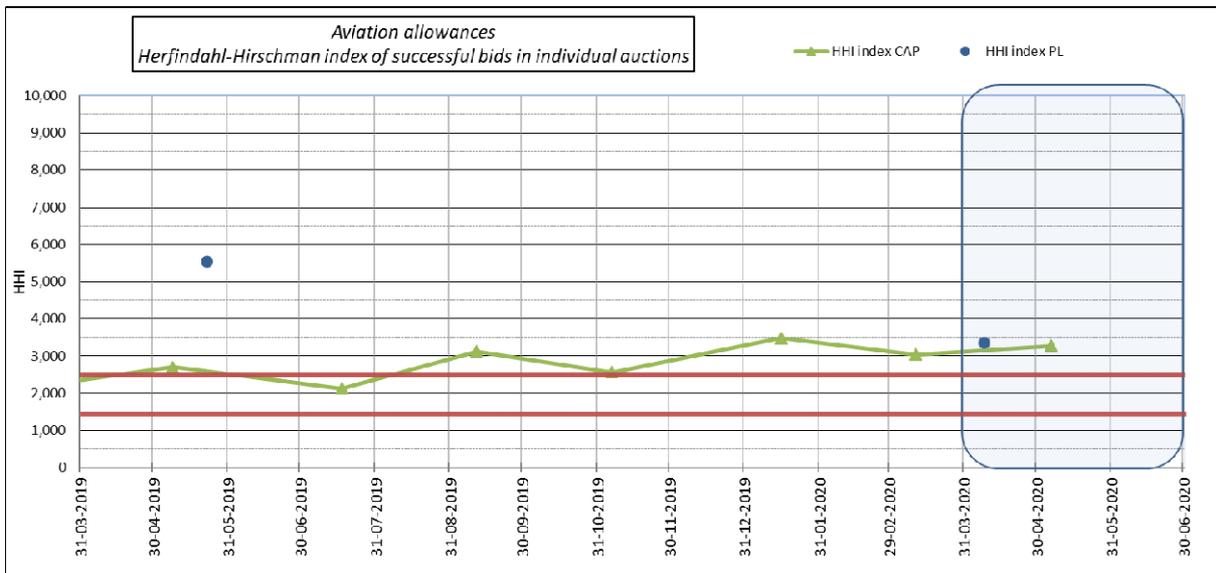
1.2.3 Type of bidders – aviation allowances

In April, May, June all volume bid was done on own account.

1.2.4 Concentration – aviation allowances

The HHI of successful bids is used to measure market concentration³⁰. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is ‘not-concentrated’, between 1 500 and 2 500 is ‘moderately concentrated,’ and above 2 500 is ‘highly concentrated’. Graph 12 indicates the HHI of the individual auctions.

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



³⁰ The HHI is calculated as the sum of the squares of all successful bidders' shares (in percentage points) of the total auctioned volume over the period of interest.

2. Implementation of and compliance with the applicable rules

Fair and open access

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

Most of the active participants in the secondary carbon market are assumed to also have been admitted to bid in the auctions³¹.

Table 8: Eligible participants to the auctions by category

Number of participants		Operator		Investment firm	Credit Institution	Business grouping	Person exempt from MiFID requirements	Total
		Stationary	Aircraft					
Participants admitted to EEX's emissions spot secondary market	Apr 2020							138
	May 2020							140
	Jun 2020							139
Participants eligible to bid in the auctions	Apr 2020	62						89
	May 2020	64	1	12	5	-	9	91
	Jun 2020	63						90
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Apr 2020							
	May 2020	-	-	3	2	-	3	8
	Jun 2020							
(Of which:) Auction-only access	Apr 2020							
	May 2020	1	-	-	-	-	1	2
	Jun 2020							

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

Transparency

Information on the auctions was published by EEX in accordance with Chapter XVI of the *Auctioning Regulation*.

No infringements of the confidentiality requirements were identified.

Technical and operational aspects

With regard to the operational performance of the auctions, no irregularities or deviations from the requirements were found.

EEX's Market Surveillance department surveyed all auctions with a view to detecting any *market abuse*, money laundering, terrorist financing or other criminal activities. No such wrongdoing was publicly reported.

Other aspects

No other problems or issues were identified.

³¹ This assessment is based on the auction participants' activity in EEX's secondary market and general market knowledge of EEX.

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

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

Comments of the auction platform on the draft of this report

EEX reviewed the auction data presented in the report.

Date of publication: DD/MM/2020

Glossary

Auction calendar	Document setting out the <i>bidding windows</i> , individual volumes and auction dates of the auctions in a given calendar year. See Articles 11, 13 and 32 of the <i>Auctioning Regulation</i> .
Auction Clearing Price	Price determined upon closure of the <i>bidding window</i> .
Auction-only access	Access to the auctions without becoming a member of or participant in other markets organised by the auction platform.
Auctioning Regulation	Commission Regulation (EU) No 1031/2010 — Timing, administration and other aspects of auctioning of greenhouse gas emission allowances pursuant to Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowances trading within the Community, Official Journal L 302, 18.11.2010, p. 1, as subsequently amended. See: http://ec.europa.eu/clima/policies/ets/cap/auctioning/documentation_en.htm .
Auctioneer	Entity appointed by a Member State that offers the allowances to be auctioned to the auction platform and receives the auction proceeds due to the appointing Member State. See Articles 22 and 23 of the <i>Auctioning Regulation</i> .
Best-bid and best-ask prices	The best-bid price is the highest price any buyer is willing to pay and the best-ask price is the lowest price any seller is willing to accept.
Business groupings	Groupings of operators or aircraft operators. See Article 18(1)(d) of the <i>Auctioning Regulation</i> .
Bidding window	Time during which bidders can submit bids. See Article 8(1) of the <i>Auctioning Regulation</i> .
Clearing	Processes preceding the opening of the <i>Bidding window</i> , during the <i>Bidding window</i> and following the closure of the <i>Bidding window</i> until <i>Settlement</i> , involving the management of any risks arising during that interval including margining, netting or novation or any other services carried out possibly by a <i>Clearing</i> or <i>Settlement</i> system. See Article 3(31) of the <i>Auctioning Regulation</i> .
Cover ratio	Total bid volume divided by the available volume in the auction.
Credit institution	Credit institution as defined in EU legislation on credit institutions (Article 4(1) of Directive 2006/48/EC).
ETS Directive	Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC, OJ L 275, 25.10.2003, p. 32, as subsequently amended. See: http://ec.europa.eu/clima/policies/ets/documentation_en.htm .

General Allowance	Allowance to emit one tonne of CO ₂ -equivalent, see Article 3(a) of the <i>ETS Directive</i> , also referred to as <i>EUA</i> .
Aviation Allowance	Allowance to emit one tonne of CO ₂ -equivalent that can be used by aircraft operators, also referred to as <i>EUAA</i> . See Article 12(2a) and (3) of the <i>ETS Directive</i> .
Investment firms	Investment firms as defined in EU financial markets legislation (point (1) of Article 4(1) of Directive 2004/39/EC).
Market abuse	Insider dealing and market manipulation. See Article 36 of the <i>Auctioning Regulation</i> and Article 1 of Directive 2003/6/EC ('Market Abuse Directive').
Participating Member States	All EU Member States except Germany 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> .
Common auction platform	Auction platform appointed pursuant to Article 26(1) or (2) of the <i>Auctioning Regulation</i> . The common auction platform appointed pursuant to Article 26(2) of the <i>Auctioning Regulation</i> (also referred to as transitional common auction platform or TCAP) conducted auctions until 18 August 2016. The <i>common auction platform</i> referred to as CAP2 the second common auction platform or CAP2 was appointed, pursuant to Article 26(1) of the <i>Auctioning Regulation</i> , on 13 July 2016 until July 2021.

Annex 1 Auction revenues per Member State from 12 November 2012 until June 2020 (reported in euros)

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

	General allowances	Aviation allowances	General and aviation allowances
Austria	803,975,450	11,101,320	815,076,770
Belgium	1,492,378,925	13,378,565	1,505,757,490
Bulgaria	1,459,588,845	4,048,730	1,463,637,575
Croatia	308,913,375	2,417,265	311,330,640
Cyprus	74,605,365	6,285,280	80,890,645
Czech Republic	2,105,389,870	5,486,950	2,110,876,820
Denmark	720,202,950	12,551,080	732,754,030
Estonia	457,834,780	689,165	458,523,945
Finland	965,368,635	9,744,900	975,113,535
France	3,161,257,420	61,234,715	3,222,492,135
Greece	2,077,345,125	22,093,755	2,099,438,880
Hungary	879,700,635	4,448,720	884,149,355
Iceland	40,165,350	3,173,225	43,338,575
Ireland	537,286,735	9,902,040	547,188,775
Italy	5,591,914,580	65,851,810	5,657,766,390
Latvia	165,062,055	2,379,760	167,441,815
Lichtenstein	995,165	0	995,165
Lithuania	324,147,975	1,244,760	325,392,735
Luxemburg	71,349,910	1,591,320	72,941,230
Malta	61,620,345	2,511,530	64,131,875
The Netherlands	1,934,192,675	20,940,795	1,955,133,470
Norway	808,940,910	30,704,785	839,645,695
Poland	6,232,798,090	10,911,495	6,243,709,585
Portugal	1,051,286,545	13,414,570	1,064,701,115
Romania	2,742,323,350	7,015,670	2,749,339,020
Slovak Republic	953,511,265	871,350	954,382,615
Slovenia	266,627,830	616,985	267,244,815
Spain	5,137,357,415	75,191,305	5,212,548,720
Sweden	526,535,015	16,288,290	542,823,305
TOTAL	40,952,676,585	416,090,135	41,368,766,720

Annex 2 Results of individual auctions on behalf of participating Member States and Poland in April - June 2020

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

General Allowances – April 2020																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
02.04.2020	17.52	16.71	20.00	17.39	17.25	2,717,500	5,374,500	1.98	23	11	47,610,600	66	13	2.87	81,432	233,674	287,432	247,045	276,701
06.04.2020	18.36	17.81	22.00	18.57	18.35	2,717,500	4,228,000	1.56	20	18	49,893,300	74	35	3.70	57,135	211,400	241,624	150,972	179,998
07.04.2020	21.11	20.25	25.00	21.01	20.82	2,717,500	5,819,000	2.14	23	15	57,366,425	69	18	3.00	84,333	253,000	221,136	181,167	149,612
08.04.2020	20.07	19.31	23.00	20.09	19.94	5,332,000	8,065,000	1.51	19	17	107,013,240	81	32	4.26	99,568	424,474	371,777	313,647	312,585
09.04.2020	21.40	20.91	23.00	21.42	21.33	2,717,500	4,061,000	1.49	21	15	58,154,500	64	25	3.05	63,453	193,381	212,073	181,167	225,852
14.04.2020	20.17	19.86	23.00	20.37	20.22	2,717,500	4,109,500	1.51	23	21	54,811,975	62	39	2.70	66,282	178,674	169,589	129,405	147,679
16.04.2020	20.10	19.50	22.00	20.07	19.96	2,717,500	5,001,500	1.84	25	15	54,621,750	78	19	3.12	64,122	200,060	251,660	181,167	257,144
20.04.2020	21.24	20.73	25.00	21.37	21.15	2,717,000	4,870,000	1.79	22	14	57,709,080	74	20	3.36	65,811	221,364	239,891	194,071	212,036
21.04.2020	20.40	19.76	25.00	20.47	20.18	2,717,000	5,784,500	2.13	22	15	55,426,800	81	20	3.68	71,414	262,932	298,634	181,133	270,852
22.04.2020	19.75	19.20	23.00	19.99	19.72	5,332,000	8,568,500	1.61	21	16	105,307,000	88	38	4.19	97,369	408,024	460,534	333,250	434,093
23.04.2020	20.24	19.51	23.00	20.30	20.17	2,717,000	4,976,000	1.83	23	19	54,992,080	81	33	3.52	61,432	216,348	207,304	143,000	141,972
27.04.2020	20.40	19.80	25.00	20.50	20.34	2,717,000	5,275,000	1.94	22	17	55,426,800	72	27	3.27	73,264	239,773	308,785	159,824	184,091
28.04.2020	19.99	19.21	25.00	19.98	19.83	2,717,000	5,686,000	2.09	20	13	54,312,830	83	19	4.15	68,506	284,300	349,380	209,000	307,647
30.04.2020	19.97	19.01	23.00	20.08	19.92	2,717,000	4,775,000	1.76	20	16	54,258,490	79	30	3.95	60,443	238,750	263,978	169,813	253,517

Note: volume variables reported in tCO₂, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

General Allowances – May 2020

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
05.05.2020	19.01	18.81	25.00	19.58	19.32	2,717,000	2,742,500	1.01	21	21	51,650,170	53	51	2.52	51,745	130,595	151,392	129,381	152,031
06.05.2020	18.85	17.71	25.00	18.94	18.61	5,332,000	8,747,000	1.64	19	12	100,508,200	88	22	4.63	99,398	460,368	479,795	444,333	469,940
07.05.2020	19.00	18.01	25.00	19.20	18.88	2,717,000	4,372,500	1.61	21	17	51,623,000	68	29	3.24	64,301	208,214	279,505	159,824	257,795
11.05.2020	18.81	18.31	25.00	19.15	18.85	2,717,000	3,664,500	1.35	21	18	51,106,770	60	37	2.86	61,075	174,500	230,874	150,944	210,918
12.05.2020	18.72	18.02	25.00	18.88	18.67	2,717,000	4,205,500	1.55	23	19	50,862,240	66	28	2.87	63,720	182,848	194,280	143,000	167,405
14.05.2020	18.37	17.71	22.00	18.48	18.27	2,717,000	4,560,000	1.68	25	19	49,911,290	70	30	2.80	65,143	182,400	183,857	143,000	142,317
18.05.2020	19.30	18.40	25.00	19.48	19.23	2,717,000	4,627,500	1.70	23	16	52,438,100	73	30	3.17	63,390	201,196	302,657	169,813	231,348
19.05.2020	20.02	18.40	25.00	20.13	19.97	2,717,000	5,094,500	1.88	24	17	54,394,340	70	26	2.92	72,779	212,271	319,970	159,824	278,726
20.05.2020	20.11	18.40	25.01	20.44	20.06	5,332,000	7,645,000	1.43	23	13	107,226,520	76	33	3.30	100,592	332,391	623,485	410,154	710,507
26.05.2020	21.45	20.81	25.00	21.62	21.36	2,717,000	4,861,000	1.79	21	14	58,279,650	66	24	3.14	73,652	231,476	299,621	194,071	264,279
28.05.2020	20.95	20.02	25.00	21.05	20.75	2,717,000	5,482,000	2.02	22	11	56,921,150	61	15	2.77	89,869	249,182	280,715	247,000	286,399

Note: volume variables reported in tCO2, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

General Allowances – June 2020

Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
02.06.2020	21.15	20.00	25.00	21.29	21.09	2,717,000	5,109,000	1.88	22	13	57,464,550	60	21	2.73	85,150	232,227	301,534	209,000	306,711
03.06.2020	21.98	21.31	25.00	22.33	21.96	5,332,000	7,348,500	1.38	21	16	117,197,360	64	29	3.05	114,820	349,929	584,897	333,250	592,700
04.06.2020	21.77	21.21	25.00	21.86	21.75	2,717,000	4,219,000	1.55	21	14	59,149,090	62	27	2.95	68,048	200,905	253,027	194,071	208,713
08.06.2020	22.66	22.12	25.01	22.77	22.65	2,717,000	3,659,500	1.35	19	13	61,567,220	45	22	2.37	81,322	192,605	281,187	209,000	254,142
09.06.2020	22.30	20.71	25.01	22.26	22.29	2,717,000	4,419,000	1.63	21	14	60,589,100	60	27	2.86	73,650	210,429	289,996	194,071	216,556
11.06.2020	22.20	21.65	25.01	22.57	22.12	2,717,000	5,322,000	1.96	18	11	60,317,400	50	19	2.78	106,440	295,667	382,832	247,000	211,039
15.06.2020	21.80	21.37	25.00	21.93	21.80	2,717,000	4,753,000	1.75	22	14	59,230,600	55	25	2.50	86,418	216,045	306,735	194,071	260,892
16.06.2020	22.87	22.16	25.00	22.87	22.70	2,717,000	4,618,000	1.70	21	14	62,137,790	62	19	2.95	74,484	219,905	302,877	194,071	260,430
17.06.2020	22.81	22.10	25.00	23.00	22.86	5,332,000	7,332,000	1.38	19	17	121,622,920	63	39	3.32	116,381	385,895	496,553	313,647	421,548
18.06.2020	23.63	22.70	25.00	23.45	23.25	2,717,000	4,576,000	1.68	20	7	64,202,710	50	11	2.50	91,520	228,800	286,097	388,143	290,995
22.06.2020	24.15	23.04	26.00	24.16	23.98	2,717,000	4,555,000	1.68	21	12	65,615,550	57	18	2.71	79,912	216,905	246,120	226,417	173,762
23.06.2020	24.85	24.51	26.25	24.96	24.91	2,717,000	3,337,000	1.23	19	18	67,517,450	49	32	2.58	68,102	175,632	176,808	150,944	173,635
25.06.2020	25.15	24.21	30.00	25.30	24.99	2,717,000	5,385,000	1.98	24	13	68,332,550	60	16	2.50	89,750	224,375	310,753	209,000	245,422
29.06.2020	24.74	24.22	30.00	24.98	24.70	2,717,000	4,761,000	1.75	21	14	67,218,580	66	26	3.14	72,136	226,714	266,016	194,071	225,610
30.06.2020	25.99	25.25	28.02	26.07	25.99	2,717,000	4,550,000	1.67	22	20	70,614,830	74	37	3.36	61,486	206,818	317,188	135,850	207,892

Note: volume variables reported in tCO2, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

Aviation Allowances – April 2020

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	
08.04.2020	20.74	19.01	30.01	20.98	20.60	105,500	422,000	4.00	7	4	2,188,070	20	5	2.86	21,100	60,286	41,562	26,375	15,497	

Note: volume variables reported in tCO2, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

Aviation Allowances – May 2020

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
06.05.2020	17.75	13.90	18.60	16.90	16.99	810,500	1,729,500	2.13	6	4	14,386,375	17	7	2.83	101,735	288,250	253,121	202,625	112,786

Note: volume variables reported in tCO2, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

Aviation Allowances – June 2020																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: volume variables reported in tCO₂, monetary variables reported in €

(1): Number of unique individual bidders or unique successful bidders present in a whole month. (2): Average number of bids submitted over the whole month by each bidder in each auction. Computed as total number of bids for the month / sum over whole month of number of bidders present in each auction. (3): Average size of all bids submitted in all auctions over the month. Computed as total bid volume for the month / number of bids for the month. (4): Average over the whole month of the volume bid by bidders each time they are present in an auction. Computed as total volume bid for the month / sum over whole month of number of bidders present in each auction. (5): Standard deviation of the total volume bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the volume won by bidders each time they are successful in an auction. Computed as total auction volume for the month / sum over whole month of number of bidders successful in each auction. (7): Standard deviation of the total volume won by each bidder in each auction, over the whole month, (8): HHI Monthly value is computed considering successful bidder's market share over whole month.

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