

# Auctions by the *Common Auction Platform*

## January, February, March 2020

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**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:*

7, 9, 13, 14, 15(PL)<sup>1</sup>, 16, 20, 21, 23, 27, 28, 29(PL), 30 January 2020;

3, 4, 6, 10, 11, 12(PL), 13, 17, 18, 20, 24, 25, 26(PL), 27 February 2020;

2, 3, 5, 9, 10, 11(PL), 12, 16, 19, 23, 24, 25(PL), 26, 30, 31 March 2020;

*Aviation Allowances:*

15 January 2020;

11 March 2020.

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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.

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<sup>1</sup> 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](http://ec.europa.eu/clima/policies/ets/cap/auctioning/index_en.htm)

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**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.

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## 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 2016<sup>2</sup>. 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)<sup>3</sup> 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*.

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<sup>2</sup> 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.

<sup>3</sup> 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 January, February, March 2020 auctions at a glance:***

	<b>General Allowances</b>			<b>Aviation Allowances</b>		
	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>	<b>Jan</b>	<b>Feb</b>	<b>Mar</b>
<b>General</b>						
Number of auctions	13	14	15	1	-	1
Total volume auctioned	40 556 500	43 274 000	48 709 000	810 500	-	810 500
Amount raised from the auctions (€)	986 511 155	1 030 723 300	960 193 830	19 516 840	-	19 119 695
Average Auction Clearing Price (€/allowance)	24.32	23.82	19.71	24.08	-	23.59
Total bid volume	72 943 000	95 448 000	92 013 000	3 150 500	-	1 825 000
Average <i>Cover ratio</i>	1.8	2.2	1.9	3.9	-	2.3
Monthly HHI	681	935	803	3 479	-	3 034
<b>Participation</b>						
Number of eligible bidders	88	88	87	88	-	87
Number of participating bidders <sup>(1)</sup>	37	41	35	8	-	6
Number of successful bidders <sup>(1)</sup>	36	37	32	4	-	4
Average number of bidders per auction	26.5	25.4	22.1	8.0	-	6.0
Average number of successful bidders per auction	20.3	17.8	16.8	4.0	-	4.0
<b>Auction data</b>						
Average total volume bid per bidder per auction	223 330	303 101	289 186	393 813	-	304 167
Average bid size (volume per bid)	61 347	70 987	86 054	60 587	-	65 179
Average volume won per bidder per auction	177 466	227 273	213 914	202 625	-	202 625
Average range of bids (€)	4.92	7.01	5.54	1.09	-	0.74

(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 March 2020 are EUR 38 338 072 585, and of *aviation allowances* EUR 399 515 690. 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 website<sup>4</sup>.

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<sup>4</sup> <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

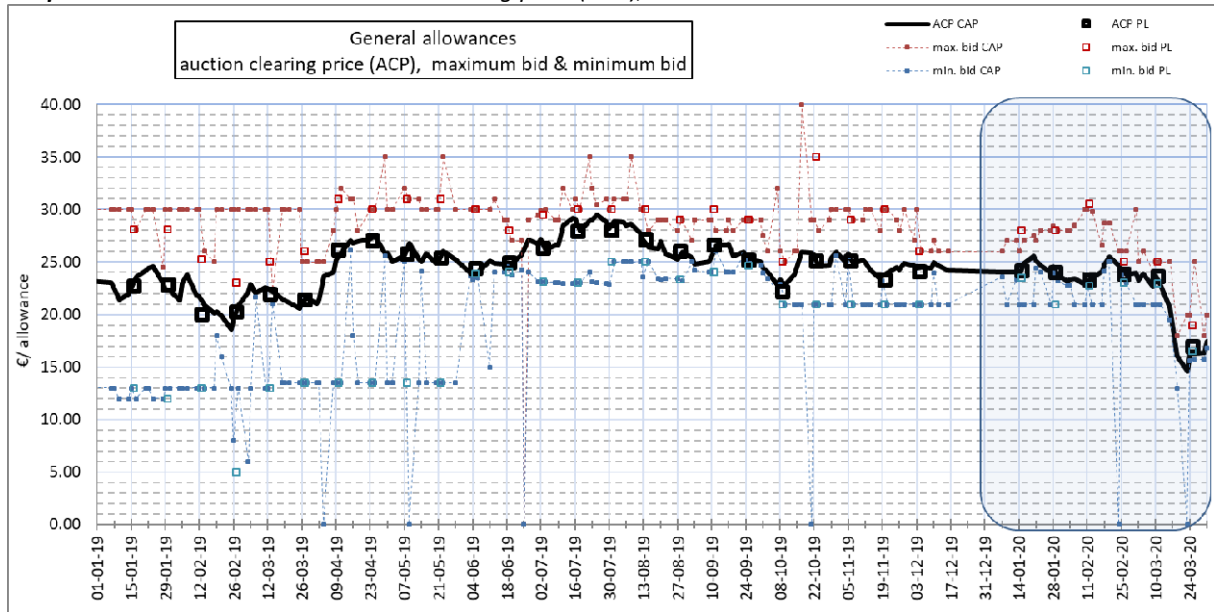
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio <sup>5</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
March 2020	48 709 000	92 013 000	960 193 830	1.9	22.1	16.8	19.71
February 2020	43 274 000	95 448 000	1 030 723 300	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
March 2019	38 797 000	72 123 000	845 041 090	1.9	23.4	17.2	21.78
February 2019	38 797 000	89 736 000	806 922 870	2.3	26.4	19.9	20.80
January 2019	38 797 000	87 990 000	890 293 255	2.3	29.7	20.8	22.95
<b>2019 total</b>	<b>460 978 500</b>	<b>906 546 500</b>	<b>11 357 236 835</b>	<b>2.0</b>	<b>24.1</b>	<b>17.2</b>	<b>24.64</b>
<b>2018 total</b>	<b>642 477 000</b>	<b>1 662 693 000</b>	<b>9 917 590 730</b>	<b>2.6</b>	<b>25.6</b>	<b>18.0</b>	<b>15.44</b>
<b>2017 total</b>	<b>648 415 500</b>	<b>1 761 212 000</b>	<b>3 744 838 845</b>	<b>2.7</b>	<b>21.2</b>	<b>14.6</b>	<b>5.78</b>
<b>2016 total</b>	<b>474 261 000</b>	<b>1 092 400 000</b>	<b>2 496 870 295</b>	<b>2.3</b>	<b>19.0</b>	<b>13.4</b>	<b>5.26</b>
<b>2015 total</b>	<b>413 874 000</b>	<b>1 337 010 500</b>	<b>3 154 940 925</b>	<b>3.2</b>	<b>18.3</b>	<b>13.3</b>	<b>7.62</b>
<b>2014 total</b>	<b>335 052 000</b>	<b>1 796 711 000</b>	<b>1 977 712 120</b>	<b>5.4</b>	<b>17.6</b>	<b>11.9</b>	<b>5.90</b>
<b>2013 total</b>	<b>530 488 000</b>	<b>1 761 639 500</b>	<b>2 349 853 340</b>	<b>3.3</b>	<b>18.4</b>	<b>13.2</b>	<b>4.43</b>

During January, February, March 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 -0.03, - 0.02, 0.03 respectively, and this difference had a standard deviation of EUR 0.10, 0.05, 0.12 respectively.

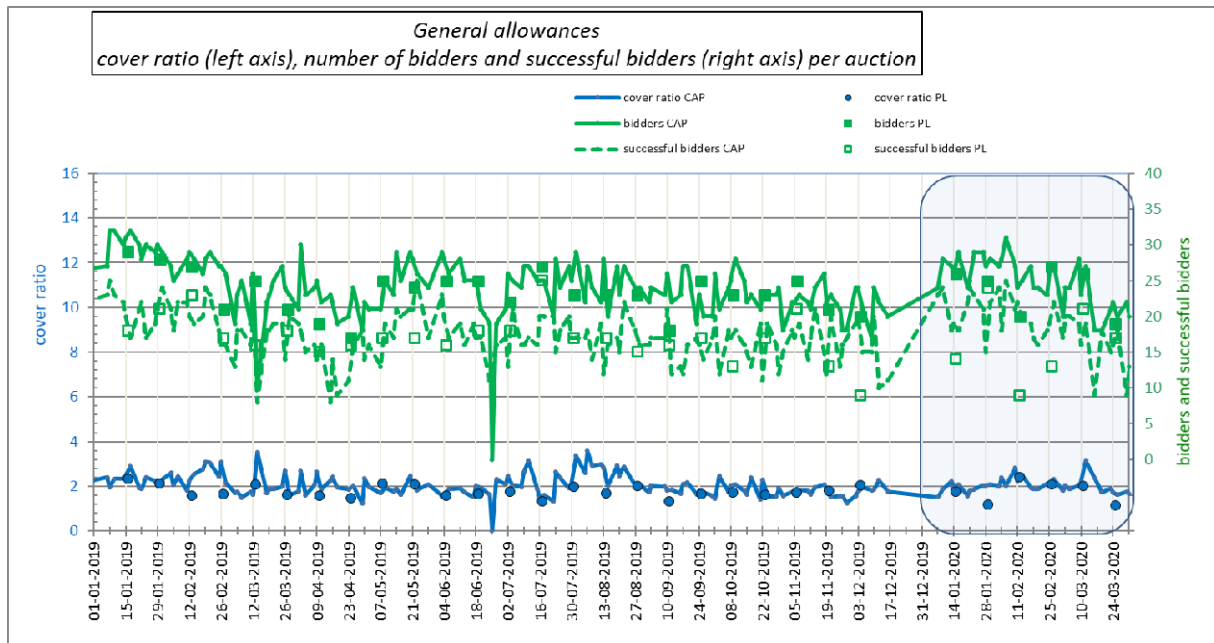
<sup>5</sup> Cover ratio is the ratio between the total bid volume and the auction volume.



**Graph 1: General allowances - auction clearing price (ACP), maximum bid & minimum bid<sup>6</sup>**



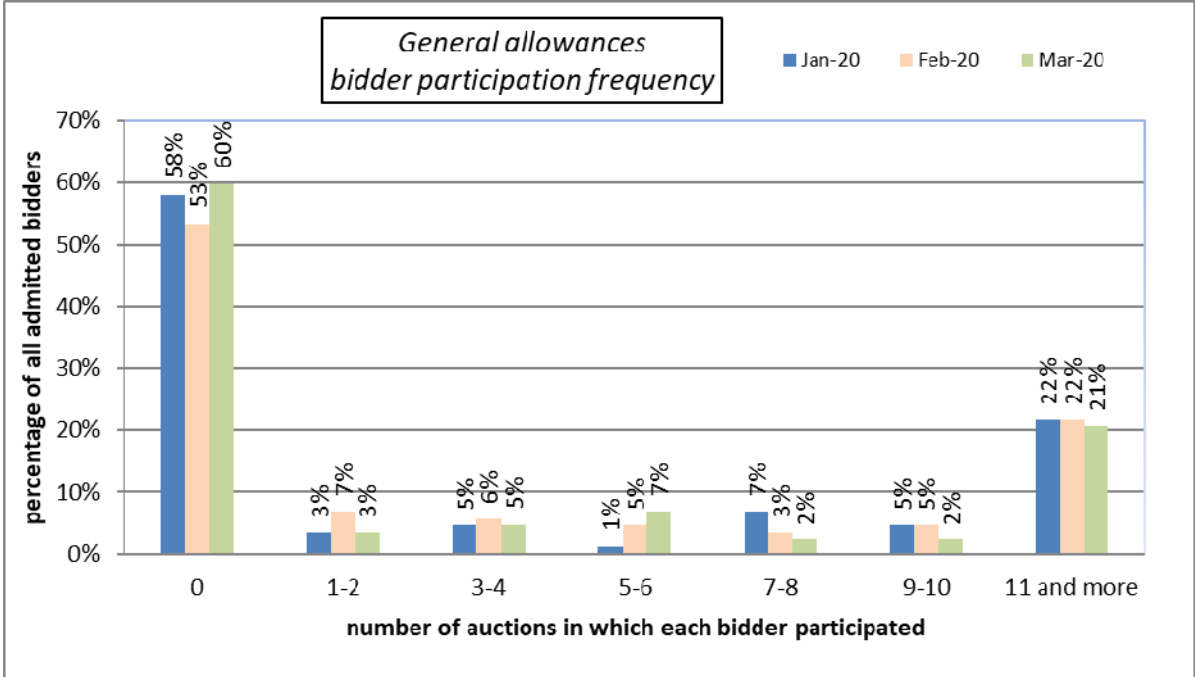
**Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction**



The number of eligible bidders is provided in Section 2. Out of these 37, 41 and 35 different bidders participated in the auctions in respectively in January, February, March 2020. Graph 3 indicates the participation frequency over these months.

<sup>6</sup> Auctions on behalf of Poland were held on the following days: 16/1/2019, 30/1/2019, 13/2/2019, 27/2/2019, 13/3/2019, 27/3/2019, 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.

**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 <sup>(1)</sup>	Total volume of bids	Average total volume bid per bidder per auction <sup>7</sup>	Average total volume bid per bidder per auction over the month <sup>8</sup>	standard deviation of total volume bid per bidder per auction over the month <sup>9</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>10</sup>	Average bid size <sup>11</sup>
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
March 2019	14	37	72 123 000	234 559	219 887	289 754	1 108	3.4	68 596
February 2019	14	38	89 736 000	247 655	239 936	323 066	1 202	3.2	78 220
January 2019	14	37	87 990 000	225 521	211 007	256 123	1 306	3.1	70 316

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

<sup>7</sup> 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.

<sup>8</sup> 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).

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

<sup>10</sup> 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).

<sup>11</sup> 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.

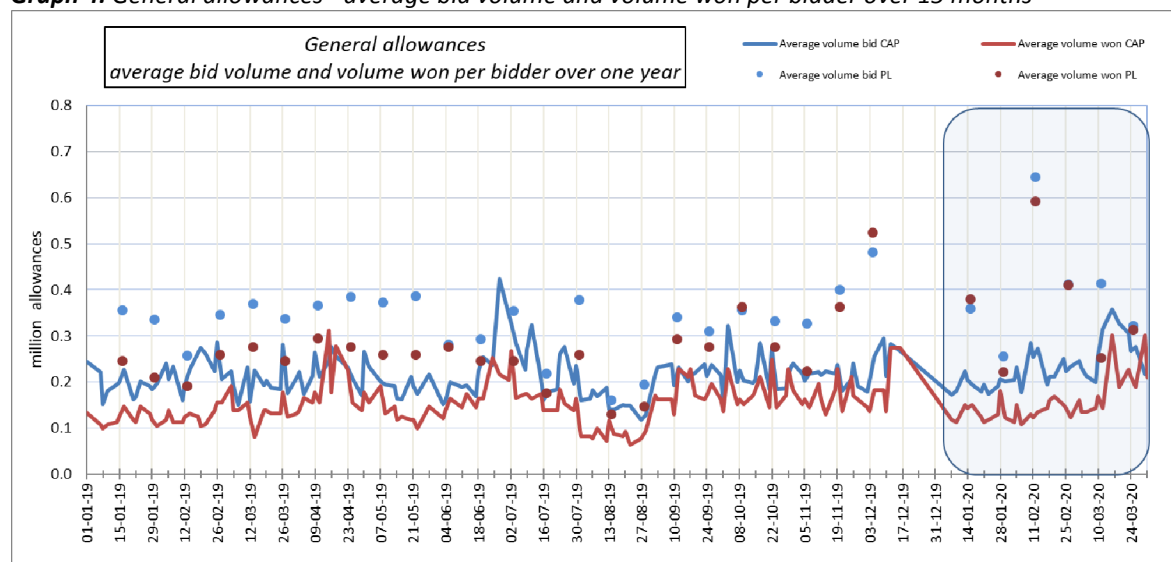
Table 3 provides monthly data on successful bids over 15 months. See also Graph 4.

**Table 3: General Allowances - monthly statistics on successful bids**

Month	Nr of auctions	Nr of successful bidders <sup>(1)</sup>	Total auction volume	Average volume won per bidder per auction <sup>12</sup>	Average volume won per bidder per auction over the month <sup>13</sup>	Standard deviation of volume won per bidder per auction over the month <sup>14</sup>	Total monthly nr of successful bids
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
March 2019	14	33	38 797 000	173 559	160 983	196 771	453
February 2019	14	36	38 797 000	149 976	139 057	177 125	455
January 2019	14	34	38 797 000	144 421	132 413	165 756	493

(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 months<sup>15</sup>**



<sup>12</sup> 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.

<sup>13</sup> 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).

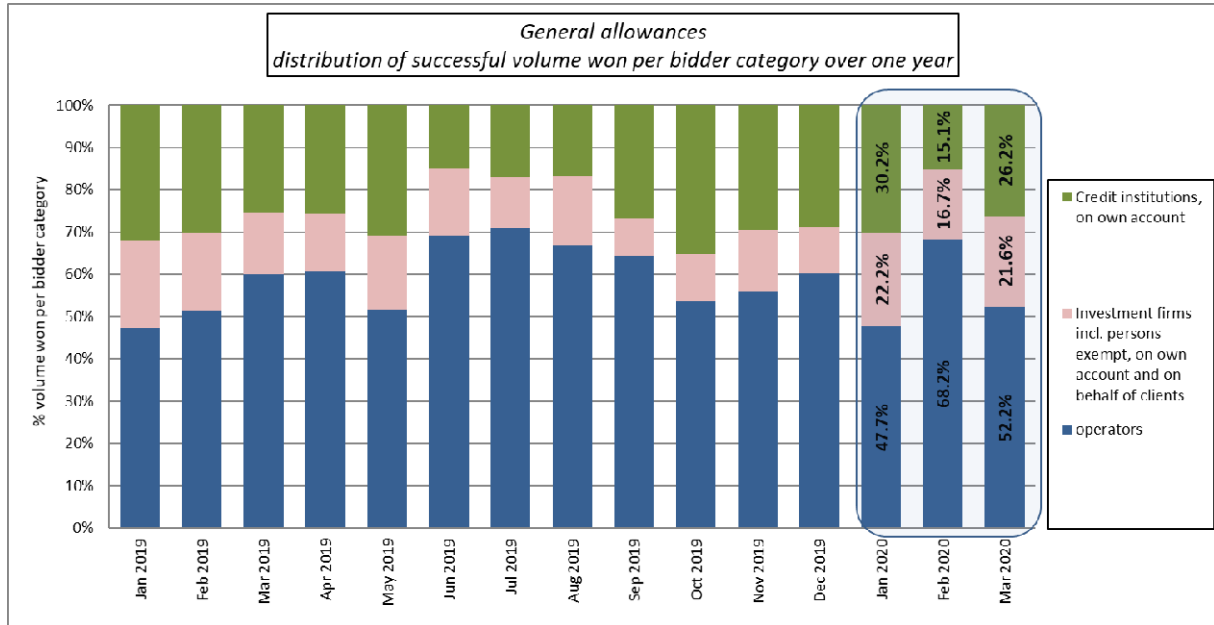
<sup>14</sup> Standard deviation of volume won per bidder in each auction over the month.

<sup>15</sup> Auctions on behalf of Poland were held on the following days: 16/1/2019, 30/1/2019, 13/2/2019, 27/2/2019, 13/3/2019, 27/3/2019, 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.

### 1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client<sup>16</sup> in January, February, March 2020 was respectively 0%, 0% and 0%, the remaining volume bid was done on own account. The shares in the total successful bid volume per bidder category are indicated in Graph 5 and in Table 4.

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



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

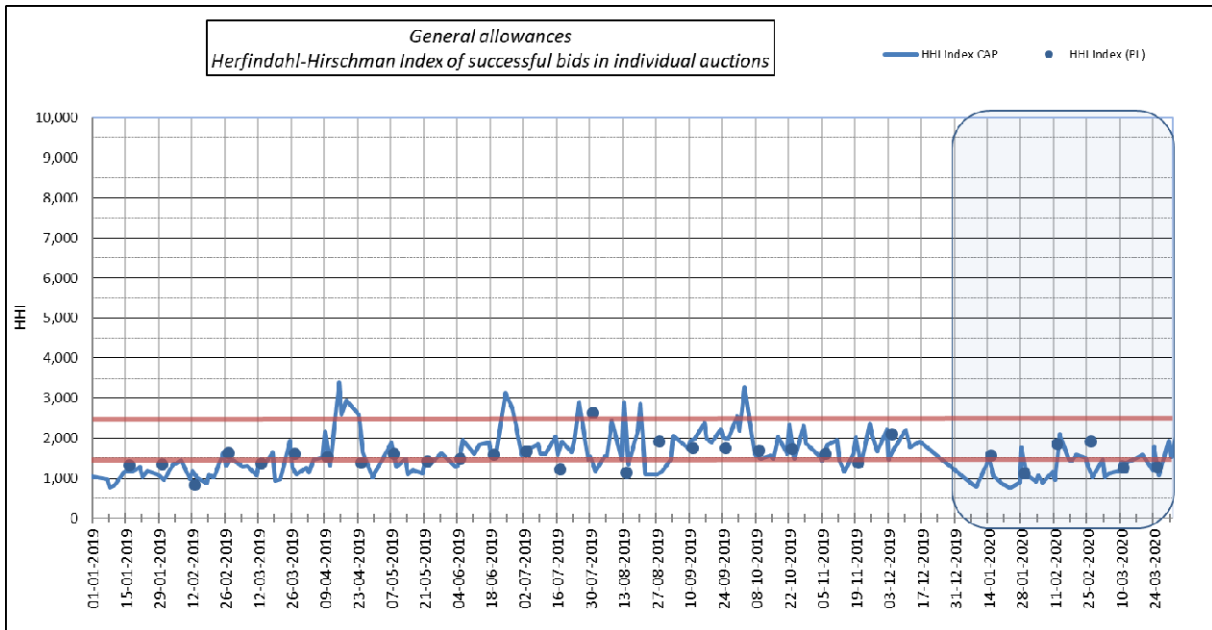
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
January 2020	0%	Operators (including Business groupings)	47.7%	12.3% points
		Investment firms (including persons exempt)	22.2%	7.1% points
		Credit institutions	30.2%	12.5% points
February 2020	0%	Operators (including Business groupings)	68.2%	10.8% points
		Investment firms (including persons exempt)	16.7%	8.2% points
		Credit institutions	15.1%	7.0% points
March 2020	0%	Operators (including Business groupings)	52.2%	13.3% points
		Investment firms (including persons exempt)	21.6%	6.8% points
		Credit institutions	26.2%	14.2% points

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

### 1.1.4. Concentration - general allowances

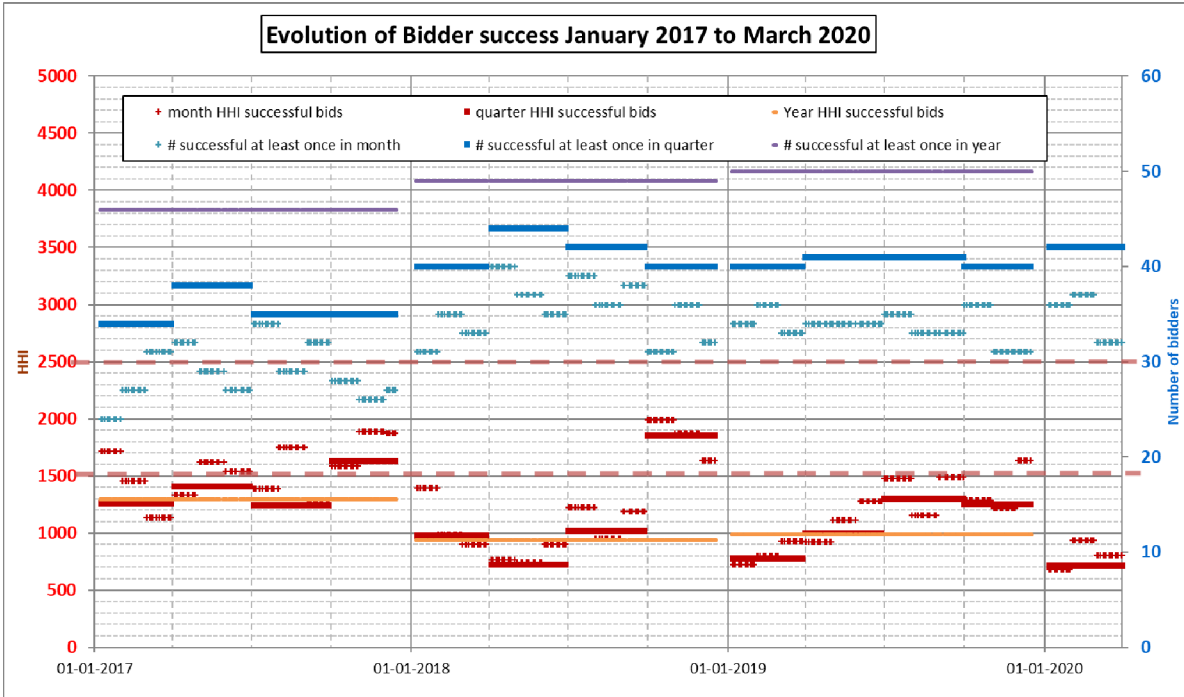
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration<sup>17</sup>. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated,' between 1 500 and 2 500 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



<sup>17</sup> 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 2014<sup>18</sup>. Pursuant to the published *auction calendar*, only *aviation allowances* for the calendar year 2012 were auctioned in 2014<sup>19</sup>; 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 <sup>20</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
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	-	-	-	-	-	-	-
March 2019	640 000	2 253 000	14 067 200	3.5	10	8	21.98
February 2019	-	-	-	-	-	-	-
January 2019	640 000	2 259 000	14 598 400	3.5	8	3	22.81
<b>2019 total</b>	<b>4 701 000</b>	<b>13 172 500</b>	<b>119 584 255</b>	<b>2.8</b>	<b>8.7</b>	<b>5.9</b>	<b>25.44</b>
<b>2018 total</b>	<b>3 941 000</b>	<b>10 830 000</b>	<b>73 956 020</b>	<b>2.7</b>	<b>8.8</b>	<b>6.1</b>	<b>18.77</b>
<b>2017 total</b>	<b>3 329 500</b>	<b>10 300 000</b>	<b>23 771 460</b>	<b>3.1</b>	<b>7.5</b>	<b>6.5</b>	<b>7.14</b>
<b>2016 total</b>	<b>4 219 000</b>	<b>17 973 500</b>	<b>22 266 205</b>	<b>4.3</b>	<b>10.4</b>	<b>4.6</b>	<b>5.28</b>
<b>2015 total</b>	<b>11 641 000</b>	<b>39 026 000</b>	<b>81 846 705</b>	<b>3.4</b>	<b>11.0</b>	<b>7.5</b>	<b>7.03</b>
<b>2014 total</b>	<b>6 570 500</b>	<b>28 201 500</b>	<b>39 454 510</b>	<b>4.3</b>	<b>13.0</b>	<b>8.0</b>	<b>6.00</b>

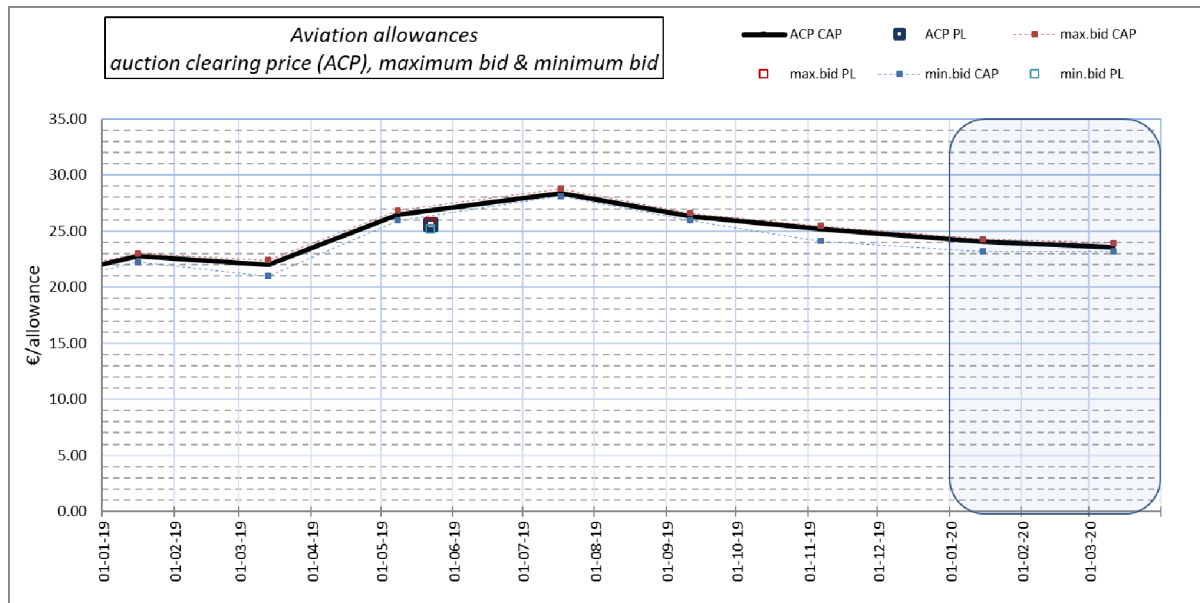
<sup>18</sup> The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 [http://ec.europa.eu/clima/news/articles/news\\_2012111601\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2012111601_en.htm).

<sup>19</sup> See also the regulatory update published by the Commission on 29 July 2014: [http://ec.europa.eu/clima/news/articles/news\\_2014072901\\_en.htm](http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm).

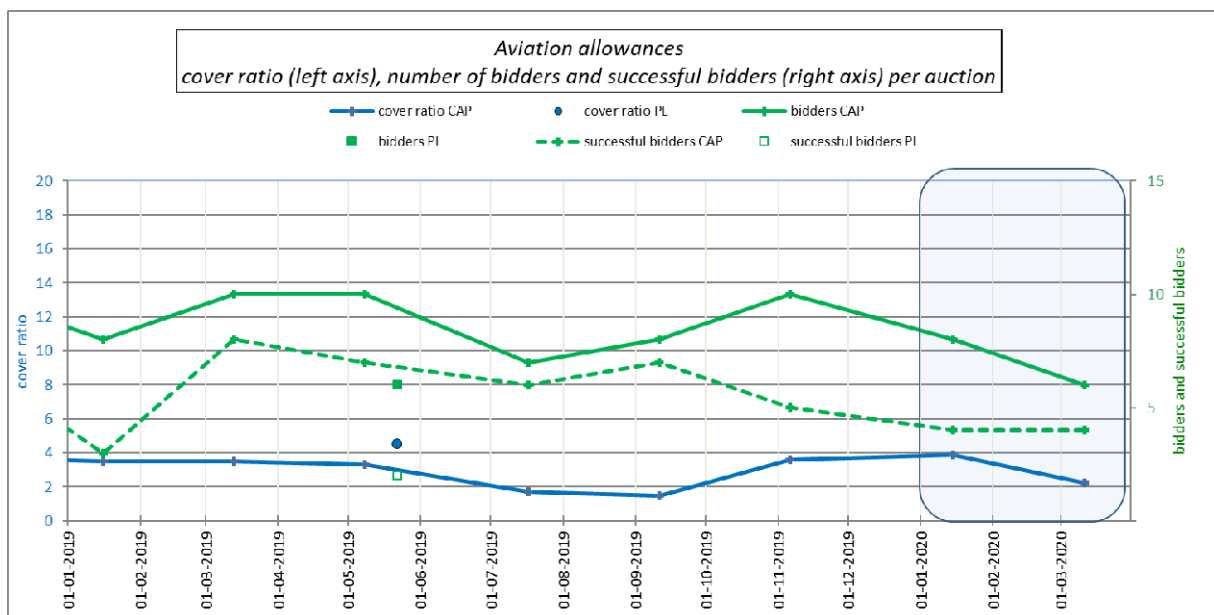
<sup>20</sup> The cover ratio is the ratio between the total bid volume and the auction volume.



**Graph 8:** Aviation allowances - auction clearing price (ACP) & maximum prices bid & minimum prices bid<sup>21</sup>

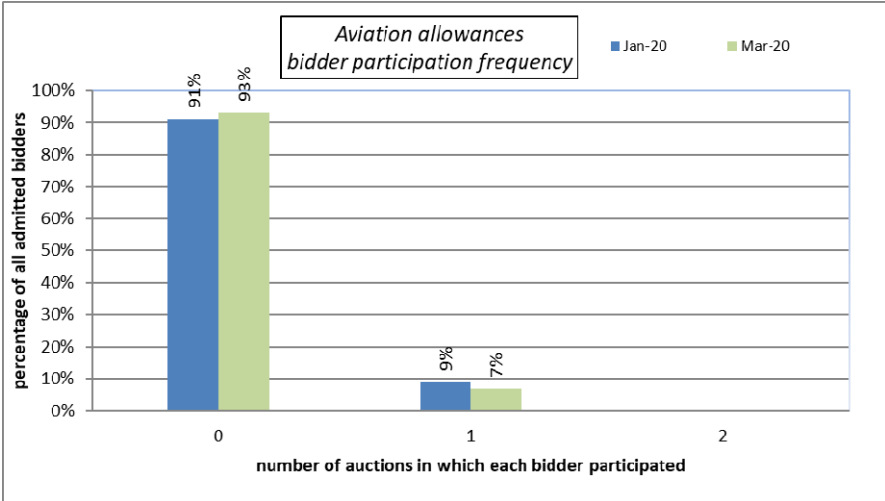


**Graph 9:** Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



<sup>21</sup> Auctions on behalf of Poland were held on the following days: 22/5/2019.

**Graph 10:** Aviation allowances – bidder participation frequency



No aviation allowances have been auctioned in February 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 <sup>(1)</sup>	Total volume of bids	Average total volume bid per bidder per auction <sup>22</sup>	Average total volume bid per bidder per auction over the month <sup>23</sup>	standard deviation of total volume bid per bidder per auction over the month <sup>24</sup>	Total monthly nr of bids	Average nr. of bids per bidder per auction <sup>25</sup>	Average bid size <sup>26</sup>
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	-	-	-	-	-	-	-	-	-
March 2019	1	10	2 253 000	225 300	225 300	165 369	45	4.5	50 067
February 2019	-	-	-	-	-	-	-	-	-
January 2019	1	8	2 259 000	282 375	282 375	237 360	56	7.0	40 339

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

<sup>22</sup> 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.

<sup>23</sup> 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).

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

<sup>25</sup> 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).

<sup>26</sup> 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.

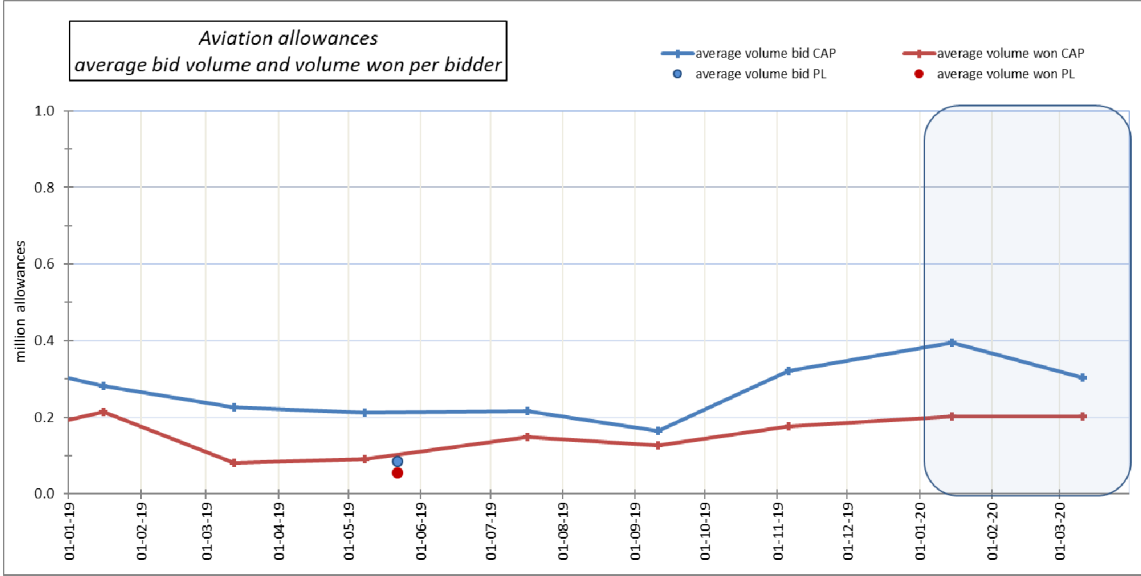
Table 7 provides monthly data on successful bids over 15 months. See also Graph 11.

**Table 7: Aviation Allowances – Monthly statistics on successful bids**

Month	Nr of auctions	Nr of successful bidders <sup>(1)</sup>	Total auction volume	Average volume won per bidder per auction <sup>27</sup>	Average volume won per bidder per auction over the month <sup>28</sup>	Standard deviation of volume won per bidder per auction over the month <sup>29</sup>	Total monthly nr of successful bids
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	-	-	-	-	-	-	-
March 2019	1	8	640 000	80 000	80 000	69 588	13
February 2019	-	-	-	-	-	-	-
January 2019	1	3	640 000	213 333	213 333	89 567	5

(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**



<sup>27</sup> 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.

<sup>28</sup> 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).

<sup>29</sup> Standard deviation of volume won per bidder in each auction over the month.

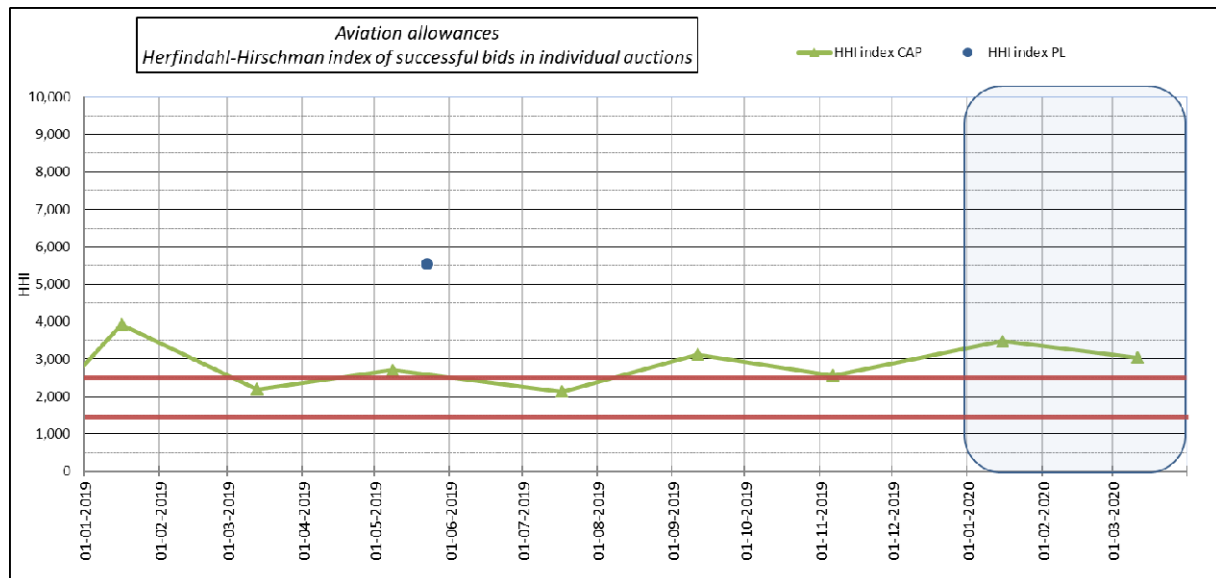
### 1.2.3 Type of bidders – aviation allowances

In January, February, March all volume bid was done on own account.

### 1.2.4 Concentration – aviation allowances

The HHI of successful bids is used to measure market concentration<sup>30</sup>. 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



<sup>30</sup> 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 auctions<sup>31</sup>.

**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 2020							137
	Feb 2020	-						136
	Mar 2020							
Participants eligible to bid in the auctions	Jan 2020							88
	Feb 2020	61	1	12	5	-	9	
	Mar 2020	60						
(Of which:) Participants eligible to bid in the auctions on behalf of clients	Jan 2020							8
	Feb 2020	-	-	3	2	-	3	
	Mar 2020							
(Of which:) Auction-only access	Jan 2020							2
	Feb 2020	1	-	-	-	-	1	
	Mar 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.

<sup>31</sup> 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: <a href="http://ec.europa.eu/clima/policies/ets/cap/auctioning/documentation_en.htm">http://ec.europa.eu/clima/policies/ets/cap/auctioning/documentation_en.htm</a> .
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: <a href="http://ec.europa.eu/clima/policies/ets/documentation_en.htm">http://ec.europa.eu/clima/policies/ets/documentation_en.htm</a> .



General Allowance	Allowance to emit one tonne of CO <sub>2</sub> -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 <sub>2</sub> -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 March 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
<b>Austria</b>	765,826,580	10,781,820	776,608,400
<b>Belgium</b>	1,417,880,660	13,014,690	1,430,895,350
<b>Bulgaria</b>	1,363,856,775	3,924,480	1,367,781,255
<b>Croatia</b>	293,797,785	2,337,390	296,135,175
<b>Cyprus</b>	66,687,675	6,090,030	72,777,705
<b>Czech Republic</b>	1,952,074,600	5,327,200	1,957,401,800
<b>Denmark</b>	686,012,925	12,187,205	698,200,130
<b>Estonia</b>	427,243,705	671,415	427,915,120
<b>Finland</b>	919,661,970	9,460,900	929,122,870
<b>France</b>	3,011,541,100	59,592,840	3,071,133,940
<b>Greece</b>	1,970,816,205	21,419,255	1,992,235,460
<b>Hungary</b>	831,834,600	4,315,595	836,150,195
<b>Iceland</b>	32,607,555	2,818,225	35,425,780
<b>Ireland</b>	511,734,190	9,609,165	521,343,355
<b>Italy</b>	5,324,152,700	63,908,185	5,388,060,885
<b>Latvia</b>	156,424,575	2,308,760	158,733,335
<b>Lichtenstein</b>	935,835	0	935,835
<b>Lithuania</b>	305,793,330	1,209,260	307,002,590
<b>Luxemburg</b>	67,750,960	1,555,820	69,306,780
<b>Malta</b>	58,381,290	2,431,655	60,812,945
<b>The Netherlands</b>	1,842,419,450	20,443,795	1,862,863,245
<b>Norway</b>	654,545,955	27,323,410	681,869,365
<b>Poland</b>	5,573,922,850	8,723,425	5,582,646,275
<b>Portugal</b>	997,662,190	13,024,070	1,010,686,260
<b>Romania</b>	2,570,653,435	6,802,670	2,577,456,105
<b>Slovak Republic</b>	901,686,385	844,725	902,531,110
<b>Slovenia</b>	252,951,820	599,235	253,551,055
<b>Spain</b>	4,878,952,805	72,990,305	4,951,943,110
<b>Sweden</b>	500,262,680	15,800,165	516,062,845
<b>TOTAL</b>	<b>38,338,072,585</b>	<b>399,515,690</b>	<b>38,737,588,275</b>

## Annex 2 Results of individual auctions on behalf of participating Member States and Poland in January – March 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 – January 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
07.01.2020	24.06	23.61	26.00	24.23	24.15	2,717,500	4,118,000	1.52	24	23	65,383,050	72	54	3.00	57,194	171,583	230,941	118,152	117,554
09.01.2020	24.01	21.00	27.00	24.06	24.01	2,717,500	5,076,000	1.87	28	24	65,247,175	102	50	3.64	49,765	181,286	244,702	113,229	107,022
13.01.2020	24.03	23.31	27.00	23.97	23.91	2,717,500	6,021,000	2.22	27	18	65,301,525	108	23	4.00	55,750	223,000	257,222	150,972	178,545
14.01.2020	23.74	21.00	26.00	23.69	23.65	2,717,500	5,334,500	1.96	26	19	64,513,450	106	32	4.08	50,325	205,173	257,703	143,026	202,274
15.01.2020	24.20	23.52	28.00	24.21	24.03	5,332,000	9,376,500	1.76	26	14	129,034,400	107	30	4.12	87,631	360,635	548,981	380,857	418,404
16.01.2020	24.85	21.00	27.05	25.03	24.72	2,717,500	5,649,500	2.08	29	18	67,529,875	111	39	3.83	50,896	194,810	236,923	150,972	143,064
20.01.2020	25.60	21.00	27.50	25.77	25.67	2,717,500	4,293,000	1.58	24	22	69,568,000	95	67	3.96	45,189	178,875	236,463	123,523	117,292
21.01.2020	25.10	24.40	27.00	25.25	25.10	2,717,500	4,855,500	1.79	25	24	68,209,250	103	49	4.12	47,141	194,220	229,571	113,229	113,469
23.01.2020	24.65	24.00	28.00	24.89	24.55	2,717,500	5,051,000	1.86	29	23	66,986,375	109	41	3.76	46,339	174,172	206,882	118,152	101,121
27.01.2020	24.04	21.00	28.00	24.10	23.96	2,717,500	5,558,000	2.05	29	21	65,328,700	99	29	3.41	56,141	191,655	204,144	129,405	121,538
28.01.2020	24.55	23.93	28.40	24.68	24.38	2,717,500	5,561,000	2.05	27	15	66,714,625	88	23	3.26	63,193	205,963	282,986	181,167	234,060
29.01.2020	24.04	21.00	28.00	24.36	24.24	5,332,000	6,415,000	1.20	25	24	128,181,280	81	70	3.24	79,198	256,600	375,143	222,167	291,506
30.01.2020	23.74	23.16	28.00	23.77	23.66	2,717,500	5,634,000	2.07	28	22	64,513,450	85	29	3.04	66,282	201,214	254,743	123,523	147,902

Note: volume variables reported in tCO<sub>2</sub>, 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 – February 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
03.02.2020	23.20	22.70	28.00	23.37	23.18	2,717,500	5,513,500	2.03	27	24	63,046,000	105	44	3.89	52,510	204,204	239,034	113,229	124,443
04.02.2020	23.33	22.70	28.00	23.40	23.19	2,717,500	6,468,500	2.38	28	18	63,399,275	114	26	4.07	56,741	231,018	315,692	150,972	146,387
06.02.2020	23.40	21.00	28.50	23.70	23.36	2,717,500	5,482,000	2.02	31	25	63,589,500	114	46	3.68	48,088	176,839	243,136	108,700	120,048
10.02.2020	22.91	21.00	30.00	23.49	22.88	2,717,500	7,666,000	2.82	27	21	62,257,925	97	42	3.59	79,031	283,926	402,158	129,405	155,647
11.02.2020	23.15	22.71	30.00	23.51	23.14	2,717,500	6,105,000	2.25	24	22	62,910,125	89	41	3.71	68,596	254,375	378,390	123,523	129,794
12.02.2020	23.35	22.75	30.55	24.15	23.17	5,332,000	12,899,500	2.42	20	9	124,502,200	110	33	5.50	117,268	644,975	853,888	592,444	486,895
13.02.2020	23.52	21.00	29.80	23.97	23.50	2,717,500	6,832,000	2.51	25	20	63,915,600	101	44	4.04	67,644	273,280	428,169	135,875	243,644
17.02.2020	24.11	21.00	26.55	24.12	24.07	2,717,500	5,271,500	1.94	27	19	65,518,925	97	36	3.59	54,345	195,241	273,204	143,026	191,374
18.02.2020	24.80	24.11	28.75	25.03	24.73	2,717,500	5,079,000	1.87	24	17	67,394,000	94	39	3.92	54,032	211,625	290,816	159,853	191,020
20.02.2020	25.50	25.01	28.75	25.63	25.43	2,717,500	5,093,000	1.87	24	16	69,296,250	108	37	4.50	47,157	212,208	283,898	169,844	210,575
24.02.2020	24.64	0.01	26.02	24.45	24.64	2,717,500	5,767,000	2.12	23	18	66,959,200	99	47	4.30	58,253	250,739	393,945	150,972	198,670
25.02.2020	24.32	23.71	26.00	24.36	24.27	2,717,500	5,823,500	2.14	26	19	66,089,600	103	39	3.96	56,539	223,981	290,654	143,026	176,451
26.02.2020	23.85	23.06	25.02	23.76	23.70	5,332,000	11,155,000	2.09	27	13	127,168,200	108	25	4.00	103,287	413,148	670,824	410,154	505,640
27.02.2020	23.80	23.00	26.00	23.73	23.71	2,717,500	6,292,500	2.32	27	22	64,676,500	115	34	4.26	54,717	233,056	299,859	123,523	139,232

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 – March 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
02.03.2020	23.96	21.00	30.00	23.98	23.95	2,717,500	4,905,000	1.80	20	17	65,111,300	89	40	4.45	55,112	245,250	319,197	159,853	195,761
03.03.2020	23.26	21.00	25.00	23.26	23.26	2,717,500	5,510,000	2.03	24	20	63,209,050	109	54	4.54	50,550	229,583	300,350	135,875	140,958
05.03.2020	23.90	21.00	26.00	23.92	23.88	2,717,500	5,119,000	1.88	24	20	64,948,250	81	36	3.38	63,198	213,292	229,538	135,875	150,569
09.03.2020	22.65	21.00	24.00	22.63	22.56	2,717,500	5,610,500	2.06	28	19	61,551,375	89	31	3.18	63,039	200,375	241,224	143,026	159,667
10.03.2020	23.76	21.00	25.00	23.65	23.64	2,717,500	5,917,000	2.18	23	16	64,567,800	83	19	3.61	71,289	257,261	253,471	169,844	190,713
11.03.2020	23.63	22.99	25.00	23.66	23.61	5,332,000	10,783,000	2.02	26	21	125,995,160	92	41	3.54	117,207	414,731	589,447	253,905	329,233
12.03.2020	22.85	21.00	25.00	22.76	22.69	2,717,500	8,527,000	3.14	27	19	62,094,875	101	25	3.74	84,426	315,815	457,097	143,026	182,303
16.03.2020	20.64	19.50	25.00	20.62	20.38	2,717,500	6,448,000	2.37	18	9	56,089,200	56	11	3.11	115,143	358,222	429,662	301,944	178,217
17.03.2020*						2,717,500													
19.03.2020	16.03	13.00	18.00	16.35	16.29	3,396,500	5,882,500	1.73	18	18	54,445,895	54	46	3.00	108,935	326,806	669,483	188,694	258,957
23.03.2020	14.60	0.01	20.00	14.50	14.47	3,396,500	6,436,500	1.90	21	15	49,588,900	75	24	3.57	85,820	306,500	367,776	226,433	202,282
24.03.2020	16.25	15.61	20.00	16.32	16.15	3,396,500	5,893,000	1.74	22	16	55,193,125	67	23	3.05	87,955	267,864	401,162	212,281	289,851
25.03.2020	16.95	16.50	19.00	17.18	17.03	5,332,000	6,140,500	1.15	19	17	90,377,400	65	45	3.42	94,469	323,184	336,435	313,647	343,665
26.03.2020	16.30	15.71	25.00	16.55	16.30	3,398,000	5,515,000	1.62	20	18	55,387,400	66	34	3.30	83,561	275,750	332,254	188,778	182,397
30.03.2020	16.32	15.71	18.00	16.23	16.10	2,717,500	4,768,000	1.75	22	9	44,349,600	57	12	2.59	83,649	216,727	249,324	301,944	259,788
31.03.2020	17.40	16.81	20.00	17.34	17.18	2,717,500	4,558,000	1.68	20	13	47,284,500	55	14	2.75	82,873	227,900	242,759	209,038	206,715

Note: volume variables reported in tCO<sub>2</sub>, 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 17.03/2020 auction was cancelled because of an insufficient volume of bids. As a result, the volumes were evenly distributed over the next four dates.

**Aviation Allowances – January 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	
15.01.2020	24.08	23.21	24.30	23.90	23.91	810,500	3,150,500	3.89	8	4	19,516,840	52	12	6.50	60,587	393,813	290,528	202,625	126,800	

Note: volume variables reported in tCO<sub>2</sub>, 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 – February 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 tCO<sub>2</sub>, 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 – March 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
11.03.2020	23.59	23.21	23.95	23.53	23.55	810,500	1,825,000	2.25	6	4	19,119,695	28	9	4.67	65,179	304,167	253,483	202,625	93,652

Note: volume variables reported in tCO<sub>2</sub>, 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>