## Auctions by the *Common Auction Platform* October, November, December 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:

1, 5, 6, 7(PL)<sup>1</sup>, 8, 12, 13, 15, 19, 20, 21(PL), 22, 26, 27, 29 October 2020;

2, 3, 4(PL), 5, 9, 10, 12, 16, 17, 18(PL), 19, 23, 24, 26, 30 November 2020;

1, 2(PL), 3, 7, 8, 10, 14 December 2020;

Aviation Allowances:

4 November 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.

<sup>&</sup>lt;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: <u>http://ec.europa.eu/clima/policies/ets/cap/auctioning/index\_en.htm</u>

#### 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.

Auctions by the Common Auction Platform – October, November, December 2020

## 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*.

<sup>&</sup>lt;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>&</sup>lt;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.

	Ge	neral Allowand	ces	Av	Aviation Allowances		
	Oct	Nov	Dec	Oct	Nov	Dec	
General							
Number of auctions	15	15	7	-	1	-	
Total volume auctioned	64 172 500	64 166 500	30 115 500	-	891 500	-	
Amount raised from the auctions (€)	1 617 594 100	1 680 636 490	890 427 730	-	21 244 445	-	
Average Auction Clearing Price (€/allowance)	25.21	26.19	29.57	-	23.83	-	
Total bid volume	102 287 000	98 183 000	45 640 500	-	2 026 000	-	
Average Cover ratio	1.6	1.5	1.5	-	2.3	-	
Monthly HHI	1 418	1 325	1 215	-	3 506	-	
Participation							
Number of eligible bidders	91	92	90	-	92	-	
Number of participating bidders <sup>(1)</sup>	35	38	33	-	10	-	
Number of successful bidders <sup>(1)</sup>	33	35	28	-	6	-	
Average number of bidders per auction	27.2	26.8	24.9	-	10.0	-	
Average number of successful bidders per auction	21.1	20.0	19.6	-	6.0	-	
Auction data				-		-	
Average total volume bid per bidder per auction	259 306	254 149	272 617	-	202 600	-	
Average bid size (volume per bid)	73 311	72 130	68 921	-	59 588	-	
Average volume won per bidder per auction	213 032	224 324	251 273	-	148 583	-	
Average range of bids (€)	7.64	6.27	6.29	-	1.65	-	

The October, November, December 2020 auctions at a glai	ice:
---------------------------------------------------------	------

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

Auctions by the Common Auction Platform – October, November, December 2020

## 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 December 2020 are EUR 49 083 735 355, and of *aviation allowances* EUR 480 388 340. 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>.

<sup>&</sup>lt;sup>4</sup> <u>https://www.eex.com/en/products/environmental-markets/emissions-auctions/overview</u>

## 1.1. General allowances auctions

#### 1.1.1. Clearing prices and participation - general allowances

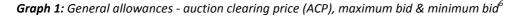
An overview of the auction results for the *participating Member States* and Poland is provided in Table 1.

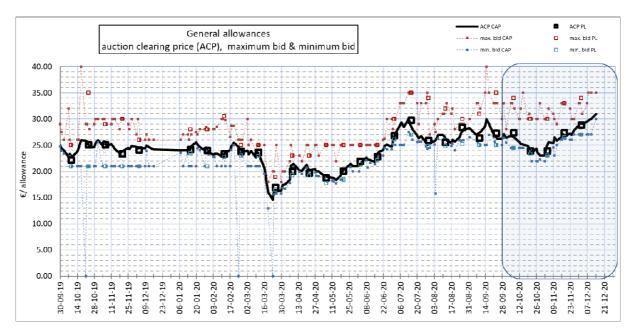
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio⁵	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
December 2020	30 115 500	45 640 500	890 427 730	1.5	24.9	19.6	29.57
November 2020	64 166 500	98 183 000	1 680 636 490	1.5	26.8	20.0	26.19
October 2020	64 172 500	102 287 000	1 617 594 100	1.6	27.2	21.1	25.21
September 2020	60 221 000	97 108 000	1 652 727 680	1.6	27.1	20.2	27.44
August 2020	27 002 500	53 053 500	717 255 960	2.0	22.7	18.5	26.56
July 2020	57 456 000	88 777 000	1 572 416 810	1.5	21.4	16.3	27.37
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
2020 total	560 046 500	951 992 500	13 723 091 055	1.7	24.3	18.2	24.50
2019 total	460 978 500	906 546 500	11 357 236 835	2.0	24.1	17.2	24.64
2018 total	642 477 000	1 662 693 000	9 917 590 730	2.6	25.6	18.0	15.44
2017 total	648 415 500	1 761 212 000	3 744 838 845	2.7	21.2	14.6	5.78
2016 total	474 261 000	1 092 400 000	2 496 870 295	2.3	19.0	13.4	5.26
2015 total	413 874 000	1 337 010 500	3 154 940 925	3.2	18.3	13.3	7.62
2014 total	335 052 000	1 796 711 000	1 977 712 120	5.4	17.6	11.9	5.90
2013 total	530 488 000	1 761 639 500	2 349 853 340	3.3	18.4	13.2	4.43

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

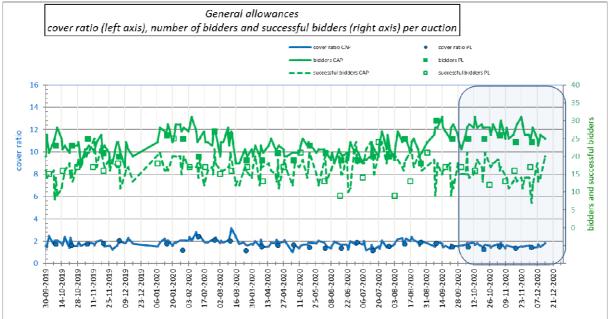
During October, November, December 2020, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for *general allowances* at the closure of the auction *bidding window* was on average EUR -0.09, - 0.03, 0.01 respectively, and this difference had a standard deviation of EUR 0.06, 0.09, 0.13 respectively.

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



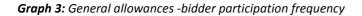


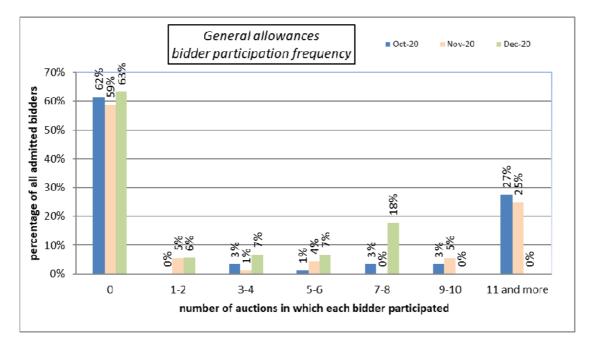
**Graph 2:** General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these 35, 38 and 33 different bidders participated in the auctions in respectively October, November, December 2020. Graph 3 indicates the participation frequency over these months.

<sup>&</sup>lt;sup>6</sup> Auctions on behalf of Poland were held on the following days: 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, 1/7/2020, 15/7/2020, 29/7/2020, 12/8/2020, 26/8/2020, 9/9/2020, 23/9/2020, 7/10/2020, 21/10/2020, 4/11/2020, 18/11/2020, 2/12/2020.





#### 1.1.2. Bidding behaviour - general allowances

Table 2 provides monthly data on the bids submitted over 15 months. See also Graph 4.

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>
December 2020	7	33	45 640 500	272 617	260 803	411 236	674	3.9	68 921
November 2020	15	38	98 183 000	254 149	243 027	394 064	1 404	3.5	72 130
October 2020	15	35	102 287 000	259 306	249 480	397 654	1 430	3.5	73 311
September 2020	14	39	97 108 000	266 879	256 222	457 614	1 298	3.4	76 570
August 2020	14	37	53 053 500	172 502	166 312	255 369	1 073	3.4	50 628
July 2020	16	33	88 777 000	280 052	258 825	452 807	1 145	3.3	82 137
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

Table 2: General Allowances - monthly statistics on the submitted bids

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

Auctions by the Common Auction Platform – October, November, December 2020

<sup>&</sup>lt;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>&</sup>lt;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>&</sup>lt;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),

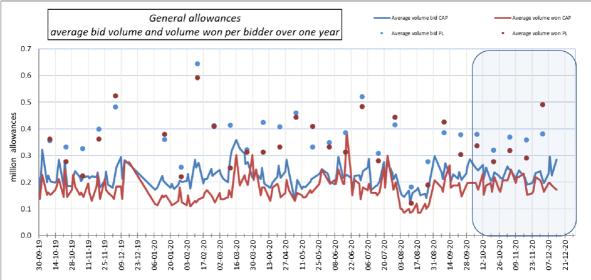
weighted by volume auctioned in each auction.

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

Month	Nr of auction <mark>s</mark>	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
December 2020	7	28	30 115 500	251 273	213 585	337 965	325
November 2020	15	35	64 166 500	224 324	214 604	340 736	590
October 2020	15	33	64 172 500	213 032	202 437	332 633	597
September 2020	14	34	60 221 000	230 018	210 563	332 460	592
August 2020	14	34	27 002 500	109 952	104 257	144 589	506
July 2020	16	31	57 456 000	252 224	217 636	331 763	555
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

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





<sup>&</sup>lt;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

Auctions by the Common Auction Platform – October, November, December 2020

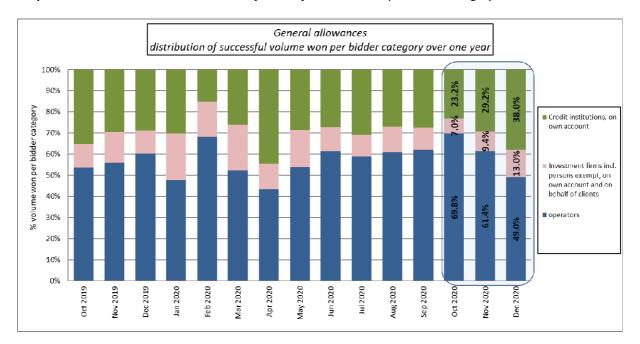
month / sum over whole month of number of bidders successful in each auction).

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

<sup>&</sup>lt;sup>15</sup> Auctions on behalf of Poland were held on the following days: 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, 1/7/2020, 15/7/2020, 29/7/2020, 12/8/2020, 26/8/2020, 9/9/2020, 23/9/2020, 7/10/2020, 21/10/2020, 4/11/2020, 18/11/2020, 2/12/2020.

#### 1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client<sup>16</sup> in October, November, December 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

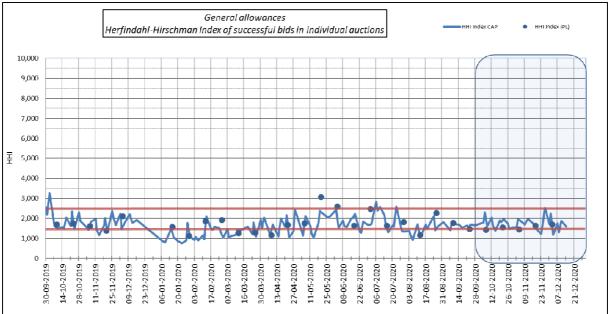
Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
		Operators (including Business groupings)	69.8%	8.4% points
October 2020	0%	Investment firms (including persons exempt)	7.0%	3.4% points
		Credit institutions	23.2%	9.8% points
_	0%	Operators (including Business groupings)	61.4%	11.4% points
November 2020		Investment firms (including persons exempt)	9.4%	3.8% points
		Credit institutions	29.2%	11.6% points
		Operators (including Business groupings)	49.0%	9.2% points
December 2020	0%	Investment firms (including persons exempt)	13.0%	6.0% points
		Credit institutions	38.0%	9.3% points

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

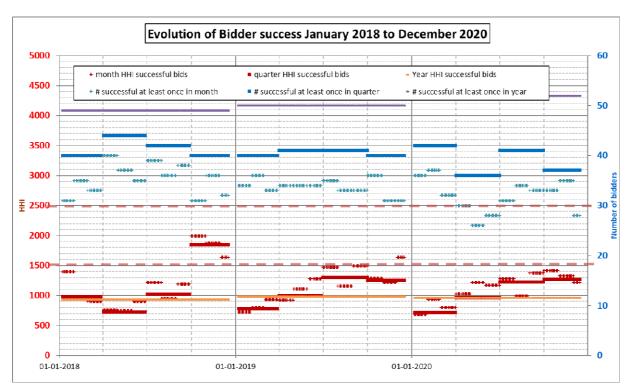
#### 1.1.4. Concentration - general allowances

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>&</sup>lt;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.

Month	Total auction volume	Total bid volume	Total revenue (€)	Average <i>Cover</i> ratio <sup>20</sup>	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
December 2020	-	-	-	-	-	-	-
November 2020	891 500	2 026 000	21 244 445	2.3	10	6	23.83
October 2020	-	-	-	-	-	-	-
September 2020	810 500	1 868 000	21 089 210	2.3	10	8	26.02
August 2020	-	-	-	-	-	-	-
July 2020	810 500	2 453 500	21 964 550	3.0	8	4	27.10
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	-	-	-	-	-	-	-
2020 total	5 049 500	13 474 500	119 509 185	2.7	8.0	5.0	23.67
2019 total	4 701 000	13 172 500	119 584 255	2.8	8.7	5.9	25.44
2018 total	3 941 000	10 830 000	73 956 020	2.7	8.8	6.1	18.77
2017 total	3 329 500	10 300 000	23 771 460	3.1	7.5	6.5	7.14
2016 total	4 219 000	17 973 500	22 266 205	4.3	10.4	4.6	5.28
2015 total	11 641 000	39 026 000	81 846 705	3.4	11.0	7.5	7.03
2014 total	6 570 500	28 201 500	39 454 510	4.3	13.0	8.0	6.00

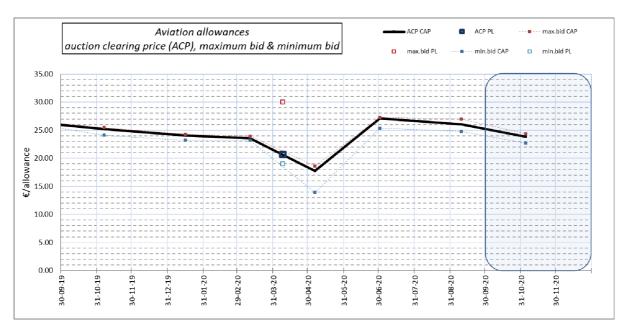
**Table 5**: Aviation allowances – main statistics on the results of the auctions per month

<sup>&</sup>lt;sup>18</sup> The auctions were suspended end 2012, see the Regulatory update published by the Commission on 16 November 2012 <u>http://ec.europa.eu/clima/news/articles/news 2012111601 en.htm</u>.

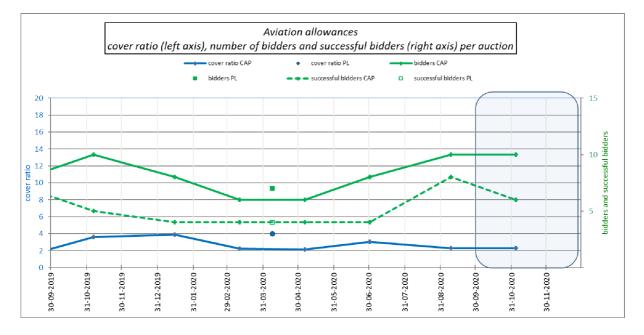
<sup>&</sup>lt;sup>19</sup> See also the regulatory update published by the Commission on 29 July 2014: <u>http://ec.europa.eu/clima/news/articles/news\_2014072901\_en.htm.</u>

<sup>&</sup>lt;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>

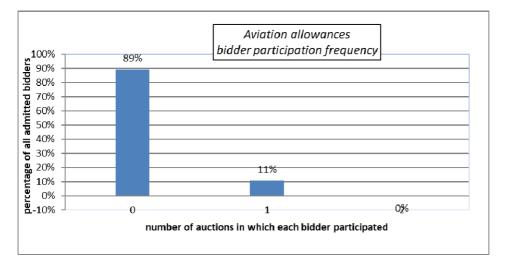


**Graph 9:** Aviation allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



 $<sup>^{21}</sup>$  Auctions on behalf of Poland were held on the following days: 8/4/2020.

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



No aviation allowances have been auctioned in October and December 2020.

#### 1.2.2 Bidding behaviour – aviation allowances

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

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>
December 2020	-	-	-	-	-	-	-	-	-
November 2020	1	10	2 026 000	202 600	202 600	246 771	34	3.4	59 588
October 2020	-	-	-	-	-	-	-	-	-
September 2020	1	10	1 868 000	186 800	186 800	226 053	31	3.1	60 258
August 2020	-	-	-	-	-	-	-	-	-
July 2020	1	8	2 453 500	306 688	306 688	259 914	28	3.5	87 625
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	-	-	-	-	-	-	-	-	-

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

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

Auctions by the Common Auction Platform – October, November, December 2020

<sup>&</sup>lt;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

<sup>&</sup>lt;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>&</sup>lt;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

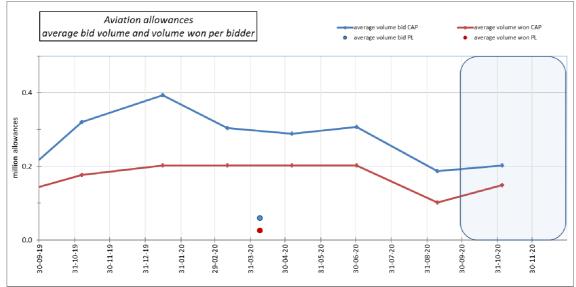
participating in that auction).<sup>25</sup> Monthly weighted average of the average bid size per bidder in each auction (total bid volume in each auction divided by number of bids in that auction), weighted by volume auctioned in each auction.

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

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
December 2020	-	-	-	-	-	-	-
November 2020	1	6	891 500	148 583	148 583	156 098	15
October 2020	-	-	-	-	-	-	-
September 2020	1	8	810 500	101 313	101 313	81 322	17
August 2020	-	-	-	-	-	-	-
July 2020	1	4	810 500	202 625	202 625	219 071	7
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	-	-	-	-	-	-	-

Table 7: Aviation Allowances – Monthly statistics on successful bids

(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>&</sup>lt;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.

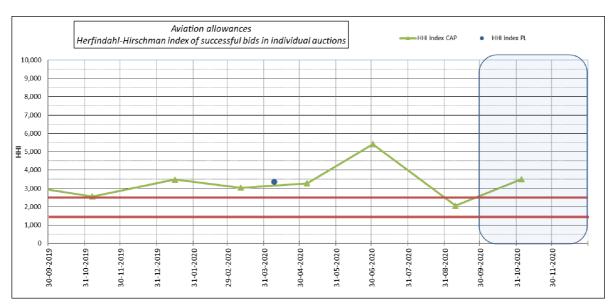
#### 1.2.3 Type of bidders – aviation allowances

In October, November, December 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>.

		Opera	ator	Investment	Credit	Business	Person exempt	
Number of parti	icipants	Stationary	Aircraft		Institution	grouping	from MiFID requirements	Total
Participants admitted	Oct 2020							142
to EEX's emissions spot secondary	Nov 2020				-			144
market	Dec 2020							144
Participants eligible to bid in the auctions	Oct 2020	64	1	12	5	-	9	91
	Nov 2020	65						92
to blu in the auctions	Dec 2020	64			4			90
(Of which:)	Oct 2020					-	3	
Participants eligible to bid in the auctions	Nov 2020	-	-	3	2			8
on behalf of clients	Dec 2020							
(Of which) Austion	Oct 2020					-	1	
(Of which:) Auction- only access	Nov 2020	2	-	-	-			3
	Dec 2020							

Table 8: Eligible participants to the auctions by category

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>&</sup>lt;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 bidding window.
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_enhtm.
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 Auctioning Regulation.
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 Auctioning Regulation.
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<sub>2</sub>-equivalent, see Article 3(a) of the ETS Directive, also referred to as EUA.
- Aviation Allowance Allowance to emit one tonne of CO<sub>2</sub>-equivalent that can be used by aircraft operators, *also referred to as EUAA*. See Article 12(2a) and (3) of the *ETS Directive*.
- 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 Auctioning Regulation 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 *Auctioning Regulation*.

- 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 *Auctioning Regulation* to bid for allowances in the auctions. See Article 18(2) of the *Auctioning Regulation*.
  - 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 Auctioning Regulation.
  - Spot secondary market Secondary market 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 Auctioning Regulation auctioned in 2012. Allowances are valid during a given period without distinction as regards the year within that period. See Article 13 of the *ETS Directive*.
- Common auction platform Auction platform appointed pursuant to Article 26(1) or (2) of the *Auctioning Regulation.* The common auction platform appointed pursuant to Article 26(2) of the Auctioning Regulation (also referred to as transitional common auction platform or TCAP) conducted auctions until 18 August 2016. The *common auction platform* referred to as CAP2 the second common auction platform or CAP2 was appointed, pursuant to Article 26(1) of the Auctioning Regulation, on 13 July 2016 until July 2021.

# Annex 1 Auction revenues per Member State from 12 November 2012 until December 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	903,523,120	12,522,165	916,045,285				
Belgium	1,685,178,300	15,015,615	1,700,193,915				
Bulgaria	1,701,176,875	4,599,295	1,705,776,170				
Croatia	347,916,060	2,787,370	350,703,430				
Cyprus	96,071,625	7,131,730	103,203,355				
Czech Republic	2,493,662,340	6,215,245	2,499,877,585				
Denmark	810,114,400	14,200,045	824,314,445				
Estonia	534,284,905	789,945	535,074,850				
Finland	1,085,251,710	11,059,505	1,096,311,215				
France	3,553,812,530	68,650,465	3,622,462,995				
Greece	2,349,320,165	25,137,005	2,374,457,170				
Hungary	1,001,935,385	5,061,590	1,006,996,975				
Iceland	60,192,145	4,688,395	64,880,540				
Ireland	604,480,735	11,195,545	615,676,280				
Italy	6,290,406,145	74,635,285	6,365,041,430				
Latvia	188,197,655	2,699,475	190,897,130				
Lichtenstein	1,312,265	0	1,312,265				
Lithuania	370,963,080	1,422,490	372,385,570				
Luxemburg	80,361,045	1,709,475	82,070,520				
Malta	69,780,915	2,845,890	72,626,805				
The Netherlands	2,174,090,280	23,178,800	2,197,269,080				
Norway	1,197,354,935	45,435,250	1,242,790,185				
Poland	8,004,108,770	10,911,495	8,015,020,265				
Portugal	1,188,521,295	15,167,045	1,203,688,340				
Romania	3,174,336,275	7,998,645	3,182,334,920				
Slovak Republic	1,083,870,075	986,775	1,084,856,850				
Slovenia	302,080,535	705,850	302,786,385				
Spain	5,803,720,045	85,126,300	5,888,846,345				
Sweden	593,888,740	18,511,650	612,400,390				
Innovation Fund	1,333,823,005	0	1,333,823,005				
TOTAL	49,083,735,355	480,388,340	49,564,123,695				

								G	ienera	l Allowan	ces – October	<sup>-</sup> 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
01.10.2020	26.41	25.51	28.00	26.45	26.40	3,952,000	6,282,000	1.59	22	20	104,372,320	86	42	3.91	73,047	285,545	421,667	197,600	306,990
05.10.2020	26.79	24.50	33.00	26.87	26.70	3,952,000	6,730,000	1.70	26	20	105,874,080	97	37	3.73	69,381	258,846	418,536	197,600	318,128
06.10.2020	26.68	24.50	33.00	26.68	26.52	3,952,000	7,095,500	1.80	28	20	105,439,360	96	34	3.43	73,911	253,411	450,389	197,600	376,047
07.10.2020	27.43	24.50	34.00	27.46	27.40	6,398,500	9,494,500	1.48	25	19	175,510,855	102	43	4.08	93,083	379,780	513,683	336,763	443,131
08.10.2020	26.40	24.50	32.00	26.49	26.33	3,952,000	7,075,000	1.79	29	23	104,332,800	101	41	3.48	70,050	243,966	397,767	171,826	283,768
12.10.2020	25.54	24.50	30.00	25.46	25.35	3,952,000	7,421,000	1.88	28	17	100,934,080	110	33	3.93	67,464	265,036	444,471	232,471	365,008
13.10.2020	25.30	24.50	32.00	25.49	25.27	3,952,000	6,552,500	1.66	31	26	99,985,600	116	53	3.74	56,487	211,371	335,381	152,000	274,147
15.10.2020	25.15	24.50	35.01	25.42	25.04	3,952,000	7,146,500	1.81	28	21	99,392,800	92	28	3.29	77,679	255,232	345,316	188,190	261,042
19.10.2020	24.85	24.01	30.00	24.89	24.77	3,952,000	5,951,000	1.51	29	20	98,207,200	78	34	2.69	76,295	205,207	315,380	197,600	330,840
20.10.2020	24.44	23.81	31.00	24.65	24.46	3,952,000	5,763,500	1.46	28	24	96,586,880	79	42	2.82	72,956	205,839	333,231	164,667	301,885
21.10.2020	23.96	23.31	30.00	24.34	24.01	6,398,500	8,018,000	1.25	25	23	153,308,060	92	55	3.68	87,152	320,720	485,287	278,196	447,035
22.10.2020	23.60	22.00	30.00	23.58	23.41	3,952,000	6,648,500	1.68	28	18	93,267,200	87	23	3.11	76,420	237,446	380,235	219,556	348,915
26.10.2020	24.33	22.00	30.00	24.50	24.30	3,952,000	6,279,000	1.59	28	23	96,152,160	101	46	3.61	62,168	224,250	418,791	171,826	297,841
27.10.2020	23.55	22.00	30.00	23.73	23.62	3,952,000	5,633,000	1.43	26	24	93,069,600	90	55	3.46	62,589	216,654	317,959	164,667	262,685
29.10.2020	23.07	22.25	33.00	23.33	22.95	3,951,500	6,197,000	1.57	29	19	91,161,105	103	31	3.55	60,165	213,690	313,069	207,974	286,900

#### Annex 2 Results of individual auctions on behalf of *participating Member States* and Poland in October – December 2020

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

#### 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 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 volume for the month / sum over whole month of number of bidders successful in each auction volume for 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.

								G	eneral	Allowand	ces –Novembe	er 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
02.11.2020	23.02	22.00	30.00	23.07	22.89	3,951,500	6,743,500	1.71	26	19	90,963,530	101	33	3.88	66,767	259,365	365,261	207,974	293,787
03.11.2020	24.40	23.00	30.00	24.39	24.26	3,951,500	6,515,000	1.65	26	18	96,416,600	78	24	3.00	83,526	250,577	375,740	219,528	346,833
04.11.2020	23.99	23.00	30.00	24.37	23.91	6,398,500	9,626,500	1.50	26	20	153,500,015	102	42	3.92	94,377	370,250	552,668	319,925	445,266
05.11.2020	25.55	23.00	32.00	25.84	25.34	3,951,500	7,277,000	1.84	30	16	100,960,825	100	27	3.33	72,770	242,567	394,367	246,969	352,551
09.11.2020	25.41	24.61	31.00	25.60	25.43	3,951,500	5,359,500	1.36	25	20	100,407,615	79	43	3.16	67,842	214,380	325,880	197,575	305,772
10.11.2020	26.47	23.00	30.00	26.43	26.40	3,951,500	6,337,000	1.60	28	18	104,596,205	85	32	3.04	74,553	226,321	369,697	219,528	332,859
12.11.2020	25.90	25.00	29.00	25.87	25.73	3,951,500	6,111,500	1.55	25	18	102,343,850	83	29	3.32	73,633	244,460	408,261	219,528	349,311
16.11.2020	26.67	26.03	33.00	26.93	26.58	3,951,500	5,799,500	1.47	26	17	105,386,505	94	31	3.62	61,697	223,058	343,217	232,441	326,064
17.11.2020	27.12	26.50	33.00	27.31	27.02	3,951,500	5,871,000	1.49	27	19	107,164,680	90	35	3.33	65,233	217,444	345,180	207,974	302,066
18.11.2020	27.42	26.50	33.00	27.64	27.48	6,398,500	8,631,000	1.35	24	22	175,446,870	91	56	3.79	94,846	359,625	563,682	290,841	471,963
19.11.2020	26.72	26.26	33.00	27.17	26.76	3,951,500	5,548,000	1.40	29	26	105,584,080	99	60	3.41	56,040	191,310	308,262	151,981	252,560
23.11.2020	27.25	26.00	32.00	27.41	27.25	3,951,500	6,090,000	1.54	31	25	107,678,375	105	53	3.39	58,000	196,452	301,268	158,060	227,874
24.11.2020	26.97	26.06	30.00	27.01	26.95	3,951,500	5,933,500	1.50	29	24	106,571,955	103	49	3.55	57,607	204,603	357,664	164,646	284,094
26.11.2020	27.77	27.00	30.00	27.72	27.65	3,951,500	6,075,000	1.54	26	18	109,733,155	97	29	3.73	62,629	233,654	422,885	219,528	413,389
30.11.2020	28.82	27.00	33.00	28.96	28.78	3,951,500	6,265,000	1.59	26	19	113,882,230	97	47	3.73	64,588	240,962	367,099	207,974	312,850

(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 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 volume for the month / sum over whole month of number of bidders successful in each 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.

								G	eneral	Allowand	es – Decemb	er 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
01.12.2020	29.24	27.00	33.00	29.38	29.31	3,951,500	5,357,000	1.36	24	20	115,541,860	89	60	3.71	60,191	223,208	353,786	197,575	370,024
02.12.2020	28.90	27.00	34.00	28.93	28.67	6,398,500	9,157,500	1.43	24	13	184,916,650	108	35	4.50	84,792	381,563	528,087	492,192	543,299
03.12.2020	29.10	27.00	31.00	29.12	29.05	3,951,500	5,509,500	1.39	28	24	114,988,650	94	39	3.36	58,612	196,768	256,098	164,646	223,987
07.12.2020	29.49	27.00	33.00	29.55	29.49	3,951,500	5,814,500	1.47	25	20	116,529,735	93	46	3.72	62,522	232,580	350,435	197,575	313,674
08.12.2020	29.69	27.00	35.00	29.82	29.69	3,951,500	6,804,000	1.72	23	20	117,320,035	88	44	3.83	77,318	295,826	323,633	197,575	250,030
10.12.2020	30.04	27.00	35.00	30.34	30.02	3,951,500	5,872,500	1.49	26	21	118,703,060	104	51	4.00	56,466	225,865	351,387	188,167	321,720
14.12.2020	30.92	30.00	35.00	31.05	30.93	3,959,500	7,125,500	1.80	25	23	122,427,740	98	50	3.92	72,709	285,020	592,590	172,152	279,648

(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 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 volume for the month / sum over whole month of number of bidders successful in each 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 – October 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	volume bid	standard deviation of total volume bid per bidder	volume	Standard deviation of volume won per bidder
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(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 bid, by each bidder in each auction, over the whole month. (6): Average over the whole month of the 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 volume for the month / sum over whole month of number of bidders successful in each 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 – November 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	volume	Standard deviation of volume won per bidder
04.11.2020	23.83	22.70	24.35	23.74	23.76	891,500	2,026,000	2.27	10	6	21,244,445	34	15	3.40	59,588	202,600	246,771	148,583	156,098

(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 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 volume for the month / sum over whole month of number of bidders successful in each 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 – December 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		Avg nr of bids per bidder	Average bid size	volume bid		Average volume won per bidder	Standard deviation of volume won per bidder
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(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 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 volume for the month / sum over whole month of number of bidders successful in each 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: <u>https://www.eex.com/en/products/environmental-markets/emissions-auctions/overview</u>