



AUCTIONS BY THE COMMON AUCTION PLATFORM

The world's largest auctioning of emissions allowances

January to March 2017

Auctions by the *Common Auction Platform*

January, February, March 2017

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:

9, 10, 12, 16, 17, 19, 23, 24, 26, 30 and 31 January 2017;

2, 6, 7, 9, 13, 14, 16, 20, 21, 23, 27 and 28 February 2017;

2, 6, 7, 9, 13, 14, 16, 20, 21, 23, 27, 28, 29(PL)¹, and 30 March 2017;

Aviation Allowances:

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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 2.8 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.

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.

¹ Auctions conducted by EEX for Poland.

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

Editor's note:

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

Methodology: For reasons of confidentiality and proper enforcement of the applicable rules, the report refers to reporting on the auctions held based on information provided by EEX. EEX is consulted before each publication. Any data not directly related to the auctions is based only on public reports.

The report is in accordance with the template agreed with the participating Member States.

Disclaimer: The authors have made every effort to ensure that the information provided is complete, correct and precise for the reporting period. Nevertheless, the report is based on limited information available to the authors in a market context where much information has to remain confidential. The authors did not actively verify the information and EEX's compliance with the specific rules and provisions applicable under European or national law. Therefore, the authors and the Member States on whose behalf this report was drafted deny any responsibility or liability whatsoever for its contents, regardless of the nature of such contents. Any reliance by any person or entity on the information provided in this report is solely at that person's or entity's own risk. Monthly averages provided are weighted by each auction's auction volume, unless otherwise indicated.

Glossary: terms and expressions written in *italics* are included in the glossary.

Introduction

The reports include data on the auctions performed by the *common auction platforms* on behalf of the *participating Member States* and Poland.

The auctions for the *participating Member States* were conducted by EEX in its capacity as *Common Auction Platform* appointed pursuant to Article 26(2) of the Auctioning Regulation (also referred to as transitional common auction platform or TCAP) until 18 August 2016 and since then by EEX appointed as *Common Auction Platform* pursuant to Article 26(1) of the Auctioning Regulation (also referred to as second common auction platform or CAP2).

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

The Member States of the European Free Trade Association (EFTA) that are Party to the European Economic Area (EEA)³ have also stated their intention to make use of the *Common Auction Platform* by aggregating their volumes to those auctioned on behalf of the *participating Member States*. The preparations for this are on-going.

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

³ Iceland, Liechtenstein and Norway.

Executive summary

In the reporting period, EEX, in its capacity as the *Common Auction Platform* (CAP2), conducted auctions of *general allowances* for the *third trading period* on behalf of the *participating Member States*. No aviation allowances have been auctioned during this period on behalf of the *participating Member States*. During this period EEX held an auction for *general allowances* on behalf of Poland.

All auctions were held successfully, and 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 2017 auctions at a glance:

	General Allowances			Aviation Allowances		
	January	February	March	January	February	March
General				-	-	
Number of auctions	11	12	14	-	-	
Total volume auctioned	46 876 500	51 138 000	61 138 000	-	-	-
Amount raised from the auctions (€)	239 624 145	261 528 255	308 415 180	-	-	-
Average Auction Clearing Price (€/allowance)	5.1	5.1	5.1	-	-	-
Total bid volume	142 746 000	140 724 500	168 711 500	-	-	-
Average <i>Cover ratio</i>	3.0	2.8	2.8	-	-	-
Monthly HHI	1 717	1 393	1 131	-	-	-
Participation				-	-	
Number of eligible bidders	67	67	67	-	-	-
Number of participating bidders ⁽¹⁾	27	31	35	-	-	-
Number of successful bidders ⁽¹⁾	24	27	31	-	-	-
Average number of bidders per auction	19.7	19.8	21.1	-	-	-
Average number of successful bidders per auction	13.1	15.0	15.6	-	-	-
Auction data				-	-	
Average total volume bid per bidder per auction	660 048	593 056	576 767	-	-	-
Average bid size (volume per bid)	135 614	124 050	139 940	-	-	-
Average volume won per bidder per auction	339 959	292 512	293 359	-	-	-
Average range of bids (€)	2.28	2.29	2.38	-	-	-

(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 2017 are EUR 11 150 545 470, and of *aviation allowances* EUR 143 567 420. Further data are provided in Annex 1.

Information on *general allowances'* auctions is provided in section 1.1, and on *aviation allowances* in section 1.2 hereafter. Detailed information per auction covered by the present report is available in the EEX website⁴.

Please note that in all parts of this report monthly averages provided are weighted by each auction's auction volume, unless otherwise indicated.

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

1.1. General allowances auctions

1.1.1. Clearing prices and participation - general allowances

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

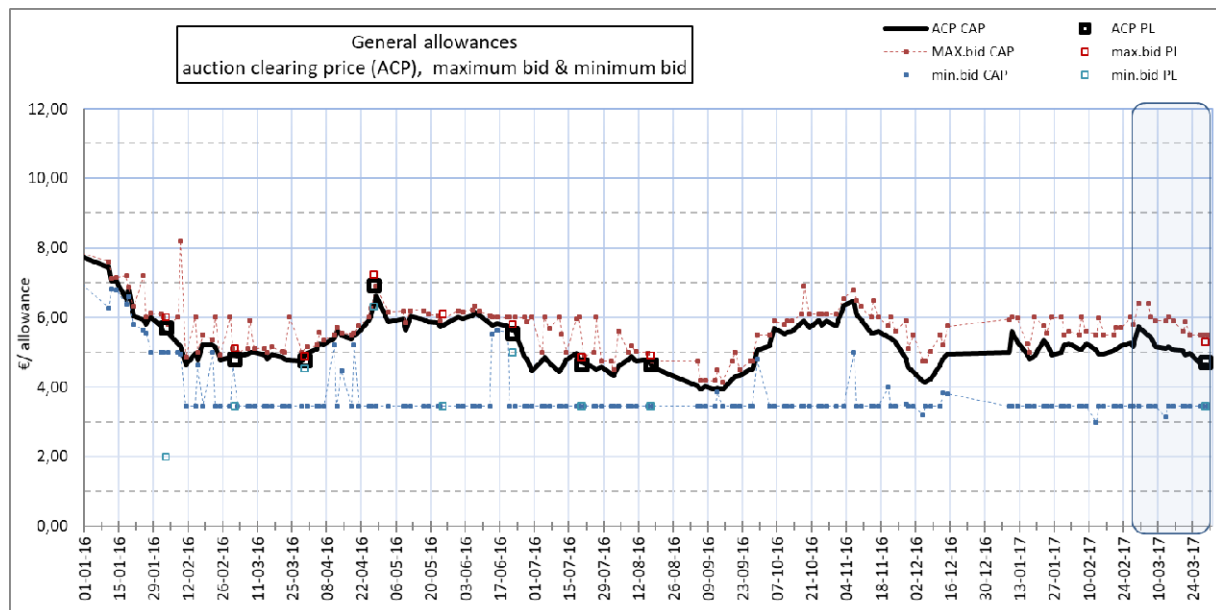
Table 1: General allowances - main statistics on the results of the auctions per month

Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ⁵	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
March 2017	61 138 000	168 711 500	239 624 145	2.8	21.1	15.6	5.05
February 2017	51 138 000	140 724 500	261 528 255	2.8	19.8	15.0	5.11
January 2017	46 876 500	142 746 000	308 415 180	3.0	19.7	13.1	5.11
December 2016	25 668 500	62 485 500	115 187 920	2.4	17.6	10.7	4.49
November 2016	43 968 000	100 554 000	245 707 840	2.3	17.3	13.6	5.59
October 2016	43 968 000	115 140 000	250 397 760	2.6	18.1	11.3	5.70
September 2016	43 968 000	92 219 000	185 984 640	2.1	18.4	13.9	4.23
August 2016	16 344 500	50 355 000	75 727 925	3.1	16.7	10.6	4.63
July 2016	45 507 500	103 410 500	212 877 125	2.3	18.1	12.2	4.68
June 2016	48 932 500	119 140 000	273 801 625	2.4	19.2	13.2	5.60
May 2016	30 825 000	56 918 000	181 251 000	1.8	16.8	13.0	5.88
April 2016	44 626 000	93 734 000	254 493 440	2.1	18.8	13.0	5.70
March 2016	51 577 000	117 768 000	251 299 820	2.3	20.7	14.8	4.87
February 2016	48 051 000	106 282 000	249 230 700	2.2	22.7	17.2	5.19
January 2016	30 825 000	74 934 000	200 910 500	2.4	21.6	14.1	6.52
2016 total	474,261,000	1,092,400,000	2,496,870,295	2.3	19.0	13.4	5.26
2015 total	413 874 000	1 337 010 500	3 154 940 925	3.2	18.3	13.3	7.62
2014 total	335 052 000	1 796 711 000	1 977 712 120	5.4	17.6	11.9	5.90
2013 total	530 488 000	1 761 639 500	2 349 853 340	3.3	18.4	13.2	4.43

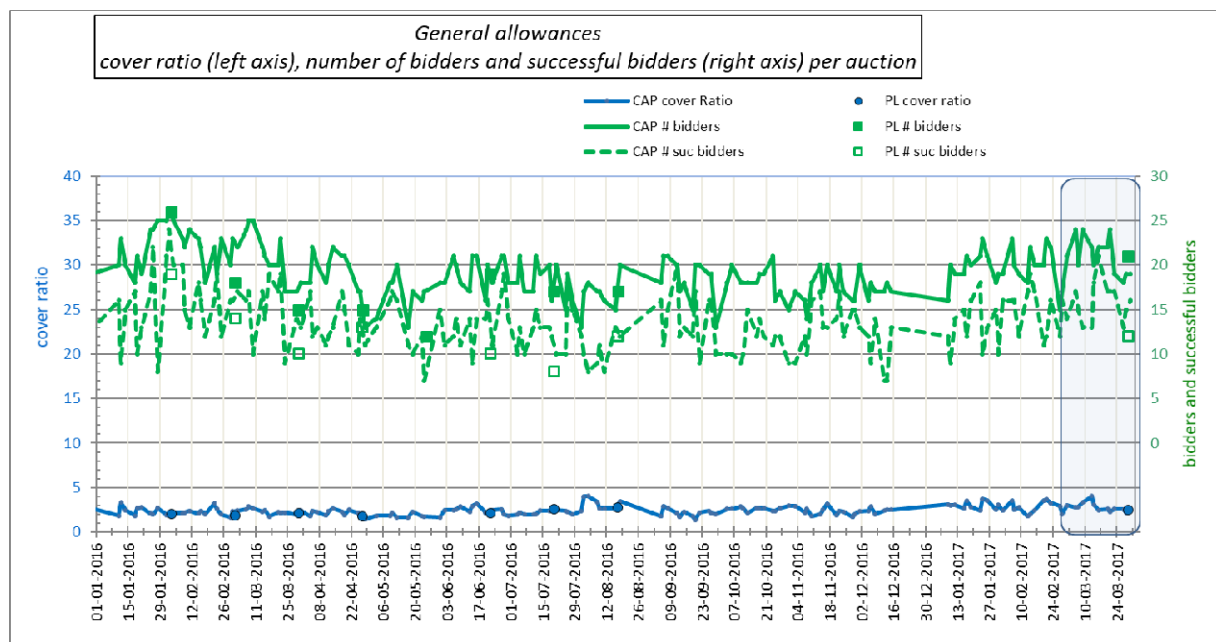
During January, February, March 2017, the difference between the Auction Clearing Prices and the mean of the *best-ask* and *best-bid* prices on the EEX *spot secondary market* for *general allowances* at the closure of the auction *bidding window* was on average EUR -0.02, -0.02, 0.01 respectively, and this difference had a standard deviation of EUR 0.01, 0.04, 0.28 respectively.

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

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



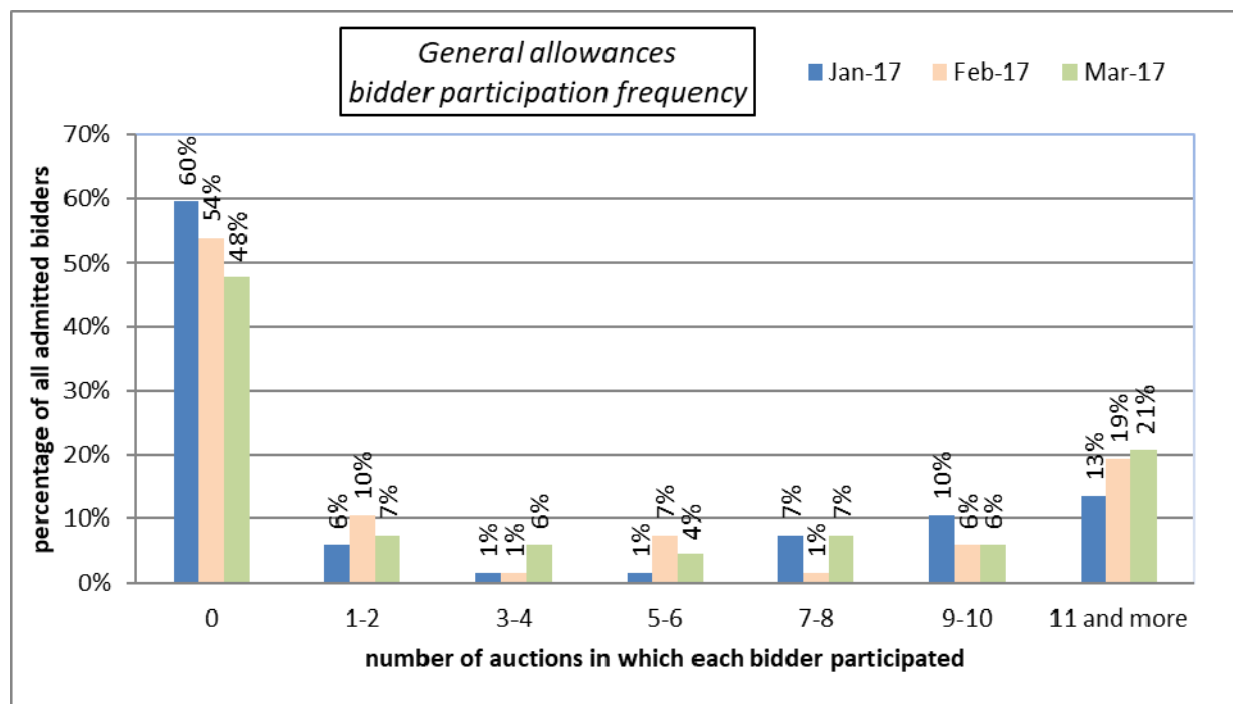
Graph 2: General allowances - cover ratio (left axis), number of bidders and successful bidders (right axis) per auction



The number of eligible bidders is provided in Section 2. Out of these, 27, 31 and 35 different bidders participated in the auctions in respectively January, February, March 2017. Graph 3A indicates the participation frequency over these months.

⁶ Auctions on behalf of Poland were held on the following days: 3/2/2016, 2/3/2016, 30/3/2016, 27/4/2016, 25/5/2016, 22/6/2016, 20/7/2016, 17/8/2016 and 29/3/2017.

Graph 3A: General allowances -bidder participation frequency



1.1.2. Bidding behaviour - general allowances

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

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

Month	Nr of auctions	Nr of bidders ⁽¹⁾	Total volume of bids	Average total volume bid per bidder per auction ⁷	Average total volume bid per bidder per auction over the month ⁸	standard deviation of total volume bid per bidder per auction over the month ⁹	Total monthly nr of bids	Average nr. of bids per bidder per auction ¹⁰	Average bid size ¹¹
March 2017	14	35	168 711 500	576 767	571 903	823 774	1 219	4.1 ⁺⁺	139 940
February 2017	12	31	140 724 500	593 055	591 279	860 695	1 138	4.8 ⁺⁺	124 050
January 2017	11	27	142 746 000	660 048	657 816	893 912	1 057	4.9 ⁺⁺	135 614
December 2016	7	26	62 485 500	509 661	508 012	707 571	531	4.3 ⁺⁺	121 257
November 2016	12	31	100 554 000	487 443	483 433	662 613	837	4.0 ⁺⁺	120 567
October 2016	12	26	115 140 000	535 857	530 599	788 774	865	4.0 ⁺⁺	134 484
September 2016	12	27	92 219 000	420 765	417 281	584 075	823	3.7 ⁺⁺	114 146
August 2016	9	27	50 355 000	339 877	335 700	404 083	531	3.5 ⁺⁺	95 870
July 2016	13	28	103 410 500	443 747	438 180	493 818	970	4.1 ⁺⁺	107 529
June 2016	14	29	119 140 000	445 334	442 900	537 011	979	3.7 ⁺⁺	121 595
May 2016	9	28	56 918 000	382 049	376 940	435 872	507	3.4 ⁺⁺	113 975
April 2016	13	29	93 734 000	384 877	384 156	468 364	850	3.5 ⁺⁺	111 049
March 2016	15	35	117 768 000	384 552	379 897	457 186	1147	3.7 ⁺⁺	105 729
February 2016	14	30	106 282 000	338 333	334 220	461 502	1104	3.5 ⁺⁺	98 299
January 2016	9	32	74 394 000	386 086	383 474	547 998	692	3.6 ⁺⁺	110 917

++: indicates simple average

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

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

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

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

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

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

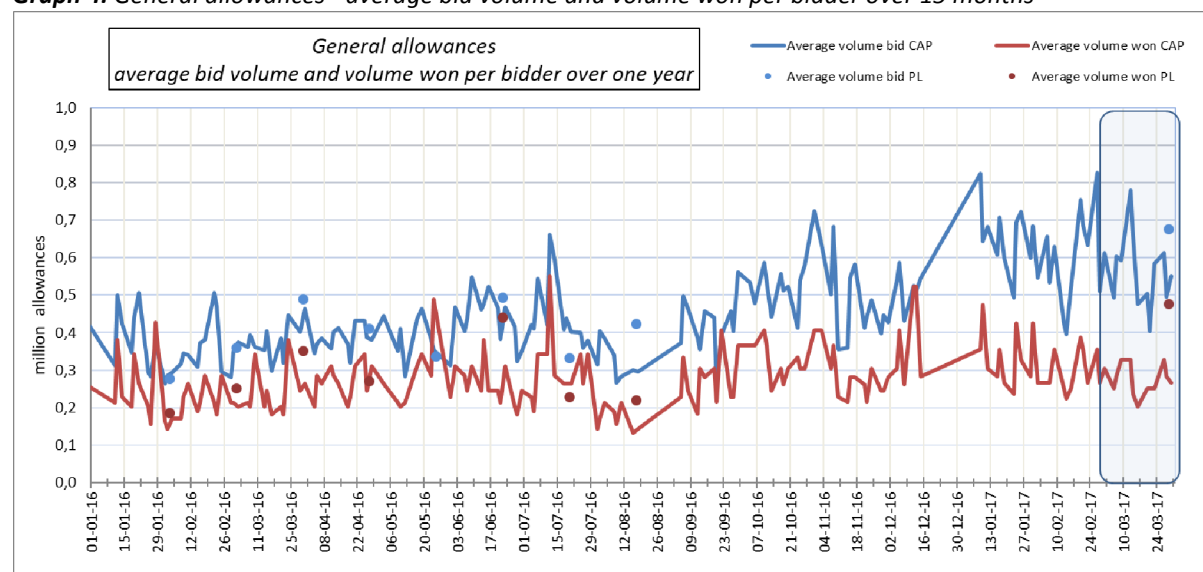
Table 3 provides monthly data on successful bids over 15 months. See also Graph 4.

Table 3: General Allowances - monthly statistics on successful bids

Month	Nr of auctions	Nr of successful bidders ⁽¹⁾	Total auction volume	Average volume won per bidder per auction ¹²	Average volume won per bidder per auction over the month ¹³	Standard deviation of volume won per bidder per auction over the month ¹⁴	Total monthly nr of successful bids
March 2017	14	31	61 138 000	293 359	280 450	344 970	465
February 2017	12	27	51 138 000	292 512	284 100	366 068	455
January 2017	11	24	46 876 500	339 959	325 531	431 829	334
December 2016	7	22	25 668 500	369 401	342 247	514 424	160
November 2016	12	30	43 968 000	279 848	269 742	366 801	353
October 2016	12	23	43 968 000	331 152	323 294	401 178	260
September 2016	12	27	43 968 000	277 426	263 281	339 773	355
August 2016	9	24	16 344 500	178 411	172 047	211 858	152
July 2016	13	28	45 507 500	305 955	284 422	328 532	262
June 2016	14	29	48 932 500	279 016	263 078	300 660	326
May 2016	9	26	30 825 000	283 328	263 462	292 574	256
April 2016	13	24	44 626 000	270 885	264 059	255 486	287
March 2016	15	31	51 577 000	245 210	232 329	256 557	416
February 2016	14	27	48 051 000	207 756	199 382	213 657	468
January 2016	9	30	30 825 000	268 407	242 717	293 170	264

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

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



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

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

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

¹⁵ Auctions on behalf of Poland were held on the following days: 3/2/2016, 2/3/2016, 30/3/2016, 27/4/2016, 25/5/2016, 22/6/2016, 20/7/2016, 17/8/2016 and 29/3/2017.

1.1.3. Type of bidders - general allowances

The volume submitted by intermediaries on behalf of a client¹⁶ in January, February and March 2017 was respectively 0.07%, 0.13% and 0.89 %, 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

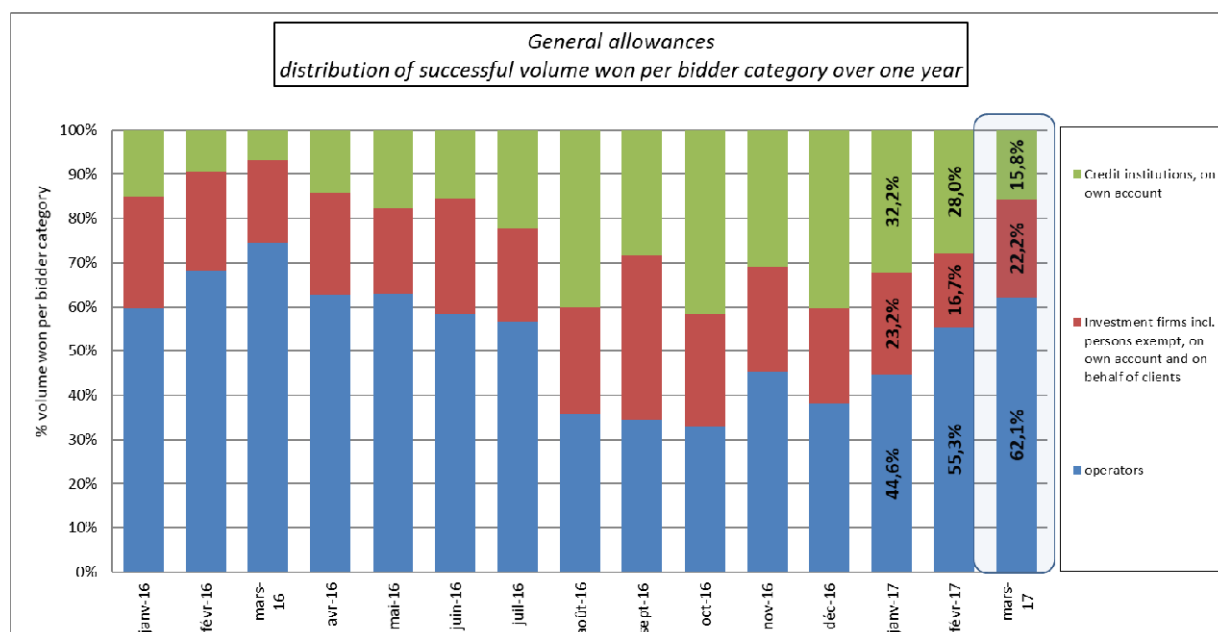


Table 4: General allowances – distribution of volume won per bidder category and their standard deviations

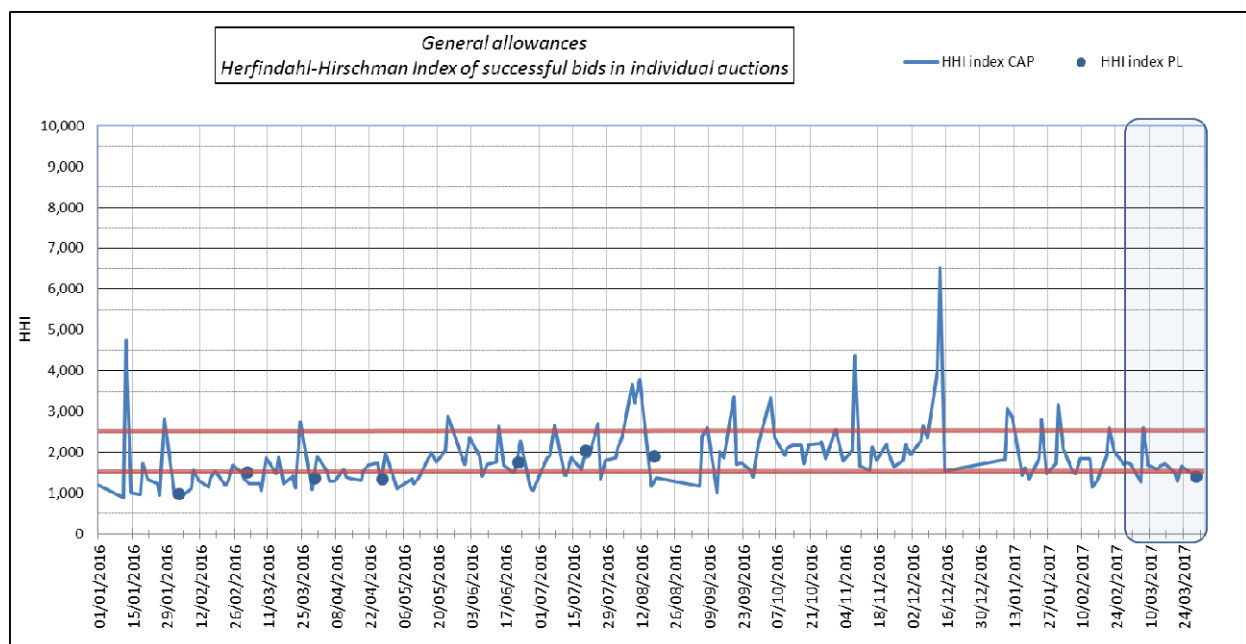
Month	% volume won coming from bidding on behalf of a client	Bidder category	% volume won	Standard deviation of % of volume won
January 2017	0.12 %	Operators (including Business groupings)	44.6 %	11.8 % points
		Investment firms (including persons exempt)	23.2 %	11.2 % points
		Credit institutions	32.2 %	11.0 % points
February 2017	0.12 %	Operators (including Business groupings)	55.3 %	10.5 % points
		Investment firms (including persons exempt)	16.7 %	7.5 % points
		Credit institutions	28.0 %	11.5 % points
March 2017	2.30 %	Operators (including Business groupings)	62.1 %	13.8 % points
		Investment firms (including persons exempt)	22.2 %	6.3 % points
		Credit institutions	15.8 %	14.7 % points

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

1.1.4. Concentration - general allowances

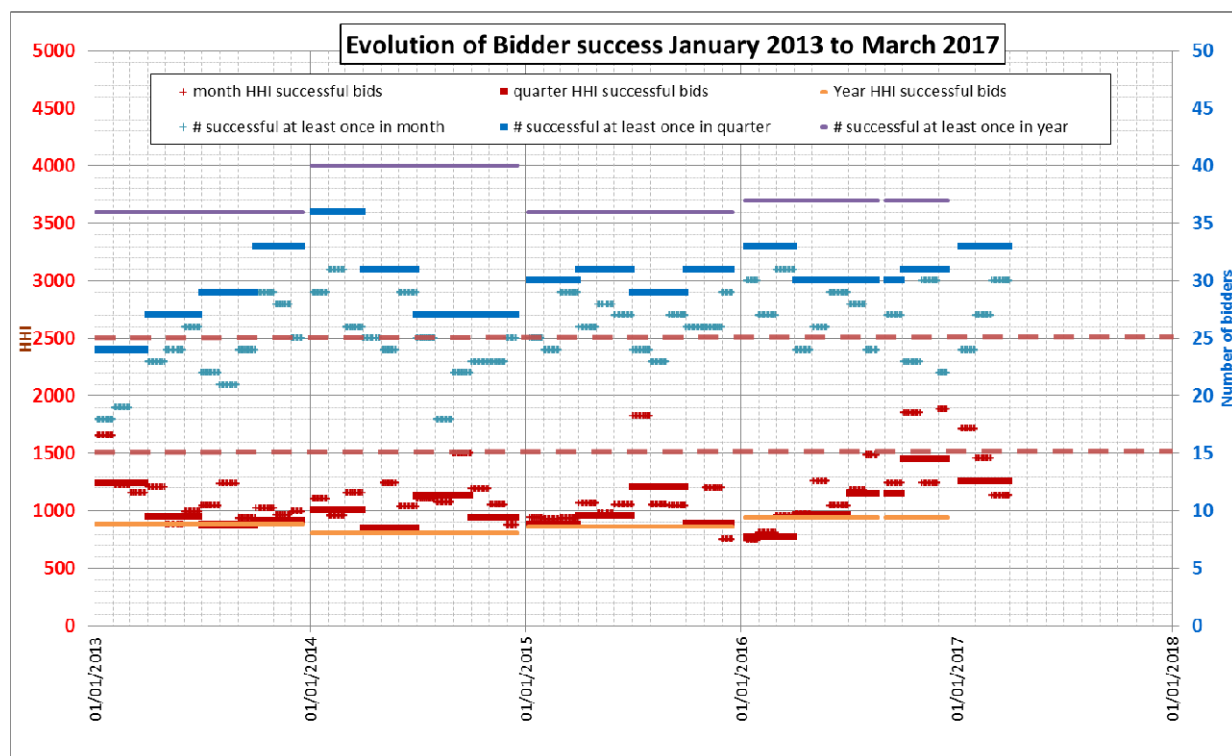
The Herfindahl-Hirschman Index (HHI) of successful bids is used to measure market concentration¹⁷. The HHI ranges from a value of 0 (perfect competition) to 10 000 (a single buyer). A common interpretation of the HHI is that a score below 1 500 is 'not-concentrated', between 1 500 and 2 500 is 'moderately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

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



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

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



1.2 Aviation allowances auctions

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

In the reporting period no aviation allowances were held pending further clarity on the Commission proposal on concerning the future scope of the EU ETS for aviation.

1.2.1 Clearing prices and participation – aviation allowances

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

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

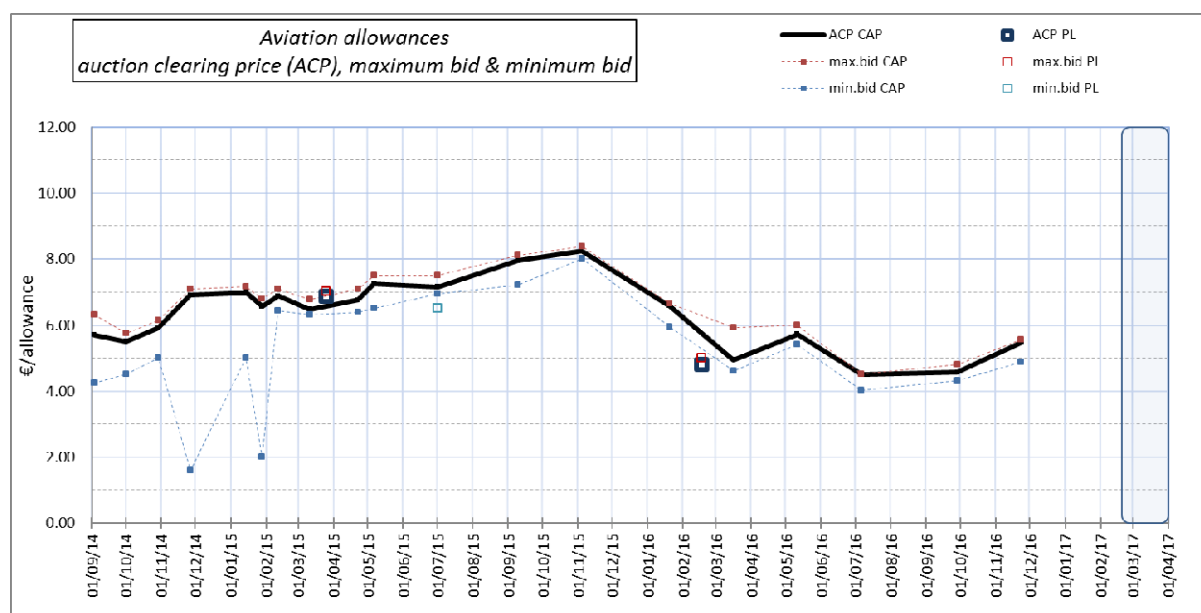
Month	Total auction volume	Total bid volume	Total revenue (€)	Average Cover ratio ²⁰	Average number of bidders	Average number of successful bidders	Average auction clearing price (€)
March 2017	-	-	-	-	-	-	-
February 2017	-	-	-	-	-	-	-
January 2017	-	-	-	-	-	-	-
December 2016	-	-	-	-	-	-	-
November 2016	681 500	2 146 500	3 720 990	3.2	10.0	6.0	5.46
October 2016	-	-	-	-	-	-	-
September 2016	683 500	1 993 000	3 123 595	2.9	11.0	5.0	4.57
August 2016	-	-	-	-	-	-	-
July 2016	683 500	2 539 000	3 068 915	3.7	10.0	4.0	4.49
June 2016	-	-	-	-	-	-	-
May 2016	683 500	3 140 500	3 909 620	4.6	11.0	5.0	5.72
April 2016	-	-	-	-	-	-	-
March 2016	683 500	2 625 500	3 376 490	3.8	8.0	3.0	4.94
February 2016	120 000	1 663 000	576 000	13.9	12.0	2.0	4.80
January 2016	683 500	3 866 000	4 490 595	5.7	12.0	5.0	6.57
2016 total	4 219 000	17 973 500	22 266 205	4.3	10.4	4.6	5.28
2015 total	11 641 000	39 026 000	81 846 705	3.4	11.0	7.5	7.03
2014 total	6 570 500	28 201 500	39 454 510	4.3	13.0	8.0	6.00

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

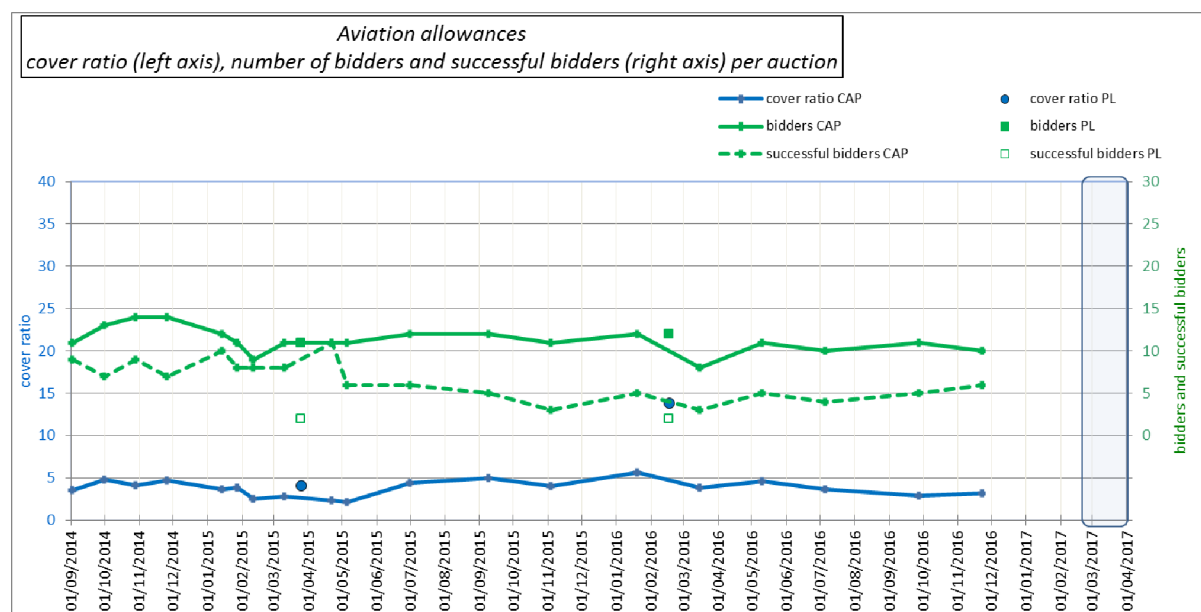
¹⁹ See also the regulatory update published by the Commission on 29 July 2014; http://ec.europa.eu/clima/news/articles/news_2014072901_en.htm.

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

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



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



²¹ Auctions on behalf of Poland were held on the following days: 25/3/2015 and 17/2/2016.

Graph 10: Aviation allowances – bidder participation frequency

January

No aviation allowances have been auctioned in January 2017.

February

No aviation allowances have been auctioned in February 2017.

March

No aviation allowances have been auctioned in March 2017.

1.2.2 Bidding behaviour – aviation allowances

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

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

Month	Nr of auctions	Nr of bidders ⁽¹⁾	Total volume of bids	Average total volume bid per bidder per auction ²²	Average total volume bid per bidder per auction over the month ²³	standard deviation of total volume bid per bidder per auction over the month ²⁴	Total monthly nr of bids	Average nr. of bids per bidder per auction ²⁵	Average bid size ²⁶
March 2017	-	-	-	-	-	-	-	-	-
February 2017	-	-	-	-	-	-	-	-	-
January 2017	-	-	-	-	-	-	-	-	-
December 2016	-	-	-	-	-	-	-	-	-
November 2016	1	10	2 146 500	214 650	214 650	245 137	44	4.4 ⁺⁺	48 784
October 2016	-	-	-	-	-	-	-	-	-
September 2016	1	11	1 993 000	181 182	181 182	139 137	31	2.8 ⁺⁺	64 290
August 2016	-	-	-	-	-	-	-	-	-
July 2016	1	10	2 539 000	253 900	253 900	194 273	25	2.5 ⁺⁺	101 560
June 2016	-	-	-	-	-	-	-	-	-
May 2016	1	11	3 140 500	285 500	285 500	277 449	41	3.7 ⁺⁺	76 598
April 2016	-	-	-	-	-	-	-	-	-
March 2016	1	8	2 625 500	328 188	328 187	271 282	33	4.1 ⁺⁺	79 561
February 2016	1	12	1 663 000	138 583	138 583	126 140	40	3.3 ⁺⁺	41 575
January 2016	1	12	3 866 000	322 167	322 167	234 168	45	3.8 ⁺⁺	85 911

++: indicates simple average

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

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

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

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

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

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

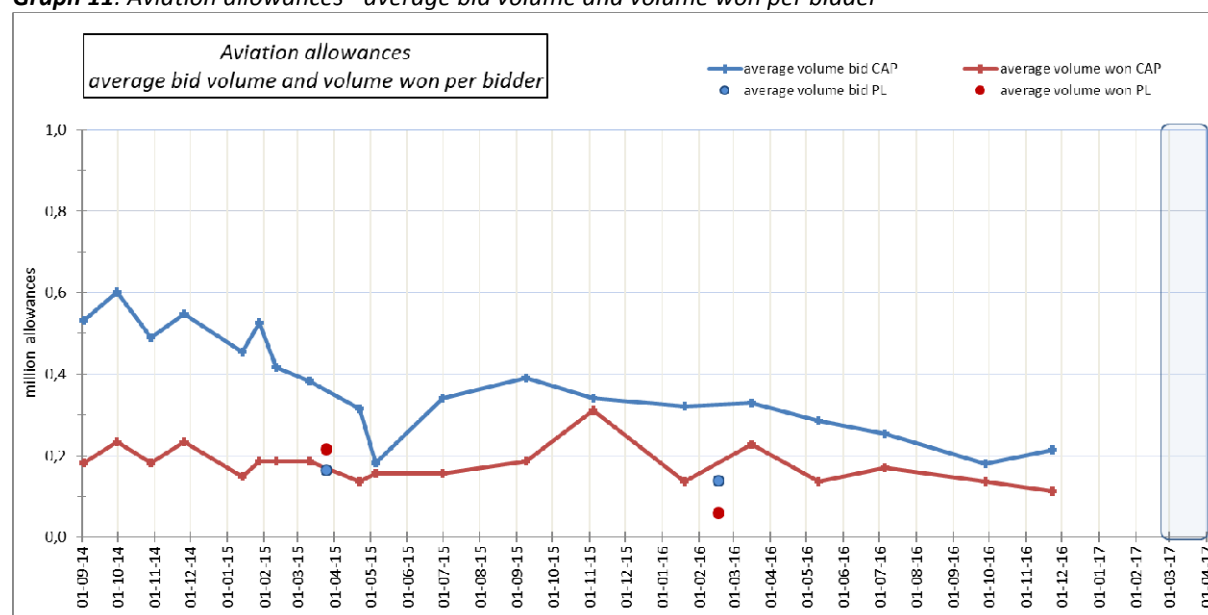
Table 7 provides monthly data on successful bids over 15 months. See also Graph 11.

Table 7: Aviation Allowances – Monthly statistics on successful bids

Month	Nr of auctions	Nr of successful bidders ⁽¹⁾	Total auction volume	Average volume won per bidder per auction ²⁷	Average volume won per bidder per auction over the month ²⁸	Standard deviation of volume won per bidder per auction over the month ²⁹	Total monthly nr of successful bids
March 2017	-	-	-	-	-	-	-
February 2017	-	-	-	-	-	-	-
January 2017	-	-	-	-	-	-	-
December 2016	-	-	-	-	-	-	-
November 2016	1	6	681 500	113 583	113 583	83 332	8
October 2016	-	-	-	-	-	-	-
September 2016	1	5	683 500	136 700	136 700	73 380	8
August 2016	-	-	-	-	-	-	-
July 2016	1	4	683 500	170 875	170 875	106 277	4
June 2016	-	-	-	-	-	-	-
May 2016	1	5	683 500	136 700	136 700	87 650	8
April 2016	-	-	-	-	-	-	-
March 2016	1	3	683 500	227 833	227 833	199 581	7
February 2016	1	2	120 000	60 000	60 000	40 000	2
January 2016	1	5	683 500	136 700	136 700	32 366	6

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

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



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

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

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

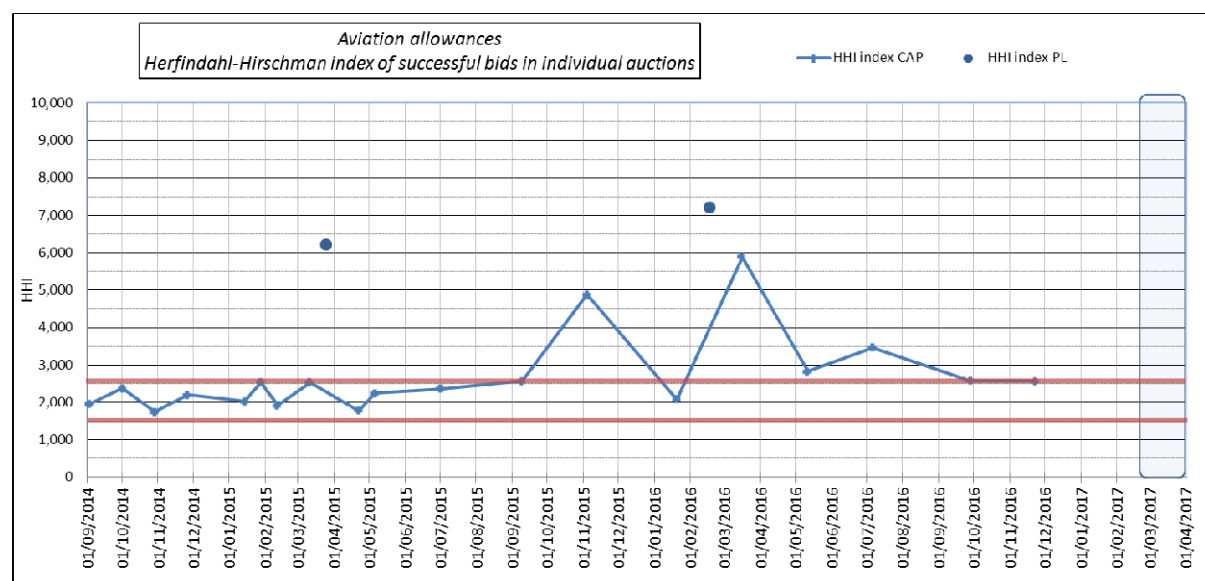
1.2.3 Type of bidders – aviation allowances

No aviation allowances have been auctioned in January - March 2017.

1.2.4 Concentration – aviation allowances

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

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



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

2. Implementation of and compliance with the applicable rules

Fair and open access

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

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

Table 8: Eligible participants to the auctions by category

Number of participants		Operator		Investment firm	Credit Institution	Business grouping	Person exempt from MiFID requirements	Total
		Stationary	Aircraft					
Participants admitted to EEX’s emissions spot secondary market	January 2017	-						110
	February 2017							111
	March 2017							111
Participants eligible to bid in the auctions	January 2017	49	1	8	4	0	5	67
	February 2017							
	March 2017							
(Of which:) Participants eligible to bid in the auctions on behalf of clients	January 2017	-	-	1	2	-	2	5
	February 2017							
	March 2017							
(Of which:) Auction- only access	January 2017	2	0	1	0	0	1	4
	February 2017							
	March 2017							

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*. With regard to the results of the auctions, EEX reported a delay in the publication of information other than the price and volume on 30 March 2018 later than 15 minutes after the close of the *bidding window* as provided for in Article 61 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.

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

Other aspects

No other problems or issues were identified.

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: 28/01/2019

Glossary

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

General Allowance	Allowance to emit one tonne of CO ₂ -equivalent, see Article 3(a) of the <i>ETS Directive</i> , also referred to as <i>EUA</i> .
Aviation Allowance	Allowance to emit one tonne of CO ₂ -equivalent that can be used by aircraft operators, also referred to as <i>EUAA</i> . See Article 12(2a) and (3) of the <i>ETS Directive</i> .
Investment firms	Investment firms as defined in EU financial markets legislation (point (1) of Article 4(1) of Directive 2004/39/EC).
Market abuse	Insider dealing and market manipulation. See Article 36 of the <i>Auctioning Regulation</i> and Article 1 of Directive 2003/6/EC ('Market Abuse Directive').
Participating Member States	All EU Member States except Germany, Poland and the UK, 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 2017 (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	273 112 695	4 185 300	277 297 995
Belgium	490 823 440	5 481 135	496 304 575
Bulgaria	348 348 375	1 382 895	349 731 270
Croatia	112 911 635	654 360	113 565 995
Cyprus	3 828 190	2 110 375	5 938 565
Czech Republic	411 967 250	1 990 995	413 958 245
Denmark	242 689 660	4 619 680	247 309 340
Estonia	79 633 670	234 505	79 868 175
Finland	328 061 180	3 526 500	331 587 680
France	1 074 200 645	25 577 025	1 099 777 670
Greece	676 666 425	7 464 235	684 130 660
Hungary	261 063 625	1 552 395	262 616 020
Ireland	180 495 115	3 608 625	184 103 740
Italy	1 890 803 605	23 619 975	1 914 423 580
Latvia	52,790,760	818 000	53 608 760
Lithuania	96 963 090	420 960	97 384 050
Luxemburg	23 581 050	916 340	24 497 390
Malta	19 848 345	824 900	20 673 245
The Netherlands	656 549 515	10 162 975	666 712 490
Poland	614 466 900	3 558 480	618 025 380
Portugal	343 924 430	4 956 085	348 880 515
Romania	709 995 680	2 356 440	712 352 120
Slovak Republic	301 907 475	297 705	302 205 180
Slovenia	86 883 770	221 525	87 105 295
Spain	1 694 424 215	27 371 325	1 721 795 540
Sweden	174 604 730	5 654 685	180 259 415
TOTAL	11 150 545 470	143 567 420	11 294 112 890

Annex 2 Results of individual auctions on behalf of *participating Member States* and Poland in January – March 2017

(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 2017																			
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
09.01.2017	5.00	3.45	5.95	4.84	4.90	4,261,500	13 200 000	3.10	16	12	21 307 500	95	20	5.94	138 947	825 000	1 087 101	355 125	386 146
10.01.2017	5.60	3.45	6.00	5.33	5.48	4,261,500	12 873 000	3.02	20	9	23 864 400	81	15	4.05	158 926	643 650	988 440	473 500	628 875
12.01.2017	5.30	3.45	5.99	5.14	5.28	4,261,500	12 973 000	3.04	19	14	22 585 950	87	36	4.58	149 115	682 789	994 390	304 393	526 855
16.01.2017	4.96	3.45	5.25	4.82	4.92	4,261,500	11 547 000	2.71	19	15	21 137 040	97	31	5.11	119 041	607 737	639 912	284 100	307 126
17.01.2017	4.80	3.45	5.00	4.64	4.71	4,261,500	14 867 000	3.49	21	12	20 455 200	108	23	5.14	137 657	707 952	835 348	355 125	346 442
19.01.2017	4.88	3.45	6.00	4.80	4.86	4,261,500	11 982 000	2.81	20	16	20 796 120	93	39	4.65	128 839	599 100	791 295	266 344	285 919
23.01.2017	5.34	3.45	5.75	5.17	5.34	4,261,500	10 345 000	2.43	21	18	22 756 410	98	49	4.67	105 561	492 619	651 279	236 750	359 767
24.01.2017	5.23	3.45	5.55	5.03	5.16	4,261,500	15 990 000	3.75	23	10	22 287 645	110	27	4.78	145 364	695 217	1 029 000	426 150	571 395
26.01.2017	4.93	3.45	6.00	4.81	4.86	4,261,500	15 177 000	3.56	21	13	21 009 195	92	27	4.38	164 967	722 714	949 578	327 808	315 876
30.01.2017	4.99	3.45	6.00	4.88	4.97	4,261,500	10 787 000	2.53	18	15	21 264 885	100	39	5.56	107 870	599 278	623 687	284 100	358 229
31.01.2017	5.20	3.45	5.50	5.01	5.16	4,261,500	13 005 000	3.05	19	10	22 159 800	96	28	5.05	135 469	684 474	1 041 434	426 150	629 417

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 – February 2017																			
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
02.02.2017	5.24	3.45	5.60	5.07	5.25	4 261 500	10 366 500	2.43	19	16	22 330 260	89	49	4.68	116 478	545 605	637 093	266 344	408 667
06.02.2017	5.08	3.45	5.50	4.92	5.02	4 261 500	15 089 000	3.54	23	16	21 648 420	124	36	5.39	121 685	656 043	1 141 086	266 344	316 549
07.02.2017	5.08	3.45	6.00	4.94	5.05	4 261 500	10 686 500	2.51	20	16	21 648 420	103	35	5.15	103 752	534 325	690 501	266 344	312 327
09.02.2017	5.25	3.45	5.60	5.08	5.20	4 261 500	11 949 500	2.80	19	12	22 372 875	100	29	5.26	119 495	628 921	1 071 065	355 125	389 617
13.02.2017	5.07	3.00	5.50	5.09	5.11	4 261 500	7 641 000	1.79	18	17	21 605 805	55	42	3.06	138 927	424 500	773 067	250 676	368 050
14.02.2017	4.95	3.45	5.99	4.84	4.96	4 261 500	8 687 000	2.04	22	19	21 094 425	85	46	3.86	102 200	394 864	470 842	224 289	245 510
16.02.2017	4.96	3.45	5.50	4.86	4.97	4 261 500	10 434 000	2.45	20	17	21 137 040	99	53	4.95	105 394	521 700	652 865	250 676	278 386
20.02.2017	5.05	3.45	5.50	4.85	4.97	4 261 500	15 065 000	3.54	20	11	21 520 575	102	21	5.10	147 696	753 250	868 709	387 409	411 999
21.02.2017	5.09	3.45	5.70	4.88	4.99	4 261 500	15 776 000	3.70	23	12	21 691 035	109	17	4.74	144 734	685 913	913 410	355 125	517 484
23.02.2017	5.17	3.45	5.70	4.99	5.14	4 261 500	13 941 000	3.27	22	16	22 031 955	102	31	4.64	136 676	633 682	948 400	266 344	398 237
27.02.2017	5.28	3.45	6.00	5.08	5.27	4 261 500	12 410 000	2.91	15	12	22 500 720	80	36	5.33	155 125	827 333	1 099 515	355 125	362 460

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 2017																			
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
02.03.2017	5.74	3.45	6.40	5.46	5.69	4 261 500	12 835 500	3.01	21	14	24 461 010	97	33	4.62	132 325	611 214	830 598	304 393	359 818
06.03.2017	5.47	3.45	6.40	5.25	5.42	4 261 500	11 826 500	2.78	24	17	23 310 405	86	33	3.58	137 517	492 771	728 756	250 676	270 870
07.03.2017	5.43	3.45	6.00	5.21	5.41	4 261 500	12 087 000	2.84	20	15	23 139 945	82	34	4.10	147 402	604 350	937 049	284 100	484 657
09.03.2017	5.16	3.45	5.90	4.98	5.08	4 261 500	14 214 500	3.34	24	13	21 989 340	94	26	3.92	151 218	592 271	905 818	327 808	358 801
13.03.2017	5.11	3.15	5.90	4.95	5.05	4 261 500	17 153 500	4.03	22	13	21 776 265	114	26	5.18	150 469	779 705	1 129 704	327 808	338 284
14.03.2017	5.16	3.45	6.00	5.02	5.15	4 261 500	13 192 500	3.10	20	18	21 989 340	89	39	4.45	148 230	659 625	1 015 329	236 750	333 351
16.03.2017	5.07	3.45	5.90	4.97	5.08	4 261 500	10 459 500	2.45	22	21	21 605 805	95	51	4.32	110 100	475 432	715 140	202 929	327 860
20.03.2017	5.05	3.45	5.60	4.93	5.03	4 261 500	11 091 500	2.60	22	17	21 520 575	95	35	4.32	116 753	504 159	739 766	250 676	313 208
21.03.2017	4.93	3.45	5.87	4.84	4.92	4 261 500	9 674 500	2.27	24	17	21 009 195	91	37	3.79	106 313	403 104	555 432	250 676	275 039
23.03.2017	4.98	3.45	5.50	4.86	4.95	4 261 500	11 104 500	2.61	19	17	21 222 270	87	32	4.58	127 638	584 447	797 058	250 676	338 971
27.03.2017	4.67	3.45	5.50	4.60	4.62	4 261 500	11 010 000	2.58	18	13	19 901 205	71	30	3.94	155 070	611 667	734 509	327 808	315 086
28.03.2017	4.63	3.45	5.50	4.60	4.64	4 261 500	9 412 000	2.21	19	15	19 730 745	64	35	3.37	147 063	495 368	627 386	284 100	315 691
29.03.2017	4.71	3.45	5.30	4.59	4.63	5 738 500	14 198 000	2.47	21	12	20 028 335	83	24	3.95	171 060	676 095	820 485	478 208	398 274
30.03.2017	4.63	3.45	5.50	4.57	4.62	4 261 500	10 452 000	2.45	19	16	19 730 745	81	30	3.74	147 211	550 105	433 645	266 344	311 816

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

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

Aviation Allowances – January 2017																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Aviation Allowances – February 2017																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

Aviation Allowances – March 2017																			
Date	Auction Clearing Price	Minimum Bid price	Maximum Bid price	Mean Bid price	Median Bid price	Total Auction Volume	Total Bid Volume	Cover ratio	Nr of Bidders	Nr of Successful Bidders	Total Revenue	Nr of Bids	Nr of Successful Bids	Avg nr of bids per bidder	Average bid size	Avg total volume bid per bidder	standard deviation of total volume bid per bidder	Average volume won per bidder	Standard deviation of volume won per bidder
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

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

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

