

Data quality checks for the update of the EEA's EU ETS data viewer

Authors:

Christian Nissen, Sabine Gores (Öko-Institut)



Contents

Contents	3
List of tables.....	4
1 Data quality checks of the new EUTL data used for the update of the EEA’s EU ETS data viewer	4
1.1 Key findings	5
1.2 Preparation of the data	6
1.2.1 Data capture from Commission Excel file	6
1.2.2 Results of plausibility checks	6
1.2.3 Changes within the dataset.....	6
1.3 Comparison of the dataset provided by the Commission and the Excel file published on the Commission’s website	7
1.3.1 Comparison of installation IDs	7
1.4 Consistency checks within the dataset.....	7
1.5 Update of the disaggregated database (installation level)	7
1.5.2 Deletion of double installations	7
1.5.3 Adjustment of free allowances for aviation operators for the year 2012	8
1.5.4 Consistency check of surrendered units	8
1.5.5 Reallocation of main activity codes.....	8
1.5.6 Information on active installations.....	10
1.6 Main changes in EU ETS viewer data between May 2021 and July 2021	11
1.6.1 Number of entities included in the scheme	11
1.6.2 Account closures	11
1.6.3 Active installation in 3 TP	11
1.6.4 Verified emissions (stationary installations)	12
1.6.5 Free allocation to existing installations from 2005 to 2020 (stationary installations).....	13
1.6.6 Surrendered units from 2005 to 2020 (stationary installations).....	15
1.6.7 Free allocation from 2018 to 2020 (stationary installations).....	15
1.6.8 Comparison of allocated amounts under Article 10a(1), 10a(7)and 10c for the years 2013 to 2019.....	15
1.6.9 Aviation.....	19
2 Aggregated database.....	21
3 Auctioning.....	21

List of tables

Table 1-2	Overview of excluded and therefore deleted verified emissions and allocations from 2013 to 2020	7
Table 1-3	Number of installations with old activity type codes	10
Table 1-4	Allocation of new activity codes to installation with old codes	12
Table 1-5	Number of entities by country.....	14
Table 1-6	Changes in VE between datasets (calculated as difference May 2021 and July 2021 data / VE (July 2021))	16
Table 1-7	Changes in free allocation to existing installations (10a, 2005-2020) between datasets (calculated as difference between May 2021 and July 2021 data / allowances (July 2021))	18
Table 1-8	Changes in surrendered units between datasets (calculated as difference between May 2021 and July 2021 data / allowances (July 2021)).....	20
Table 1-10	Allocated amounts for the years 2013 to 2020 for stationary installations.....	22
Table 1-11	Changes in VE, free allocation and surrendered units to aviation operators (2015-2019) between datasets (calculated as difference between May 2021 and July 2021 data / allowances (July 2021))	26

1 Data quality checks of the new EUTL data used for the update of the EEA's EU ETS data viewer

1.1 Key findings

- The EUTL extract provided by the European Commission on April 1st, 2022 contained 17 666 installations-rows. The dataset used for the ETS data viewer includes 17 781 entities:
 - 16 169 stationary and 1 610 aviation operators
 - 3 387 entities (19% of total) not operating in the third trading period
- 134 entities entered the trading system between July 2021 and April 2022.
- From 2021 on British entities are not part of the EU ETS anymore.
- Total verified emissions 2021 from stationary installations sum up to 1 237 Mt in the actual dataset (1355 Mt in 2020 / 1 253 Mt without GB).
- To align the dataset with the EU ETS registry, the information on excluded emissions provided since April 2018 has been used: For excluded entities, verified emissions and allocation have been deleted in the year of exclusion. For details see section **Error! Reference source not found.**
- One aviation operator seems to be included twice and has been deleted (NL 202792) (section **Error! Reference source not found.**).
- Three installations in Malta have been deleted to allow a correct counting (see section **Error! Reference source not found.**).
- 20% of the operators report outdated activity type codes, which correspond to the second trading phase and which have been translated to new activity type codes. The resulting percentage changes in some activity type codes are still high but have been reduced compared to last year (see **Error! Reference source not found.**).
- 45 aviation operators changed from GB to other country codes. This results in higher verified emissions, allocations and surrendered units for these countries.

1.2 Preparation of the data

1.2.1 Data capture from Commission Excel file

The European Commission extracted data from the EUTL on April 1st, 2022 and provided this extract to the EEA (referred to as “extract for EEA” in the text). The data used for the ETS data viewer¹ is based on this extract.

It contained 17 785 installations-rows with detailed information. After joining the rows for installations from MT it ends up in **17 782 entities**.

Since April 2018, there are two additional LNG fuelled power plants^{2,3} with activity codes 20 that entered the ETS in 2017. Both use the same permit identifier MT-3 but they have different installation IDs: MT 209863 and MT 210138. It seems like the plant is included twice with two different permit identifiers. That is why the latter has been deleted since no additional information is given compared to the first, verified emissions and surrendered allowances are reported only for the first installation mentioned. Since April 2020 the installation MT 210138 was indicated as closed but was nevertheless removed from the dataset again to maintain consistency. For the same reasons the installations MT 210346 and MT 210348 were deleted as well, as they are indicated as closed but do have the same permit identifier as MT-2 and MT-1 respectively.

There is also one aircraft operator which seems to be included twice and which has been deleted (NL 202792, see section **Error! Reference source not found.**)

The dataset used for the ETS data viewer hence includes **17 781 entities**.

1.2.2 Results of plausibility checks

No MS-IDs are doubled.

Compared to the dataset of July 2021, no installations are missing, and 134 new installations were added to EUTL. Installations located in Northern Ireland were reallocated from Great Britain in 2021.

1.2.3 Changes within the dataset

In April 2018 new columns were inserted into the extract for EEA: From 2013 onwards a column per year states if an entity was excluded from the ETS in that particular year. A reason for annual exclusion of entities can e.g. be low production / emissions or a small number of flights in the scope of the EU ETS. An entity that was excluded in one year can be part of the ETS again in following year(s).

The information on annual exclusion is not directly linked to account status. Most of the entities with closed accounts are marked as “included” which does not seem completely consistent.

Furthermore, there are entities which show ETS information (verified emissions, allocations or surrendered units) in the database provided to EEA by the Commission although these entities have been excluded in that year. In the EU ETS registry, these entities do not show verified emissions if they are excluded in a year. To harmonize the EEA data viewer with the EU ETS registry it has been decided by EEA in May 2018 to delete verified emissions and allocations of all excluded entities. Surrendered units are kept for excluded entities because these units can also be used to cover emissions from earlier years. The amount of deleted verified emissions and allocations can be seen in **Error! Reference source not found.** Entities with an indication of zero for any ETS information have not been counted here.

¹ <https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1>

² <https://www.wartsila.com/twentyfour7/energy/malta-prepares-for-an-lng-powered-future>

³ [https://www.aecom.com/hk/projects/electrogas-malta/?q!%5B0%5D=260&qp=&qt=12](https://www.aecom.com/hk/projects/electrogas-malta/?q!%5B0%5D=260&q!%5B0%5D=260&qp=&qt=12)

Table 1-2 Overview of excluded and therefore deleted verified emissions and allocations from 2013 to 2021

	Number of excluded entities in single years	of which with				Deleted amounts			NOT deleted amounts
		of which with VE	Allocations	Allocated Reserve	Surrendered units	VE	Allocations	Allocated Reserve	Surrendered units
2013	1,347	31	196	0	95	25,849	280,871	0	29,041
2014	1,321	1	181	0	83	6,509	179,586	0	162,216
2015	1,360	3	197	0	26	386	282,260	0	8,346
2016	1,325	1	195	0	20	303	243,857	0	14,596
2017	1,347	0	202	2	28	0	237,600	1,182	6,410
2018	1,345	0	208	2	26	0	1,759,965	644	6,535
2019	1,306	2	216	4	4	6,296	1,877,259	153,664	12,806
2020	1,414	1	281	4	12	947	2,318,029	1,876	17,487
2021	751	3	73	0	4	13,789	426,705	0	1,066
Total	11,516	42	1,749	12	298	54,079	7,606,132	157,366	258,503

Source: EUTL extract April 1st, 2022, own calculation; Entities with an indication of zero for any ETS information have not been counted here.

1.3 Comparison of the dataset provided by the Commission and the Excel file published on the Commission’s website

A quick comparison between ETS data from the registry as published on the Commission’s website⁴, and the extract for EEA directly provided by the Commission on April 1st, 2022 was performed. No differences were found.

1.3.1 Comparison of installation IDs

The April 2022 datasets shows that 45 aviation accounts were relocated from GB to other country codes compared with the July 2021 dataset.

1.4 Consistency checks within the dataset

The main findings are:

- There are 6 813 entities with a closure date. This is higher compared to the last data extract from July 2021 (6 450 entities).
- There are 303 entities with a given year of last emissions and the indication “open” in the field “account closure”.

1.5 Update of the disaggregated database (installation level)

Not necessary.

1.5.2 Deletion of double installations

⁴ https://ec.europa.eu/clima/policies/ets/registry_en#tab-0-1

Due to the comparison of information on returned allowances from aviation operators for the year 2012, which has been conducted in the April 2015, it became obvious, that one aviation operator is included in the extract which is doubled (NL 202792 and 202833).

NL 202792 has a closure date in 2013 and does not include any ETS information at all but has the same operator name as NL 202833. For the latter ETS information is given including emissions in 2012. Therefore, NL 202792 has been deleted.

It appears as if three Maltese installations are double. This applies to installation MT 210138, MT 210346 and MT 210348. These all have the same Permit Identifiers with other installations, but do not have verified emissions. These installations each have the same Permit Entry Date and have the account status Closed, see chapter **Error! Reference source not found.**

1.5.3 Adjustment of free allowances for aviation operators for the year 2012

Free allowances for the year 2012 had to be returned by aviation operators if they chose to account for the reduced scope of the stop the clock decision.

The amount which had to be returned is publicly available on operator level. In addition, the Commission sent an excel file with details on amounts which finally had been returned and on the partial adjustment of the numbers in EUTL (“Aviation return before and after deadline.xlsx”).

With information in this file, the adjustment of free allowances for 2012 takes place for the update of the EEA data viewer because it seems necessary to reflect the reduced amount of free allowances for the comparison with verified emissions.

The calculation of corrections has been conducted in April 2015.

As there have been no changes to free allocation for aviation in 2012 (see **Error! Reference source not found.**), no update of this correction has to be done.

1.5.4 Consistency check of surrendered units

There is no longer an inconsistency related to the sums of total ERU, CER and EUA compared with total units surrendered, as it has been revealed in the 2013 dataset.

1.5.5 Reallocation of main activity codes

New activity codes from 10-47 are in place since the start of the third trading period, but a lot of installations which already have been part of the EU ETS in the former trading periods did not change their activity codes.

In total, 3 596 installations (20% of all entities), still report old activity codes (see **Error! Reference source not found.**). These are 67 less than in the dataset of July 2021.

Table 1-3 Number of installations with old activity type codes

MAIN_ACTIVITY_TYPE_CODE	Number of installations - July 2018	Number of installations - July 2019	Number of installations - July 2020	Number of installations - July 2021	Number of installations - April 2022
1	2846	2739	2632	2563	2511
2	41	38	38	36	35
3	3	3	3	3	3
4	4	4	3	3	3
5	49	47	44	43	42
6	133	129	126	121	120
7	112	109	104	101	97
8	563	557	543	531	530
9	284	274	268	262	255
99					
Total	4035	3900	3761	3663	3596

Source: EUTL extract April 1st, 2022 and former extracts, own calculation

Since 2015 the EU ETS data viewer no longer includes old activity codes except for code 99 which will remain as it is, if no other country specific information is available. For the installations reporting an old code, a correction will be made. Since 2015 the translation procedure follows the methodology explained in the ETC/ACM document “Attribution of new activity codes for installations with old codes in the EEA’s EU ETS data viewer” (latest version as of April 2016⁵). The result of this methodology has been amended with country specific information. The translation table will be made publicly available to make the translation of activity codes as transparent as possible.

As highlighted in the methodology document, there is a risk that the number of installations allocated to activity codes 38 to 41 (Production of specific chemicals) are underestimated, because the allocation to these codes is not possible without further detailed knowledge of the activity of single installations. Consequently, there is also a risk that the number of installations allocated to activity code 42 (Production of bulk chemicals) is overestimated.

Looking at verified emissions 2021 (see **Error! Reference source not found.**), emissions of installations with code 42 still increased because of the allocation to new codes (from 31 to 32 Mt). But it can be considered that due to the inclusion of Member State specific information allocated verified emissions due to the translation process have decreased by a high amount of emissions: With the translation of September 2015, verified emissions of sector 42 has been 23 Mt before and 43 Mt after the translation (+20 Mt), whereas the difference has now been reduced to 1.06 Mt for the year 2021.

Similarly, it is not possible to differentiate between the production of primary (code 26) and secondary aluminium (code 27) without more information on single installations. NACE code 24.42 (Aluminium production) has now been completely translated to code 26, leading to possible overestimation and an underestimation in code 27.

In September 2015 11 installations have been translated to code 26, whereas the number of installations which was translated in July 2021 was reduced to 7 (code 26).

The installation FR 956 SK 150 and CZ 73 were relocated from code 20 to code 24 based on information from the Member States as these plants are foremost steel plants.

For further details, see **Error! Reference source not found.**

⁵ http://acm.eionet.europa.eu/docs/ETCACM_EU-ETS_translation_of_activity_codes_April_2016_for_publication.pdf

Table 1-4 Allocation of new activity codes to installation with old codes

MAIN_ACTIVITY_TYPE_CODE	Before Translation		After Translation		Conducted Translation		Percentage of translation to total	
	No of installations	VE 2021	No of installations	VE 2021	No of installations	VE 2021	No of installations	VE 2020
1	2,511	25,672,534						
2	35	8,282,207						
3	3	-						
4	3	-						
5	42	5,339,264						
6	120	3,927,596						
7	97	457,111						
8	530	651,679						
9	255	1,656,548						
10	1601	24,999,247	1,601	24,999,247	0	0	0%	0%
20	7856	748,441,439	10010	754,027,620	2,154	5,586,181	22%	1%
21	142	95,444,794	175	103,727,001	33	8,282,207	19%	8%
22	19	4,347,838	28	4,347,838	9	0	32%	0%
23	14	949,178	14	949,178	0	0	0%	0%
24	244	88,604,543	293	110,266,104	49	21,661,561	17%	20%
25	257	9,955,661	294	10,039,525	37	83,864	13%	1%
26	33	7,873,966	40	7,873,966	7	0	18%	0%
27	37	1,187,624	38	1,187,624	1	0	3%	0%
28	89	5,890,787	95	5,890,787	6	0	6%	0%
29	252	93,596,201	333	95,901,002	81	2,304,801	24%	2%
30	273	25,146,944	415	25,559,433	142	412,489	34%	2%
31	372	13,327,251	463	13,770,739	91	443,488	20%	3%
32	1210	11,817,824	1740	12,437,795	530	619,971	30%	5%
33	48	1,526,293	66	1,665,206	18	138,913	27%	8%
34	43	922,368	43	922,368	0	0	0%	0%
35	183	4,269,315	200	4,532,262	17	262,947	9%	6%
36	574	15,919,039	872	17,535,019	298	1,615,980	34%	9%
37	18	1,513,070	18	1,513,070	0	0	0%	0%
38	34	1,362,796	34	1,362,796	0	0	0%	0%
39	3	117,593	3	117,593	0	0	0%	0%
40	1	-	1	-	0	0	0%	0%
41	29	17,347,289	30	17,347,289	1	0	3%	0%
42	361	30,954,371	460	32,014,622	99	1,060,251	22%	3%
43	44	6,894,953	49	6,894,953	5	0	10%	0%
44	15	2,572,152	15	2,572,152	0	0	0%	0%
45	3	46	3	46	0	0	0%	0%
46								
99	430	1,492,884	431	673,472	1	-819,412	0%	-122%
Group 1-9	3,596	45,986,939	-	-				
Group 10-99	14,185	1,216,475,466	17,764	1,258,128,707				
Total	17,781	1,262,462,405	17,764	1,258,128,707	3,579	41,653,241	20%	3%

Note: The total number of translations given in the table (3 579) is not the absolute number of translations, because a small amount of other translations took place in the activity type codes 20-99.

Source: EUTL extract April 1st, 2022, own calculation

The EU ETS data viewer separates between stationary installations and aviation. The total number of **aviation operators** (activity type code 10) is **1 601**, so there are **16 180 stationary installations** included in the data viewer.

1.5.6 Information on active installations

The indicator “Active installation in 3 TP” has been included in the EU ETS data viewer since 2015. It indicates installations and operators which operate in the third trading period. This indicator is included by the ETC/CME. If the given year of last emission is between 2005 and 2012, the indicator is “no”, if the given year of last emission is higher or equal 2013 or an empty cell, the indicator is “yes”.

This is to give the possibility to align the analysis of data from the EEA data viewer with the dataset published by the Commission.

1.6 Main changes in EU ETS viewer data between July 2021 and April 2022

1.6.1 Number of entities included in the scheme

The number of stationary installations and aviation operators by country is shown in the following table:

Table 1-5 Number of entities by country

MS	10. Jul 18	02. Apr 19	03. May 19	01. Jul 19	01. Jul 20	01. Jul 21	01. Apr 22	Difference Apr 22 - July 21
AT	292	295	295	295	296	297	297	0
BE	491	497	498	498	499	505	521	16
BG	172	174	174	174	174	174	177	3
CY	27	27	28	28	29	29	29	0
CZ	468	468	468	468	469	470	471	1
DE	2725	2765	2768	2768	2785	2794	2818	24
DK	460	461	461	462	465	466	469	3
EE	66	66	66	66	66	66	66	0
ES	1481	1490	1492	1495	1515	1530	1544	14
FI	732	737	738	738	738	745	753	8
FR	1713	1726	1730	1733	1749	1766	1819	53
GB	1927	1984	1985	1986	2021	2027	1982	-45
GR	212	215	215	215	217	220	221	1
HR	59	59	59	59	62	64	65	1
HU	298	301	301	301	304	307	310	3
IE	228	229	231	231	235	239	245	6
IS	44	44	44	44	44	44	45	1
IT	1610	1624	1626	1628	1643	1648	1656	8
LI	2	2	2	2	2	2	2	0
LT	126	126	126	126	129	130	130	0
LU	33	34	34	34	34	34	34	0
LV	120	120	120	120	120	120	120	0
MT	13	16	16	16	15	16	16	0
NL	660	663	663	663	667	677	686	9
NO	183	186	186	186	191	194	197	3
PL	1068	1075	1080	1080	1084	1086	1094	8
PT	364	368	369	369	371	371	373	2
RO	300	302	302	302	304	307	311	4
SE	949	961	962	962	976	982	992	10
SI	106	106	106	106	106	106	106	0
SK	222	222	222	222	223	225	226	1
XI						6	6	0
Total	17151	17343	17367	17377	17533	17647	17781	134

Source: EUTL extract April 1st, 2022 and former extracts, own calculation

As shown in **Error! Reference source not found.**, the April 2022 dataset includes 134 more entities than the July 2021 dataset.

1.6.2 Account closures

The indicator “account closure” is included in the dataset since May 2015. In July 2021, 10 968 entities have been indicated as open, 6 813 (38% of total) have a closure date that lies before the extraction date of the ETS dataset. All stationary installations from UK have been indicated as closed since the July 2021 dataset.

1.6.3 Active installation in 3 TP

3 387 entities – 19% of total – indicated that they are not operating in the third trading period. This number increased by 22 compared to the dataset of July 2021.

58 of those entities no longer active in the 3rd trading period still have open accounts.

1.6.4 Verified emissions (stationary installations)

In the following table, data on verified emission is compared between the datasets from July 2021 and April 2022, just for stationary data. Differences are shown as percentages, calculated from the difference related to latest data.

Table 1-6 Changes in VE between datasets (calculated as difference July 2021 and April 2022 data / VE (April 2022))

	total 1st trading period	total 2nd trading period	total 3rd trading period	2017	2018	2019	2020
AT	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%
BE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BG	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ES	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FI	0.0%	0.0%	0.1%	0.2%	0.2%	0.0%	0.0%
FR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-0.1%
GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HR			0.0%	0.0%	0.0%	0.0%	0.0%
HU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IE	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	-0.1%
IS			0.0%	0.0%	0.0%	0.0%	0.0%
IT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LI		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NO		0.0%	-0.1%	-0.1%	-0.1%	-0.1%	0.0%
PL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SE	0.0%	0.0%	-0.5%	-0.6%	-0.7%	-0.7%	-1.7%
SI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
XI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes: Insert Purple: increase, light orange: decrease, green: zero difference

Source: EUTL extract April 1st, 2021 and former extracts, own calculation

In general, there are no major changes for the first and second trading period but changes for the third trading period.

1.6.5 Free allocation to existing installations from 2005 to 2020 (stationary installations)

In the same structure, the data on free allowances to existing installations allocated under Article 10a(1) has been compared:

Table 0-1 Changes in free allocation to existing installations (10a, 2005-2020) between datasets (calculated as difference between July 2021 and April 2022 data / allowances (April 2022))

MS	Percentages related to last available data (+ => increase)					
	total 1st trading period	total 2nd trading period	total 3rd trading period	2017	2018	2020
AT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BG		0.0%	0.0%	0.0%	0.0%	0.0%
CY		0.0%	0.0%	0.0%	0.0%	0.0%
CZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ES	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FR	0.0%	0.0%	0.1%	0.2%	0.2%	0.2%
GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HR			0.0%	0.0%	0.0%	0.0%
HU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IS			0.0%	0.0%	0.0%	0.0%
IT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LI		0.0%	0.0%	0.0%	0.0%	0.0%
LT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LU	0.0%	0.0%	0.1%	0.0%	0.0%	0.5%
LV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MT		0.0%				
NL	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
NO		0.0%	0.0%	0.1%	0.1%	0.1%
PL	0.0%	0.0%	0.1%	0.0%	0.0%	0.4%
PT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
XI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	-0.4%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes: Purple: increase, light orange: decrease, green: zero difference

Source: EUTL extract April 1st, 2022 and former extracts, own calculation

Between both datasets there is a change of free allocations in the first trading period. These changes are mostly due to missing allocations for Malta. In previous datasets Malta had 14 double installations which were consolidated in this dataset.

1.6.6 Surrendered units from 2005 to 2020 (stationary installations)

The changes in surrendered units are shown in Table 0-2.

Table 0-2 Changes in surrendered units between datasets (calculated as difference between July 2021 and April 2022 data / allowances (April 2022))

MS	Percentages related to last available data (+ => increase)										
	total 1st trading period	total 2nd trading period	total 3rd trading period	2013	2014	2015	2016	2017	2018	2020	
AT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BG		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ES	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HR			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IS			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LI		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NO		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
XI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes: Purple: increase, light orange: decrease, green: zero difference

Source: EUTL extract 1st April, 2022 and former extracts, own calculation

There are no change in surrendered units between the datasets.

1.6.7 Free allocation from 2018 to 2020 (stationary installations)

At this point, a look into the allocations until the end of the trading period is usually taken. As the third trading period ended in 2020, the check was not carried out this time.

1.6.8 Comparison of allocated amounts under Article 10a(1), 10a(7) and 10c for the years 2013 to 2020

The comparisons of allocated amounts focussed only on those allocated under Article 10a. With the data sets from 2015 on, allocated amounts for new entrants (also called NER – new entrants reserve or just

“reserve”; see Article 10a(7)) / and the transitional free allocation (10c) are separately shown by installations for the years from 2013 onwards.

Table 0-10 Allocated amounts for the years 2013 to 2020 for stationary installations

COUNTRY CODE	Total Allocated Amounts July 2021 data							
	2013	2014	2015	2016	2017	2018	2019	2020
AT	22,454,153	21,908,568	21,092,137	20,493,654	19,927,056	19,364,427	18,776,348	18,185,631
BE	37,088,489	36,112,098	34,354,257	34,147,062	33,375,238	32,243,823	32,056,996	31,199,064
BG	21,806,523	19,654,265	17,658,558	16,276,968	13,204,971	11,770,073	10,143,838	8,015,996
CY	3,732,224	3,359,549	3,050,888	2,702,796	2,363,517	2,192,980	1,883,331	1,285,776
CZ	52,272,757	47,009,218	42,090,957	37,174,806	31,840,232	27,487,273	22,730,763	17,993,206
DE	169,530,393	164,992,668	158,867,783	154,697,039	150,139,118	146,016,696	141,102,717	136,462,871
DK	12,226,328	11,072,867	9,637,343	8,918,360	8,291,092	7,726,416	7,141,898	6,449,596
EE	8,796,110	8,016,944	7,006,287	5,881,109	4,910,164	3,283,874	3,151,643	2,982,844
ES	67,264,348	61,216,818	60,369,500	59,892,584	58,692,457	57,263,358	57,857,775	57,172,413
FI	22,910,666	21,624,883	20,090,018	18,960,796	18,065,869	16,954,631	16,069,410	15,282,491
FR	82,511,887	80,390,689	77,484,779	75,314,171	70,789,661	67,485,756	66,244,871	64,250,693
GB	66,688,817	65,237,357	61,063,662	54,920,547	52,875,635	51,357,132	49,622,985	48,058,253
GR	15,030,093	14,653,644	14,588,921	14,296,259	14,212,389	13,957,456	13,726,877	13,389,027
HR	5,268,253	5,088,881	4,839,931	4,711,951	4,580,337	4,434,782	4,348,866	4,265,324
HU	18,029,782	9,974,571	10,360,373	10,187,692	10,037,502	9,852,632	9,554,457	9,247,552
IE	5,264,456	4,734,181	5,320,682	5,271,502	5,124,841	4,986,109	4,855,184	4,729,305
IS	1,536,345	1,509,661	1,482,664	1,455,382	1,427,808	1,399,965	1,482,546	1,405,547
IT	86,819,074	78,321,142	72,502,773	70,872,198	68,937,083	67,477,277	64,661,444	58,328,355
LI	2,077	1,859	1,647	1,441	1,241	1,048	861	681
LT	6,882,732	6,568,554	6,364,312	6,158,587	5,786,259	5,494,201	4,947,666	4,600,903
LU	1,372,664	1,305,073	1,307,879	1,277,648	1,246,053	1,215,724	1,177,800	1,146,470
LV	2,674,695	2,419,954	2,078,189	1,889,937	1,752,520	1,599,997	1,476,875	1,301,288
MT	-	-	-	-	-	-	-	-
NL	49,463,427	48,156,669	46,725,878	44,659,457	44,424,885	43,732,156	42,903,266	41,779,765
NO	17,684,543	17,380,448	17,062,716	17,102,115	16,235,617	16,176,633	16,097,040	15,833,479
PL	135,700,274	120,663,559	99,551,170	84,995,908	71,796,789	66,440,719	61,740,129	43,272,707
PT	12,517,946	12,124,706	11,477,626	11,215,619	10,944,392	10,741,032	10,788,491	10,496,403
RO	40,036,964	30,351,749	29,677,224	29,487,027	27,227,820	21,024,344	20,989,087	18,687,128
SE	29,081,450	27,401,839	25,590,780	24,439,650	23,159,316	21,783,685	20,711,593	19,189,269
SI	2,284,557	2,367,424	2,136,638	1,893,876	1,800,500	1,737,666	1,677,584	1,611,625
SK	16,466,336	15,821,315	15,029,434	14,526,743	13,849,714	13,746,320	13,414,163	13,048,220
XI	4,947	4,428	3,923	3,433	2,960	2,501	2,058	1,630
Total	1,013,403,310	939,445,581	878,868,929	833,826,317	787,023,036	748,950,686	721,338,562	669,673,512

COUNTRY CODE	Comparison 2016 Allocation July 2021 with April 2022 data			Comparison 2017 Allocation July 2021 with April 2022 data			Comparison 2018 Allocation July 2021 with April 2022 data			Comparison 2019 Allocation July 2021 with April 2022 data			Comparison 2020 Allocation July 2021 with April 2022 data		
	ALLOCATED	ALLOCATED_RESERVE	ALLOCATED_TRANSITIONAL	ALLOCATED	ALLOCATED_RESERVE	ALLOCATED_TRANSITIONAL	ALLOCATED	ALLOCATED_RESERVE	ALLOCATED_TRANSITIONAL	ALLOCATED	ALLOCATED_RESERVE	ALLOCATED_TRANSITIONAL	ALLOCATED	ALLOCATED_RESERVE	ALLOCATED_TRANSITIONAL
AT	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	3.8%	
BE	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	2.5%	
BG	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	
CY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
CZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	
DE	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	1.7%	
DK	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
EE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
ES	0.0%	0.0%		0.0%	0.1%		0.0%	0.1%		0.0%	0.1%		0.0%	1.6%	
FI	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.4%		0.0%	3.6%	
FR	0.0%	0.8%		-0.2%	2.1%		-0.2%	3.6%		-0.2%	14.3%		-0.2%	29.3%	
GB	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
GR	0.0%	0.0%		0.0%	0.0%		0.0%	0.1%		0.0%	1.7%		0.0%	2.9%	
HR	0.0%	0.0%		0.0%			0.0%			0.0%	0.0%		0.0%	0.0%	
HU	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.5%	
IE	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
IS	0.0%			0.0%			0.0%			0.0%	0.0%		0.0%	0.0%	
IT	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	2.1%		0.0%	12.3%	
LI	0.0%			0.0%			0.0%			0.0%			0.0%		
LT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
LU	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		-0.5%	0.0%		-0.5%	0.0%	
LV	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
MT															
NL	0.0%	0.0%		-0.1%	0.0%		0.0%	17.3%		-0.1%	53.2%		0.0%	93.8%	
NO	0.0%	0.0%		-0.1%	0.7%		-0.1%	2.5%		-0.1%	33.0%		-0.1%	52.8%	
PL	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	2.3%	0.0%	-0.3%	2.6%	0.0%	-0.4%	4.6%	
PT	0.0%	0.0%		0.0%	1.0%		0.0%	1.3%		0.0%	0.9%		0.0%	0.9%	
RO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	
SE	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
SI	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
SK	0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%		0.0%	0.0%	
XI	0.0%			0.0%			0.0%			0.0%			0.0%		
Total	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.9%	0.0%	0.0%	3.3%	0.0%	0.0%	7.4%	

COUNTRY CODE	Comparison total Free Allocation with data of July 2021					
	2015	2016	2017	2018	2019	2020
AT	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
BE	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
BG	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
CY	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
DE	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
DK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ES	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
FI	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
FR	0.0%	0.0%	-0.2%	-0.2%	0.0%	0.2%
GB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
GR	0.0%	0.0%	0.0%	0.0%	0.2%	0.3%
HR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IT	0.0%	0.0%	0.0%	0.0%	0.1%	0.6%
LI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LU	0.0%	0.0%	0.0%	0.0%	-0.5%	-0.5%
LV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MT						
NL	0.0%	0.0%	-0.1%	0.3%	1.1%	2.2%
NO	0.0%	0.0%	-0.1%	0.0%	1.2%	2.0%
PL	0.0%	0.0%	0.0%	0.1%	-0.1%	0.0%
PT	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
RO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
XI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%

Notes: Purple: increase, light orange: decrease, green: zero difference

Source: EUTL extract April 1st, 2022 and former extracts, own calculation

In total, NER allowances (Column: "Allocated Reserve") decreased by 0.2% in 2017, 0.9% in 2018, 3.3% in 2019 and 7.4 % in 2020.

1.6.9 Aviation

For aviation a comparison of verified emissions, free allocation and surrendered units has been conducted together for the years 2012-2020.

Table 0-11 Changes in VE, free allocation and surrendered units to aviation operators (2015-2020) between datasets (calculated as difference between July 2021 and April 2022 data / allowances (April 2022))

MS	Percentages related to last available data (+ => increase)																		
	VERIFIED_E MISSIONS_2015	VERIFIED_E MISSIONS_2016	VERIFIED_E MISSIONS_2017	VERIFIED_E MISSIONS_2018	VERIFIED_E MISSIONS_2019	VERIFIED_E MISSIONS_2020	Allocation 2015	Allocation 2016	Allocation 2017	Allocation 2018	Allocation 2019	Allocation 2020	SURRENDE RED_UNITS_2015	SURRENDE RED_UNITS_2016	SURRENDE RED_UNITS_2017	SURRENDE RED_UNITS_2018	SURRENDE RED_UNITS_2019	SURRENDE RED_UNITS_2020	
AT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BE	6.2%	5.9%	7.1%	6.8%	0.9%	0.0%	3.2%	3.3%	3.3%	3.6%	3.7%	0.0%	6.1%	6.0%	7.1%	0.0%	0.0%	0.0%	0.0%
BG	0.0%	0.0%	0.0%	0.0%	0.0%	23.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CY	0%	0%	0%	0%	0%	0.0%	0%	0%					0%	0%	0%	0%	0%	0%	0.0%
CZ	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
DE	1.3%	1.4%	1.4%	1.3%	1.2%	2.4%	0.7%	0.7%	0.7%	0.9%	1.2%	1.2%	1.3%	1.4%	1.5%	1.3%	1.2%	2.4%	2.4%
DK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ES	28.9%	29.3%	32.3%	53.1%	55.9%	46.5%	36.8%	36.8%	36.6%	36.8%	54.3%	54.1%	28.9%	29.3%	32.3%	53.1%	57.8%	45.4%	45.4%
FI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FR	1.3%	1.6%	2.0%	1.6%	1.9%	1.8%	0.6%	0.6%	0.7%	0.7%	-1.7%	-1.8%	1.3%	1.5%	2.1%	1.6%	1.9%	2.1%	2.1%
GB	-21.6%	-22.5%	-25.5%	-88.3%	-192.3%	-168.7%	-21.1%	-21.1%	-21.1%	-23.2%	-112.4%	-118.7%	-21.6%	-22.7%	-27.1%	-85.4%	-246.9%	-180.5%	-180.5%
GR	0.0%	0.0%	0.0%	0.0%	0.0%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HR	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
HU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
IT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LU	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LV	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NL	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
NO	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PL	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PT	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
RO	0.0%	0.0%	0.0%	3.7%	25.2%	33.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	25.2%	33.6%	33.6%
SE	0.8%	0.5%	1.6%	2.4%	3.3%	8.1%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.8%	0.5%	1.6%	2.4%	3.3%	8.0%	8.0%
SI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
SK	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Notes: Purple: increase, light orange: decrease, green: zero difference

Source: EUTL extract April 1st, 2021 and former extracts, own calculation

Between the last dataset from July 2021 and the most recent dataset April 2022 significant changes can be observed for aviation operators. These changes are mostly due to the reallocation of 45 British aviation operators to other country codes. This means all these verified emissions, allocations and surrendered units that have been mapped to GB are now mapped to other countries.

2 Aggregated database

Updated data for 2005 to 2020 on free allowances, for 2005-2020 on verified emissions and for 2005-2020 on surrendered units for all installations has been aggregated and integrated in the aggregated database.

3 Auctioning

Auctioning data has not changed qualitatively between July 2021 and April 2022. Most actual information on auctioning data is included in the background document (see on the EEA homepage below the ETS data viewer).