

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

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## Content

<i>Content</i> .....	2
<i>List of tables</i> .....	3
<b>1 Data quality checks of the new EUTL data used for the update of the EEA's EU ETS data viewer</b> .....	<b>4</b>
<b>1.1 Key findings</b> .....	<b>4</b>
<b>1.2 Preparation of the data</b> .....	<b>5</b>
1.2.1 Data capture from Commission Excel file .....	5
1.2.2 Results of plausibility checks .....	5
1.2.3 Changes within the dataset.....	5
<b>1.3 Comparison of the dataset provided by the Commission and the Excel file published on the Commission's website</b> .....	<b>6</b>
1.3.1 Comparison of installation-IDs .....	7
<b>1.4 Consistency checks within the dataset</b> .....	<b>7</b>
<b>1.5 Update of the disaggregated database (installation level)</b> .....	<b>7</b>
1.5.1 Integration of missing installations.....	8
1.5.2 Deletion of double installations.....	8
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 .....	9
1.5.6 Information on active installations .....	12
<b>1.6 Main changes in EU ETS viewer data between April 2020 and July 2019</b> .....	<b>12</b>
1.6.1 Number of entities included in the scheme .....	12
1.6.2 Account closures .....	13
1.6.3 Active installation in 3 TP.....	14
1.6.4 Permit identifier.....	14
1.6.5 Verified emissions (stationary installations) .....	14
1.6.6 Free allocation to existing installations from 2005 to 2018 (stationary installations) .....	16
1.6.7 Surrendered units from 2005 to 2019 (stationary installations).....	17
1.6.8 Free allocation from 2018 to 2020 (stationary installations) .....	18
1.6.9 Comparison of allocated amounts under Article 10a(1), 10a(7)and 10c for the years 2013 to 2019	19
1.6.10 Aviation .....	23
<b>2 Aggregated database</b> .....	<b>25</b>
<b>3 Auctioning</b> .....	<b>25</b>

## List of tables

Table 1-2	Overview of excluded and therefore deleted verified emissions and allocations from 2013 to 2019 .....	6
Table 1-3	Number of installations with old activity type codes .....	9
Table 1-4	Allocation of new activity codes to installation with old codes .....	11
Table 1-5	Number of entities by country .....	13
Table 1-6	Changes in VE between datasets (calculated as difference between May 2020 and April 2020 data / VE (May 2020)) .....	15
Table 1-7	Changes in free allocation to existing installations (10a, 2005-2018) between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020)) .....	16
Table 1-8	Changes in surrendered units between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020)) .....	17
Table 1-9	Changes in free allocation to existing installations (10a, 2018-2020) between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020)) .....	18
Table 1-10	Allocated amounts for the years 2013 to 2019 for stationary installations .....	20
Table 1-11	Changes in VE, free allocation and surrendered units to aviation operators (2015-2019) between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020)) .....	24

# 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 May 4th, 2020 contained 17 543 installations-rows. The dataset used for the ETS data viewer includes 17 526 entities:
  - 15 953 stationary and 1 573 aviation operators
  - 12 605 open and 4 921 (28% of total) closed entities
  - 3 288 entities (19% of total) not operating in the third trading period
  - 11 218 stationary installations are currently active
- 23 entities entered the trading system between April 2020 and May 2020.
- Total verified emissions 2019 from stationary installations sum up to 1 530 Mt in the actual dataset.
- 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 1.2.3.
- One aviation operator seems to be included twice and has been deleted (**NL 202792**) (section 1.5.2).
- Comparison of the dataset provided by the European Commission to EEA with the public extract published on the Commission's website:
  - There is a discrepancy between the dataset and the public extract: in the dataset, **DE 200696** (Croatia Airlines hrvatska zrakoplovna tvrtka d.d.) belongs to Germany, while it belongs to Croatia in the public extract and on the EUTL website (see section 0). Ronald Velghe states that the country code of the address seems to be wrong as the contact is located in Croatia. Therefore, this entity has been reallocated to Croatia in the dataset for the ETS data viewer.
- 22% 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 Table 1-3).

## 1.2 Preparation of the data

### 1.2.1 Data capture from Commission Excel file

The European Commission extracted data from the EUTL on May 4, 2020 and provided this extract to the EEA (referred to as “extract for EEA” in the text). The data used for the ETS data viewer<sup>1</sup> is based on this extract.

It contained 17 543 installations-rows with detailed information. After joining the rows for installations from CY and MT it ends up in **17 527 entities** (minus 13 for Cyprus, minus 3 for Malta).

In processes before, only two installations have been deleted for Malta (two power stations that are part of the ETS since its start in 2005). Since April 2018, there are two additional LNG fuelled power plants<sup>2,3</sup> 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 the April 2020 the installation MT 210138 was indicated as closed but was nevertheless removed from the dataset again to maintain consistency.

There is also one aircraft operator which seems to be included twice and which has been deleted (NL 202792, see section 1.5.2)

The dataset used for the ETS data viewer hence includes **17 526** entities.

### 1.2.2 Results of plausibility checks

No MS-IDs are doubled.

Compared to the dataset of April 2020, no installation is missing, and 23 new installations were added to EUTL.

In Austria, Germany, France, Italy, Sweden, United Kingdom “Permit Entry dates” are partly showing the start year of the installation operation and not the entry date into the EU ETS.

### 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

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

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

<sup>3</sup> <https://www.aecom.com/hk/projects/electrogas-malta/?qI%5B0%5D=260&qp=&qt=12>

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 Table 1-1. Entities with an indication of zero for any ETS information have not been counted here.

*Table 1-1 Overview of excluded and therefore deleted verified emissions and allocations from 2013 to 2019*

	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
<b>2013</b>	1.346	30	214	0	95	25.715	283.226	0	29.041
<b>2014</b>	1.321	1	202	0	83	6.509	182.008	0	162.216
<b>2015</b>	1.348	2	223	0	25	86	285.705	0	8.046
<b>2016</b>	1.346	0	221	0	19	0	247.302	0	14.293
<b>2017</b>	1.346	0	230	2	28	0	241.045	1.182	6.410
<b>2018</b>	1.356	0	236	2	26	0	1.770.662	644	6.535
<b>2019</b>	1.293	1	242	4	4	5.828	1.888.405	265.250	12.806
<b>Total</b>	<b>9.356</b>	<b>34</b>	<b>1.568</b>	<b>8</b>	<b>280</b>	<b>38.138</b>	<b>4.898.353</b>	<b>267.076</b>	<b>239.347</b>

Source: EUTL extract May 4, 2020, 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

The ETS data from the registry as published on the Commission's website<sup>4</sup> was published two weeks after the extract for EEA directly provided by the Commission. Therefore, no comparison check was performed for the April update. Instead, it was decided this year to make a comparison of the EEA extract for May 2020 with the compliance data of the Commission, which were published on the homepage of the European Commission on May 4th, 2020<sup>5</sup>.

<sup>4</sup> [https://ec.europa.eu/clima/sites/clima/files/ets/registry/docs/verified\\_emissions\\_2019\\_en.xlsx](https://ec.europa.eu/clima/sites/clima/files/ets/registry/docs/verified_emissions_2019_en.xlsx)

<sup>5</sup> [https://ec.europa.eu/clima/sites/clima/files/ets/registry/docs/compliance\\_2019\\_code\\_en.xlsx](https://ec.europa.eu/clima/sites/clima/files/ets/registry/docs/compliance_2019_code_en.xlsx)

The total numbers of entities are for both datasets the same (taking into account the removal of the data in chapter 1.2).

### 1.3.1 Comparison of installation-IDs

The first check concerns the included installations. In the extract for EEA, the aircraft operator with the ID “**DE 200696**” (Croatia Airlines hrvatska zrakoplovna tvrtka d.d.) is allocated to Germany, while it belongs to Croatia in the Excel file published on the Commission’s website. As hence the country code of the address seems to be wrong, this entity has been reallocated to Croatia in the EEA dataset for the ETS data viewer.

## 1.4 Consistency checks within the dataset

The main findings are:

- There are 4 921 entities with a closure date, two of them have no year of last emissions.
- There are 411 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)

Some changes have been implemented in the disaggregated database (to be used for the EEA EU ETS data viewer), compared to the extract provided by the Commission:

### Rows

- One aviation operator has been deleted (NL 202792) (see 1.5.2).

### Columns

The following four columns were added to the EUTL extract:

- “MS-ID” as a combination of Country Code and Installation Identifier
- “Entry Year” with only the year of “Permit Entry Date”
- “Closure date” with either only the year of “Account closure” or the note “open”
- “Active installation in 3 TP” with the values yes or no where yes indicates that the given year of last emissions of an entity is either 2013 or after or an empty cell, no indicates that the given year of last emissions is between 2005 and 2012 (see 1.5.6).

The following columns were changed:

- The extract contains 8 times a column with the name "EXC". These are the annual "Excluded" values. These were provided therefore with the appropriate year number. Excluded for 2020 was deleted because this column is not yet needed.

- Columns with the expression "ALLOCATION" changed to "ALLOCATED" to be consistent with old datasets

### **Content**

- Due to information in the public dataset, one aviation operator (DE 200696) has been allocated to Croatia instead of Germany (see 0).
- Main activity codes 1-9 have been translated to new codes (see 1.5.5).

The total amount of installations included in the MS Access database is now 17 526.

#### **1.5.1 Integration of missing installations**

Not necessary.

#### **1.5.2 Deletion of double installations**

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.

One Maltese installation (MT 210138) that is included since the April 2018 dataset has been deleted because it was included twice, see chapter 1.2.1.

#### **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 Table 1-10), 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, 3778 installations, so 22% of all installations, still report old activity codes (see Table 1-2). These are 8 less than in the dataset of April 2020.

Table 1-2 Number of installations with old activity type codes

MAIN ACTIVITY_TYPE_CODE	Number of installations - September 2016	Number of installations - July 2017	Number of installations - July 2018	Number of installations - July 2019	Number of installations - April 2020	Number of installations - May 2020
<b>1</b>	3471	3216	2846	2739	2654	<b>2649</b>
<b>2</b>	51	48	41	38	38	<b>38</b>
<b>3</b>	3	3	3	3	3	<b>3</b>
<b>4</b>	4	4	4	4	3	<b>3</b>
<b>5</b>	77	74	49	47	44	<b>44</b>
<b>6</b>	192	176	133	129	126	<b>126</b>
<b>7</b>	163	148	112	109	104	<b>104</b>
<b>8</b>	614	579	563	557	544	<b>543</b>
<b>9</b>	390	358	284	274	270	<b>268</b>
<b>Total</b>	4965	4606	4035	3900	3786	<b>3778</b>

Source: EUTL extract May 4, 2020 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 2016<sup>6</sup>). 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.

<sup>6</sup>[http://acm.eionet.europa.eu/docs/ETCACM\\_EU-ETS\\_translation\\_of\\_activity\\_codes\\_April\\_2016\\_for\\_publication.pdf](http://acm.eionet.europa.eu/docs/ETCACM_EU-ETS_translation_of_activity_codes_April_2016_for_publication.pdf)

Looking at verified emissions 2019 (see Table 1-3), emissions of installations with code 42 still increased because of the allocation to new codes (from 34 to 36 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 2.3 Mt for the year 2018.

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 May 2020 was reduced to 7 (code 26).

Since the April 2018 dataset, there are two installations with activity code 45 (Capture of greenhouse gases under Directive 2009/31/EC) which did not occur in ETS before. These are installations in the United Kingdom which entered the ETS in 2017.

With the dataset of April 2019, an installation with activity code 46 appeared for the first time (Transport of greenhouse gases under Directive 2009/31/EC).

In September 2018 three installations (FR 956, SK 150, IT 515) have been reallocated from code 20 to code 24 after an exchange with Member States and their agreement, that these plants are foremost steel plants. This reallocation has been done again with the May 2019 update since the installations FR 956 and SK 150 were still allocated to the activity code 20. The installation IT 515 was allocated to activity code 24 between the April and May update 2019.

For further details, see Table 1-3:

Table 1-3 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 2019	No of installations	VE 2019	No of installations	VE 2019	No of installations	VE 2019
1	2.649	64.441.819						
2	38	9.462.486						
3	3	-						
4	3	-						
5	44	4.451.735						
6	126	5.724.510						
7	104	1.023.412						
8	543	888.990						
9	268	2.136.253						
10	1573	68.139.163	1.573	68.139.163	0	0	0%	0%
20	7542	910.156.331	9821	957.307.176	2.279	47.150.845	23%	5%
21	139	113.274.237	176	122.736.723	37	9.462.486	21%	8%
22	19	10.047.163	29	10.171.963	10	124.800	34%	1%
23	13	2.571.680	13	2.571.680	0	0	0%	0%
24	242	99.085.974	292	116.127.380	50	17.041.406	17%	15%
25	250	12.498.817	287	12.621.754	37	122.937	13%	1%
26	33	8.564.055	40	8.564.055	7	0	18%	0%
27	35	1.275.301	36	1.275.301	1	0	3%	0%
28	92	7.556.372	98	7.556.372	6	0	6%	0%
29	248	116.031.489	333	120.800.956	85	4.769.467	26%	4%
30	272	27.876.944	426	30.204.586	154	2.327.642	36%	8%
31	366	17.113.807	464	18.077.180	98	963.373	21%	5%
32	1192	13.819.810	1739	14.707.016	547	887.206	31%	6%
33	44	1.847.675	65	2.166.988	21	319.313	32%	15%
34	42	1.248.381	42	1.248.381	0	0	0%	0%
35	177	4.992.780	197	5.317.500	20	324.720	10%	6%
36	554	19.083.658	866	21.586.406	312	2.502.748	36%	12%
37	18	1.615.221	18	1.615.221	0	0	0%	0%
38	34	3.484.689	36	3.756.332	2	271.643	6%	7%
39	3	113.963	3	113.963	0	0	0%	0%
40	1	10.099	1	10.099	0	0	0%	0%
41	29	20.490.772	30	20.490.772	1	0	3%	0%
42	353	33.799.968	458	36.111.790	105	2.311.822	23%	6%
43	42	8.891.782	47	9.231.631	5	339.849	11%	4%
44	14	4.153.217	14	4.153.217	0	0	0%	0%
45	2	221	2	221	0	0	0%	0%
46	1	1.451	1	1.451	0	0	0%	0%
99	418	1.805.474	419	1.014.422	1	-791.052	0%	-78%
Group 1-9	3.778	88.129.205	-	-				
Group 10-99	13.748	1.509.550.494	17.526	1.597.679.699				
<b>Total</b>	<b>17.526</b>	<b>1.597.679.699</b>	<b>17.526</b>	<b>1.597.679.699</b>	<b>3.778</b>	<b>88.129.205</b>	<b>22%</b>	<b>6%</b>

**Note:** The total number of translations given in the table (3 778) is not the absolute number of translations

Source: EUTL extract May 4, 2020, own calculation

The EU ETS data viewer separates between stationary installations and aviation. The total number of **aviation operators** (activity type code 10) is **1 573**, so there are **15 953 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 April 2020 and July 2019**

### **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 1-4 Number of entities by country

MS	20. July 17	10. Jul 18	03. May 19	01. Jul 19	01. Apr 20	04. Mai 20	Difference May 20 - July 19
AT	292	292	295	295	296	296	0
BE	488	491	498	498	499	499	0
BG	172	172	174	174	174	174	0
CY	26	27	28	28	29	29	0
CZ	466	468	468	468	468	468	0
DE	2689	2725	2768	2768	2783	2785	2
DK	460	460	461	462	465	465	0
EE	66	66	66	66	66	66	0
ES	1468	1481	1492	1495	1507	1515	8
FI	729	732	738	738	738	738	0
FR	1671	1713	1730	1733	1744	1745	1
GB	1838	1927	1985	1986	2017	2020	3
GR	211	212	215	215	217	217	0
HR	59	59	59	59	62	62	0
HU	296	298	301	301	304	304	0
IE	223	228	231	231	232	233	1
IS	41	44	44	44	44	44	0
IT	1593	1610	1626	1628	1641	1643	2
LI	2	2	2	2	2	2	0
LT	125	126	126	126	129	129	0
LU	31	33	34	34	34	34	0
LV	118	120	120	120	120	120	0
MT	8	13	16	16	16	17	1
NL	653	660	663	663	666	667	1
NO	179	183	186	186	191	191	0
PL	1058	1068	1080	1080	1083	1084	1
PT	361	364	369	369	370	371	1
RO	298	300	302	302	303	303	0
SE	945	949	962	962	975	976	1
SI	104	106	106	106	106	106	0
SK	222	222	222	222	222	223	1
<b>Total</b>	<b>16892</b>	<b>17151</b>	<b>17367</b>	<b>17377</b>	<b>17503</b>	<b>17526</b>	<b>23</b>

Source: EUTL extract May 4, 2020 and former extracts, own calculation

As shown in Table 1-4, the May 2020 dataset includes 23 more entities than the May 2020 dataset.

Furthermore, as discussed in chapter 0, one entity has been transferred from Germany to Croatia.

### 1.6.2 Account closures

The indicator “account closure” is included in the dataset since May 2015. In May 2020, 12 605 entities have been indicated as open, 4 921 (28% of total) have a closure date that lies before the extraction date of the ETS dataset.

### **1.6.3 Active installation in 3 TP**

3 288 entities – 19% of total – indicated that they are not operating in the third trading period. This number increased by 5 compared to the dataset of May 2020.

70 of those 3 288 entities no longer active in the 3<sup>rd</sup> trading period still have open accounts.

### **1.6.4 Permit identifier**

This check was not conducted this time because the corresponding column in the data set was incorrectly formatted.

### **1.6.5 Verified emissions (stationary installations)**

In the following table, data on verified emission is compared between the datasets from April 2020 and May 2020, just for stationary data. Differences are shown as percentages, calculated from the difference related to latest data.

Table 1-5 Changes in VE between datasets (calculated as difference between May 2020 and April 2020 data / VE (May 2020))

	total 1st trading period	total 2nd trading period	total 3rd trading period	2016	2017	2018	2019
AT	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
BE	0,0%	0,0%	2,0%	0,0%	0,0%	0,0%	7,9%
BG	0,0%	0,0%	16,2%	0,0%	0,0%	0,0%	75,9%
CY	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
CZ	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,6%
DE	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,3%
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%	0,0%	0,0%	0,0%	0,0%	0,0%
FR	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,6%
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%	8,0%	0,0%	0,0%	0,0%	31,7%
IE	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%
IT	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,4%
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%	0,5%	0,0%	0,0%	0,0%	3,3%
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%	0,0%	0,0%	0,0%	0,0%	0,0%
PL	0,0%	0,0%	0,9%	0,0%	0,0%	0,0%	7,0%
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%	0,0%	0,0%	0,0%	0,0%	-0,1%
SI	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
SK	0,0%	0,0%	0,3%	0,0%	0,0%	0,0%	2,1%
<b>Total</b>	0,0%	0,0%	0,4%	0,0%	0,0%	0,0%	3,1%

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

Source: EUTL extract May 4, 2020 and former extracts, own calculation

There are no changes for the first and second trading period but minor changes for the third trading period.

The increases for 2019 are mostly due to effects on the reporting date, as the April data wasn't complete on the day the data extract was provided.

### 1.6.6 Free allocation to existing installations from 2005 to 2018 (stationary installations)

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

Table 1-6 Changes in free allocation to existing installations (10a, 2005-2018) between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020))

	total 1st trading period	total 2nd trading period	total 3rd trading period	2016	2017	2018	2019
AT	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%
BG		0,0%	0,0%	0,0%	0,0%	0,0%	0,0%
CY	-0,5%	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%	0,0%	0,0%	0,0%	0,0%	0,0%
FR	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%
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%	0,0%	0,0%
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%	-0,2%	0,1%
MT	0,0%	0,0%					
NL	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%
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%	0,0%	0,0%	0,0%	0,0%	0,0%
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%
<b>Total</b>	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%

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

Source: EUTL extract May 4, 2020 and former extracts, own calculation



There are no significant changes in total free allowances for the first and second trading period, with exception of Cyprus due to changes for the years 2006 and 2007.

For the third trading period, free allowances changed for several countries for the years 2013-2019, but the overall change for the 3rd trading period is insignificant.

There are no free allowances for Malta in the third trading period.

### 1.6.7 Surrendered units from 2005 to 2019 (stationary installations)

The changes in surrendered units are shown in Table 1-7.

Table 1-7 Changes in surrendered units between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020))

	total 1st trading period	total 2nd trading period	total 3rd trading period	2013	2014	2015	2016	2017	2018	2019
AT	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	82,1%
BE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	83,9%
BG		0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	99,5%
CY	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
CZ	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	91,4%
DE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	86,3%
DK	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	70,8%
EE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	99,1%
ES	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	94,4%
FI	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	77,9%
FR	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	83,5%
GB	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	67,5%
GR	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	94,6%
HR			0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	43,9%
HU	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	72,8%
IE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	31,2%
IS			0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
IT	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	94,5%
LI		0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
LT	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	95,6%
LU	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	31,4%
LV	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	93,9%
MT	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	96,5%
NL	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	86,9%
NO		0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	95,6%
PL	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	83,4%
PT	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	95,4%
RO	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	76,2%
SE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	70,1%
SI	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	94,9%
SK	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	86,5%
Total	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	85,1%

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

Source: EUTL extract May 4, 2020 and former extracts, own calculation

There are no changes in surrendered units for all trading periods. The column for the 3<sup>rd</sup> TP does not include 2019, as the comparison is performed with the April dataset, which was mostly incomplete for the surrendered units.

## 1.6.8 Free allocation from 2018 to 2020 (stationary installations)

Table 1-8 Changes in free allocation to existing installations (10a, 2018-2020) between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020))

	2018	2019	2020
AT	0,0%	0,0%	-0,1%
BE	0,0%	0,0%	0,0%
BG	0,0%	0,0%	-2,8%
CY	0,0%	0,0%	0,0%
CZ	0,0%	0,0%	0,0%
DE	0,0%	0,0%	-0,3%
DK	0,0%	0,0%	-4,3%
EE	0,0%	0,0%	-0,2%
ES	0,0%	0,0%	0,0%
FI	0,0%	0,0%	-0,1%
FR	0,0%	0,0%	-0,3%
GB	0,0%	0,0%	0,2%
GR	0,0%	0,0%	-0,1%
HR	0,0%	0,0%	0,8%
HU	0,0%	0,0%	-0,6%
IE	0,0%	0,0%	-0,1%
IS	0,0%	0,0%	0,0%
IT	0,0%	0,0%	-0,1%
LI	0,0%	0,0%	0,0%
LT	0,0%	0,0%	0,0%
LU	0,0%	0,0%	0,0%
LV	-0,2%	0,1%	-2,8%
MT			
NL	0,0%	0,0%	0,0%
NO	0,0%	0,0%	0,0%
PL	0,0%	0,0%	-0,4%
PT	0,0%	0,0%	0,0%
RO	0,0%	0,0%	0,7%
SE	0,0%	0,0%	-0,2%
SI	0,0%	0,0%	0,0%
SK	0,0%	0,0%	0,0%
<b>Total</b>	<b>0,0%</b>	<b>0,0%</b>	<b>-0,2%</b>

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

Source: EUTL extract May 4, 2020 and former extracts, own calculation

### **1.6.9 Comparison of allocated amounts under Article 10a(1), 10a(7) and 10c for the years 2013 to 2019**

Both prior 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.

Data quality checks for the dataset used for the EEA's EU ETS data viewer

Table 1-9 Allocated amounts for the years 2013 to 2019 for stationary installations

COUNTRY CODE	2020 May data																				
	SummevonALLOCATED_2013	SummevonALLOCATED_RESERVE_2013	SummevonALLOCATED_TRANSITIONAL_2013	SummevonALLOCATED_2014	SummevonALLOCATED_RESERVE_2014	SummevonALLOCATED_TRANSITIONAL_2014	SummevonALLOCATED_2015	SummevonALLOCATED_RESERVE_2015	SummevonALLOCATED_TRANSITIONAL_2015	SummevonALLOCATED_2016	SummevonALLOCATED_RESERVE_2016	SummevonALLOCATED_TRANSITIONAL_2016	SummevonALLOCATED_2017	SummevonALLOCATED_RESERVE_2017	SummevonALLOCATED_TRANSITIONAL_2017	SummevonALLOLOCATED_RESERVE_2018	SummevonALLOCATED_RESERVE_2018	SummevonALLOCATED_TRANSITIONAL_2018	SummevonALLOCATED_2019	SummevonALLOCATED_RESERVE_2019	SummevonALLOCATED_TRANSITIONAL_2019
AT	22.314.317	139.836	-	21.729.285	179.283	-	20.897.099	195.038	-	20.304.382	189.272	-	19.705.989	221.067	-	19.066.999	305.957	-	18.457.836	310.862	-
BE	36.987.882	100.607	-	35.749.767	362.331	-	33.857.606	496.651	-	33.277.664	869.398	-	32.431.977	943.261	-	31.184.209	1.026.996	-	30.945.203	1.020.739	-
BG	10.477.130	156.115	11.173.278	9.640.429	234.593	9.779.243	9.169.919	327.179	8.160.589	9.097.819	649.662	6.528.467	8.685.511	700.809	3.812.436	8.275.447	693.662	2.787.615	7.864.984	680.376	1.608.231
CY	895.638	317.509	2.519.077	852.370	311.984	2.195.195	837.126	306.460	1.907.302	818.441	300.935	1.583.420	808.569	295.410	1.259.538	803.998	453.325	935.657	784.160	512.058	575.111
CZ	25.276.664	170.123	26.825.970	23.784.842	230.688	22.993.688	22.575.435	354.113	19.161.409	21.436.791	408.889	15.329.126	19.872.619	472.726	11.494.886	19.412.240	413.766	7.661.840	18.510.916	394.621	3.830.111
DE	168.272.504	1.244.219	-	163.230.330	1.831.177	-	156.626.012	2.321.912	-	151.505.515	3.277.504	-	146.645.362	3.504.062	-	142.238.683	3.776.482	-	137.206.055	3.779.707	-
DK	12.180.767	45.561	-	10.969.069	103.798	-	9.762.685	111.906	-	9.013.995	135.692	-	8.353.580	161.541	-	7.727.993	216.397	-	7.153.360	193.168	-
EE	3.076.541	584.403	5.135.166	2.860.744	754.632	4.401.568	2.269.966	1.068.346	3.667.975	1.794.800	1.147.331	2.934.380	1.677.508	1.141.214	2.055.614	1.870.956	1.242.557	38.939	1.778.183	1.225.071	15.000.000
ES	65.202.365	2.061.983	-	58.964.220	2.246.714	-	57.931.693	2.424.041	-	57.456.163	2.530.924	-	55.966.221	2.787.412	-	54.236.212	3.025.684	-	54.423.670	3.267.436	-
FI	22.560.320	336.611	-	21.223.206	383.485	-	19.488.364	601.654	-	18.070.605	890.191	-	17.002.249	1.029.895	-	15.970.403	1.025.488	-	15.052.728	940.908	-
FR	82.326.306	236.637	-	80.073.473	368.288	-	77.066.240	493.699	-	74.928.149	517.094	-	70.437.837	564.225	-	67.099.492	560.946	-	65.675.318	536.919	-
GB	65.686.609	1.078.837	-	63.903.741	1.333.729	-	59.575.096	1.492.789	-	57.898.191	1.785.017	-	51.079.900	1.916.772	-	49.427.524	1.916.970	-	47.650.311	1.694.795	-
GR	13.885.293	1.144.800	-	13.128.239	1.527.223	-	13.012.422	1.578.709	-	12.745.427	1.552.657	-	12.701.598	1.514.317	-	12.480.281	1.480.573	-	12.263.186	1.443.807	-
HR	5.268.253	-	-	5.079.562	9.319	-	4.826.293	13.638	-	4.698.559	13.392	-	4.580.337	-	-	4.434.782	-	-	4.325.443	23.423	-
HU	11.498.851	396.306	6.134.625	9.553.664	420.907	-	9.870.048	488.582	-	9.636.553	549.614	-	9.405.400	630.787	-	9.124.116	725.276	-	8.808.687	699.795	-
IE	5.222.237	42.219	-	4.682.891	51.290	-	5.269.356	51.326	-	5.140.237	131.265	-	5.003.118	121.723	-	4.867.278	118.831	-	4.737.769	115.960	-
IS	1.462.844	-	-	1.437.438	-	-	1.411.731	-	-	1.385.754	-	-	1.359.499	-	-	1.332.989	-	-	1.306.149	-	-
IT	86.309.051	505.043	-	77.323.438	990.997	-	70.592.399	1.940.667	-	68.733.421	2.131.238	-	66.595.823	2.329.566	-	64.899.442	2.495.819	-	61.875.119	2.489.725	-
LI	2.077	-	-	1.859	-	-	1.647	-	-	1.441	-	-	1.241	-	-	1.048	-	-	861	-	-
LT	6.532.876	27.407	322.449	6.224.962	46.479	297.113	5.954.919	139.918	269.475	5.687.632	233.725	237.230	5.427.596	273.864	200.379	5.160.909	289.139	158.922	4.707.921	296.696	94.000.000
LU	1.352.075	20.589	-	1.278.011	27.062	-	1.281.921	25.958	-	1.251.578	26.070	-	1.221.259	24.794	-	1.190.993	24.731	-	1.160.702	23.321	-
LV	2.567.577	107.118	-	2.313.591	106.363	-	2.014.186	64.003	-	1.832.360	58.861	-	1.699.597	54.030	-	1.552.622	48.309	-	1.430.167	50.116	-
MT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	48.996.953	466.474	-	47.584.924	571.745	-	45.994.256	756.004	-	44.421.226	751.805	-	43.837.832	623.193	-	42.790.060	791.445	-	41.589.876	738.600	-
NO	17.601.394	90.411	-	17.177.203	210.874	-	16.748.711	333.895	-	16.451.612	660.231	-	16.060.781	340.273	-	15.682.611	311.841	-	15.342.872	339.517	-
PL	63.394.350	723.669	71.582.255	58.976.684	897.471	60.789.404	54.673.748	1.308.622	43.568.800	51.110.701	1.724.408	32.160.799	48.115.296	2.392.053	21.257.038	44.794.167	2.603.987	18.981.528	42.423.058	2.878.707	16.299.000
PT	11.867.317	650.629	-	11.479.980	644.726	-	10.956.532	521.094	-	10.687.623	527.996	-	10.414.614	524.757	-	10.202.996	525.670	-	9.976.084	771.522	-
RO	23.746.268	542.685	15.748.011	21.078.703	681.585	8.591.461	19.671.744	794.683	9.210.797	21.461.881	835.185	7.189.961	20.188.332	817.233	6.222.255	16.365.778	845.030	3.778.439	18.161.453	985.083	1.720.000
SE	28.676.640	404.810	-	26.793.799	608.040	-	24.996.209	607.742	-	23.644.655	795.061	-	22.258.857	900.346	-	20.894.117	889.472	-	19.743.407	829.766	-
SI	2.284.557	-	-	2.367.424	-	-	2.136.638	-	-	1.893.352	524	-	1.794.445	6.055	-	1.725.765	11.901	-	1.660.160	17.424	-
SK	16.385.346	80.990	-	15.674.222	147.093	-	14.904.201	125.233	-	14.433.933	92.810	-	13.719.276	130.438	-	13.543.368	202.952	-	13.154.054	259.225	-
<b>Total</b>	<b>862.311.002</b>	<b>11.675.591</b>	<b>139.440.831</b>	<b>815.138.070</b>	<b>15.281.876</b>	<b>109.047.672</b>	<b>774.374.202</b>	<b>18.943.862</b>	<b>85.946.347</b>	<b>750.820.460</b>	<b>22.786.751</b>	<b>65.963.383</b>	<b>717.052.223</b>	<b>24.421.823</b>	<b>46.302.146</b>	<b>688.357.478</b>	<b>26.023.206</b>	<b>34.342.940</b>	<b>668.169.692</b>	<b>26.519.347</b>	<b>24.152.000</b>

Data quality checks for the dataset used for the EEA's EU ETS data viewer

COUNTRY CODE	Total Allocated Amounts May 2020 data						
	2013	2014	2015	2016	2017	2018	2019
AT	22.454.153	21.908.568	21.092.137	20.493.654	19.927.056	19.372.956	18.768.698
BE	37.088.489	36.112.098	34.354.257	34.147.062	33.375.238	32.211.205	31.965.942
BG	21.806.523	19.654.265	17.657.687	16.275.948	13.198.756	11.756.724	10.154.073
CY	3.732.224	3.359.549	3.050.888	2.702.796	2.363.517	2.192.980	1.872.007
CZ	52.272.757	47.009.218	42.090.957	37.174.806	31.840.231	27.487.846	22.736.442
DE	169.516.723	165.061.507	158.947.924	154.783.019	150.149.424	146.015.165	140.985.762
DK	12.226.328	11.072.867	9.874.591	9.149.687	8.515.121	7.944.390	7.346.528
EE	8.796.110	8.016.944	7.006.287	5.876.511	4.874.336	3.152.452	3.022.725
ES	67.264.348	61.210.934	60.355.734	59.987.087	58.753.633	57.261.896	57.691.106
FI	22.896.931	21.606.691	20.090.018	18.960.796	18.032.144	16.995.891	15.993.636
FR	82.562.943	80.441.761	77.559.939	75.445.243	71.002.062	67.660.438	66.212.237
GB	66.765.446	65.237.470	61.067.885	59.683.208	52.996.672	51.344.494	49.345.106
GR	15.030.093	14.655.462	14.591.131	14.298.084	14.215.915	13.960.854	13.706.993
HR	5.268.253	5.088.881	4.839.931	4.711.951	4.580.337	4.434.782	4.348.866
HU	18.029.782	9.974.571	10.358.630	10.186.167	10.036.187	9.849.392	9.508.482
IE	5.264.456	4.734.181	5.320.682	5.271.502	5.124.841	4.986.109	4.853.729
IS	1.462.844	1.437.438	1.411.731	1.385.754	1.359.499	1.332.989	1.306.149
IT	86.814.094	78.314.435	72.533.066	70.864.659	68.925.389	67.395.261	64.364.844
LI	2.077	1.859	1.647	1.441	1.241	1.048	861
LT	6.882.732	6.568.554	6.364.312	6.158.587	5.901.839	5.608.970	5.099.049
LU	1.372.664	1.305.073	1.307.879	1.277.648	1.246.053	1.215.724	1.184.023
LV	2.674.695	2.419.954	2.078.189	1.891.221	1.753.627	1.600.931	1.480.283
MT	-	-	-	-	-	-	-
NL	49.463.427	48.156.669	46.750.260	45.173.031	44.461.025	43.581.505	42.328.476
NO	17.691.805	17.388.077	17.082.606	17.111.843	16.401.054	15.994.452	15.682.389
PL	135.700.274	120.663.559	99.551.170	84.995.908	71.764.387	66.379.682	61.601.486
PT	12.517.946	12.124.706	11.477.626	11.215.619	10.939.371	10.728.666	10.747.606
RO	40.036.964	30.351.749	29.677.224	29.487.027	27.227.820	20.989.247	20.869.552
SE	29.081.450	27.401.839	25.603.951	24.439.716	23.159.203	21.783.589	20.573.173
SI	2.284.557	2.367.424	2.136.638	1.893.876	1.800.500	1.737.666	1.677.584
SK	16.466.336	15.821.315	15.029.434	14.526.743	13.849.714	13.746.320	13.413.279
<b>Total</b>	<b>1.013.427.424</b>	<b>939.467.618</b>	<b>879.264.411</b>	<b>839.570.594</b>	<b>787.776.192</b>	<b>748.723.624</b>	<b>718.841.086</b>

Data quality checks for the dataset used for the EEA's EU ETS data viewer

COUNTRY CODE	Comparison 2015 Allocation April 2020 with May 2020 data			Comparison 2016 Allocation April 2020 with May 2020 data			Comparison 2017 Allocation April 2020 with May 2020 data			Comparison 2018 Allocation April 2020 with May 2020 data			Comparison 2019 Allocation April 2020 with May 2020 data		
	ALLOCATE D	ALLOCATE D_RESERVE	ALLOCATE D_TRANSITIONAL	ALLOCATE D	ALLOCATE D_RESERVE	ALLOCATE D_TRANSITIONAL	ALLOCATE D	ALLOCATE D_RESERVE	ALLOCATE D_TRANSITIONAL	ALLOCATE D	ALLOCATE D_RESERVE	ALLOCATE D_TRANSITIONAL	ALLOCATE D	ALLOCATE D_RESERVE	ALLOCATE D_TRANSITIONAL
AT	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%	0,1%	-	0,0%	0,2%	-
BG	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	11,3%	0,0%	0,0%	100,0%
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%	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%	0,0%	100,0%
DE	0,0%	-0,1%	-	0,0%	-0,3%	-	0,0%	-0,3%	-	0,0%	0,4%	-	0,0%	3,2%	-
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%	1,1%	0,0%	0,0%	1,3%	0,0%	0,0%	1,2%	0,0%	0,0%	1,2%	100,0%
ES	0,0%	1,1%	-	0,0%	1,2%	-	0,0%	2,6%	-	0,0%	8,7%	-	0,0%	17,4%	-
FI	0,0%	0,0%	-	0,0%	8,1%	-	0,0%	22,5%	-	0,0%	22,2%	-	0,0%	19,1%	-
FR	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,8%	-	0,0%	0,8%	-
GB	-0,1%	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%	-
HR	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	-	-	0,0%	-	-	0,0%	46,0%	-
HU	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,2%	-	0,0%	0,6%	-	0,0%	0,8%	-
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%	-	-
IT	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	1,3%	-
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%	100,0%
LU	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%	-	-0,2%	1,2%	-	0,1%	17,4%	-
MT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NL	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%	2,3%	-	0,0%	4,0%	-
PL	0,0%	0,0%	0,0%	0,0%	0,0%	1,5%	0,0%	0,0%	0,0%	0,0%	6,5%	0,7%	0,0%	16,3%	100,0%
PT	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	16,7%	-
RO	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	2,4%	0,0%	0,0%	18,5%	100,0%
SE	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,0%	-	0,0%	0,2%	-	0,0%	2,1%	-
SI	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%	33,2%	-	0,0%	50,8%	-
<b>Total</b>	<b>0,0%</b>	<b>0,5%</b>	<b>0,0%</b>	<b>0,0%</b>	<b>1,8%</b>	<b>0,7%</b>	<b>0,0%</b>	<b>3,3%</b>	<b>0,0%</b>	<b>0,0%</b>	<b>8,6%</b>	<b>2,5%</b>	<b>-3,0%</b>	<b>10,3%</b>	<b>-38,7%</b>

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

Source: EUTL extract May 4, 2020 and former extracts, own calculation

In total, NER allowances (Column: "Allocated\_Reserve") increased by about 0.4% in 2015, 1.8% in 2016, 3.3% in 2017, 8.6% in 2018 and 10.3% in 2019. NER allowances changed, especially for 2018 and 2019. As NER allocation is linked to putting into operation a new plant or a new part of it, high relative changes are not surprising.

#### **1.6.10 Aviation**

For aviation a comparison of verified emissions, free allocation and surrendered units has been conducted together for the years 2012-2019.

Table 1-10 Changes in VE, free allocation and surrendered units to aviation operators (2015-2019) between datasets (calculated as difference between May 2020 and April 2020 data / allowances (May 2020))

	VERIFIED_E MISSIONS_2015	VERIFIED_E MISSIONS_2016	VERIFIED_E MISSIONS_2017	VERIFIED_E MISSIONS_2018	VERIFIED_E MISSIONS_2019	Allocation 2015	Allocation 2016	Allocation 2017	Allocation 2018	Allocation 2019	SURRENDE RED_UNITS_2015	SURRENDE RED_UNITS_2016	SURRENDE RED_UNITS_2017	SURRENDE RED_UNITS_2018	SURRENDE RED_UNITS_2019
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%	100,0%
BE	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	98,9%
BG	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
CY	0,0%	0,0%	0,0%	0,0%	0,0%	0%	0%				0%	0%	0%	0%	99%
CZ	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
DE	0,0%	0,0%	0,0%	3,0%	2,6%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	95,2%
DK	0,0%	0,0%	0,0%	-0,5%	10,9%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	97,1%
EE	0,0%	0,0%	0,0%	0,0%	100,0%	0,0%					0,0%	0,0%	0,0%	0,0%	100,0%
ES	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	86,2%
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%	100,0%
FR	0,0%	0,0%	0,0%	0,0%	3,2%	0,0%	0,0%	0,0%	0,0%	-0,1%	0,0%	0,0%	0,0%	0,0%	99,5%
GB	0,0%	0,0%	0,0%	0,0%	8,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	89,9%
GR	0,0%	0,0%	0,0%	0,0%	0,1%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	94,5%
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%
HU	0,0%	0,0%	0,0%	0,0%	0,5%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
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%	100,0%
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%	100,0%
IT	0,0%	0,0%	0,0%	0,0%	0,7%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	92,7%
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%		55,9%
LU	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%	100,0%
LV	0,0%	0,0%	0,0%	0,0%	0,3%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
MT	0,0%	0,0%	0,0%	0,0%	6,4%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	96,7%
NL	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%
NO	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	99,9%
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%	100,0%
PT	0,0%	0,0%	0,0%	0,0%	0,5%	0,0%	0,0%	0,0%	0,0%	-0,4%	0,0%	0,0%	0,0%	0,0%	100,0%
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%	0,0%	100,0%
SE	0,0%	0,0%	0,0%	0,0%	97,4%	0,0%	0,0%	0,0%	0,0%	-0,4%	0,0%	0,0%	0,0%	0,0%	98,3%
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%
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%	100,0%
Total	0,0%	0,0%	0,0%	0,4%	7,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	96,0%

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

Source: EUTL extract May 4, 2020 and former extracts, own calculation



For aviation operators, there are only very small changes for verified emissions. The changes in 2019 are due to the incomplete April dataset.

## **2 Aggregated database**

Due to corona-related technical issues the update of the aggregated database will only be conducted as soon as this tool is needed.

## **3 Auctioning**

Auctioning data has not changed qualitatively between May 2020 and April 2020. Most actual information on auctioning data is included in the background document (see on the EEA homepage below the ETS data viewer).