

Data quality checks for the update of the EEA's EU ETS data viewer Latest Dataset May 2024

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

This paper describes the data quality checks of new EU ETS data provided by the EU Commission to update the EEA EU ETS DataViewer. New data are usually made available every year in April, May and July and compared, among other things, for consistency with previous datasets.

The current dataset was made available on May 2nd, 2024. The comparison data set is from April 2023.

1.1 Key Findings

Table 1.1 Comparison of the last two data sets

| DataExtract | 1st April 2024* | 2nd May 2024 |
|---------------------------------------|------------------------|---------------------|
| DataRows | 18 230 | 18 469 |
| Stationary | 16 400 | 16 413 |
| Aviation operators | 1 654 | 1 655 |
| Maritime operators | 176 | 401 |
| DataRows excluded | 0 | 0 |
| Stationary | 0 | 0 |
| Aviation operators | 0 | 0 |
| Verified Emissions (2023) [Mt] | 1 067 | 1 141 |
| Stationary [Mt] | 1 021 | 1089 |
| Aviation operators [Mt] | 47 | 52 |
| Allocated [M] | 559 | 559 |
| Stationary [M] | 537 | 537 |
| Aviation operators[M] | 22 | 22 |
| Surrendered Units [M] | 96 | 359 |
| Stationary [M] | 95 | 347 |
| Aviation operators [M] | 1 | 12 |

Note: *The April dataset is usually incomplete

Sources: EUTL extract May 2nd, 2024, EUTL April, 2024

1.2 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 website, and the extract for EEA directly provided by the Commission on April 1st, 2024 was performed. No differences were found.

2 Consistency checks within the dataset

The main findings are:

- There are 7 314 entities with a closure date. This is higher compared to the last data extract from April 2024 (7 308 entities).
- There are 309 entities with a given year of last emissions and the indication “open” in the field “account closure”

2.1.1 Deletion of double installations

No deletion of double installations in April 2024

2.1.2 Reallocation of main activity codes

With start of the 3rd trading period in 2013 new activity codes were introduced. Some installations which already have been part of the EU ETS in the 1st or 2nd Trading Period haven’t changed their old activity codes with new ones.

In total, 3 498 installations (19% of all entities), still report old activity codes (see Table 2.1). These are 8 less than in the dataset of April 2024.

Table 2.1 Number of installations with old activity type codes

| MAIN_ACTIVITY_TYPE_CODE | Number of installations - July 2019 | Number of installations - July 2020 | Number of installations - July 2021 | Number of installations - July 2022 | Number of installations - July 2023 | Number of installations - April 2024 | Number of installations - May 2024 |
|-------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------------------|------------------------------------|
| 1 | 2739 | 2632 | 2563 | 2497 | 2477 | 2444 | 2436 |
| 2 | 38 | 38 | 36 | 35 | 35 | 35 | 35 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 |
| 5 | 47 | 44 | 43 | 42 | 42 | 40 | 40 |
| 6 | 129 | 126 | 121 | 120 | 117 | 116 | 116 |
| 7 | 109 | 104 | 101 | 97 | 96 | 94 | 94 |
| 8 | 557 | 543 | 531 | 529 | 524 | 523 | 523 |
| 9 | 274 | 268 | 262 | 254 | 252 | 248 | 248 |
| 99 | | | | | | | |
| Total | 3900 | 3761 | 3663 | 3580 | 3549 | 3506 | 3498 |

Sources: EUTL extract May 2nd, 2024

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). 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 2023 (see Table 2.2), emissions of installations with code 42 still increased because of the allocation to new codes (from 26.7 to 27.1 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 number 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 0.4 Mt for the year 2023.

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 Table 2.2:

Table 2.2 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 2023 | No of installations | VE 2023 | No of installations | VE 2023 | No of installations | VE 2023 |
| 1 | 2.436 | 17.890.996 | | | | | | |
| 2 | 35 | 8.491.606 | | | | | | |
| 3 | 3 | - | | | | | | |
| 4 | 3 | - | | | | | | |
| 5 | 40 | 4.590.351 | | | | | | |
| 6 | 116 | 2.912.880 | | | | | | |
| 7 | 94 | 356.212 | | | | | | |
| 8 | 523 | 425.339 | | | | | | |
| 9 | 248 | 1.054.307 | | | | | | |
| 10 | 1655 | 52.480.956 | 1.655 | 52.480.956 | 0 | 0 | 0% | 0% |
| 20 | 8120 | 641.298.906 | 10213 | 647.136.389 | 2.093 | 5.837.483 | 20% | 1% |
| 21 | 141 | 96.989.155 | 174 | 105.480.761 | 33 | 8.491.606 | 19% | 8% |
| 22 | 19 | 4.956.877 | 28 | 4.956.877 | 9 | 0 | 32% | 0% |
| 23 | 15 | 1.689.092 | 15 | 1.689.092 | 0 | 0 | 0% | 0% |
| 24 | 242 | 77.774.844 | 288 | 94.211.022 | 46 | 16.436.178 | 16% | 17% |
| 25 | 261 | 8.796.561 | 298 | 8.863.045 | 37 | 66.484 | 12% | 1% |
| 26 | 33 | 5.498.553 | 40 | 5.498.553 | 7 | 0 | 18% | 0% |
| 27 | 37 | 1.070.086 | 38 | 1.070.086 | 1 | 0 | 3% | 0% |
| 28 | 89 | 5.903.192 | 95 | 5.903.192 | 6 | 0 | 6% | 0% |
| 29 | 254 | 92.005.896 | 335 | 94.647.698 | 81 | 2.641.802 | 24% | 3% |
| 30 | 277 | 22.083.007 | 418 | 22.480.587 | 141 | 397.580 | 34% | 2% |
| 31 | 376 | 14.699.059 | 465 | 15.053.398 | 89 | 354.339 | 19% | 2% |
| 32 | 1226 | 9.233.301 | 1755 | 9.682.899 | 529 | 449.598 | 30% | 5% |
| 33 | 55 | 1.530.856 | 72 | 1.649.616 | 17 | 118.760 | 24% | 7% |
| 34 | 45 | 901.522 | 45 | 901.522 | 0 | 0 | 0% | 0% |
| 35 | 179 | 3.535.380 | 196 | 3.738.593 | 17 | 203.213 | 9% | 5% |
| 36 | 593 | 13.373.594 | 882 | 14.339.772 | 289 | 966.178 | 33% | 7% |
| 37 | 18 | 1.432.547 | 18 | 1.432.547 | 0 | 0 | 0% | 0% |
| 38 | 35 | 1.799.382 | 35 | 1.799.382 | 0 | 0 | 0% | 0% |
| 39 | 3 | 67.838 | 3 | 67.838 | 0 | 0 | 0% | 0% |
| 40 | 1 | - | 1 | - | 0 | 0 | 0% | 0% |
| 41 | 29 | 12.228.944 | 30 | 12.228.944 | 1 | 0 | 3% | 0% |
| 42 | 365 | 26.648.851 | 460 | 27.121.747 | 95 | 472.896 | 21% | 2% |
| 43 | 48 | 7.065.017 | 53 | 7.065.017 | 5 | 0 | 9% | 0% |
| 44 | 15 | 1.631.943 | 15 | 1.631.943 | 0 | 0 | 0% | 0% |
| 45 | 3 | - | 3 | - | 0 | 0 | 0% | 0% |
| 50 | 401 | - | 401 | - | 0 | 0 | 0% | 0% |
| 99 | 436 | 1.471.530 | 437 | 757.104 | 1 | -714.426 | 0% | -94% |
| Group 1-9 | 3.498 | 35.721.691 | - | - | | | | |
| Group 10-99 | 14.971 | 1.106.166.889 | 18.468 | 1.141.888.580 | | | | |
| Total | 18.469 | 1.141.888.580 | 18.468 | 1.141.888.580 | 3.497 | 35.721.691 | 19% | 3% |

Note: The total number of translations given in the table (3 498) is not the absolute number of translations, because a small amount of other translations took place in the activity type codes 20-99.

Activity Code 50 was introduced in 2024 and includes the maritime operators. As these have only been part of the EU ETS since 2024, they have no emission data for 2023

Sources: EUTL extract May 2nd, 2024

3 Main changes in EU ETS viewer data between July 2023 and April 2024

3.1 Number of entities included in the scheme

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

Table 3.1 Number of entities by country

| MS | 01. Jul 20 | 01. Jul 21 | 01. Jul 22 | 05. July 23 | 01. Apr 24 | 02. Mai 24 | Difference July 23 - April 2024 |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------------------------------|
| AT | 296 | 297 | 297 | 298 | 299 | 299 | 0 |
| BE | 499 | 505 | 524 | 526 | 527 | 533 | 6 |
| BG | 174 | 174 | 177 | 178 | 179 | 180 | 1 |
| CY | 29 | 29 | 29 | 29 | 32 | 34 | 2 |
| CZ | 469 | 470 | 472 | 473 | 473 | 473 | 0 |
| DE | 2785 | 2794 | 2834 | 2856 | 2874 | 2875 | 1 |
| DK | 465 | 466 | 470 | 473 | 473 | 473 | 0 |
| EE | 66 | 66 | 66 | 68 | 73 | 75 | 2 |
| ES | 1515 | 1530 | 1546 | 1558 | 1572 | 1574 | 2 |
| FI | 738 | 745 | 754 | 759 | 776 | 782 | 6 |
| FR | 1749 | 1766 | 1850 | 1942 | 1956 | 1965 | 9 |
| GB | 2021 | 2027 | 1937 | 1853 | 1852 | 1852 | 0 |
| GR | 217 | 220 | 225 | 239 | 383 | 536 | 153 |
| HR | 62 | 64 | 66 | 66 | 70 | 70 | 0 |
| HU | 304 | 307 | 313 | 315 | 317 | 317 | 0 |
| IE | 235 | 239 | 249 | 253 | 256 | 257 | 1 |
| IS | 44 | 44 | 46 | 46 | 46 | 46 | 0 |
| IT | 1643 | 1648 | 1665 | 1683 | 1686 | 1720 | 34 |
| LI | 2 | 2 | 2 | 2 | 2 | 2 | 0 |
| LT | 129 | 130 | 130 | 130 | 132 | 132 | 0 |
| LU | 34 | 34 | 34 | 35 | 35 | 35 | 0 |
| LV | 120 | 120 | 120 | 120 | 121 | 123 | 2 |
| MT | 15 | 16 | 18 | 25 | 28 | 29 | 1 |
| NL | 667 | 677 | 691 | 695 | 705 | 709 | 4 |
| NO | 191 | 194 | 201 | 203 | 206 | 210 | 4 |
| PL | 1084 | 1086 | 1095 | 1101 | 1104 | 1105 | 1 |
| PT | 371 | 371 | 373 | 373 | 374 | 374 | 0 |
| RO | 304 | 307 | 311 | 314 | 316 | 316 | 0 |
| SE | 976 | 982 | 992 | 1007 | 1023 | 1032 | 9 |
| SI | 106 | 106 | 106 | 107 | 107 | 108 | 1 |
| SK | 223 | 225 | 226 | 227 | 227 | 227 | 0 |
| XI | | 6 | 6 | 7 | 6 | 6 | 0 |
| Total | 17533 | 17647 | 17825 | 17961 | 18230 | 18469 | 239 |

Sources: EUTL extract May 2nd, 2024

As shown in Table 3.1, the May 2024 dataset includes 239 more entities than the July 2023 dataset. Most of the new entities (239) are new maritime operators that have been part of the EU ETS since the beginning of 2024.

3.2 Account closures

The indicator “account closure” is included in the dataset since May 2015. In April 2024, 11 155 entities have been indicated as open, 7 314 (40% of total) have a closure date that lies before the extraction date of the ETS dataset.

3.3 Active installation in 3 TP/4 TP

3 403 entities – 19% of total – indicated that they are not operating in the third/fourth trading period. 35 of those entities no longer active in the 3rd / 4th trading period still have open accounts.

3.4 Verified emissions (stationary installations)

In the following table, data on verified emission is compared between the datasets from April 2024 and May 2024, just for stationary data. Differences are shown as percentages, calculated from the difference related to latest data.

Table 3.2 Changes in VE between datasets (stationary installations)

| MS | Percentages related to last available data (+ => increase) | | | | | | | |
|--------------|--|--------------------------|--------------------------|--------------------------|------|------|------|-------|
| | total 1st trading period | total 2nd trading period | total 3rd trading period | total 4th trading period | 2020 | 2021 | 2022 | 2023 |
| AT | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| BE | 0,0% | 0,0% | 0,0% | 6,2% | 0,0% | 0,0% | 0,0% | 20,5% |
| BG | 0,0% | 0,0% | 0,0% | 12,0% | 0,0% | 0,0% | 0,0% | 55,5% |
| CY | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| CZ | 0,0% | 0,0% | 0,0% | 0,1% | 0,0% | 0,0% | 0,0% | 0,4% |
| DE | 0,0% | 0,0% | 0,0% | 0,4% | 0,0% | 0,0% | 0,0% | 1,5% |
| DK | 0,0% | 0,0% | 0,0% | 2,4% | 0,0% | 0,0% | 0,0% | 8,3% |
| EE | 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% |
| FI | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| FR | 0,0% | 0,0% | 0,0% | 0,7% | 0,0% | 0,0% | 0,0% | 2,5% |
| GB | 0,0% | 0,0% | 0,0% | | 0,0% | | | |
| GR | 0,0% | 0,0% | 0,0% | 2,3% | 0,0% | 0,0% | 0,0% | 8,2% |
| HR | | | 0,0% | 4,2% | 0,0% | 0,0% | 0,0% | 12,9% |
| HU | 0,0% | 0,0% | 0,0% | 0,5% | 0,0% | 0,0% | 0,0% | 1,8% |
| IE | 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% |
| IT | 0,0% | 0,0% | 0,0% | 0,3% | 0,0% | 0,0% | 0,0% | 0,9% |
| LI | | 0,0% | 0,0% | | 0,0% | | | |
| LT | 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% |
| LV | 0,0% | 0,0% | 0,0% | 30,6% | 0,0% | 0,0% | 0,0% | 99,8% |
| MT | 0,0% | 0,0% | 0,0% | -0,1% | 0,0% | 0,0% | 0,0% | -0,2% |
| NL | 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% |
| PL | 0,0% | 0,0% | 0,0% | 7,1% | 0,0% | 0,0% | 0,0% | 24,6% |
| PT | 0,0% | 0,0% | 0,0% | 0,1% | 0,0% | 0,0% | 0,0% | 0,4% |
| RO | 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% |
| SI | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| SK | 0,0% | 0,0% | 0,0% | 0,2% | 0,0% | 0,0% | 0,0% | 0,6% |
| XI | 0,0% | 0,0% | 0,0% | 19,1% | 0,0% | 0,0% | 0,0% | 72,2% |
| Total | 0,0% | 0,0% | 0,0% | 1,8% | 0,0% | 0,0% | 0,0% | 6,3% |

Note: Calculated as difference between April 2024 and May 2024 data
Purple: increase, light orange: decrease, green: zero difference.

Sources: EUTL extract May 2nd, 2024 and former extracts, own calculation

In general, there are no changes for the first and second trading period and minor changes for the third trading period. There are some changes in the fourth trading period, due to the incomplete dataset from April 2024.

3.5 Free allocation to existing installations from 2005 to 2023 (stationary installations)

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

Table 3.3 Changes in free allocations between datasets (stationary installations)

| MS | Percentages related to last available data (+ => increase) | | | | | | | |
|--------------|--|--------------------------|--------------------------|--------------------------|-------------|-------------|-------------|-------------|
| | total 1st trading period | total 2nd trading period | total 3rd trading period | total 4th trading period | 2020 | 2021 | 2022 | 2023 |
| AT | 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% |
| 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% | 0,0% |
| DE | 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% |
| EE | 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% |
| FI | 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% |
| GB | 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% |
| 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% | 0,0% | 0,0% |
| IE | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| IS | | | 0,0% | 0,3% | 0,0% | 0,0% | 0,0% | -0,9% |
| IT | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,1% |
| LI | | 0,0% | 0,0% | | 0,0% | | | |
| LT | 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% |
| LV | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| MT | | 0,0% | | | | | | |
| NL | 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% |
| PL | 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% |
| RO | 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% |
| SI | 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% |
| XI | 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% |

Note: Calculated as difference between April 2024 and May 2024 data
 Purple: increase, light orange: decrease, green: zero difference.

Sources: EUTL extract May 2nd, 2024 and former extracts, own calculation

In general, there are no changes for the first and second trading period and minor changes for the third trading period. There are some changes in the fourth trading period.

3.6 Surrendered units from 2005 to 2023 (stationary installations)

The changes in surrendered units are shown in Table 3.4.

Table 3.4 Changes in surrendered units between datasets (stationary installations)

| MS | Percentages related to last available data (+ => increase) | | | | | | | |
|--------------|--|--------------------------|--------------------------|--------------------------|-------------|-------------|-------------|--------------|
| | total 1st trading period | total 2nd trading period | total 3rd trading period | total 4th trading period | 2020 | 2021 | 2022 | 2023 |
| AT | 0,0% | 0,0% | 0,0% | 8,8% | 0,0% | 0,0% | 0,0% | 97,4% |
| BE | 0,0% | 0,0% | 0,0% | 13,3% | 0,0% | 0,0% | 0,0% | 94,0% |
| BG | | 0,0% | 0,0% | 0,6% | 0,0% | 0,0% | 0,0% | 59,9% |
| CY | 0,0% | 0,0% | 0,0% | 33,2% | 0,0% | 0,0% | 0,0% | 100,0% |
| CZ | 0,0% | 0,0% | 0,0% | 13,6% | 0,0% | 0,0% | 0,0% | 87,4% |
| DE | 0,0% | 0,0% | 0,0% | 5,3% | 0,0% | 0,0% | 0,0% | 71,3% |
| DK | 0,0% | 0,0% | 0,0% | 9,1% | 0,0% | 0,0% | 0,0% | 97,7% |
| EE | 0,0% | 0,0% | 0,0% | 0,2% | 0,0% | 0,0% | 0,0% | 86,0% |
| ES | 0,0% | 0,0% | 0,0% | 16,7% | 0,0% | 0,0% | 0,0% | 98,6% |
| FI | 0,0% | 0,0% | 0,0% | 11,7% | 0,0% | 0,0% | 0,0% | 90,9% |
| FR | 0,0% | 0,0% | 0,0% | 6,9% | 0,0% | 0,0% | 0,0% | 88,1% |
| GB | 0,0% | 0,0% | 0,0% | | 0,0% | | | |
| GR | 0,0% | 0,0% | 0,0% | 3,2% | 0,0% | 0,0% | 0,0% | 97,9% |
| HR | | | 0,0% | 5,5% | 0,0% | 0,0% | 0,0% | 68,4% |
| HU | 0,0% | 0,0% | 0,0% | 9,2% | 0,0% | 0,0% | 0,0% | 35,3% |
| IE | 0,0% | 0,0% | 0,0% | 5,2% | 0,0% | 0,0% | 0,0% | 22,0% |
| IS | | | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| IT | 0,0% | 0,0% | 0,0% | 5,7% | 0,0% | 0,0% | 0,0% | 81,7% |
| LI | | 0,0% | 0,0% | | 0,0% | | | |
| LT | 0,0% | 0,0% | 0,0% | 8,2% | 0,0% | 0,0% | 0,0% | 99,4% |
| LU | 0,0% | 0,0% | 0,0% | 3,8% | 0,0% | 0,0% | 0,0% | 21,4% |
| LV | 0,0% | 0,0% | 0,0% | 29,0% | 0,0% | 0,0% | 0,0% | 99,8% |
| MT | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | |
| NL | 0,0% | 0,0% | 0,0% | 15,7% | 0,0% | 0,0% | 0,0% | 85,7% |
| NO | | 0,0% | 0,0% | 8,4% | 0,0% | 0,0% | 0,0% | 96,4% |
| PL | 0,0% | 0,0% | 0,0% | 4,2% | 0,0% | 0,0% | 0,0% | 31,1% |
| PT | 0,0% | 0,0% | 0,0% | 8,5% | 0,0% | 0,0% | 0,0% | 95,4% |
| RO | 0,0% | 0,0% | 0,0% | 12,1% | 0,0% | 0,0% | 0,0% | 59,2% |
| SE | 0,0% | 0,0% | 0,0% | 8,2% | 0,0% | 0,0% | 0,0% | 88,4% |
| SI | 0,0% | 0,0% | 0,0% | 24,3% | 0,0% | 0,0% | 0,0% | 97,4% |
| SK | 0,0% | 0,0% | 0,0% | 29,9% | 0,0% | 0,0% | 0,0% | 97,3% |
| XI | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% |
| Total | 0,0% | 0,0% | 0,0% | 8,4% | 0,0% | 0,0% | 0,0% | 72,7% |

Note: Calculated as difference between April 2024 and May 2024 data
 Purple: increase, light orange: decrease, green: zero difference.

Sources: EUTL extract May 2nd, 2024 and former extracts, own calculation

3.7 Aviation

For aviation a comparison of verified emissions, free allocation and surrendered units has been conducted together.

Table 3.5 Changes in VE, free allocation and surrendered units to aviation operators

| MS | Percentages related to last available data (+ => increase) | | | | | | | | | | | |
|-------|--|--------------------------|--------------------------|--------------------------|-----------------|-----------------|-----------------|-----------------|-------------------------|-------------------------|-------------------------|-------------------------|
| | VERIFIED_E MISSIONS_2020 | VERIFIED_E MISSIONS_2021 | VERIFIED_E MISSIONS_2022 | VERIFIED_E MISSIONS_2023 | Allocation 2020 | Allocation 2021 | Allocation 2022 | Allocation 2023 | SURRENDE RED_UNITS_2020 | SURRENDE RED_UNITS_2021 | SURRENDE RED_UNITS_2022 | SURRENDE RED_UNITS_2023 |
| AT | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 99,7% |
| BE | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 100,0% |
| BG | 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% | 92% |
| CZ | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 46,8% |
| DE | 0,0% | 0,0% | 0,0% | 5,7% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 43,2% |
| DK | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 100,0% |
| EE | | 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% | 90,1% |
| FI | 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% | 95,3% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 76,6% |
| GB | 0,0% | | | | 0,0% | | | | 0,0% | | | |
| GR | 0,0% | 0,0% | 0,0% | 0,3% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 79,3% |
| HR | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 100,0% |
| HU | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | -0,9% | 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% | 99,2% |
| IS | 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% | 99,9% |
| LT | 0,0% | 0,0% | 0,0% | 0,4% | | | | | 0,0% | 0,0% | 0,0% | 0,0% |
| LU | 0,0% | 0,0% | 0,0% | 0,1% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 100,0% |
| LV | 0,0% | 0,0% | 0,0% | 100,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 14,1% |
| MT | 0,0% | 0,0% | 0,0% | 3,5% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 21,0% |
| NL | 0,0% | 0,0% | 0,0% | 0,4% | 0,0% | 0,0% | 0,0% | 0,5% | 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% | 100,0% |
| PL | 0,0% | 0,0% | 0,0% | 100,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | |
| PT | 0,0% | 0,0% | 0,0% | 87,7% | 0,0% | 0,0% | 0,0% | -0,4% | 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% | |
| 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% | 100,0% |
| SK | | 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% | 10,1% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 0,0% | 92,5% |

Note: Calculated as difference between April 2024 and May 2024 data
 Purple: increase, light orange: decrease, green: zero difference.

Sources: EUTL extract May 2nd, 2024 and former extracts, own calculation

