

# Assessment of EU ETS data trends in relation to the April 2022 update of the EEA EU ETS data viewer

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## 1 Background

The EEA's 'EU ETS data viewer' provides, in an easily accessible way, aggregated information on verified emissions, allowances and surrendered units by country, sector and year related to the European Union (EU) emissions trading system (ETS). The ETC/CM supports the EEA in updating this EU ETS data viewer. Each year in early April, the European Commission publishes data on verified emissions and free allocation for the previous year. This data is based on the EU Transaction Log (EUTL), which records all transactions of permits made under the EU ETS. Since July 2013 the EEA receives a file with EU ETS data directly from the Commission for the use in the data viewer, covering all trading periods. The ETC/CM conducts several checks to ensure consistency of the data. The quality-checked dataset is then uploaded by the EEA on its website and can be viewed through its EU ETS data viewer.

This report presents preliminary results up to the year 2022, based on the dataset published by the Commission on April 3rd, 2023. These results are based on the data analysis performed by the ETC/CM on the full database (the 'disaggregated database'), which includes ETS information at installation level and is used to update the EU ETS data viewer.

## 2 First analysis of verified emissions in 2021

With the first EUTL extract on April 3rd, 2023, total verified emissions (VE) 2022 summed up to 1,292 Mt CO<sub>2</sub>-eq for stationary installations, compared to 1,364 Mt CO<sub>2</sub>-eq of the year 2021. This difference is equivalent to a decrease of 6.7% (see Table 2-1). However, the data on verified emissions in 2022 is incomplete, as not all installation operators report their emissions by that date.

If the emission trend is calculated only for those installations which already reported VE 2022 and have also reported VE in 2021, an emission **increase of 0.3%** can be observed (see also Table 2-1).

In the next step, to make the sum of emission 2022 more complete, emissions of installations are identified, for which currently no information is available on emissions of 2022. For this analysis on completeness, verified emissions 2021 have been summed up for all those accounts that are active in the third trading period and for which no verified emissions 2022 have been reported to date (see Table 2-2, if the percentage given in column 3 is high, a lot of verified emissions have not been reported yet). This sum amounts to 76.6 Mt CO<sub>2</sub>-eq (5.7% of verified emissions 2021).

It is expected that the information on 2022 verified emissions will become increasingly complete in the weeks following this initial publication of data, which will make it easier to derive conclusions on emission trends. However, even at this stage, an estimation of the total amount of verified emissions in 2022 can be derived. For the estimation of the total amount, the following volumes have been added up:

- Total actual reported VE 2022
- Sum of missing VE 2021, assuming that all installations for which the account is active in the third trading period and which reported VE 2021 will report emissions again for 2022. Usually, it is assumed that these emissions will remain at a similar level.

Following this procedure, an amount of 1,321 Mt CO<sub>2</sub>-eq VE is estimated for 2021, which means an decrease by 1.2 % compared to 2021 VE. It has to be noted, that it is a conservative assumption, that all missing emissions would be at the level of emissions 2021. If adjusted to the average trend in the respective countries, the reduction would only amount to 0.9%.

Emissions from operators of installations which entered the system in 2022 and did not report VE 2022 yet, could not been considered for this estimate. Experience of the last years shows that the absolute amounts of emissions from these new installations are not high. So this does not change the complete picture.

**Table 2.1 First analysis of verified emissions as reported April 1, 2022**

	VE 2021	VE 2022	Emission trend 21->22 as in database	Emission trend 21-> 22 corrected (for entities with VE 2022 AND 2021>0)
	tCO2eq			
Total	1.336.635.097	1.246.944.531	-6,7%	0,3%
AT	28.704.509	26.626.258	-7,2%	-2,6%
BE	41.402.799	34.271.930	-17,2%	-2,6%
BG	28.935.079	18.804.229	-35,0%	36,0%
CY	4.314.996	4.328.319	0,3%	0,6%
CZ	57.871.344	57.042.890	-1,4%	-1,0%
DE	355.082.824	353.393.156	-0,5%	0,7%
DK	11.618.371	11.230.704	-3,3%	-1,6%
EE	6.850.057	8.407.459	22,7%	22,4%
ES	91.685.230	96.323.388	5,1%	7,2%
FI	20.310.347	19.008.305	-6,4%	-3,0%
FR	87.616.705	78.832.719	-10,0%	-3,4%
GR	33.250.959	31.515.796	-5,2%	0,0%
HR	6.996.696	6.455.403	-7,7%	-6,9%
HU	17.615.142	15.541.479	-11,8%	-5,4%
IE	15.320.020	14.664.586	-4,3%	20,9%
IS	1.843.588	1.875.076	1,7%	14,1%
IT	131.446.562	136.287.675	3,7%	4,8%
LT	5.976.002	5.066.303	-15,2%	-15,1%
LU	1.317.495	1.133.548	-14,0%	-8,4%
LV	2.064.880	1.583.793	-23,3%	-9,0%
MT	771.044	796.530	3,3%	22,4%
NL	74.132.239	68.226.319	-8,0%	-6,2%
NO	22.967.089	22.574.277	-1,7%	0,9%
PL	192.032.908	148.750.798	-22,5%	-2,1%
PT	16.037.219	13.526.880	-15,7%	4,7%
RO	32.302.679	28.160.835	-12,8%	-12,2%
SE	18.476.247	17.434.918	-5,6%	1,1%
SI	5.680.711	4.861.180	-14,4%	-14,4%
SK	20.898.870	17.240.509	-17,5%	-16,5%
XI	3.112.486	2.979.269	-4,3%	-3,6%

Note:

Last column shows emission trends for those installations that reported verified emissions for both 2021 and 2022.

Source: EUTL extract April 3rd, 2023, own calculation

**Table 2.2 Completeness and VE 2021 estimate (trend corrected)**

	VE 2022 missing in absolute terms		VE 2021 estimate	
	tCO <sub>2</sub> eq	Share of VE 2022 (%)	tCO <sub>2</sub> eq	Difference to VE 2021 (%)
<b>Total</b>	<b>76.638.103</b>	<b>5,7%</b>	<b>1.320.581.904</b>	<b>-1,2%</b>
AT	26.113	0,1%	26.652.371	-7,1%
BE	5.802.872	14,0%	40.074.802	-3,2%
BG	15.170.467	52,4%	33.974.696	17,4%
CY	409	0,0%	4.328.728	0,3%
CZ	166.532	0,3%	57.209.422	-1,1%
DE	1.566.251	0,4%	354.959.407	0,0%
DK	140.627	1,2%	11.371.331	-2,1%
EE	-	0,0%	8.407.459	22,7%
ES	106.670	0,1%	96.430.058	5,2%
FI	13.936	0,1%	19.022.241	-6,3%
FR	7.570.334	8,6%	86.403.053	-1,4%
GR	1.451.870	4,4%	32.967.666	-0,9%
HR	16.839	0,2%	6.472.242	-7,5%
HU	58.001	0,3%	15.599.480	-11,4%
IE	3.344	0,0%	14.667.930	-4,3%
IS	472	0,0%	1.875.548	1,7%
IT	895.228	0,7%	137.182.903	4,4%
LT	97	0,0%	5.066.400	-15,2%
LU	-	0,0%	1.133.548	-14,0%
LV	131.463	6,4%	1.715.256	-16,9%
MT	9.932	1,3%	806.462	4,6%
NL	536.770	0,7%	68.763.089	-7,2%
NO	277.065	1,2%	22.851.342	-0,5%
PL	39.753.397	20,7%	188.504.195	-1,8%
PT	2.301.828	14,4%	15.828.708	-1,3%
RO	105.636	0,3%	28.266.471	-12,5%
SE	294.702	1,6%	17.729.620	-4,0%
SI	-	0,0%	4.861.180	-14,4%
SK	215.787	1,0%	17.456.296	-16,5%
XI	21.461	0,7%	3.000.730	-3,6%

Note: The last two columns rely on an estimate of 2022 emissions, where emissions of all operators that have not reported for 2022 and still are active in the third trading period, are estimated based on the average increase per country.

Source: EUTL extract April 3rd, 2023, own calculation