

## Early estimates of CO<sub>2</sub> emissions from energy use In 2019, CO<sub>2</sub> emissions from energy use in the EU estimated to have decreased

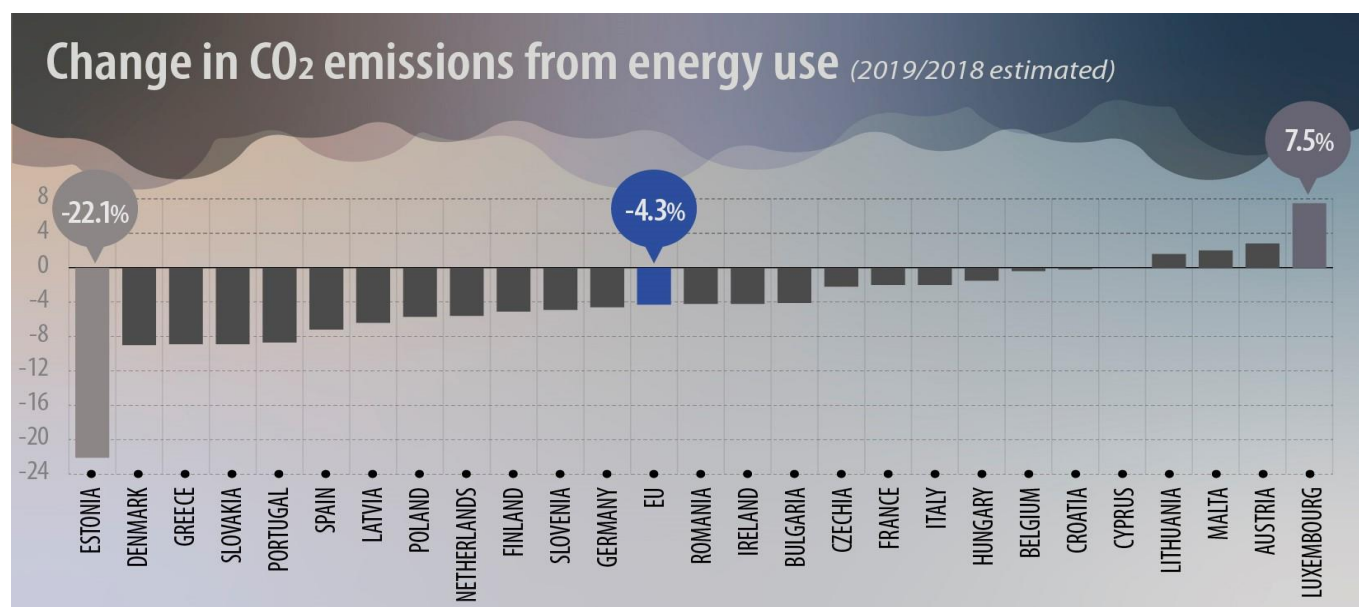
Eurostat estimates that in 2019, the year before COVID-19 containment measures were widely introduced by EU Member States, carbon dioxide (CO<sub>2</sub>) emissions from fossil fuel combustion (mainly oil and oil products, coal, peat and natural gas) significantly decreased by 4.3% in the **European Union of 27 Member States (EU)**, compared with the previous year. CO<sub>2</sub> emissions are a major contributor to global warming and account for some 80% of all man-made EU greenhouse gas emissions. They are influenced by factors such as climate conditions (e.g. cold / long winter or hot summer), economic growth, size of the population, transport and industrial activities.

CO<sub>2</sub> emissions from fossil fuels are generated in the country where the fuels are burned for purposes such as electricity generation, transport, steel production etc. Consequently, imports and exports of energy products have an impact: for example if coal is imported for electricity generation this leads to an increase in emissions in the importing country, while if electricity as such is imported, it has no effect on emissions in the importing country, as these emissions would be reported in the exporting country where the electricity has been produced.

This information on early estimates of CO<sub>2</sub> emissions from energy use for 2019 is published by **Eurostat, the statistical office of the European Union**.

### Largest falls in CO<sub>2</sub> emissions from energy use in Estonia and Denmark, highest increase in Luxembourg

According to Eurostat estimates, emissions fell in 2019 in a majority of EU Member States, with the highest decrease in **Estonia** (-22.1%), followed by **Denmark** (-9.0%), **Greece** and **Slovakia** (-8.9% each), **Portugal** (-8.7%) and **Spain** (-7.2%). Increases were estimated for four Member States: **Luxembourg** (+7.5%), ahead of **Austria** (+2.8%), **Malta** (+2.0%) and **Lithuania** (+1.6%), while CO<sub>2</sub> emissions remained unchanged in **Cyprus**.



In 2019, a clear drop in solid fossil fuel consumption (hardcoal, lignite and oil shale and oil sands) is observed in many countries. The main reason for this drop is the substantially increased price of the EU emission trading system for emission allowances in 2019 compared to 2018 (> 25 €/ t CO<sub>2</sub>). This system makes it economically less profitable to use solid fossil fuels mainly for electricity generation because they emit more CO<sub>2</sub> per MWh electricity produced than other fuels e.g. natural gas. To compensate for the reduced use of solid fuels countries use more natural gas and more renewables for electricity generation and/or import missing electricity from other countries.

## Geographical information

**European Union (EU27):** Belgium, Bulgaria, Czechia, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, the Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland and Sweden.

The United Kingdom left the European Union on 31 January 2020. Information on dissemination of European statistics from 1 February 2020 is published on the [Eurostat website](#).

## Methods and definitions

Early estimates of CO<sub>2</sub> emissions from energy use for 2019 are computed by Eurostat based on aggregated monthly energy statistics for fossil fuels (oil and oil-products, natural gas, coal and peat) for the years 2018 and 2019. These monthly data are official data provided by Member States to Eurostat. The comparison of the two years gives a year-on-year change by fuel (increase/decrease by x%). This year-on-year change is then applied to official (GHG) inventory data Member States provided to UNFCCC for reference year 2018 and results in the amount of CO<sub>2</sub> emitted (in kt) in 2019 by fossilfuel and by country.

CO<sub>2</sub> emission data published here may slightly differ from those published nationally. More information about the methodology used by Eurostat can be found [here](#).

Data on CO<sub>2</sub> emissions from energy use presented in this press release do not include CO<sub>2</sub> emissions resulting from the combustion of non-renewable waste.

## Country notes:

**Denmark, Estonia, Finland:** calculation of year-on-year change of liquid fuel consumption is based on 'gross inland deliveries observed'.

**Bulgaria, Germany, Hungary, Poland, Romania, Slovakia:** year-on-year change calculations of solid fuel consumption are based on the energy content (in Tera Joules).

**Netherlands:** petroleum coke in 2018 and 2019 were not considered because figures were not available for 2018 (data download April 2019).

**Finland:** gaps for international bunkers of gas/diesel oil and residual fuel oil had to be gap filled for the months from August to December 2019.

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## Estimated CO<sub>2</sub> emissions from energy use in the EU

	Change 2019/2018 (%)	Share of EU total CO <sub>2</sub> emissions in 2019 (%)
<b>EU*</b>	<b>-4.3</b>	<b>100</b>
<b>Belgium</b>	-0.4	2.9
<b>Bulgaria**</b>	-4.1	1.5
<b>Czechia</b>	-2.2	3.4
<b>Denmark**</b>	-9.0	1.1
<b>Germany**</b>	-4.6	25.1
<b>Estonia**</b>	-22.1	0.6
<b>Ireland</b>	-4.2	1.3
<b>Greece</b>	-8.9	2.2
<b>Spain</b>	-7.2	8.7
<b>France</b>	-2.0	11.2
<b>Croatia</b>	-0.2	0.6
<b>Italy</b>	-2.0	11.8
<b>Cyprus</b>	0.0	0.2
<b>Latvia</b>	-6.4	0.3
<b>Lithuania</b>	+1.6	0.5
<b>Luxembourg</b>	+7.5	0.4
<b>Hungary**</b>	-1.5	1.6
<b>Malta</b>	+2.0	0.1
<b>Netherlands**</b>	-5.6	5.3
<b>Austria</b>	+2.8	2.0
<b>Poland**</b>	-5.7	11.2
<b>Portugal</b>	-8.7	1.6
<b>Romania**</b>	-4.2	2.5
<b>Slovenia</b>	-4.9	0.5
<b>Slovakia**</b>	-8.9	1.0
<b>Finland**</b>	-5.1	1.5
<b>Sweden</b>	:	:
<b>United Kingdom</b>	-4.3	-

\* EU represents the European Union with 27 Member States after 1 February 2020. The EU aggregate excludes Sweden.

\*\* See country notes

: Data for Sweden are still under revision and therefore not presented in this table.