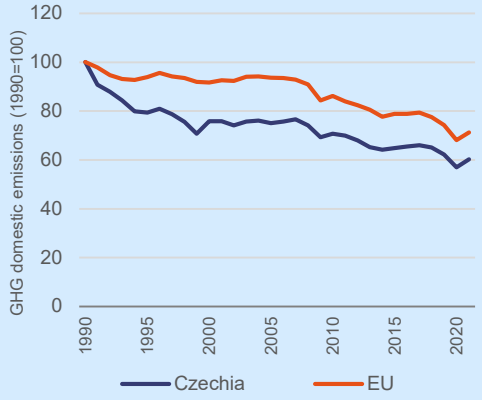
Czechia

1) Key takeaways

- In 2021, GHG emissions in Czechia were 3.1% below 2019 pre-pandemic levels.
- Over the same period, ETS and Effor Sharing emissions decreased by 7.4% and increased by 2.1%, respectively.
- Net GHG emissions (i.e. including LULUCF) in 2021 were 36.5% lower than 1990 levels.
- The LULUCF sector emitted 4.41 MtCO2-eq on average per year from 2013 to 2020, based on accounting.

2) Greenhouse gas emissions

In 2021, approximated domestic greenhouse gas (GHG) emissions in Czechia were 119.7 MtCO2-eq, 5.6% higher compared to 2020 but 3.1% below pre-pandemic levels. Overall, net domestic emissions, including the Land Use, Land Use Change and Forestry (LULUCF) sector, were 36.5% lower than 1990 levels.



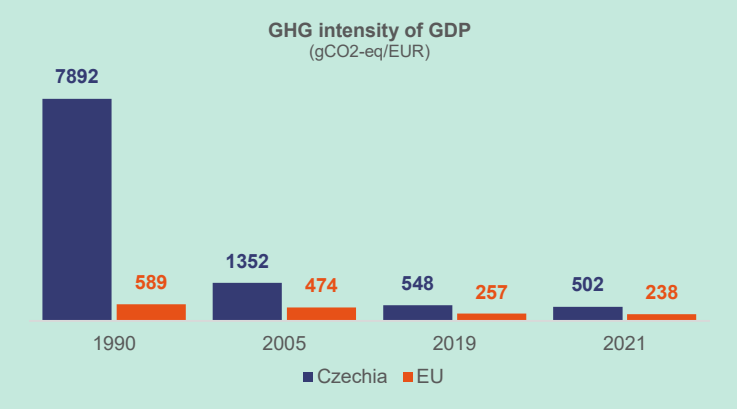
Total domestic GHG emissions

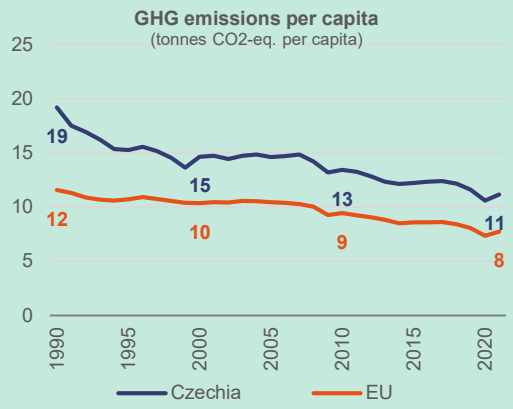
	1990 (MtCO2-eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Czechia	199	-25%	-17%	-3%	-40%
EU	4847	-6%	-21%	-4%	-29%

Total net domestic GHG emissions (including LULUCF)

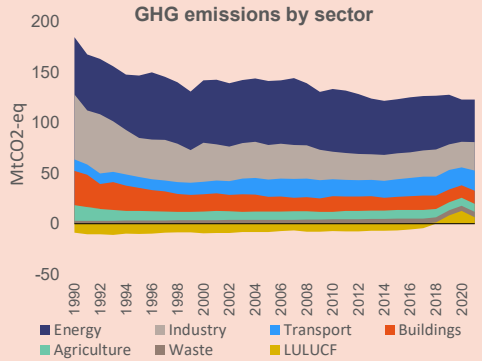
Czechia	190	-29%	-12%	2%	-36%
EU	4633	-13%	-26%	-10%	-33%

Note: GHG emissions and removals for 1990-2020 are based on data submitted by EU Member States to the UNFCCC under Regulation (EU) No 525/2013. Figures may change following resubmissions. GHG emissions for 2021 are based on approximated GHG inventories.





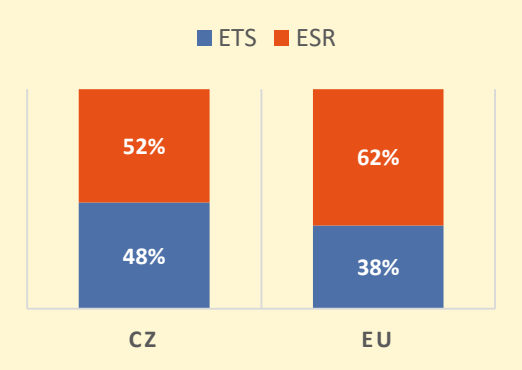
3) Greenhouse gas emissions by sector

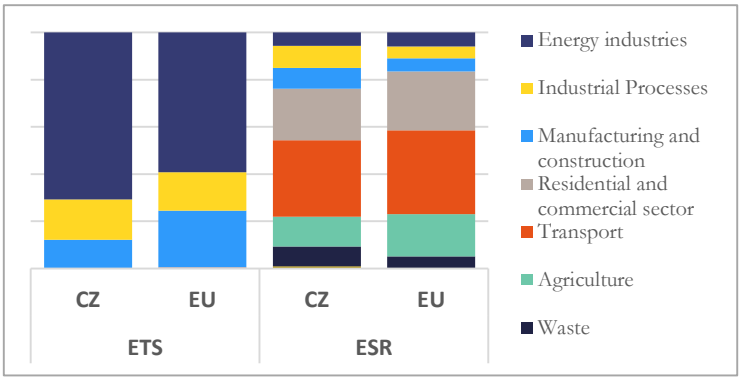


	1990 (MtCO2-eq)	2005 to 1990 (% change)	2019 to 2005 (% change)	2021 to 2019 (% change)	2021 to 1990 (% change)
Energy	56.9	11%	-22%	-14%	-26%
Industry	64.4	-47%	-25%	10%	-56%
Transport	11.3	53%	10%	5%	77%
Buildings	33.8	-57%	-13%	5%	-61%
Agriculture	15.5	-48%	-1%	-4%	-50%
Waste	3.0	31%	30%	2%	73%
LULUCF	-8.9	-7%	-199%	-20%	-174%
International aviation	0.7	50%	30%	-71%	-43%

Notes: (1) Energy sector refers to electricity and heat production and petroleum refining. (2) Industry includes fuel combustion in manufacturing and construction and emissions in industrial processes and product use. (3) Buildings include emissions from energy use in residential and tertiary buildings, and energy use in agriculture and fishery sectors.

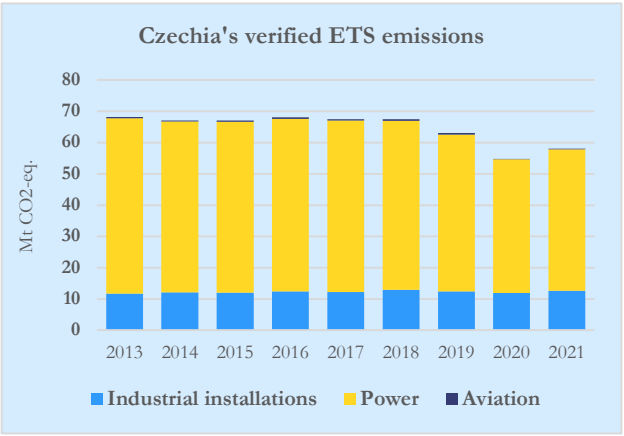
In 2021, the highest contribution to net GHG emissions in Czechia came from the Energy sector (34%), followed by the Industry sector (23%) and the Transport sector (16%). Emissions from sectors under the Effort Sharing Regulation (ESR) were 52% compared to 62% for the EU as a whole (see shares in the charts below).





4) Emissions under the EU Emissions Trading System (ETS)

In 2021, stationary installations (e.g. power generation and manufacturing industry) in Czechia emitted 57.9 million tonnes of CO2-eq emissions (equal to 48% of Czechia's total GHG emissions). This is 5.8% higher compared to 2020 but 7.4% below pre-pandemic levels. By 2021, emissions from stationary installations were down by 14.5% against 2013 level (i.e. -32.8% to 2005 levels). Aviation emissions covered by the EU ETS were 65.4% higher compared to 2020 but 66.1% below 2019 level.



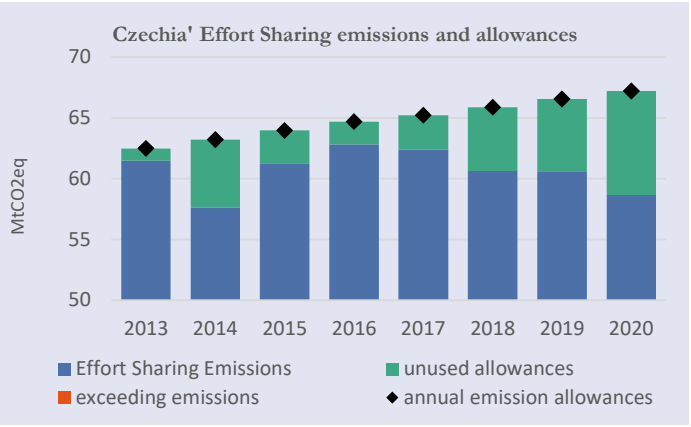
In parallel, Czechia has raised over EUR 3.1 billion in auction revenues since 2013, available for further climate action and energy transformation. Czechia reported that an average of 62% of revenues was spent for climate and energy purposes over the same period.(*)

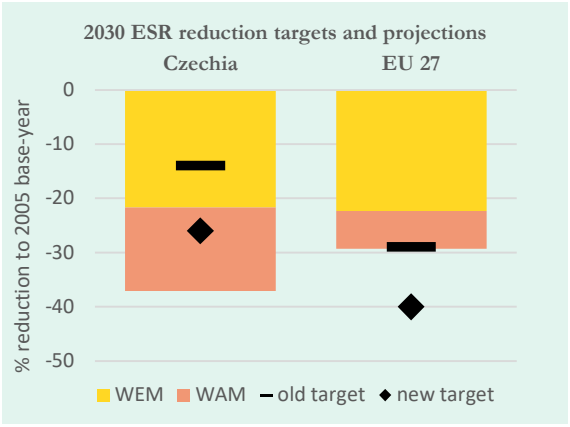
Mt CO2-eq	2013	2020	2021
Power installations	55.9	42.8	45.2
% change since 2013	-	-23.5%	-19.1%
Industrial installations	11.8	11.9	12.6
% change since 2013	-	1.1%	7.4%
Aviation (**)	0.42	0.10	0.16
% change since 2013	-	-76.1%	-60.5%

(*) Revenues are not earmarked. Reported spending represents the amounts allocated for climate change and energy projects in the national budget of each year (if this allocation is higher than 100%, it is reported as 100% of revenues).

(**) ETS emissions from aviation include flights within the European Economic Area (EEA) and outgoing flights to Switzerland and to the UK.

5) Emissions in Effort Sharing sectors





Note: (1) Verified emissions based on annual inventory review under the Effort Sharing Decision (ESD). (2) Projections as reported by Member States under Reg. (EU) 2018/1999, compiled and checked by the EEA. (3) ESR base-year emissions and targets have been approximately converted into GWP AR4 for comparability. For these reasons, the distances to targets for 2030 are provided for illustrative purposes only (4) WEM = with existing measures, WAM = with additional measures.

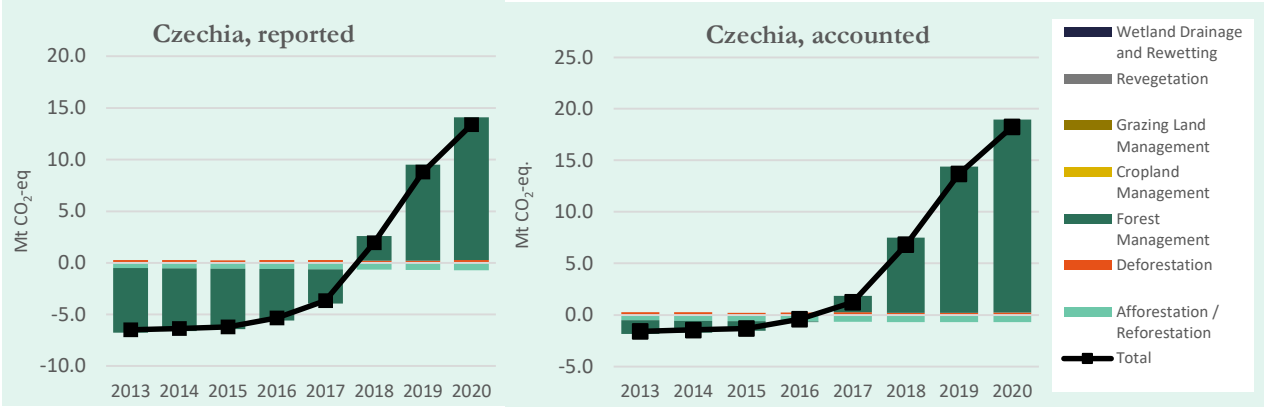
In 2021, effort sharing approximated emissions in Czechia were 61.8 MtCO2eq (equal to 52% of Czechia's total GHG emissions), 5.3% higher than in 2020 and 2.1% higher than 2019 pre-pandemic level.

Between 2013 and 2019, Czechia's emissions have always been below the annual limits.

In 2020, effort sharing emissions in Czechia were below the annual limit.

6) Land Use, Land Use Change and Forestry (LULUCF)

Reported quantities under the Kyoto Protocol for the Czech Republic show net average annual removals of -0.5 Mt CO2-eq for the period 2013 to 2020. In this regard, the Czech Republic contributes with 0.2% to the annual average sink of -320.2 Mt CO2-eq of the EU-27. Accounting for the same period depicts net debits of, on average, 4.4 Mt CO2-eq, which represents -5.3% of the EU-27 accounted sink of -83.4 Mt CO2-eq. Reported net removals show an overall accelerating decreasing trend that turns into net emissions in the past three years. This pattern replicates in the accounted quantities when small net credits turned into net debits in 2017 with a substantial rise in between 2018 to 2020.



Notes: (1) Charts based on the submissions delivered until May 2022. (2) Data reported for the period 2013-2020, for mandatory and elected LULUCF activities , were submitted by Member States to the European Environment Agency (EEA) and underwent a simulated accounting process developed by the Joint Research Centre (JRC), together with DG CLIMA. (3) Reported data represent the gross annual flux of greenhouse gas from the sector, by activity, according to the IPCC methods for calculation in the framework of the Kyoto Protocol (KP). Accounting is aimed at assessing the impact of policies on climate actions on the actual data, for example as an increase in the sink within the Forest Management activity. (4) The simulated accounting process does not take into account any adjustments or flexibilities that a Member State may apply, for example the purchase of KP credits.

The dominant reported activity is Forest Management with removals from 2013 to 2017 and emissions in 2018 to 2020. The main reason for this trend is a series of dry seasons since 2015, which led to bark beetle outbreaks that required necessary sanitary action including wood removal. Total harvest increased by 96% from 2015 to 2019. The share of salvage logging on the total harvest amounted to 95% in 2019 and 2020 (17% in 2005 and 61% in 2017). Salvage logging due to insect outbreaks doubled between 2018 and 2020. As a result, removals by Forest Management show an accelerated decline over the eight-year period and turn into notable emissions of 9.3 Mt CO2-eq in 2019 and 13.8 Mt CO2-eq in 2020.

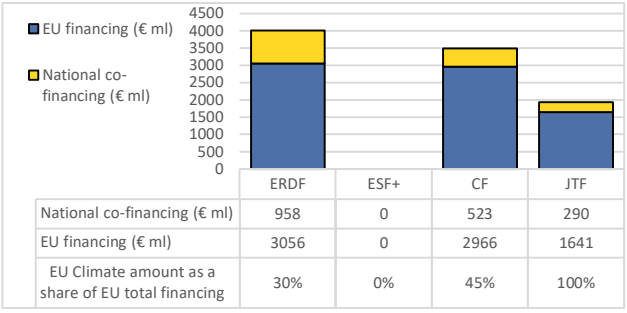
Removals by Afforestation/Reforestation are small, and emissions by Deforestation can be neglected in the overall emission budget of the LULUCF sector. Accounted credits by Forest Management turn into debits in 2017 and reach 14.2 Mt CO2-eq in 2019 and 18.7 Mt CO2-eq in 2020. Credits by Afforestation/Reforestation are small and debits by Deforestation negligible. Overall, however, the trend is towards accounted debits.

7) Financing Climate Action

Cohesion policy

Czechia's Planned Financing for Climate Actions

(EU financing & national co-financing - 2021-2027 Cohesion Policy)



	ERDF	ESF+	CF	JTF
National co-financing (€ ml)	958	0	523	290
EU financing (€ ml)	3056	0	2966	1641
EU Climate amount as a share of EU total financing	30%	0%	45%	100%

The chart presents information on investment plans and achievement targets from adopted programmes. Financing for cohesion policy uses a categorisation to provide thematic information on the finances planned.

Source: https://cohesiondata.ec.europa.eu/

Innovation and Modernisation Fund

Innovation Fund (Portfolio of signed projects)

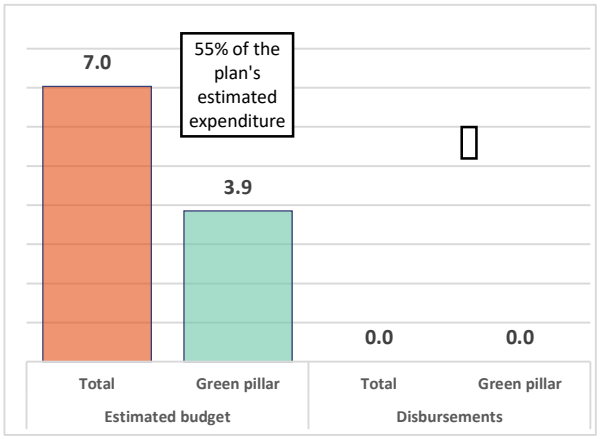
	n.	EUR million
Small Scale Projects	-	-
Large Scale Projects	-	-

Modernisation Fund	n.	EUR million
(List of confirmed or approved investment proposals)	21	1660

Recovery & Resilience Facilities

RRF allocations (EUR billion)	Grants:	Loans:	% of GDP
	7.04	-	**3.0**

RRF contribution to the Green pillar in Czechia (€ bn)



This graph displays: 1) the estimated cost of measures attributed by the Commission, in consultation with the Member State, to the green pillar either as primary or secondary assignments; and 2) how disbursements under the RRF (excluding pre-financing) relate to the green pillar.

Source: https://ec.europa.eu/economy_finance/recovery-and-resilience-scoreboard/index.html?lang=en