










Provisional greenhouse gas emissions 1990-2021

EPA Emissions Statistics team, July 2022

EPA Climate Science Activities



Rialtas
na hÉireann
Government
of Ireland

	Environmental Assessment & Strategic Environmental Assessment
	Emissions Statistics (Inventories/Projections)
	Research
	Emissions Trading & Registry
	Industrial & Chemical Regulation
	Climate Secretariat
	Intergovernmental Climate Science
	Resource Efficiency & Behavioural Change
	Climate Dialogue

Emissions Statistics role



Rialtas
na hÉireann
Government
of Ireland

*"Producing Greenhouse gas and Air Pollutant
to support international reporting commensurate with the State's climate goals"*

January -
Prov.
Inventory
to EU

March/April
- Final
Inventory
to EU/UN

March -
Projections
to EU

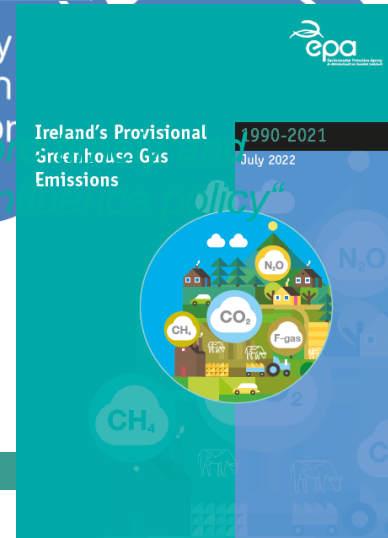
April/July
Publish
Projection

EPA Strategic Plan 2022-2026

*"Our information on greenhouse gas emissions will be more
targeted to support national ambitions on climate and to inform policy"*



projections
side the





Increase in total emissions of 4.7% compared to the 2020 levels, 1.1% above the (pre COVID restrictions) 2019 level. Increased Agriculture, Transport, Energy Industries emissions



More Coal and less Wind means more emissions from electricity generation. Tripling of Coal & Oil use in 2021 Vs 2020.



Transport emissions rebounded following partial lifting of COVID restrictions but still below pre-pandemic levels

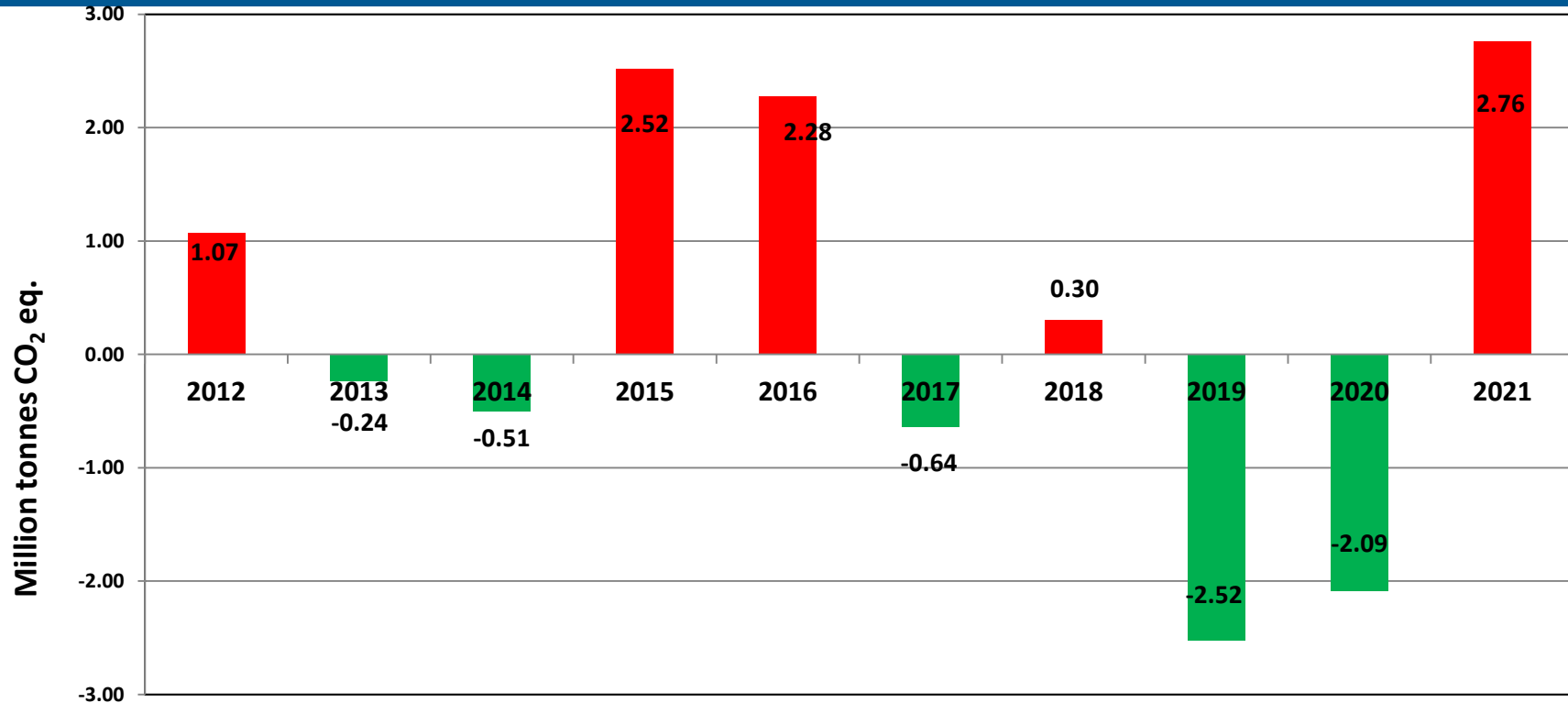
Agriculture emissions increased in 2021 following an increase in 2020 when activity hadn't been affected by pandemic restrictions.

Highlights

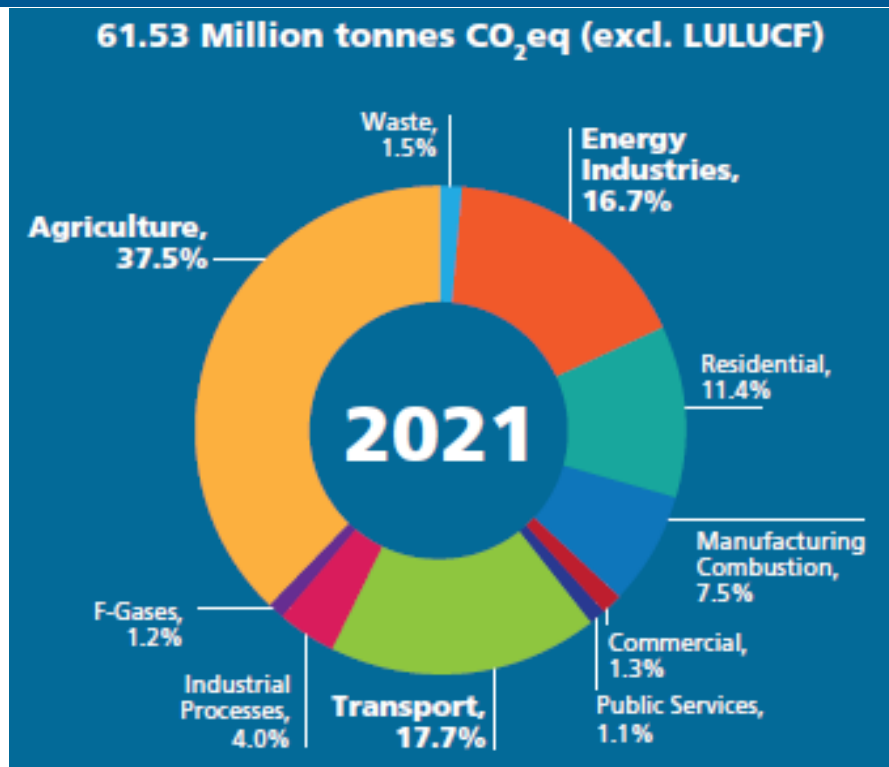
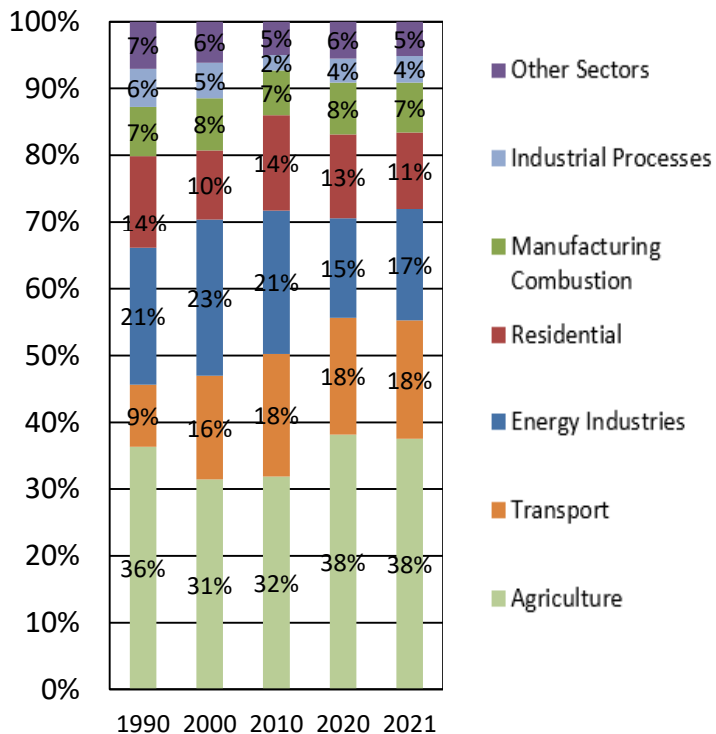


- **Overall total** GHG emissions have increased by 4.7% in 2021 compared to 2020 (Exc. LULUCF), up 1.1% compared to the 2019 pre-COVID level. 2021 level is 61.5 Mt CO₂eq
- **Energy Industries** emissions show an increase of 17.6% (1.53 Mt CO₂eq) in 2021, due to significant consumption of coal and oil for electricity generation. There was also less electricity generated from renewables in 2021 compared to 2020.
- **Transport** emissions increased by 6.1% (to 10.9 Mt CO₂eq) due largely to the partial lifting of COVID restrictions. Petrol and Diesel use in road transport both rose by 6%.
- Greenhouse gas emissions from the **Residential** sector decreased by 4.9% or 0.36 Mt CO₂eq with coal, peat and oil use down by 5.0%, 5.0% and 7.0%.
- **Agriculture** emissions increased by 3.0% (0.67 Mt CO₂eq) in 2021, driven by increased fertiliser nitrogen use, limestone application and more dairy cattle

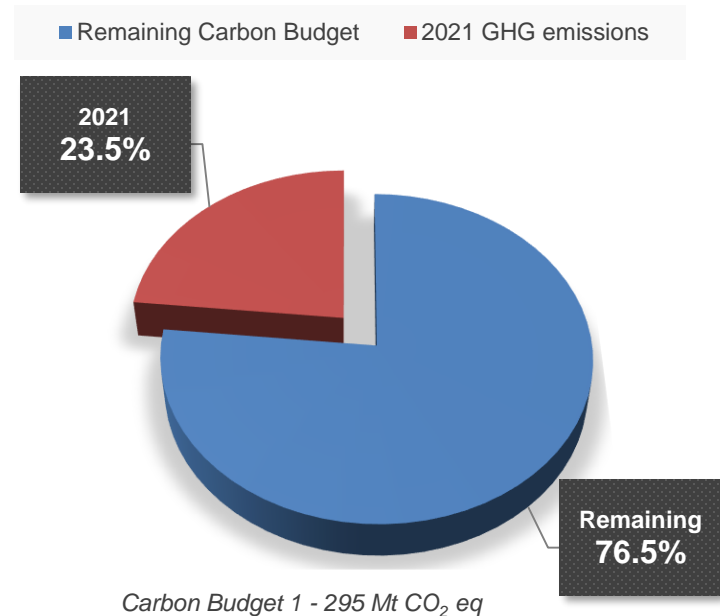
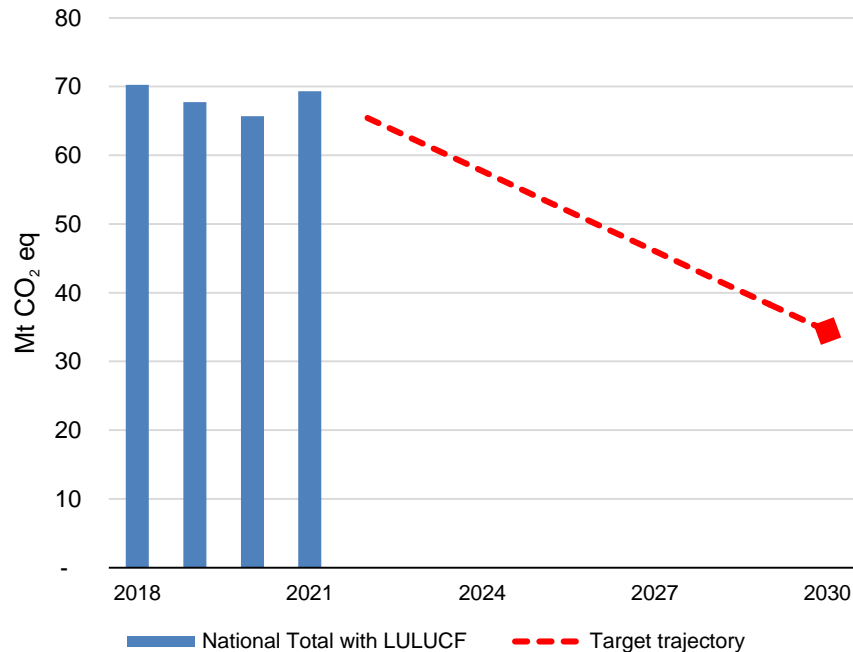
Annual Emissions trends (Mt CO₂ eq)



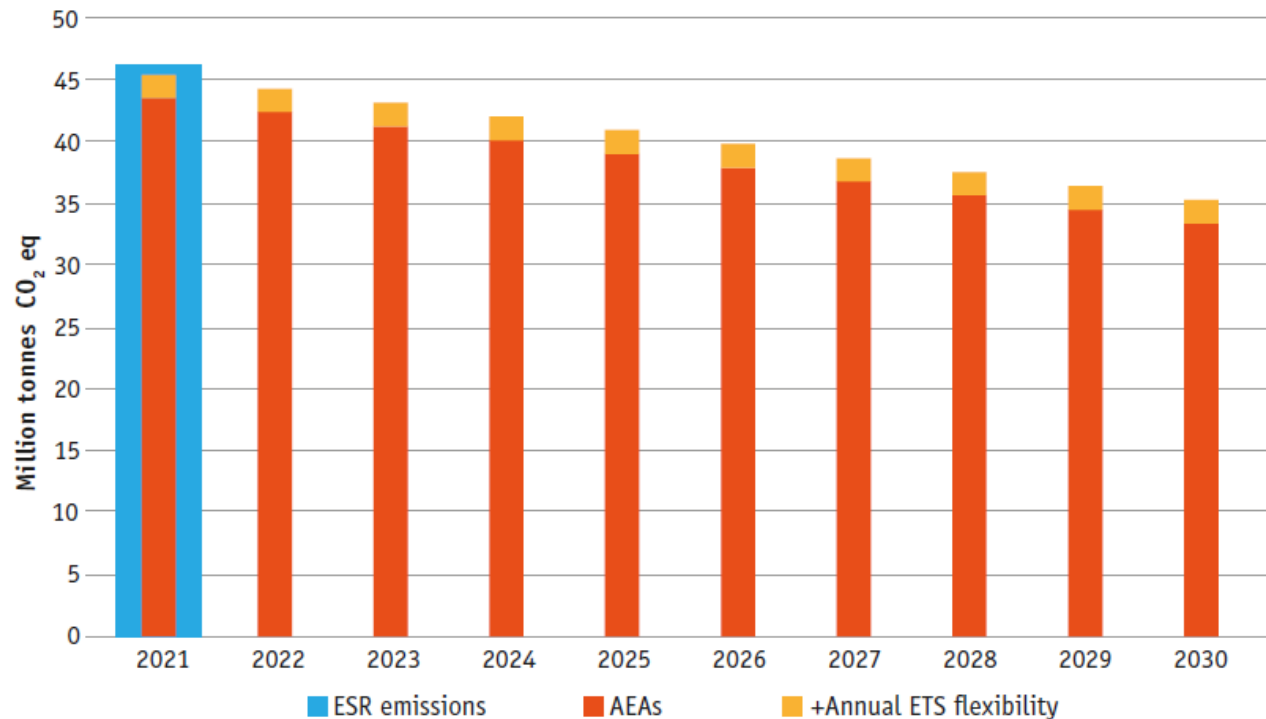
Sectoral Share of GHG emissions



Climate Act Target & Carbon Budgets



European Targets

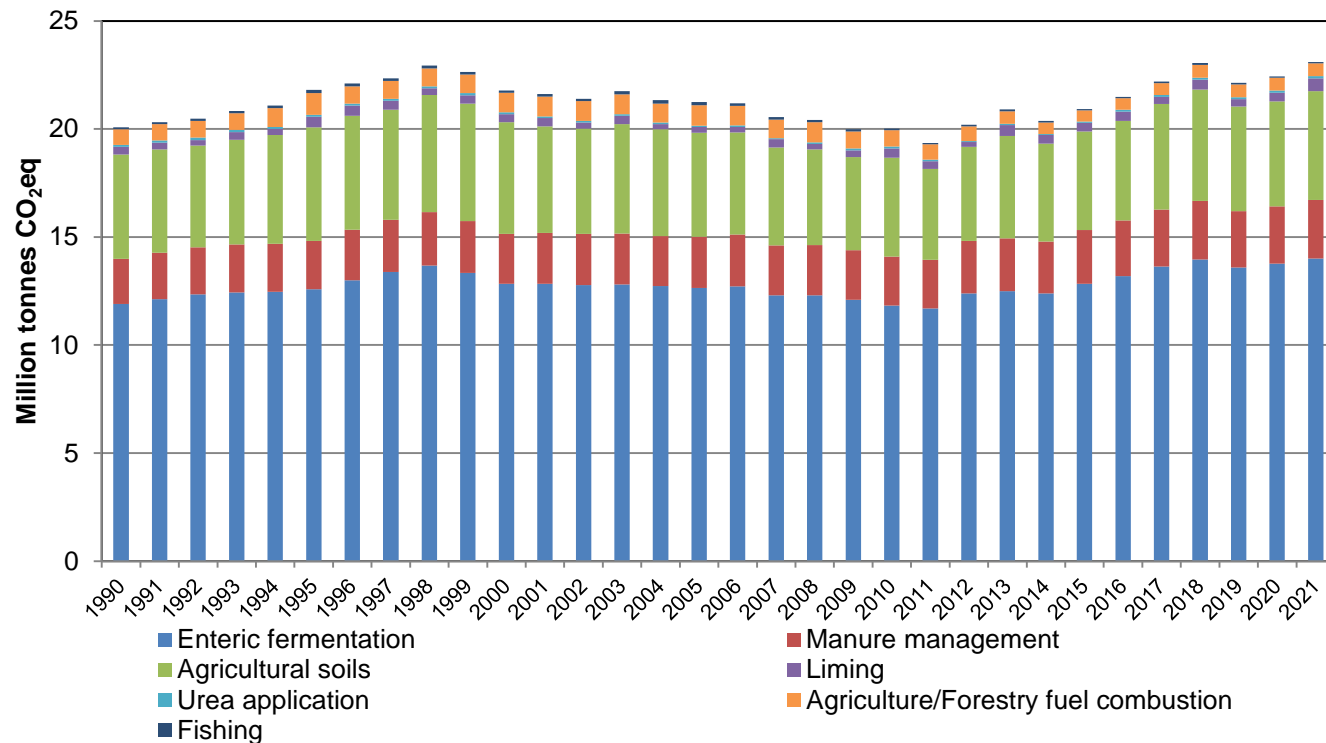


EU Targets



Before use of flexibilities Ireland has exceeded its 2021 annual Effort Sharing Regulation (ESR) limit by 2.71 Mt CO₂eq.

Agriculture



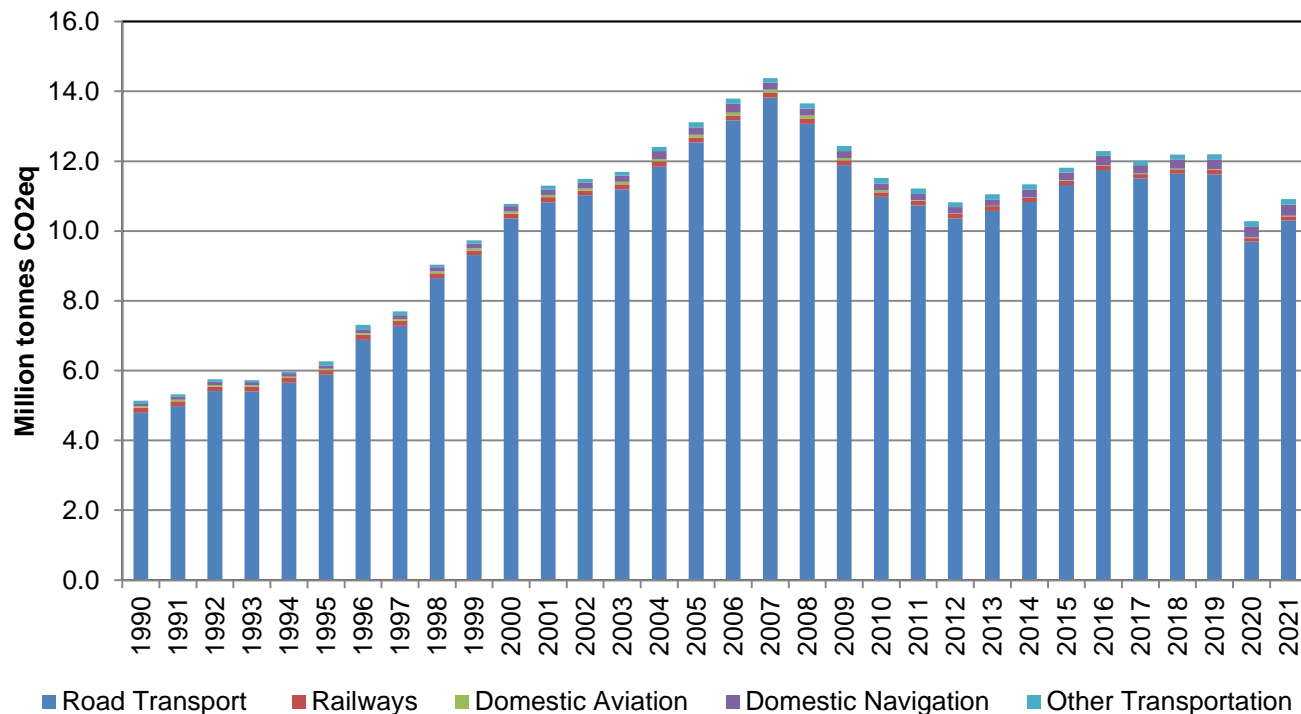
↑ +3.0%
Agriculture



Emissions growth in Agriculture
mainly due to:

Fertiliser use	+5.2%
Dairy cow numbers	+2.8%
Milk production	+5.5%

Transport

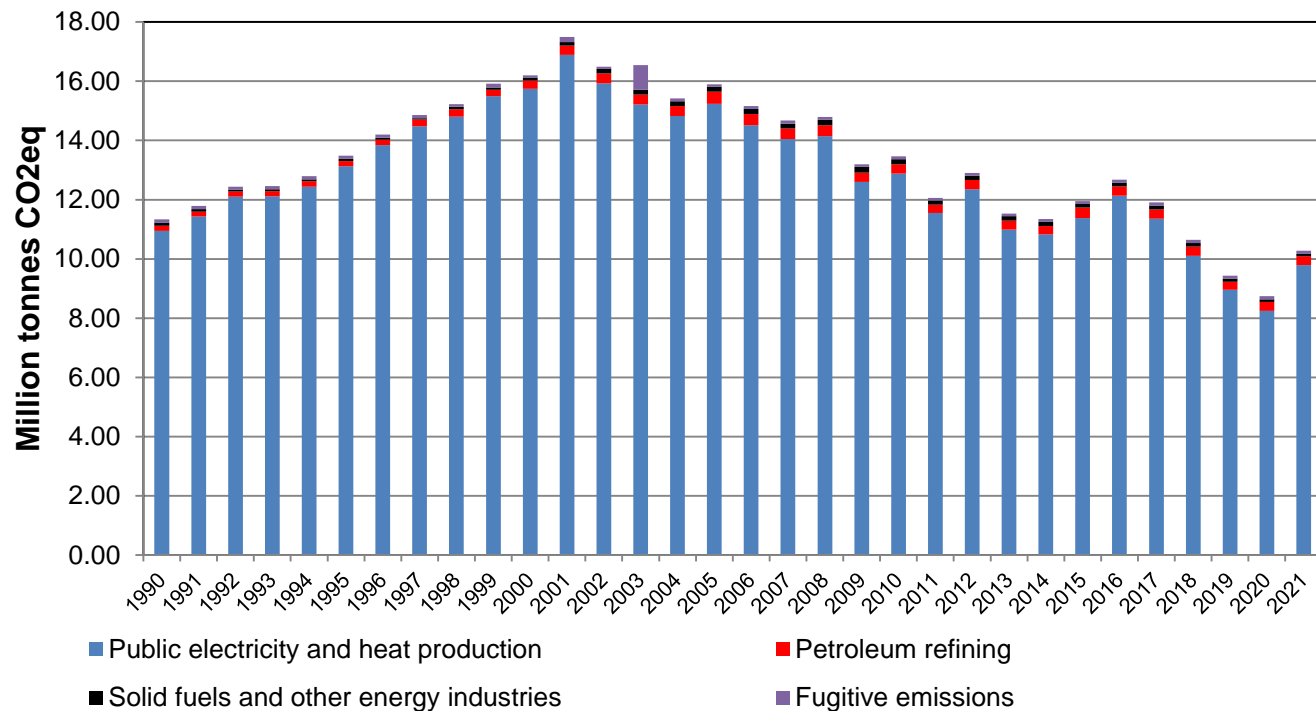


↑ +6.1%
Transport



Rebound in emissions driven by the easing of COVID restrictions. 47,000 electric vehicles (BEV + PHEV) on Irish roads in 2021.

Energy Industries



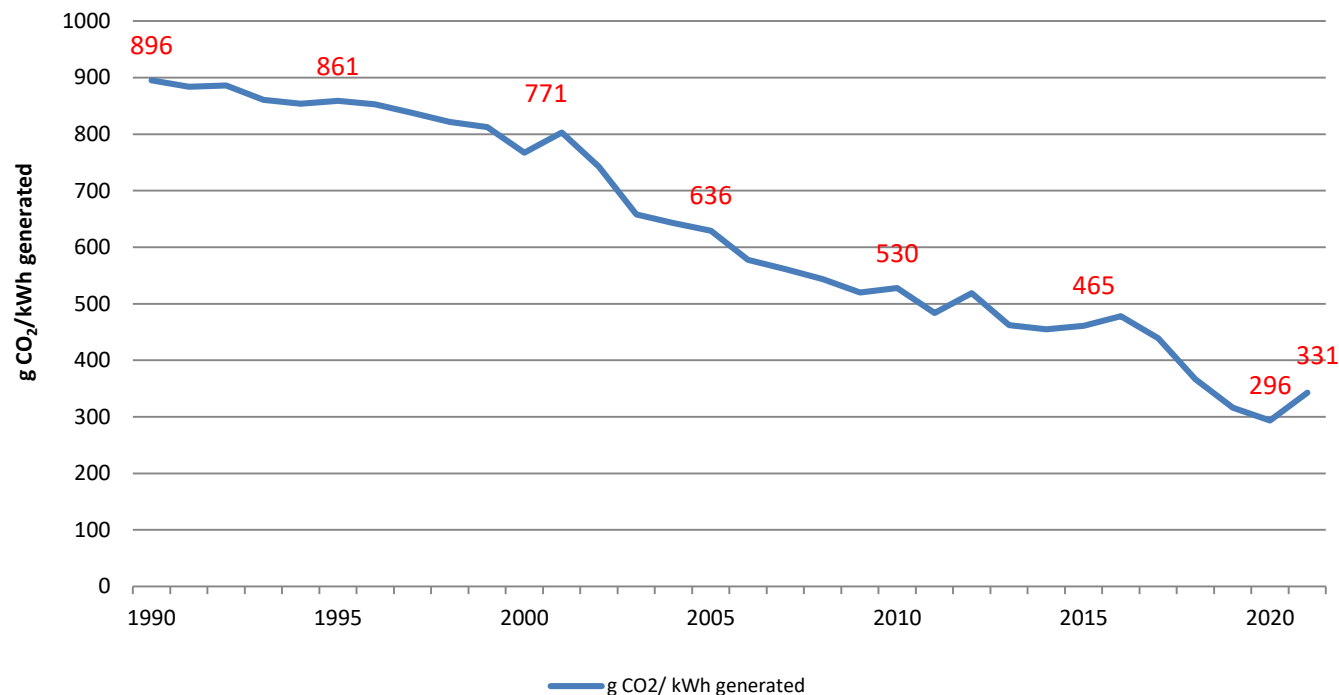
↑ +17.6%
Energy Industries



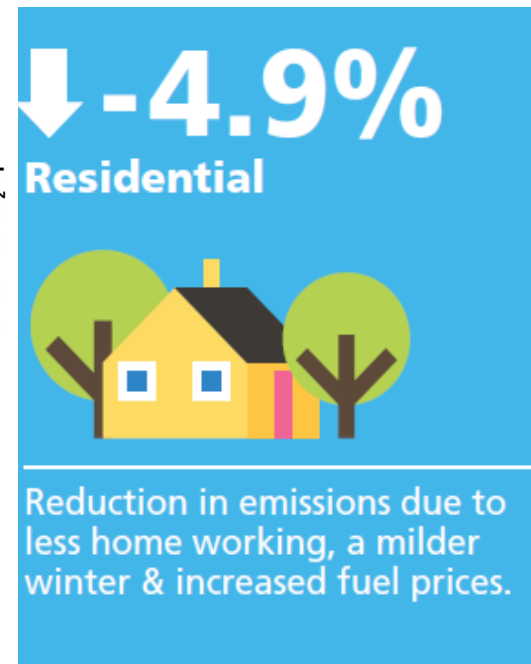
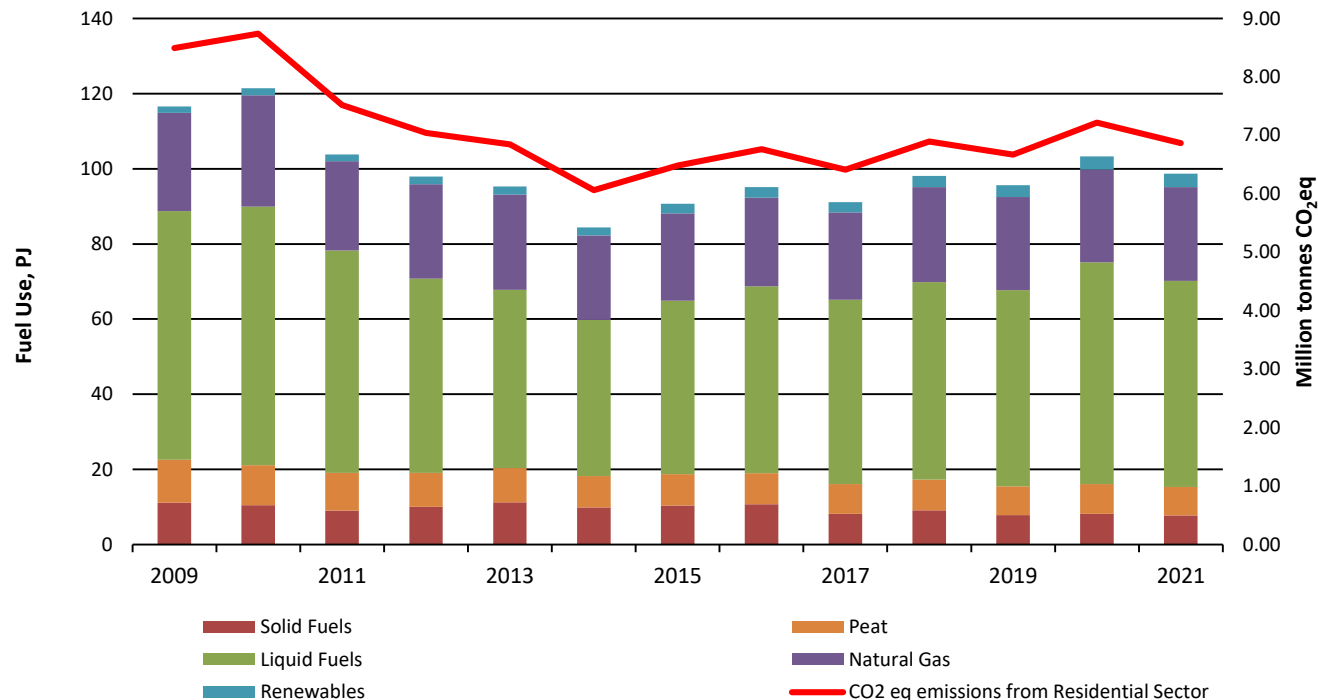
Return to coal use in electricity generation **+245%**.
Renewable share dropped from **42% to 35%**.

Overall emissions in 2021 are 9.4% below 1990 levels

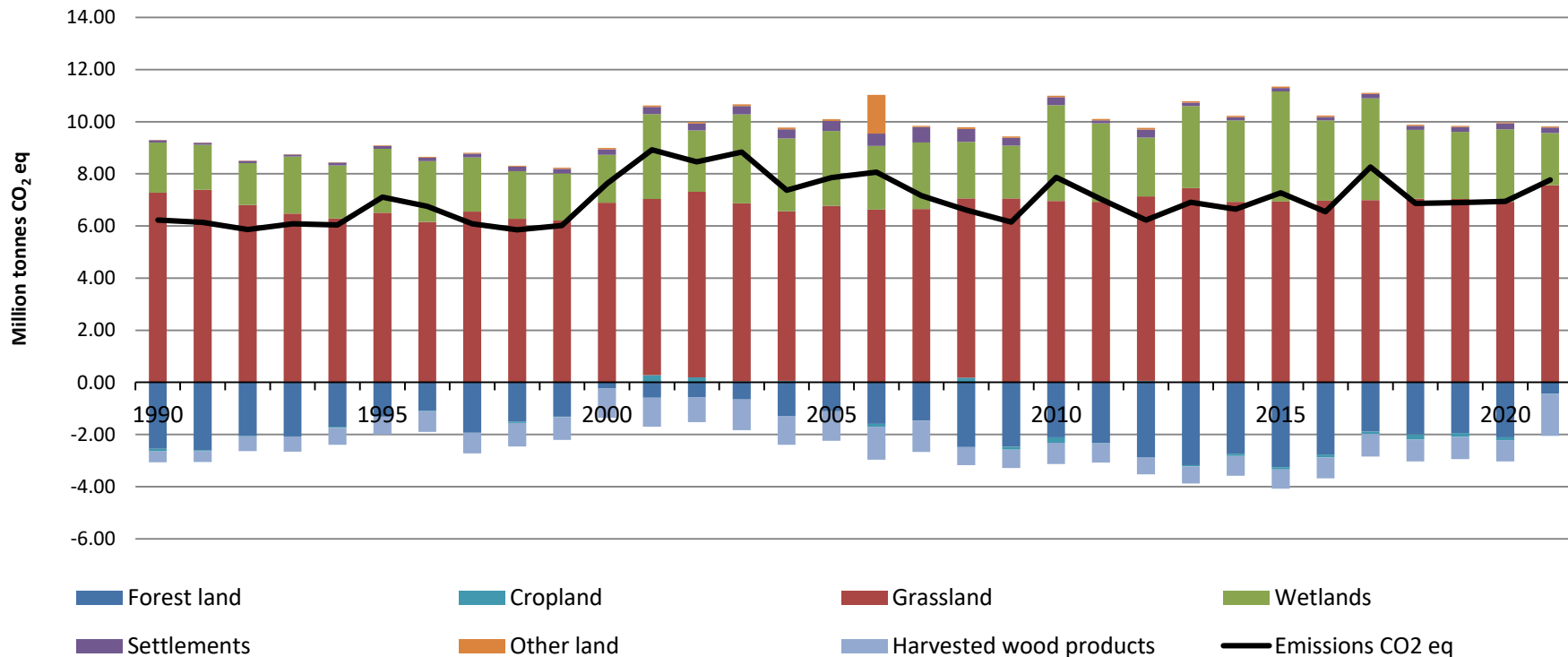
CO₂ Intensity of electricity generation



Residential



Land use, land-use change and forestry (LULUCF)



Remaining Sectors



- Emissions from the **Manufacturing Combustion** sector increased by 0.9% or 0.04 Mt CO₂eq in 2021
- Emissions from the **Industrial Processes** sector increased by 16.8% (0.35 Mt CO₂eq) in 2021 due to a increase in cement production
- Emissions from the **Waste sector** decreased by 4.5% in 2021 or 0.04 Mt CO₂eq.
- **F-Gas** emissions were very similar in 2021 with a slight decrease of 0.2% from 2020
- Emissions from **Commercial Services** sector decreased by 3.0% and **Public Services** sector emissions decreased by 3.8% in 2021.

Conclusion



- 2021 witnessed a significant increase in emissions, presenting a challenge in achieving existing EU and new National reduction targets
- Increases are only partially explained by post-COVID recovery, energy supply developments and continued link between production and emissions in Agriculture responsible for a greater portion
- Meeting our targets will require systemic and transformative change – implementation of measures such as in the Climate Action Plan is needed as soon as possible.

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Intergovernmental Panel on Climate Change

Greenhouse gas emissions Ireland



Key messages

Greenhouse gas (GHG) emissions in Ireland decreased in 2021

Change in emissions since 2020

+4.7%

Emissions increases were driven by the partial lifting of COVID restrictions on transport highlighting that Ireland is still not on the pathway required to meet future targets and a climate neutral economy.



Latest emissions estimates

Ireland's latest greenhouse gas (GHG) emissions 1990-2021 are provisional figures based on the SEAI's energy balance released in June 2022.

Latest emissions data

61.53 Mt

CO₂eq

Ireland's GHG emissions are estimated to be 61.53 million tonnes carbon dioxide equivalent (Mt CO₂eq)



Learn more on
www.epa.ie/ghg