

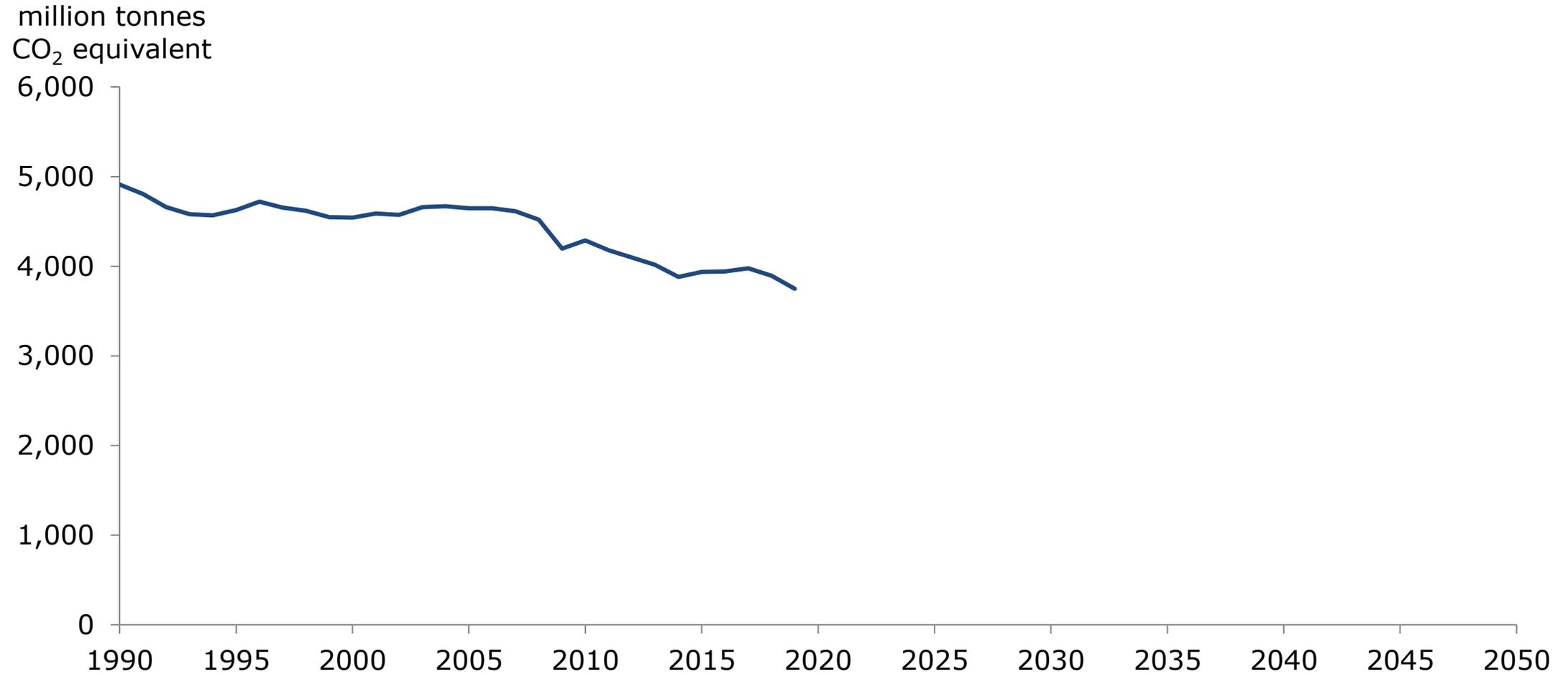
# Trends in greenhouse gas emissions

## Identifying and analysing recent developments in GHG emissions in Europe



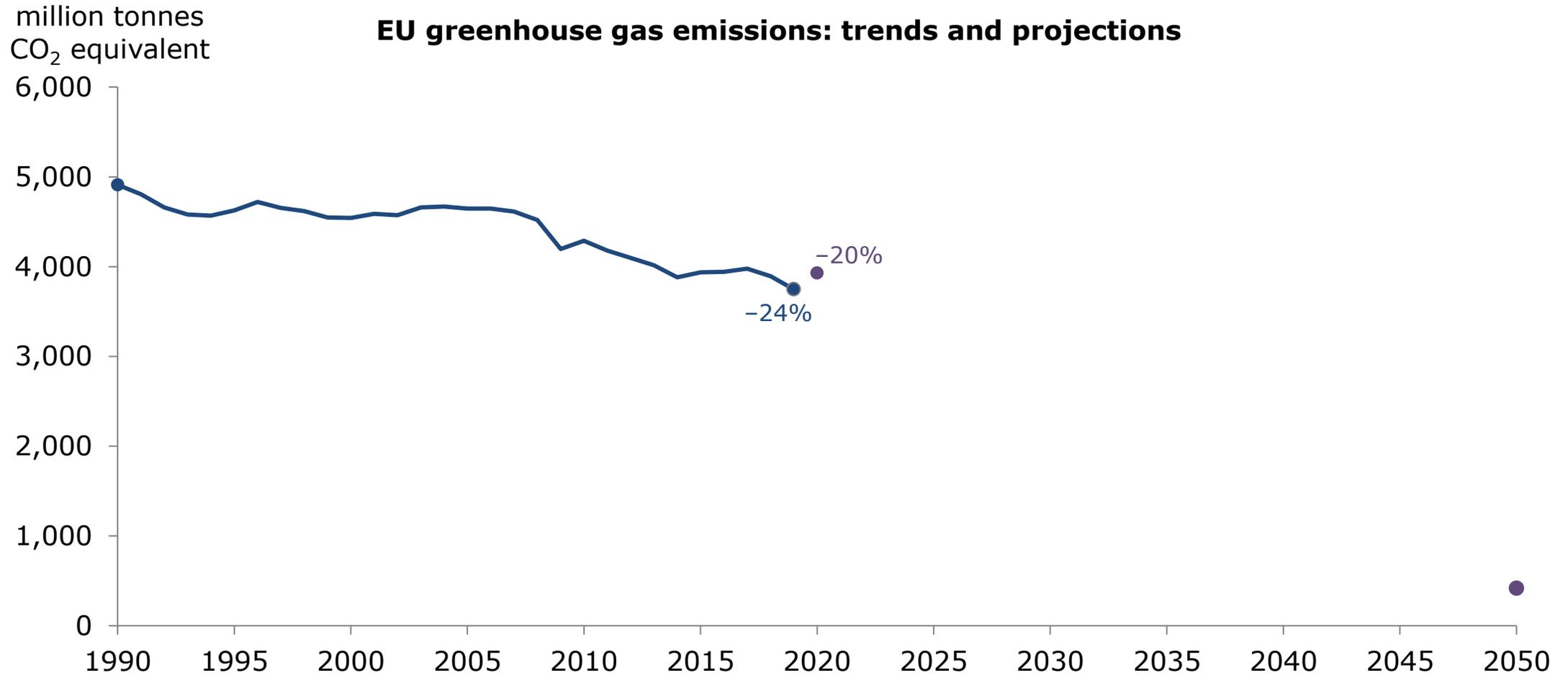
François Dejean, Head of group 'Mitigation, Energy and Transport' | 11<sup>th</sup> EU ETS COMPLIANCE CONFERENCE | 25 November 2020

# A look into historic trends in EU greenhouse gas emissions...



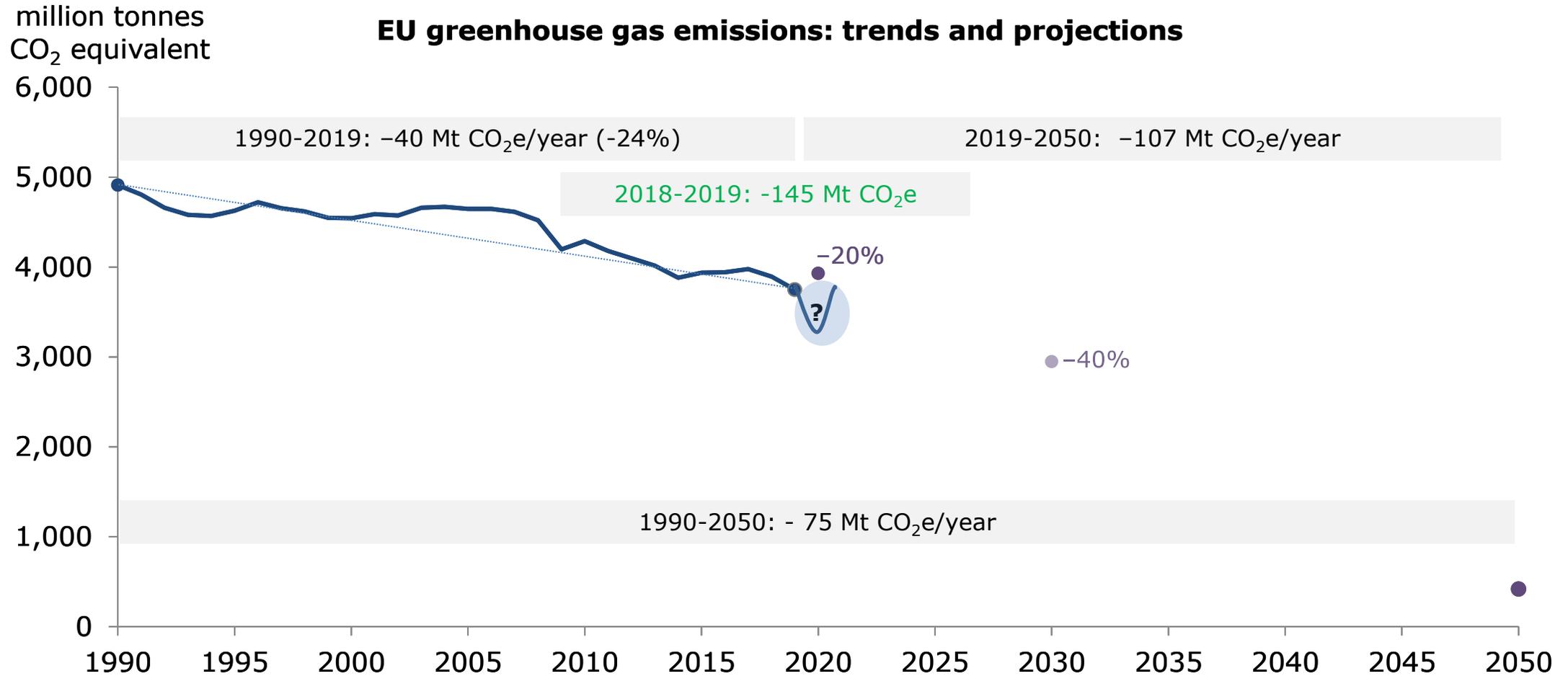
Source: European Environment Agency

# EU on track to is 2020 target (-24% in 2019)

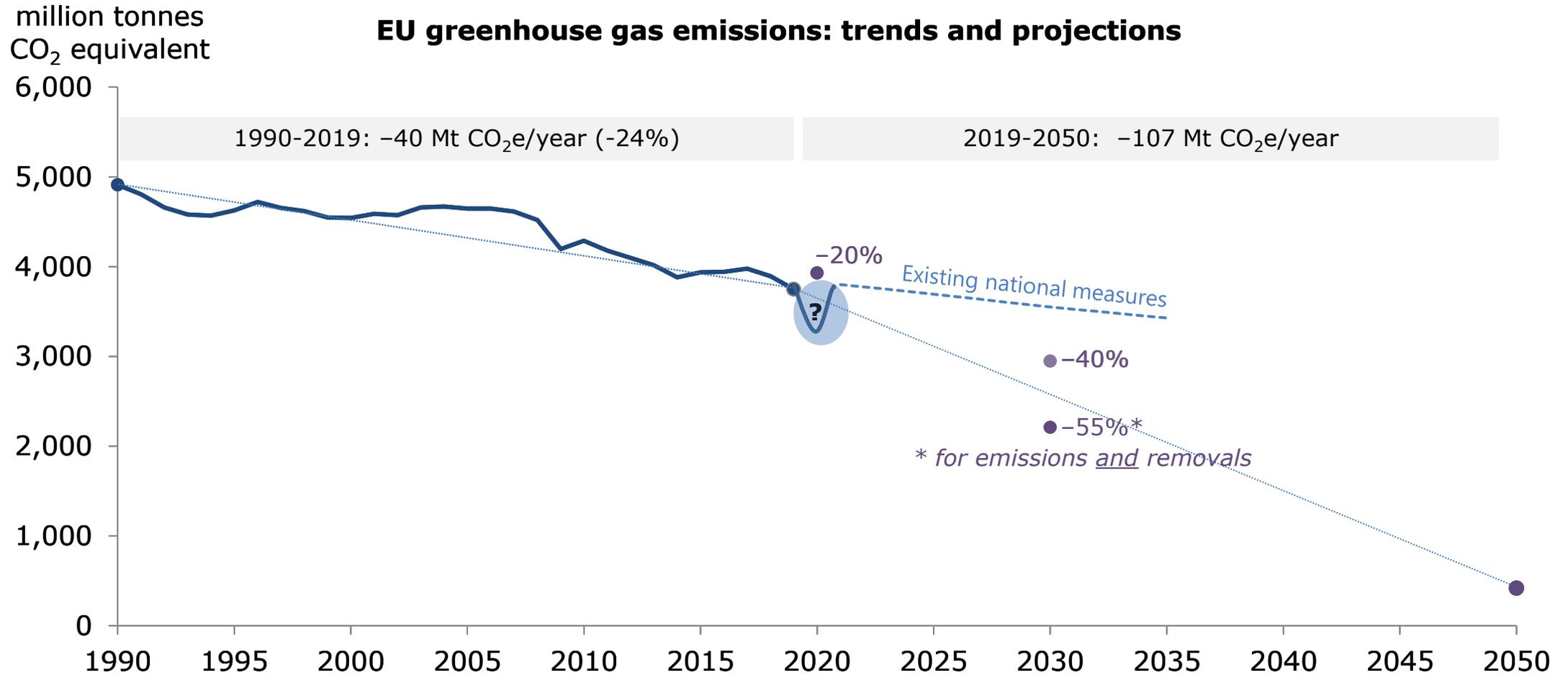


Source: European Environment Agency

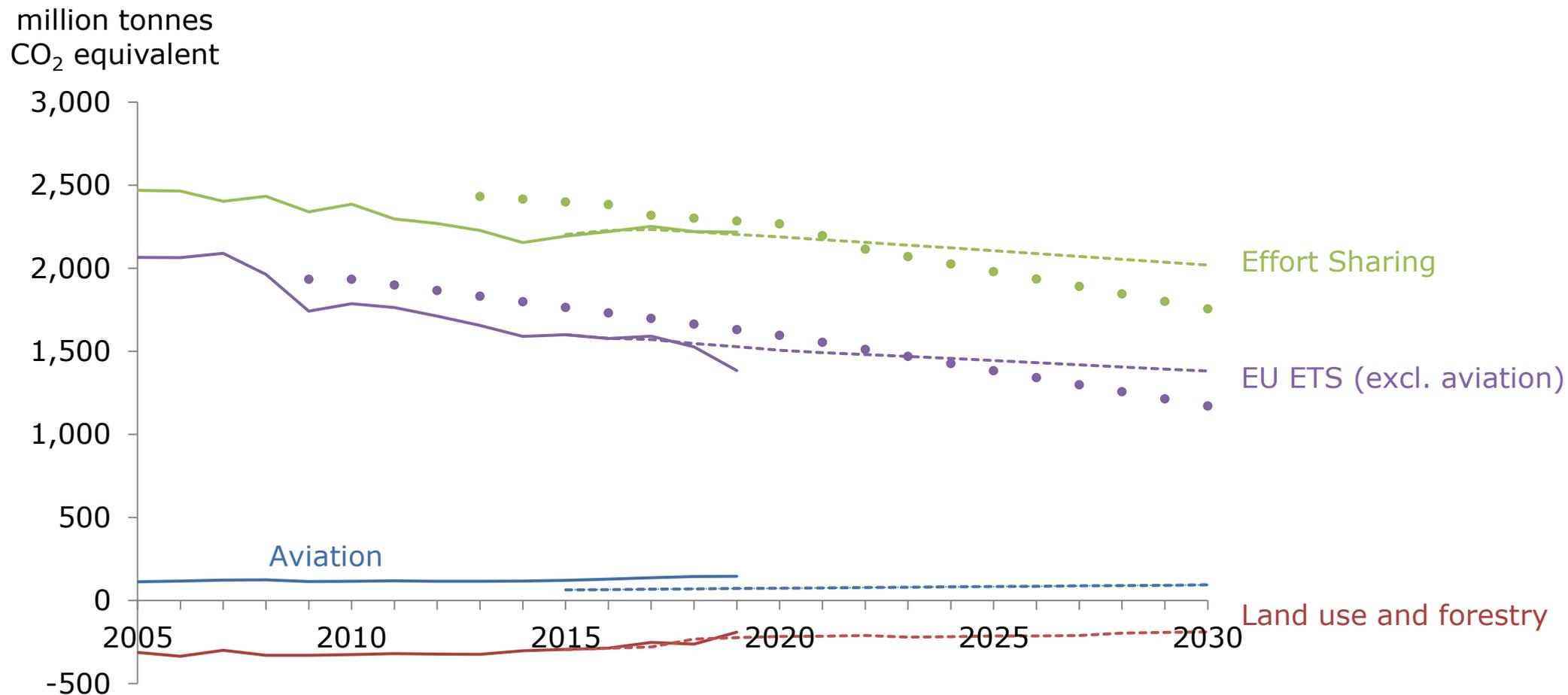
# -4% in 2019: largest reduction in the decade, 2020 unknown



# Insufficient progress planned with national measures in place

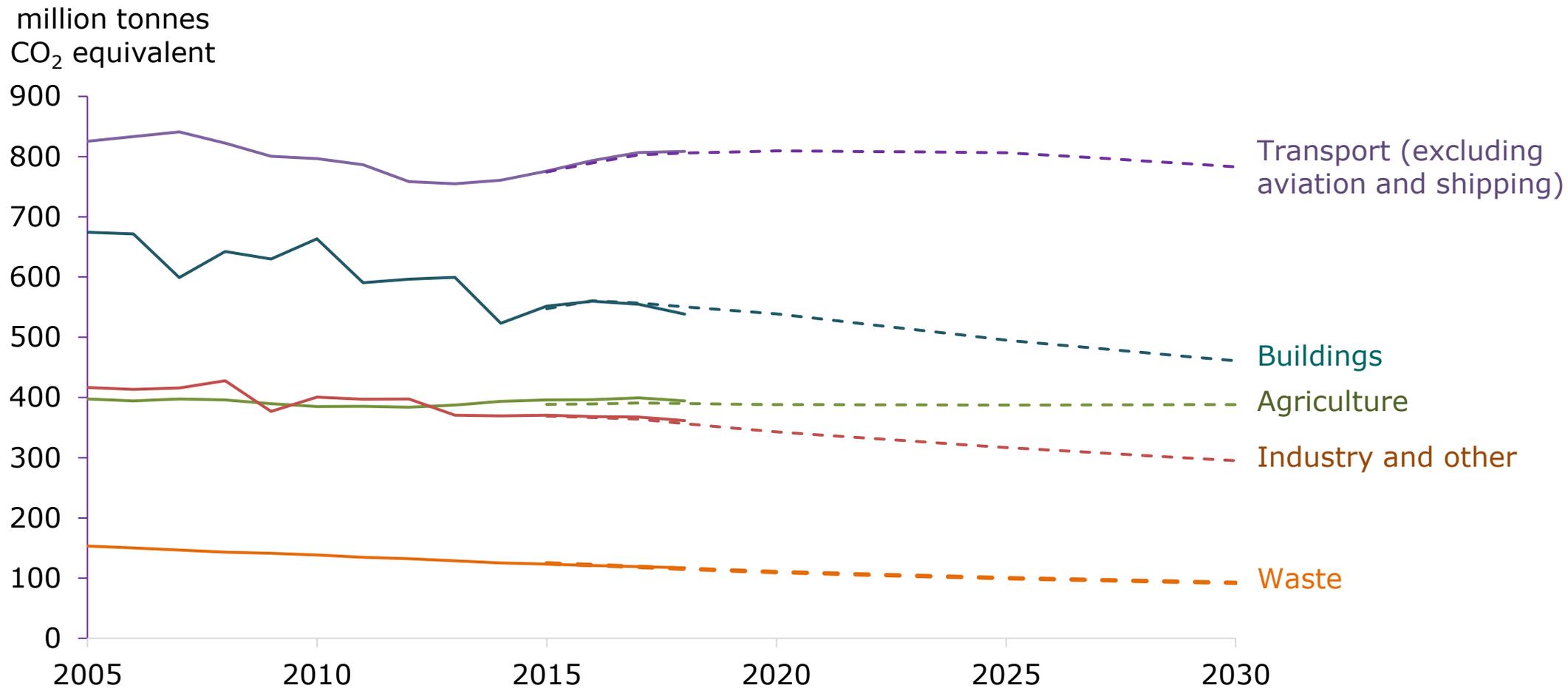


# Historic reductions mostly took place in ETS sectors



Source: European Environment Agency

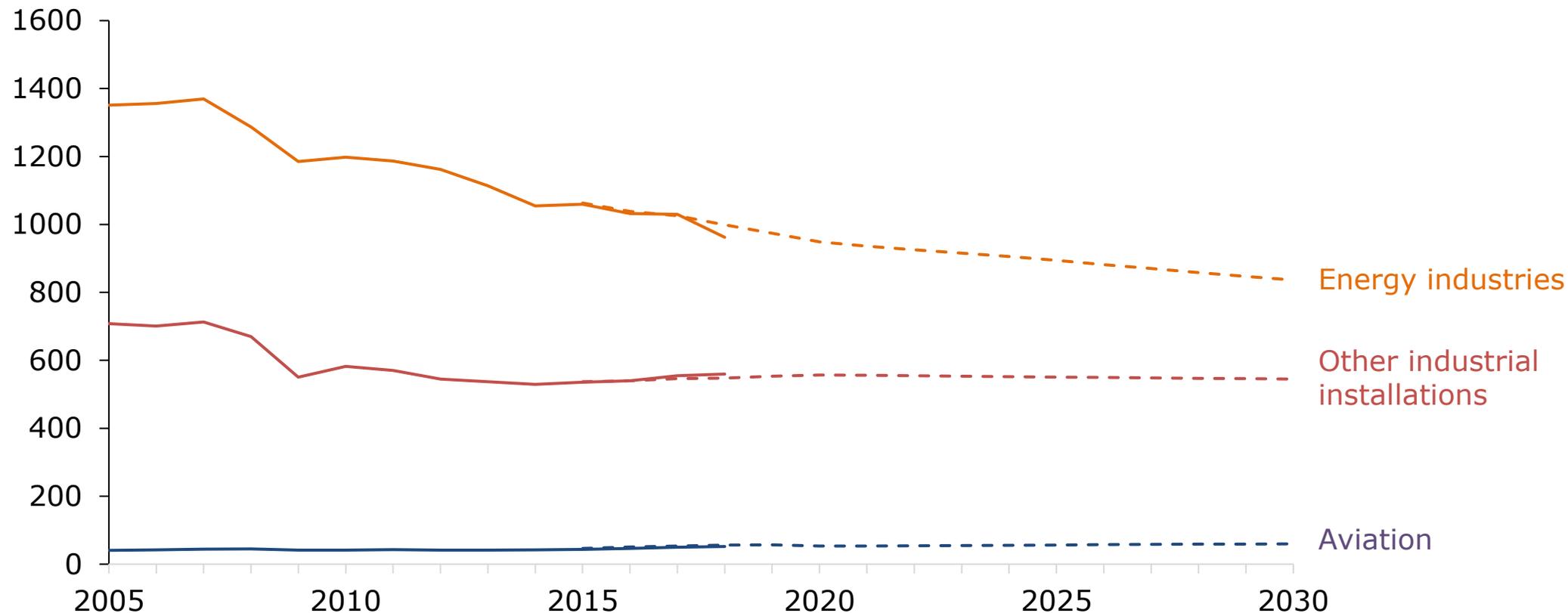
# Effort Sharing: transport sector most problematic



Source: European Environment Agency

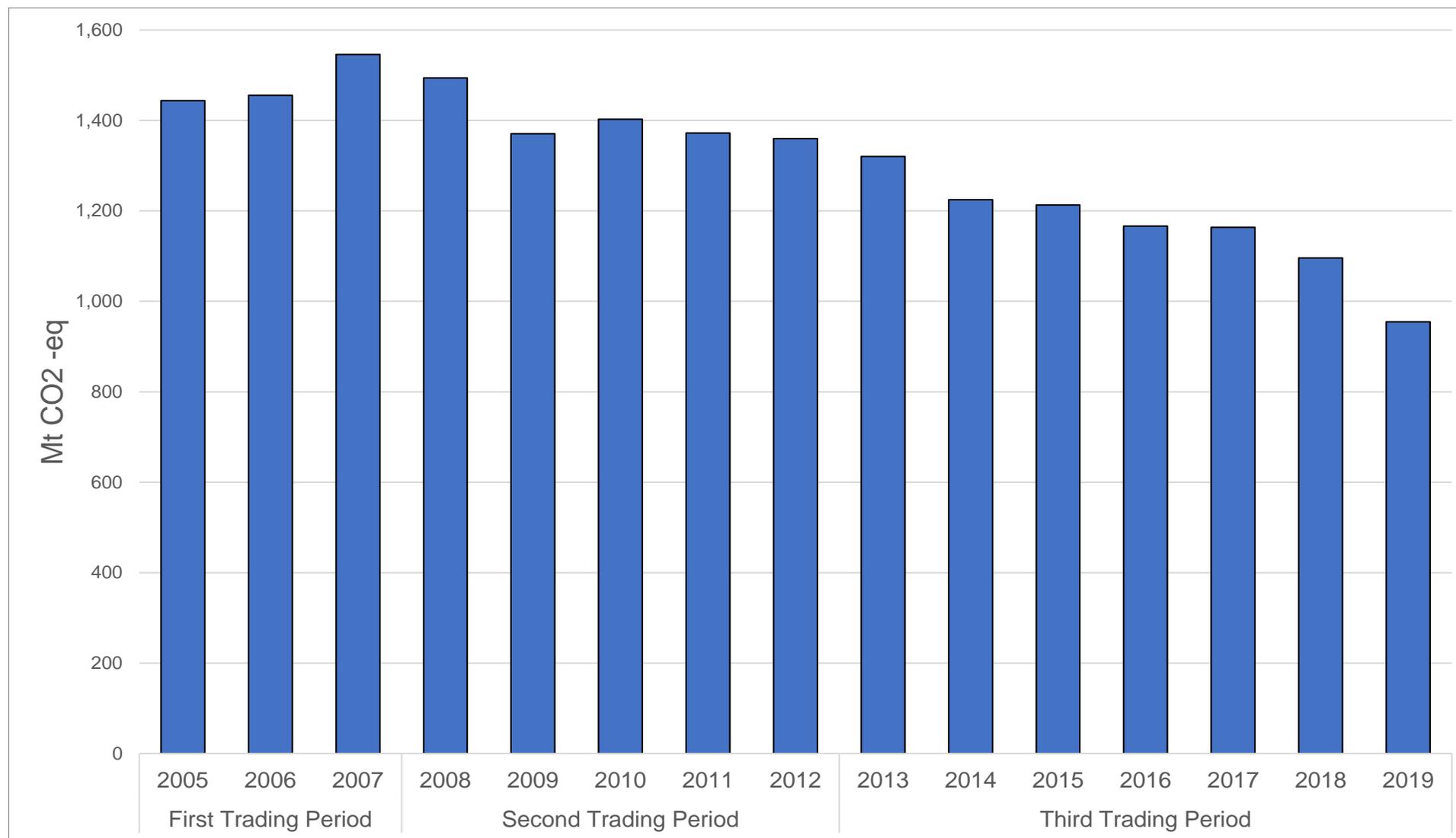
# EU ETS: the energy sector drives emission reductions

million tonnes  
CO<sub>2</sub> equivalent



Source: European Environment Agency

# Historic 2019 reduction from fuel combustion (Activity 20)



Source: European Environment Agency

# Power generation driving emissions down

- Combustion of fuels (activity 20)
  - 60% of all ETS emissions
  - > one-third reduction since the beginning of the ETS
  - Exceptional 12.9% reduction in 2019 (-141 Mt CO<sub>2</sub>eq)
- Drivers of emission reductions
  - Fuel switch away from coal, mainly to gas and renewables
  - Electricity generation in 2019 compared to 2018:
    - Coal: -144 TWh
    - Gas: +75 TWh
    - Wind: +54 TWh
    - Solar: +8 TWh

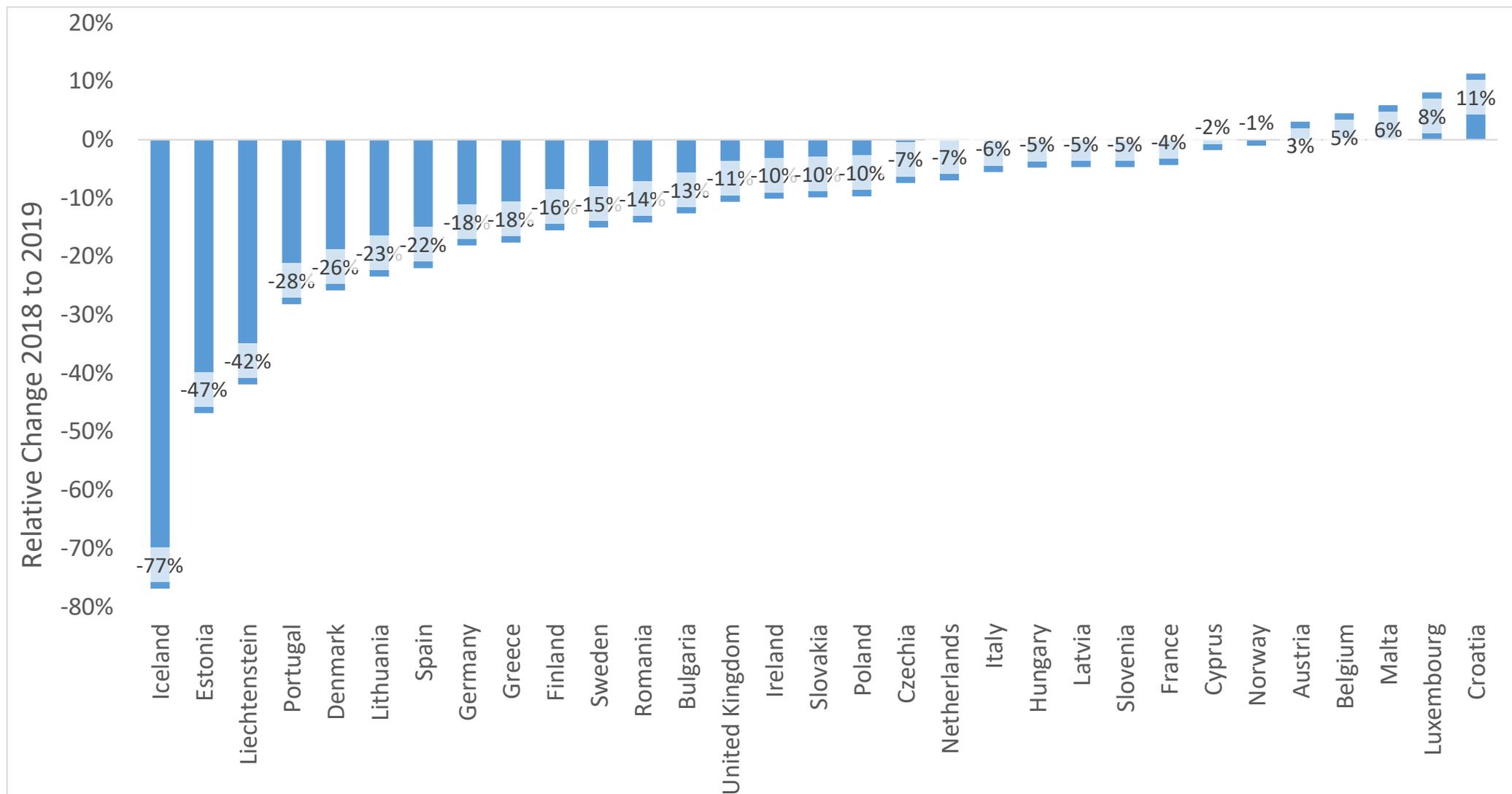


# Main drivers of the 2019 reduction in the power sector

- Carbon price up by 60%
  - 2018: €15.5
  - 2019: €24.7
- Higher share of renewables in power generation:
  - 2018: 32.9%
  - 2019: 34.7% (EU27+UK+NO)
- Lower electricity consumption
  - Generation dropped by -48 TWh in 2019

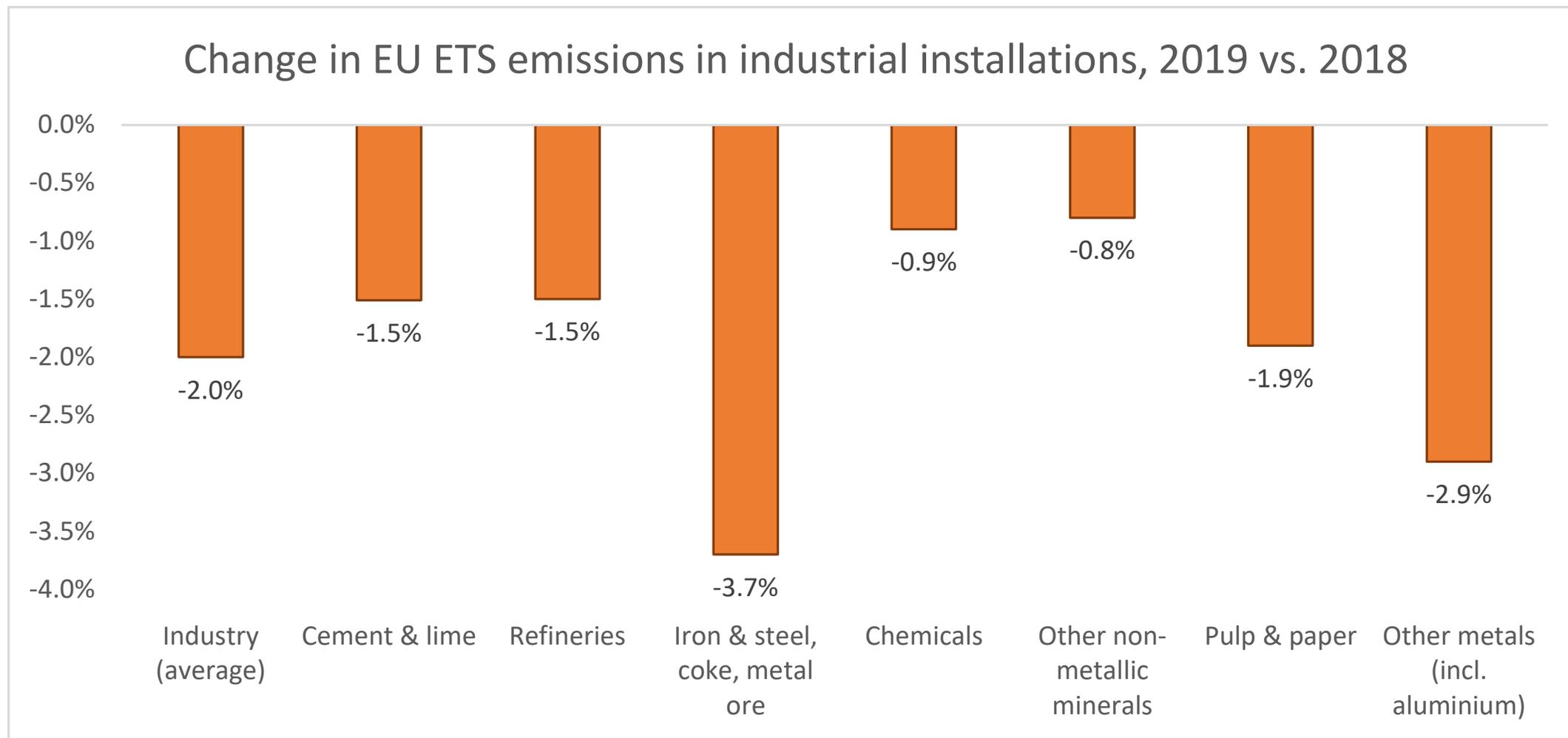


# Combustion of fuels (Activity 20) – by country



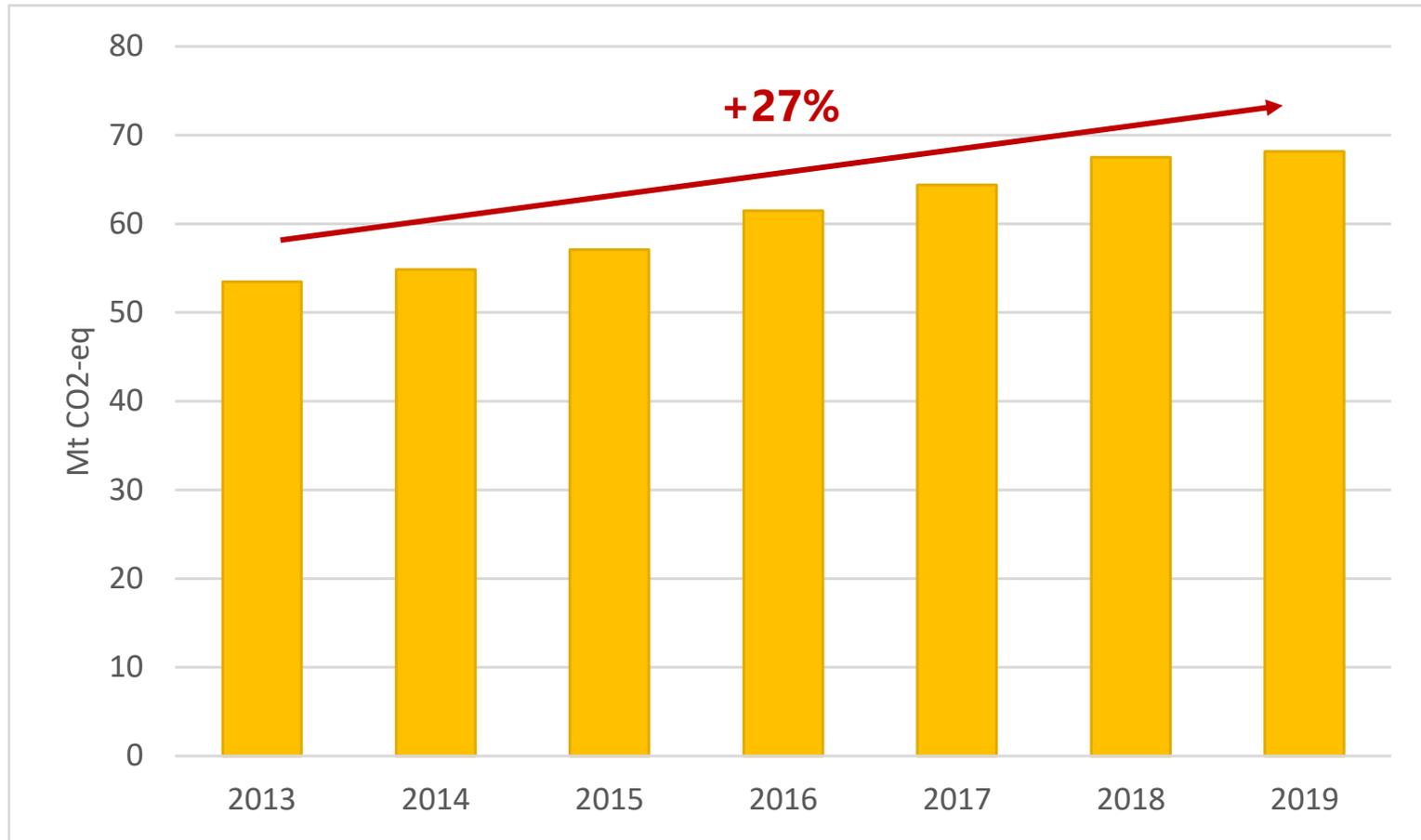
Source: European Environment Agency

# Industrial installations (Activity 21-99)



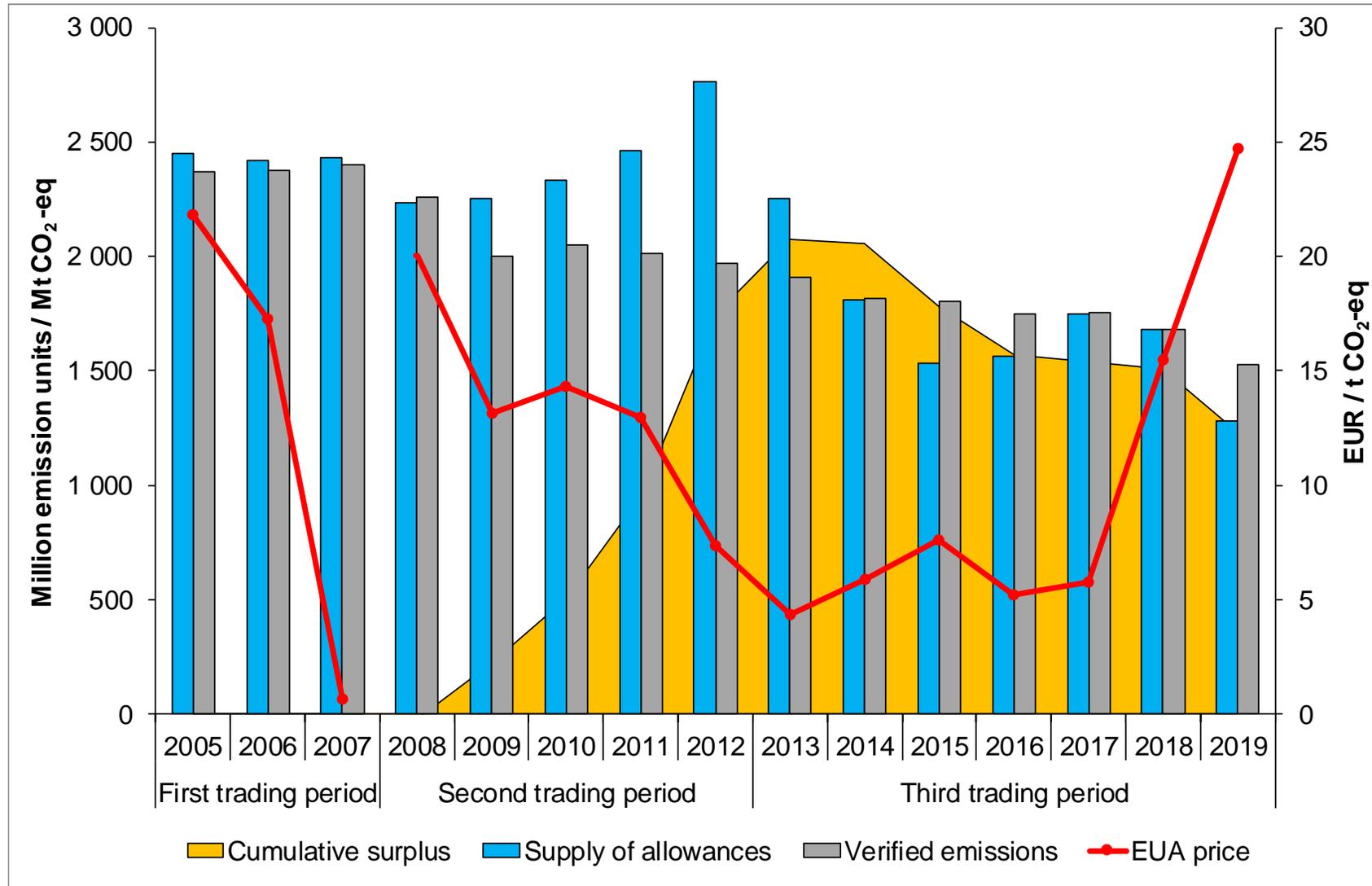
Source: European Environment Agency

# Aviation emissions keep increasing, driven by demand



Source: European Environment Agency

# Emissions, allowances, carbon prices and surplus



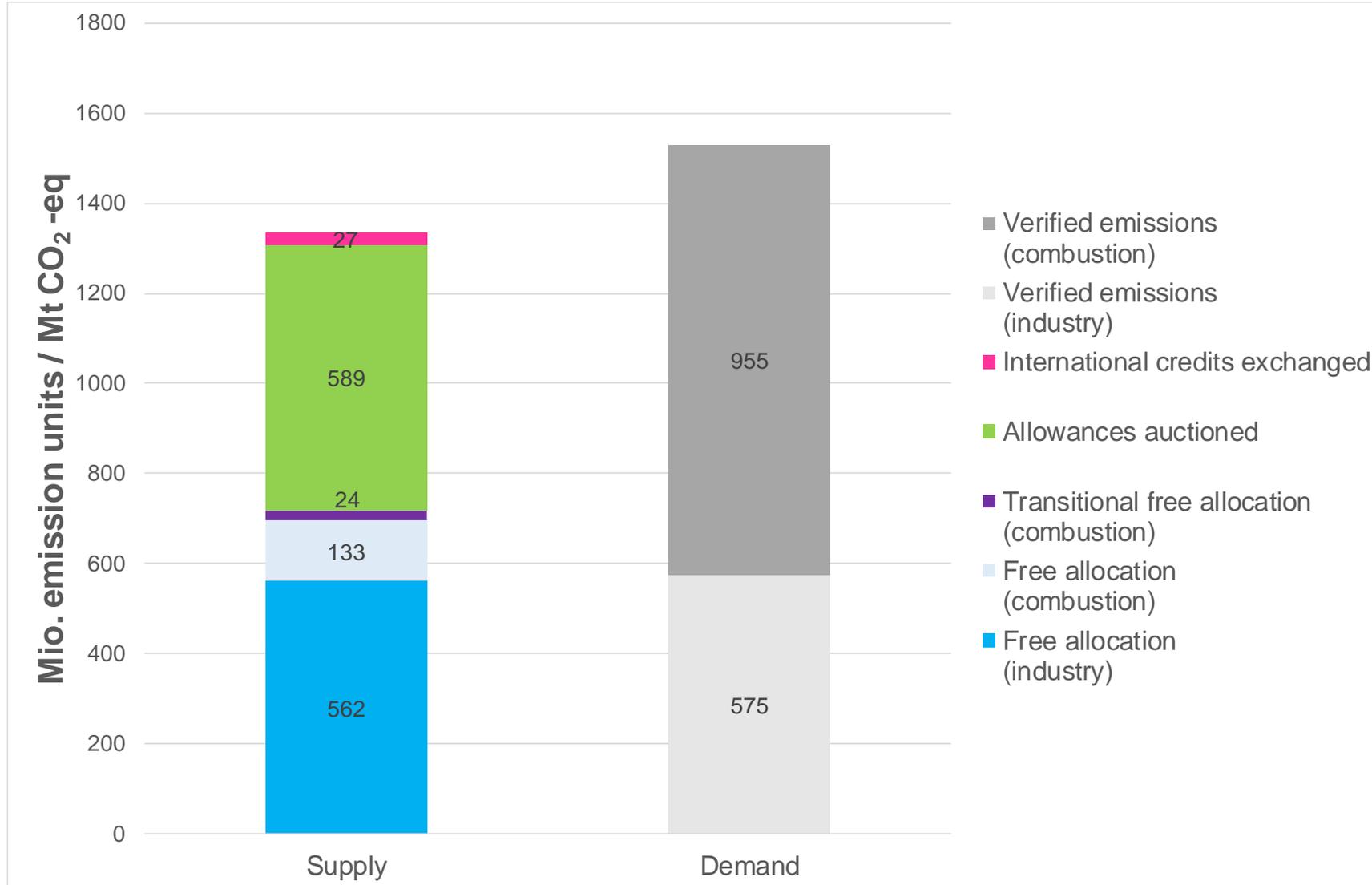
Source: European Environment Agency

Thank you



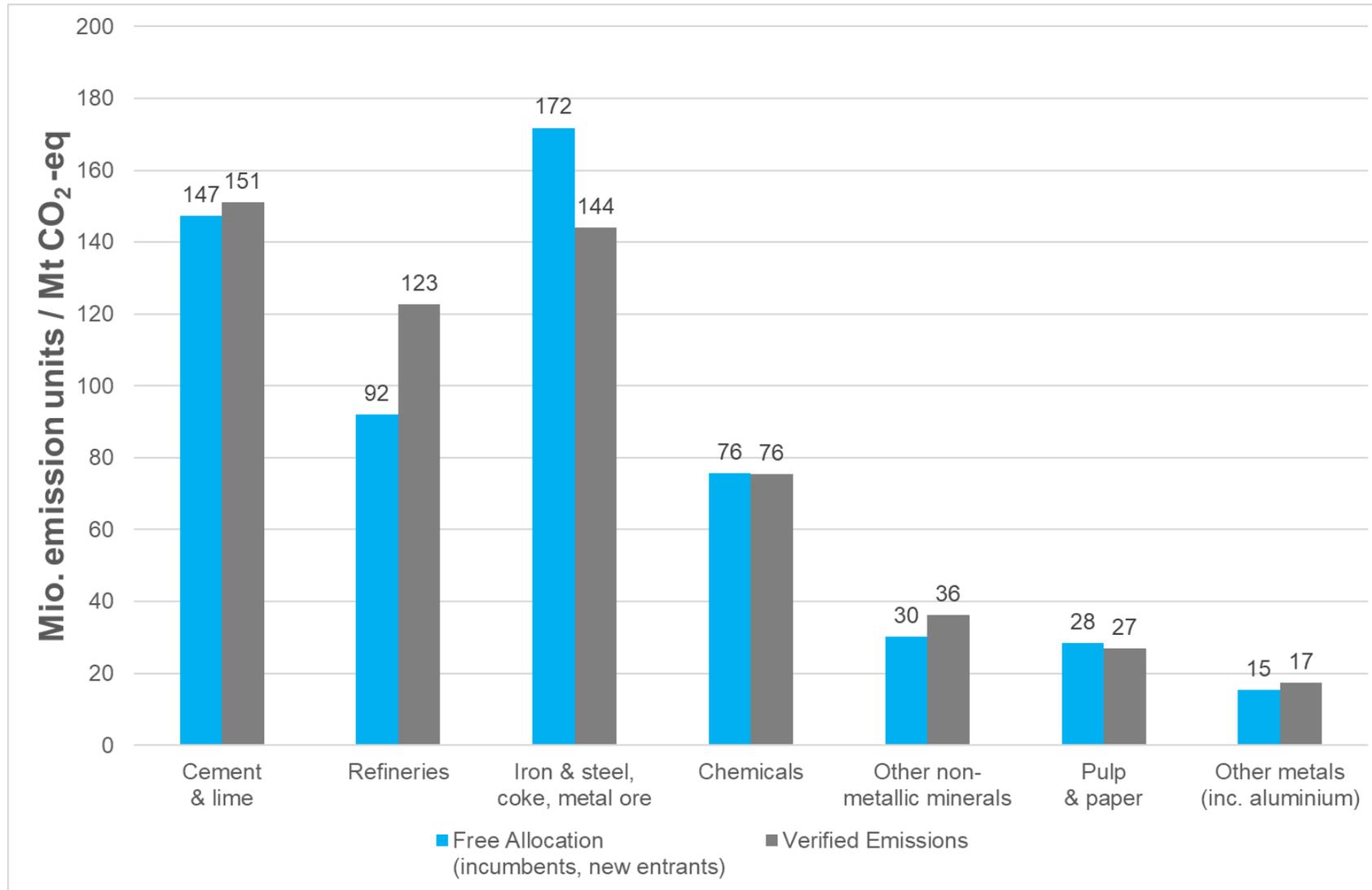
Simone Manfredi photographer

# Overall less allowances than verified emissions in 2019



Source: European Environment Agency

# Emissions in most industrial sectors exceeded free allowances



Source: European Environment Agency