

# Air Pollutant Emissions in Ireland

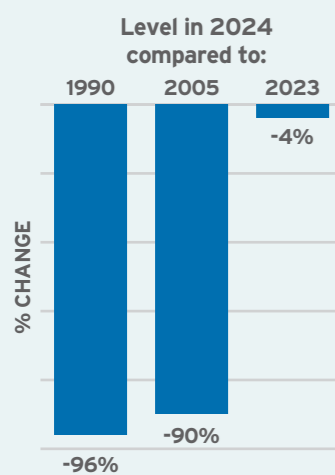
## KEY MESSAGES

Ireland is currently meeting its emission reduction targets for five key air pollutants: sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), non methane volatile organic compounds (NMVOCs), and fine particulate matter (PM<sub>2.5</sub>).



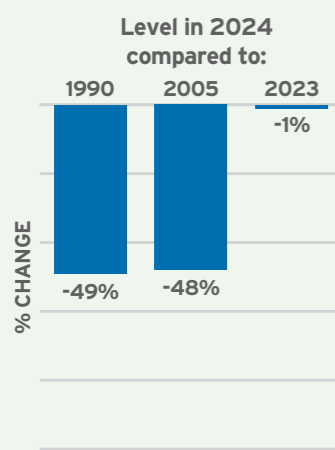
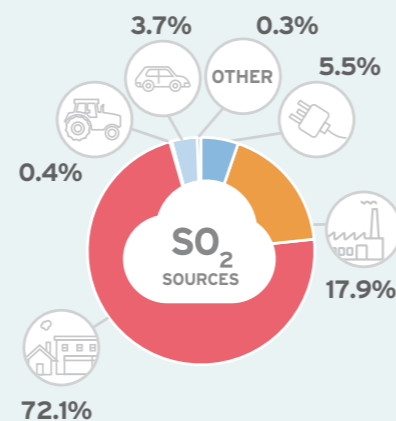
EPA's latest projections indicate that Ireland is expected to remain within the required limits for all five pollutants up to 2030. However, NMVOC and PM<sub>2.5</sub> emissions need closer monitoring, as increases in some parts of the economy could pose challenges in the longer term. Taking action now will be important to ensure we meet future targets beyond 2030.

Energy efficiency measures across society, increased electrification of our public and private transport, REFIT support schemes and smoky coal ban, will have sizeable impacts on reducing emissions into the future.



## Sulphur Dioxide (SO<sub>2</sub>)

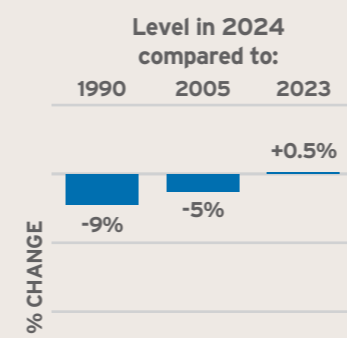
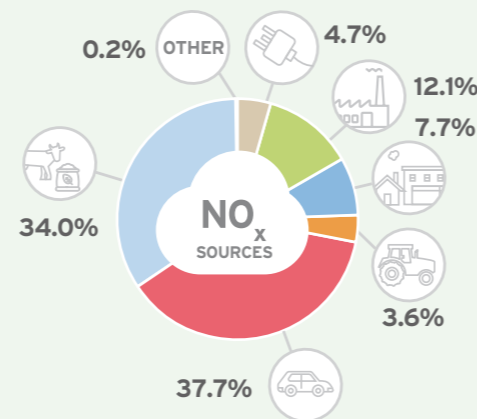
This air pollutant plays a major role in causing acid rain, damaging soils, rivers, lakes, buildings and historic monuments. Short-term exposure can irritate the lungs and worsen asthma, particularly for people with existing respiratory conditions. Emissions mainly come from burning sulphur containing fossil fuels such as coal and oil. Ireland's SO<sub>2</sub> emissions have declined dramatically since 1990 due to the move to low sulfur fuels and cleaner energy.



## Nitrogen Oxides (NO<sub>x</sub>)

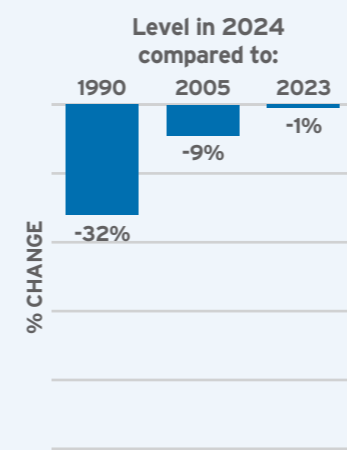
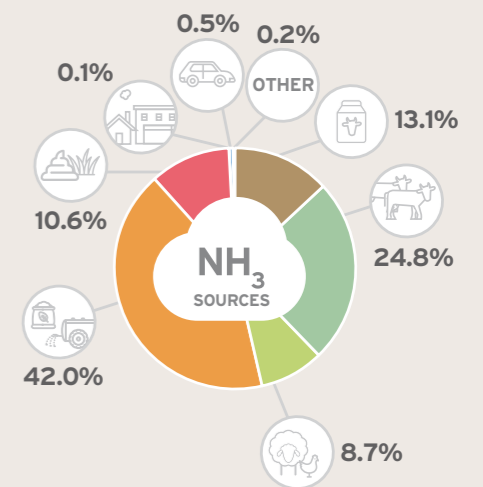
Nitrogen oxides contribute to the acidification of soils and surface waters, harming plants and wildlife. They also affect human health by irritating the lungs and increasing the risk of asthma, COPD, heart disease, stroke, diabetes and high blood pressure.

Transport is the main source of NO<sub>x</sub>, though emissions have fallen by 50% since 1990 due to cleaner vehicles and better emission controls.



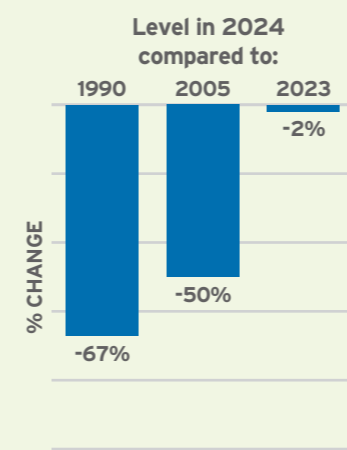
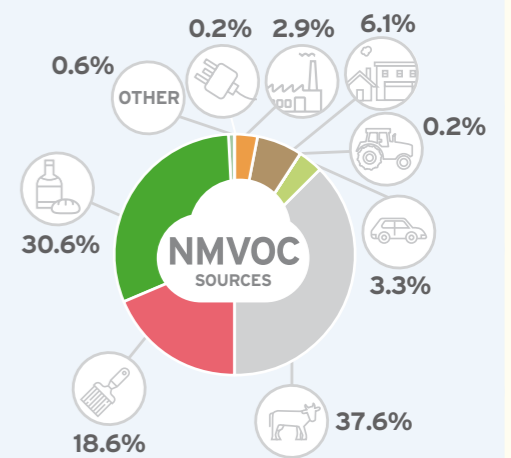
## Ammonia (NH<sub>3</sub>)

Ammonia contributes to acid rain and the formation of fine particles that harm human health and environment. In Ireland, over 99% comes from agriculture and changes in the national cattle population largely determine emission levels year-to-year. Recent reductions in cattle numbers and wider use of low-emission slurry spreading have brought NH<sub>3</sub> into compliance with EU and UN reduction targets. This demonstrates the effectiveness of national policies and uptake of good farming practices.



## Non-Methane Volatile Organic Compounds (NMVOC)

Non methane volatile organic compounds (NMVOCs) are a group of air pollutants released from everyday products like paints and cleaning agents, incomplete fuel combustion, agriculture, and food and drink production. NMVOC emissions have fallen by 32% since 1990 due to cleaner fuels, EU solvent regulations, and improvements in vehicle technology. More recently, growth in the Food and Beverage Industry has led to increases in emissions.



## Particulate Matter < 2.5µm (PM<sub>2.5</sub>)

Particulate matter comes from vehicles, construction, industry and natural dust, with some particles forming in the air from gases such as ammonia. Fine particles (PM<sub>2.5</sub>) are especially harmful as they can penetrate deep into the lungs. Since 1990, emissions have fallen by 67% due to the shift from coal and peat to cleaner fuels, as well modern vehicle technology and fewer older vehicles on roads.

