

Overview:

- **Air quality in the UK has improved over the past 14 years:** Nitrogen oxide (NO_x) pollution has fallen by 44% - the lowest since records began - and fine particulate matter (PM_{2.5}) has fallen by 18%. However, air pollution remains the largest environmental threat to human health and is estimated to cost the economy billions each year in lost productivity.

Air pollution:

- **Dirty air is detrimental to our quality of life and the economy:** Air pollution is estimated to cost the economy between £9-19 billion per year. This is through a combination of more people experiencing mild health complaints like the common cold, and the likelihood of contracting acute medical conditions that affect workforce participation and productivity.
- **PM_{2.5} is the most harmful to human health:** Since 1970, PM_{2.5} pollution has been falling with average roadside concentrations falling by approximately 30% in the last 14 years. PM_{2.5} arises from a combination of industrial processes, domestic burning, road transport, and farming. Due to its minute size it enters the organs and can reduce lung function, causing asthma, strokes, dementia, and heart disease. A recent study found PM_{2.5} in the lungs, livers, and brains of unborn babies.
- **NO_x is declining but still presents an acute risk:** Regular exposure to NO_x pollution has been linked to poorer lung function and heart and lung conditions in both children and adults, particularly for those living alongside busy roads. In the UK our NO_x pollution generally follows the road network, with hotspots occurring around our major towns and cities. NO_x is projected to continue to fall as we transition to EVs as they produce no pollution at the tailpipe.
- **There is a particularly acute risk to childhood growth and development:** Consistent exposure to harmful air pollutants can stunt lung development, increase the likelihood of contracting respiratory conditions like asthma, and hinder cognitive development in children. Air pollution presents an acute risk in pregnancy — causing low birth weight and premature birth.

Government action:

- **Since leaving the European Union, the UK has strengthened its legally binding air quality targets:** The [Environment Act](#) includes a legally binding target to reduce the annual average level of PM_{2.5} in England to 10µg/m³ by 2040 and population exposure by 35% by 2040 compared to 2018 levels. In 2023, Defra also published the [Environmental Improvement Plan](#), which sets a number of interim targets on air pollution to measure progress. It also details how the government will work with landowners, businesses, and communities to improve air pollution.
- **Electricity sector decarbonisation has significantly reduced air pollution:** Following pressure from CEN MPs in 2015, the government committed to phase out coal-fired

power stations by 2025. Coal power has nearly disappeared from the grid, having made up 39% of the power mix in 2012. Over 40% of our electricity is now generated by renewables, following the introduction of the Contracts for Difference scheme, which has reduced the cost of capital of renewable energy for investors. Prior to this, large amounts of our [NOx and SO2 pollution](#) was coming from energy generation.

- **In 2019, the UK produced a Clean Air Strategy that was lauded as an example for the rest of the world to follow:** The strategy sets out cross government and society actions to reduce air quality. It details plans to halve the number of people living in locations where concentrations of particulate matter are above the 10µg/m3 guideline limit, the creation of the UK Air Information Resource national monitoring site, and new guidance on domestic burning to share with local authorities.
- **The government has taken a number of steps to increase the number of EVs on our roads:** In the last 14 years, the government has set up grants for charge points, introduced financial incentives for buying an EV, and passed the zero emission vehicle mandate to increase the supply of EVs on the market. As of February 2024, there were one million EVs on UK roads and making up 17.7% of new car sales.
- **The government has invested billions to keep bus fares low and services pleasant:** Following a dip in patronage during the pandemic, the government introduced the £2 bus fare cap until December 2024. And the UK has outperformed Europe in the number of zero-emission bus registrations with around 4,570 battery-electric or hydrogen buses now in the fleet.
- **Record funding has gone into active travel to make walking and cycling a natural choice for shorter journeys:** The government has spent £2.3 billion in improving active travel, set up Active Travel England - a new funding body and inspectorate to ensure all new infrastructure meets required standards - made changes to the highway code to protect vulnerable road users, and expanded the Cycle to Work scheme to include e-bikes.
- **The landmark Environment Act simplified smoke control legislation and enforcement:** The government banned the sale of the most polluting fuels – including smoky coal and wet wood, which were major PM2.5 contributors. It also matched indoor burning restrictions with outdoor fuels and it made breaches a civil offence so local authorities can issue fines between £175 and £300, which goes towards their enforcement costs.