Sydney's air quality

Fact sheet

transport.nsw.gov.au

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We recognise that good air quality is important for us all. According to the World Health Organisation's (WHO) air quality guidelines, Sydney has a good standard of air quality. Even when challenged by events such as severe bushfires, Greater Sydney's air quality returns to WHO's good standard level. As our population continues to grow, we are committed to maintaining high air quality standards.

Air pollution

Air pollution in Australia is measured by six main air pollutants: carbon monoxide, nitrogen dioxide, photochemical oxidants, sulphur dioxide, lead and particles. Generally, Australia has good air quality but it's not without challenges. Population growth and urban expansion can heighten pollution levels if there is a continued reliance on fossil fuels. Additionally, climate change effects such as increased summer smog, dust storms from droughts, and exposure to hazardous smoke due to severe bushfires, pose impacts to our air quality.



National Environment Protection (Ambient Air Quality) Measure

The National Environment Protection (Ambient Air Quality) Measure was developed in consultation with health professionals, environmental groups and the community. Both state and federal governments are required to report against the six main air pollutants and our national standards for PM_{2.5} (particulate matter that has a diameter of 2.5mm or less) are amongst of the most stringent in the world. Established under the National Environment Protection Council Act (1994), the National Environment Protection Council (NEPC) has two primary functions:

- 1. to make National Environment Protection Measures (NEPMs)
- 2. to assess and report on the implementation and effectiveness of NEPMs in participating jurisdictions.

Measuring, monitoring and regulations

In NSW, the Department of Planning and Environment monitors, analyses and publishes information about air quality. They operate a comprehensive air quality monitoring network to provide accurate and up-to-date information about air quality. The NSW Environment Protection Authority (EPA) regulates air quality and implements measures for managing and reporting air pollution. They assist NSW in maintaining a balance between managing competing demands on the environment and supporting sustainable growth.



Air quality in Sydney and internationally. Source: World Health Organisation

Reducing vehicle emissions

According to EPA data, despite the increasing number of cars on the road, total emissions from motor vehicles in Sydney have significantly decreased over the past 20 years. This is a result of the improvements in fuel quality and better engine designs.

While the number of cars is expected to further increase as the population of Sydney continues to grow, total emissions from motor vehicles will continue to fall over the next decade.

Federal and NSW Government initiatives and technological developments have also been implemented in recent years to assist in further reducing vehicle emissions. They include:

- National Clean Air Agreement
- The National Electric Vehicle Strategy
- NSW Electric Vehicle Strategy
- Australian vehicle emissions standards
- clean fleet program
- smoky vehicle camera systems
- vehicle import duties on second-hand cars
- improvements in technologies and design e.g. electric vehicles

The NSW Government will continue to work with the Commonwealth and support initiatives to further reduce motor vehicle emissions at the source.

Cars built after 2013 emit 97% Less oxides of nitrogen than vehicles built in 1967	Post-2013 NO _x levels	1976 NO _x levels
Diesel trucks built after 2011 emit 92% Less particles of matter than vehicles built in 1996	Post-2011 PM levels	1996 PM levels

Source: Adapted from EPA 2012 and 2016

Main pollution contributors

Sydney is a major international centre with residential, commercial, industrial, and natural occurrences such as bushfires, all contributing to air pollution. Motor vehicles are an important contributor to emissions, contributing 13 per cent of PM_{2.5}, and 55 per cent of nitrogen oxides (which includes nitrogen dioxide (NO₂) and nitric oxide (NO)). Other major contributors include wood heaters, which contributes 50 per cent of PM_{2.5}, and industry which contributes 18 per cent of PM_{2.5}.



Source contributions to PM_{2.5} emissions in Sydney. Source: NSW Environment Protection Authority



Source contributions to NOx emissions in Sydney. Source: NSW Environment Protection Authority

Further reading

NSW Environment Protection Authority: NSW's Air

Tunnel air quality: Advisory Committee on Tunnel Air Quality

Current and forecast air quality

Vehicle Emission Standards