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**THE LEGISLATIVE ASSEMBLY FOR THE
AUSTRALIAN CAPITAL TERRITORY**

ELEVENTH ASSEMBLY

**NATIONAL ENVIRONMENT PROTECTION COUNCIL
ANNUAL REPORTS 2023-2024**

**Presented by
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Minister for Climate Change, Environment, Energy and Water
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Annual Report 2023 – 2024

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Overview

ABOUT THE NATIONAL ENVIRONMENT PROTECTION COUNCIL

The *National Environment Protection Council Act 1994* (Cth) (the NEPC Act) formally establishes the National Environment Protection Council (the Council) as a body to determine national environment protection measures. Each state and territory has mirror legislation to support this establishment. The Council consists of environment ministers from all jurisdictions, including the Commonwealth.

The objects of the NEPC Act are to ensure that, through the establishment and operation of the Council:

- people enjoy the benefit of equivalent protection from air, water or soil pollution and from noise, wherever they live in Australia
- decisions of the business community are not distorted, and markets are not fragmented, by variations between participating jurisdictions in relation to the adoption or implementation of major environment protection measures.

The Council has two primary functions under the NEPC Act:

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

National Environment Protection Measures (NEPMs) are a set of legislative instruments designed to assist in protecting or managing particular aspects of the environment, in a uniform and consistent way across all jurisdictions.

The Council continues to receive operational, administrative and corporate support from the NEPC Business Services Team within the Australian Government Department of Climate Change, Energy, the Environment and Water (the Department), transitioning from the Australian Government Department of Agriculture, Water and the Environment.

THE NATIONAL ENVIRONMENT PROTECTION COUNCIL COMMITTEE

The National Environment Protection Council (NEPC) Committee is also established under the NEPC Act. The Committee consists of a NEPC Executive Officer, and a nominee of each member of the Council. This is usually the head of the environment agencies within each jurisdiction. The Council delegates most of its responsibilities to the NEPC Committee. In addition, the NEPC Committee is responsible for:

- assisting and advising the Council in the performance of its functions
- supporting the Council in implementing the NEPC Act
- overseeing the management of the Council's budget.

THE NATIONAL ENVIRONMENT PROTECTION COUNCIL EXECUTIVE OFFICER

The NEPC Act requires the appointment of a NEPC Executive Officer by the Council, for a period not exceeding five years. The role of the Executive Officer is to provide assistance and support to the Council and the Committee.

For the 2023–2024 reporting year Ms Jackie Raynor was the NEPC Executive Officer with support provided by David Jeffrey as Acting NEPC Executive Officer.

GOVERNANCE STRUCTURE OF THE COUNCIL AND INTER-JURISDICTIONAL RELATIONSHIPS

As membership of the Council consists of all Australian environment ministers, the Meetings of Environment Ministers are held in conjunction with meetings of the Council and the Environment Minister's Meeting is the primary multi-jurisdictional forum at which national environmental issues are considered. The following streamlined approach to multi-jurisdictional environmental work has been agreed by Environment Ministers:

- Environment Ministers Meetings occur on an ad hoc basis and run concurrently with meetings of the National Environment Protection Council as required. Agendas are focused on issues requiring multi-jurisdictional collaboration or decision.
- Meetings of the heads of jurisdictional environment agencies (Senior Officials Group) are held on a regular basis – at least annually, and concurrently with NEPC Committee meetings.
- Ongoing communication occurs between the Senior Officials/NEPC Committee groups and the Heads of Environmental Protection Agencies network. Where relevant, the Heads of Environment Protection Agencies may be asked to take a role in progressing agenda items for the Senior Officials/NEPC Committee groups.
- New Zealand and the Australian Local Government Association are represented by invitation to Environment Ministers Meetings when relevant subject matter is to be discussed.

ABOUT NATIONAL ENVIRONMENT PROTECTION MEASURES

The NEPC Act recognises the importance of communities and business in protecting Australia's environment, and that national outcomes are best achieved through regionally tailored approaches.

National Environment Protection Measures (NEPMs), created under the NEPC Act, provide an agreed nationally consistent framework of goals, standards, guidelines and protocols for protecting and managing particular aspects of the environment, including air, water, noise, site contamination, hazardous waste and recycling. A NEPM is a Commonwealth legislative instrument. Once a NEPM is made or varied, its implementation is the prerogative of each jurisdiction. Regulation is just one of a suite of implementation tools a jurisdiction may use.

National Environment Protection Measures provide a single national framework to address one or more environmental issues, with the flexibility for local implementation to vary between jurisdictions. This provides certainty and consistency for business and the community in the management of these environmental issues, while reducing the need for regulation.

There are seven National Environment Protection Measures:

Air Toxics – sets out a nationally consistent approach to collection of data on toxic air pollutants (such as benzene) to deliver a comprehensive information base from which standards can be developed to manage these air pollutants to protect human health.

Ambient Air Quality – establishes a nationally consistent framework for monitoring and reporting on air quality, including the presence of six pollutants – carbon monoxide, lead, particulates, nitrogen dioxide, sulfur dioxide and ozone.

Assessment of Site Contamination – provides a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by regulators, site assessors, environmental auditors, landowners, developers and industry. It provides authoritative guidance to practitioners in this field.

Diesel Vehicle Emissions – supports reducing pollution from diesel vehicles. Several jurisdictions operate a suite of programs to reduce exhaust emissions from diesel vehicles.

Movement of Controlled Waste – operates to minimise potential environmental and human health impacts related to the movement of certain waste materials, by ensuring that waste to be moved between states and territories is properly identified, transported and handled in ways consistent with environmentally-sound management practices.

National Pollutant Inventory – provides a framework for collection and dissemination of information to improve ambient air and water quality, minimise environmental impacts associated with hazardous wastes and improve the sustainable use of resources.

Used Packaging Materials – operates to minimise environmental impacts of packaging materials, through design (optimising packaging to use resources more efficiently), recycling (efficiently collecting and recycling packaging) and product stewardship (demonstrating commitment by stakeholders).

GOVERNANCE

Financial management, work health and safety matters, fraud compliance and risk management are all covered by both the Commonwealth and the Department's policies and procedures. These are reported against in the Department's annual report.

No freedom of information requests were received during the reporting year.

PROCUREMENT, CONSULTANCIES AND FINANCIAL PERFORMANCE

All such activities are undertaken in accordance with relevant Commonwealth requirements, including legislation, policies and procedures. The NEPC Business Services Team strives to ensure the core principle of value for money in all the NEPC procurement activities.

Detailed financial matters are contained in the financial statements within the Department's 2023–24 annual reports which can be found here: [Annual Report 2023-24](https://www.dcceew.gov.au/sites/default/files/documents/dcceew-2023-24-annual-report.pdf) (https://www.dcceew.gov.au/sites/default/files/documents/dcceew-2023-24-annual-report.pdf)

NEPC report on the implementation of the

National Environment Protection (Air Toxics) Measure





National Environment Protection (Air Toxics) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Air Toxics) Measure.

Made by Council: 3 December 2004.

Commencement date: 20 December 2004 (advertised in *Commonwealth of Australia Special Gazette* No. S 52904, 20 December 2004).

Amendment Date: 16 October 2011.

NEPM goal (or purpose)

The goal of the National Environment Protection (Air Toxics) Measure is set out in clause 5 of the measure:

The national environment protection goal of this Measure is to improve the information base regarding ambient air toxics within the Australian environment in order to facilitate the development of standards following a Review of the Measure within eight years of its making.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Air Toxics) Measure is set out in clause 6 of the measure:

The desired environmental outcome of this Measure is to facilitate management of air toxics in ambient air that will allow for the equivalent protection of human health and well-being, by:

- 1. providing for the generation of comparable, reliable information on the levels of toxic air pollutants ('air toxics') at sites where significantly elevated concentrations of one or more of these air toxics are likely to occur ('Stage 1 sites') and where the potential for significant population exposure to air toxics exists ('Stage 2 sites').*
- 2. establishing a consistent approach to the identification of such sites for use by jurisdictions.*
- 3. establishing a consistent frame of reference ('monitoring investigation levels') for use by jurisdictions in assessing the likely significance of levels of air toxics measured at Stage 2 sites.*
- 4. adopting a nationally consistent approach to monitoring air toxics at a range of locations (e.g. near major industrial sites, major roads, areas affected by wood smoke).*

Evaluation criteria

The effectiveness of the National Environment Protection (Air Toxics) Measure has been assessed by each jurisdiction against the evaluation criteria at schedule 4 of the NEPM: [National Environment Protection \(Air Toxics\) Measure | nepc](https://www.nepc.gov.au/nepms/air-toxics) (<https://www.nepc.gov.au/nepms/air-toxics>).

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM is implemented through a range of legislative, regulatory and administrative frameworks, and has a calendar year reporting year requirement (2023). The NEPM continues to provide a nationally consistent framework for monitoring and reporting ambient levels of specified air toxics across diverse monitoring sites.

Monitoring to date has demonstrated that air toxics in Australia are below monitoring investigation levels. As a result, no jurisdiction has engaged in any specific strategies or actions to manage them during the reporting year. No new monitoring sites were identified for stage 1 or stage 2 sites during the reporting period, however roadside and industrial areas may experience issues relating to air toxics.

Inter-jurisdictional consultations in 2018–19 agreed that the Air Toxics NEPM fulfils a useful role but may benefit from further work, for example to broaden the scope of the toxins being monitored. The National Clean Air Agreement (NCAA) 2021–23 work plan included a project to further review the current state of Air Toxics in Australia and options for management.

For implementation activities refer to jurisdiction reports as provided in Appendix 1.

PART 3 – REPORTING ON IMPLEMENTATION BY JURISDICTIONS

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NEPC report on the implementation of the

National Environment Protection (Ambient Air Quality) Measure





National Environment Protection (Ambient Air Quality) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Ambient Air Quality) Measure.

Made by Council: 26 June 1998.

Commencement Date: 8 July 1998 (advertised in *Commonwealth of Australia Gazette* No. GN 27, 8 July 1998, p. 2211).

Amendment Dates: 2 June 2003, 3 February 2016, 18 May 2021.

NEPM goal (or purpose)

The goal of the National Environment Protection (Ambient Air Quality) Measure is set out in clause 6 of the Measure as follows:

- (a) for carbon monoxide, nitrogen dioxide, photochemical oxidants (as ozone), lead and particles (as PM₁₀ and PM_{2.5}) – to achieve the national environment protection standards specified in table 1 of Schedule 2;
- (b) for sulfur dioxide – to achieve the national environment protection standards specified in table 1 of Schedule 2, and from 1 January 2025 to achieve the national environment protection standard specified in table 1A of Schedule 2;
- (c) for particles as PM_{2.5} from 1 January 2025 – to seek to achieve the further reductions in maximum concentrations specified in table 2 of Schedule 2.

Note: The goal for particles as PM_{2.5} from 1 January 2025 will provide a framework for continuous improvement and facilitate a review of the PM_{2.5} standard.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Ambient Air Quality) Measure is set out in clause 5 of the Measure as follows:

The desired environmental outcome of this Measure is ambient air quality that minimises the risk of adverse health impacts from exposure to air pollution.

Evaluation criteria

The effectiveness of the National Environment Protection (Ambient Air Quality) Measure has been assessed by jurisdictions against the evaluation criteria outlined at clause 17 in the NEPM: [National Environment Protection \(Ambient Air Quality\) Measure | nepc](https://www.nepc.gov.au/nepms/ambient-air-quality) (<https://www.nepc.gov.au/nepms/ambient-air-quality>)

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Ambient Air Quality NEPM is implemented through a range of legislative, regulatory and administrative frameworks within each jurisdiction, and has a calendar year reporting requirement (2023).

The NEPM continues to be essential for monitoring Australia's ambient air quality and informing actions under the NCAA and its work plan.

Monitoring results show that NEPM standards are mostly being met, and Australia's air quality is good. Where exceedances were detected, they were typically associated with bush fires, wood burning heaters/stoves, hazard reduction burning and windblown dust. Instrumental outages/upgrades and regulatory controls in some cases pose issues in gathering data in jurisdictions. One jurisdiction noted an increase in ozone exceedances in 2023 from 2022 due to photochemical mechanisms.

For detailed implementation activities refer to jurisdictional reports as provided in Appendix 2.

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NEPC report on the implementation of the

National Environment Protection (Assessment of Site Contamination) Measure





National Environment Protection (Assessment of Site Contamination) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Assessment of Site Contamination) Measure.

Made by Council: 10 December 1999.

Commencement date: 22 December 1999 (advertised in *Commonwealth of Australia Gazette* No. GN 51, 22 December 1999, p. 4246).

Amendment date: 16 May 2013.

NEPM goal (or purpose)

The goal of the National Environment Protection (Assessment of Site Contamination) Measure is set out in clause 5(1) of the Measure as follows:

The purpose of the Measure is to establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Assessment of Site Contamination) Measure is set out in clause 5(2) of the Measure as follows:

The desired environmental outcome for this Measure is to provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination.

Evaluation criteria

The effectiveness of the National Environment Protection (Assessment of Site Contamination) Measure has been assessed by each jurisdiction in line with the reporting requirements outlined at clause 9 of the NEPM: [National Environment Protection \(Assessment of Site Contamination\) Measure | nepc](https://www.nepc.gov.au/nepms/assessment-site-contamination) (https://www.nepc.gov.au/nepms/assessment-site-contamination)

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The NEPM continues to provide a consistent, science-based, national methodology to guide professional practitioners in assessing site contamination. It is widely used by industry, site owners and governments. The science-based approaches in the ASC NEPM support collaborative action across the Commonwealth, States and Territories on contamination issues. There has been an improvement in the consistency of site assessment as a result of the NEPM.

Jurisdictions noted a desire for increased guidance in the NEPM relating to emerging contaminants of concern to assist in assessing the risk to human health and the environment.

Jurisdictions would welcome a review of the NEPM to provide more updated guidance and standards on emerging issues, updated scientific knowledge and monitoring, including changes to instruments. Periodic reviews of the ASC NEPM are welcomed as well in the context of scientific advances and updated technical information, allowing for more updates to appendices and supporting documentation when more information about these contaminants become known. Changes to the administrative process as highlighted by jurisdictions may allow for more timely inclusion of these changes.

For detailed implementation activities, please refer to jurisdictional reports as provided in Appendix 3.

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NEPC report on the implementation of the

National Environment Protection (Diesel Vehicle Emissions) Measure





National Environment Protection (Diesel Vehicle Emissions) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Diesel Vehicle Emissions) Measure.

Made by Council: 29 June 2001.

Commencement date: 18 July 2001 (advertised in *Commonwealth of Australia Gazette* No. GN 28, 18 July 2001, p. 2014).

Amendment Date: 5 June 2009

NEPM goal (or purpose)

The goal of the National Environment Protection (Diesel Vehicle Emissions) Measure is set out in clause 10 of the Measure as follows:

The goal of this Measure is to reduce exhaust emissions from diesel vehicles, by facilitating compliance with in-service emissions standards for diesel vehicles.

Desired environmental outcomes

The desired environmental outcome of the National Environment Protection (Diesel Vehicle Emissions) Measure is set out in clause 11 of the Measure as follows:

The desired environmental outcome of this Measure is to reduce pollution from in-service diesel vehicles.

Evaluation criteria

The effectiveness of the National Environment Protection (Diesel Vehicle Emissions) Measure has been assessed against the evaluation criteria outlined in the NEPM: [National Environment Protection \(Diesel Vehicle Emissions\) Measure | nepc](https://www.nepc.gov.au/nepms/diesel-vehicle-emissions) (<https://www.nepc.gov.au/nepms/diesel-vehicle-emissions>)

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Diesel Vehicle Emissions NEPM is implemented via a range of legislative, regulatory and administrative frameworks within each jurisdiction. ACT and NT jurisdictions report that the NEPM is not applicable due to other legislative requirements in place. SA and Tas jurisdictions reported that emissions testing has not taken place in this period due to no emissions testing facilities. NSW, Vic and Tas jurisdictions noted that while there was an increase in diesel vehicles on the roads, the number of 'smoky' vehicles decreased, demonstrating effectiveness in moving towards more modern and efficient engines. Observation, emission readings and registration data are used to track compliance with this measure. Jurisdictions remain in line with the goal of the NEPM, and it continues to be useful in managing vehicle emissions and air quality.

Following inter-jurisdictional consultations reviewing the need for the Diesel NEPM in 2018 and 2019, it was agreed that the NEPM fulfils a useful role but may benefit from further work. While there was support at that time for the NEPM being retained, its need and/or purpose will be considered further in the context of the Australian Government implementation of more stringent (Euro 6d equivalent) noxious emissions standards for light vehicles (passenger and commercial vehicles with gross vehicle mass up to 3.5 tonnes).

Any potential changes to this NEPM would consider outcomes from the 2019 review of the *National Environment Protection Council Act 1994* and align with any proposed legislative amendments.

For detailed implementation activities, please refer to jurisdictional reports as provided in Appendix 4.

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NEPC report on the implementation of the

National Environment Protection (Movement of Controlled Waste between States and Territories) Measure





National Environment Protection (Movement of Controlled Waste between States and Territories) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection Council (Movement of Controlled Waste between States and Territories) Measure.

Made by Council: 26 June 1998.

Commencement date: 8 July 1998 (advertised in the *Commonwealth of Australia Gazette* No. GN 27, 8 July 1998, p. 2212).

Amendment Dates: 15 October 2004, 4 November 2010, 21 November 2012

NEPM goal (or purpose)

The desired Goal for the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure is set out in clause 11 of the Measure as follows:

The National environment protection goal of this Measure is to assist in achieving the desired environmental outcomes set out in clause 12 by providing a basis for ensuring that controlled wastes which are to be moved between states and territories are properly identified, transported, and otherwise handled in ways consistent with environmentally sound practices for the management of such wastes.

Desired environmental outcomes

The desired environmental outcome for the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure is set out in clause 12 of the Measure as follows:

The desired environmental outcomes of this Measure are to minimise the potential for adverse impacts associated with the movement of controlled waste on the environment and human health.

Evaluation criteria

The effectiveness of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure has been assessed against the evaluation criteria outlined in the NEPM: [National Environment Protection \(Movement of Controlled Waste between States and Territories\) Measure | nepc](https://www.nepc.gov.au/nepms/movement-controlled-waste) (<https://www.nepc.gov.au/nepms/movement-controlled-waste>)

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Jurisdictions reported that the NEPM continues to provide a means of tracking interstate movement of controlled waste between states and territories. The NEPM continues to assist in minimising the potential for adverse impacts associated with the movement of controlled waste on human health and the environment.

Jurisdictions noted that consistency of tracking programs between states and territories may be helpful. Jurisdictions currently have their own waste tracking systems which vary inconsistency and differ in scope. Some jurisdictions expressed desire to establish a national electronic waste tracking program. It was noted that both NSW and Vic have developed their own electronic waste reporting systems to track waste coming into these jurisdictions. There remains a high level of communication and cooperation between jurisdictions for this NEPM.

For details of individual programs and initiatives, please refer to jurisdictional reports listed in Appendix 5. The collated national data is available at request from the NEPC Secretariat: nepc@dcceew.gov.au.

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NEPC report on the implementation of the

National Environment Protection (National Pollutant Inventory) Measure





National Environment Protection (National Pollutant Inventory) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (National Pollutant Inventory) Measure.

Made by Council: 27 February 1998.

Commencement date: Clauses 1 and 2 of the Measure commenced on the date of Gazettal 4 March 1998 (advertised in *Commonwealth of Australia Gazette* No. S 89, 4 March 1998, p.1) with the remaining provisions of the Measure commencing on 1 July 1998.

Amendment Dates: 15 August 2007, 26 November 2008

NEPM goal (or purpose)

The environment protection goals are established by clause 6 of this Measure as follows:

The national environment protection goals established by this Measure are to:

- (a) *collect a broad base of information on emissions and transfers of substances on the reporting list, and*
- (b) *disseminate the information collected to all sectors of the community in a useful, accessible and understandable form.*

In summary, the National Pollutant Inventory (NPI) NEPM provides the framework for the development and establishment of the NPI which is an internet database designed to provide publicly available information on the types and amounts of certain chemicals being emitted to the air, land and water.

Desired environmental outcomes

The desired environmental outcomes, as set out in clause 5 of the Measure, are:

- (a) *the maintenance and improvement of:*
 - (i) *ambient air quality; and*
 - (ii) *ambient marine, estuarine and fresh water quality;*
- (b) *the minimisation of environmental impacts associated with hazardous wastes; and*
- (c) *an improvement in the sustainable use of resources.*

Evaluation criteria

The effectiveness of the National Environment Protection (National Pollutant Inventory) Measure has been assessed against the evaluation criteria outlined in the NEPM: [National Environment Protection \(National Pollutant Inventory\) Measure | nepc](https://www.nepc.gov.au/nepms/national-pollutant-inventory) (<https://www.nepc.gov.au/nepms/national-pollutant-inventory>)

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Jurisdictions report that the NEPM continues to provide a valuable resource for national environment protection, noting particular use in the detailed air emissions inventory.

Website and public awareness:

The NPI database continues to be used by non-government organisations and the media where they identify environmental issues of concern. Academics and researchers use NPI data for modelling and other studies.

The use of the NPI database is increasing, with 1.4 million page views over 2023–24 with an engagement rate of 88%.

In March 2024, the Commonwealth published National Pollutant Inventory (NPI) data for 2022–2023. The data detailed emissions from over 4000 industry facilities. The number of facilities reporting to the NPI rose from 4,511 in 2021–22 to 4,631 in 2022–23.

Online reporting and Industry facilitated reporting:

There were 4,631 reports from industry in 2022–23 and 138 new reporters. Jurisdictions have provided training to industry which has reduced the quantity of reported difficulties.

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NEPC report on the implementation of the

National Environment Protection (Used Packaging Materials) Measure





National Environment Protection (Used Packaging Materials) Measure

PART 1 – GENERAL INFORMATION

NEPM details

Title: National Environment Protection (Used Packaging Materials) Measure.

Commencement date: 15 July 2005.

Amendment Date: 16 September 2011

NEPM goal (or purpose)

The environment protection goal is established by clause 6 of this Measure as follows:

The goal of the Measure is to reduce environmental degradation arising from the disposal of used packaging and conserve virgin materials through the encouragement of re-use and recycling of used packaging materials by supporting and complementing the voluntary strategies in the National Packaging Covenant.

Desired environmental outcomes

The desired environmental outcomes from the combination of the Australian Packaging Covenant and the Measure are to minimise the overall environmental impacts of packaging by pursuing the Covenant performance goals:

1. **Design:** optimise packaging to use resources efficiently and reduce environmental impact without compromising product quality and safety.
2. **Recycling:** efficiently collect and recycle packaging.
3. **Product Stewardship:** demonstrate commitment by all signatories.

Evaluation criteria

The effectiveness of the National Environment Protection (Used Packaging Materials) Measure has been assessed against the evaluation criteria outlined in the NEPM: [National Environment Protection \(Used Packaging Materials\) Measure | nepc](https://www.nepc.gov.au/nepms/used-packaging) (<https://www.nepc.gov.au/nepms/used-packaging>)

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Used Packaging Materials (UPM) NEPM is implemented via a range of legislative, regulatory and administrative frameworks within each jurisdiction.

In September 2021, a review report provided to the Australian Government identified some issues and the need to improve environmental outcomes for packaging. The review presented nine recommendations to assist governments and industry to develop a reformed packaging scheme. At the October 2022 Environment Ministers Meeting (EMM), Environment Ministers agreed to reform the regulation of packaging in Australia to be delivered by 2025.

In 2023, Ministers agreed to mandate obligations for packaging design based on international best practice and that the Commonwealth should regulate the new scheme.

As of 30 June 2024, there were 2,442 signatories to the Australian Packaging Covenant. This was an increase of 272 signatories (12.5 per cent) from the previous reporting period. Of the 2,442 signatories, 2,048 had obligations to submit an action plan (of which 2,039 or 99.6 per cent were compliant) and an annual report (of which 2,037 or 99.5 per cent were compliant).

Kerbside recycling:

Local government authorities have continued to collect data on the composition of kerbside recycling waste streams. The amount of data collected in each jurisdiction varies, so no direct comparison between jurisdictions can be made.

The NEPM remains a less effective mechanism in the Northern Territory as the major contributors to the waste stream are brand owners not based in the NT. Additionally, only two of the 17 NT councils have kerbside recycling.

Complaints, investigations and prosecutions:

The Australian Packaging Covenant Organisation's (APCO) 2023–24 Brand Owner audit was modified to focus on key industries that placed high volumes of packaging on the market, namely electronics, food and beverage and general merchandise and apparel. APCO approached 264 potentially liable brand owners inviting them to become signatories to the Australian Packaging Covenant. As a result of the audit, three jurisdictions have conducted investigations into businesses. Victoria noted they are investigating compliance and enforcement options of five non-reporting companies that have not submitted their reports by the end of Sept 2024. WA received a referral for 160 brand owners that were not signatories to the Covenant, responses were received from 87 brand owners and 9 brand owners committed to join the Covenant. Lastly, APCO sent 114 letters to NSW entities, with 44 entities becoming APCO members and 82 were referred to the EPA due to brand owner obligations. Additionally, NSW is developing an internal assessment procedure to validate the referrals from APCO and developing compliance programs which are scheduled to start during the 2024–25 financial year. Individual jurisdictions continue to work with brand owners to encourage engagement.

The NEPM sets out the information jurisdictions are required to report on. This information has been provided by jurisdictions in their individual reports listed in Appendix 7.

PART 3 – REPORTING ON IMPLEMENTATION BY JURISDICTIONS

The annexes to this report are in Appendix 7.

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APPENDIX 1:

Jurisdictional reports on the implementation and effectiveness of the Air Toxics National Environment Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Air Toxics) Measure from the Commonwealth prepared by the Department of Climate Change, Energy, the Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Air Toxics) Measure 2011 (Air Toxics NEPM) provides a nationally consistent framework for monitoring and reporting specified air toxics. It specifies methods and criteria for monitoring ambient concentrations of air toxics in areas close to sites where those air toxics are known to be emitted. The Air Toxics NEPM was put in place to improve information on ambient air toxics within the Australian environment. This was with the aim of facilitating the development of standards. State and territory agencies are responsible for monitoring and reporting data. The Commonwealth implements the Air Toxics NEPM administratively and is not required to undertake direct monitoring and reporting of specified air toxics.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Following inter-jurisdictional consultations reviewing the need for the Air Toxics NEPM in 2018 and 2019, it was agreed that the Air Toxics NEPM fulfils a useful role but would benefit from further work. The National Clean Air Agreement (NCAA) 2021–23 work plan included a project to further review the current state of air toxics in Australia as well as options for management. Any potential changes to this NEPM would need to consider outcomes from the review of the *National Environment Protection Council Act 1994* and the Conran Review.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for New South Wales by the Hon Penny Sharpe MP, Minister for Climate Change, Minister for Energy, Minister for the Environment and Minister for Heritage, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The implementation of the Air Toxics NEPM in New South Wales (NSW) is coordinated by the NSW Department of Climate Change, Energy, the Environment and Water and the NSW Environment Protection Authority. Under Part 3, Clause 8 of the Air Toxics NEPM, the identification of Stage 1 and Stage 2 sites for monitoring of air toxics was required within 12 months of the NEPM commencement in 2004. NSW completed the desktop analysis and reported the results in the implementation report for the reporting year ended 30 June 2005.

Under Part 3, Clause 9 of the Air Toxics NEPM, monitoring of air toxics is required at Stage 2 sites (i.e. sites prioritised for monitoring based on the potential for significant population exposure). NSW conducted ambient monitoring for the five NEPM air toxics at two Stage 2 sites in the Sydney metropolitan area using a one-day-in-six cycle for a full year from October 2008 to October 2009 and reported the results in the implementation report for the reporting year ended 30 June 2010.

The *Protection of the Environment Operations Act 1997*, the Protection of the Environment Operations (Clean Air) Regulation 2022 and the Protection of the Environment Operations (General) Regulation 2022, provide the regulatory framework for action to address air emissions including managing air toxics in NSW.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Overview

NSW previously achieved the Air Toxics NEPM goal to estimate human exposure to the five NEPM air toxics using a consistent national framework, by conducting ambient monitoring at two Stage 2 monitoring sites in the Sydney metropolitan area in 2008 and 2009. The monitoring demonstrated that the five NEPM air toxics were well below the NEPM monitoring investigation levels that would trigger the Air Toxics NEPM requirement for ongoing ambient air toxics monitoring and no further monitoring has been required.

Reporting of monitoring of air toxics

NSW data collection commenced in October 2008 and concluded in October 2009.

The Turrella site collected data on formaldehyde and acetaldehyde; 19 polycyclic aromatic hydrocarbons including benzo(a)pyrene; and 41 volatile organic compounds including benzene, toluene and xylenes.

The Rozelle site collected data on formaldehyde and acetaldehyde; and 41 volatile organic compounds including benzene, toluene and xylenes.

NEPM-compliant sampling and analysis methods were used.

Tables 1 to 5 of the NSW implementation report for the reporting year ended 30 June 2010, reproduced below, summarise the monitoring results for the five air toxics – benzene, benzo(a)pyrene as a marker for polycyclic aromatic hydrocarbons, formaldehyde, toluene and xylenes.

The results clearly showed levels of air toxics were below the monitoring investigation levels. There were no occasions on which any of the air toxics monitored exceeded the monitoring investigation levels at any location. The most significant results were for benzo(a)pyrene, with levels of approximately 65% of the Air Toxics NEPM monitoring investigation level.

The 2013 Air Emissions Inventory for the Greater Metropolitan Region of NSW (www.epa.nsw.gov.au/your-environment/air/air-emissions-inventory) shows that emissions for all five NEPM Air Toxics in the Sydney region were reduced relative to 2008 by:

- 13% for benzene
- 3% for toluene
- 6% for xylene
- 23% for formaldehyde, and
- 10% for total polycyclic aromatic hydrocarbons.

Since 2013, air toxic emissions from motor vehicles, a major source of all five compounds, are estimated to have continued to decrease. These emission estimates indicate that ambient air toxic levels would be expected to have decreased since the 2008–09 monitoring.

NSW air toxics monitoring results 2008–09

Tables 1–5: Monitoring results for benzene, benzo(α)pyrene as a marker for polycyclic aromatic hydrocarbons, formaldehyde, toluene and xylenes 2008–09. Reproduced from the NSW Report to the NEPC on the implementation of the Air Toxics NEPM, for the reporting year ended 30 June 2010: NEPC Annual Report 2009–2010 (<https://webarchive.nla.gov.au/awa/20141215134000/http://www.scew.gov.au/resource/ephc-archive-nepc-annual-report-2009-10>).

Table 1: Monitoring results – Benzene

	Rozelle	Turrella
Air toxic	Benzene	Benzene
Monitoring method	USEPA TO-15	USEPA TO-15
Period of monitoring	2/10/08 to 8/10/09	2/10/08 to 29/9/09
Number of valid results	32	36
Maximum 24-hour average concentration	0.90 ppb	2.00 ppb
Annual average concentration (as arithmetic mean)	0.26 ppb	0.38 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.17 ppb	0.34 ppb
Number of times monitoring investigation level exceeded*	0	0

* Must be evaluated as 'not demonstrated' if no monitoring or assessment has taken place.

Table 2: Monitoring results – Benzo(α)pyrene as a marker for polycyclic aromatic hydrocarbons

	Turrella
Air toxic	Benzo(α)pyrene
Monitoring method	USEPA TO-13
Period of monitoring	2/10/08 to 27/9/09
Number of valid results	16
Maximum 24-hour average concentration	0.40 ng/m³
Annual average concentration (as arithmetic mean)	0.21 ng/m³
Arithmetic Standard Deviation of 24-hour average concentrations	0.10 ng/m³
Number of times monitoring investigation level exceeded*	0

* Must be evaluated as 'not demonstrated' if no monitoring or assessment has taken place.

Table 3: Monitoring results – Formaldehyde

	Rozelle	Turrella
Air toxic	Formaldehyde	Formaldehyde
Monitoring method	USEPA TO-11	USEPA TO-11
Period of monitoring	2/10/08 to 27/9/09	2/10/08 to 27/9/09
Number of valid results	50	53
Maximum 24-hour average concentration	3.2 ppb	4.4 ppb
Annual average concentration (as arithmetic mean)	1.6 ppb	1.6 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.65 ppb	0.66 ppb
Number of times monitoring investigation level exceeded*	0	0

* Must be evaluated as 'not demonstrated' if no monitoring or assessment has taken place.

Table 4: Monitoring results – Toluene

	Rozelle	Turrella
Air toxic	Toluene	Toluene
Monitoring method	USEPA TO-15	USEPA TO-15
Period of monitoring	2/10/08 to 8/10/09	2/10/08 to 29/9/09
Number of valid results	54	53
Maximum 24-hour average concentration	3.8 ppb	6.4 ppb
Annual average concentration (as arithmetic mean)	0.9 ppb	1.8 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.69 ppb	1.35 ppb
Number of times monitoring investigation level exceeded*	0	0

* Must be evaluated as 'not demonstrated' if no monitoring or assessment has taken place.

Table 5: Monitoring results – Xylenes (as total of ortho, meta and para isomers)

	Rozelle	Turrella
Air toxic	Xylenes	Xylenes
Monitoring method	USEPA TO-15	USEPA TO-15
Period of monitoring	2/10/08 to 8/10/09	2/10/08 to 29/9/09
Number of valid results	26	30
Maximum 24-hour average concentration	2.60 ppb	4.90 ppb
Annual average concentration (as arithmetic mean)	0.73 ppb	1.2 ppb
Arithmetic Standard Deviation of 24-hour average concentrations	0.53 ppb	0.95 ppb
Number of times monitoring investigation level exceeded*	0	0

* Must be evaluated as 'not demonstrated' if no monitoring or assessment has taken place.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Air Toxics NEPM in Victoria is implemented by the Environment Protection Regulations 2021 and the Victorian EPA's Guideline for assessing and minimising air pollution (<https://www.epa.vic.gov.au/about-epa/publications/1961>).

The Regulations came into force on 1 July 2021, as subordinate legislation to the *Environment Protection Act 2017* which applied from the same date. The Guideline was published in February 2022 and provides a framework to assess and control risks associated with air pollution. It is a technical guideline for air pollution practitioners and specialists with a role managing pollution discharges to air.

With the introduction of the Act, environment protection law shifted to a prevention-based approach. Central to this approach is the general environment duty. This is a shared responsibility to prevent harm to the environment and means all Victorians must each take reasonable steps to stop harm, and do so before damage is done.

There were no implementation issues during the 2023–24 reporting year.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Since 2003, no air toxics monitoring done in Victoria has measured levels exceeding the monitoring investigation levels (air quality objectives) in the Air Toxics NEPM.

Identification of sites

During 2023–24, no suitable sites were identified as being potential stage 1 and stage 2 sites for air toxics monitoring in Victoria.

Reporting of monitoring of air toxics

During 2023–24, no monitoring was carried out for air toxics.

Reporting on assessment and action if any planned or taken to manage air toxics

As noted above, there has been no monitoring in Victoria that has measured levels of air toxics exceeding the monitoring investigation levels. Therefore, there has been no additional action taken to manage air toxics beyond existing programs.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Queensland by Hon Leanne Linard MP, Minister for the Environment and the Great Barrier Reef and Minister for Science and Innovation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Queensland, the Air Toxics NEPM is implemented under the *Environmental Protection Act 1994*, the *Environmental Protection Regulation 2019*, and the *Environmental Protection (Air) Policy 2019*, with the NEPM monitoring investigation levels incorporated as air quality objectives.

In the 2023 calendar year reporting period, the Department of Environment, Science and Innovation (DESI) continued to monitor benzene, toluene, xylenes and formaldehyde using open path Differential Optical Absorption Spectroscopy (DOAS) instrumentation in Gladstone.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM has resulted in the evaluation of emission sources posing the greatest potential for significant population exposure to air toxics (concluded to be motor vehicles and industrial facilities), and locations where significant population exposure to elevated ambient concentrations of air toxics are most likely to occur.

The Queensland Government has a long-running program monitoring levels of benzene, toluene, xylenes and formaldehyde using an alternative DOAS technique at its Springwood ambient air quality monitoring network site in Southeast Queensland (1999 to 2020) and in central Gladstone (2009 to present). Although the DOAS monitoring methodology is not in accordance with the protocols set out in the Air Toxics NEPM and the monitoring sites are not identified as Stage 2 sites, the data collected improves DESI's knowledge of ambient concentrations of most toxic air pollutants listed in Schedule 1 of the Air Toxics NEPM.

Monitoring of air toxics is also carried out on occasion as part of specific studies into localised air quality to address community concerns. In such situations, the Air Toxics NEPM monitoring investigations levels provide a defensible benchmark for assessing measured concentrations. However, no specific localised air quality studies involving the measurement of air toxics were conducted in the 2023–24 reporting period.

Identification of sites

The Stage 1 and Stage 2 sites analysis identified roadside and industrial locations as having the greatest potential for significant population exposure to air toxics.

Reporting of monitoring of air toxics

During 2023, ambient monitoring of benzene, toluene, xylenes and formaldehyde using DOAS instrumentation continued in Gladstone.

Monitoring results from the Gladstone monitoring site for the 2023 calendar year are provided in Table 1 below. These results indicate that levels of air toxics were well below the Air Toxics NEPM monitoring investigation levels.

Table 1: Monitoring results

	Central Gladstone			
Air toxic	Benzene	Toluene	Xylenes	Formaldehyde
Monitoring method	DOAS	DOAS	DOAS	DOAS
Period of monitoring	01/01/2023 to 31/12/2023	01/01/2023 to 31/12/2023	01/01/2023 to 31/12/2023	01/01/2023 to 31/12/2023
Number of valid results	359	357	354	331
Maximum 24-hour average concentration	0.0013 ppm	0.0080 ppm	0.0065 ppm	0.0044 ppm
Annual average concentration (as arithmetic mean)	0.0008 ppm	0.0011 ppm	0.0041 ppm	0.0022 ppm
Arithmetic Standard Deviation of 24-hour average concentrations	0.0001 ppm	0.0008 ppm	0.0010 ppm	0.0007 ppm
Number of times monitoring investigation level exceeded	0	0	0	0

Reporting on assessment and action if any planned or taken to manage air toxics

From the monitoring results for the 2023 calendar year reporting period, together with past results, there is no evidence that the Air Toxics NEPM monitoring investigation levels would be exceeded in ambient air in Queensland. No specific management actions to reduce air toxics concentrations have been implemented.

Repeat identification of Stage 1 and Stage 2 sites

As monitoring to date has shown compliance with the monitoring investigation levels, no repeat identification of Stage 1 and Stage 2 sites is currently planned.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Western Australia by the Department of Water and Environmental Regulation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia (WA), the Air Toxics NEPM is implemented by the Department of Water and Environmental Regulation under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*.

Air toxics emissions are also managed through the Perth Air Quality Management Plan (AQMP), a non-statutory mechanism established by the Western Australian Government. The objective of the AQMP is to ensure that clean air is achieved and maintained throughout the Perth metropolitan region. The AQMP identifies that, to achieve an overall improvement in Perth's air quality, studies are required to determine major sources and concentrations of air toxics in the Perth metropolitan region. The initiatives within the AQMP are complementary to the Air Toxics NEPM.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM has been effective in highlighting the need to investigate air toxics concentrations and providing monitoring investigation levels against which the results can be compared. The monitoring investigation levels provide a nationally consistent benchmark for assessing and comparing the concentrations of ambient air toxics from diverse monitoring sites and are an effective tool to inform government policy and programs on appropriate abatement actions.

Monitoring for air toxics in WA has primarily been undertaken as part of specific studies. This has meant there are often several objectives to be satisfied when developing and implementing the monitoring programs. Therefore, the Air Toxics NEPM monitoring protocol has not always been followed. However, the monitoring results from these studies are invaluable when assessing ambient air toxic concentrations across Western Australia.

Reporting of monitoring of air toxics

The results of NEPM-compliant monitoring as well as the additional complementary air quality studies undertaken in 2007–08 and 2009 indicated that air toxics levels in Perth were low compared to international standards and below NEPM monitoring investigation levels. These studies have been summarised in the *Background Air Quality Monitoring in Kwinana 2005–10* technical report, which is available on the DWER website at <https://www.wa.gov.au/government/publications/background-air-quality-monitoring-kwinana-2005-10>. No additional NEPM-compliant monitoring has been undertaken during the past 12 months.

Reporting on assessment and action if any planned or taken to manage air toxics

Past monitoring has indicated that levels of air toxics are below monitoring investigation levels and no further action is currently planned.

Repeat identification of Stage 1 and Stage 2 sites

No repeat identification of Stage 1 and Stage 2 sites is currently planned. The initial desktop analysis identified 13 Stage 1 sites for formaldehyde, of which three also met the ranking criteria for polycyclic aromatic hydrocarbons. No Stage 1 sites were identified for benzene, toluene or xylene. Two priority criteria (traffic volume and wood heater density) were used to identify two Stage 2 sites. The results of the air toxics monitoring at these two Stage 2 sites showed that the annual average concentrations for formaldehyde and benzo(a)pyrene were below the Air Toxics NEPM monitoring investigation levels. As these two sites are representative of the Stage 1 sites initially identified, repeat identification of Stage 1 and Stage 2 sites is not needed at this stage.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for South Australia by the Hon Susan Close, Minister for Climate, Environment and Water, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia (SA), the Air Toxics NEPM operates as an Environment Protection Policy under the *Environment Protection Act 1993*.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

As monitoring in other jurisdictions has shown, air toxics in Australia are well below monitoring investigation levels. SA has not engaged in any specific monitoring of air toxics during the reporting period.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Hon Madeleine Ogilvie, Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Tasmania, the enabling legislation for the Air Toxics NEPM process is the *Environmental Management and Pollution Control Act 1994* (EMPCA). The process is implemented primarily through EPA Tasmania.

NEPMs are adopted as state policies under the *State Policies and Projects Act 1993*, and the Air Toxics NEPM is put into effect under the Environment Protection Policy (Air Quality) 2004 (Air Policy) and the Tasmanian Air Quality Strategy 2006.

Tasmania undertook extensive preliminary screening monitoring of air toxics in Tasmania between 2008 and 2011. Due to budgetary constraints air toxics monitoring was discontinued in 2011. No air toxics monitoring was undertaken in Tasmania during the reporting year ending 30 June 2024.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The monitoring conducted to date has improved the information base available in relation to ambient concentrations of air toxics in Tasmania.

Identification of sites

In 2005, 14 Stage 2 sites were identified in a desktop analysis conducted in accordance with the Air Toxics NEPM Desktop Analysis Protocol.

Monitoring was conducted at nine of these sites in the period from 2008 to 2011. Some of the sites monitored were considered representative of other identified sites, in terms of land use (e.g. residential), proximity to traffic and geography. This has allowed an indicative evaluation of some unmonitored sites.

Monitoring was also undertaken at selected sites to determine concentrations of air toxics in areas affected by:

1. domestic woodsmoke emissions
2. motor vehicle emissions, in Hobart, and
3. industrial emissions.

The results of the last air toxics monitoring program undertaken by EPA Tasmania during the 2011 calendar year were reported in the 2011–12 Annual Implementation Report (<https://www.nepc.gov.au/sites/default/files/2022-09/nepc-annual-report-2011-12.pdf>).

Reporting of monitoring of air toxics

The results of active sampling for polycyclic aromatic hydrocarbons at two sites were reported in 2011. A program of active sampling at peak sites, for benzene, toluene, xylenes and formaldehyde was completed in 2011 and the results were included in the 2011–12 annual implementation report.

Reporting on assessment and action if any planned or taken to manage air toxics

There is no evidence to indicate that Air Toxics NEPM Monitoring Investigation Levels (MIL) would be exceeded at any of the sites monitored in Tasmania in previous years. No action to specifically reduce concentrations of air toxics has been taken.

Repeat identification of Stage 1 and Stage 2 sites

The Air Toxics NEPM sets out a two-stage process for selecting sites for monitoring. This involves firstly a desktop assessment to identify Stage 1 sites; that is, sites at which significantly elevated levels of one or more of the air toxics are expected to occur.

Secondly, a further desktop assessment is undertaken to identify Stage 2 sites; that is, those stage 1 sites that are judged to be a priority for monitoring on the basis of a rapid assessment of the likelihood of significant population exposure to one or more air toxic.

In 2005, 14 Stage 2 sites were identified in a desktop analysis conducted in accordance with the Air Toxics NEPM Desktop Analysis Protocol.

Repeat identification of Stage 1 and Stage 2 sites has not been conducted.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for the Australian Capital Territory by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

No implementation issues have arisen during the reporting year in the Australian Capital Territory (ACT).

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ACT Government has previously undertaken a desktop analysis which showed that air toxics are not an issue for the ACT airshed.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Air Toxics) Measure for Northern Territory by the Minister for Lands, Planning and Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory Environment Protection Authority (NT EPA), supported by the Department of Lands, Planning and Environment (DLPE), is responsible for the implementation of the Air Toxics NEPM in the Northern Territory (NT) through the provisions of the *Waste Management and Pollution Control Act 1998* and the *National Environment Protection Council (Northern Territory) Act 1994*.

The NT undertook a desktop study in 2005 to identify Stage 1 and Stage 2 sites for the purposes of meeting obligations under the Air Toxics NEPM. No Stage 2 sites were identified, and a long-term monitoring program has not been implemented.

A nine-month monitoring program was completed in February 2006, establishing baseline conditions for Darwin. The results, at that time, indicated that there are very low concentrations of benzene, toluene and xylenes, well below the investigation levels set by the NEPM.

No further implementation activities were conducted in 2023–24.

Reassessment of Stage 1 and Stage 2 sites may be required in the future, considering industrial development in the Darwin region such as the development of the Middle Arm Sustainable Development Precinct. According to Air Toxics NEPM guidance, reassessment was required by 2009, although the previous studies indicate that concentrations of air toxics are at very low levels, well below the monitoring investigation levels of the Air Toxics NEPM.

Despite very low levels of air toxics, community concern about the issue is high. The NT EPA and DLPE are currently investigating options for increasing monitoring of air toxics in cooperation with industry.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Air Toxics NEPM has provided the impetus and methodology for identifying sites most at risk of air toxics in the NT. Monitoring in 2005–06 provided baseline data for further consideration.

No sites were evaluated or selected, and no analyses were performed for Air Toxics NEPM reporting in 2023. Recent air toxics sampling in and around Darwin, undertaken by industries under their Environmental Protection Licences, indicate very low ambient levels of benzene, toluene and xylenes.

NT EPA is one of the lead agencies for a project to 'Improve understanding of air toxics and options for their management' which is part of the National Clean Air Agreement 2024–26 workplan.

APPENDIX 2:

Jurisdictional reports on the implementation and effectiveness of the Ambient Air Quality National Environment Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Ambient Air Quality) Measure from the Commonwealth prepared by the Department of Climate Change, Energy, the Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Ambient Air Quality) Measure 2021 (Ambient Air Quality NEPM) establishes national standards and a national framework for monitoring and reporting on six key air pollutants that most Australians are exposed to: carbon monoxide, nitrogen dioxide, photochemical oxidants (as ozone), sulfur dioxide, lead and particles (as PM_{2.5} and PM₁₀).

States and territories are primarily responsible for managing ambient air quality in their jurisdictions. The Commonwealth implements the Ambient Air Quality NEPM administratively and is not required to undertake direct air quality monitoring as there are no non-self-governing Commonwealth territories or Commonwealth areas with a population above the 25,000-protocol threshold.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The data collected by jurisdictions for the pollutants listed in the Ambient Air Quality NEPM remains essential for monitoring Australia's ambient air quality. It is also a valuable resource for informing actions under the National Clean Air Agreement (NCAA) and its work plan.

As part of the NCAA's third work plan (2021–23), work to evaluate options for a national approach to non-road diesel engine emissions through a cost-benefit and associated impact analysis is well-advanced. The cost-benefit analysis was released in the first quarter of 2023. Further work on impact analysis was conducted from 2023 to 2024, including a public comment period on draft impact analysis that closed 14 July 2023. Non-road diesel engine emissions are a significant unregulated source of air pollution in Australia, including nitrogen dioxide and particulate matter.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for New South Wales by the Hon Penny Sharpe MP, Minister for Climate Change, Minister for Energy, Minister for the Environment and Minister for Heritage, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Ambient Air Quality NEPM is implemented under the *Protection of the Environment Operations Act 1997* (POEO Act), the Protection of the Environment Operations (Clean Air) Regulation 2022, the Protection of the Environment Operations (General) Regulation 2022 and the NSW Clean Air Strategy 2021–30.

The POEO Act sets the statutory framework for managing air quality in New South Wales (NSW). The Protection of the Environment Operations (Clean Air) Regulation 2022 provides measures to control emissions from industry, motor vehicles and fuels, domestic solid fuel heaters and open burning. The Protection of the Environment Operations (General) Regulation 2022 establishes the licensing scheme for major industrial premises and economic incentives for licensed businesses and industry to reduce pollution, including emissions to air. The Clean Air Strategy presents a cohesive set of priorities and actions to support liveable communities, healthy environments and the NSW economy, by reducing the adverse effects of air pollution on NSW communities.

In NSW, the Department of Climate Change, Energy, the Environment and Water (the department) and the NSW Environment Protection Authority (NSW EPA) work together to reduce the impacts of air pollution. The department develops policies and programs to improve compliance with the Ambient Air Quality NEPM goals and protect public health. The department also operates a comprehensive air quality monitoring network and undertakes air quality forecasting to provide timely information so people can reduce their risk of exposure. The NSW EPA develops and implements regulations, conducts compliance activities and provides expert technical advice on air quality issues. Both agencies work closely with stakeholders to inform, educate and involve stakeholders in improving air quality management.

NSW air quality stabilised in 2023 (calendar year) compared to 2022, due primarily to a return to average to below average rainfall totals and above average temperatures, resulting in some bushfire and hazard reduction burn activity. While air quality varied regionally, more exceedance days were recorded in 2023 than in 2022 across all regions, however, national standards were met at least 96% of the time for most regions.

- Particulates (particulate matter (PM) – PM₁₀ and PM_{2.5}) were the primary cause of days over national standards in 2023, but annual averages for particulates at most locations were lower than those observed for most of the past nine years. Particles as PM₁₀ were above the daily national standard on 27 days observed at 19 stations, while particles as PM_{2.5} were above the daily national standard on 24 calendar days observed at 27 stations.
- Ozone exceedances were observed on three days at 11 stations in 2023, compared to no exceedances in 2022. These exceedances were due to photochemical processes.
- The Bradfield Highway recorded the only exceedance of the nitrogen dioxide annual 0.015 parts per million (ppm) standard, with 0.019 ppm recorded throughout 2023.
- The 1-hour sulfur dioxide standard (0.100 ppm) was exceeded on two occasions during 2023 (2 January and 23 March), both at Muswellbrook with a maximum value of 0.124 ppm on 2 January. The 0.020 ppm 24-hour standard was also exceeded at Muswellbrook on 2 January 2023, with a 24-hour average of 0.025 ppm.

Gaseous pollutants were assessed against newer, more stringent Ambient Air Quality NEPM goals and standards for 2023. For details, see: www.environment.nsw.gov.au/topics/air/understanding-air-quality-data/standards-and-goals.

The Ambient Air Quality NEPM goal is a driver for air quality management strategies and a benchmark against which progress in managing air quality can be assessed.

Air quality management in the Greater Metropolitan Region (GMR) and regional NSW

The department and the NSW EPA deliver actions that target the pollutants of most concern in NSW, namely particles in the Greater Metropolitan Region (GMR) and some regional centres, and ground-level ozone by targeting precursor emissions. These actions are designed to improve knowledge about air emissions, air quality and the impacts of air pollution, inform and engage the community and other stakeholders, and reduce air quality impacts from industry, vehicles, and commercial and domestic activities.

As of 30 June 2024, the department operated 95 long-term monitoring stations in the NSW air quality monitoring network, which comprises the Ambient Air Quality NEPM compliance network, several industry-funded networks and a rural air quality monitoring network. Air quality data and information are made publicly available on the department's website, updated hourly. Automated text messages and emails are sent to subscribers when air quality exceeds national air quality standards. A daily forecast is also sent to subscribers and published on the department's website for the Sydney region. The department also collaborates with the NSW EPA, other agencies and science partners to deliver research to inform air policies and programs.

The following is an outline of the key mechanisms for managing air quality and the activities implemented in 2023–24. Monitoring network data are presented for the calendar year 2023.

Clean Air Strategy 2021–30

The NSW Clean Air Strategy 2021–30 (the strategy) presents a whole of NSW Government approach to improving air quality, reducing emissions and protecting communities. The strategy was released in February 2022, following public consultation in 2021. It presents a cohesive set of priorities and actions to support liveable communities, healthy environments and the NSW economy, by reducing the adverse effects of air pollution on NSW communities. It sets out actions under five priority areas where the biggest gains for air quality and health can be made: better preparedness for pollution events; cleaner industry; cleaner transport, engines and fuels; healthier homes; and better places. More information on the strategy is available on the department's website (<https://www.environment.nsw.gov.au/topics/air/clean-air-strategy#:~:text=The%20NSW%20Clean%20Air%20Strategy,air%20pollution%20on%20human%20health>)

The strategy integrates and builds on other key initiatives that tackle some of the state's biggest air pollution sources, including the Net Zero Plan, the NSW Electricity Infrastructure Roadmap, the Electric Vehicles Strategy, the Future Transport Strategy and the Hydrogen Strategy. Agencies across the NSW Government are working to deliver strategy actions.

Key implementation highlights for 2023–24 include: expansion of the NSW air quality monitoring program; improved forecasting of air pollution during bushfire events; release of the *Towards Net Zero Emissions Freight Policy* (<https://www.transport.nsw.gov.au/operations/freight-hub/towards-net-zero-emissions-freight-policy>), *Net Zero Climate Change Policy* (<https://www.transport.nsw.gov.au/system/files/media/documents/2023/net-zero-and-climate-change-policy.pdf>) and *Climate Change Action Plan 2023–2026* (<https://www.epa.nsw.gov.au/Publications/Climate-change/23p4265-Climate-Change-Action-Plan-2023-26>); and substantial investment in renewable energy generation projects, zero emission bus programs, electric vehicle programs and infrastructure, and programs to create and manage urban forests. More information on key implementation highlights for 2023 is available at the department's website (<https://www2.environment.nsw.gov.au/topics/air/nsw-air-quality-statements/annual-air-quality-statement-2023/nsw-clean-air-strategy-2023>).

Air quality monitoring

In 2023, the department continued to run and refresh its comprehensive network of long-term air quality monitoring stations. As at 30 June 2024, the department's air quality monitoring network totalled 99 stations. This comprised of 95 long-term stations, which consisted of 56 stations accredited to ISO 17025 standards by the National Association of Testing Authorities (NATA) and 39 indicative rural monitoring stations. The four remaining stations are short-term incident monitoring stations, which include three stations supporting the NSW EPA's investigations in the Cadia Valley and one at Cammeray investigating the local air quality impact of the Warringah Freeway Upgrade project.

Of the 56 stations accredited by NATA, 43 stations were designated as Ambient Air Quality NEPM stations in 2023 for the purposes of compliance assessment with the Ambient Air Quality NEPM goals and standards. The remaining 13 stations monitor for industry emissions in the Upper Hunter Air Quality Monitoring Network (10 stations) and around the Port of Newcastle as the Newcastle Local Air Quality Monitoring Network (3 stations).

The network provides detailed air quality information that is updated hourly and available on the recently established dedicated air quality website (<https://www.airquality.nsw.gov.au/>). Further information about the network and current and historic data can also be found at: www.environment.nsw.gov.au/topics/air/monitoring-air-quality.

The NSW air quality monitoring plan describes how air quality monitoring in NSW ascribes to meet the objectives of the Ambient Air Quality NEPM. It is available on the Environment NSW website (<https://www.environment.nsw.gov.au/topics/air/monitoring-air-quality/review/nsw-air-quality-monitoring-plan>).

Air emissions and health impacts research

Broken Hill community lead monitoring program

The Broken Hill community lead monitoring program continued in 2023. A one-day-in-six sampling schedule at four locations monitored against the NEPM standard for lead in ambient air. The averages across 2023 at the four stations ranged from 0.043 to 0.117 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$). These are well under the Ambient Air Quality NEPM health standard of $0.50 \mu\text{g}/\text{m}^3$ but are higher than the $0.02 \mu\text{g}/\text{m}^3$ lead level measured in the GMR in 2004. Further monitoring and analysis continue to provide a better understanding of the sources and averages expected across Broken Hill.

Warringah Freeway Upgrade: Air quality monitoring

In early 2022, the department established a compliant air quality monitoring station (AQMS) at Cammeray Park near North Sydney, as part of a monitoring project commissioned on behalf of the NSW EPA. The project was established to monitor air quality around the Warringah Freeway Upgrade/ Western Harbour Tunnel, and also included a network of ten low-cost sensors located along a transect from Wollstonecraft to Middle Harbour. It initially ran for a two-year period, with monitoring started before major construction and continued during construction. Planning is underway to extend the monitoring for a further three years.

Project details including quarterly data reports are available on the NSW EPA website (<https://www.epa.nsw.gov.au/Working-together/Community-engagement/updates-on-issues/Warringah-freeway-air-monitoring>). Hourly data from Cammeray AQMS are reported on the Cammeray Air Quality website page (<https://www.airquality.nsw.gov.au/east-sydney/cammeray>).

Incident air quality monitoring in 2023–24

The department supported the NSW EPA with three incident monitoring campaigns during 2023–24.

- The department is undertaking an Air Quality Monitoring Study to assist the NSW EPA in ensuring that Newcrest's Cadia Holdings Pty Ltd mine complies with its environmental obligations. The department has established an incident monitoring station at Millthorpe. This station continuously measures particles, visibility and gaseous pollutants. In addition to incident monitoring, two additional indicative monitors (DustTrak) and two Meteorology stations were established at Errowanbang and Forest Reefs to monitor particulate matter and weather parameters. Data from these sites are reported live on the air quality webpage's Central Tablelands regional summary (<https://www.airquality.nsw.gov.au/central-tablelands>) and incident monitoring sections (<https://www.airquality.nsw.gov.au/#section-incident-monitoring-project-stations>). The department also installed six direction high-volume samplers for heavy metal analysis in the airborne particulate matter; five out of six samplers are monitoring air mass passing through the mine, and the sixth represents background concentration for heavy metal analysis. The department also distributed 36 smart sensors, known as low-cost monitors, to residents across the Cadia Valley to engage the community in air pollution monitoring.
- The department operated an indicative monitor (DustTrak) at Padstow in Sydney to understand the influence of construction and demolition waste facility dust emissions.
- Twenty low-cost sensors were deployed in the Lake Macquarie area to assess local air quality.

Enhancing air quality forecasting in NSW

This program was established to progressively expand the scope of and enhance air quality forecasting capabilities in NSW. The department issues a daily air quality forecast for the Greater Sydney region. Through this program the department is working towards more accurately forecasting air quality for Greater Sydney and its subregions and is progressively expanding forecasting to the whole of the NSW GMR.

Continuous improvements are being made to this system, expanding forecasting capabilities to include regions beyond the Sydney GMR.

To improve the accuracy of the forecasting system, the department is developing and testing new methods based on artificial neural network models and machine learning.

Industry emissions

In 2023–24, the NSW EPA continued to implement its regulatory responsibilities, including licensing scheduled industry activities and conducting compliance and enforcement programs. The POEO Act, the Protection of the Environment Operations (Clean Air) Regulation 2022 and the Protection of the Environment Operations (General) Regulation 2022 set the framework for managing air pollution from major industries in NSW.

Load-Based Licensing scheme

The NSW EPA's Load-Based Licensing (LBL) scheme requires some environment protection licensees to pay part of their annual licence fees based on the load of certain air and water pollutants their activities release to the environment. By tying the fees payable to pollutant loads, the scheme aims to provide an ongoing economic incentive for licensees to improve their environmental performance beyond the levels required by regulation or licence conditions alone. In 2023–24, the NSW EPA continued to implement the LBL scheme.

Coal fired power stations

In 2023–24, the NSW EPA continued to regulate NSW coal fired power stations under the POEO Act, the Clean Air Regulation 2022 and individual environment protection licences which contain specific requirements for each facility.

The NSW EPA has progressed the feasibility of in-stack real-time continuous particulate monitoring systems of all four operational NSW coal fired power stations. This is in addition to the already installed and operated real-time continuous monitors for sulfur dioxide and nitrogen oxides. These systems will strengthen monitoring and reporting accuracy and assist in the efficient operation of the power station boilers.

The NSW EPA has also included a specific requirement for licensees to include a Trigger Action Response Plan within their dust management plans that must consider all reasonable actions to minimise or prevent dust emissions.

In 2023, the NSW EPA completed statutory reviews of the coal fired power station licences, following a proactive public consultation campaign. The NSW EPA continues to consult with licensees and is progressively implementing licence changes throughout 2024. As an outcome of the review, the NSW EPA has already reduced in-stack air concentration limits for chlorine, cadmium and mercury, as well as type 1 and type 2 substances in aggregate and volatile organic compounds. These limit reductions will ensure greater regulatory oversight by the NSW EPA.

The NSW EPA's website (<https://www.epa.nsw.gov.au/Working-together/Community-engagement/Regulation-of-power-stations>) contains information about the outcomes of the licence review and the further changes that the NSW EPA will be implementing. The licences for the four operating coal-fired power stations are available on the NSW EPA's POEO public register (<https://www.epa.nsw.gov.au/Licensing-and-Regulation/Public-registers>).

In April 2023, the Hunter Valley's Liddell Power Station, Australia's oldest power station, ceased operations. The facility had been operating for 52 years. It is expected that its closure will improve air quality in nearby communities, including reductions in particulate matter, nitrogen dioxide and sulfur dioxide.

Hunter region coal mines dust management

Wetter weather conditions due to the La Niña climatic conditions helped manage dust emissions from coalmines during 2021 and 2022. Due to extended wet weather, targeted dust compliance campaigns were not conducted during the 2021 to 2022 or 2022 to 2023 spring and summer seasons.

In response to forecast El Niño conditions, the NSW EPA conducted a Bust the Dust Campaign from late August to early December 2023 coinciding with warmer and windier seasonal conditions. Bust the Dust targeted dust mitigation measures at licensed coal mining sites in the Hunter Valley incorporating off-site observations using unmanned aerial vehicles (drones) and on-site unannounced inspections. The campaign found that mines were generally implementing dust mitigation measures, with the campaign reinforcing with licensees the need to increase dust mitigation measures during adverse weather conditions.

During the campaign, the NSW EPA in conjunction with NSW Health, the Resources Regulator, the department's Climate and Atmospheric Science section and the Department of Planning and Environment's Compliance section hosted a community-drop-in session attended by community members of Muswellbrook and Singleton local government areas.

Non-road diesel emissions at coal mines

The NSW EPA's (<https://www.epa.nsw.gov.au/Your-environment/Climate-change/Policy-and-action-plan>) includes an action for all new large non-road diesel machinery at NSW open-cut coal mines to be US Tier 4 or higher. This will be implemented under the *Protection of the Environment Operations Act 1997* Environmental Protection Licensing framework. In 2023–24, the NSW EPA continued to review the issues raised by industry and will consult with industry before progressing proposed licence variations.

Update of approved methods for air quality sampling and modelling documents

The approved methods for the sampling and analysis of air pollutants (<https://www.epa.nsw.gov.au/Your-environment/Air/industrial-emissions/sampling-analysing-air-emissions/approved-methods-sampling-analysing-air-pollutants>) lists the methods that NSW industries and commercial premises must use to ensure they comply with NSW air quality regulations by sampling and analysing their emissions of air pollutants. This methodology lists the statutory methods to be used for modelling and assessing emissions of air pollutants in NSW.

In 2023–24, the NSW EPA continued to apply the approved methods for air quality sampling and modelling to assist in implementing its regulatory responsibilities.

Non-road diesel and marine emissions

National Clean Air Agreement – Evaluating the potential for a national approach to non-road diesel engine emissions

Under the National Clean Air Agreement (<https://www.dcccew.gov.au/environment/protection/air-quality/national-clean-air-agreement>), in 2023–24 the department and the Commonwealth Department of Climate Change, Energy, the Environment and Water continued to evaluate the potential for a national approach to manage non-road diesel engine emissions in Australia.

Non-road diesel engines are used in a wide range of industries and applications, including construction, mining, manufacturing, airport services, agriculture and marine sectors. Diesel engine exhaust contains high levels of pollutants, including fine particles (PM_{2.5}) and NO_x, and has been declared as carcinogenic by the World Health Organisation's International Agency for Research on Cancer (https://www.iarc.who.int/wp-content/uploads/2018/07/pr213_E.pdf). It contributes to premature deaths and health related problems, such as cardiovascular, cardiopulmonary and respiratory diseases, and lung cancer.

Unlike other countries (including the United States, the European Union, China, India, Brazil and Japan), and unlike for on-road (passenger) vehicles in Australia, there are currently no national standards or approaches to manage emissions from non-road diesel engines in Australia.

In 2023–24, the department continued to work with the Commonwealth Department of Climate Change, Energy, the Environment and Water on a cost benefit analysis examining the impact of options to manage emissions from non-road diesel engines. The cost benefit analysis report was published in 2023 and based on the findings, progressed to an impact analysis process. Public consultation of the draft impact analysis was undertaken from 24 May to 14 July 2023. Further information on the project can be found at National Clean Air Agreement – Evaluation of Non-Road Diesel Engines Emissions (<https://www.dcccew.gov.au/environment/protection/air-quality/national-clean-air-agreement/evaluation-non-road-diesel-engine-emissions>) webpage.

Government Resource Efficiency Policy (GREP)

In 2023–24, the department continued to administer the *NSW Government Resource Efficiency Policy* (<https://www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/sustainability-government/net-zero-government>) (GREP). The GREP includes requirements to address non-road diesel engine emissions through government procurement and contracts.

For non-road diesel engines, government agencies must continue to comply with EU or US EPA standards when purchasing or leasing such equipment. Agencies must consider air emissions from contractor-supplied equipment in tender processes for all new buildings and infrastructure as well as upgrades to existing buildings and infrastructure over \$10 million. The tender selection process either incorporates a weighting for air emission standards in conjunction with other environmental considerations, or a statement by contractors on how they will reduce emissions from their equipment accompanied with their equipment's air emissions data.

Locomotives

Amendments to the POEO Act to regulate railway rolling stock operations, in addition to railway infrastructure operators, came into effect in July 2019. The amendments mean that operators of rolling stock are required to hold an environment protection licence and are directly accountable for their environmental performance, including management of air emissions.

The NSW EPA issued the new rolling stock operator licences in August 2020. The requirements in the licence are for new locomotives to meet US Tier 2 particulate matter emissions. There are no air emission limits for locomotives already operating on the rail network. The licences, however, include operating conditions that seek to minimise impacts on air quality through idling. In 2023–24, the NSW EPA continued to work with the rail industry to progressively reduce locomotive air emissions.

Vehicle and fuel emissions

Regulation of motorway tunnel ventilation stacks

In July 2019, the NSW Government amended the POEO Act to include changes to the way road tunnel ventilation stacks are regulated. From March 2020, operators of motorway tunnel ventilation stacks were required to have environment protection licences. The licences place strict operating requirements on air emissions from ventilation stacks. The licences require air quality monitoring of tunnel ventilation stack emissions. Monitoring data is required to be made publicly available through tunnel operators' websites and provided to the NSW EPA for review. In 2023–24, the NSW EPA continued to regulate tunnel ventilation stacks under licences. The NSW EPA undertook compliance activities such as monitoring reviews, site inspections and pollution studies to ensure ventilation stacks continue to operate according to licence conditions.

Smoky vehicles program

In NSW, it is an offence for a vehicle to emit excessive air impurities for a continuous period of more than ten seconds. Penalty notices may be issued to the registered owners of vehicles emitting excessive air impurities. The public can also report smoky vehicles via the NSW EPA Environment Line (<https://www.epa.nsw.gov.au/About-us/Contact-us/environmentline>) or mobile phone application.

In 2023–4, more than 2,500 smoky vehicle reports were received from the public, a monthly average of over 200 reports, indicating a high level of awareness in the community of the unacceptability of excessive visible emissions. The NSW EPA issued 1,257 advisory letters based on public reports, of which 1,032 advisory letters were to diesel vehicle owners.

Vapour recovery at service stations

Vapour recovery stage 1 technology (VR1) captures displaced vapours from storage tanks when a tanker delivers fuel to a service station, while vapour recovery stage 2 technology (VR2) captures vapours displaced at the bowser when a motorist refuels.

In 2023–24, the NSW Vapour Recovery Compliance Program continued to be implemented under the Protection of the Environment Operations (Clean Air) Regulation 2022 by local councils at service stations across the Sydney, Wollongong, Newcastle and Central Coast metropolitan areas, as well as the Lower Hunter and Illawarra Regions.

Implementation of vapour recovery at these service stations is estimated to reduce emissions of volatile organic compounds (VOCs) by approximately 8,600 tonnes per year.

Summer low-volatility petrol

In 2023–24, the NSW EPA continued to implement the summer low-volatility petrol program. To manage ozone formation in the Sydney region, regulatory requirements limit petrol volatility to 62 kilopascals (a measure of vapour pressure) over the summer period from 15 November to 15 March each year. Petrol importers and blenders are required to test and report to the NSW EPA on batch volatility.

In December 2022, the Clean Air Regulation was remade and included an extension to the summer low-volatility period. Commencing in November 2023, the summer low-volatility period was extended from 1 November to 31 March. VOC reductions are currently estimated at approximately 2,470 tonnes per year, an increase of an estimated 370 tonnes due to the new summer low-volatility period extension.

Zero emissions buses transition plan

The NSW Government's Net Zero Plan Stage 1: 2020–2030 (<https://www.energy.nsw.gov.au/sites/default/files/2022-08/net-zero-plan-2020-2030-200057.pdf>), and the NSW Government's Electric Vehicle Strategy (<https://www.nsw.gov.au/driving-boating-and-transport/nsw-governments-electric-vehicle-strategy>) identified commitments to replace the state's 8,000 plus diesel and compressed natural gas bus fleet with zero emission buses. The Zero Emission Buses program, a key net zero initiative, will transition the NSW bus fleet into zero emission buses powered by renewable energy. NSW Government funding of \$3 billion is supporting delivery of the first stage of the program in Greater Sydney, which includes purchasing more than 1,200 new buses, converting 11 existing depots for electric charging and building a new battery electric bus depot at Macquarie Park.

On-road trials commenced in April 2024, as part of a \$25 million project to look at how zero emission bus technology can be delivered to NSW regions. Over the course of the trial, four battery electric zero emission buses or ZEBs will service 30 schools across Armidale and Uralla and the Tweed.

The NSW Government will transition the entire 8,000 plus bus fleet to zero emissions technology by 2035 in Greater Sydney, Outer Metro regions by 2040 and regional NSW by 2047. For more information see the Transport NSW website (<https://www.transport.nsw.gov.au/projects/programs/zero-emission-buses>).

National vehicle and fuel standards

The Commonwealth Government is responsible for fuel quality and vehicle emission standards for new on-road vehicles.

The NSW Government has consistently supported harmonisation of national vehicle emission standards with Euro standards, together with a tightening of fuel standards to enable adoption of control technologies to meet the tighter vehicle standards. Over 2023–24, the department continued to support early adoption of the Euro 6/VI emissions standards for diesel vehicles and enabling changes to fuel quality standards. The following new national fuel quality standards come into effect from December 2025.

- The level of aromatic hydrocarbons in 95 RON (research octane number) petrol will be reduced to a maximum of 35% to enable the introduction of stricter noxious emissions standards for light vehicles.
- The level of sulfur allowed in all petrol grades (91 RON, 95 RON and 98 RON) and E85 will be reduced to 10 parts per million.

The Commonwealth Government is also implementing more stringent (Euro 6d equivalent) noxious emissions standards for new light vehicles (passenger and commercial vehicles with gross vehicle mass up to 3.5 tonnes) – both petrol and diesel vehicles. These standards set stricter limits on the levels of noxious emissions (such as carbon monoxide, hydrocarbons, oxides of nitrogen and particulates) produced by new road vehicles supplied to Australia. The new vehicle standards commence from 1 December 2025 for all new model vehicles, and from 1 July 2028 for all new vehicles.

Further information on the new vehicle standards is available on the Commonwealth Department of Infrastructure website (<https://www.infrastructure.gov.au/questions-and-answers-new-adrs-light-vehicle-noxious-emissions>).

In 2023–24, departmental staff represented NSW on the national Fuel Standards Consultative Committee.

Wood smoke management

Reducing wood smoke and fine particle pollution is a priority action in the NSW Clean Air Strategy 2021–30. Under the strategy, the NSW Government is committed to further research to inform the development of future actions on wood heaters. In 2023–24, the department undertook and supported ongoing research to further understand the health impacts of wood heaters and the effectiveness of different types of interventions, including filtration, education and financial incentive schemes, to reduce these impacts.

The department and the NSW EPA continue to support local councils across NSW in managing wood smoke through research, periodic wood smoke reduction programs and providing community education materials. In 2023–24, the NSW EPA continued to provide a range of educational materials for councils to raise public awareness about wood smoke impacts and the correct operation of wood heaters. The materials are available in English and five community languages – Arabic, Cantonese, Hindi, Mandarin and Vietnamese, and are available on the NSW EPA's *Council resource kit* webpage (<https://www.epa.nsw.gov.au/Your-environment/Air/reducing-wood-smoke-emissions/council-resource-kit>).

In 2023–24, the department participated as a member of the Standards Australia Technical Committee – Solid Fuel Burning Appliances. This committee commenced reviews of AS/NZS 4012, 4013 and 2918, relating to emissions standards, efficiency and installation of wood heaters.

The NSW EPA regulates the sale of wood heaters. All appliances must meet minimum emission and efficiency standards as set out in the Protection of the Environment (Clean Air) Regulation 2022.

Local Government Air Quality Toolkit

In 2023–24, the department undertook a major update of the Local Government Air Quality Toolkit, based on extensive consultation including with the NSW EPA and local councils. The Toolkit is a comprehensive set of guidance materials to assist councils to deliver on their regulatory responsibilities regarding clean air and as well as to effectively manage air quality issues in their local government areas. The Toolkit upgrade is a priority action under the NSW Clean Air Strategy 2021–30. The updated Toolkit will be released in August 2024, and will contain new guidance material including on climate change impacts affecting air quality, land-use planning, crematoria emissions and neighbourhood smoke. It also includes new practical visual guides and a resource pack to assist council officers with air quality related inspections.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Data in this section are presented for the 2023 calendar year. Data for the full year are reported against the Ambient Air Quality NEPM standards in effect from 2021, registered on 26 May 2021.

The NSW air quality monitoring program is the largest in Australia, with a comprehensive monitoring network operated by the department. As noted above, the Ambient Air Quality NEPM network is a sub-set of the NSW air quality monitoring network operated by the department. On 31 December 2023, the period to which the data presented applies, the NSW Ambient Air Quality NEPM reporting network comprised 43 air quality monitoring stations, compared with 40 in 2022.

The Bradfield Highway was commissioned as a roadside monitoring station in October 2018 and was incorporated into the Ambient Air Quality NEPM network in 2022. The Port Macquarie and Coffs Harbour monitoring stations were initially established as emergency bushfire monitoring stations during the 2019–20 bushfire period. Long-term monitoring was commissioned at these stations in April 2020 following the bushfires, and they have been incorporated into the Ambient Air Quality NEPM network since 2022.

Permanent nitrogen dioxide and ozone monitoring was extended to Tamworth, Albury and Wagga Wagga North, while permanent ozone monitoring was only established at Orange and Bathurst during the first quarter of 2023.

The 43 Ambient Air Quality NEPM stations comprise 20 in Sydney, one on the Central Coast, one at Lake Macquarie, three in the Illawarra, three in the Lower Hunter, four in the Upper Hunter and 11 stations in regional NSW.

Summary

Detailed observed data and the compliance assessment with respect to the national air quality standards follow in the next section. Key results from the following section are summarised below:

- During 2023 the levels of carbon monoxide remained within the 8-hour rolling 9.0 ppm average standard at all stations in the NSW Ambient Air Quality NEPM network.
- The annual nitrogen dioxide standard (0.015 ppm) was exceeded at the Bradfield Highway (0.019 ppm). There were no 1-hour exceedances of the 0.080 ppm 1-hour standard in 2023.
- The 1-hour sulfur dioxide standard (0.100 ppm) was exceeded on two days at Muswellbrook, with a maximum observation of 0.124 ppm on 2 January 2023. The 24-hour standard (0.020 ppm) was exceeded on the same day at Muswellbrook, with a 24-hour average of 0.025 ppm.
- Exceedances of the 8-hour rolling 0.065 ppm average ozone standard occurred over three days (19 March, 8–9 December 2023) at 11 stations due to heatwave conditions enhancing photochemical processes. Exceedances ranged from 0.083 ppm at Liverpool to 0.066 ppm at both Bargo and Oakdale.
- Although higher than 2022, 24-hour and annual PM_{10} concentrations in 2023 were generally lower than previous years. 27 exceedance days were recorded in 2023, with exceptional events such as hazard reduction burning and bushfires occurring on 10 days and non-exceptional events such as local dust events occurring on 18 days. Annual PM_{10} averages ranged from $21.9 \mu\text{g}/\text{m}^3$ – $9.4 \mu\text{g}/\text{m}^3$.
- Although higher than 2022, 24-hour and annual $PM_{2.5}$ concentrations in 2023 were generally lower than previous years. 24 exceedance days were recorded in 2023, with exceptional events such as hazard reduction burning and bushfires occurring on 14 days and non-exceptional events such as woodsmoke occurring on ten days. Annual $PM_{2.5}$ averages ranged from $8.6 \mu\text{g}/\text{m}^3$ – $4.3 \mu\text{g}/\text{m}^3$.
- Monitoring for lead as a regional pollutant ceased in NSW from January 2005, due to the extremely low concentrations of lead now found in ambient air. Some recent observations are reported, such as the Sydney Particle Characterisation Study (https://www.environment.nsw.gov.au/research-and-publications/publications?sort=field_publish_event_date), which confirmed the low levels of lead in ambient air. Also, monitoring for lead in Broken Hill is currently underway.

The section below summarises the data tables, focused on pollutants that recorded levels above the respective national standards.

Nitrogen dioxide

Nitrogen dioxide was monitored at 38 stations in the NSW Ambient Air Quality NEPM network in 2023. Two stations, Camden and Wagga Wagga North, did not meet the required quarterly data coverage (75%) to determine Ambient Air Quality NEPM compliance.

All stations with sufficient data complied with the 1-hour standard for nitrogen dioxide.

The Bradfield Highway recorded an annual average of 0.019 ppm and was the only station to not meet the annual nitrogen dioxide standard of 0.015 ppm. Adjacent to the Bradfield Highway in Milsons Point, traffic emissions are the likely source for this exceedance. All other stations met the annual standard.

Sulfur dioxide

Sulfur dioxide was monitored at 27 stations in the NSW Ambient Air Quality NEPM network in 2023, with all stations meeting the required annual data coverage of 75% to determine compliance.

The Muswellbrook station in the Upper Hunter exceeded both the 1-hour and the 24-hour sulfur dioxide standards of 0.100 ppm and 0.02 ppm respectively. Muswellbrook exceeded both the 1-hour and 24-hour standards on 2 January 2023, with a maximum hourly sulfur dioxide concentration of 0.124 ppm, resulting in a 24-hour average of 0.025 ppm. Muswellbrook again exceeded the hourly standard on 23 March 2024, with a maximum value of 0.113 ppm. Muswellbrook did not exceed the daily standard on this day.

All other stations with sufficient data met the 1-hour and 24-hour sulfur dioxide standards throughout 2023.

Ozone

Ozone was monitored at 38 stations in the NSW Ambient Air Quality NEPM network during 2023, with two stations, Camden and Wagga Wagga North, not meeting the required data coverage target of 75% to determine Ambient Air Quality NEPM compliance.

Eleven stations exceeded the 8-hour rolling ozone standard in 2023, with each station recording one exceedance each. Maximum exceeded concentrations ranged from 0.083 ppm at Liverpool to 0.066 ppm at both Bargo and Oakdale. The exceedances occurred over three days, with eight observed on 19 March 2023, two on 8 December and another on 9 December 2023. All exceedances are attributed to photochemical processes that were exacerbated by heatwave conditions.

Ten of the exceeding stations are in Sydney, with Albion Park South in the Illawarra, the other station recording an exceedance in 2023.

While not achieving the data coverage target of 75% for the year, Camden recorded an ozone exceedance on 19 March, resulting in its compliance assessed as 'not met', rather than 'not demonstrated' (ND).

Particles as PM₁₀

Forty-three stations in the NSW Ambient Air Quality NEPM network monitored PM₁₀ levels in 2023, with 42 stations meeting the required data coverage target of 75%. Cook and Phillip did not meet this data coverage target.

- *PM₁₀ 24-hour standard and goal*

Daily average PM₁₀ levels over the national standard were observed on 27 days in 2023 compared to 87 days in 2020, 18 days in 2021 and one in 2022. Kembla Grange recorded the highest number of PM₁₀ exceedances in 2023 with eight.

Ten exceedance days were observed due to exceptional events. This included six exceedance days in Sydney due to hazard reduction burning in September, three exceedance days in December in the Northwest Slopes and Sydney due to the Duck Creek Pilliga Forest bushfire, and a mixture of dust and smoke in the Central Tablelands on 10 March 2023.

Seventeen non-exceptional exceedance days throughout 2023 were observed and are attributed to local dust.

At least one exceedance at seven stations was due to non-exceptional causes (local dust), resulting in these seven stations not meeting the PM₁₀ 24-hour goal. With one station not meeting the 75% data coverage benchmark, 35 stations met the 24-hour PM₁₀ goal.

- *Annual PM₁₀ standard and goal*

All stations with sufficient data to assess compliance (42) recorded annual averages below the annual PM₁₀ standard of 25.0 µg/m³, and therefore met the annual goal. PM₁₀ annual averages ranged from 21.9 µg/m³ at Muswellbrook to 9.4 µg/m³ at Narrabri. Annual standards are reported using all measured data, including exceptional events.

Particles as PM_{2.5}

42 stations in the NSW Ambient Air Quality NEPM network monitored PM_{2.5} levels in 2023. 39 stations met the 75% data availability requirement, while three did not have sufficient data to determine compliance (Parramatta North, Camden and Orange).

- *PM_{2.5} 24-hour standard and goal*

There were 24 calendar days with daily PM_{2.5} average levels observed above the national standard in 2023. This compares with 59 days in 2020, 23 days in 2021 and 16 in 2022. Armidale recorded the highest number of PM_{2.5} exceedances in 2023 with eight.

14 exceedance days occurred due to exceptional events. A mixture of dust and burning resulted in an exceedance in the Central Tablelands on 10 March 2023, while hazard reduction burning in Sydney during September 2023 resulted in seven exceedance days. Six exceedance days across the Northwest Slopes, Sydney and the Upper Hunter in December 2023 were due to the Duck Creek Pilliga Forest bushfire.

10 non-exceptional exceedance days were recorded for PM_{2.5} in 2023, with all being attributed to woodsmoke from domestic wood heaters. All eight of Armidale's eight exceedances were due to woodsmoke.

At least one exceedance at four stations was due to non-exceptional causes (woodsmoke), resulting in these four stations not meeting the 24-hour PM_{2.5} goal. With three stations not meeting the 75% data coverage benchmark, 35 stations met the 24-hour PM_{2.5} goal.

A new Ambient Air Quality NEPM goal of 20 µg/m³ for the PM_{2.5} 24-hour average is scheduled to commence in 2025. The highest station readings in 2023 of an additional eight stations would exceed this goal. Although conditions in 2023 were less mild than 2022, that this goal cannot be achieved in a year characterised by relatively mild climate conditions suggests that meeting the new PM_{2.5} 24-hour average goal from 2025 may be challenging.

- *PM_{2.5} annual standard and goal*

Two of the 39 stations with sufficient data to assess their compliance recorded annual averages above the 8.0 µg/m³ annual PM_{2.5} standard. Armidale recorded an annual PM_{2.5} average of 8.6 µg/m³, while the Bradfield Highway recorded 8.3 µg/m³. Coffs Harbour recorded the lowest annual PM_{2.5} average with 4.3 µg/m³.

Annual standards are reported using all measured data, including exceptional events. Most stations continued to report low annual averages for PM_{2.5} compared to the previous nine years.

A new Ambient Air Quality NEPM goal of 7 µg/m³ for the PM_{2.5} annual average is scheduled to commence in 2025. The highest station readings in 2023 of an additional seven stations would exceed this goal.

Although conditions in 2023 were less mild than 2022, that this goal cannot be achieved in a year characterised by relatively mild climate conditions suggests that meeting the new PM_{2.5} annual average goal from 2025 may also be challenging.

Monitoring data

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goals were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. Note that to comply with the Ambient Air Quality NEPM goals in effect since May 2021, no exceedances of any of the revised Ambient Air Quality NEPM standards are allowed, for any averaging times.

An air quality monitoring station complies with Ambient Air Quality NEPM goals for specific criteria pollutants on the criteria that at least 75% of 1-hour data are captured in each quarter of the year if:

- The Ambient Air Quality NEPM standards (i.e., either hourly, rolling 8-hour, daily (24-hour), or annual as applicable) are not exceeded for any of the criteria pollutants (sulfur dioxide, carbon monoxide, ozone and nitrogen dioxide and particles as PM₁₀, and particles as PM_{2.5}).
- For ozone, the NEPM rolling 8-hour standard if exceeded, is due to an exceptional cause, where elevated levels relate directly to authorised hazard reduction burning or bushfires.
- For particles as PM₁₀ and particles as PM_{2.5}, the Ambient Air Quality NEPM 24-hour standards if exceeded, are due to exceptional causes (where elevated levels relate directly to continental windblown dust, authorised hazard reduction burning or bushfires). Additionally, if the Ambient Air Quality NEPM annual standards are not exceeded, then particles are deemed to comply with the NEPM annual goal.

Hourly updated data from the total NSW air quality monitoring network are reported at www.airquality.nsw.gov.au. Current and historical data is searchable and downloadable from <https://www.airquality.nsw.gov.au/air-quality-data-services/data-download-facility>. See also the NSW Air Quality Monitoring Plan and Regional Monitoring Plans that can be accessed at www.environment.nsw.gov.au/topics/air/monitoring-air-quality/review/nsw-air-quality-monitoring-plan.

CO

Carbon monoxide

(NEPM standard: rolling 8-hour = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Sydney		
Alexandria*	–	ND
Bradfield Highway	0	Met
Camden*	–	ND
Campbelltown West	0	Met
Cook and Phillip	0	Met
Lidcombe	0	Met
Liverpool	0	Met
Macquarie Park	0	Met
Parramatta North	0	Met
Penrith	0	Met
Prospect	0	Met
Rouse Hill	0	Met
Rozelle	0	Met
Central Coast		
Wyong	0	Met
Lake Macquarie		
Morisset	0	Met
Illawarra		
Wollongong	0	Met
Lower Hunter		
Newcastle	0	Met
Upper Hunter		
Merriwa	0	Met
Mid North Coast		
Coffs Harbour	0	Met
Port Macquarie	0	Met

* Station did not meet the 75% requirement in at least one quarter. Performance against the 8-hour standard is ideally not determined (ND). The station is however assessed as having 'Met' the Ambient Air Quality NEPM goal for CO, as CO levels across the network rarely exceed the national standard.

NO₂ Nitrogen Dioxide

(NEPM standards: 1-hour = 0.080 ppm, 1 year = 0.015ppm)

Station	1-hour		1-year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Sydney				
Alexandria	0	Met	0.011	Met
Bargo	0	Met	0.005	Met
Bradfield Highway	0	Met	0.019	Not Met
Bringelly	0	Met	0.003	Met
Camden*	–	ND	–	ND
Campbelltown West	0	Met	0.009	Met
Cook and Phillip	0	Met	0.012	Met
Earlwood	0	Met	0.009	Met
Lidcombe	0	Met	0.011	Met
Liverpool	0	Met	0.009	Met
Macquarie Park	0	Met	0.004	Met
Oakdale	0	Met	0.001	Met
Parramatta North	0	Met	0.008	Met
Penrith	0	Met	0.007	Met
Prospect	0	Met	0.008	Met
Randwick	0	Met	0.007	Met
Richmond	0	Met	0.003	Met
Rouse Hill	0	Met	0.005	Met
Rozelle	0	Met	0.008	Met
St Marys	0	Met	0.006	Met
Central Coast				
Wyang	0	Met	0.002	Met
Lake Macquarie				
Morisset	0	Met	0.002	Met
Illawarra				
Albion Park South	0	Met	0.004	Met
Kembla Grange	0	Met	0.005	Met
Wollongong	0	Met	0.007	Met

Station	1-hour		1-year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Lower Hunter				
Beresfield	0	Met		Met
Newcastle	0	Met	0.008	Met
Wallsend	0	Met	0.005	Met
Upper Hunter				
Merriwa	0	Met		Met
Muswellbrook	0	Met	0.008	Met
Singleton	0	Met	0.006	Met
North West Slopes				
Gunnedah	0	Met	0.003	Met
Tamworth	0	Met	0.004	Met
Mid North Coast				
Coffs Harbour	0	Met	0.003	Met
Port Macquarie	0	Met	0.002	Met
South West Slopes				
Albury	0	Met	0.005	Met
Wagga Wagga North*	–	ND	–	ND
Southern Tablelands				
Goulburn	0	Met	0.003	Met

O₃ Ozone

(NEPM standard: rolling 8-hour = 0.065 ppm)

Station	Non-exceptional exceedance days*	Total exceedance days	NEPM goal compliance
Sydney			
<i>Alexandria*</i>	–	–	<i>ND</i>
Bargo	1	1	Not Met
Bradfield Highway	0	0	Met
Bringelly	1	1	Not Met
<i>Camden*</i>	1	1	Not Met
Campbelltown West	0	0	Met
Cook and Phillip	0	0	Met
Earlwood	1	1	Not Met
Lidcombe	1	1	Not Met
Liverpool	1	1	Not Met
Macquarie Park	0	0	Met
Oakdale	1	1	Not Met
Parramatta North	1	1	Not Met
Penrith	0	0	Met
Prospect	1	1	Not Met
Randwick	0	0	Met
Richmond	0	0	Met
Rouse Hill	0	0	Met
Rozelle	0	0	Met
St Marys	1	1	Not Met
Central Coast			
Wyang	0	0	Met
Lake Macquarie			
Morisset	0	0	Met
Illawarra			
Albion Park South	1	1	Not Met
Kembla Grange	0	0	Met
Wollongong	0	0	Met

Station	Non-exceptional exceedance days*	Total exceedance days	NEPM goal compliance
Lower Hunter			
Beresfield	0	0	Met
Newcastle	0	0	Met
Wallsend	0	0	Met
Upper Hunter			
Merriwa	0	0	Met
Central Tablelands			
Bathurst	0	0	Met
Orange	0	0	Met
North West Slopes			
Gunnedah	0	0	Met
Tamworth	0	0	Met
Mid North Coast			
Coffs Harbour	0	0	Met
Port Macquarie	0	0	Met
South West Slopes			
Albury	0	0	Met
Wagga Wagga North*	–	–	ND
Southern Tablelands			
Goulburn	0	0	Met

* This represents all assessable days which are not due to an exceptional event. An exceptional event means a fire or dust occurrence that adversely affects air quality at a particular location that causes an exceedance of the standard that is more than normal historical fluctuations and background levels and is directly related to bushfire, jurisdiction authorised hazard reduction burning or continental scale windblown dust.

SO₂

Sulfur dioxide

(NEPM standards: 1 hour = 0.100 ppm, 1 day = 0.020 ppm)

Station	1 hour		1 day	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Sydney				
Alexandria	0	Met	0	Met
Bargo	0	Met	0	Met
Bradfield Highway	0	Met	0	Met
Bringelly	0	Met	0	Met
Campbelltown West	0	Met	0	Met
Cook and Phillip	0	Met	0	Met
Lidcombe	0	Met	0	Met
Liverpool	0	Met	0	Met
Macquarie Park	0	Met	0	Met
Parramatta North	0	Met	0	Met
Penrith	0	Met	0	Met
Prospect	0	Met	0	Met
Randwick	0	Met	0	Met
Richmond	0	Met	0	Met
Rouse Hill	0	Met	0	Met
Rozelle	0	Met	0	Met
Illawarra				
Albion Park South	0	Met	0	Met
Wollongong	0	Met	0	Met
Central Coast				
Wyang	0	Met	0	Met
Lake Macquarie				
Morisset	0	Met	0	Met
Lower Hunter				
Beresfield	0	Met	0	Met
Newcastle	0	Met	0	Met
Wallsend	0	Met	0	Met

Station	1 hour		1 day	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Upper Hunter				
Merriwa	0	Met	0	Met
Muswellbrook	2	Not Met	1	Not Met
Singleton	0	Met	0	Met
Mid North Coast				
Port Macquarie	0	Met	0	Met

PM₁₀

Particles as PM₁₀
(NEPM standards: 1 day = 50.0 µg/m³, 1 year = 25.0 µg/m³)

Station	1 day			1 year	
	# Non-exceptional exceedance days	Total exceedance days	NEPM goal compliance	Annual average (µg/m ³)	NEPM goal compliance
Sydney					
Alexandria	0	3	Met	14.6	Met
Bargo	4	5	Not Met	15	Met
Bradfield Highway	0	4	Met	17.8	Met
Bringelly	1	1	Not Met	16.2	Met
Camden	0	2	Met	13.7	Met
Campbelltown West	0	2	Met	14.4	Met
Cook and Phillip*	0	2	ND	–	ND
Earlwood	0	1	Met	15.9	Met
Lidcombe	0	1	Met	16.6	Met
Liverpool	0	2	Met	19.3	Met
Macquarie Park	0	0	Met	14.5	Met
Oakdale	0	1	Met	12.4	Met
Parramatta North	0	0	Met	16.8	Met
Penrith	0	0	Met	16.6	Met
Prospect	0	0	Met	16.8	Met

Station	1 day			1 year	
	# Non-exceptional exceedance days	Total exceedance days	NEPM goal compliance	Annual average (µg/m³)	NEPM goal compliance
Randwick	0	2	Met	16.6	Met
Richmond	0	0	Met	14	Met
Rouse Hill	0	0	Met	15.4	Met
Rozelle	0	0	Met	15.7	Met
St Marys	0	0	Met	16.1	Met
Illawarra					
Albion Park South	0	0	Met	13.4	Met
Kembla Grange	2	8	Not Met	20.9	Met
Wollongong	1	1	Not Met	16.5	Met
Central Coast					
Wyong	0	0	Met	13.9	Met
Lake Macquarie					
Morisset	0	0	Met	11.2	Met
Lower Hunter					
Beresfield	0	0	Met	17.8	Met
Newcastle	0	0	Met	20.1	Met
Wallsend	0	0	Met	16.1	Met
Upper Hunter					
Aberdeen	0	0	Met	15.3	Met
Merriwa	0	0	Met	14.2	Met
Muswellbrook	2	2	Not Met	21.9	Met
Singleton	0	0	Met	19.1	Met
Central Tablelands					
Bathurst	1	2	Not Met	12.5	Met
Orange	0	0	Met	11.8	Met
North West Slopes					
Gunnedah	0	2	Met	12.9	Met
Narrabri	0	1	Met	9.4	Met
Tamworth	0	0	Met	15.1	Met

Station	1 day			1 year	
	# Non-exceptional exceedance days	Total exceedance days	NEPM goal compliance	Annual average (µg/m³)	NEPM goal compliance
Northern Tablelands					
Armidale	0	0	Met	11.9	Met
Mid North Coast					
Coffs Harbour	0	0	Met	10.5	Met
Port Macquarie	0	0	Met	11.9	Met
South West Slopes					
Albury	0	0	Met	13.5	Met
Wagga Wagga North	2	2	Not Met	17.4	Met
Southern Tablelands					
Goulburn	0	0	Met	10.4	Met

- # This represents all assessable days which are not due to an exceptional event. An exceptional event means a fire or dust occurrence that adversely affects air quality at a particular location that causes an exceedance of the standard that is in excess of normal historical fluctuations and background levels and is directly related to bushfire, jurisdiction authorised hazard reduction burning or continental scale windblown dust.
- * Station did not meet the 75% requirement in at least one quarter of the year and therefore performance against the 1-day and annual standards are not determined (ND).

PM_{2.5}

Particles as PM_{2.5}
(NEPM standards: 1 day = 25.0 µg/m³, 1 year = 8.0 µg/m³)

Station	1 day			1 year	
	# Non-exceptional exceedance days	Total exceedance days	NEPM goal compliance	Annual average (µg/m³)	NEPM goal compliance
Sydney					
Alexandria	0	5	Met	7.3	Met
Bargo	0	1	Met	5.7	Met
Bradfield Highway	0	5	Met	8.3	Not Met
Bringelly	0	3	Met	7.0	Met
Camden*	0	2	Not Met	–	ND
Campbelltown West	0	4	Met	6.1	Met
Cook and Phillip	0	4	Met	6.9	Met

Station	1 day			1 year	
	# Non-exceptional exceedance days	Total exceedance days	NEPM goal compliance	Annual average (µg/m³)	NEPM goal compliance
Earlwood	0	4	Met	7.1	Met
Lidcombe	0	4	Met	6.6	Met
Liverpool	0	4	Met	7.7	Met
Macquarie Park	0	3	Met	6.0	Met
Oakdale	0	2	Met	5.0	Met
<i>Parramatta North*</i>	–	–	<i>ND</i>	–	<i>ND</i>
Penrith	0	1	Met	7.5	Met
Prospect	0	2	Met	7.4	Met
Randwick	0	3	Met	6.2	Met
Richmond	0	3	Met	6.6	Met
Rouse Hill	1	5	Not Met	6.7	Met
Rozelle	0	3	Met	6.3	Met
St Marys	0	2	Met	5.8	Met
Illawarra					
Albion Park South	0	0	Met	4.9	Met
Kembla Grange	0	0	Met	5.8	Met
Wollongong	0	2	Met	5.6	Met
Central Coast					
Wyong	0	0	Met	4.9	Met
Lake Macquarie					
Morisset	0	0	Met	5.0	Met
Lower Hunter					
Beresfield	0	0	Met	6.7	Met
Newcastle	0	0	Met	6.7	Met
Wallsend	0	0	Met	6.1	Met
Upper Hunter					
Merriwa	0	1	Met	4.7	Met
Muswellbrook	0	1	Met	7.5	Met
Singleton	0	0	Met	6.7	Met

Station	1 day			1 year	
	# Non-exceptional exceedance days	Total exceedance days	NEPM goal compliance	Annual average ($\mu\text{g}/\text{m}^3$)	NEPM goal compliance
Central Tablelands					
Bathurst	0	1	Met	5.7	Met
Orange*	–	–	ND	–	ND
North West Slopes					
Gunnedah	1	5	Not Met	7.6	Met
Narrabri	0	4	Met	4.8	Met
Tamworth	0	0	Met	6.6	Met
Northern Tablelands					
Armidale	8	8	Not Met	8.6	Not Met
Northern Tablelands					
Coffs Harbour	0	0	Met	4.3	Met
Port Macquarie	1	1	Not Met	5.1	Met
South-west Slopes					
Albury	0	0	Met	6.5	Met
Wagga Wagga North	0	0	Met	6.6	Met
Southern Tablelands					
Goulburn	0	0	Met	5.9	Met

This represents all assessable days which are not due to an exceptional event. An exceptional event means a fire or dust occurrence that adversely affects air quality at a particular location that causes an exceedance of the standard that is in excess of normal historical fluctuations and background levels and is directly related to bushfire, jurisdiction authorised hazard reduction burning or continental scale windblown dust.

* Station did not meet the 75% requirement in at least one quarter of the year and performance against the 1-day and annual standards are therefore not determined (ND).

** Station did not meet the 75% requirement in at least one quarter. Performance against the 1-day standard was determined due to exceedances of the standard during the year. However, performance against the annual standard cannot be determined (ND) in this case, as an annual average cannot be calculated.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Ambient Air Quality NEPM in Victoria is implemented by the Environment Protection Regulations 2021 and the Guideline for assessing and minimising air pollution (<https://www.epa.vic.gov.au/about-epa/publications/1961>) (the Guideline) issued by the Victorian Environment Protection Authority (EPA Victoria).

The Regulations came into force on 1 July 2021, as subordinate legislation to the *Environment Protection Act 2017* (the Act) which applied from the same date. The Guideline was published in February 2022 and provides a framework to assess and control risks associated with air pollution. It is a technical guideline for air pollution practitioners and specialists with a role managing pollution discharges to air.

With the introduction of the Act, environment protection law shifted to a prevention-based approach. Central to this approach is the general environment duty. This is a shared responsibility to prevent harm to the environment and means all Victorians must each take reasonable steps to stop harm and do so before damage is done.

Monitoring was performed in accordance with a modified state monitoring plan, Ambient Air Quality NEPM technical papers and EPA Victoria's National Association of Testing Authorities' accreditation.

- For particulate matter equal or less than 2.5 µm (PM_{2.5}) data capture was below the target of 75% at Footscray in quarters 3 (Q3) and 4 (Q4). This is related to the availability of the land where the station was based. EPA Victoria is currently working on an alternative location. Data capture was above 75% at all other stations.
- For particulate matter equal or less than 10 µm (PM₁₀) data capture was below the target of 75% at Footscray in quarters 3 (Q3) and 4 (Q4). This is related to the availability of the land where the station was based. EPA Victoria is currently working on an alternative location. Data capture was also below 75% at Alphington in quarters 3 (Q3) and 4 (Q4) due to instrumentation issues. Data capture was above 75% at all other stations.
- For carbon monoxide, data capture was below the target of 75% at Footscray in quarters 3 (Q3) and 4 (Q4). This is related to the availability of the land where the station was based. EPA Victoria is currently working on an alternative location. Data capture was also below 75% at Geelong South in quarter 3 (Q3) due to instrumentation faults. Data capture was above the target of 75% at all other stations.
- For nitrogen dioxide, data capture was below the target of 75% at Footscray in quarters 3 (Q3) and 4 (Q4). This is related to the availability of the land where the station was based. EPA Victoria is currently working on an alternative location. Data capture was above the target of 75% at all other stations.
- For ozone, data capture was below the target of 75% at Footscray in quarters 3 (Q3) and 4 (Q4). This is related to the availability of the land where the station was based. EPA Victoria is currently working on an alternative location. Data capture was also below 75% at Melton in quarter 4 (Q4) due to instrumentation faults. Data capture was above the target of 75% at all other stations.
- For sulfur dioxide, data capture was below the target of 75% at Geelong South in quarters 3 (Q3) and 4 (Q4) and at Traralgon in quarters 3 (Q3) and 4 (Q4) due to instrument faults. Data capture was above 75% at all other stations.

There were no other significant implementation issues.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

In general, Victoria's air quality in 2023 was good due to levels of air pollution meeting air quality standards on most days. However, there were days when the air pollution levels for PM_{2.5} and PM₁₀ exceeded air quality thresholds. These exceedances were primarily due to landscape fires and wood heaters for PM_{2.5} and strong winds leading to raised dust for PM₁₀.

While there were several stations where a PM_{2.5} exceedance was recorded, these all occurred on the same day in April and were potentially associated with landscape fires. These burns are carried out to reduce fuel loads and the risk of major bushfires in summer, as well as for the protection of water catchment areas.

In 2023, while landscape fires where the main causes of exceedance, urban sources, such as domestic wood heating, continue to be a significant contributor to air pollution. These generally occurred on cold, still nights, which are usually associated with increased usage of heating and meteorological conditions that limit the dispersion of smoke.

Wind-blown dust also contributed to several days of the PM₁₀ standard to be exceeded during summer.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. There are no allowable exceedances for any of the standards.

An exceptional event rule may apply in the event of bushfires, jurisdiction-authorised hazard reduction burning, or continental scale windblown dust., This means that during these exceptional events, levels of fine and coarse particulate matter as well as ozone that exceed the Ambient Air Quality NEPM standard will be noted as exceedances but not counted as such for compliance purposes.

Data from relevant monitoring stations are also presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. For averaging times shorter than one year, compliance with the Ambient Air Quality NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

CO

Carbon monoxide
(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Alphington	0	Met
Footscray	0	Not Met*
Geelong South	0	Not Met*
Traralgon	0	Met

* Data capture of less than 75% over the year

NO₂

Nitrogen Dioxide

(NEPM standard: 1 hour = 0.12ppm, 1 year = 0.03ppm)

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Alphington	0	Met	7.81	Met
Footscray	0	Not Met*	8.64*	Not Met*
Geelong South	0	Met	5.2	Met
Traralgon	0	Met	5.71	Met

* Data capture of less than 75% over the year

O₃

Ozone

(NEPM standard: 1 hour = 0.10ppm, 4 hours = 0.08ppm)

Station	1 Hour		4 Hours	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Alphington	0	Met	0	Met
Dandenong	0	Met	0	Met
Footscray	0	Not Met*	0	Not Met*
Geelong South	0	Met	0	Met
Melton	0	Not Met*	0	Not Met*
Point Cook	0	Met	0	Met
Traralgon	0	Met	0	Met

* Data capture of less than 75% over the year

SO₂

Sulfur dioxide

(NEPM standard: 1 hour = 0.20ppm, 1 day = 0.08ppm, 1 year = 0.02ppm)

Station	1 hour		1 day		1 year	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Alphington	0	Met	0	Met	0.00024	Met
Altona North	0	Met	0	Met	0.00016	Met
Geelong South	0	Not Met*	0	Not Met*	0.00057	Not Met*
Traralgon	0	Not Met*	0	Not Met*	0.00063	Not Met*

* Data capture of less than 75% over the year

Pb

Lead

(NEPM standard 1 year = 0.50µg/m³)

Station	Annual average (µg/m³)	NEPM goal compliance
Not Monitored in 2023		

PM₁₀

Particles as PM₁₀

(NEPM standard 1 day = 50µg/m³)

Station	Number of exceedances	NEPM goal compliance
Alphington	0	Not Met*
Dandenong	0	Met
Footscray	0	Not Met*
Geelong South	9	Not Met
Mooroolbark	0	Met
Traralgon	1	Not Met

* Data capture of less than 75% over the year

PM_{2.5}

Particles as PM_{2.5}

(NEPM standard 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedances	Annual average (mg/m³)
Alphington	1	6.39
Footscray	0	6.88*
Geelong South	0	4.61
Melbourne CBD	1	7.26
Traralgon	1	5.85

* Annual average based on data capture of less than 75% over the year

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Queensland by Hon Leanne Linard MP, Minister for the Environment and the Great Barrier Reef and Minister for Science and Innovation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

This report contains monitoring data from 1 January 2023 to 31 December 2023 as well as relevant events during the reporting year commencing 1 July 2023 and ending 30 June 2024.

In Queensland, the Ambient Air Quality NEPM is implemented under the *Environmental Protection Act 1994* (EP Act), the Environmental Protection Regulation 2019, and the Environmental Protection (Air) Policy 2019, with the NEPM standards incorporated as air quality objectives.

In the 2023–24 reporting period, monitoring was conducted in eight of the ten regions identified in the Monitoring Plan: Southeast Queensland, Toowoomba, Maryborough – Hervey Bay, Gladstone, Mackay, Townsville, Cairns and Mount Isa. Fourteen of the 18 sites nominated in the monitoring plan, and two additional reporting sites, were operational. Monitoring at three of the four remaining sites concluded prior to 2023–24 due to completion of campaign monitoring.

As part of a four-year air quality monitoring network expansion program to provide Queensland communities with locally relevant air quality information during bushfire smoke exposure episodes, monitoring of PM₁₀ and PM_{2.5} commenced in Cairns in March 2023.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The results of Queensland's ambient air quality monitoring in 2023 indicate that the goal of the Ambient Air Quality NEPM was met for all pollutants at all monitoring stations where there was sufficient data capture to assess compliance, except for 1-hour and 1-day sulfur dioxide concentrations in Mount Isa, due to industry emissions.

Although sulfur dioxide emissions to air from industry sources in Mount Isa have reduced in recent years through capture and conversion to sulfuric acid as well as improved monitoring and process control feedback mechanisms, existing regulatory controls mean that compliance with the Ambient Air Quality NEPM sulfur dioxide 1-hour and 1-day standards is unlikely to be achieved, particularly following the introduction of more stringent Ambient Air Quality NEPM 1-hour and 1-day standards from May 2021. The smelter operator's current Environmental Authority (EA), issued in 2015 (and most recently amended in March 2024), permits 1-hour and 1-day sulfur dioxide concentrations more than the Ambient Air Quality NEPM standards. As a result, the Ambient Air Quality NEPM sulfur dioxide 1-hour standard was exceeded for 38 hours and the 1-day standard on ten days at The Gap monitoring site in Mount Isa during 2023, due to industrial emissions.

There were 11 exceedances of the Ambient Air Quality NEPM PM₁₀ 1-day standard (the numerical threshold) across Queensland performance monitoring stations during 2023. All 2023 PM₁₀ 1day exceedances were directly attributable to an exceptional event (bushfire smoke or regional dust events).

There were 12 exceedances of the Ambient Air Quality NEPM PM_{2.5} 1-day standard (the numerical threshold) across Queensland performance monitoring stations during 2023. All 2023 PM_{2.5} 1day exceedances were directly attributable to an exceptional event (smoke from bushfires or hazard reduction burning events).

Valid assessment of compliance with the standards and goal for 2023 was not possible for:

- carbon monoxide at the Woolloongabba site in Southeast Queensland and at the Boyne Island site in Gladstone due to extended monitoring instrument outages, and
- PM₁₀ and PM_{2.5} at the Woree site in Cairns due to monitoring not commencing until March 2023.

Collection of PM_{2.5} data using Tapered Element Oscillating Microbalance (TEOM) instrumentation with Filter Dynamics Measurement System (FDMS) continued during 2023 at three stations in Southeast Queensland (Rocklea for the full year, Springwood and Southport until July) and one station in Gladstone (South Gladstone).

Collection of PM_{2.5} data using Teledyne Advanced Pollution Instrumentation (TAPI) T640X optical particle spectrometers continued at two stations in Southeast Queensland (Mountain Creek and Flinders View) and at Toowoomba, Maryborough, Mackay (West Mackay), Townsville (North Ward) and Mount Isa (The Gap) during 2023. Collection of PM_{2.5} data using TAPI T640X instrumentation commenced at Cairns (Woree) from March 2023 and at two stations in Southeast Queensland (Springwood and Southport) from July 2023.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. For averaging times shorter than one year, compliance with the NEPM goal is achieved if the standard for a pollutant is not exceeded, excluding exceedances due to exceptional events directly related to bushfire, jurisdiction authorised hazard reduction burning or continental scale windblown dust, and at least 75% of data are captured in each quarter.

The data are presented in greater detail in the Queensland 2023 Air Monitoring Report available at <https://www.qld.gov.au/environment/management/monitoring/air/air-reports>.
The monitoring plan for Queensland is available from <https://www.qld.gov.au/environment/management/monitoring/air/air-reports>.

CO

Carbon monoxide
(NEPM standard: 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
South East Queensland		
Woolloongabba	0	Not demonstrated ^a
Gladstone		
Boyne Island	0	Not demonstrated ^a

^a not demonstrated due to insufficient data (i.e. less than 75% in one or more quarters) due to extended monitoring instrument outages.

NO₂

Nitrogen Dioxide

(NEPM standards: 1 hour = 0.080ppm, 1 year = 0.015ppm)

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
South East Queensland				
Mountain Creek	0	Met	0.005	Met
Deception Bay	0	Met	0.003	Met
Rocklea	0	Met	0.007	Met
Springwood	0	Met	0.009	Met
Southport	0	Met	0.004	Met
Flinders View	0	Met	0.005	Met
Gladstone				
South Gladstone	0	Met	0.005	Met
Townsville				
North Ward	0	Met	0.002	Met

O₃

Ozone

(NEPM standard: 8 hours = 0.065ppm)

Station	8 Hour		
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance
South East Queensland			
Mountain Creek	0	0	Met
Deception Bay	0	0	Met
Rocklea	0	0	Met
Springwood	0	0	Met
Southport	0	0	Met
Flinders View	0	0	Met

SO₂

Sulfur dioxide

(NEPM standards: 1 hour = 0.10ppm, 1 day = 0.02ppm)

Station	1 Hour		1 Day	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
South East Queensland				
Springwood	0	Met	0	Met
Flinders View	0	Met	0	Met
Gladstone				
South Gladstone	0	Met	0	Met
Townsville				
North Ward	0	Met	0	Met
Mount Isa				
The Gap	38	Not Met	10	Not Met

Pb

Lead

(NEPM standard: 1 year = 0.50µg/m³)

Station	Annual average (µg/m³)	NEPM goal compliance
Townsville		
Coast Guard	Insufficient data	Not demonstrated ^a
Mount Isa		
The Gap	0.07	Met

^a not demonstrated due to insufficient data (i.e. less than 75% in one or more quarters) due to lead monitoring ceasing in July 2023.

PM₁₀Particles as PM₁₀(NEPM standards: 1 day = 50µg/m³, 1 year = 25µg/m³)

Station	1 Day			1 Year	
	Non-exceptional event exceedences	Exceptional event exceedences	NEPM goal compliance	Annual average (µg/m ³)	NEPM goal compliance
South East Queensland					
Mountain Creek [†]	0	0	Met	14.9	Met
Rocklea [†]	0	0	Met	16.5	Met
Springwood ^{†,‡}	0	0	Met	13.5	Met
Southport ^{†,‡}	0	0	Met	13.2	Met
Flinders View [†]	0	1*	Met	16.1	Met
Toowoomba					
Toowoomba [†]	0	0	Met	14.2	Met
Maryborough-Hervey Bay					
Maryborough [†]	0	0	Met	15.0	Met
Gladstone					
South Gladstone [†]	0	1*	Met	18.0	Met
Mackay					
West Mackay [†]	0	0	Met	18.3	Met
Townsville					
North Ward [†]	0	0	Met	16.3	Met
Cairns					
Woree [†]	0	0	Not demonstrated ^a	15.2	Not demonstrated ^a
Mount Isa					
The Gap [†]	0	9 (3*, 5**)	Met	17.0	Met

^a not demonstrated due to insufficient data (i.e. less than 75% in one or more quarters) due to monitoring not commencing until March 2023.

* exceptional event due to bushfire smoke.

** exceptional event due to region-wide windblown dust.

† monitoring by TEOM Model 1405DF instrumentation fitted with FDMS (Springwood until 13 July, Southport until 11 July).

‡ monitoring by TAPI T640X optical particle spectrometer (Springwood from 13 July, Southport from 11 July).

PM_{2.5}

Particles as PM_{2.5}
(NEPM standards: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 Day			1 Year	
	Non-exceptional event exceedences	Exceptional event exceedences	NEPM goal compliance	Annual average (µg/m³)	NEPM goal compliance
South East Queensland					
Mountain Creek†	0	0	Met	6.0	Met
Rocklea†	0	0	Met	8.0	Met
Springwood†‡	0	0	Met	6.2	Met
Southport†‡	0	0	Met	5.5	Met
Flinders View‡	0	3*	Met	7.2	Met
Toowoomba					
Toowoomba‡	0	0	Met	6.1	Met
Maryborough-Hervey Bay					
Maryborough‡	0	0	Met	6.4	Met
Gladstone					
South Gladstone‡	0	1*	Met	4.7	Met
Mackay					
West Mackay‡	0	0	Met	6.7	Met
Townsville					
North Ward‡	0	1*	Met	6.2	Met
Cairns					
Woree‡	0	0	Not demonstrated ^a	6.3	Not demonstrated ^a
Mount Isa					
The Gap‡	0	7 (6*, 1**)	Met	6.3	Met

^a not demonstrated due to insufficient data (i.e. less than 75% in one or more quarters) due to monitoring not commencing until March 2023.

* exceptional event due to bushfire smoke.

** exceptional event due to smoke from hazard-reduction burning.

† monitoring by TEOM Model 1405DF instrumentation fitted with FDMS (Springwood until 13 July, Southport until 11 July).

‡ monitoring by TAPI T640X optical particle spectrometer (Springwood from 13 July, Southport from 11 July).

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Western Australia by the Department of Water and Environmental Regulation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia (WA), Ambient Air Quality NEPM is implemented by the Department of Water and Environmental Regulation (DWER) under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*.

Implementation activities may be viewed in two categories:

1. those activities related to the monitoring and reporting protocol of the Ambient Air Quality NEPM, plus other activities associated with the 'Future Actions' listed in the NEPM Impact Statement; and
2. those activities within WA (including regulatory activities) designed to ensure that air quality is compliant with the Ambient Air Quality NEPM goal for each of the seven criteria pollutants.

In the first category, DWER has:

- continued to liaise with local governments and other organisations as required to facilitate the establishment of fixed ambient monitoring stations. The most recent site was established at Armadale in July 2020. PM_{2.5} monitoring was added to the Albany and Collie monitoring stations in 2021.
- maintained monitoring of carbon monoxide, oxides of nitrogen, ozone, sulfur dioxide and PM₁₀ and PM_{2.5} particle fractions.

In the second category, DWER has:

- continued to implement the Perth Air Quality Management Plan (AQMP). The AQMP is a whole-of-government plan aimed at improving and maintaining Perth's air quality.
- continued to investigate and trial several new monitoring technologies designed to establish a better understanding of pollutant sources and the dispersion of these pollutants in targeted areas. This includes monitoring campaigns that survey air quality in residential and other sensitive receptor areas, particularly where these areas may be impacted by vehicle or industrial emissions.
- maintained community access to regularly updated air quality information via DWER's webpage, (<https://www.wa.gov.au/service/environment/environment-information-services/air-quality>); and
- regulated emissions from industrial premises through works approvals and licences to control emissions of the criteria pollutants.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Ambient Air Quality NEPM has provided a focus for air quality issues and driven all jurisdictions to work towards nationally consistent monitoring techniques and reporting. This has culminated in the development and approval of monitoring plans for all jurisdictions, including WA. The Ambient Air Quality NEPM standards and goals provide an additional impetus for the implementation of air quality improvement strategies and are a useful benchmark against which air quality management can be assessed. WA is committed to implementing the NEPC-agreed Ambient Air Quality NEPM variation to apply annual average and daily PM_{2.5} standards of 7 µg/m³ and 20 µg/m³ respectively by 2025.

Air quality management initiatives implemented in WA have placed the state in a favourable position to achieve compliance with the Ambient Air Quality NEPM goals in most circumstances. For example, the control of sulfur dioxide has been effective in the key airsheds of Kwinana and Kalgoorlie. Carbon monoxide, lead and nitrogen dioxide concentrations comply with the Ambient Air Quality NEPM standards by comfortable margins due to clean fuel quality standards, national vehicle emissions standards and regulatory control of other sources. Ozone, PM₁₀ and PM_{2.5} remain pollutants of concern in the Perth metropolitan region and are the focus of attention within the AQMP. In regional areas, PM₁₀ and PM_{2.5} are the pollutants of the most significance with respect to the NEPM standards.

The data presented below show that WA met the Ambient Air Quality NEPM goals for all pollutants in calendar year 2023 except for:

- the daily average PM₁₀ at Armadale, Mandurah, South Lake, Albany, Collie, Caversham and Kalgoorlie
- the daily average PM_{2.5} at Albany, Armadale, Bunbury, Busselton, Caversham, Collie, Kalgoorlie, Mandurah, Quinns Rocks and South Lake
- the annual average PM_{2.5} at Armadale, Bunbury, Collie, Mandurah and Quinns Rocks, and
- the hourly average sulfur dioxide at Kalgoorlie.

The Mandurah monitoring station is the closest site to the coast and has been recording exceedances of the daily PM₁₀ standard during onshore winds, which are due mainly to sea-salt from the ocean. While these exceedances are assessable according to the current classification, it is noted that marine aerosol is not harmful to human health.

Data from monitoring stations are presented in tabular form below to enable an evaluation of whether the NEPM standards and goals were met. The data are presented in greater detail in the 2023 NEPM report (<http://www.wa.gov.au/government/document-collections/air-quality-publications>). See also the monitoring plan for Western Australia (<http://www.wa.gov.au/government/publications/national-environment-protection-measure-ambient-%20air-quality>).

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Perth		
North East Metro	0	Met
North Metro	0	Met
South Metro	0	Met
Peel		
Mandurah	0	Met
Goldfields		
Kalgoorlie	0	Met

NO₂

Nitrogen Dioxide

(NEPM standard: 1 hour = 0.08ppm, 1 year = 0.015ppm)

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Perth				
North Metro	0	Met	0.004	Met
North East Metro	0	Met	0.005	Met
Outer North Coast	0	Met	0.004	Met
South Coast	0	Met	0.004	Met
Outer East Rural	0	Met	0.001	Met
South Metro	0	Met	0.006	Met
Inner West Coast	0	Met	0.004	Met
Peel				
Mandurah	0	Met	0.002	Met

O₃ Ozone

(NEPM standard: 8 hours = 0.065ppm)

Station	8 Hour	
	Number of exceedances	NEPM goal compliance
Perth		
North East Metro	0	Met
Outer North Coast	0	Met
South Coast	0	Met
Outer East Rural	0	Met
South Metro	0	Met
Inner West Coast	0	Met
Peel		
Mandurah	0	Met

SO₂ Sulfur dioxide

(NEPM standard: 1 hour = 0.10ppm, 1 day = 0.02ppm)

Station	1 hour		1 day	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Perth				
South Coast	0	Met	0.004	Met
South Metro	0	Met	0.001	Met
South Industrial*	0	Met*	NA*	NA*
Goldfields				
Kalgoorlie	2	Not Met	0.002	Met

Pb Lead

(NEPM standard 1 year = 0.50µg/m³)

Lead monitoring ceased on 31 December 2001 following the introduction of unleaded petrol. These management initiatives consequently resulted in sustained measurements at analytical limits of detection well below the standard.

PM₁₀

Particles as PM₁₀

(NEPM standard 1 day = 50µg/m³, 1 year = 25µg/m³)

Station	1 day		1 year	
	Number of exceedances	NEPM goal compliance	Annual average (µg/m ³)	NEPM goal compliance
Perth				
North East Metro	3	Not Met	14.7	Met
North Metro	0	Met	12.9	Met
Outer North Coast	0	Met	16.5	Met
South Metro	1	Not Met	14.3	Met
South East Metro	5	Not Met	17.0	Met
Peel				
Mandurah	11	Not Met	22.6	Met
Southwest				
Albany	0	Met	12.1	Met
Bunbury	0	Met	17.8	Met
Busselton	0	Met	12.9	Met
Collie	6	Not Met	18.8	Met
Midwest				
Geraldton	0	Met	16.3	Met
Goldfields				
Kalgoorlie	2	Not Met	14.0	Met

PM_{2.5}

Particles as PM_{2.5}
(NEPM standard 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 day		1 year	
	Number of exceedances	NEPM goal compliance	Annual average (µg/m³)	NEPM goal compliance
Perth				
North East Metro	8	Not Met	6.8	Met
North Metro	0	Met	5.5	Met
Outer North Coast	1	Not Met	8.3	Not Met
South Metro	7	Not Met	6.6	Met
South East Metro	20	Not Met	10.9	Not Met
Peel				
Mandurah	4	Not Met	8.0	Not Met
Southwest				
Albany	1	Not Met	4.4	Met
Bunbury	3	Not Met	9.0	Not Met
Busselton	1	Not Met	5.9	Met
Collie	49	Not Met	11.4	Not Met
Midwest				
Geraldton	0	Met	4.8	Met
Goldfields				
Kalgoorlie	3	Not Met	4.7	Met

Location descriptors for metropolitan monitoring stations

Location descriptor	Station Location	Location descriptor	Station Location
North East Metro	Caversham	South Coast	Rockingham
North Metro	Duncraig	Inner West Coast	Swanbourne
South East Metro	Armadale	South Industrial	Wattleup*
Outer East Rural	Rolling Green	Outer North Coast	Quinns Rocks
South Metro	South Lake		

* Wattleup AQMS was decommissioned in February 2023. While there were no exceedances of the sulfur dioxide standard while it was operating, it is not possible to calculate an annual average.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for South Australia by the Hon Susan Close, Minister for Climate, Environment and Water, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia (SA), the Environment Protection Authority (SA EPA) is responsible for implementing the Ambient Air Quality NEPM. SA makes air quality monitoring data available on a variety of publicly available platforms and continues to make improvements to data visualisation.

SA has implemented nationally consistent air quality categories based on the recommendations provided by the enHealth committee of the Australian Health Protection Principal Committee (AHPPC).

In 2023, annual PM_{10} and $PM_{2.5}$ compliance was achieved at all sites. Natural events such as dust storms and bush fires can be major contributors to particulate concentrations, however natural events did not occur often during this year. High data capture rates were achieved in 2023, with data availability for all quarters greater than 75% at all sites, except Christie Downs due to station upgrades.

The Elizabeth station was reinstalled in late 2022. A full year's worth of data is available and is included in this year's report.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Data for SA shows that air quality was generally good during the 2023 calendar year.

In the Adelaide metropolitan region:

- carbon monoxide – monitoring at the Adelaide CBD station showed concentrations were far below the NEPM standard
- nitrogen dioxide – the 1-hour standard, 1-year standard and goals were met at all Adelaide metropolitan monitoring stations except Adelaide CBD. At the Adelaide CBD station the 1-hour standard and goal were not met, due to the proximity of the station to a bus drop-off and pickup zone.
- ozone – the 8-hour standard and goal were met at all Adelaide monitoring stations
- sulfur dioxide – the 1-hour and 1-day standards and goals were met at North Haven monitoring station
- particles (PM_{10}) – the 1-year standard was met at all monitoring stations. The 1-day standard was met at all stations except LeFevre 1 station (three exceedances). This was due to local sources.
- particles ($PM_{2.5}$) – the 1-day and 1-year standard and goals were met at all Adelaide monitoring stations.

In the Spencer Region:

- particles (PM_{10}) – the 1-year standard was met at all sites. The 1-day standard was met at Whyalla (Schulz Reserve) but not at Whyalla (Walls Street) station (eight exceedances) or at Port Pirie Oliver Street station (three exceedances). These exceedances were due to local sources.
- sulfur dioxide – the 1-hour and 1-day standards and goals were not met at Port Pirie (Oliver Street). This was due to emissions from the lead smelter located in the town.
- lead – the annual average standard and goal were met at both NEPM monitoring stations in Port Pirie.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. There are no allowable exceedances for any of the standards.

An exceptional event rule may apply in the event of bushfires, jurisdiction-authorised hazard reduction burning, or continental scale windblown dust, meaning that during these exceptional events, levels of fine and coarse particulate matter as well as ozone that exceed the Ambient Air Quality NEPM standard will be noted as exceedances but not counted as such for compliance purposes.

The monitoring plan for South Australia is available from https://www.epa.sa.gov.au/files/12061_airnepm.pdf.

The SA EPA also publishes monitoring data on the SA EPA and Data SA websites:

- Hourly data – Air quality monitoring – EPA (https://www.epa.sa.gov.au/environmental_info/air_quality/new-air-quality-monitoring)
- Summary reports – Reports – EPA (https://www.epa.sa.gov.au/environmental_info/air_quality/reports_and_summaries)
- Validated data – Data – SA <https://data.sa.gov.au/>

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Adelaide		
ADL07-CBD	0	Met

NO₂

Nitrogen Dioxide

(NEPM standard: 1 hour = 0.08ppm, 1 year = 0.015ppm)

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Adelaide				
ADL07-CBD	1	Not Met	0.011	Met
CHD01 – Christie Downs	0	Met	0.003	Met
ELI01 – Elizabeth		Met	0.003	Met
NET01 – Netley		Met	0.007	Met
NOR01 – Northfield		Met	0.005	Met
NHV01 – North Haven		Met	0.005	Met

O₃

Ozone

(NEPM standard: 8 hours = 0.065ppm)

Station	8 Hour		
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance
Adelaide			
CHD01 – Christies Downs	0	0	Met
ELI01 – Elizabeth	0	0	Met
NET01 – Netley	0	0	Met
NOR01 – Northfield	0	0	Met
NHV01 – North Haven	0	0	Met

SO₂

Sulfur dioxide

NEPM standard: 1 hour = 0.10ppm, 1 day = 0.02ppm)

Station	1 hour		1 day	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Adelaide				
NHV01 – North Haven	0	Met	0	Met
Spencer				
PTP01 – Pt Pirie Oliver Street	99	Not Met	28	Not Met

Pb

Lead

(NEPM standard 1 year = 0.50µg/m³)

Station	Annual average (µg/m³)	NEPM goal compliance
Spencer		
PTP05 – Pt Pirie Frank Green Park	0.16	Met
PTP01 – Pt Pirie Oliver Street	0.33	Met

PM₁₀

Particles as PM₁₀
(NEPM standard 1 day = 50µg/m³, 1 year = 25µg/m³)

Station	1 Day			1 Year	
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance	Annual average (mg/m ³)	NEPM goal compliance
Adelaide					
ADL07 – CBD	0	0	Met		Met
BIR02 – LeFevre 1	3	0	Not Met		Met
CHD01 – Christies Downs	0	0	Met		Met
ELI01 – Elizabeth	0	0	Met		Met
NET01 – Netley	0	0	Met		Met
NHV01 – North Haven	0	0	Met		Met
Spencer					
PTP01 – Pt Pirie Oliver Street	3	0	Not Met		Met
WHY04 – Whyalla Walls Street	8	0	Not Met		Met
WHY07 – Whyalla Schulz Reserve	0	0	Met		Met

PM_{2.5}

Particles as PM_{2.5}
(NEPM standard 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 Day			1 Year	
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance	Annual average (mg/m ³)	NEPM goal compliance
Adelaide					
ADL07 – CBD	0	0	Met	5.8	Met
ELI01 – Elizabeth	0	0	Met	4.7	Met
BIR02 – LeFevre 1	0	0	Met	5.3	Met
NET01 – Netley	0	0	Met	3.9	Met
NHV01 – North Haven	0	0	Met	3.9	Met

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Tasmania by Hon Madeleine Ogilvie Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Tasmania, the enabling legislation for the Ambient Air Quality NEPM process is the *Environmental Management and Pollution Control Act 1994* (EMPCA). The process is implemented primarily through the Environment Protection Authority (EPA Tasmania).

NEPMs are adopted as state policies under the *State Policies and Projects Act 1993*, and the Ambient Air Quality NEPM is put into effect under the Environment Protection Policy (Air Quality) 2004 (Air Policy), the Environmental Management and Pollution Control (Smoke) Regulations 2019, and the *Tasmanian Air Quality Strategy 2006*.

The Air Policy includes specific reference to meeting the requirements of the Ambient Air Quality NEPM through regulation of industry and management of diffuse sources like planned burning activities. The policy is available on the EPA Tasmania website at www.epa.tas.gov.au.

Wood smoke from domestic wood heaters and from planned burning activities continues to be the primary air quality issue for Tasmania.

In the *Tasmanian Air Quality Strategy*, published in June 2006, a five-year process to assess compliance with the Ambient Air Quality NEPM standards in Tasmania is detailed and strategies for achieving compliance where standards are not being met are also specified. The strategy addresses the management of air quality in Tasmania and includes programs to further reduce domestic and industrial emissions of respirable particles in critical regions of the state.

The Environmental Management and Pollution Control (Distributed Atmospheric Emissions) Regulations 2007, gazetted in August 2007, initially provided the legal framework for programs to reduce the emission of domestic wood smoke through controls on the import, sale and installation of wood heaters. The Regulations were revised and reissued on 26 June 2019 as the Environmental Management and Pollution Control (Smoke) Regulations 2019. The revised Regulations continue to make the emission of excessive smoke from a residential chimney an offence. On-ground experience, however, has found that many councils have difficulty in the implementation of these Regulations. Householders often report how excessive smoke from neighbouring properties is impacting at night. Resource constraints can also mean councils are less likely to be able to respond at these times.

In 2009, the then Environment Division of the Department of Environment, Parks, Heritage and the Arts (DEPHA) established a state-wide network of indicative level air monitoring stations referred to as the BLANKET (Base-Line Air Network of EPA Tasmania) network. In 2023–24 this network consisted of 34 fixed stations, including those co-located with the reference level stations at Hobart, Launceston and Devonport. This network of optical particle monitors, calibrated against reference level instruments, provides real-time information for understanding smoke concentration, movement and dispersal in the greater Tasmanian airshed. Air quality and meteorological data from the BLANKET network support chimney-smoke complaint-resolution. The small stations, known as 'baby BLANKETs', are easily relocated and are of low-cost. The data from these stations have at times assisted councils with their regulatory activities and, importantly, provide a window into 'peak-residential' woodsmoke exposure. The local air quality has been found to be significantly degraded in some instances. However, quantitative data illustrating degraded air quality is not recognised as evidence of an offence under the Environmental Management and Pollution Control (Smoke) Regulations 2019, and in some cases no rectification action is taken.

The Tasmanian reference level air monitoring program operates under an ISO:17025 compliant Quality System and holds NATA accreditation for the daily measurement of PM_{2.5} and PM₁₀ using the reference instruments and methods prescribed in the Ambient Air Quality NEPM.

A reference level air monitoring station at Devonport was commissioned in December 2012. This station is equipped with gravimetric air samplers for reference measurements of daily averaged $PM_{2.5}$ particulate concentrations, as well as Tapered Element Oscillating Microbalances (TEOMs) to provide hourly-averaged PM_{10} data.

A reference level peak carbon monoxide (CO) monitoring station was established in Macquarie Street, Hobart at the end of 2010. Regular monitoring commenced in February 2011, and continued until the station was de-commissioned in February 2013. No exceedances of the Ambient Air Quality NEPM standard for CO were recorded in this interval. Details of this monitoring program were published on the EPA Tasmania website.

From 2009, planned burning activities undertaken by the forestry industry and by the Parks and Wildlife Service have been conducted using the Coordinated Smoke Management Strategy (CSMS) administered by the Forest Practices Authority (FPA). The CSMS requires burners to make daily bids for burn units in a given airshed. Bidding is managed by an automated web-based system. The total burn unit allocation is set with reference to meteorological and other considerations. Air quality data from the EPA Tasmania's state-wide BLANKET network is used to facilitate an annual review process to increase the strategy's effectiveness. Monitoring data from the BLANKET network shows that the severity of planned burn smoke impacts has decreased since the implementation of the CSMS. Feedback from the users of the CSMS indicates that their ability to make more informed decisions concerning smoke movement and dispersion is facilitated by the BLANKET air quality monitoring network and the analyses carried out by the EPA Tasmania.

In response to the growing understanding that poor winter-time air quality is widespread in many Tasmanian towns and urban areas, the Domestic Smoke Management Program (DSMP), an initiative of EPA Tasmania was started in 2012. The focus of the program is community education on air quality issues and how smoke emissions from domestic wood heaters can be significantly reduced through proper operation. The DSMP is realised through collaborative projects with local government known as the 'Burn Brighter this Winter' projects. Officers of EPA Tasmania and various Councils work together on the 'Burn Brighter this Winter' projects. The education and information campaign is backed up with air quality data from nearby BLANKET stations, mobile air quality monitoring and from smoky chimney surveys. This data enables appropriate information to be conveyed to specific households.

Since winter 2016 small, indicative-quality air stations have been deployed in several residential backyards as part of work undertaken with local government supporting chimney-smoke complaint-resolution. These small stations are the 'baby BLANKETs' mentioned above.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Ambient Air Quality NEPM has made a significant contribution to improved urban air quality in Tasmania, by raising community awareness of air quality issues and supporting programs aimed at reducing wood smoke pollution during winter. This has been particularly effective in Launceston, where a combination of a reduction in the number of wood heaters, and improved community co-operation has reduced winter PM_{10} levels.

Other ongoing programs to reduce the impacts of air pollution in Tasmania, driven at least in part by the Ambient Air Quality NEPM and the associated air quality standards and goals, have been introduced in more recent years. These include the DSMP started in 2012 to address issues related to smoke from domestic wood heaters and the CSMS established in 2009 to address issues related to smoke from planned burning activities.

Launceston

PM_{10}

From analysis of preliminary data there were no exceedances of the 24-hour PM_{10} standard of $50 \mu g/m^3$ measured in Launceston in 2023. Data capture rates for the four quarters of 2023 were 99%, 96%, 95% and 100% respectively, giving an annual rate of 97%. The annual average PM_{10} was $15.1 \mu g/m^3$, which meets the annual PM_{10} standard of less than $25 \mu g/m^3$.

PM_{2.5}

From analysis of preliminary data there was one calendar day with PM_{2.5} above the 24-hour PM_{2.5} standard of 25 µg/m³ measured in Launceston in 2023. Data capture rates for the four quarters of 2023 were 94%, 74%, 99% and 99% respectively, giving an annual rate of 92%. The annual average PM_{2.5} was 5.8 µg/m³, which meets the annual PM_{2.5} standard of less than 8 µg/m³.

Hobart**PM₁₀**

From analysis of preliminary data there were no exceedances of the 24-hour PM₁₀ standard of 50 µg/m³ measured in Hobart in 2023. Data capture rates for the four quarters of 2023 were 100%, 100%, 100% and 100% respectively, giving an annual rate of 100%. The annual average PM₁₀ was 11.6 µg/m³, which meets the annual PM₁₀ standard of less than 25 µg/m³.

PM_{2.5}

From analysis of preliminary data there was one calendar day with PM_{2.5} above the 24-hour PM_{2.5} standard of 25 µg/m³ measured in Hobart in 2023. Data capture rates for the four quarters of 2023 were 100%, 100%, 98% and 98% respectively, giving an annual rate of 99%. The annual average PM_{2.5} was 4.5 µg/m³, which meets the annual PM_{2.5} standard of less than 8 µg/m³.

Devonport**PM₁₀**

From analysis of preliminary data there were no exceedances of the 24-hour PM₁₀ standard of 50 µg/m³ measured in Devonport in 2023. Data capture rates for the four quarters of 2023 were 100%, 100%, 99% and 98% respectively, giving an annual rate of 99%. The annual average PM₁₀ was 14.2 µg/m³, which meets the annual PM₁₀ standard of less than 25 µg/m³.

PM_{2.5}

From analysis of preliminary data there were no exceedances of the 24-hour PM_{2.5} standard of 25 µg/m³ measured in Devonport in 2023. Data capture rates for the four quarters of 2023 were 94%, 85%, 82% and 96% respectively, giving an annual rate of 92%. The annual average PM_{2.5} was 5.4 µg/m³, which meets the annual PM_{2.5} standard of less than 8 µg/m³.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. For averaging times shorter than one year, compliance with the Ambient Air Quality NEPM goal is achieved if the standard for a pollutant is exceeded on no more than a specified number of days in a calendar year (one day per year for all pollutants except PM₁₀, which may be exceeded no more than five days per year) and at least 75% of data are captured in each quarter.

The data are presented in greater detail in Tasmania's annual reports.

The monitoring plan for Tasmania is available from the EPA Tasmania website ([https://epa.tas.gov.au/environment/air/monitoring-air-pollution/monitoring-data/reference-station-\(nepm\)-monitoring-information](https://epa.tas.gov.au/environment/air/monitoring-air-pollution/monitoring-data/reference-station-(nepm)-monitoring-information)).

Carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide and lead are not monitored in Tasmania.

PM₁₀

Particles as PM₁₀
(NEPM standard 1 day = 50 µg/m³, annual average 25 µg/m³)

Station	Number of exceedances	Annual average (mg/m ³)
Hobart	0	11.6
Launceston	0	15.1
Devonport	0	14.2

PM_{2.5}

Particles as PM_{2.5}
(NEPM standard 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 year	
	Number of exceedances	Annual average (mg/m ³)
Hobart	1	4.5
Launceston	1	5.8
Devonport	0	5.4

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for the Australian Capital Territory by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The ACT's ambient air quality monitoring was performed in accordance with the ACT's monitoring plan, Ambient Air Quality NEPM, Technical Papers and ACT Health's National Association of Testing Authorities' accreditation.

The ACT's air quality in 2023 was assessed against the Ambient Air Quality NEPM standards. In accordance with its agreed policy position, the ACT assessed its compliance for the annual average for particulate matter less than 10 microns (PM₁₀) against a lower standard of 20µg/m³ rather than the Ambient Air Quality NEPM standard of 25µg/m³ from 2016.

Due to a lack of heavy industry, the ACT has never monitored sulfur dioxide. It is primarily an industrial pollutant and lead monitoring ceased in 2002 with the phase out of leaded petrol.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ACT Government has been undertaking ambient air quality monitoring in Canberra since the early 1990s. The monitoring network in the ACT consists of three monitoring stations. Monash and Florey stations are the ACT's two performance monitoring stations, as per the requirements under Section 14 of the Ambient Air Quality NEPM, and they fully comply with relevant standards.

In addition, the ACT Government carries out key pollutants monitoring at Civic station to better inform the community concerning ambient air quality and support formation of government policy. As Civic station does not fully comply with relevant standards, the data from this station is not included in this report.

Data from Monash and Florey stations are presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. For stations to demonstrate compliance they also need at least 75% of data captured in each quarter.

A summary of the 2023 Report is:

- the ACT maintained excellent air quality in 2023
- there were no exceedances of the Ambient Air Quality NEPM standards for carbon monoxide, nitrogen dioxide, ozone and PM₁₀ at any of the ACT's monitoring stations, and
- PM_{2.5} was the only pollutant that exceeded the national standard, with one minor exceedance at the Monash station. The exceedance which occurred at Monash on 12 June 2023 was attributed to emissions from domestic wood heaters.

An exceptional event rule may apply in the event of bushfires, jurisdiction-authorised hazard reduction burning, or continental scale windblown dust. This means that during these exceptional events, levels of fine and coarse particulate matter as well as ozone that exceed the Ambient Air Quality NEPM standard will be noted as exceedances but not counted as such for compliance purposes.

The data are presented in greater detail in the ACT Air Quality report (https://www.accesscanberra.act.gov.au/_data/assets/pdf_file/0009/2544777/2023-ACT-Air-Quality-Report.pdf)

CO

Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Monash	0	Met
Florey	0	ND

NO₂

Nitrogen Dioxide

(NEPM standard: 1 hour = 0.08ppm, 1 year = 0.015ppm)

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Monash	0	ND	0.005	ND
Florey	0	Met	0.004	Met

O₃

Ozone

(NEPM standard: 8 hours = 0.065ppm)

Station	8 Hours		
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance
Monash	0	0	Met
Florey	0	0	Met

PM₁₀

Particles as PM₁₀

(NEPM standard: 1 day = 50µg/m³, 1-year average = 20 µg/m³ (ACT Standard))

Station	1 day			1 year	
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance	Annual average (mg/m³)	ACT goal compliance
Monash	0	0	Met	10.4	Met
Florey	0	0	Met	9.9	Met

PM_{2.5}

Particles as PM_{2.5}

(NEPM standard: 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 day			1 year	
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance	Annual average (mg/m³)	ACT goal compliance
Monash	0	1	Not Met	6.8	Met
Florey	0	0	Met	6.4	Met

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Ambient Air Quality) Measure for Northern Territory by the Minister for Environment, Climate Change and Water Security for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Department of Lands, Planning and Environment NT (DLPE) provides services to the Northern Territory Environment Protection Authority (NT EPA) which is responsible for implementing the Ambient Air Quality NEPM in the Northern Territory (NT) through provisions of the *Waste Management and Pollution Control Act 1998* and the *National Environment Protection Council (Northern Territory) Act 1994*.

Air pollutants nitrogen dioxide, sulfur dioxide, ozone, carbon monoxide and particles (as PM_{10} and $PM_{2.5}$) are routinely monitored at three ambient air quality monitoring stations Palmerston, Winnellie and Stokes Hill, all located within the Greater Darwin Region. A station located in Katherine monitors only PM_{10} and $PM_{2.5}$. This station is operated by Katherine Town Council (KTC) as part of a performance agreement with the NT EPA.

Major pollutants in the Darwin airshed and Katherine – $PM_{2.5}$ and PM_{10} – are associated with smoke from controlled and uncontrolled bushfire activities in surrounding bushland.

The NT ambient air monitoring program is undertaken in accordance with the approved monitoring plan. The administrative frameworks for the implementation of the Ambient Air Quality NEPM are in place.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

No exceedances of the Ambient Air Quality NEPM standards for nitrogen dioxide, sulfur dioxide, ozone and carbon monoxide were recorded in the Darwin region during the 2023 calendar year. Sufficient data was collected at all the stations to demonstrate compliance with the NEPM goals.

PM_{10}

To comply with the Ambient Air Quality NEPM 1-day standard for PM_{10} , no exceedance of the 1-day average standard of 50 mg/m^3 is allowed unless determined as an exceptional event.

The following exceedances of the 1-day standard were linked to exceptional events such as smoke from bushfires:

- Katherine recorded seven exceedances
- Palmerston recorded five exceedances
- Stokes Hill recorded three exceedances, and
- Winnellie recorded 35 exceedances.

PM_{10} 1-year averages of 17.1, 18.5, 20.9 and 29.5 mg/m^3 at Katherine, Palmerston, Stokes Hill and Winnellie respectively were recorded. All the stations met the Ambient Air Quality NEPM PM_{10} 1-year average standard of 25 mg/m^3 except Winnellie.

PM_{2.5}

To comply with the Ambient Air Quality NEPM 1-day standard for PM_{2.5}, no exceedances of the 1-day average standard of 25 mg/m³ is allowed, unless determined as an exceptional event.

The following exceedances of the 1-day standard were linked to exceptional events such as smoke from bushfires:

- Katherine recorded 16 exceedances
- Palmerston recorded 34 exceedances
- Stokes Hill recorded 3 exceedances, and
- Winnellie recorded 67 exceedances.

The PM_{2.5} 1-year averages of 8.4, 12.2, 9.2 and 17.0 mg/m³ at Katherine, Palmerston, Stokes Hill and Winnellie respectively were recorded. All stations exceeded the Ambient Air Quality NEPM PM_{2.5} 1-year average standard of 8 mg/m³.

Data from relevant monitoring stations are presented in tabular form below to enable an evaluation of whether the Ambient Air Quality NEPM standards and goal were met at each monitoring station. The standards, with accompanying definitions and explanations, appear in Schedule 2 of the Ambient Air Quality NEPM. There are no allowable exceedances for any of the standards, except for applicable exceptional events. Compliance with the Ambient Air Quality NEPM goal is achieved if the standard for a pollutant is not exceeded and at least 75% of data are captured.

An exceptional event rule may apply in the event of bushfires, jurisdiction-authorised hazard reduction burning, or continental scale windblown dust. This means that during these exceptional events, levels of fine and coarse particulate matter, as well as ozone that exceed the Ambient Air Quality NEPM standard, will be noted as exceedances but not counted as such for compliance purposes.

The data are presented in greater detail in <http://ntepa.webhop.net/NTEPA>. The monitoring plan for the Northern Territory is available from: https://ntepa.nt.gov.au/_data/assets/pdf_file/0010/284986/monitoringplan.pdf. Changes to the monitoring plan are updated in the annual Ambient Air Quality NEPM compliance reports.

CO Carbon monoxide

(NEPM standard 8 hours = 9.0ppm)

Station	Number of exceedances	NEPM goal compliance
Palmerston	0	Met
Stokes Hill	0	Met
Winnellie	0	Met

NO₂

Nitrogen Dioxide

(NEPM standard: 1 hour = 0.08ppm, 1 year = 0.015ppm)

Station	1 Hour		1 Year	
	Number of exceedances	NEPM goal compliance	Annual average (ppm)	NEPM goal compliance
Palmerston	0	Met	0.0017	Met
Stokes Hill	0	Met	0.0040	Met
Winnellie	0	Met	0.0020	Met

O₃

Ozone

(NEPM standard: 8 hours = 0.065ppm)

Station	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance
Palmerston	0	0	Met
Stokes Hill	0	0	Met
Winnellie	0	0	Met

SO₂

Sulfur dioxide

(NEPM standard: 1 hour = 0.10ppm, 1 day = 0.02ppm)

Station	1 hour		1 day	
	Number of exceedances	NEPM goal compliance	Number of exceedances	NEPM goal compliance
Palmerston	0	Met	0	Met
Stokes Hill	0	Met	0	Met
Winnellie	0	Met	0	Met

Pb

Lead

(NEPM standard 1 year = 0.50µg/m³)

No monitoring for lead is undertaken in the NT for NEPM reporting.

PM₁₀

Particles as PM₁₀

(NEPM standard 1 day = 50µg/m³, 1 year = 25µg/m³)

Station	1 Day			1 Year	
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance	Annual average (mg/m³)	NEPM goal compliance
Katherine	0	7	Met	17.1	Met
Palmerston	0	5	Met	18.5	Met
Stokes Hill	0	3	Met	20.9	Met
Winnellie	0	35	Met	29.5	Not met

APPENDIX 2

PM_{2.5}

Particles as PM_{2.5}

(NEPM standard 1 day = 25µg/m³, 1 year = 8µg/m³)

Station	1 Day			1 Year	
	Non-exceptional event exceedances	Exceptional event exceedances	NEPM goal compliance	Annual average (mg/m³)	NEPM goal compliance
Katherine	0	16	Met	8.4	Not met
Palmerston	0	34	Met	12.2	Not met
Stokes Hill	0	3	Met	9.2	Not met
Winnellie	0	67	Met	17.0	Not met

APPENDIX 3:

Jurisdictional reports on the implementation and effectiveness of the Assessment of Site Contamination National Environment Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for the Commonwealth by Environmental Contamination Advice and Standards (ECAS) Section for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Australian Government continues to implement the National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) administratively on Commonwealth land and in Commonwealth waters across Australia.

The ASC NEPM continues to provide a practical and nationally consistent framework for use by Australian Government agencies when assessing site contamination. The science-based approaches in the ASC NEPM support collaborative action across the Commonwealth, states and territories on contamination issues.

The PFAS National Environmental Management Plan (PFAS NEMP) assists landowners, site managers, communities and governments by providing consistent, risk-based guidance for managing PFAS contamination in Australia and New Zealand. Version 3.0 of the PFAS NEMP (PFAS NEMP 3.0) has been prepared and finalised by the National Chemicals Working Group (NCWG) of the Heads of EPA Australia and New Zealand (HEPA) through 2023–24. The draft final version of PFAS NEMP 3.0 was endorsed by the NCWG in June 2024. Endorsement of the PFAS NEMP 3.0 will be sought from HEPA and Environment Ministers in the second half of 2024.

The ASC NEPM is due for review to ensure that it remains based on best available science. A timeline for the review is yet to be determined.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ASC NEPM provides valuable technical guidance for assessing contaminated sites and includes ecological and human health investigation levels for listed toxicants.

It continues to provide consistent, effective, and efficient national guidance which contributes to achieving Australian Government goals, particularly in the context of the *Environment Protection and Biodiversity Conservation Act 1999*, the *National Environment Protection Council Act 1994* and the *National Environment Protection Measures (Implementation) Act 1998*. The ASC NEPM is widely used across Australia by industry, site owners, auditors and governments.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for New South Wales by the Hon Penny Sharpe MP, Minister for Environment, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NSW Environment Protection Authority (NSW EPA) considers the ASC NEPM when making decisions on whether contaminated land requires regulation under the *Contaminated Land Management Act 1997* (the Act) (NSW).

The ASC NEPM is approved as a statutory guideline by the NSW EPA under section 105 of the Act.

In 2023–24, the NSW EPA was notified of 40 contaminated sites, declared seven new sites to be significantly contaminated and removed declarations of significance from 13 sites after remediation – all under the Act.

The NSW EPA monitors and reviews the work of accredited site auditors, which includes checks on whether site audits have been undertaken with due regard to the ASC NEPM. In 2023–24 accredited site auditors issued 241 site audit statements following 191 statutory audits and 50 non-statutory audits under the Act.

Overall, the ASC NEPM has improved the efficiency of regulating contaminated sites in New South Wales (NSW).

The limited number of derived ecological investigation levels (EILs) adopted into the ASC NEPM continues to present challenges. While there is already a framework for deriving EILs outlined in ASC NEPM Schedule B5b, the NSW EPA sees a need for a clear and transparent process for adopting new EILs into the ASC NEPM.

The ASC NEPM refers extensively to the WA 2009 Guidelines for the assessment, remediation and management of asbestos contaminated sites. The NSW EPA has received several enquiries about whether the updated guidelines are applicable under the ASC NEPM. The guidelines are widely referenced in NSW by contaminated land consultants and were updated in 2021 by WA Department of Health.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The NSW EPA continues to update relevant legislative instruments and guidance to incorporate or refer to the 2013 amendments to the ASC NEPM.

Assessment and remediation of asbestos-contaminated sites is challenging in NSW. The Office of the NSW Chief Scientist and Engineer has recently reviewed management of asbestos in recovered fines and recovered materials for beneficial reuse in NSW and published their final report in February 2025. The NSW Government is currently considering this report.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Victoria, the ASC NEPM is implemented by the Environment Protection Regulations 2021, the Environment Reference Standard (ERS), and associated Environment Protection Authority (EPA Victoria) contaminated environments policies and guidance. The regulations and ERS came into force on 1 July 2021, as subordinate legislation to the *Environment Protection Act 2017* (EP Act) which applied from the same date.

The EP Act and Regulations introduce a range of significant changes to environmental protection laws. These include new obligations relating to the risks contaminated land poses to human health and the environment – a duty to manage contamination risks and a duty to notify EPA Victoria in certain circumstances. The ERS incorporates ASC NEPM standards and methodologies, including using investigation and screening levels as a proxy for indicators in the land use settings where no other published standards exist in Australia. EPA Victoria also contributed to Contaminated Environments Network activities and the update to the PFAS NEMP 3.0.

There continues to be a lack of guidance relating to contaminants of emerging concern. The upcoming review of the ASC NEPM should focus on changes to the instrument to allow for more frequent updates to appendices and supporting documentation as more information about these contaminants becomes known.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ASC NEPM continues to reinforce an existing framework for the management of contaminated sites in Victoria by providing consistent, consolidated guidance on the assessment of site contamination. Some improvements in the consistency of site assessment have resulted from use of the NEPM.

The NEPM continues to be well supported by environmental auditors and others in the site assessment industry.

We look forward to the upcoming review of the NEPM.

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure (NEPM) for Queensland by the Hon Leanne Linard MP, Minister for the Environment and the Great Barrier Reef, Minister for Science and Innovation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Department of Environment, Science and Innovation (DESI) is the administering authority for contaminated land in Queensland under the *Environmental Protection Act 1994* (EP Act).

The first step in the management of land which is contaminated or presumed to be contaminated in Queensland is the listing of the land on the Environmental Management Register (EMR). Land may be included on the EMR if a *notifiable activity* prescribed in Schedule 3 of the EP Act has been carried out on the land or the land is otherwise contaminated land. Land may be included on the Contaminated Land Register (CLR) after it is first included in the EMR, if it is necessary to take action to remediate the contaminated land to prevent serious environmental harm.

It is a requirement in Queensland under the EP Act for contaminated land investigation documents, which include site investigation reports, validation reports and draft site management plans, to be certified by an approved auditor prior to being submitted to DESI.

As at the end of the reporting period, Queensland had 27 contaminated land auditors approved to perform regulatory functions under section 568 of the EP Act.

The following relevant operational data associated with NEPM implementation were collected in the reporting period 2023–24:

- 22 sites were listed on the EMR for a hazardous contaminant
- 68 sites were listed on the EMR as a notifiable activity
- two sites were listed on the CLR
- DESI appointed one new contaminated land auditor during 2023–24 under the EP Act. Auditor applications are assessed by a DESI technical panel and approved by the delegate.
- 55 sites were finalised during the reporting period as being adequately assessed according to the NEPM, remediated and removed from the EMR
- 10 Site Management Plans were issued during the reporting period for development or use of a site, including those that were assessed and partially remediated with management of residual contamination for restricted land uses, and
- 178 permits were issued during the reporting period for the transport and disposal of contaminated soil in accordance with the EP Act.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ASC NEPM is a central reference document for the assessment of site contamination in Queensland. It is supported by the Queensland Government's guidelines on contaminated land and, in instances of surface and groundwater contamination, the Environmental Protection (Water and Wetland Biodiversity) Policy 2019. Its use is well established in contaminated land practices, leading to effective and practical site and development outcomes.

The use of the ASC NEPM by contaminated land practitioners has been recognised through the provisions of the operational policy and guidelines relating to assessment of contaminated land. All applications to DESI for statutory decisions about site contamination and changing the status of land on the EMR/CLR must demonstrate compliance with the current ASC NEPM in accordance with the EP Act.

The ASC NEPM continues to be used as an effective technical basis for site assessment for contaminated site professionals operating in Queensland.

The current ASC NEPM provides adequate guidance for selected types of contamination affecting terrestrial ecosystem, vapour flux, aesthetic and management impacts of petroleum hydrocarbon compounds in soil and groundwater, and fragments of cement bonded asbestos commonly encountered on contaminated sites. Statutory approval conditions related to land development require current NEPM adherence. The quality control procedures applied by DESI in internal review of assessment reports involve a review of the practitioner's adherence to the NEPM.

The establishment and implementation of the contaminated land auditor approval framework has successfully led to the certification of 27 auditors. The selection and approval of the persons to be auditors has been structured around Schedule B9 of the amended NEPM 1999.

Implementation of the general provisions of the ASC NEPM would be improved by additional guidance for particular common types of contamination. This includes fluorinated organic chemicals that are commonly encountered on contaminated sites.

It is considered that clarification of these issues in any future revision of the ASC NEPM would assist jurisdictions and practitioners.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Western Australia by the Department of Water and Environmental Regulation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Department of Water and Environmental Regulation (the department) is responsible for regulating the assessment of site contamination in Western Australia (WA) under the *Contaminated Sites Act 2003* (CS Act) and the Contaminated Sites Regulations 2006.

The ASC NEPM and other relevant technical guidelines are considered by the department in regulating contaminated sites, by contaminated sites auditors when conducting site audits, and by environmental consultants when assessing the risk to human health and the environment from known and suspected contaminated sites.

Compliance with the ASC NEPM and departmental guidelines is assessed in the site classification/reclassification process under the CS Act. The department classified 186 sites (including reclassifications) during the year, bringing the total number of classified sites to 4,744. As of 30 June 2024, 1,429 of these sites were listed on the public contaminated sites database and require remediation or restrictions on the use of the land and/or groundwater to protect public health and/or the environment and/or environmental values.

During the year ending 30 June 2024, 131 known or suspected contaminated sites were reported to the department, compared with 112 in the previous year.

In the same period, the department received 38 mandatory audit reports related to contaminated sites. These reports were submitted to comply with conditions imposed under a written law, generally a Ministerial or planning condition, or as part of the investigation or remediation of 'source' sites and their related 'affected' sites. In addition, the department received a further 20 voluntary audit reports or addendums.

Environmental practitioners' awareness of the amended ASC NEPM requirements is well established in WA and as a result, the assessment reports submitted to the department generally apply the guidance in an appropriate and consistent manner.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ASC NEPM continues to be used as the central technical reference document for site assessment by contaminated site professionals operating in Western Australia. The department regularly liaises with environmental regulators in other jurisdictions to ensure a nationally consistent approach can be developed for any new implementation issues as they arise.

To ensure that the ASC NEPM continues to provide authoritative guidance where site contamination has occurred, it is important that the guidance is periodically reviewed in the context of advances in scientific knowledge and updated technical information. The inclusion of relevant supporting material in the NEPM Tool Box assists in promoting a nationally consistent approach to emerging issues. The inclusion of new EILs in the Toolbox, derived using the NEPM methodology by appropriately qualified experts and endorsed by environmental regulators, would be consistent with the purpose and desired environmental outcome of the ASC NEPM.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for South Australia by the Hon Susan Close, Minister for Climate, Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The South Australian Environment Protection Authority (SA EPA) is responsible for administering the implementation of the ASC NEPM in South Australia (SA).

Site contamination is regulated by the SA EPA through a framework established under the *Environment Protection Act 1993* (the Act). The ASC NEPM informs the SA EPA's established processes for the assessment and remediation, as well as its risk-based regulatory decision making in relation to site contamination. The purpose and desired environmental outcome as well as the technical guidance of the ASC NEPM continues to be supported by the SA EPA through published guidelines and advice.

The SA EPA provides written and verbal guidance and information relating to site contamination and the ASC NEPM to the community, peak groups, industry, developers, site owners, planning authorities, site contamination consultants and accredited site contamination auditors. Selected guidelines are prescribed under the Act and must be considered in the regulation, auditing, remediation and assessment of site contamination by relevant persons including site contamination auditors and consultants.

During the 2023–24 reporting period, the SA EPA accepted 124 notifications of site contamination that affected or threatened underground water. In the same period, the SA EPA recorded 20 site contamination audit reports on the Public Register required to be kept by the SA EPA under the Act. There were 22 site contamination auditors accredited by the SA EPA.

Site contamination advice, guidelines and an index of site contamination information and auditor register are available on the SA EPA website (https://www.epa.sa.gov.au/environmental_info/site_contamination).

Actions supporting the implementation of the ASC NEPM in SA during the 2023–24 reporting period included the following:

- preparation of revised and updated guidance on the processes for assessment, remediation and auditing of site contamination
- establishment of groundwater prohibition areas to protect the community from exposure to contaminated groundwater. Work on further groundwater prohibition areas continues to be undertaken.

- implementing orphaned site contamination assessment to investigate identified risks to public health from legacy site contamination
- use of the EPA regulatory framework, statutory tools under the Act and a certified practitioner policy to support consistency and predictability in regulatory decision-making in relation to site contamination, and
- ongoing engagement with local communities impacted by site contamination.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The SA EPA continues to strengthen its systems, communications, guidance and tools to support the implementation of the ASC NEPM with consideration of the most current technical advice and best practice. Several important issues which influence the effectiveness of the ASC NEPM in SA include the following:

Environment Protection Policy

The SA EPA intends to prepare a draft Environment Protection (Site Contamination) Policy under the Act to give mandatory effect to the ASC NEPM (as amended in 2013).

Development and planning

The planning system has an important role in ensuring risk posed by known or suspected site contamination is appropriately considered when land use changes or land is otherwise developed.

National harmonisation of auditor accreditation

The national harmonisation of auditor accreditation requirements, consistent with Schedule B9 of the ASC NEPM, would ensure a consistent technical standard across all jurisdictions and provide benefits to future applicants through improved application processes. The SA EPA continues to strongly support the development and implementation of an agreed national approach. Jurisdictions continue to work collaboratively to develop a process for the national harmonisation of auditor accreditation.

Community and stakeholder engagement

The SA EPA continues to work to deliver open and effective engagement and the exchange of information with local communities affected by site contamination, and to ensure that appropriate engagement is planned and implemented by all parties through improved and updated guidance and access to specialist expertise within the SA EPA.

Review issues

The emergence of new issues where there may be limited or no specific guidance in the ASC NEPM continues to provide challenges in relation to the assessment of risk to human health and the environment. A review of the ASC NEPM is essential to ensure that it continues to:

- incorporate new scientific knowledge and updated technical information
- maintain credibility as the premier and authoritative source of technical guidance on health and environmental outcomes related to site contamination in Australia, and
- provide increased certainty that human health and the environment are adequately protected.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Tasmania by Hon Madeleine Ogilvie, Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The ASC NEPM automatically became Tasmanian state policy under the *State Policies and Projects Act 1993*. It is implemented in the following ways:

- Notices issued under the *Environmental Management and Pollution Control Act 1994* routinely require ASC NEPM compliant environmental site assessment.
- Works required pursuant to the Environmental Management and Pollution Control (Underground Petroleum Storage Systems) Regulations 2020 (UPSS Regulations) must comply with the ASC NEPM.
- Contaminated land issues that are being managed through a collaborative approach adopt the ASC NEPM as the primary guidance document for assessment of contaminated land.
- Tasmanian Planning Authorities may require ASC NEPM compliant assessments where land changes to a more sensitive use.
- The Potentially Contaminated Land Code applies to planning schemes and is being progressively implemented by Tasmanian Planning Authorities. The Code requires that environmental site assessments submitted to satisfy planning purposes are prepared in accordance with the ASC NEPM.
- Ensuring contaminated land site assessor's work is compliant with the NEPM is a key focus in Tasmania. To help improve work quality and outcomes in the assessment and management of site contamination, the Director, Environment Protection Authority (EPA Tasmania) requires that contaminated site assessments to be provided to the EPA Tasmania are completed by persons certified under an approved accreditation scheme.
- Regulatory effort on site contamination continues to be drawn to the management of pollution associated with service stations, although management of PFAS contamination is also an increasing focus. Through the implementation of UPSS Regulations, regulatory focus has shifted towards prevention of pollution arising from UPSS systems, however management of contaminated sites remains a priority.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

In Tasmania, the implementation of the ASC NEPM has helped contribute to a consistent and authoritative framework for the assessment and management of contaminated sites.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for the Australian Capital Territory by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Access Canberra, within the Chief Minister, Treasury and Economic Development Directorate, is responsible for the implementation and administration of the ASC NEPM. The Environment, Planning and Sustainable Development Directorate is responsible for the development of legislation and policy to ensure the ASC NEPM is appropriately implemented.

The provisions of the ASC NEPM are implemented under the *Environment Protection Act 1997* (the Act). The Contaminated Sites Environment Protection Policy 2017, made under the Act, is the primary policy document for the management of contaminated land in the Australian Capital Territory (ACT) and references the ASC NEPM as the key resource for assessing contaminated land in the ACT.

All contaminated site assessments undertaken in the ACT must be undertaken in accordance with the NEPM.

ACT practitioners continue to recommend changes to administrative processes in relation to ASC NEPM updates to allow for more timely inclusion of emerging contaminants of concern, relevant criteria, and guidance in relation to site assessment, remediation and ongoing management.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ASC NEPM continues to be an effective means of ensuring a nationally consistent approach to contamination assessment.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Assessment of Site Contamination) Measure for Northern Territory by the Minister for Environment, Climate Change and Water Security for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory (NT) continues to refer to and rely upon the ASC NEPM for the consistent and appropriate management of contaminated sites across the NT.

The NT Environment Protection Authority's (NT EPA) Northern Territory Contaminated Land Guideline (<https://ntepa.nt.gov.au/your-environment/contaminated-land/contaminated-land-databases-and-resources>) (NT CLG), published in 2017 references the ASC NEPM, creating an NT-referenced expectation of compliance with the ASC NEPM. The ASC NEPM and NT CLG are referenced in all statutory notices issued for contaminated land requiring investigation.

The NT EPA website (<https://ntepa.nt.gov.au/>) includes information on contaminated land investigation, management and remediation, as well as a public register of statutory notices issued requiring contaminated site audits, and the outputs of those audits. This assists the public, industry and other government bodies in understanding their duties relating to contaminated land in the NT in accordance with the ASC NEPM.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The ASC NEPM and the NT CLG facilitate better understanding of contaminated site assessment in the NT. They continue to help ensure that all parties are aware of the expectations and responsibilities within the site assessment process and when establishing potential risk to environmental and human health receptors.

It has provided a stable and defensible position for the NT to require developments and legacy contaminated sites to undertake contaminated land investigations where applicable, with the support of the ASC NEPM to clearly explain the need and minimum expectations.

Continued implementation of the ASC NEPM within the NT will ensure that all parties are clearly aware of the requirements of appropriately assessing contaminated or potentially contaminated sites. This is being progressed through the continuing development of the strategies mentioned in Part 1 as well as further interaction and consultation with planning authorities, professional organisations such as the Australian Land and Groundwater Association, consultants and the broader community. The requirement to use accredited contaminated site auditors to audit, amongst other factors, assists to increase compliance with ASC NEPM across the NT.

APPENDIX 4:

Jurisdictional reports on the implementation and effectiveness of the Diesel Vehicle Emissions National Environment Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure from the Commonwealth prepared by the Department of Climate Change, Energy, the Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The National Environment Protection (Diesel Vehicle Emissions) Measure 2001 (Diesel NEPM) aims to reduce exhaust emissions from diesel vehicles. It forms part of an integrated suite of national approaches to address emissions from diesel vehicles, including the Australian Design Rules and fuel quality standards, managed by the Commonwealth. The Diesel NEPM targets ‘in service’ vehicles (vehicles in use, after the point of sale), by supporting initiatives implemented by states and territories, such as smoky vehicle programs.

The Commonwealth implements the Diesel NEPM administratively and is not required to undertake direct activities to reduce exhaust emissions from diesel vehicles.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Following inter-jurisdictional consultations reviewing the need for the Diesel NEPM in 2018 and 2019, it was agreed that the Diesel NEPM fulfils a useful role but would benefit from further work. While there was support at that time for the Diesel NEPM being retained, its need and/or purpose will be considered further in the context of the Australian Government implementation of more stringent (Euro 6d equivalent) noxious emissions standards for light vehicles (passenger and commercial vehicles with gross vehicle mass up to 3.5 tonnes). Any potential changes to this NEPM would consider outcomes from the review of the *National Environment Protection Council Act 1994* and the Conran Review, as well as align with any proposed legislative amendments.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for New South Wales by the Hon Penny Sharpe MP, Minister for Climate Change, Minister for Energy, Minister for the Environment and Minister for Heritage, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In New South Wales (NSW), the *Protection of the Environment Operations Act 1997* (POEO Act) and the Protection of the Environment Operations (Clean Air) Regulation 2022 provide the regulatory framework for action to address emissions from the in-service diesel fleet.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The NSW Environment Protection Authority (NSW EPA), Transport for New South Wales (TfNSW) and the NSW Department of Climate Change, Energy, the Environment and Water (the department) continue to collect data on the diesel vehicle fleet and implement government programs to reduce diesel emissions. In 2023–24, NSW continued the Smoky Vehicles Program as well as the transition of the state’s bus fleet to electric under the Zero Emission buses transition plan.

NSW diesel fleet profile

TfNSW registration statistics data shows that during 2023–24 the total NSW vehicle fleet grew by 128,182 vehicles from 7,193,462 to 7,321,644 or 1.78%, while the number of diesel vehicles increased by 65,236 from 1,631,689 to 1,696,925 or 4.0% (see Table 1).

Table 1: Diesel vehicles as a proportion of the total fleet and diesel fleet

Total Number	June 2023	June 2024	Vehicle Change	% change
All Vehicles in fleet	7,193,462	7,321,644	128,182	1.78%
Diesel Vehicles in fleet	1,631,689	1,696,925	65,236	4.00%

Source: TfNSW registration snapshot report (June 2023, June 2024)

TfNSW registration data also shows that as of 30 June 2024 the proportion of diesel vehicles in the fleet constituted 23.18% of the total NSW fleet (see Table 2). This is compared to 22.68% in June 2023, 22.14% in June 2022, and 21.51% in June 2021. Light goods vehicles represent the largest diesel vehicle category with 11.11% of the total fleet and 47.94% of the diesel vehicle fleet.

Table 2: Diesel vehicles by category as a proportion of the total fleet and diesel fleet

Diesel vehicle categories				
NSW June 2024		No. in diesel category	Diesels in total NSW fleet	Vehicles by category in diesel fleet
Light vehicles	Light goods vehicle	813,486	11.11%	47.94%
	Passenger car	315,485	4.31%	18.59%
	Off-road vehicle	272,682	3.72%	16.07%
	Forward-cont. passenger vehicle	27,578	0.38%	1.63%
	Light omnibus	12,758	0.17%	0.75%
	Light plant	780	0.01%	0.05%
	Motor cycle	43	0.00%	0.00%
	Light trailer	7	0.00%	0.00%
	Other	5	0.00%	0.00%
Heavy vehicles	Medium goods vehicle	154,473	2.11%	9.10%
	Heavy goods vehicle	80,887	1.10%	4.77%
	Heavy omnibus	12,266	0.17%	0.72%
	Heavy plant	6,475	0.09%	0.38%
Total		1,696,925	23.18%	100%

Source: TfNSW registration snapshot report (June 2024)

Diesel vehicle emissions estimates

Diesel vehicles made up 23.18% of the total NSW fleet at 30 June 2024, however, they contribute disproportionately to the amount of air pollution produced by on-road mobile sources.

On-road mobile sources were estimated to contribute approximately 55% oxides of nitrogen (NO_x) and 13% of fine particle (particulate matter 2.5 (PM_{2.5})) emissions from all anthropogenic sources in the Sydney¹ region in 2013.

The latest data from the Australian Infrastructure and Transport Statistics Yearbook 2023 (<https://www.bitre.gov.au/publications/2023/australian-infrastructure-and-transport-statistics-yearbook-2023>) shows that the total vehicle kilometres travelled in NSW increased by approximately 9% in 2022–23 when compared to 2021–22. The total vehicle distance travelled also continues to increase for light goods vehicles and heavy vehicle categories.

However, the total per kilometre PM_{2.5} and NO_x exhaust emissions from diesel vehicles is estimated to have continued to decrease since 2011, following the introduction of more stringent vehicle emissions regulations combined with fleet turnover.

1 'Sydney region' is as defined in the Air Emissions Inventory for the NSW Greater Metropolitan Region, which can be found on the [NSW EPA's](#) website.

National on-road vehicle emission and fuel standards

The Commonwealth Government is responsible for fuel quality and vehicle emission standards for new on-road vehicles.

The NSW Government has consistently supported harmonisation of national vehicle emission standards with Euro standards, together with tightening of fuel standards to enable adoption of control technologies to meet the tighter vehicle standards. Over 2023–24, the department continued to support early adoption of the Euro 6/VI emissions standards for diesel vehicles and enabling changes to fuel quality standards.

In December 2023, the Commonwealth Government announced more stringent (Euro 6d equivalent) noxious emissions standards for new light vehicles (passenger and commercial vehicles with gross vehicle mass up to 3.5 tonnes) both petrol and diesel vehicles. These standards set stricter limits on the levels of noxious emissions (such as carbon monoxide, hydrocarbons, oxides of nitrogen and particulates) produced by new road vehicles supplied to Australia. The new vehicle standards commence from 1 December 2025 for all new model vehicles, and from 1 July 2028 for all new vehicles.

Further information on the new vehicle standards is available on the Commonwealth Department of Infrastructure (<http://www.infrastructure.gov.au/questions-and-answers-new-adrs-light-vehicle-noxious-emissions>) website.

National Clean Air Agreement – Evaluating the potential for a national approach to non-road diesel engine emissions

Under the National Clean Air Agreement (<https://www.dcceew.gov.au/environment/protection/air-quality/national-clean-air-agreement/evaluation-non-road-diesel-engine-emissions>), the department and the Commonwealth Department of Climate Change, Energy, the Environment and Water continued to evaluate the potential for a national approach to manage non-road diesel engine emissions in Australia.

Non-road diesel engines are used in a wide range of industries and applications, including construction, mining, manufacturing, airport services, agriculture and marine sectors. Diesel engine exhaust contains high levels of pollutants, including fine particles (PM_{2.5}) and NO_x, and has been declared as carcinogenic by the World Health Organisation's International Agency for Research on Cancer (https://www.iarc.who.int/wp-content/uploads/2018/07/pr213_E.pdf). It contributes to premature deaths and health related problems, such as cardiovascular, cardiopulmonary and respiratory diseases, and lung cancer.

Unlike other countries (including the United States, the European Union, China, India, Brazil and Japan), and unlike for on-road (passenger) vehicles in Australia, there are currently no national standards or approaches to manage emissions from non-road diesel engines in Australia.

In 2023–24, the department continued to work with the Commonwealth Department of Climate Change, Energy, the Environment and Water on a cost benefit analysis examining the impact of options to manage emissions from non-road diesel engines. The cost benefit analysis report was published in 2023 and based on the findings, progressed to an impact analysis process. Public consultation of the draft impact analysis was undertaken from 24 May to 14 July 2023. Further information on the project can be found on the National Clean Air Agreement website (<https://www.dcceew.gov.au/environment/protection/air-quality/national-clean-air-agreement/evaluation-non-road-diesel-engine-emissions>).

Smoky vehicles program

In NSW, it is an offence for a vehicle to emit excessive air impurities for a continuous period of more than 10 seconds. Penalty notices may be issued to the registered owners of vehicles emitting excessive air impurities. The public can also report smoky vehicles via the NSW EPA's Environment Line website or mobile phone application.

In 2023–24, more than 2,500 smoky vehicle reports were received from the public, a monthly average of over 200 reports, indicating a high level of awareness in the community of the unacceptability of excessive visible emissions. The NSW EPA issued 1,257 advisory letters based on public reports, of which 1,032 advisory letters were to diesel vehicle owners.

Annual statistics for smoky diesel vehicles

Table 3 shows a breakdown of the percentage of diesel vehicle owners that received advisory letters as a proportion of all vehicles fined.

Table 3: Smoky vehicles – actions taken

	2011–12	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
All vehicles – received advisory or warning letter	556	552	891	812	782	957	681	835	804	810	675	596	1,257
Diesel vehicles – received advisory or warning letter	96	74	462	423	433	475	438	623	621	628	566	497	1,032
Percentage that were diesel vehicles	17%	13%	52%	52%	55%	50%	64%	75%	77%	78%	84%	83%	82%

Other programs

Zero emissions buses transition plan

The NSW Government's Net Zero Plan Stage 1: 2020–30, and NSW Electric Vehicle Strategy identified commitments to replace the State's 8,000 plus diesel and compressed natural gas bus fleet with zero emission buses. The Zero Emission Buses program, a key net zero initiative, will transition the NSW bus fleet to zero emission buses powered by renewable energy.

NSW Government funding of \$3 billion is supporting delivery of the first stage of the program in Greater Sydney, which includes purchasing more than 1,200 new buses, converting 11 existing depots to accommodate electric charging and building a new battery electric bus depot at Macquarie Park.

On-road trials commenced in April 2024, as part of a \$25 million project to look at how zero emission bus technology can be delivered to NSW regions. Over the course of the trial, four battery electric zero emission buses or ZEBs will service 30 schools across Armidale and Uralla and the Tweed.

The NSW Government will transition the entire 8,000 plus bus fleet to zero emissions technology by 2035 in Greater Sydney, Outer Metro regions by 2040 and regional NSW by 2047.

More information: <https://www.transport.nsw.gov.au/projects/current-projects/zero-emission-buses>.

Construction industry

In 2023–24, the department continued to administer the NSW Government Resource Efficiency Policy (GREP) (<https://www.environment.nsw.gov.au/research-and-publications/publications-search/nsw-government-resource-efficiency-policy>). The GREP includes requirements to address non-road diesel engine emissions through government procurement and contracts.

For non-road diesel engines, government agencies must continue to comply with EU or US EPA standards when purchasing or leasing such equipment. Agencies must consider air emissions from contractor-supplied equipment in tender processes for all new buildings and infrastructure as well as upgrades to existing buildings and infrastructure over \$10 million. The tender selection process either incorporates a weighting for air emission standards in conjunction with other environmental considerations, or a statement by contractors on how they will reduce emissions from their equipment accompanied with their equipment's air emissions data.

Locomotives

Amendments to the POEO Act to regulate railway rolling stock operations, in addition to railway infrastructure operators, came into effect in July 2019. The regulatory amendments mean that operators of rolling stock are required to hold an environment protection licence and are directly accountable for their environmental performance, including management of air emissions.

The NSW EPA issued the new rolling stock operator licences in August 2020. The requirements in the licences are for new locomotives to meet US Tier 2 particulate matter emissions. There are no air emission limits for locomotives already operating on the rail network. The licences, however, do include operating conditions that seek to minimise impacts on air quality through idling. In 2023–24, the NSW EPA continued to work with the rail industry to progressively reduce locomotive air emissions.

Non-road diesel emissions at coal mines

The NSW EPA's Climate Change Action Plan 2022–26 (<https://www.epa.nsw.gov.au/your-environment/climate-change/policy-and-action-plan>) includes an action for all new large non-road diesel machinery at NSW open-cut coal mines to be US Tier 4 or higher. This will be implemented under the *Protection of the Environment Operations Act 1997* Environmental Protection Licensing framework. In 2023–24, the NSW EPA continued to review the issues raised by industry and will consult again with industry before progressing proposed licence variations.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Diesel NEPM in Victoria is administered and implemented by the Environment Protection Regulations 2021. These Regulations came into force on 1 July 2021, as subordinate legislation to the *Environment Protection Act 2017* which applied from the same date.

With the introduction of the Act, environment protection law shifted to a prevention-based approach. Central to this approach is the general environment duty. This is a shared responsibility to prevent harm to the environment and means all Victorians must each take reasonable steps to stop harm, and do so before damage is done.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Environment Protection Authority Victoria (EPA Victoria) has run a public smoky vehicle reporting program for many years. The numbers of vehicles reported provide some insight into the level of community awareness and concern surrounding diesel vehicle exhaust emissions.

The number of smoky vehicles reported over the last five years has been increasing. In contrast, over the past five years, the number of diesel vehicles reported as smoky has steadily declined. This may indicate that there are fewer diesel vehicles out of compliance with in-service emissions standards.

There is no current information available on the level of diesel vehicle emissions to ambient air. Retail diesel fuel sales in Victoria have risen by 3.2% ([energy.gov.au](https://www.energy.gov.au)) and the number of diesel vehicles registered in Victoria has risen by 6% ([abs.gov.au](https://www.abs.gov.au)). Fuel sales had rebounded from the previous year's COVID-affected reduction. Emissions from diesel engines are likely to have gone up due to the increased fuel consumption, outweighing any gains from engine efficiency from one year to the next.

Smoky vehicles program

Victoria's public smoky vehicle reporting program allows members of the public to report vehicles (diesel, petrol or LPG) identified as continuously emitting smoke for more than 10 seconds to EPA Victoria. EPA Victoria also operates an official smoky vehicle enforcement program where EPA Victoria or Victoria Police officers can report vehicles using the '10-second' smoke rule.

As a result of these reports, the owners of the offending vehicles are informed in writing of the report and are requested to have the problem fixed. They are also informed about the penalties that may apply if they are identified by officers from EPA Victoria, VicRoads or the Police. From 1 July 2024, EPA Victoria will commence issuing enforceable notices to vehicle owners who have been reported by EPA Victoria or Police, requiring them to have their vehicle tested, and to provide evidence of compliance in relation to smoke emission regulations. Failing compliance with the notice, vehicle owners will be issued with an infringement.

Table 4 indicates the number of smoky vehicle letters being sent from the public and official reporting programs over the past ten years. Generally, there was a slow downward trend between 2014/15 and 2021/22 however these numbers have increased in the last couple of years.

Table 4: Number of cautionary letters issued under the smoky vehicles reporting program from public and official reports over the last 10 years

From 2019/20 the streams are not separated.

Year	2014–15	2015–16	2016–17	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	2023–24
Number of letters from public reports	2,124	1,901	1,815	1,777	842	–	–	–	–	–
Number of letters from official reports	193	95	196	459	198	–	–	–	–	–
Total number of letters						973	0	264	2,395	3,017

* Note: These numbers include all vehicles in the official program, not just diesel-engine vehicles.

Diesel vehicle emission testing and repair programs

Victoria has not had an emission testing and repair program since 2016.

Audited maintenance programs for diesel vehicles

Victoria does not have an audited maintenance program for diesel vehicles.

Diesel vehicle retrofit programs

Victoria does not have a diesel retrofit program.

Other programs

Not applicable.

Queensland

Report to the NEPC on the implementation of the National Environment Protection Diesel Vehicle Emissions (DVE) Measure for Queensland by the Hon Bart Mellish MP, Minister for Transport and Main Roads, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

There have been some changes in the recording of smoky vehicles due to the introduction of the National Heavy Vehicle Regulator (NHVR) and the more recent associated functional re-alignment the national services transition.

The Department of Transport and Main Roads (TMR) is now only recording light vehicles reported through the smoky vehicle online reporting service, with the NHVR overseeing all heavy vehicle smoke related issues.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Smoky vehicles program

The Smoky Vehicle Online Reporting Program offers the public a platform to report vehicles that surpass the 10-second smoke rule, mandating compliance with specific smoke opacity standards. Vehicles breaching this rule emit smoke continuously for 10 seconds or more.

Upon matching reported data with provided information, a notification letter is sent to the registered owner, highlighting the report, and suggesting methods to identify and rectify the issue. If a vehicle is reported three times within a four-month span, the owner receives a Present Vehicle Order (PVO), and a Transport Inspector will inspect their vehicle for potential defects.

For the period 1 July 2023 to 30 June 2024 there were a total of 1,453 vehicles reported through the TMR smoky vehicle online portal. Of those reported 618 were diesel powered vehicles. There were 15 No Further Action (NFA) advice notices, while 612 vehicle owners received an initial warning letter and 26 received a second letter. There were 11 unsubstantiated complaints and no PVO's were sent during the reporting period although the distribution between heavy and light vehicles is not known.

Diesel vehicle emission testing and repair programs

Queensland has no testing and repair programs. The Brisbane City Council no longer operates the DT80 testing equipment for heavy vehicles and has not done so since 2021. They have no other DVE testing equipment.

Audited maintenance programs for diesel vehicles

TMR administers a mandatory scheduled inspection program for all registered heavy vehicles in Queensland. These inspections occur every 12 months, coinciding with the registration renewal process. Public passenger vehicles, such as buses, undergo inspections every six months.

Total diesel-powered heavy vehicles inspected in Queensland in the reporting period equalled 36,794. Of those vehicles inspected 6,945 were public transit vehicles while 29,849 were privately owned diesel-powered heavy vehicles. Most vehicles ran on diesel, however eight of those inspected were powered by a mix of diesel and electric, or diesel and gas. These inspections play a crucial role in identifying and rectifying issues related to defective engine performance, exhaust and muffler problems, all of which contribute to problematic emissions.

Audited maintenance programs for diesel vehicles

The Queensland Government encourages owners and operators of heavy vehicles to participate in the National Heavy Vehicle Accreditation Scheme (NHVAS), now administered by the National Heavy Vehicle Regulator. The scheme gives heavy vehicle owners more responsibility for servicing their vehicles and ensuring they are compliant with maintenance accreditation requirements.

Compliance with an accredited maintenance management scheme provides a concession to the requirement for an annual inspection in Queensland as well as the requirement to provide a Certificate of Inspection prior to registering vehicles.

There are 56,796 Queensland registered heavy vehicles currently participating in the NHVAS maintenance scheme and 1,145 operators accredited in Queensland, representing a 4.19% increase on last year's NHVAS accreditations. Most vehicles participating in the NHVAS use diesel fuel.

There are 1,287 operators and 13,501 heavy vehicles operating under the NHVAS mass scheme which allows the vehicles to carry higher loads in exchange for being tracked to ensure drivers remain on specified routes. These vehicles are larger but make fewer trips and improve productivity and fuel efficiency, while reducing congestion.

Diesel vehicle retrofit programs

Queensland has no diesel retrofit programs at this time.

Other programs

There are no other specific programs which aim to reduce in service diesel vehicle emissions in Queensland.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Western Australia by the Department of Water and Environmental Regulation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia (WA), the Diesel NEPM is implemented by the Department of Water and Environmental Regulation (DWER) under the *National Environment Protection Council (WA) Act 1996* and the *Western Australian Environmental Protection (WA) Act 1986*.

Vehicle emissions in WA are regulated under the *Road Traffic (Vehicles) Act 2012* and Road Traffic (Vehicles) Regulations 2014, which are administered by the Department of Transport (DoT). The '10-second rule' in the regulations is the primary mechanism used to target visually polluting diesel and petrol vehicles.

The WA Government's Perth Air Quality Management Plan (AQMP) aims to ensure that clean air is achieved and maintained throughout the Perth metropolitan region. The AQMP identifies that the management of emissions from in-service petrol and diesel vehicles is critical to achieving clean air, and contains a range of initiatives that target on-road vehicles. The implementation of vehicle emissions reduction initiatives in the AQMP is largely complementary to the outcomes of the Diesel NEPM.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The implementation of vehicle emissions reduction initiatives of the AQMP and the CleanRun Program are the foundation of vehicle emissions reduction strategies undertaken by DWER. DWER continues to work with DoT, government agencies and industry associations to investigate and implement motor vehicle related policies and management actions to reduce the impact of diesel vehicle emission in WA.

Smoky Vehicles Program

In 2023–24, the Smoky Vehicle Reporting Program (SVRP) received 1,077 valid reports, which is an average of 90 reports per month, and was a 44% increase in reports from 2022–23. This was the largest report increase reported by the program in recent history. A factor that may have contributed to the increase was a revision to the reporting form in January 2024 that allowed further details to be recorded on the characteristics of the offending vehicles. This may have encouraged reporters who were uncertain whether their observations were valid or not.

Prior to contacting the owners of reported vehicles, DWER and DoT verify reports by comparing reported vehicle details against the DoT vehicle registration database, discarding reports if details do not sufficiently match. Six hundred and sixty advisory letters were sent to reported vehicle owners in 2023–24 (61% valid report rate).

Table 5 summarises the responses received for vehicles reported from July 2023 to June 2024 and compares them to previous years.

Table 5: Responses from owners of reported vehicles

Response	2017–2018	2018–2019	2019–2020	2020–2021	2021–2022	2022–2023	2023–2024
Reports received	415	482	579	685	796	750	1,077
Letters sent	353	417	505	576	666	640	660
Responses received	191	225	265	216 ²	317	281	295
Vehicle repaired	129 (67.5%)	142 (63.1%)	174 (65.4%)	133 (61.6%)	206 (65.0%)	160 (56.9%)	194 (65.8%)
Vehicle does not smoke	49 (25.7%)	67 (29.8%)	71 (26.7%)	68 (31.5%)	98 (30.9%)	100 (35.6%)	80 (27.1%)
Can't afford to repair	0 (0%)	0 (0.0%)	1 (0.4%)	0 (0.0%)	3 (0.9%)	2 (0.7%)	5 (1.7%)
Disposed of vehicle	5 (2.6%)	7 (3.1%)	12 (4.5%)	6 (2.8%)	6 (1.9%)	11 (3.9%)	11 (3.7%)
Wrong vehicle	1 (0.5%)	1 (0.4%)	2 (0.8%)	2 (0.9%)	3 (0.9%)	4 (1.4%)	4 (1.4%)
Other	7 (3.7%)	8 (3.6%)	6 (2.3%)	7 (3.2%)	1 (0.3%)	5 (1.8%)	3 (1.0%)
Petrol	66 (20.2%)	70 (16.8%)	95 (17.5%)	122 (19.1%)	99 (13.5%)	80 (11.6%)	90 (12.0%)
Diesel	259 (79.4%)	345 (82.7%)	443 (81.6%)	510 (79.7%)	633 (86.0%)	607 (87.7%)	651 (86.9%)
LPG	0 (0%)	2 (0.5%)	5 (0.9%)	8 (1.3%)	4 (0.5%)	5 (0.7%)	8 (1.1%)

Diesel vehicles continue to represent the most significant vehicle group reported to the program.

There were 74 vehicles reported more than once in 2023–24, seven of which were reported more than twice. Of the vehicles reported more than once, three vehicle owners responded to the advisory letters sent.

Annual reporting on smoky vehicle reporting is published on the DWER (<https://www.wa.gov.au/government/document-collections/smoky-vehicle-reporting-program>) website, summarising program data and analysis of vehicle trends observed.

Diesel vehicle emission testing and repair programs

The WA Government does not undertake diesel vehicle emission testing and repair programs.

² Responses from July mailout event were still being received at the time of this report being prepared. It is likely this figure will be higher, but it is not expected to be higher than 2019–20. Response percentages are not expected to significantly change.

Audited maintenance programs for diesel vehicles

The National Heavy Vehicle Accreditation Scheme (NHVAS) encourages heavy vehicle operators to take responsibility for servicing their vehicles and ensuring vehicles are compliant with scheme accreditation requirements.

In WA, operators of certain types of heavy vehicles must become accredited to gain a permit or notice from Main Roads Western Australia. The majority of these vehicles use diesel as their primary fuel source. Western Australian Heavy Vehicle Accreditation (WAHVA) is mandatory for individuals and organisations which require a permit or notice to perform any transport task as part of a commercial business or for profit within WA, including interstate operators.

There are currently four accreditation modules: Accreditation Common Standards, Fatigue Management, Maintenance Management, and Dimension and Loading. An optional module, Mass Management, is also available. Accredited operators must ensure their vehicles are maintained and meet all relevant safety standards. A record of the maintenance and servicing work done to each vehicle must be kept to prove the vehicles are safe at all times.

Compliance and enforcement activities are key factors in ensuring effective and safe management of heavy vehicles on the road network. Transport inspectors in WA are authorised to intercept and inspect vehicles for roadworthiness, load security and vehicle licensing conditions. Compliance also plays an important role in educating and working with the transport industry and other agencies as well as stakeholders to improve standards.

Diesel vehicle retrofit programs

The WA Government does not operate a diesel vehicle retrofit program.

Other programs

There are no other programs currently run by the WA Government relevant to the Diesel NEPM.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for South Australia by the Hon Susan Close, Minister for Climate, Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia (SA), the Diesel NEPM became an Environment Protection Policy under the repealed section 28A of the *Environment Protection Act 1993*. Section 4 of the transitional provisions in the *Environment Protection (Miscellaneous) Amendment Act 2005*, Schedule 1, enables the continued operation of the Diesel NEPM as an Environment Protection Policy.

The SA Government made provision to regulate emissions from diesel vehicles under the Road Traffic (Light Vehicle Standards) Rules 2018: Rule 131 – Exhaust Emissions – diesel-powered vehicles. Rule 131(4) sets emission limits for NO_x and particulate matter for diesel vehicles that are in service.

The 10-second smoke rule regulated as Rule 130 in the Road Traffic (Light Vehicle Standards) Rules 2018 has also been applied as an in-service standard towards the achievement of Diesel NEPM outcomes.

National Heavy Vehicle Law was enacted in SA in 2013, including adoption of the national regulations. Rule 96 of the Heavy Vehicle (Vehicle Standards) Regulation continues the existing diesel emission standard for SA heavy vehicles (in addition to requiring heavy vehicles in each participating jurisdiction to comply with the standard).

Compliance with Rules 147A and 96 was previously tested at the Regency Park Vehicle Inspection Emissions Test Facility. However, the facility has now been closed due to high maintenance costs and low throughput of vehicles.

SA Police patrols are the primary means for the detection of vehicles exceeding the 10-second smoke rule. During the reporting period, no diesel vehicles were reported by SA Police to the Department for Infrastructure and Transport (DIT) for the assessment of corrective actions. Vehicle inspectors also look for excessive smoke, missing or inoperative particulate filters and empty AdBlue tanks. They can order corrective action where necessary.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Unlike most states, SA does not conduct a 'Dob in a Smoky Vehicle' program, where members of the public can report a smoky vehicle on-line with follow-action in the form of a letter of concern sent to the registered owner of the vehicle. In SA, it is expected that the matter be reported directly to the police. There is evidence of occasional reports being made, but without firsthand evidence of non-compliance, there is some reluctance by police to allocate resources to investigate. There is no reporting by police of any complaints made.

Since the closure of the Regency Park Emissions Test Facility during the 2013–14 financial year, due to high maintenance costs and ongoing reliability issues, there has been no means to accurately test diesel emissions in SA other than by visual assessment.

In the absence of effective reporting, vehicle testing and compliance mechanisms, this program has become ineffective in SA.

Smoky vehicles program

Not applicable.

Diesel vehicle emission testing and repair programs

Not applicable.

Audited maintenance programs for diesel vehicles

Not applicable.

Diesel vehicle retrofit programs

Not applicable.

Other programs

In 2019, the Department of Infrastructure and Transport (DIT) introduced a new specification, *PC-ST2 Sustainability in Construction*, which includes requirements for DIT contractors to reduce the environmental as well as community/workforce health impacts of vehicles, plant and equipment emissions. The clause includes requirements for contractors to:

- purchase or hire mobile non-road diesel plant and equipment that complies with highest practicable EU or US EPA emissions standards (for plant over 19kW)
- require sub-contractors for larger projects (i.e., >\$100 million) to provide information on the emissions standards of the mobile non-road diesel plant and equipment they propose to use on site, and apply a weighting for air emission standards (in conjunction with other environmental considerations) in tender selection processes (for plant over 19kW)
- ensure engines are correctly repaired and regularly serviced to ensure efficiency and to prevent/minimise spills and leaks
- restrict unnecessary idling time of vehicles, plant and equipment
- improve an engine's emission performance by fitting it with an anti-pollution control device, and
- ensure fuel conforms with relevant quality standards.

These requirements are also reflected in DIT's Road Maintenance Contracts.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for Tasmania by Hon Madeleine Ogilvie, Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Under section 12A of the *Tasmanian State Policies and Projects Act 1993*, National Environmental Protection Measures made under section 14(1) of the *National Environment Protection Council (Tasmania) Act 1995* are taken to be state policies which have been passed by both Houses of Parliament.

In 2006 and 2007, a contract between the then Department of Tourism, Arts and the Environment and the Commonwealth Department of the Environment and Water Resources facilitated the funding of a series of diesel engine skill gap training workshops in the south, north and northwest of the state. Funding provided for the purchase of diesel emissions testing equipment and the delivery of free three-hour training courses for 321 qualified mechanics.

Since the end of this program and prior to 2020, TasTAFE continued to utilise this equipment in training courses for automotive apprentices. The equipment was used in training activities to test the operation and repairs of emission controls /devices on vehicles. Prior to 2019, the equipment was also used to check the emission outputs of LNG and CNG conversions. In 2020, the emissions testing competency was removed from the training requirements for the Light Vehicle Mechanical Technology (AUR30620) qualification. Consequently, the diesel emissions testing equipment became redundant to the training requirements of TasTAFE. Emissions testing for LNG/CNG heavy vehicle conversions are no longer undertaken as the market for LNG and CNG within the heavy vehicle road transport industry in Tasmania has significantly declined due in part to improved diesel engine design and associated emissions control systems.

The diesel emissions testing equipment has not been used for commercial or training purposes in the current period.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

As of 30 June 2024, there were 16,587 diesel powered heavy vehicles (that is vehicles over 4.5 tonnes) and 171,435 diesel powered light vehicles registered in the state. This represents an increase of 1.1% and an increase of 2.7 % respectively since 1 July 2023. Of the total of 716,731 vehicles registered in Tasmania on 30 June 2024, 26.2% were diesel powered.

Smoky vehicles program

The Department of State Growth (the department) maintains a strong focus on road safety and does not actively target vehicle emissions as part of light vehicle compliance and enforcement activities. The National Heavy Vehicle Regulator is responsible for vehicle standards applicable to all heavy vehicles. The department does not possess diesel vehicle emission measurement facilities. However, standards applicable to light and heavy vehicles include 'the vehicle must not emit visible emissions for a continuous period of at least 10 seconds' also known as the 10-second rule. When issued with a Defect Notice and/or Traffic Infringement Notice by Authorised Officers, remedial action and subsequent inspection by an Approved Vehicle Examiner is required to enable the defective vehicle status to be cleared from the registry.

Diesel vehicle emissions testing and repair programs

The department does not possess vehicle emissions measurement facilities and does not compile records of vehicle testing or repairs.

Audited maintenance programs for diesel vehicles

There is no audited maintenance program specific to diesel vehicle emissions in Tasmania. However, the National Heavy Vehicle Regulator now administers the National Heavy Vehicle Accreditation Scheme (previously performed individually by jurisdictions). Heavy Vehicle Maintenance Management Accreditation is one module within this scheme that encourages heavy vehicle operators to take more responsibility for maintaining their vehicles correctly and ensuring that they are always in good mechanical condition, compliant with relevant vehicle standards and operating efficiently. Fuel quality and fault repair activity standards apply in this module. Scheduled compliance audits and triggered audits are requirements of this accreditation.

Diesel vehicle retrofit programs

Statistics are not compiled on diesel vehicle retrofitting.

Other programs

There were no other programs implemented during the reporting year to manage emissions from in-service diesel vehicles.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for the Australian Capital Territory by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The ACT's Road Transport (Vehicle Registration) Regulation 2000 requires emission control systems supplied by vehicle manufacturers to remain fitted and functional. This is consistent with the goals in the Diesel NEPM.

Aggregate air quality data indicates that air pollution caused by diesel emissions is not a significant contributor to the urban airshed in the Australian Capital Territory (ACT). Therefore, no actions are taken because of measures against the Diesel NEPM.

Notwithstanding the above, the ACT has introduced several measures consistent with achieving the goals of the Diesel NEPM, including:

- adoption of the Australian Design Rules as requirements under Schedule 1 of the Road Transport (Vehicle Registration) Regulation 2000
- requiring emission control equipment fitted to a vehicle to remain fitted and be maintained in a condition to ensure it operates essentially in accordance with the system's original design under Schedule 1 of the Road Transport (Vehicle Registration) Regulation 2000
- implementation of random on-road and car park inspections
- implementation of arrangements enabling members of the community to report vehicles that they consider unroadworthy, including those that emit excessive smoke, and enabling appropriate action against those vehicles
- ACT Government subscription to Greenfleet for the planting of trees to offset its vehicles fleet emissions
- supporting ACT representation on the Fuel Standards Consultative Committee, and
- incentivising the uptake of zero/low emission light vehicles through concessions to registration fees. The ACT is also transitioning to emissions-based registration arrangements for light vehicles, commencing on 1 July 2024.

While statistics on the number of inspections, defects and warnings are collected, currently the reasons for these enforcement actions are not collated. In general, ACT inspectors would not normally issue an infringement notice to a vehicle emitting excessive smoke. The ACT has found it more beneficial to require a vehicle to be repaired than to impose a monetary penalty. Issuing a monetary penalty is likely to delay repairs or make it more difficult for owners to repair their vehicles.

In addition, the Transport Canberra and City Services Directorate (TCCS) took delivery of six Euro VI diesel buses and eight battery electric buses in 2023–24 replacing 11 aged non-Euro VI compliant diesel buses. The number of Euro VI buses in the TC fleet now stands at 193. In addition, 62 CNG buses purchased between 2004 and 2008 remain in the fleet. There are a total of 368 diesel buses in the TCCS fleet.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

As indicated above, the ACT airshed quality does not approach the Diesel NEPM trigger points and therefore no action is taken within the ACT as a result. As such, the Diesel NEPM has limited effectiveness within the ACT.

Therefore, the programs identified under the Diesel NEPM are not applicable within the ACT. Any actions taken in relation to diesel vehicles are because of the overriding road transport laws that apply standards to individual vehicles based on type, age and roadworthiness.

Smoky vehicles program

Not applicable.

Diesel vehicle emission testing and repair programs

Not applicable.

Audited maintenance programs for diesel vehicles

Not applicable.

Diesel vehicle retrofit programs

Not applicable.

Other programs

Not applicable.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Diesel Vehicle Emissions) Measure for the Northern Territory by the Hon Joshua Burgoyne Minister Lands, Planning and Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Aggregate data on diesel emissions for the Northern Territory (NT) is not available. However, air quality studies and the National Pollutant Inventory indicate that motor vehicle traffic is not a major contributor to air emissions in the larger urban areas.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Several initiatives have been implemented to control diesel vehicle emissions in the NT. Vehicle standards are enforced through the general provisions of the NT *Motor Vehicles Act 1949* and the Australian Vehicle Standard Rules, which require all vehicles to comply with Australian Design Rules when in service.

In the NT, there are 73,953 diesel vehicles registered, representing around 45% of the total vehicle fleet, which is much higher than the national proportion of diesel vehicles in the vehicle fleet (approximately 29%). Bureau of Infrastructure and Transport Research Economics data indicates that diesel vehicles registered in the NT represent approximately 1.2% of all diesel vehicles in Australia.

Of the four major regions in the territory, 71% of all diesel vehicles are registered in the Darwin region, with 14% in Alice Springs, 8.2% in Katherine and 1.7% in Tennant Creek.

In the Darwin region, approximately 42.5% of all registered vehicles are diesels, which is lower than in Alice Springs where diesels represent 47.5% of the total vehicle fleet. In Katherine and Tennant Creek, the diesel portion of the total fleet is 62.5% and 62.7% respectively, indicating a higher reliance on diesel vehicles in remote areas.

Of the heavy vehicle diesels registered in the NT, 63.7% are registered in the Darwin region, 18.8% in Alice Springs and 9.7% in Katherine. The distribution of light diesel vehicle registrations in the territory differs slightly, with 72.2% of all light diesel vehicles registered in the Darwin region, 13.7% in Alice Springs and 8% in Katherine.

Smoky vehicles program

A smoky vehicle program is undertaken as part of the territory's vehicle registration and roadworthiness testing procedures. Records of diesel vehicles issued with defect orders show that only a small number of vehicles checked as part of the vehicle registration process receive a defect notice due to engine smoke.

Diesel vehicle emission testing and repair programs

Pollutants associated with diesel emissions in the territory are well below emission standards. Therefore, the current air quality conditions are not considered a trigger for change in relation to managing diesel emissions in the territory. The NT will continue to monitor the need for action on diesel emissions and will take appropriate action as required.

Audited maintenance programs for diesel vehicles

Vehicle roadworthy inspections are undertaken periodically for light and heavy vehicles. These inspections include checking that all required emission control equipment is fitted as well as the detection of smoky vehicles. Periodic roadworthy inspections are required at registration renewal and the frequency of inspections is determined by the vehicle type, age and category. Since 1 July 2013, light vehicle inspections are required at five years, and then when the vehicle is 10 years old after which the vehicles are inspected annually. All heavy vehicles require an annual roadworthy inspection.

Diesel vehicle retrofit programs

Most of the NT road train fleet employs the latest technology in engine management systems to minimise fuel consumption. On a payload per emission basis, road trains operating line haul operations in remote Australia are some of the most efficient road freight vehicles in the world.

Other programs

The NT's open access policy provides for 'as of right' access for road trains and 100% network access for vehicles operating at higher mass limits. In addition, the territory's innovative vehicle policy promotes the development of high productivity innovative vehicle combinations which can deliver further efficiency benefits.

APPENDIX 5:

Jurisdictional reports
on the implementation
and effectiveness of the
Movement of Controlled
Waste between
States and Territories
National Environment
Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure from the Commonwealth prepared by the Department of Climate Change, Energy, the Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Commonwealth supports the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure (Controlled Waste NEPM) through our hazardous waste data and reporting activities.

Key activities related to tracking and understanding Australia's interstate movements of hazardous and controlled waste include:

- Annual data on hazardous waste generation produced for reporting under the Basel Convention (published for the 2022 calendar reporting year and preparing to publish for the 2023 calendar reporting year).
- Working with the states, territories and industry to deliver the National Waste Policy Action Plan's commitment to implement agreed national waste data, reporting and information-sharing improvements.

For more information, see www.dcceew.gov.au/environment/protection/hazardous-waste/reform.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Not applicable for the Commonwealth.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for New South Wales by the Hon Penny Sharpe MP, Minister for Climate Change, Minister for Energy, Minister for the Environment and Minister for Heritage, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Controlled Waste NEPM has been in place since 1998, with the most recent changes being minor and implemented in New South Wales (NSW) in 2014 following the 10-year review of the Controlled Waste NEPM in 2010.

Waste management incidents which result in adverse impacts indicate that interjurisdictional management of some controlled wastes could be improved. Currently, each jurisdiction has their own waste tracking systems and requirements. These lack consistency and differ widely in their ability to provide and share information necessary to ensure the effective implementation of the Controlled Waste NEPM. In response, NSW has established a new waste tracking system which aims to ultimately improve the quality of data and give better oversight of waste movements in and between jurisdictions. Development of a national waste tracking system, and/or improved information sharing, accessibility and transparency with respect to the transport of waste may prevent such incidents and will assist in NSW's strategic infrastructure planning and the identification of critical waste infrastructure needs.

The *NSW Waste and Sustainable Materials Strategy 2041* (<https://www.dpie.nsw.gov.au/our-work/environment-energy-and-science/waste-and-sustainable-materials-strategy>) outlines the actions NSW will take between 2021 and 2027 (the first phase of the strategy) to transition to a circular economy. This includes improved waste management and environmental outcomes for controlled waste in NSW.

In accordance with section 13 of the Controlled Waste NEPM, a report on the movement of controlled waste into NSW is provided in Part 2. Note the data reported is based on recorded data from 1 July 2023 to 27 February 2024 only. The data for the remaining period, 28 February 2024 to 31 June 2024, has been estimated on a pro rata basis from the recorded data.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Inconsistencies between jurisdictions' waste management strategies, policies and legislation limit the effectiveness of the Controlled Waste NEPM, as noted in Part 1. In addition, outdated waste tracking processes and the absence of a nationally integrated waste tracking system greatly limits NSW and other jurisdictions' ability to ensure compliance with Controlled Waste NEPM requirements and achieve the NEPM's goal:

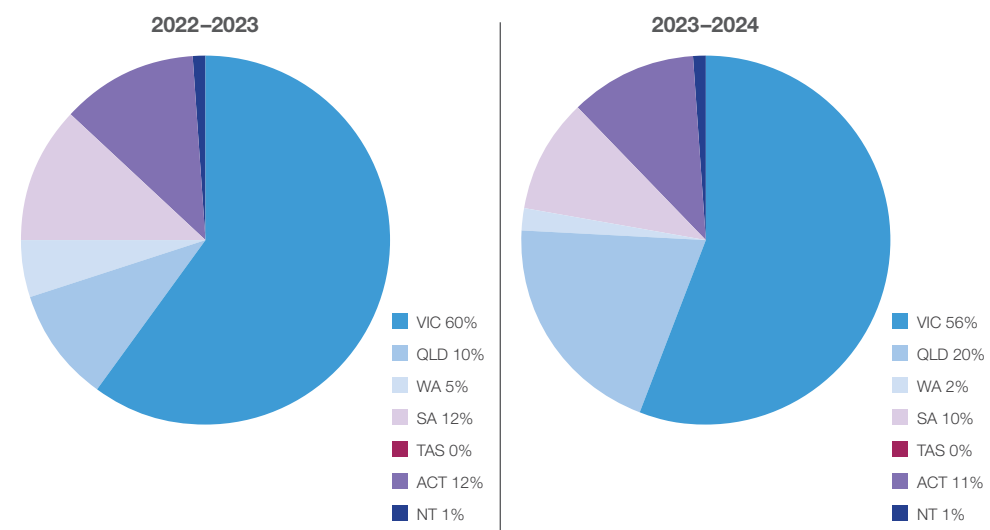
To provide a basis for ensuring that controlled wastes which are to be moved between States and Territories are properly identified, transported, and otherwise handled in ways which are consistent with environmentally sound practices for the management of these wastes.

In 2023–24, a total of 83,710 tonnes of controlled waste in 4,214 movements was estimated as having been transported into NSW from interstate (Tables 2 and 4). This is a 31% increase on the 63,515 tonnes moved and a 4% decrease on the 4,403 waste movements that occurred in 2022–23. This compares to the reported 12% decrease in controlled waste tonnage and 2% increase in waste movements in the previous reporting period of 2022–23.

NSW received less waste in 2023–24 compared to 2022–23 from Tasmania and Western Australia, and more waste from Victoria, Queensland, South Australia, Tasmania, the ACT and the Northern Territory. Victoria is still the largest contributor by volume (46,490 tonnes).

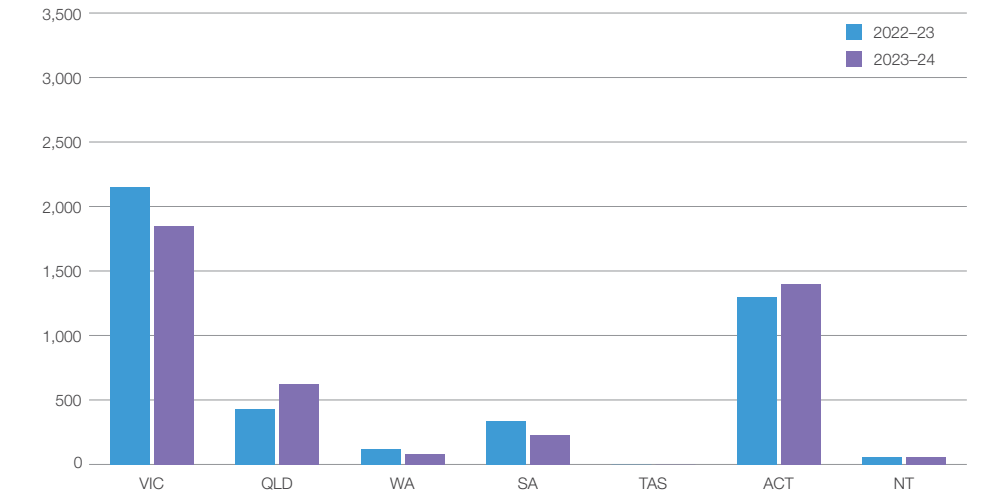
The greatest increase was from Queensland (10,380 tonnes, 158%), followed by Victoria (8,369 tonnes, 22%), the ACT (1,547 tonnes, 20%), South Australia (1,032 tonnes, 14%) and the Northern Territory (217 tonnes, 14%). The greatest decrease in waste was from Tasmania (33 tonnes, 100%), followed by Western Australia (1,208 tonnes, 43%) (Figures 1 and 2).

Figures 1 and 2 – Percentage waste contribution from states and territories into NSW



During the 2023-24 reporting period there were an estimated 169 fewer movements into NSW than during the 2022-23 period. Victoria accounted for the largest decrease (by 298) (Figure 3).

Figure 3 – Waste movements into NSW by Transport Certificate totals (all TCs) by State/Territory



Highlights by jurisdiction (waste transported into NSW)

Victoria: Transport of acid waste between 2023–24 and 2022–23 decreased by 14% to 5,410 tonnes. Organic waste also decreased by 46% to 814 tonnes. Inorganic chemicals waste increased by 362% to 15,155 tonnes. Other wastes that increased were organic solvents by 346% to 2,530 tonnes and waste paints, resins and inks by 70% to 1,063 tonnes.

Queensland: Clinical and pharmaceutical waste decreased by 89% to 456 tonnes. Oils, organic chemicals and alkalis decreased by 90%, 23% and 28% to 40 tonnes, 152 tonnes and 315 tonnes respectively. Inorganic chemicals increased from seven tonnes to 3,250 tonnes. Inorganic chemicals and paints resins and inks increased by 153% and 1446% to 12,321 tonnes and 677 tonnes respectively.

Western Australia: Inorganic chemical waste decreased by 23% to 1,269 tonnes. Oils also decreased by 79% to 198 tonnes.

South Australia: There was an increase in waste oil by 25% to 7,975 tonnes and an increase in paints, resins and inks from 0.2 to 142 tonnes. Clinical and pharmaceutical waste decreased by 85% to 88 tonnes.

Tasmania: No waste was recorded as transported into NSW from Tasmania. In 2022–23, only 33 tonnes of waste was recorded as transported to NSW from Tasmania.

ACT: There was a large increase in miscellaneous waste from 178 tonnes to 2,613 tonnes. Soil and sludge waste, and paints, resins and inks increased by 73% and 21% to 502 tonnes and 307 tonnes respectively.

Northern Territory: the total quantity of waste transported from the Northern Territory (970 tonnes) was similar to the previous reporting period (848 tonnes), with the main component being inorganic chemicals (968 tonnes).

Highlights by waste type (waste transported into NSW)

Oils: decreased by 8% from 2022–23 to 29,822 tonnes, with Victoria contributing the most (20,822 tonnes).

Acids: increased by 36% to 8,661 tonnes, with Victoria and Queensland contributing the most (by 5,410 and 3,250 tonnes, respectively).

Inorganic chemicals: increased by 178% from 2022–23 to 29,715 tonnes.

Paints, resins, inks and dyes: increased by 138% to 3,332 tonnes, with Victoria contributing most of the increase (438 tonnes increase).

Organic solvents: increased by 265% to 2,728 tonnes, with Victoria contributing most of the increase (1,962 tonnes increase).

NOTE: Data from 28 Feb 2023 to 30 June 2024 has been estimated based on recorded waste transport undertaken between 1 July 2023 and 27 February 2024.

Detailed data is provided in Tables 1–3. Note that with respect to Table 3, reliable discrepancy information is not currently available.

Table 1: Number of consignment authorisations issued by NSW for the movement of controlled waste into NSW for the period 1 July 2023 to 30 June 2024

Reporting year	Consignment authorisations issued
2021–22	1,290
2022–23	1,162
2023–24	1,087

Table 2: Quantity of controlled waste into NSW for the period 1 July 2023 to 30 June 2024
Tonnes per waste category by state/territory

Group	Description	VIC	QLD	WA	SA	TAS	ACT	NT	Total (T)
A	Plating & heat treatment	0	9	0	0	0	0	0	9
B	Acids	5,410	3,250	0	0	0	1	0	8,661
C	Alkalis	6	315	0	0	0	0	0	321
D	Inorganic chemicals	15,155	12,321	1,269	0	0	2	968	29,715
E	Reactive chemicals	0	0	0	0	0	0	0	0
F	Paints, resins, inks, organic sludges	1,063	677	33	142	0	307	0	2,221
G	Organic solvents	2,530	103	48	31	0	16	0	2,728
H	Pesticides	28	1	0	0	0	0	0	30
J	Oils	20,822	40	198	7,975	0	787	0	29,822
K	Putrescible/organic waste	814	0	0	0	0	5,158	0	5,972
L	Industrial washwater	n/r	n/r	n/r	n/r	n/r	n/r	n/r	n/r
M	Organic chemicals	162	152	0	0	0	5	0	319
N	Soil/sludge	468	14		51	0	502	0	1,035
R	Clinical & pharmaceutical	32	48	69	88	0	15	0	253
T	Miscellaneous	0	12	0	0	0	2,613	0	2,626
Total		46,490	16,941	1,618	8,288	0	9,406	968	83,710

n/r = not recorded under this category

Table 3: Discrepancies in movements of controlled waste into NSW for the period 1 July 2023 to 30 June 2024

Discrepancy type	VIC	QLD	WA	SA	TAS	ACT	NT	Ext Terr
Consignment non-arrival	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Transport without authorisation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Non-matching documentation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste data	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 4: Number of movements of controlled waste into NSW for the period 1 July 2023 to 30 June 2024

NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Ext Terr	Total
N/A	1,835	619	83	243	0	1,381	53	0	4,214

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *Environment Protection Act 2017* came into effect 1 July 2021. The accompanying Environment Protection Regulations 2021 describe the requirements for waste transport recording, including interstate transport of controlled waste.

A new waste reporting system, Waste Tracker, was introduced on 1 July 2021. Waste Tracker can be used to record the transport of waste into Victoria to permissioned sites.

The largest proportion of waste coming into Victoria was R code clinical waste. Next largest codes were M, which includes soil contaminated with PFAS. Total waste coming into the state was reduced when compared to last year.

There continues to be consultation between the state and territory agencies, via an Implementation Working Group established under the Controlled Waste NEPM agreement. The Implementation Working Group is proposing to strengthen and harmonise the regulation and tracking of controlled waste movements in Australia. The Environment Protection Authority (EPA Victoria) continues active discussions across jurisdictions on waste tracking solutions.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Victoria

Reporting Year	Consignment authorisations issued
2021–22	227 (waste into Victoria – 196) (waste out of Victoria – 31)
2022–23	224 (waste into Victoria – 205) (waste out of Victoria – 19)
2023–24	247 (waste into Victoria – 232) (waste out of Victoria – 15)

Please note the following points regarding the data presented in Tables 2, 3 and 4 (below):

1. 'Cleansed' waste transport dataset

The data presented has been extracted from version 1.0 of EPA Victoria's 'cleansed' waste transport dataset. The cleansed dataset represents waste transport data collected or received by EPA Victoria via Waste Tracker and other means, a subset of which has subsequently been transformed to improve the accuracy and reliability of the data. The improvement in accuracy has been achieved by correcting suspected errors made by duty holders. This involves correcting suspected erroneous waste amounts (e.g. 10,000 tonnes corrected to 10,000 kg), suspected erroneous waste codes and other waste record information. The dataset does not represent a correction of all known or suspected errors.

2. Lack of complete record of waste movements

There are an unquantified number of movements of controlled waste into Victoria from outside the state that have not been reported to, or digitised by, EPA Victoria. As such, the reported figures may be unreliable.

3. User entry and system errors

Whilst EPA Victoria has modified waste record data to 'correct' certain suspected errors, the data used to produce the results may contain 'uncorrected' errors. As it is unclear which uncorrected errors, if any, are present in the data, it is therefore also unclear how such errors impact the reported figures.

**Table 2*: Quantity of controlled waste into Victoria for the period 1 July 2023 to 30 June 2024
– Tonnes per waste category by State/Territory**

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
A		0.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B		421.25	N/A	0.00	0.00	0.00	0.00	0.00	9.60	0.00	430.85
C		43.97	N/A	11.83	0.00	0.00	0.00	0.00	0.00	0.00	55.80
D		1,362.85	N/A	24.04	0.00	2,569.84	577.20	0.00	0.00	0.00	4,533.93
E		3.23	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.23
F		2,445.70	N/A	625.88	684.73	218.24	87.60	0.00	0.00	0.00	4,062.15
G		3,769.44	N/A	650.32	370.55	668.01	0.00	0.00	314.38	0.00	5,772.70
H		128.70	N/A	60.00	27.00	32.34	74.00	0.00	0.00	0.00	322.04
I		0.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
J		1,299.71	N/A	15.28	52.62	20.65	368.52	0.00	8.06	0.00	1,764.85
K		774.14	N/A	0.00	7.43	0.00	2.39	0.00	62.18	0.00	846.13
L		618.40	N/A	0.40	0.00	20.00	0.00	0.00	0.00	0.00	638.80
M		855.06	N/A	969.18	0.00	4,571.88	148.91	0.00	75.14	0.00	6,620.17
N		111.24	N/A	134.40	0.00	3,884.90	6.11	0.00	10.13	0.00	4,146.78
O		0.00	N/A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R		5.37	N/A	41.82	148.66	165.65	6.30	0.00	9.29	0.00	377.09
T		4,844.46	N/A	1.87	17.38	4,409.71	243.90	0.00	0.18	0.00	9,517.49
State Totals (tonnes)		16,683.53	N/A	2,535.01	1,308.37	16,561.22	1,514.93	0.00	488.95	0.00	39,092.01

*** Notes regarding Table 2:**

1. Conversion to tonnes

Each tonnage figure represents the sum of waste amounts, as recorded by the waste receiver, across multiple relevant waste records. For many of the included waste amounts, no estimation is necessary to convert the amount to tonnes (e.g. if the amount on a given waste record is specified by the receiver as 1,000 kilograms, then no estimation is necessary to convert this amount to 1 tonne). However, for a subset of included waste amounts, an estimation is necessary to convert the amount to tonnes. Specifically:

- If the received amount is recorded as a volume (e.g. cubic metres or litres) or in equivalent passenger units (EPUs), then a conversion factor is applied to estimate the equivalent amount in tonnes,
- If the received amount has been recorded on a grouped waste record, then each record within the group is allocated an equal share of the group amount (e.g. if 10 waste records have been associated with a single grouped record that specifies the amount as 1 tonne, then each of the 10 waste records is allocated 0.1 tonne).

Table 3: Discrepancies in movements of controlled waste into Victoria for the period
1 July 2023 to 30 June 2024 – Percentage of total movements**

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival	35 / 1,931 = 1.81%	n/a	8 / 166 = 4.82%	6 / 205 = 2.93%	10 / 726 = 1.38%	25 / 193 = 12.95%	0 / 0 = NA	46 / 343 = 13.41%	0 / 0 = NA
Transport without authorisation	421 / 1,931 = 21.80%	n/a	54 / 166 = 32.53%	56 / 205 = 27.32%	225 / 726 = 30.99%	138 / 193 = 71.50%	0 / 0 = NA	336 / 343 = 97.96%	0 / 0 = NA
Non-matching documentation		n/a							
Waste data		n/a							

**** Notes regarding Table 3:**

1. Consignment non-arrival

'Consignment non-arrival' has been interpreted to mean: 'Waste movements from outside Victoria to inside Victoria that are not in status 'Draft', 'Cancelled', 'DoU', or 'Received'.'

2. Transport without authorisation

'Transport without authorisation' has been interpreted to mean waste movements that:

- have been picked up from the producer's interstate site, destined for Victoria, in which the producer section (Part A) 'consignment authorisation' field is blank/empty, or
- have been picked up from the producer's overseas site, destined for Victoria, in which the producer section (Part A) 'Basel permit' field is blank/empty.

In addition to the data quality issues noted above Table 2, the following data quality issue applies to the reported 'Transport without authorisation' figures. It is not possible to accurately report the percentage of unauthorised movements of controlled waste into Victoria from interstate or overseas due, in part, to the fact that the authorisation status of most records of such movements has not been verified. Such verification would involve:

- validation of each recorded consignment authorisation number and Basel permit number, and
- obtaining and validating the consignment authorisation number or Basel permit number for all waste records in which it is required but unspecified.

3. Non-matching documentation

It is unclear what 'non-matching documentation' refers to. It is not possible to evaluate whether the requested information can be provided, nor to provide the requested information.

4. Non-matching waste data

It is not possible to accurately report the percentage of unique waste movements containing non-matching waste data. In addition to the data quality issues noted above Table 2, this is due to:

- the absence of a method to report all detectable discrepancies in information across each section of each waste record, and
- widespread under-reporting, by waste receivers, of required discrepancy information.

Further detail about the above two dot points can be provided upon request.

**Table 4: Number of movements of controlled waste into Victoria for the period
1 July 2023 to 30 June 2024**

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
1931	n/a	166	205	726	193	0	343	0

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Queensland by Hon Leanne Linard MP, Minister for the Environment and the Great Barrier Reef and the Minister for Science and Innovation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Queensland Department of Environment, Science and Innovation (DESI) is responsible for the administration of the Controlled Waste NEPM in Queensland. The NEPM is implemented under the *Environmental Protection Act 1994* (EP Act) through Chapter 5, Part 9 of the Environmental Protection Regulation 2019 (EP Reg). As per the Controlled Waste NEPM, the regulation includes provisions in relation to obligations for the tracking of controlled waste into and out of Queensland, as well as requirements for the prior approval of consignments of controlled waste being transported into Queensland. Legislative requirements for the licensing of controlled waste transporters are included in the EP Act and detailed in Schedule 12 of the EP Reg. The NEPM administration is integrated with intrastate tracking, controlled waste licensing and compliance activities in Queensland.

DESI has continued to administer the Controlled Waste NEPM to help ensure controlled waste is managed appropriately. The prior approval process through consignment authorisation and consultation with other jurisdictions and waste handlers has helped to ensure controlled waste is consigned to appropriate facilities. The total number of applications for consignment authorisation (Table 1) approved for 2023–24 was 394, which is a 11.7% decrease from 2022–23 (446).

During 2023–24, the department's compliance efforts were focused on Consignment Authorisation application assessment to ensure regulated waste was adequately characterised and categorised.

The total amount of consignment applications approved into Queensland included:

- NSW 336
- NT 34
- SA 2
- TAS 1
- VIC 13
- WA 8

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Queensland

Reporting Year	Consignment authorisations issued
2021–22	592
2022–23	446
2023–24	394

Table 2: Quantity of controlled waste into Queensland for the period 1 July 2023 to 30 June 2024 – Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
A	Plating & heat treatment	2.10	0	N/A	0	0	0	0	0	0	2.1
B	Acids	42.14	0	N/A	0	0	0	0	261.32	0	303.46
C	Alkalis	100.35	0	N/A	0	0	0	0	1,922.74	0	2,023.09
D	Inorganic chemicals	12,710.53	0	N/A	0	0	0	0	5.6	0	12,716.49
E	Reactive chemicals	23.03	0	N/A	2.0	0	0	0	0	0	25.03
F	Paints, resins, inks, organic sludges	112.87	82.65	N/A	0	0	0	0	0	0	195.52
G	Organic solvents	262.40	0	N/A	7.0	0	0	0	0	0	269.40
H	Pesticides	36.18	0	N/A	0	0	0	0	0	0	36.18
J	Oils	73,016.94	1.4	N/A	0.27	50.0	0	0	68.50	0	73,137.11
K	Putrescible/organic waste	6,219.80	1.0	N/A	44.70	0	0	0	0	0	6,265.50
I	Industrial washwater	0	0	N/A	0	0	0	0	0	0	0
M	Organic chemicals	808.86	0	N/A	5.00	0	0	0	0	0	813.86
N	Soil/Sludge	2,016.99	3.22	N/A	6.00	0	0	0	0	0	2,071.21
R	Clinical & pharmaceutical	199.25	0	N/A	0.26	0	0	0	0	0	199.51
T	Misc	4,847.13	0	N/A	0	0	0	0	491.82	0	5,338.95
State Totals (tonnes)		100,443.57	88.27	N/A	65.23	50.00	0.00	0.00	2750.34	0.00	206,794.82

Table 3: Discrepancies in movements of controlled waste into Queensland for the period
1 July 2023 to 30 June 2024 – Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr *
Consignment non-arrival	0	0	N/A	0	0	0	0	0	0
Transport without authorisation	0	0	N/A	0	0	0	0	0	0
Non-matching documentation	0	0	N/A	0	0	0	0	0	0
Waste data	0	0	N/A	0	0	0	0	0	0

Table 4: Number of movements of controlled waste into Queensland for the period
1 July 2023 to 30 June 2024

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
30,446	425	N/A	55	185	0	4	1132	0

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Western Australia by Hon Reece Whitby MLA, Minister for Energy; Environment; Climate Action for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia (WA), the Department of Water and Environmental Regulation is responsible for administering the implementation of the *Controlled Waste NEPM*, under the *National Environment Protection Council (WA) Act 1996* and the *Environmental Protection Act 1986*.

The Environmental Protection (Controlled Waste) Regulations 2004 (the Regulations) provide for the licensing of carriers, drivers, vehicles and/or tanks, as well as the use of controlled waste tracking forms to ensure controlled waste is transported to an appropriate waste facility.

The Regulations are currently under amendment to ensure a streamlined approach to licensing and an increase in rigour around interstate movements. Publication of the amendments is anticipated by Q3 2024–25.

The number of consignment authorisations issued by WA during 2023–24 for the movement of waste into the state increased 125% when compared to 2022–23 (from 20 to 45) and 36.4% when compared to 2021–22 (from 33 to 45).

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Western Australia

Reporting Year	Consignment authorisations issued
2021–22	33
2022–23	20
2023–24	45

Table 2: Quantity of controlled waste into Western Australia for the period
1 July 2023 to 30 June 2024 – Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
A	Plating & heat treatment			75.16	n/a						75.16
B	Acids	20.00			n/a	49.80					69.80
C	Alkalis		1297.93		n/a						1,297.93
D	Inorganic chemicals	65.28	310.14		n/a	7.00			308.50		690.92
E	Reactive chemicals		5.53		n/a						5.53
F	Paints, resins, inks, organic sludges				n/a				14.49		14.49
G	Organic solvents				n/a						0.00
H	Pesticides			3.20	n/a						3.20
I	Oils				n/a	623.31			183.05		806.36
J	Putrescible/ organic waste				n/a						0.00
K	Industrial washwater				n/a						0.00
L	Organic chemicals	19.44		38.50	n/a	96.55			5.37		159.86
M	Soil/Sludge	2,839.13			n/a						2,839.13
N	Clinical & pharmaceutical				n/a						0.00
O	Misc				n/a						0.00
State Totals (tonnes)		2,943.84	1,613.60	116.86	n/a	776.66	0.00	0.00	511.41	0.00	5,962.37

Table 3: Discrepancies in movements of controlled waste into Western Australia for the period 1 July 2023 to 30 June 2024 Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
Consignment non-arrival	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Transport without authorisation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Non-matching documentation	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Waste data	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

n/a =WA information not available/applicable

Table 4: Number of movements of controlled waste into Western Australia for the period 1 July 2023 to 30 June 2024

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
166	89	10	n/a	41		41		

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for South Australia by the Hon Susan Close, Minister for Climate, Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Controlled Waste NEPM obligations are administered by the Environment Protection (Movement of Controlled Waste) Policy 2014 under the *Environment Protection Act 1993*.

Meetings of the Controlled Waste NEPM Implementation Working Group did not take place in 2023 due to the unavailability of a chair. The South Australian (SA) Environment Protection Authority (SA EPA) will be giving consideration on how to engage with other jurisdictions to achieve the desired environmental outcome of this measure to resource the Working Group from 2025.

No implementation issues were reported during 2023–24.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by {name of jurisdiction}

Reporting Year	Consignment authorisations issued
2021–22	168
2022–23	129
2023–24	192

Table 2: Quantity of controlled waste into South Australia for the period 1 July 2023 to 30 June 2024 – Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
A	Plating & heat treatment	0	0	0	0	n/a	0	0	0	0	0
B	Acids	0	0	0	0	n/a	0	0	2.27	0	2.27
C	Alkalies	0	9.35	0	0	n/a	0	0	69.91	0	79.26
D	Inorganic chemicals	123.24	2,515.56	0	0	n/a	21,656.99	508.08	291.34	0	25,095.21
E	Reactive chemicals	0	21.67	0	0	n/a	0	0	0	0	21.67
F	Paints, resins, inks, organic sludges	0	0	0	0	n/a	0	0	27.77	0	27.77
G	Organic solvents	28.2	0	5.04	24.99	n/a	0	0	27.30	0	85.53
H	Pesticides	0	0	0	0	n/a	0	0	0.002	0	0.002

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
J	Oils	274.6	159.25	0	930.00	n/a	85.00	0	28,665.49	0	30,114.34
K	Putrescible/organic waste	0	127.00	0	0	n/a	0	0	0	0	127.00
L	Industrial washwater	0	0	0	0	n/a	0	0	0	0	0.00
M	Organic chemicals	0	390.22	0	0	n/a	0	0	4.00	0	394.22
N	Soil/Sludge	17,000.2	13,603.13	0	267.91	n/a	0	0	476.61	0	31,347.85
R	Clinical & pharmaceutical	0	22.81	0	757.77	n/a	52.50	0	0	0	833.08
O	Misc	556.90	0	0	0	n/a	240.00	0	2,228.59	0	3,025.49
State Totals (tonnes)		17,983.14	16,848.99	5.04	1,980.67	n/a	22,034.49	508.08	31,793.28	0.00	91,153.69

Table 3: Discrepancies in movements of controlled waste into South Australia for the period 1 July 2023 to 30 June 2024 – Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
Consignment non-arrival	7	14	16	6	n/a	5	0	43	0
Transport without authorisation	0	0	0	0	n/a	0	0	0	0
Non-matching documentation	0	0	0	0	n/a	0	0	0	0
Waste data	0	0	0	0	n/a	0	0	0	0

Table 4: Number of movements of controlled waste into South Australia for the period 1 July 2023 to 30 June 2024

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
497	1006	43	52	n/a	62	1	386	0

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Tasmania by Hon Madeleine Ogilvie, Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Tasmania, the Controlled Waste NEPM is a state policy under the *State Policies and Projects Act 1993*. The key legislative instrument for implementation of the NEPM is the *Environmental Management and Pollution Control Act 1994*.

Tasmania consults with Australian jurisdictions on Controlled Waste NEPM matters such as consignment authorisations and the appropriateness of treatment/disposal proposals.

Tasmania receives controlled waste from Antarctica and Macquarie Island. This waste was previously reported by Tasmania as being received from an external territory. In July 2019, the Environment Protection Authority (EPA Tasmania) accepted the advice of the Australian Antarctic Division that these waste movements were not subject to the Controlled Waste NEPM, and thus they have not been reported herein.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by {name of jurisdiction}

Reporting Year	Consignment authorisations issued
2021–22	2
2022–23	2
2023–24	2

Table 2: Quantity of controlled waste into Tasmania for the period 1 July 2023 to 30 June 2024 – Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
A	Plating & heat treatment										0.00
B	Acids										0.00
C	Alkalis										0.00
D	Inorganic chemicals		1,453.0								1,453.0
E	Reactive chemicals										0.00
F	Paints, resins, inks, organic sludges										0.00
G	Organic solvents										0.00

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
H	Pesticides										0.00
I	Oils										0.00
J	Putrescible/organic waste										0.00
K	Industrial washwater										0.00
L	Organic chemicals										0.00
M	Soil/Sludge										0.00
N	Clinical & pharmaceutical										0.00
O	Misc										
State Totals (tonnes)		0.00	1,453.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1453.0

Table 3: Discrepancies in movements of controlled waste into Tasmania for the period 1 July 2023 to 30 June 2024 – Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	TAS	ACT	NT	Ext Terr*
Consignment non-arrival						*			
Transport without authorisation						*			
Non-matching documentation						*			
Waste data						*			

* Tasmania does not currently reconcile controlled waste tracking certificate data to allow the identification of discrepancies

Table 4: Number of movements of controlled waste into Tasmania for the period 1 July 2023 to 30 June 2024

NSW	Vic	Qld	WA	SA	TAS	ACT	NT	Ext Terr*
					81			

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for the ACT by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Access Canberra, within the Chief Minister, Treasury and Economic Development Directorate, is responsible for the implementation and administration of the Controlled Waste NEPM. In addition, the Environment Planning and Sustainable Development Directorate is responsible for the development of legislation and policy to ensure the NEPM is appropriately implemented in the Australian Capital Territory (ACT).

The provisions of the Controlled Waste NEPM are implemented through the *Environment Protection Act 1997* and Environment Protection Regulation 2005.

The Controlled Waste NEPM has been fully implemented and operational in the ACT since March 2000 with no major issues identified with its operation. Regular contact has been maintained with other jurisdictions to ensure cooperative administration of the Controlled Waste NEPM.

Controlled Waste NEPM information sheets (which include an explanation of producer, transporter and waste facility responsibilities as well as instructions on how to complete a waste transport certificate) have been produced by the ACT Government to assist stakeholders in meeting their statutory obligations.

The difference in relation to movements during this reporting period to previous years was that clinical waste coming into the ACT from surrounding NSW regions has slightly decreased and waste coming from Victoria has ceased due to Cleanaway Daniels clinical waste treatment facility in Victoria being back online.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by the ACT

Reporting Year	Consignment authorisations issued
2022–23	40
2023–24	29

Table 2: Quantity of controlled waste into the ACT for the period 1 July 2023 to 30 June 2024 – Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr*	Total (tonnes)
A	Plating & heat treatment										0.00
B	Acids										0.00
C	Alkalis										0.00
D	Inorganic chemicals										0.00
E	Reactive chemicals										0.00

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr*	Total (tonnes)
F	Paints, resins, inks organic sludges										0.00
G	Organic solvents										0.00
H	Pesticides										0.00
J	Oils	27.80									27.80
K	Putrescible/ organic waste										0.00
L	Industrial wash water										0.00
M	Organic chemicals										0.00
N	Soil/sludge	169.2									169.2
R	Clinical & pharmaceutical	283.05									283.05
T	Misc.										0.00
State Totals (tonnes)		480.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00		480.05

**Table 3: Discrepancies in movements of controlled waste into the ACT for the period
1 July 2023 to 30 June 2024 – Percentage of total movements**

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
Consignment non-arrival									
Transport without authorisation									
Non-matching documentation									
Waste data									

**Table 4: Number of movements of controlled waste into the ACT for the period
1 July 2023 to 30 June 2024**

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
893								

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Movement of Controlled Waste between States and Territories) Measure for Northern Territory by the Minister for Lands, Planning and Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Northern Territory (NT) Environment Protection Authority (NT EPA), supported by the Department of Environment, Parks and Water Security (DEPWS), is responsible for the implementation of the Controlled Waste NEPM in the NT through the provisions of the *Waste Management and Pollution Control Act 1998* and the *National Environment Protection Council (Northern Territory) Act 1994*.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 1: Number of consignment authorisations issued by Northern Territory

Reporting Year	Consignment authorisations issued
2021–22	6
2022–23	6
2023–24	18

Table 2: Quantity of controlled waste into Northern Territory for the period
1 July 2023 to 30 June 2024 – Tonnes per waste category by State/Territory

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
A	Plating & heat treatment										0.00
B	Acids				1						1
C	Alkalis										0.00
D	Inorganic chemicals										0.00
E	Reactive chemicals										0.00
F	Paints, resins, inks, organic sludges										0.00
G	Organic solvents										0.00
H	Pesticides										0.00
I	Oils	312.8		262	727.6						1302.4
J	Putrescible/ organic waste				4						4

Code	Description	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext-Terr	Total (Tonnes)
K	Industrial washwater										0.00
L	Organic chemicals				1						1
M	Soil/Sludge				4						4
N	Clinical & pharmaceutical										0.00
O	Misc				1						1
State Totals (tonnes)		312.8	0.00	262	738.6	0.00	0.00	0.00	0.00	0.00	0.00

Table 3: Discrepancies in movements of controlled waste into Northern Territory for the period 1 July 2023 to 30 June 2024 – Percentage of total movements

Discrepancy Type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
Consignment non-arrival									
Transport without authorisation									
Non-matching documentation									
Waste data			4						

Table 4: Number of movements of controlled waste into Northern Territory for the period 1 July 2023 to 30 June 2024

NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Ext Terr*
5		11	19					

APPENDIX 6:

Jurisdictional reports on the implementation and effectiveness of the National Pollutant Inventory National Environment Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (National Pollutant Inventory) Measure from the Commonwealth prepared by the Department of Climate Change, Energy, the Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Commonwealth implements the National Environment Protection (National Pollutant Inventory) Measure (NPI NEPM) administratively and ensures that its obligations under the *National Environment Protection Act 1994* and *National Environment Protection Measures (Implementation) Act 1998* are met.

On 28 March 2024, the Commonwealth published National Pollutant Inventory (NPI) data for 2022–23. This data detailed emissions from over 4,000 industry facilities and was the 25th year of NPI publication of emissions from industry.

Maintenance on the NPI online reporting system was carried out during the year with a focus on stability, security and maintainability. Maintenance efforts were impacted by the Commonwealth migrating from a shared IT network to a new self-managed network.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The Commonwealth published the 2022–23 National Pollutant Inventory (NPI) data on 28 March 2024. The number of facilities reporting to the NPI rose from 4,511 in 2021–22 to 4,631 in 2022–23.

Figure 1 shows the number of facilities reporting to the NPI in each jurisdiction over the past 10 years.

Figure 1: Number of reporting facilities in each jurisdiction by year since 2013–14

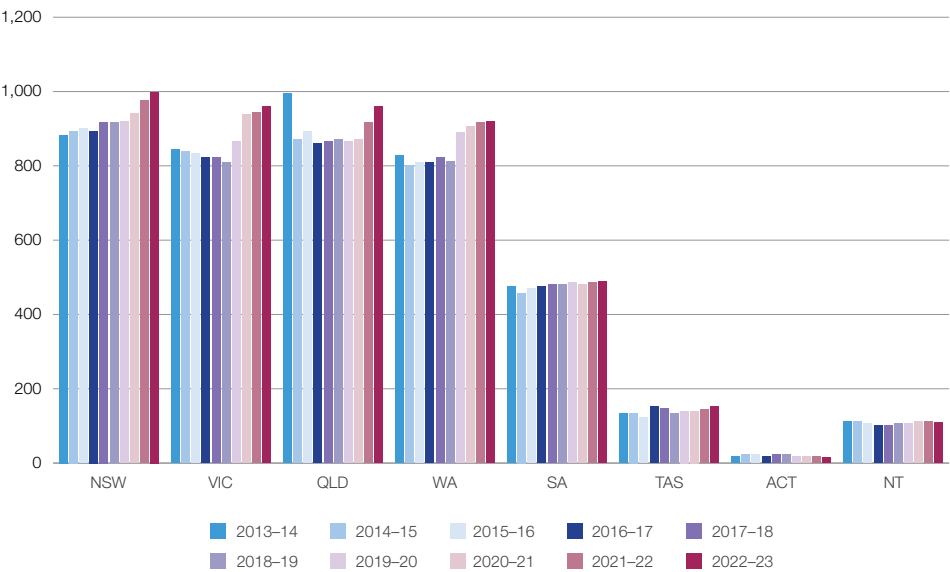


**Table 1: Participation, feedback and effectiveness for the Commonwealth for the period
1 July 2022 to 30 June 2023**

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
1.4 million page views on website with an engagement rate of 88%	- The number of pages increased by 10% compared to the previous year. - Software errors in the NPI database continued to affect public users who searched on the data.	- The Commonwealth responded to 32 information and support requests from the public. - Of the 1,775 times individuals gave anonymous feedback on the helpfulness of an NPI web page, 70% said it was helpful.
Industry		
4,511 reports for 2021–22 4,631 reports for 2022–23 138 new reporters - No new sectors reporting - No confidentiality claims submitted	- The online reporting system became unstable during the final week of industry reporting in September. The Commonwealth's remedial actions were successful in restoring normal system operation. - A significant number of industry reporters had trouble running the calculation tools due to evolving security protection standards that prevent Excel macros from running.	The Commonwealth responded to 44 requests from industry. Most industry reporters were referred to the relevant jurisdiction NPI team and a small number of requests were handled directly.
Government		
Seven facilities from two Commonwealth departments reported to the NPI for 2022–23	- The Department of Climate Change, Energy, the Environment and Water used NPI data to update the Australian Government's emissions inventory of short-lived climate forcers (atmospheric substances that affect air quality and climate) in the National Greenhouse Accounts. This includes emissions of black carbon, particulate matter $\leq 2.5 \mu\text{m}$ ($\text{PM}_{2.5}$), particulate matter $\leq 10 \mu\text{m}$ (PM_{10}) and sulfur dioxide. - The Department of Climate Change, Energy, the Environment and Water ceased using NPI waste transfers data for its National Waste and Resource Recovery Reporting as it discontinued estimating waste generation from mining and mineral processing. - The Department of Agriculture, Fisheries and Forestry used NPI ammonia emissions data as part of Australia's Agri-environmental indicators reported to the OECD.	The Commonwealth refined techniques for preparing data for analysis and sharing using Power Query and Power Maps.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for New South Wales by the Hon Penny Sharpe MP, Minister for Climate Change, Minister for Energy, Minister for the Environment and Minister for Heritage, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The New South Wales (NSW) Department of Climate Change, Energy, the Environment and Water (the department) and the NSW Environment Protection Authority (NSW EPA) implement the NPI NEPM through the provisions in Chapter 8 of the Protection of the Environment Operations (General) Regulation 2022, including:

- definition of reporting premises and substance thresholds
- reporting and record keeping requirements
- compliance and penalty requirements
- emission estimation techniques, and
- exemptions.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

NPI facility emissions and transfers are reported for the 2022–23 reporting period. This is the most recent year for which facility reporting data has been finalised, provided by NSW to the Commonwealth and published by the Commonwealth.

The department conducts online and face-to-face training as necessary to assist facility reporters with:

- understanding key elements of NPI reporting
- using the inventory online reporting system, and
- applying calculation and validation tools rather than emission estimation technique manuals to reduce time and improve accuracy.

The NPI online reporting system has led to improvements in the quality and accuracy of facility data by including estimation and validation tools while also minimising the need for manual data entry. There are opportunities for further improvements, including:

- additional calculation tools to estimate the transfer of NPI substances in waste streams from key industry sectors with guidance on transfer destinations
- emission factors for non-standard fuels such as landfill gas burnt in flares or engines
- improved fugitive emission estimation methods
- an interactive online training program, and
- regular review of the NPI to scope improvements in its performance and administration.

There were 25 new reporters in 2022–23. The department and the NSW EPA undertake industry sector reviews to identify facilities that may be required to report data to the NPI. Generally, these industry sector reviews include facilities that currently hold an environment protection licence issued by the NSW EPA under the NSW *Protection of the Environment Operations Act 1997*.

Table 2: Participation, feedback and effectiveness for New South Wales for the period 1 July 2022 to 30 June 2023

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community member visits to the NPI website is recorded by the Commonwealth.	- Academics and researchers continue to use NPI data for modelling and other studies. - The media and community groups utilise NPI data where they identify environmental issues of concern. - Enquiries from the public and media continue to demonstrate a growing awareness of the dataset, however, there continues to be a strong need to provide contextual information to support accurate interpretation of the data.	N/A
Industry		
999 reports for 2022–23 (compared to 975 reports for 2021–22). 25 new reporters in 2022–23 - No confidentiality claims submitted.	Training and support provided by DPE to facility reporters has improved data quality and reduced costs to NPI facility reporters.	- During 2022–23, the department trained approximately 40 reporters by phone and online, including in use of the NPI online reporting system. - The department has received ongoing requests from industry for training and guidance material on transfers of NPI substances in waste streams.
Government		
999 desktop audits of reports.	- The department and the NSW EPA continue to use the NPI to inform policy and regulatory approaches. - The NSW EPA continues to use the NPI to analyse environmental outcomes in relation to the regulation of substances at industrial facilities.	- The department continues to utilise internal and inter-agency communications to inform DPE and NSW EPA staff about NPI data and emission estimation techniques. - Regular NPI officer meetings and communications facilitate information exchange and knowledge sharing between jurisdictions and seek to ensure a consistent approach for reporters with multiple facilities across Australia.

Victoria

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

From 1 July 2021, the NPI NEPM in Victoria is implemented by the Environment Protection Regulations 2021. The Regulations came into force, as subordinate legislation to the *Environment Protection Act 2017* which applied from the same date.

With the introduction of the Act, environment protection law shifted to a prevention-based approach. Central to this approach is the general environment duty. This is a shared responsibility to prevent harm to the environment and means all Victorians must each take reasonable steps to stop harm, and do so before damage is done.

Victoria’s new environment protection legal framework means that the enforcement of NPI requirements is more straightforward. Not complying with the NPI reporting requirements (including keeping records for five years) has become an infringeable offence.

Note that the data presented in this report is for the 2023–24 financial year as per the NPI NEPM requirement.

The EPA will continue raising the NPI data quality issue and the need for consistency of the program enforceability across all Australian jurisdictions with the NPI NEPM Review Steering Committee.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

**Table 3: Participation, feedback and effectiveness for Victoria for the period
1 July 2022 to 30 June 2023**

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community member visits to the NPI website is recorded by the Commonwealth.	No specific feedback was received from the community.	N/A

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Industry		
964 published reports for 2022–23. 11 retained (not published), including one calendar year report. 29 new reporting facilities. - No confidentiality claims submitted.	Some companies reported difficulties associated with NPI reporting, caused by the MS Excel macros incorporated in the updated all-in-one calculation tool.	- Out of 66 published reports for the 2022 calendar year, 65 reports (or 98.5%) were submitted on time, while one report was several months late due to change in the company ownership. - The single NPI report for the 2022–23 Japanese financial year was submitted on time. - Out of 897 published reports for the 2022–23 financial year, 844 reports (or 94.1%) were submitted on time, 27 reports were delayed by less than one week, while 26 reports were delayed by up to several months. - Two 2022–23 financial year reports were submitted in April 2024, after the NPI report publication in March 2024. - Out of 966 reports for 2022–23, 952 reports (or 98.6%) were submitted online, while the remaining 17 reports were submitted on paper.
Government		
334 published reports for 2022–23 were individually assessed and corrected (if required). - No NPI-specific audits were conducted in 2023–24. - NPI information was provided to EPA operation officers as part of their licence compliance site visits and desk-top assessments. - Out of four identified NPI non-compliances for 2022–23, one regulatory action was undertaken in 2023–24. - Two other non-compliances were remedied by the duty-holders prior to any further escalation, while the fourth non-compliance investigation was terminated due to the related company being placed under external administration by Australian Securities and Investments Commission (ASIC).	- No specific feedback was received from the government. - EPA Victoria used NPI data for prioritising some compliance work and will seek to expand this in the coming year - NPI data was used in the development of the Environment Protection Regulations 2021 and the <i>Environment Protection Act 2017</i>, for air quality modelling and cross-checking of licence compliance.	N/A

Queensland

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Queensland by Hon Leanne Linard, Minister for the Environment and the Great Barrier Reef, Minister for Science and Innovation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

There were no Implementation Working Group meetings for the reporting year ending 30 June 2023

The Australian Government-led NPI NEPM review was paused after work was put in to complete the terms of reference.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Reporting for the 2022–23 reporting period incorporates data from the 2021–22 year which was received on 30 September 2022 and validated in the 2022–23 financial year.

Table 4: Participation, feedback and effectiveness for Queensland for the period 1 July 2022 to 30 June 2023

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community member visits to the NPI website is recorded by the Commonwealth.	Four news articles were circulated in the 2023–24 year compared to seven in the 2022–23 year.	NPI emissions and transfer reports were published through the Australian Government Open Data portal (http://www.data.gov.au/).
Industry		
973 reports for 2021–22 (922 published, five reported after publication and 45 below threshold/no emissions or transfers reported). 1,000 reports for 2022–23 (952 published, 44 below threshold/no emissions or transfers reported and four will be published in FY24 due to delay in verification of data). 39 new reporters. - No new sectors reporting. - No confidentiality claims submitted.	Issues with the NPI online reporting system continued both accessibility and timing out issues.	96% of facility reports were subject to desktop evaluation. - One on-site audit was completed.
Government		
969 desktop audits. - One on-site audit. - No regulatory actions.	The Queensland Department of Environment, Science and Innovation (DESI) utilised the industry pollutant emissions data to contribute to the development of emissions inventories.	The NPI facility emissions PowerBI dashboard was published and made available department wide.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Western Australia by the Department of Water and Environmental Regulation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia (WA), the Department of Water and Environmental Regulation is responsible for implementing the NPI NEPM under the *National Environment Protection Council (WA) Act 1996*, the *Environmental Protection Act 1986* and the *Environmental Protection Regulations 1987*. The implementation of the NPI NEPM continues to be successful in WA.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 5: Participation, feedback and effectiveness for Western Australia for the period 1 July 2022 to 30 June 2023

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community member visits to the NPI website is recorded by the Commonwealth.	Environment groups and the media utilise NPI NEPM data where environmental issues of concern are identified.	No media or public queries were made to WA NPI for 2023–24.
Industry		
933 reports for 2021–22. 936 reports for 2022–23. 19 new reporters. - No new sectors reporting. - No confidentiality claims submitted.	- Widespread compliance with the online reporting system with 98% uptake in WA for 2022–23. - Some smaller facilities, mostly wineries and landfills, require above-average reporting guidance. Staff turnover and technical competency are the main drivers. - Major industrial facilities maintain awareness of community interest in their emissions and ensure reports accurately reflect site emissions.	- Training sessions provided to industry reporters included an introductory webinar, emission estimation training webinar and online reporting training. - Reporters from other jurisdictions were invited and attended the webinar. - We continued to follow-up potential reporters in several industry sectors. - Reporters were regularly reminded of reporting deadlines and supplied additional reporting information to that available on website.

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Government		
• 936 desktop audits. • 29 detailed audits, including two site visits • No regulatory actions	• The Department of Water and Environmental Regulation uses NPI NEPM data to inform policy development, program implementation and to support regulatory activity. • NPI NEPM data is used to identify and rank WA's major emitters with comparisons made with national data.	• WA NPI audit program recently changed from individual facilities of interest to industry-wide assessment with targeted site-visits. Significantly increased number of detailed audits undertaken and improved industry reporting methodology consistency. • 2023–24 audit campaign targeted non-metallic mineral mining and quarrying, with 66 improvement recommendations being made in total. • The Department of Water and Environmental Regulation uses toxic equivalency potentials to support the assessment of risk.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for South Australia by Hon Susan Close, Minister for Climate, Environment and Water, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In South Australia (SA), the Environment Protection Authority (SA EPA) implements the NPI NEPM through the *Environment Protection (National Pollutant Inventory) Policy 2008*.

A detailed air emissions inventory remains a strategic priority for both the NPI program and the SA EPA. Aggregated emissions data are required for reliable comparison with industry emissions. However, program resourcing levels do not currently allow for the updating of aggregate emissions data (last undertaken in SA in 2003).

The SA EPA contributed to the NPI Steering Committee task of developing the terms of reference for the formation of a Technical Advisory Panel (TAP) to deliver on the recommendations of the NPI Review. Unfortunately, the Commonwealth will not be progressing the formation of a TAP in the short term, limiting the opportunity for improvements to be made to the NPI program.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 6: Participation, feedback and effectiveness for South Australia for the period 1 July 2022 to 30 June 2023

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community member visits to the NPI website was recorded by the Commonwealth.	- There are occasional enquiries about NPI data from the public and industry. - The media use NPI data.	- Prompt responses are made when NPI data is requested. - There was involvement with the GovHack 2023 open data competition as a data mentor.
Industry		
496 reports for 2021–22. 494 reports for 2022–23. 11 new reporters. - No new sectors reporting. - No confidentiality claims submitted.	- Online reporting training has been well received by industry. - Industry provided positive feedback on the assistance provided to them by the SA NPI team. - Ongoing support provided to reporters on how to use the all-in-one calculation tool, which addresses incompatibility issues with the old individual NPI calculation tools that do not work with 64-bit version of Excel and have been decommissioned.	- A newsletter was emailed to reporters, and published on the SA EPA website, to inform reporters about updates and provide general information about NPI reporting. - Industry enquiries have been promptly followed up. - Training on NPI requirements, online reporting and ‘drop in’ sessions were held to support industry reporters.

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Government		
• 494 desktop audits. • No on-site audits. • No regulatory actions.	• The SA EPA utilises NPI data to implement the Resource Efficiency Component of its load based or 'polluter pays' licensing system. • The SA EPA uses NPI data as part of its regulation of EPA licensed facilities. • NPI provides data for SA's State of Environment (SoE) reports. • NPI data are used for developing air quality modelling to provide comprehensive, spatially distributed diffuse and industrial point pollutant emission data across SA airsheds.	• Participation in the NPI Intergovernmental Working Group remains important for the discussion of policy, strategy and technical implementation details. • Implementing the recommendations of the NPI Review is critical to ensuring the program's longevity and utility in the future. • The SA EPA contributed to the NPI Steering Committee task of developing the terms of reference for the formation of a Technical Advisory Panel (TAP) to deliver on the recommendations of the NPI Review.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for Tasmania by the Hon Madeleine Ogilvie MP, Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

System administration presents an ongoing issue with many reporters needing direct support to fulfill obligations in an accurate and timely manner. It is also likely that not all Tasmanian emitters are inputting data into the NPI. Some particular industries are underrepresented in the dataset, for example, distilleries and wine producers. In addition, there are ongoing concerns about the reliability of the data. The Tasmanian jurisdiction is only resourced for desktop audits, therefore has difficulty verifying the accuracy of the data received.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

**Table 7: Participation, feedback and effectiveness for Tasmania for the period
1 July 2022 to 30 June 2023**

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
There were 206 visits to the NPI page on EPA Tasmania website, and community visits were recorded by the Commonwealth.	No formal feedback was received by the Tasmanian jurisdiction regarding the NPI database.	
Industry		
134 reports for 2021–22. 148 reports for 2022–23. 153 reports for 2023–24 as at 17 October 2024, with another three facilities expected to submit a late report. - Two new reporters. - No new sectors reporting. - No confidentiality claims submitted².	Protocols around reporting of transfers are confusing for many reporters.	- Four one-on-one meetings with reporters were conducted to assist with report compilation. 12 large non-reporting organisations were identified and directly approached with formal correspondence advising of their responsibility to report to the NPI. Of these, two have responded and begun participation in reporting. - Where a facility's reported data appears inaccurate, reporters are being engaged to update their reports and improve data quality.
Government		
154 desktop audits³. - No on-site audits³. - No regulatory actions.	NPI data is used to support Assessment decisions relating to air emissions and community impacts.	The purpose of the NPI is being communicated with industry regulators.

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure for the Australian Capital Territory by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Access Canberra, within the Chief Minister, Treasury and Economic Development Directorate is responsible for the implementation and administration of the NPI NEPM.

The Environment Planning and Sustainable Development Directorate is responsible for the development of legislation and policy to ensure the NPI NEPM is appropriately implemented in the Australian Capital Territory (ACT).

The NPI is implemented through the provisions of the ACT's *Environment Protection Act 1997*.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 8: Participation, feedback and effectiveness for Australian Capital Territory for the period 1 July 2022 to 30 June 2023

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community member visits to the NPI website was recorded by the Commonwealth.	No specific feedback was received from the community.	
Industry		
18 reports for 2022–23. 17 reports for 2021–22. - No new reporters. - No new sectors reporting. - No confidentiality claims submitted.	- Training was welcomed by the industry to increase understanding of the program and how to use the online reporting system. - Technical support was essential during the reporting period.	- All ACT reporters used the online reporting system. - One-on-one training sessions continued to work successfully. - Industry enquiries were responded to in a timely manner.
Government		
18 desktop audits - No on-site audits - No regulatory actions	No specific feedback was received from the government.	- Every NPI report underwent a desktop validation. - The ACT Government continued liaising with other jurisdictions to achieve a nationally consistent implementation.

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (National Pollutant Inventory) Measure Northern Territory by the Minister for Environment, Climate Change and Water Security for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The NPI program is implemented in the Northern Territory (NT) through the *Environment Protection (National Pollutant Inventory) Objective 2004* established under the *Waste Management and Pollution Control Act 1998*. Overall responsibility for implementation of the NPI rests with the NT Environment Protection Authority (NT EPA), which is supported by the Department of Lands, Planning and Environment (DLPE).

All submitted reports were validated. However, due to limited resourcing, audits were done selectively based on evidence of significant emissions changes from previous years and facility size.

The NT does not have sufficient funding to perform aggregate emissions data (AED) modelling as required by the NPI NEPM. AED includes diffuse sources of emissions such as fuel stations, motor vehicles and other non-road engines.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 9: Participation, feedback and effectiveness for Northern Territory for the period 1 July 2022 to 30 June 2023

Participation levels	Feedback from the community, industry and government	Implementation activity effectiveness
Public		
The number of community visits to the NPI website was recorded by the Commonwealth.	No feedback on the database was received from the public. However, there was public concern about the amount of Volatile Organic Compounds (VOC) emitted from an LNG plant.	The NT EPA (https://ntepa.nt.gov.au/your-environment/national-pollutant-inventory) website provides information on the NPI and has links to the NPI website.
Industry		
113 reports for 2021–22. 115 reports for 2022–23. 111 reports for 2023–24. - No new reporters. - No new sectors reporting. - No confidentiality claims submitted.	No feedback on the database was received from industry.	- Industry reporters were provided training on reporting. - Some industry reporters who were assisted in reporting their emissions expressed their appreciation.
Government		
12 desktop audits. - No on-site audits. - No regulatory actions.	The Department of Logistics and Infrastructure NT (DLI) is using NPI data to assist in compiling an emissions inventory for the development of a Darwin airshed model.	Participation of the NPI Officer in the NPI Intergovernmental Working Group remains important for the implementation of NPI in the NT.

APPENDIX 7:

Jurisdictional reports
on the implementation
and effectiveness of the
Used Packaging Materials
National Environment
Protection Measure





Commonwealth

Report to the National Environment Protection Council (NEPC) on the implementation of the National Environment Protection (Used Packaging Materials) Measure 2011 from the Commonwealth prepared by the Department of Climate Change, Energy, the Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

Since 1999, the National Environment Protection (Used Packaging Materials) Measure (Used Packaging Materials NEPM) and Australian Packaging Covenant (Covenant) have provided a mandatory national co-regulatory framework to encourage Australian businesses to design more sustainable packaging that will increase recycling rates and reduce environmental impacts. Under the framework, liable packaging brand owners in Australia must choose between becoming a Covenant signatory or reporting under state or territory government NEPM laws and arrangements.

The industry-led Covenant is an agreement between governments and businesses in the packaging supply chain that aims to optimise the design of more sustainable packaging to increase recycling rates and prevent the impacts of waste packaging on the environment. The Australian Packaging Covenant Organisation (APCO) is the industry body responsible for managing signatories to the Covenant and supporting industry action against the goals of the Covenant.

The Used Packaging Materials NEPM is Commonwealth legislation that is implemented and enforced by participating jurisdictions through necessary laws and other administrative arrangements. It requires participating jurisdictions to establish a statutory basis for ensuring that businesses that choose not to sign up to the Covenant cannot act as free-riders and gain a competitive advantage over those organisations that opt to meet their obligations by becoming Covenant signatories.

The Used Packaging Materials NEPM requires participating state and territory governments to report annually on brand owners that are subject to NEPM requirements, survey packaged products to ascertain the effectiveness of the Used Packaging Materials NEPM, and to report local government collection and participation data for kerbside or other municipal material recovery systems.

The Commonwealth NEPM applies to packaging brand owner companies with over 50% Commonwealth ownership, and to the Commonwealth's territories. Australia Post is the only Commonwealth brand owner under the definition of the Commonwealth NEPM, and Christmas and Cocos Keeling Islands are the only Commonwealth territories where the NEPM could be applied. The Australian Government and Australia Post are signatories to the Covenant and therefore are not subject to the requirements of the Used Packaging Materials NEPM.

The Used Packaging Materials NEPM also requires the Commonwealth to provide information annually to NEPC on the overall national performance of the Covenant. In accordance with section 19 of the Used Packaging Materials NEPM, the Commonwealth is to be provided with information in relation to:

- membership of the Covenant expressed as both the number of signatories, and the proportion of consumer packaging used in Australia represented by those signatories
- the number of action plans lodged with APCO
- recovery and utilisation rates reported by Covenant signatories in accordance with their action plans under the Covenant, with reference to the key performance indicators and targets specified in the Covenant, and
- a statement of interpretation of the information.

There were no significant issues pertaining to the implementation of the Used Packaging Materials NEPM in 2023–24.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Independent review of the co-regulatory arrangement for packaging and regulatory reform

In 2021, an independent review of the Used Packaging Materials NEPM and Covenant to evaluate the effectiveness of Australia's co-regulatory framework for packaging was completed. This was the first comprehensive statutory review of the co-regulatory framework since it was first established in 1999. The review was informed by a detailed analysis of the federal, state and territory legislation and policies that underpin and provide for enforcement of the Used Packaging Materials NEPM and Covenant, data on packaging consumption and recovery rates in Australia, a five-week stakeholder consultation period, and in-depth briefings and one-on-one interviews with key industry and government stakeholders, including APCO and all state and territory governments.

A review report provided to the Australian Government on 6 September 2021 broadly identified that, while the co-regulatory arrangement has some strengths, the Used Packaging Materials NEPM is not fit-for-purpose and reform is needed to improve environmental outcomes for packaging. In particular, the review identified significant failures in the Used Packaging Materials NEPM's implementation and enforcement since its establishment. These failures have resulted in a lack of clarity for brand owners regarding their liability and obligations, enabled free riders, reduced industry confidence and participation in the Covenant, and limited data collection to measure and report on performance.

Overall, the review found that the co-regulatory arrangement was no longer fit-for-purpose to deliver a circular economy for packaging and made nine recommendations to address these limitations and assist governments and industry to develop a reformed packaging scheme.

In 2022, federal, state and territory Environment Ministers collectively agreed on the need to reform the regulation of packaging in line with circular economy principles. In 2023, Ministers agreed to mandate obligations for packaging design based on international best practice and noted that the Commonwealth should regulate the new scheme.

Effectiveness of the Covenant

To comply with the Covenant, brand owner signatories are required to take the following actions:

- within three months of becoming a signatory, submit an action plan that sets out what the signatory proposes to do to contribute to the Covenant's aim and meet the obligations published by APCO
- by 31 March each year, commencing in the financial year following the year in which a company becomes a signatory, submit an annual report that outlines performance against all action plan commitments and meet the reporting obligations as published by APCO
- publish the action plan and annual reports on its website in a prominent and readily identifiable way
- make annual financial contributions in the form of membership fees payable to APCO
- implement policies or procedures to buy products made from recycled materials
- establish collection and recycling programs for used packaging materials generated on-site
- where appropriate take action to reduce litter
- allow independent audits of annual reports and the implementation of action plans, including allowing access to relevant supporting documentation demonstrating application of the Sustainable Packaging Guidelines, or an alternative to the Guidelines, and
- assist APCO to respond to complaints from the public about the design and use of packaging materials.

If a signatory to the Covenant does not meet one or more of the above obligations, the non-compliant signatory can be removed from the Register of Covenant Signatories. APCO then notifies the relevant state or territory government that the business is no longer a signatory. APCO deems a business referred once the state or territory government has been notified.

Data provided by APCO indicates that as at 30 June 2024, there were 2,442 signatories to the Australian Packaging Covenant. This was an increase of 272 signatories (12.5%) from the previous reporting period. Of the 2,442 signatories, 2,048 had obligations to submit an action plan (of which 2,039 or 99.6% were compliant) and an annual report (of which 2,037 or 99.5% were compliant).

Table 1: Number of APCO signatories by reporting year (Australia)

Reporting year	Number of Covenant signatories
2021–22	2,095
2022–23	2,170
2023–24	2,442

Complaints, investigations and prosecutions

No complaints regarding brand owners or Covenant signatories were received in the reporting period, and no investigations or prosecutions were carried out.

New South Wales

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for NSW by the Hon Penny Sharpe MP, Minister for Climate Change, Minister for Energy, Minister for the Environment and Minister for Heritage, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The New South Wales (NSW) Environment Protection Authority (NSW EPA) is the primary environmental regulator for NSW and is responsible for administering and enforcing Part 8 of the Protection of the Environment Operations (Waste) Regulation 2014 (POEO (Waste) Regulation), which applies to brand owners. Part 8 gives effect to the Used Packaging Materials NEPM in NSW.

In November 2023, Environment Ministers agreed that new national packaging regulation will be implemented under Commonwealth law and that the Commonwealth Government will be the regulator of these new laws. Under these new laws, the Commonwealth Government will mandate how packaging is designed, set minimum recycled content requirements, and prohibit harmful chemicals being used in packaging. These design requirements for packaging will be finalised, in consultation with industry, by the end of 2024.

The NSW EPA is working closely with the Commonwealth Government on reforms to the national packaging regulation to reduce the impact of packaging on the environment. Addressing packaging waste issues requires an integrated, whole-of-lifecycle approach that enables collaboration between stakeholders at all parts of the supply chain, to create a circular economy for packaging.

Mandatory design standards, extended producer responsibility and producer pays principles are important considerations for packaging reforms. NSW is supportive of these solutions that involve producers taking responsibility for managing the environmental impact of packaging at the post-consumer state of their life cycle.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Part 8 of the POEO (Waste) Regulation sets out the responsibilities that brand owners have for the packaging of their consumer products. These responsibilities include recovering packaging materials, ensuring recovered packaging materials have been reused or recycled, informing consumers about how to reuse or recycle packaging, reviewing packaging design and keeping annual records.

For the year ending 30 June 2024, the NSW EPA set the following targets for recovery of materials and review of packaging design:

- 90% recovery of all materials used in packaging products up to and including 30 June 2026, and
- 100% of new and existing packaging must be reviewed using the Sustainable Packaging Guidelines.

Brand owners can implement systems, processes and/or other activities within their business that meet the regulatory obligations or discharge these obligations by becoming a signatory to the Australian Packaging Covenant.

Table 2: Number of APCO signatories by reporting year (NSW)

Reporting year	Number of Covenant signatories
2021–22	823
2022–23	874
2023–24	851

Instead of meeting the NSW targets, APCO members must collectively work towards the 2025 National Packaging Targets. APCO’s review of the 2025 National Packaging Targets in April 2023 stated that none of the targets would be met under a ‘business as usual’ approach.

APCO has published a 2030 Strategic Plan which sets out an ambitious program of work that focuses on introducing eco-modulated fees and procuring services under contract for the collection, sorting, transport and reprocessing of materials to support achieving the 2025 National Packaging Targets.

Recovery data

The NSW EPA did not request records from brand owners reporting to the EPA in the 2023–24 financial year.

Supporting data

Clause 18 of the Used Packaging Materials NEPM requires jurisdictions to carry out surveys of packaged products (‘brand owner surveys’) to ascertain the effectiveness of the measure in preventing free riding.

Previous annual reports noted that in August 2015, a meeting of jurisdictions and industry resolved that jurisdiction would not carry out surveys, and that industry would take responsibility for brand owner surveys from 1 July 2016.

This is reflected in Schedule 5 – Compliance Procedures of the Australian Packaging Covenant, which requires the APCO to undertake annual brand owner surveys of packaged consumer products and identify potential brand owners and not registered as Signatories to the Covenant.

Complaints, investigations and prosecutions

Complaints

No complaints in relation to specific businesses were received during financial year 2023–24. The NSW EPA responded to 21 enquiries from entities regarding brand owner obligations and requirements, and 95 enquiries about packaging related issues.

Investigations undertaken and prosecutions mounted

No investigations or prosecutions in relation to specific entities reporting to the NSW EPA were undertaken during financial year 2023–24.

Brand owner engagement campaign

During the 2023–24 APCO brand owner audit, APCO sent 114 letters to NSW entities, followed by 79 follow up co-branded letters with the NSW EPA. Following this campaign, 44 entities became APCO members, and 82 were referred to the NSW EPA as potentially having brand owner obligations.

The NSW EPA has taken steps to validate the referrals from APCO by developing an internal assessment procedure. In addition, the NSW EPA has been developing compliance programs for APCO’s brand owner audit and regulating brand owners reporting to the EPA. These compliance programs are scheduled to commence during the 2024–25 financial year.

REDcycle clean-up notices

On 9 November 2022, REDcycle announced it was pausing its soft plastics collections due to damage caused by a fire at its recycling partner's facility. The REDcycle program previously allowed consumers to return plastic bags and soft plastic packaging to major supermarkets across Australia. Several Covenant signatories participated in this program.

In early 2023, the NSW EPA issued clean-up notices to two major supermarkets. These notices directed supermarkets to manage the recovery, recycling and lawful removal of 15 soft plastic stockpiles across NSW, containing more than 5,200 tonnes of soft plastic waste, by May 2024. They may be able to have it processed at a recycling facility or sent overseas. A last resort would be to send it to landfill. The major supermarkets have complied with the clean-up notices and removed all soft plastics waste from the 15 stockpile sites in NSW. Most of the waste has been taken to a waste facility at Orchard Hills while longer term solutions for the material are explored.

The notices gave the supermarkets 12 months, until May 2024, to develop a lawful solution that determines the future of the materials, whether that be processing at a recycling facility, exporting it overseas, or as a last resort sending it to landfill. On 10 May 2024 supermarkets were granted an additional 10 months to comply with the notices, until March 2025. This will ensure that the identified processing solution operates at sufficient capacity to handle the stockpiled material.

The NSW EPA is working with other jurisdictions and industry to ensure a coordinated approach and understanding of the issues that impacted the REDcycle program.

Compliance with Plastic Reduction and Circular Economy Act 2021

The NSW EPA is the sole regulator of the *Plastic Reduction and Circular Economy Act 2021* (PRCE Act), using a proportionate, risk-based approach to influence, enable, monitor and enforce compliance. The NSW EPA uses proactive intelligence-based approaches to regulation to identify and educate businesses that may have a high risk of non-compliance.

In 2023–24, the NSW EPA conducted 272 inspections in response to community reports and as part of proactive engagement campaigns. We received 95 reports of non-compliance during this time. Four Compliance Notices (including Stop notices) were issued to businesses regarding the supply of rinse-off personal care products reasonably suspected to contain plastic microbeads, in contravention of section 9 of the PRCE Act. The NSW EPA will continue to monitor compliance with these notices over the first half of 2024–25. The NSW EPA responded to 290 enquiries related to the plastic bans in 2023–24.

Statement of interpretation of the information

The NSW EPA delivers an extensive suite of policies, programs and initiatives that contribute to the Used Packaging Materials NEPM goal of encouraging packaging waste avoidance, reuse and recycling, and preventing environmental harm caused by packaging litter and leakage. These activities go beyond the administrative requirements of the Used Packaging Materials NEPM as well as Part 8 of the POEO (Waste) Regulation. They are essential to improving the management of packaging wastes so that their impact to the environment is reduced and recycling and reuse is encouraged.

Strategic and policy updates

On 29 October 2023, the NSW EPA released the *NSW Plastics: Next Steps* (<https://yoursay.epa.nsw.gov.au/plastics-paper>) paper seeking feedback on potential further action to reduce the harms associated with problematic and unnecessary plastic. The paper sought feedback on proposals to address a range of plastic items that:

- are frequently littered
- release microplastics into the environment
- contain harmful chemical additives, and
- are currently, or are proposed to be, regulated in other states and territories.

Consultation on the *NSW Plastics: Next Steps* paper closed on 4 February 2024.

The NSW EPA also held a series of targeted workshops and one-on-one meetings throughout March and April 2024 with key industry, environment and government stakeholders to discuss the items identified in the *NSW Plastics: Next Steps* paper and options to address them. The NSW EPA has reviewed the feedback provided on the paper and is developing more detailed proposed actions, timeframes and definitions on the problematic and unnecessary plastic items that were highlighted for potential action.

The NSW EPA has now released *NSW Plastics: The Way Forward* for public consultation until 4 November 2024.

Litter prevention

Litter and leakage to the environment of packaging materials remains a concern. NSW litter data shows that many packaging items end up as litter not only because of littering behaviour, but due to product design and intended use (i.e., lightweight, designed to be torn open and consumed on the go).

According to Litter data and targets (<https://www.epa.nsw.gov.au/your-environment/litter/data-and-targets>), key items of concern include:

- confectionary wrappers and snack bags, which are now the most littered item in the NSW Key Littered Item Study, accounting for around 15% of littered items found in NSW estuaries, and
- beverage container lids, accounting for around 7% of littered items.

The NSW Litter Prevention Strategy (<https://www.epa.nsw.gov.au/your-environment/litter/nsw-litter-prevention-strategy>) provides the framework we use to prioritise funding and action to reduce litter and achieve our objectives.

Two new ambitious litter reduction targets have been set in the new NSW Waste and Sustainable Materials Strategy 2041 and NSW Plastics Action Plan. These targets are:

- Target 1: a 30% reduction in plastics litter items by 2025.
- Target 2: a 60% reduction in all litter items by 2030

Under the NSW Waste and Sustainable Materials Strategy 2041, an additional \$38 million of funding for 2022–27 has been allocated to litter prevention programs to achieve these targets. This includes over \$10 million in funding which is being provided to councils and community groups to deliver local and regional litter prevention projects and build on NSW's other litter prevention work, including the successful Don't be a Tosser!

Container deposit scheme

The introduction of the Return and Earn scheme has had a significant and sustained positive impact on reducing and preventing beverage container litter. Since its introduction in 2017, eligible CDS beverage container litter has fallen in both the density (number of items) (by 73%) and in volume (by 71%).

The scheme has also doubled recycling rates for drink containers. Before the scheme commenced 33% of drink containers were being recycled through kerbside recycling in NSW. Since the start of the scheme, the number of containers being recycled has risen to as high as 68%.

Consultation on an expanded scope of Return and Earn finished in December 2022. The NSW Government is reviewing feedback from public consultation regarding a potential expansion of the scheme to include additional beverage containers. A summary of submissions will be published soon.

The scheme celebrated over 12 billion bottles and cans being collected through the network and recycled. This is a monumental effort and shows the power of government, industry and the community working together to manage waste.

Return and Earn is one of seven CDSs in Australia, which are largely consistent. By 2025, all eight states and territories will have implemented schemes, making harmonisation a focus for ongoing national work.

Waste levy

The waste levy has been instrumental in driving resource recovery in NSW to date, ensuring our materials are used for as long as possible instead of being disposed of in landfill or polluting our environment as litter or dumped material.

The recycling rate is now plateauing in NSW, with recycling rates in 2021–22 for waste from commercial and industrial (C&I) sources and household kerbside waste, otherwise known as municipal solid waste (MSW), flagged at 49% and 43% respectively.

The NSW Government is reviewing the waste levy to examine why recycling is plateauing in NSW, and how the waste levy can be better used to drive further resource recovery. The government is consulting with the community, local councils and industry to explore how adjustments to the operation of the waste levy could reinvigorate incentives to recycle while minimising impacts on cost-of-living as well as making it easier for waste operators to do the right thing.

In May 2024, the NSW Government released the NSW waste levy review (<https://yoursay.epa.nsw.gov.au/nsw-waste-levy-review>), seeking stakeholder feedback on how to:

- adjust waste levy rates and boundaries to increase resource recovery in NSW, while minimising impacts on cost-of-living
- create a fair playing field for waste operators who safely and sustainably manage waste, and
- ensure the waste levy operates as an effective incentive for resource recovery within the broader waste and resource recovery landscape of NSW, including infrastructure, services and markets.

Consultation on the issues paper closed on 15 July 2024.

Waste and recycling infrastructure

By 2030, NSW aims to recover 80% of waste on average, reduce waste per capita by 10%, and triple the recycling rate of plastics. Doing this will require significant investment in infrastructure to collect, sort, recycle and remanufacture packaging into new products.

The NSW EPA is working closely with local councils and industry to develop a Waste Infrastructure Plan for NSW (the Plan). The Plan will be informed by robust, data-driven analysis to determine infrastructure needs across the state and will take a staged approach, starting with the most urgent capacity needs in residual waste and FOGO infrastructure before moving to an holistic approach to recycling infrastructure.

The NSW EPA is working to create public data dashboards so that stakeholders can make informed decisions for planning and investment and support the development of waste strategies. This includes data from the commercial and industrial waste audit and material flow analysis by regions.

The Plan will be action oriented and focus on several key issues, including:

- establishing consensus and trust in data regarding waste generation, material flows, infrastructure capacity and future needs
- improving current strategic planning and delivery mechanisms for waste infrastructure, and
- improving and clarifying the policy and regulatory framework to give greater certainty to stakeholders.

NSW is continuing to invest in new infrastructure. Details of specific waste and recycling infrastructure funding can be found at: www.epa.nsw.gov.au/working-together/grants.

Business support

The NSW EPA provides a range of tools, programs and services, as well as funding for equipment to make it easier for businesses to avoid waste, recycle more and send less waste to landfill.

This has included:

- partnerships and trials to support reusables at events and within cafes
- packaging supply chain trials to reduce the use of non-recyclable plastic packaging
- trials to reuse and recycle medical plastics
- trials to support reusable food containers in food courts, and
- manufacture and reuse of refillable packaging for personal care and cleaning products.

The Bin Trim Networks program (<https://www.epa.nsw.gov.au/working-together/grants/business-recycling/bin-trim-grants>) has awarded \$6 million in funding to 14 projects across the state, targeting 4,000 businesses across specific sectors, supply chains, precincts and networks. Projects include solutions to reduce excessive plastic packaging and non-recyclable packaging, improved materials circularity and reuse systems.

The Bin Trim Equipment Rebates program (<https://www.epa.nsw.gov.au/working-together/grants/business-recycling/bin-trim-rebates-program>) has allocated \$6 million to businesses, including registered charities, not-for-profits, public entities and government organisations. Funding is available for equipment or technology that avoids, reduces, reuses or recycles waste. Rebates may fund equipment or technology that avoids or prevents waste through a supply chain, reuses material, enables redesign, promotes producer responsibility and prevents the generation of priority materials including plastics.

Local government data

Clause 17 of the Used Packaging Materials NEPM requires participating jurisdictions to require local governments to provide collection and participation data for kerbside recycling collection services.

This is delivered through the NSW Local Government Waste and Resource Recovery Data Report, which is based on voluntary annual survey responses from 128 NSW local councils. This report provides data about domestic waste and recycling in NSW. It is an important resource to help local councils and industry measure the success of programs and make evidence-based decisions about waste and recycling. It also helps the NSW EPA monitor waste and recycling levels across the state.

Local government data is available on NSW EPA's website (<https://www.epa.nsw.gov.au/Your-environment/Recycling-and-reuse/warr-strategy/policy-makers/surveys>).

Victoria

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Victoria by the Hon Ingrid Stitt, Minister for the Environment; Early Childhood Education and Pre-prep and the Hon Steve Dimopoulos, Minister for Environment; Tourism, Sport and Major Events; and Outdoor Recreation, for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

From 1 July 2021, the Used Packaging Materials NEPM is implemented in Victoria through Part 4.3 of the new Environment Protection Regulations 2021 (EP Regs).

Regulation 99 of EP Regs states brand owners must provide an annual report to the Authority by 30 September each year, allowing EPA reporting from the first quarter of 2023–24.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

The main purpose of the Used Packaging Materials NEPM is to establish a statutory basis for ensuring that brand owners that have signed up to the Australian Packaging Covenant are not competitively disadvantaged in fulfilling their commitments under the Covenant by non-signatories.

The Secretariat of the Covenant makes initial approaches to companies that are identified as brand owners (or potential brand owners) to encourage them to become signatories to the Covenant.

The Secretariat then refers non-signatory brand owners and non-compliant signatory brand owners to jurisdictions. This is done in line with compliance procedures set out in Schedule 3 of the Covenant. Jurisdictions then write to, and speak with, representatives of the companies referred to them.

Victoria has established a compliance process to identify free riders and start them reporting on their obligations.

At 30 June 2024, there were over 2,318 signatories to the Covenant nationally. Victoria has 864 signatories, accounting for 37% of all signatories. There were 50 brand owners referred to Victoria because of the brand audit process undertaken by APCO. These were potential brand owners that failed to become signatories to the Covenant and had their registered head office located in Victoria. An additional 34 brand owners were referred to Victoria by APCO due to their withdrawal from the Covenant.

Table 3: Number of APCO signatories by reporting year (Vic)

Reporting year	Number of Covenant signatories (Vic)	Number of non-signatories (referred to Victoria)
2021–22	791	664
2022–23	848	402
2023–24	864	84

Recovery data

Due to a more targeted approach from APCO, Victoria received a smaller number of referrals for the 2023–24 reporting period than the previous year.

Over the 2023–24 reporting period, EPA Victoria's Compliance Reporting team ran a compliance program for the submission of required annual reports with recovery data as per Clause 16.

A prioritisation methodology was applied to target 102 brand owners from Victoria's Brand Audit Referral list received from APCO (as well as repeat reporters from previous years). These brand owners received initial correspondence from EPA Victoria in June 2024 in preparation for the 30 September reporting due date. Responses were required in an attached template by 30 June on brand owner intention to either:

- commence the procedure to become a signatory to the Covenant via APCO membership
- report through EPA Victoria subject to obligations under Part 4.3 of the EP Regs, or
- provide evidence that the company is exempt as:
 - not a liable brand owner
 - having an annual turnover of less than \$5 million
 - having ceased trading or having been acquired, or
 - being part of another arrangement that produces equivalent outcomes to those achieved by the Australian Packaging Covenant.

EPA Victoria closely works with APCO to check that companies that indicated they would become signatories of the Covenant followed through with that membership. EPA Victoria followed up directly with companies that did not respond to our initial correspondence or responded stating they would report directly to EPA Victoria. Thirty companies decided to become signatories to the Covenant as a result of EPA Victoria's communications.

As at 31 Oct 2024, EPA Victoria has received 78 reports which will be assessed for completeness and compliance with the Regulations. Feedback will be provided to all reporters. There are five companies that either did not respond to communications or responded but did not provide their report. These companies were issued Information Gathering Notices on 31 Oct 2024. These notices required information to be provided to determine brand owner liability. These companies were then followed up and told to submit their used packaging report. Failure to provide a response to the notice received a sanction for failure to comply with a notice.

Supporting data

Nil.

Complaints, investigations and prosecutions

EPA Victoria is still in the process of investigating compliance and enforcement options for five non-reporting companies that have not submitted their reports by the end of Sept 2024. These companies will receive information gathering notices to determine whether they meet the definition of brand owner. Sanctions will follow if there continues to be no response.

Statement of interpretation of the information

Nil.

Local government data

Local government recycling data is published on Recycling Victoria's website: (<https://www.vic.gov.au/victorian-local-government-waste-data-dashboard>)

Queensland

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Queensland by Hon Leanne Linard MP, Minister for the Environment and Great Barrier Reef and Minister for Innovation for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The primary purpose of the Used Packaging Materials NEPM is to establish a statutory framework to ensure that signatories to the Australian Packaging Covenant are not competitively disadvantaged in the marketplace as a result of fulfilling their signatory commitments.

The Used Packaging Materials NEPM is given regulatory effect in Queensland through provisions of the *Waste Reduction and Recycling Act 2011* and the Waste Reduction and Recycling Regulation 2023.

On 1 September 2021, Queensland's ban on single-use plastic items commenced. This ban covers single-use plastic straws, stirrers, plates, unenclosed bowls and cutlery, and takeaway expanded polystyrene food containers and cups. A second round of bans commenced on 1 September 2023, covering plastic microbeads in personal care and cleaning products, expanded polystyrene packaging peanuts, plastic-stemmed cotton buds and plastic shopping bags over 35 microns that do not meet reusability requirements.

In December 2021, the Queensland Government announced a 10-year \$1.1 billion Recycling and Jobs Fund, aimed at improving recycling and resource recovery infrastructure across Queensland. Funding is also being directed towards education and behaviour change initiatives aimed at helping reduce contamination in the recycling bin and improving recycling rates.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

During the 2023–24 reporting year, the number of brand owner signatories in Queensland increased by 11. Queensland continues to support APCO to identify potential brand owners and to work towards achieving the National Packaging Targets.

Table 4: Number of APCO signatories by reporting year (Qld)

Reporting year	Number of Covenant signatories
2021–22	153
2022–23	161
2023–24	172

Recovery data

There are currently no brand owners reporting directly to the Department of Environment, Science and Innovation.

Supporting data

Brand owner audits are now undertaken by APCO.

Complaints, investigations and prosecutions

No complaints were received, investigations commenced, or prosecutions undertaken during the reporting period.

Statement of interpretation of the information

Queensland is working closely with other states and territories and the Australian Government on reforms to the packaging framework objectives and obligations to ensure consistency across all jurisdictions.

Local government data

Local government data for the 2023–24 reporting period is available in the annual Recycling and Waste in Queensland Report 2024 (<https://www.qld.gov.au/environment/circular-economy-waste-reduction/data-reports/recycling-waste>), published on the Queensland Government website.

Western Australia

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Western Australia by the Department of Water and Environmental Regulation for the reporting year ended 30 June 2023.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In Western Australia (WA), the Used Packaging Materials NEPM is implemented by the Department of Water and Environmental Regulation (DWER) under the *National Environment Protection Council (Western Australia) Act 1996*, the *Western Australian Environmental Protection Act 1986* and the *Environmental Protection (NEPM-UPM) Regulations 2013*. DWER has been working with the other jurisdictions to ensure a consistent approach to following up non-signatories.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

APCO referred 160 brand owners to DWER that were not signatories to the Australian Packaging Covenant. Following analysis, DWER wrote to 158 brand owners (two brand owners were incorrectly identified) and then sent follow up letters to 101 non-responders and incomplete responders. Responses were received from 87 brand owners and nine brand owners committed to join the Covenant.

The APCO 2023–24 brand owner audit was modified to focus on key industries that placed high volumes of packaging on the market, namely: electronics, food and beverage, and general merchandise and apparel. APCO approached 264 potentially liable brand owners, inviting them to become signatories to the Australian Packaging Covenant, with 16 headquartered in WA.

One WA brand owner joined the Covenant and three claimed they were not liable brand owners. Twelve co-branded letters were then sent to WA non-responders, notifying them of APCO’s intention to refer them to DWER. As a result, another WA brand owner joined APCO and a further three claimed they were not liable brand owners.

Fourteen companies were then referred to DWER to follow up, including the six companies claiming not to be liable brand owners. No further brand owners committed to join the Covenant.

Table 5: Number of APCO signatories by reporting year (WA)

Reporting year	Number of Covenant signatories
2021–22	140
2022–23	140
2023–24	142

Recovery data

No WA-based companies have been required to provide records for auditing.

Supporting data

Not applicable.

Complaints, investigations and prosecutions

No complaints were received, or investigated or prosecutions undertaken, during the 2023–24 reporting period.

Statement of interpretation of the information

Not applicable.

Local government data

[Local government material recovery system data](#) for 2022–23 will be made available later in the year. Data for 2023–24 will be available in 2025.

South Australia

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for South Australia by the Hon Susan Close, Minister for Climate, Environment and Water for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

In 2023–24, South Australia (SA) continued to work with APCO, the Commonwealth and other jurisdictions to pursue national consistency in the attainment of the goal of the Used Packaging Materials NEPM.

The SA Environment Protection Authority (SA EPA) and the Government Officials Group (GOG) continued work on the Packaging Regulatory Reform Working Group (PRRWG) including:

- work on key elements of a new packaging regulatory framework
- providing advice on new mandatory packaging design standards, and
- working with APCO throughout the reform process to make sure businesses are kept informed and supported during the transition to the new scheme.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

During 2023–24, SA continued to work with APCO and the GOG to encourage brand owners to become signatories to the Australian Packaging Covenant.

Table 6: Number of APCO signatories by reporting year (SA)

Reporting year	Number of Covenant signatories
2022–23	115
2023–24	112

Recovery data

There are currently no brand owners reporting to the SA EPA and, therefore, no requirements for audits under clause 16.

Supporting data

The work conducted by the PRRWG on a co-designed model for a nationally consistent reformed scheme will provide a more effective way forward for pursuing brand owners identified under APCO’s brand owner audit.

Complaints, investigations and prosecutions

No complaints were received, investigations undertaken, or prosecutions mounted pursuant to the Used Packaging Materials NEPM during this reporting period.

Statement of interpretation of the information

SA continues to work with APCO, the Commonwealth and other jurisdictions to provide advice and support for the development and implementation of a co-designed model for a nationally consistent packaging regulatory reform scheme.

Local government data

Data will be available on the SA EPA website (https://www.epa.sa.gov.au/environmental_info/waste_recycling/waste-management) from February 2025.

Tasmania

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Tasmania by Hon Madeleine Ogilvie, Minister for the Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The Used Packaging Materials NEPM is a state policy under the *State Policies and Projects Act 1993*.

During the reporting period, NRE/EPA responded to one request from an APCO member on the implications of discontinuing membership and seeking clarification on what the regulatory and compliance alternative would look like.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 7: Number of APCO signatories by reporting year (Tas)

Reporting year	Number of Covenant signatories
2021–22	20
2022–23	19
2023–24	18

Recovery data

No recovery data to report under clause 16 of the Used Packaging Materials NEPM.

Supporting data

No surveys pursuant to clause 18 were completed during the reporting period.

Complaints, investigations and prosecutions

No complaints regarding brand owners or Covenant signatories were received in the reporting period, and no investigations or prosecutions were initiated.

Statement of interpretation of the information

Not applicable.

Local government data

Table 8: Amounts of materials collected at the kerbside, sent for secondary use/energy recovery and contamination (waste) disposed of to landfill 1 July 2023 to 30 June 2024

Material types collected at kerbside	Kerbside recycling collected (in tonnes)	Kerbside recycling sold or sent for secondary use including energy recovery by material type (in tonnes)	Kerbside recycling residual waste (contaminants) disposed of to landfill (only report total tonnes)
Total packaging paper i.e. cardboard and liquid paper board		20,551	
Total non packaging paper i.e. paper mixed, paper white office, newspaper and magazines		3,124	
Total glass		13,432	
Total plastics		2,923	
Total aluminium (cans)		850	
Total steel (cans, tins etc.)		818	
Total mixed metals		114	
TOTALS	50,404	41,812	8,592

Australian Capital Territory

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for the Australian Capital Territory by Ms Rebecca Vassarotti MLA for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *Waste Management and Resource Recovery (Environment Protection – Used Packaging Materials) Code of Practice 2020* (the Code of Practice) came into force as a code of practice established under the *Waste Management and Resource Recovery Act 2016* to give legislative force to the Used Packaging Materials NEPM in the Australian Capital Territory (ACT).

The Code of Practice meets the ACT's obligations under the *National Environmental Protection Council Act 1994*. The Code of Practice allows the ACT Government to regulate non-compliant brand owners. APCO did not identify any liable brand owners based in the ACT as part of its brand owner audit conducted in 2023–24. Information about the implementation of the Code of Practice and Brand Owners' responsibilities under the Used Packaging Materials NEPM is available on the ACT Government's Transport Canberra and City Services Directorate (TCCS) website.

At the October 2022 Environment Ministers Meeting (EMM), Environment Ministers agreed to reform the regulation of packaging in Australia by 2025. To support progression of the reformed packaging scheme, the ACT Government participates and contributes to the Government Officials Group (GOG) Packaging Regulatory Reform Working Group.

The ACT Government has committed to transitioning towards a circular economy. The ACT Circular Economy Strategy and Action Plan 2023–2030 (the Strategy) was released in August 2023. The Strategy outlines actions and opportunities to progress towards a circular economy in the ACT. In addition, the *Circular Economy Act 2023* was passed in October 2023, repealing and replacing the *Plastic Reduction Act 2011*. The Strategy and legislation present opportunities to explore how the impacts of packaging could be further reduced in the ACT.

The ACT has also taken significant steps to reduce plastic waste (including from some plastic packaging). To date, the following items have been banned through a staged approach:

- single-use plastic cutlery
- single-use plastic stirrers
- expanded polystyrene takeaway food and beverage containers
- single-use plastic straws
- cotton buds with plastic sticks
- all oxo-degradable plastics
- single-use plastic plates and bowls
- expanded polystyrene loose fill packaging and expanded polystyrene trays, and
- plastic microbeads in rinse-off personal care and cleaning products.

The ACT Container Deposit Scheme (CDS) continues to support improved packaging outcomes through the recovery of eligible beverage containers with the aim of reducing litter.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

Table 9: Number of APCO signatories by reporting year (ACT)

Reporting year	Number of Covenant signatories
2021–22	0
2022–23	0
2023–24	3

Recovery data

No information has been gathered from brand owners as no audits have been undertaken by the ACT Government.

Supporting data

No retailer survey of packaged products was conducted in the ACT in 2023–24.

Complaints, investigations and prosecutions

No complaints, investigations, prosecutions or enforcement actions were recorded, and no non-compliant signatories were referred to the ACT Government in 2023–24.

Statement of interpretation of the information

In 2023–24, the ACT Government continued to work with the community and industry to encourage waste avoidance and increase recycling and resource recovery rates. Through complementary activities, such as implementing the phase out of certain single-use and problematic plastic products through the *Circular Economy Act 2023* and the ongoing packaging recovery activities through the CDS, the ACT is achieving improved outcomes for the management of packaging.

Local government data

Data for the ACT will be provided on the Transport Canberra and City Services (TCCS) website (<https://www.cityservices.act.gov.au/recycling-and-waste/waste-strategies/reports-audits>) as it becomes available. Relevant data is published in TCCS annual reports, including the 2022–23 Annual Report (https://www.cityservices.act.gov.au/about-us/annual_report).

Northern Territory

Report to the NEPC on the implementation of the National Environment Protection (Used Packaging Materials) Measure for Northern Territory by the Minister for Lands, Planning and Environment for the reporting year ended 30 June 2024.

PART 1 – IMPLEMENTATION OF THE NEPM AND ANY SIGNIFICANT ISSUES

The *Environment Protection (Beverage Containers and Plastic Bags) Act 2011* (the Act) regulates the supply of single use, non-biodegradable plastic bags. The Act established a plastic bag ban from September 2011 that prohibits retailers from providing customers with lightweight polyethylene shopping bags with handles. The Act also established the Northern Territory (NT) Container Deposit Scheme (CDS) to reduce beverage container waste and increase resource recovery, reuse and recycling. The CDS commenced in January 2012. The NT is progressing with reforms to both the CDS and Single Use Plastics (SUPs) bans in accordance with the national agenda.

PART 2 – ASSESSMENT OF NEPM EFFECTIVENESS

There are six brand-owners identified in the NT that would have obligations under the Used Packaging Materials NEPM. In 2023–24, there has been no reporting under clause 16 of the Used Packaging Materials NEPM.

Major contributors to the waste stream are brand-owners not based in the NT. Brand owners who are signatories to the Australian Packaging Covenant are able to meet their national targets more cost effectively in other more populous jurisdictions where well-established recycling infrastructure and high volumes of recyclable materials are available. However, the NT continues to be committed to the Used Packaging Materials NEPM goal and desired environmental outcomes through its existing programs.

Of the 17 councils within the NT, only two provided kerbside recycling services: City of Darwin and Palmerston. Recycling activities in other areas face significant barriers and costs. Voluntary local drop-off recycling schemes are in place in a number of remote communities.

The CDS provides the most accurate and reliable indication of recovery and recycling of beverage containers in the NT.

Table 10: Number of APCO signatories by reporting year (NT)

Reporting year	Number of Covenant signatories
2021–22	1
2022–23	0
2023–24	0

Recovery data

A total of 122,305,414 permitted beverage containers were sold in the NT during 2023–24. Of these, 100,403,036 containers were returned by a collection depot to a CDS coordinator. Thus 82% of all containers sold were returned, recycled and reused through the CDS and were thereby diverted from landfill and litter. This is a 4% increase in return rate over the 2022–23 period.

Supporting data

Landfill recovery data includes where the landfill also operates a transfer station. Waste types are collected in dedicated bins and diverted from landfill into recycling and recovery. In 2023–24, 421.6 tonnes of cardboard were recovered and recycled by landfills in the NT. This data relates to licensed landfills which service over 80% of the NT.

In addition, 5,299 tonnes of material was recovered and recycled through the NT’s CDS including 3,939 tonnes of glass.

Table 11: Volume of material returned in the NT’s container deposit scheme

Annual summary		
Container material	Weight returned (tonnes)	Return rate (%)
Aluminium	756	95
PET	535	61
HDPE	24	23
Glass	3,939	108
LPB	37	44
Other	8	41
Total	5,299	82

Complaints, investigations and prosecutions

Not applicable.

Statement of interpretation of the information

Not applicable.

Local government data

See above.



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