



Major air quality projects and programs: 2014–15

'Dust Stop' Program

This [program](#) requires open-cut mines to implement and report on best practice measures to reduce dust emissions. Three pollution reduction programs (PRPs) added to all open-cut mine licences require 80% control of wheel-generated dust, modification or cessation of overburden handling during adverse weather, and investigation of better-practice overburden handling. All mines have proposed programs to assess compliance with these PRPs and are required to report against these in 2014.

Coal mine non-road diesel engine emissions

This initiative involves detailed site-specific evaluation of retrofitting, replacing and/or procuring off-road diesel machines compliant with US and European Union standards and the adoption of low-sulfur diesel at all NSW open-cut mines. A study report will be published following industry consultation and is expected to form the basis of binding PRPs for the mines.

Clean Machine Program

The EPA partners with councils and private companies to promote improved worksite and procurement practices and subsidise the retrofit of diesel particle filters to existing non-road diesel machines. The [Clean Machine Program](#) targets users of non-road diesel equipment in heavily polluting sectors identified in the NSW Air Emissions Inventory and EPA regulatory activities, including metalliferous mines, quarries, ports, landfill and waste operations, and infrastructure construction and maintenance.

Wood Smoke Reduction Program

This two-year, \$1.3-million [program](#) helps NSW councils to raise community awareness about the health impacts of wood smoke and the benefits of correct wood heater operation and encourage people to shift from wood heaters to cleaner heating solutions. Four regional organisations of councils and 17 individual councils (60 councils in total) have been awarded grants for programs in winter 2014. Other councils received grants for the 2013 winter.

Vapour recovery at service stations

[NSW air quality regulations](#) require service stations from Port Stephens to the Shoalhaven and west to the Blue Mountains to install or upgrade equipment to capture vapours when tankers fill underground storage tanks (VR1) and vehicles re-fuel at the bowser (VR2).

NSW Air Emissions Inventory update

The [NSW Air Emissions Inventory for the Greater Metropolitan Region](#) (Sydney, Hunter and Illawarra regions) will be updated with 2013 data to provide comprehensive evidence on air pollution sources.

Lower Hunter Particle Characterisation Study

Sampling will be carried out at Newcastle (PM_{2.5}), Beresfield (PM_{2.5}), Mayfield (PM_{2.5}, PM₁₀) and Stockton (PM_{2.5}, PM₁₀) for 12 months in this [study](#), followed by detailed analysis to determine the major components and sources of fine particles in the region. Modelling of particle movements will also be undertaken and will include the Lake Macquarie area.

Lower Hunter Dust Deposition Study

This [study](#), to be conducted collaboratively through a project reference group which includes community and industry representatives and independent technical experts, will measure dust deposition rates and identify dust sources, focusing on the rail corridor in the Lower Hunter. Larger particle-sized dust will be sampled (TSP).

Newcastle Local Air Quality Monitoring Network

This dedicated industry-funded [network](#) operated by the Office of Environment and Heritage (OEH) measures PM₁₀, PM_{2.5}, SO₂, NO_x and meteorology, with information to be made publicly available in near real-time on the OEH website. Monitoring site locations at Mayfield, Stockton and Carrington have been chosen in consultation with community.

Gunnedah Basin air quality monitoring

The Strategic Regional Land Use Plan for this region committed to the roll-out of an air quality monitoring network. It is proposed to commence with two air quality monitoring stations, one at Gunnedah and one at Narrabri. Over time, this may be expanded as the number of coal mines increases. The stations will be industry-funded and operated by OEH, initially at least.

Fugitive Coal Seam Gas Study

This study will develop appropriate monitoring methods to measure fugitive methane emissions associated with coal seam gas (CSG) mining to inform regulation of the industry and discussion with the community. It will involve differentiating between natural methane sources and those from coal mines or CSG operations and other non-natural sources, such as feedlots.

Community information reports

A consultant has been commissioned to provide plain English summaries of air quality data for the Newcastle area. The EPA will continue this reporting until the end of 2014 at least and expand it to include the Lake Macquarie local government area. The reports are publicly available on the [Newcastle Community Consultative Committee](#) webpage on the EPA website.

Particulate matter in the rail corridor

To ensure EPA knowledge is current and informed by a comprehensive evidence base, [Australian Rail and Track Corporation data](#) on coal train particulate matter emissions along the rail corridor in the Hunter Valley will be further analysed to examine the contribution that diesel emissions from locomotives have on particle levels.

To complement this work, Australian and international management practices to control and reduce coal dust emissions will be reviewed to examine control effectiveness and indicative costs associated with the management practices identified, relevant to NSW coal fields, with an emphasis on the Hunter Valley.

The EPA will also seek detailed information from rail corridor environmental licence holders about how spills, leaks and emissions are monitored and managed and any policies and procedures to prevent or minimise coal spills or leaks. This will include focused compliance audits examining loading and unloading of coal. The work will focus on the management procedures in place to prevent or minimise the loss of coal and coal dust emissions during the rail transportation of coal to the port facilities and the return of empty wagons from the port facilities.

Non-road diesel emissions

The EPA is focusing on reducing diesel emissions from key sectors and prioritising major contributors to diesel emissions, based on fuel use, population exposure and the cost-effectiveness of actions. Given the different applications of diesel engines, a tailored approach may be needed to deal with different sectors and new and existing engines. Stakeholder consultation and an economic analysis will be undertaken.

The EPA is also focusing on emissions from diesel locomotives and will consider emission standards for new and in-service locomotives and the use of regulatory tools to reduce diesel emissions. This work builds on a [scoping report and industry consultation](#) undertaken in 2012–13 to assess potential measures to reduce emissions from new and in-service locomotives.

Evaluating health impacts of different types of particles

The EPA and NSW Health have funded the Centre for Air Quality and Health Research Evaluation (CAR) to undertake an international literature review of evidence on the health impacts of different sources, types and levels of particle pollution. The focus is particle sources to which NSW and Hunter Valley residents may be exposed. These sources include coal-related activities and other industry, wood heaters, on- and off-road diesel and other transport, and hazard reduction burning. The review will assist in informing and targeting policy and regulatory actions to reduce exposure to particle pollution, in particular exposure to PM_{2.5}.

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Every effort has been made to ensure that the information in this document is accurate at the time of publication. However, as appropriate, readers should obtain independent advice before making any decision based on this information.

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