Comments on Air Quality Improvements in NSW

Objective: improve average air quality and population weighted air quality

This objective is too simplistic and does not link in strongly with the complexity of air quality parameters and the effects of each of those parameters on public health. The focus on fine particles and ozone is very limited. Just these two analytes alone does not account for health effects caused by other known carcinogens. I suggest that the primary objective be revised to incorporate a broader air quality objective in community exposure to include air toxics, NOx and SOx. The use of “average” becomes very limiting when there is a need to take action to improve air quality in localised areas due to specific point sources. These localised emissions can cause major localised problems which do not become evident using the “average” and when only particulates and ozone are the pollutants identified to be reduced in this program. The proposed new controls on mine rehabilitation and dust from coal trains may not show up as being necessary at the “average” level in NSW. It is for this reason that the use of “average” is problematic when deciding whether an particular program should be developed or not and I suggest that “average” be removed.

The application of rigorous cost benefit analysis should also be qualified as the assessment of any cost benefit analysis can become highly contentious. For example, the cost benefit analysis that was used to justify the WestConnex project contains numerous simplistic assumptions and omissions of environmental costs. Where markets do not provide an environmental cost, how does cost benefit handle these issues or does the analysis simply ignore these costs? I suggest that cost benefit analysis may be used as a tool to review identified projects without making cost benefit mandatory or a requirement that the analysis must show a benefit before a program will be implemented. A current example of where cost benefit analysis is being used to prevent pollution control action from taking place is the control of noise from cruise ships in White Bay. Cost benefit analysis concludes that no action is necessary as the 20dB(A) noise problem should be borne by the impacted community forever. Just like the WestConnex cost benefit analysis, cost benefit analysis does not deliver protection of public health.

NEPM

A reliance on NEPM is limiting the opportunities for air quality improvements to that negotiated Federally. There is a serious disconnect between the timing of NEPM parameters and WHO guidelines. NSW air quality would be better linked to WHO guidelines rather than the Federal Government NEPMs due to the slowness in adoption of revised guidelines. As the premier State, it would be prudent for NSW to be more closely linked with WHO guidelines.

Weather patterns

The results of air quality monitoring show that annual air quality is subject to weather patterns and this may be of much greater influence than the quantity of pollutants discharged in a particular year. With continuing future climate change, air quality in NSW may be more a factor of weather patterns than the quantity of pollutants discharged. If this is the case, improvements in future air quality may be much harder to achieve.

Population data
The air quality plan does not provide any data on changes in the population subject to high levels of pollution caused by major roads or shipping activities. If the objective of improvement in public health is to be met, an essential part of that objective is reducing the population exposed to high levels of pollution. Planning policies allowing increased residential densities adjacent to major roads will cause higher levels of exposure and the current document has not identified this element as being an important factor in delivering health improvements.

Priority actions

Industry emissions

The omission of tackling ship emissions from this list is serious. Ship to shore power for all shipping facilities in the GMR should be phased in over a 3 year period. An environment protection licence fee structure could be introduced which facilitated the financial incentives for ships to use ship to shore power where this is available.

The reduction of emissions from coal fired power stations can be achieved through the phasing of cost competitive renewable energy sources. Attaching licence fees to reflect emissions is a positive measure that should be introduced.

Transport emissions

The introduction of electric vehicles into the Government motor vehicle fleet should be phased in over a 5 year period. This will require recharge facilities to be provided at garaging sites. The introduction of hybrid vehicles should be introduced immediately. There is a wide variety of hybrid vehicles available and these achieve emission reductions typically of 25% or more relative to non-hybrid types.

Requirements for emission reduction on railway diesel engines should also take place for shipping diesel engines operated in the GMR. Without regulation, operators will not be given a financial incentive to change existing practices.

While the reduction of toxic emissions from fuel stations in regional areas is identified as a priority action, this does not fall into the claim of the clean air plan to reduce average exposure to air pollution from particulates and ozone.

The registration charges for vehicles with higher levels of pollution need to be significantly increased to reflect particulates and NOx emissions in particular. The extensive use of large four wheel drive vehicles by commercial users to avoid Federal private use taxation is causing much higher levels of air pollution than would be the case if the Federal Government taxation arrangements were neutral. To counter this factor, air pollution charges should be included in a registration fee.

An air pollution registration fee would also operate to favour plugin and hybrid motor vehicles. It would also assist NSW to more quickly introduce lower polluting vehicles into the vehicle fleet countering the slowness of the Federal Government’s adoption of European emission standards. It could also be used to tackle the VW company which produced some vehicles with misleading emission levels.

Household emissions
Under wood smoke emission reduction, it is essential that NSW lead by introducing a ban on internal wood and hydrocarbon burning devices. To facilitate the phasing out of existing wood heaters, a scheme offering a payback incentive when an internal wood fired heater is removed and replaced by a reverse cycle air conditioner or a hot water heat pump system.

Reducing the use of small petrol engines could be facilitated by air emission labelling of these items. Labelling is already present for noise emissions from many of these items. This would assist to grow the sales of battery powered devices.

There has been significant growth in sales of aerosol cans. There is currently no regulation of the pressurising gas used. GHG labelling of aerosol cans would at least provide an opportunity for consumers to make a more informed purchasing decision. Hand pump systems versus aerosol cans would be an important part of this program.

Exposure and impact reduction

Air Monitoring Network

The current air monitoring network in the GMR is based upon sites that are relatively distant from major roads. There is no data on air pollution exposure to the population residing within say 200m of major roads. The graphs which show long term increases in particulates and ozone and a reduction in NOx may not be the same if data was available for residential areas adjacent to main roads. The lack of air quality data associated with major roads is a fundamental flaw in the existing air quality monitoring network. It is strongly recommended that NSW develop a network of low cost air quality monitoring stations that are located in close proximity to major sources of pollution. The low cost network would add considerably to the body of air quality data being generated and provide air pollution exposure of many densely populated areas that are close to major transport routes.

Air pollution incident response

If exposure and impact reduction is to be acted upon, merely telling people to stay indoors on high air pollution days is only one element that is currently used. There needs to be a system for curtailing large air pollution sources from being operated. Allowing large air pollution - up to 18MW diesel engines- to operate in the centre of the CBD on high pollution days needs to be addressed. Pollution charges are an effective means to change behaviour. It is time that pollution charges were imposed on cruise ships berthing in Sydney Harbour.

Planning for Clean Air as Sydney Grows

Up to this point of time, the planning authorities have been totally silent on air quality in the vicinity of major transport facilities and roads. The growth of shipping ports in the Bays Precinct of White Bay – Blackwattle Bay area displays total ignorance of the effects of air pollution on residential and sensitive existing neighbours. RMS has continued to show its plan for new ports facilities while ignoring the effects of the air pollution caused by the operation of those facilities on neighbours. There has been a total failure for RMS to be “controlled” in its planning development.

The Parramatta Road rejuvenation project has also failed to identify the air quality issue arising from major roads. NSW Planning has approved plans for increased residential densities adjacent to
Parramatta Road despite “knowing” that air pollution exposure of future residents will exceed air quality guidelines. If the Greater Sydney Commission (GSC) is planning for Sydney to have a larger population, what act is the GSC taking in response to the air quality guidelines? It appears the GSC is just working on “minimising exposure” not ensuring that future residents will not be subject to exceedances of air quality guidelines.

Addressing traffic congestion which causes higher emissions

The claim made in the paper that WestConnex will reduce air pollution is not supported by road planning experts. WestConnex will cause increased use of alternative routes. Increased air pollution arising from these routes has not been assessed. Traffic planning experts advise that public transport is the primary driver of travel times. WestConnex will induce additional private vehicle use up to the point that travel times balance with public transport travel times.

The claim in the paper that ventilation from tunnels in the WestConnex project represents best practice is misleading. None of the tunnels are proposed to have scrubbing technology fitted. Hence the tunnel stacks are simply designed around dispersion over a wider area not pollution reduction. Experience with the M5 tunnel shows that air pollution levels inside the tunnel exceeded acceptable health criteria for road users at times. Claims about what the WestConnex tunnels might achieve are therefore speculative.

Supporting active transport

Claims in the paper about the NSW Government supporting active transport are not supported by evidence provided by comments made by the NSW Roads Minister. The continuing failure of the NSW Government to support the introduction of travel to work bike routes shows a lack of commitment to this measure. It is essential that an elevated bike road be established for commuters on the Harbour Bridge. This is long overdue. Road travel speeds in peak hour are consistently slower than bike travel speeds in the inner city area. Further action is essential to shift the balance more towards safe bike and pedestrian travel. This means separated bike ways be established not simply placing cyclists in greater danger on the overcrowded public roads.

Collaboration with Commonwealth and Local Government

Local Government provides many opportunities for reducing air pollution exposure of the population. At this point of time, NSW Planning has remained silent on the issue of guiding the zoning and rezoning of land to reduce air pollution exposure. Its publications do not include specific requirements for air quality to be addressed in planning applications on the basis of air quality objectives being met. Large scale residential developments being approved adjacent to major roads are commonplace. There is a serious failure of this arm of Government to act in the interests of future residents not the short term financial interests of developers. One of the aims of this air quality paper is being ignored by NSW Planning. It is time that NSW Planning was required to change its existing policies so that the health of future residents is protected.

Empowering and engaging stakeholders

The proposal to develop a new localised air monitoring network is supported. Due to the large scale redevelopment works around the Bays Precinct, such a network would be of great benefit to local
residents. The air quality monitoring currently being provided by Ports NSW at White Bay is of little benefit as data reliability and integrity is questionable. A more extensive network operated under a citizen’s management system is required. The challenge for the regulation of the Bays Precinct is that the approved development needs to reflect the air quality data and at this point of time, there is no data.

The achievement of trust between the regulators and the community is currently problematic. NSW Planning has shown that it is not trusted by the community through its approval processes. The Government’s response to cruise ships at White Bay led by Ports NSW has failed to instil any confidence in this arm of Government. The WestConnex project is another example of regulatory failure. Hopefully, information sharing under the air quality improvement plans can deliver a greater level of confidence and trust.