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NSW Environmental Protection Authority and Office of Environment and Heritage
PO Box A290
Sydney
NSW 2000

Submitted Electronically

EnergyAustralia submission: Clean Air for NSW

EnergyAustralia welcomes the opportunity to make a submission in response to the Clean Air for NSW Consultation Paper.

The consultation paper notes that NSW air quality is generally good by world standards. This is, in part, the result of existing regulatory arrangements which have been developed over an extended period in consultation with stakeholders, including industry. EnergyAustralia considers that current licence conditions are effective tools to drive reductions in emission of pollutants. However, it is important that any proposed changes to environmental protection regulation are proportionate and appropriately targeted to ensure maximum effect.

In this submission EnergyAustralia, as one of the largest and experienced energy companies in Australia, highlights the challenges experienced by the energy sector as it transitions to lower carbon generation in an uncertain energy policy environment. Strong linkages between state and federal environmental policies are critical to ensure the industry can deliver reliable and affordable energy to customers whilst reducing emissions.

This submission responds to the following key issues raised in the consultation paper:

- Review of National Air Quality Standards;
- Reducing industry emissions from electricity generation;
- Reducing transport, engine and fuel emissions;
- Co-benefits of clean air through clean energy; and
- Strengthening knowledge.

EnergyAustralia welcomes the opportunity for further engagement and to participate in the NSW Clean Air Summit.

For further information on our attached submission, please contact Simon Davey, Policy and Advocacy Manager, at: simon.davey@energyaustralia.com.au

Yours sincerely

Lee Evans
Policy and Advocacy Leader
EnergyAustralia Submission on the Clean Air for NSW Consultation Paper

**About us**

EnergyAustralia is one of Australia’s largest energy companies, providing gas and electricity to 2.5 million household and business customer accounts in NSW, Victoria, Queensland, South Australia and the Australian Capital Territory. EnergyAustralia owns and operates a portfolio of energy generation, including coal, gas and wind assets with control of over 4,500MW of generation in the National Electricity Market (NEM).

We serve approximately 1.2M retail customer accounts in NSW and operate the 1,400MW coal fired Mt Piper power station near Lithgow and the 435MW Tallawarra gas fired power station near Wollongong.

Mt Piper is the newest, most efficient and the best environmentally performing coal fired power station in NSW. Tallawarra is the most efficient combine cycle gas fired power station in Australia. These assets have some of the lowest emissions of air pollutants and greenhouse gases in their respective classes operating well below emissions limits.

Environmental discharges are regulated in accordance with licences issued by the NSW EPA, and compliance is strictly enforced. EnergyAustralia is proud of its strong environmental performance and leverages environmental management systems to control environmental risks in our operations. These are independently certified to the internationally recognised standard ISO14001.

Mt Piper has best practice ‘fabric filter’ technology that effectively captures and removes the vast majority of particles from the gaseous emissions to air. By operating plant significantly below emission limits, this contributes to minimal air quality effects in the surrounding region.

EnergyAustralia has also invested over $1 billion in renewable energy and has underpinned approximately 14% of the large scale wind farms built in the NEM. In December 2016 we committed to a further 500MW power from new wind and solar energy projects across eastern Australia, including the Manildra solar project in NSW. This commitment will drive an additional $1.5 billion of investment in new renewable development.

**NSW Electricity market context**

The rising cost of electricity to households, business and industry is a priority issue for all jurisdictions in the National Electricity Market (NEM). Furthermore, there is an increasing focus on the security and reliability of the NEM as older coal plants retire and more intermittent renewable generation is introduced. The largest exponent of these circumstance recently has been South Australia, however all NEM regions, including NSW, are impacted.

EnergyAustralia is committed to transitioning Australia’s energy sector to a lower emissions future, without compromising the delivery of reliable and affordable energy to customers. This challenge is referred to as “the energy policy trilemma” and there are choices and a balance to be made between price, reliability and carbon emissions objectives.

In NSW, the supply and demand in the electricity market is more balanced than it has been in the past, with higher forward prices and recent plant outages at both Liddell and Eraring Power Stations resulting in high price events during 2016. The announced withdrawal of Hazelwood Power Station, in Victoria, also has significant implications for NSW, with the expectation that NSW black coal generators will supply...
more electricity to fill any gap, resulting in NSW becoming a net exporter of electricity to Victoria. It is clear the NEM cannot sustain another closure of a large thermal generator in the near term. In AEMO’s 2016 ESOO\(^1\), it is noted that reliability standards may be breached in NSW following the retirement of the Liddell power station in 2022.

The figure below shows the forward wholesale electricity contract price for calendar year 2018 showing a 65% rise in NSW since Q1 2016 to approximately $75MWh. We believe it is essential that any policy direction contemplated by the NSW Government should aim to place downward pressure on electricity prices.

Figure 1:  Forward wholesale electricity price (CAL18).

In any case, as we all participate in a NEM, we would urge the NSW government to ensure alignment and strong linkages between policy development at the national level and at the state level. Furthermore, we would actively dissuade NSW from considering state-based action that is inconsistent with national policy that may impact electricity generation, including actions that inadvertently accelerate the closure of coal generators or establishment of state based carbon emission reduction targets or regulations.

**Response to the Consultation Paper**

The consultation paper sets out a proposed approach for the NSW Government to meet its goal of ‘improving the average air quality across NSW’. The focus is on pollutants that have measurable health impacts and are monitored according to the national air quality standard (NEPM Ambient Air Quality). The pollutants of most concern are particulate

\(^1\) AEMO Electricity Statement of Opportunities (ESOO), August 2016.
matter (PM$_{10}$ and PM$_{2.5}$, ozone (O$_3$), nitrous oxides (NOx) and sulphur dioxide (SO$_2$). EnergyAustralia supports this goal for outdoor air quality that protects human health and wellbeing.

**Review of National Air Quality Standards**

The paper refers to the declaration made by the Council of Australian Governments (COAG) in 2011 that air quality is a priority issue of national significance that requires a national approach. The Ambient Air Quality NEPM currently establishes national ambient air quality standards and a national framework for the monitoring and reporting of six common air pollutants. In 2015 the NSW Government proposed fine particle standards that were adopted nationally. National standards for ozone, nitrogen dioxide and sulphur dioxide are currently under review. However, the Paper also states that ‘NSW cannot afford to wait on national action or market developments to support clean air’. EnergyAustralia disagrees with this statement and recommend that the NSW EPA await the national reviews and adopt national standards.

We prefer national regulatory consistency as opposed to differing state-based obligations as it minimises market distortion across Australia and reduces compliance costs of companies that operate across multiple jurisdictions.

**Reducing industry emissions from electricity generation**

The paper refers to concerns that in NSW:

- national air quality standards are occasionally exceeded for ozone and particle pollution
- poor air quality days across NSW are usually due to particle pollution, and
- poor air quality days in Sydney and Illawarra are also caused by ozone.

The draft plan presents data that confirms that in the Greater Metropolitan Region, electricity generation is the third highest emitter of PM$_{2.5}$ and is a major source of NOx and SO$_2$. However, the plan primarily seeks to minimise emissions from coal-fired power stations. We note that EnergyAustralia’s NSW coal fired power station in Lithgow is located outside of the Sydney basin and away from the population base.

Figure 6 indicates electricity generation is not a leading source of PM$_{2.5}$ emissions and that residential wood heating is by far the most significant source in the Sydney region (where the bulk of the population resides). We consider it is unreasonable that the energy sector is targeted to bear a disproportionate burden of these air pollutants which are many and varied, and in large part natural. Over 50% of the PM$_{2.5}$ particles can be from naturally occurring sources which cannot be controlled. Changes to regulation should be tailored to the highest emitting sources, such as wood heating, that, are not currently regulated.

The following goals are outlined in the Paper to reduce industry emissions:

- extend and improve the effectiveness of the EPA’s Load Based Licensing (LBL) scheme as a tool in managing air quality;
- minimise emissions from power stations to reduce primary and secondary particle precursors; and
- strengthen the mining rehabilitation framework.

**EPA’s Load Based Licensing (LBL) scheme**

EnergyAustralia has made a separate submission to the NSW EPA on the LBL scheme. Key points extracted from this submission are:
The LBL Paper suggests that LBL fees payable by the electricity sector could increase. EnergyAustralia considers that increasing fees will not incentivise action to reduce emissions from Mt Piper or Tallawarra, as they are already low, but will increase the cost of electricity to consumers.

Emissions from EnergyAustralia power plants are strictly controlled using approved licences and other regulatory instruments. The driver for change to date has been compliance with these regulations and pollution reduction programs.

NSW generators operate in a competitive market. An increase in fees at Mt Piper or Tallawarra could amplify a market distortion and result in competitive disadvantage relative to competitors in other states. There is potential to enhance the burden of electricity costs on low income households, who tend to spend a higher proportion of income on electricity than higher income households.

EnergyAustralia proposes that rather than increase LBL fees, efficient generators should be afforded opportunities to invest in environmental offsets to achieve the equivalent (or greater) environmental outcomes.

Load based fees adopt a polluter pays principle, with the level of fees linked to the severity of impacts associated with the polluter's emissions. This requires an understanding of the severity of the impact across sources. These impacts can vary significantly according to the characteristics of the receiving environment.

There is much work to be done to understand ambient air particles. EnergyAustralia supports further studies in the Greater Metropolitan Region of Sydney to better understand the nature and mix of fine particles in regions with elevated levels. This will better identify the sources and their impacts and would inform development of targeted strategies. For example, the Lower Hunter particle characterisation study showed particles from industry to be around 10% of the air particles. This information is essential to inform the LBL scheme and the general public.

The health costs of PM emissions from generators is likely to vary by orders of magnitude as population exposure varies markedly from site to site (dependent on direction, distance and how densely populated the residential areas are from the source). The LBL scheme accounts for this variability by having different fees for pollutants that are emitted from specific ‘critical zones’ and higher fees for NOx and VOC emissions in summer. This structure is unlikely to adequately capture the variability in external costs of electricity generation emissions, and will therefore fail to provide incentives that are proportional to actual external impacts. This distortion would be exacerbated if fee levels are further increased.

EnergyAustralia considers that the LBL could be an effective and efficient regulatory tool to address emissions from smaller emitters that have opportunities for abatement and are not currently subject to the level of regulatory EPA scrutiny that applies to electricity generators.

Minimise emissions from power stations to reduce particle precursors

The NSW Air Quality Paper proposes a project to benchmark international best practice emission controls for coal-fired power stations, to model their impacts on air quality, to research control options and to analyse their economic impacts. This will be complemented by a study by Coal Innovation NSW to understand the role of coal in NSW’s electricity mix to 2050, with the goal of reducing greenhouse emissions in line with best practice methodologies.
While NOx and SO\textsubscript{2} emissions are known to be precursors to secondary fine particle creation, our data shows that NOx and SO\textsubscript{2} emissions from our NSW power stations are well within limits. Reducing these further at Mt Piper would require the retrofit of technologies such as Selective Catalytic Reactor (SCR) technology for NOx and Flue Gas Desulphurisation (FGD) for SO\textsubscript{2}. These were not considered necessary when the Government built the Mt Piper Power Station following an extensive review of the environment impacts by the EPA and we do not consider them to be necessary now.

The retrofit of new technologies like scrubbers now or in the future would be technically challenging, consume excessive levels of energy and water to operate, and impose a high capital cost. The environmental impacts created (e.g. increased greenhouse emissions and water consumption) would outweigh the benefits. Furthermore, significant additional capital requirements for the retro-fitting of such technology will likely result in the early withdrawal of dispatchable thermal generation from the market, an outcome that threatens the security and reliability of the NSW electricity system.

International best practice technology should only be considered for applications to future new build coal fired power stations. We would also note this is consistent with the approach taken with emissions from residential wood heaters, as the plan only proposes to change standards for new heaters offered for sale (i.e. no retrospectivity).

**Strengthen the mining rehabilitation framework**

The plan proposes changes to the rehabilitation framework for post-mining final land-use. Standard conditions of a mining lease would be amended to require adherence to a rehabilitation code of practice to encourage rehabilitation as works progress, to reduce wind-blown dust effects on air quality.

EnergyAustralia considers that the NSW Air Quality Plan is an inappropriate mechanism to modify the broader mine rehabilitation regulations. Any mining rehabilitation framework changes should be considered in a holistic manner and include a separate, thorough and transparent consultation process.

**Reducing transport, engine and fuel emissions**

EnergyAustralia supports the phase-in of standards for vehicles on public roads, especially in areas of high community exposure. Tightening of non-road diesel vehicle emissions would have a low community benefit as exposure is local around the mines (which have buffer zones from the public). It would, however, have a cost impact on mining operations, as there is minimal opportunity to reduce these emissions.

We are disappointed that the consultation paper excludes road vehicles, which make a significant contribution to air quality impacts in NSW, particularly in the Sydney basin. Consistent with our view earlier regarding proportionality of regulatory intervention, we recommend that the Government consider more stringent emissions restrictions on road vehicles if it wishes to have the greatest impact on reducing emissions.

**Co-benefits of clean air through clean energy**

The consultation paper notes that many sources of air pollution are also sources of carbon emissions, and that policies to support clean energy and reduce greenhouse emissions can support clean air and vice-versa. The establishment of an Interagency Taskforce on Air Quality in NSW is proposed to coordinate relevant government programs.

EnergyAustralia recognises the co-benefits of reduced greenhouse emissions and clean air. However, EnergyAustralia strongly argues that a nationally consistent approach to
greenhouse emission reduction and energy policy is needed to provide the most effective and lowest cost outcomes. Furthermore, the establishment of direct or indirect regulation of greenhouse emissions at a state level undermines national action, creates further policy uncertainty in this space and impairs the confidence of industry to make long term investments.

As mentioned previously, we believe that in considering air quality objectives, the NSW Government should not contemplate policy that may compromise the implementation and operation of national energy and climate change policies.

**Strengthening knowledge**

EnergyAustralia supports NSW Government action to:
- review the NSW air quality forecasting and advice;
- improve responses to air quality incidents; and
- develop an integrated EPA monitoring, evaluation and reporting system.

EnergyAustralia supports transparently providing air quality information to the community to allow them to be informed. Providing best available information during and following incidents such as large bushfires and major industrial accidents may reduce complaints being incorrectly directed at electricity generation sites. Communications should include air quality, meteorological and health information and be credible, up to date and put into a context that is easy to understand.