



EnergyAustralia

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Mr Tony Chappel
Chief Executive Officer
NSW Environment Protection Authority

BY EMAIL

CC: air.policy@environment.nsw.gov.au

Dear Mr Chappel,

Submission on draft Protection of the Environment Operations (Clean Air) Regulation 2022

Thank you for providing EnergyAustralia with the opportunity to provide feedback on the draft *Protection of the Environment Operations (Clean Air) Regulation 2022 (NSW) (Draft Clean Air Regulation)*.

About EnergyAustralia

EnergyAustralia is one of Australia's largest energy companies with around 2.4 million electricity and gas customers across NSW, Victoria, Queensland, South Australia, and the Australian Capital Territory.

In NSW, EnergyAustralia is one of the largest electricity and gas retailers with over 1.4 million customer accounts in the state. EnergyAustralia also owns, contracts, and operates a diverse energy generation portfolio that includes coal, gas, battery storage, demand response, solar, and wind assets. Combined, these assets provide 4,500MW of generation capacity to Australia. We own and operate about 15% of the generation in NSW's wholesale electricity market.

We understand that our activities can affect the environment. We also understand our responsibilities and take environmental stewardship very seriously. As a provider of an essential service, the energy we generate has a critical role in supporting the stability of the National Electricity Market. We are also mindful we have a responsibility to service our household, business and industrial customers with reliable and lowest-cost energy.

EnergyAustralia is committed to Australia's transition to net zero emissions and to providing cleaner, reliable and affordable energy for customers. Our [Climate Change Statement](#) confirms how we are transforming our generation portfolio, investing in cleaner forms of energy as we build the new power system, while reducing emissions from conventional generation assets that remain needed to keep the lights on and ensure access to reliable and affordable electricity. In particular, EnergyAustralia has adopted targets:

- To reach net zero greenhouse gas emissions by 2050;
 - To reduce direct carbon dioxide emissions by over 60% on 2019-20 levels in 2028-2029; and
 - To transition out of coal assets by 2040.
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We are continuing to deliver on this commitment by:

- Accelerating the retirement of the Yallourn Power Station, which will close in mid-2028.
- Announcing an earlier retirement date of 2040 for the Mt Piper Power Station.
- Investing in the Tallawarra B Power Station, which will be Australia's first net zero emissions hydrogen/gas power plant.
- Investing extensively in renewables including:
 1. Victoria's first two battery storage facilities with a combined capacity of 55MW and storage of 80MWh, enough to power around 40,000 hours of critical peak demand before being recharged;
 2. the 250MW Kidston pumped hydroelectricity storage project, construction of which commenced in May 2022 and which will be the first in the National Electricity Market in nearly 40 years;
 3. the Wooreen Energy Storage System, the first four-hour utility-scale battery of 350MW capacity - larger than any battery operating in the world today, which is scheduled to be commissioned by the end of 2026, ahead of Yallourn's closure in mid-2028;
 4. the Cathedral Rocks wind farm; and
 5. a wide range of other renewable projects currently under assessment and development.
- Giving our customers the opportunity to fully offset emissions from their electricity use, including at no extra cost for home energy users, through our Go Neutral program. This program is one of the latest offset programs in Australia.

While we play a lead role in the energy transition, we continue to operate and invest in all our generation facilities in accordance with our [Health, Safety, Security and Environment Policy](#). This records our commitments to continue to:

- Comply with all applicable Health, Safety, Security and Environmental laws, regulations and other obligations; and
- Minimise the adverse impacts of our operations on the environment and community.

Mt Piper Power Station

EnergyAustralia NSW Pty Limited (**EA NSW**) owns and operates the Mt Piper Power Station. EA NSW acquired the Mt Piper Power Station in 2013 from the NSW Government owned Corporation which traded as Delta Electricity.

Built over two stages, with commissioning in 1992 and 1993, the Mt Piper Power Station comprises of one 700 and one 730 MW coal-fired steam turbine generators which have the capacity to meet 12% of the State's energy needs or approximately 1.18 million homes in New South Wales every year.

EA NSW is committed to continuous improvement in the environmental performance of Mt Piper Power Station and has worked collaboratively with the NSW Environment Protection Authority (**EPA**) to progressively optimise its operations at Mt Piper Power Station, including to improve the efficiency of its generation with respect to air emissions. Recently this has included:

- Investing \$80M in upgrading a turbine at Mt Piper Power Station, allowing that unit to provide 30MW of additional power without having to burn more coal;
- Working cooperatively with the EPA to implement tightened air emission limits and additional air emissions monitoring, including following the changes made to the Mt Piper environment protection licence as part of the EPA's recent review of NSW coal fired power stations; and
- Investing more than \$10 million in specific environmental initiatives and upgrades over the last 5 years.

Potential Impacts of the Draft Clean Air Regulation

1. Overview

The EPA has published a consultation version of the Draft Clean Air Regulation which proposes to materially revise the maximum air emissions limits, including for NSW coal fired power stations, within a short timeframe. Existing air emission limits introduced in 2021 by the EPA already require Mt Piper Power Station to modify its operations and at reduced loads on occasion.

EnergyAustralia appreciates that air emissions are an important issue and that air emissions limits play a key role in ensuring that NSW air quality meets all applicable health-based criteria.

EnergyAustralia is still working through the full implications of the Draft Clean Air Regulation for the Mt Piper Power Station and has not completed the required feasibility studies in the limited time it has been made available for public comment. However, based on the work we have completed to date, it is apparent that the Draft Clean Air Regulation, if made in its current form, has the potential to result in serious unintended consequences to the NSW electricity market and NSW electricity consumers, including by requiring EA NSW:

- to materially curtail generation at Mt Piper Power Station, and this will occur in market periods where there is the greatest need, on hot summer days, and in winter with heating demand; and/or
- to bring further forward the closure date for Mt Piper Power Station.

This has the potential to result in adverse impacts on the security of generation across the National Electricity Market and ultimately increase electricity prices for NSW consumers.

2. Impact of Proposed Changes to Nitrogen Dioxide Limits

The Draft Clean Air Regulation is proposed to replace the *Protection of the Environment Operations (Clean Air) Regulation 2021* (NSW) (**Current Regulation**).

The Current Regulation relevantly operates to set certain maximum air emissions limits for all electricity generation facilities, including Mt Piper Power Station. However, the EPA can set tighter air emissions limits for specific sites by imposing conditions on the site specific environment protection licences (**EPLs**) granted under the *Protection of the Environment Operations Act 1997* (NSW) (**POEO Act**).

At present:

- under the Current Regulation the air emissions limit for Nitrogen dioxide (**NO₂**) which applies to electricity generation facilities is 2,500 mg/m³; and
- the current air emissions limits for NO₂ under the Mt Piper Power Station EPL are much more stringent, being:
 1. a 100 percentile limit of 1500 mg/m³; and
 2. a 99th percentile limit of 1100 mg/m³.

If Part 5 of the Draft Clean Air Regulation is made in the form currently proposed it will operate to require Mt Piper Power Station to further reduce NO₂ air emissions:

- to 800 mg/m³ by 1 July 2025; and
- to 500 mg/m³ by 1 July 2030,

This is not achievable without either:

- materially curtailing generation at Mt Piper Power Station; or
- making financially extensive and short-term capital-intensive plant changes to Mt Piper Power Station.

EnergyAustralia has not yet had sufficient time to assess the feasibility of any such plant changes, including requirements for outages and potential impacts on generation efficiency and reliability. However:

- even if the plant changes required to enable compliance with the revised limits proposed are confirmed as feasible, they have the potential to impact adversely on electricity prices and to take much longer to achieve than the time proposed by the Draft Clean Air Regulation; and
- if the plant changes required are not feasible, they may require EA NSW to curtail generation and/or bring forward the closure of Mt Piper Power Station which could result in a shortfall of stable generation capacity across the National Electricity Market.

We are currently experiencing very substantial increases in wholesale electricity prices (more than doubling since 1 January 2022) in NSW following a reduction in thermal generation resulting from unplanned outages of coal generation, coal supply constraints from NSW mines and higher coal and gas costs, refer to Figure 1. These conditions have persisted and been compounded by the ongoing conflict in Ukraine, which has led to significant rises to coal and gas prices. We are seeing these higher wholesale costs flow through to households and businesses across NSW through double digit percentage increases to electricity bills in mid-2022. These are likely to continue over the coming years as the forward contract electricity prices remain high.

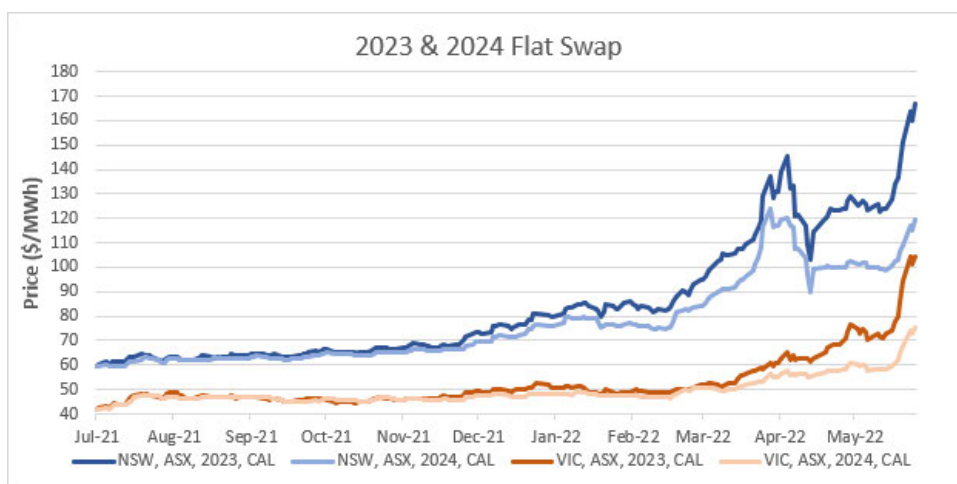


Figure 1 – Future contract electricity prices 2023 to 2024 ASX calendar year data

The Australian Energy Market Operator (AEMO) has updated its Electricity Statement of Opportunities (ESOO) in April 2022 following Origin Energy's announcement that it will bring forward the closure of NSW's largest power station, Eraring, to 2025. Considering only existing and committed developments, AEMO forecasts breaches to reliability standards from 2025 with unserved energy (USE) above the reliability standard (0.002% USE) in NSW, leaving a reliability gap of 590 MW from 2025-26 (*Update to Electricity Statement of Opportunities, April 2022, AEMO*). Figure 2 shows

We note that the exit of Eraring and forecast system reliability breaches by AEMO coincide with the timing of the proposed implementation of tighter power station air emissions in 2025 that may result in reduced output or early closure for Mt Piper Power Station.

3. Consistency with NSW Government Policy

As outlined above, as currently proposed, the Draft Clean Air Regulation has a high potential to effectively constrain electricity generation, increase power prices and/or bring forward the closure of coal fired power stations in NSW.

This does not reflect the NSW Government's *NSW Electricity Strategy* and *NSW Clean Air Strategy 2021-2030* which:

- recognises that "*an orderly approach to the retirement of the State's coal fired power stations is important to ensure security and reliability of electricity supply and avoid adverse impacts on prices*"; and
- confirms the NSW Government's commitment to supporting "*a reliable, affordable and sustainable energy future*", with emissions to be minimised using "*reasonable and practical measures*".

In relation to energy policy in NSW, the central, and importantly bipartisan, energy policy framework is referred to as the NSW Electricity Roadmap ("The Roadmap"). This policy has been enabled through legislation; *The Electricity Infrastructure Investment Act (2020)* that is currently being implemented by the government entities created for this purpose. The roadmap recognises the NSW electricity sector is in transition and retirement of large coal generation will occur over the next 15 years. The policy objective is to enable and coordinate the deployment of new transmission, generation, storage and firming in timeframes that ensures system reliability (and low prices) into the future. Long construction lead-times of new electricity capacity and pumped hydro storage, combined with risks of delays to major transmission projects are complicating the roadmap implementation.

The careful co-ordination of the timing of the exit of large thermal power stations with the construction of low-emissions, renewable generation and storage is critical to the success of the Roadmap. As coal fired power stations approach their end-of-life and are competing against lower cost renewables enabled through the Roadmap, their commercial capacity is reduced to accommodate additional capital expenditure.

The risk of earlier, and uncoordinated, exit of coal generation driven by the cost of environmental regulation would result in a disorderly energy transition, lead to higher costs for consumers and would compromise the NSW Government's energy policy.

EnergyAustralia suggests greater coordination of coal generation plant exit is required across NSW Government environmental and energy policies, particularly when the timeframes are co-incident, to achieve positive policy outcomes for the environment, NSW consumers and its economy. We would further suggest that environmental objectives and emissions reductions, in relation to coal fired power stations, are a central objective of the NSW Electricity Roadmap as coal is phased out in NSW but this needs to be balanced with energy security and consumer outcomes during the transition period.

4. Adequacy of Consultation

As the EPA appreciates, the regulation of air emissions under the POEO Act is complex. It has been more than a decade since the EPA has substantively amended the Clean Air Regulations. However, it is clear from the EPA's guidance materials that the EPA has not used this time to fully assess or consider potential impacts of the Draft Clean Air Regulation on energy security or affordability for retail and industrial consumers. Rather, the EPA's guidance materials expressly acknowledge that:

- it may not be "*economically feasible*" for industry to meet the new standards proposed; and
- "*the impact, if any, on electricity prices of the proposed changes in the Draft Clean Air Regulation cannot be readily determined*".

Given this context, EnergyAustralia is not aware and finds it very concerning that no direct and coordinated consultation to date has been carried out by the EPA on the Draft Clean Air Regulation with the AEMO, the Australian Energy Council or EnergyAustralia as key stakeholders.

5. Extent of Analysis Completed by the EPA

The Draft Clean Air Regulation proposes broad changes to air emissions limits in very short time frames. It is apparent that, in proposing to bring in the revised air emissions limits with effect as early as 1 July 2025 and 1 July 2030, the EPA has not fully considered:

- the reduced air emissions from the NSW electricity generation sector which will occur as the energy transition continues to occur in an ordered and timely manner. For example, Liddell Power Station will fully close as early as 2023, with Earring Power Station to follow shortly thereafter in 2025;
- the regional air shed surrounding each of the NSW power stations and whether the changes proposed are in fact required to achieve relevant evidence based health criteria;
- the extensive actions already taken by NSW power station operators, including EA NSW to ensure ongoing minimisation of air emissions;
- the complex nature of coal fired power stations which means:
 1. that any changes to plant and equipment necessarily requires a comprehensive feasibility assessment of potential options and alternatives, including to avoid adverse impacts on reliability and efficiency; and
 2. where plant and equipment changes are identified as feasible:
 - are likely to require new or revised development consents to be obtained under the *Environmental Planning and Assessment Act 1979* (NSW), a process which (including environmental assessment and public consultation requirements) can take in excess of 2 years to achieve; and
 - will require specialised plant and equipment to be designed and procured (against a backdrop of ongoing manufacturing delays as the world continues to recover from the ongoing Covid19 pandemic); and
 - may require additional outages to install, with consequent impact on generation outputs.

6. Actions Already Completed to Minimise and Assess Air Emissions

While the continued operation of Mt Piper Power Station remains critical to ensuring the security and reliability of electricity generation in NSW, EA NSW is continuing to take reasonable and practical measures to reduce air emissions. EA NSW cooperated fully with the recent EPA coal fired power station licence review process which included a comprehensive review of the appropriateness of the air emissions limits applying to Mt Piper Power

Station. This review process resulted in a number of key changes being made to the conditions of the Mt Piper Power Station EPL in mid 2020. As a result, EA NSW:

- accepted and implemented a new 99th percentile limit for NO₂ of 1100 mg/m³;
- has developed and implemented:
 1. a new Site Specific Air Emission Monitoring Plan;
 2. a new Continuous Emissions Monitoring Systems Quality Assurance and Control Procedure;
 3. a new Air Pollution Control Equipment - Maintenance, Operation and Fault Response Procedure
- has carried out a continuous particulate matter monitoring feasibility study; and
- has completed a dioxin and furan emissions study.

In addition, EA NSW recently and proactively procured and installed new PCME QAL260 continuous emission monitoring systems for particulates on both Units 1 and 2 to enable improved qualitative monitoring of baghouse performance during operations.

The EPA does not appear to have considered this recent review process or the extensive actions already taken in proposing the revised air emissions limits contained in the Draft Clean Air Regulation.

7. Proposed Legacy Condition Exemption Process

As outlined above, the EPA acknowledges in its FAQs that it may not be "economically feasible" for industry to meet the new standards and states that *"the Regulation allows for a transparent process to set alternative emission limits by way of conditions in environment protection licences."*

While it is appropriate for the EPA to have the power to provide for alternative emissions limits to be set by environment protection licences, EnergyAustralia strongly submits that it is not appropriate for revised limits to be enshrined in legislation without the appropriateness and consequences of this for energy security and power prices being fully considered and assessed. Otherwise, the ongoing security and reliability of the National Electricity Market has the potential to hinge on whether the EPA exercises discretionary powers to grant "legacy condition" exemptions as proposed by the Draft Clean Air Regulation.

Further, it is not clear from the Draft Clean Air Regulation whether it will be possible for a "legacy condition" exemption to be renewed at the end of 5 year expiry date. This needs to be clarified as part of the broader consideration of the appropriateness of the proposed changes to NO₂ air emission limits as they apply to NSW's coal fired power stations which continue to provide the majority of NSW's electricity supply pending the ongoing orderly transition to renewables.

Conclusion

For the reasons outlined above, EA NSW strongly opposes the Draft Clean Air Regulation in its current form and submits that it needs to be revised in consultation with key stakeholders, including EnergyAustralia, and assessed alongside other key government policy frameworks such as the Electricity Roadmap to:

- avoid unintended outcomes for NSW electricity generators and consumers; and
- ensure consistency with the EPA's *Regulatory Policy* which confirms that the EPA takes an *"informed"* and *"evidence-based"* approach, and will *"partner with industry and government to protect, restore and enhance the environment"*.

EA NSW respectfully requests the opportunity to discuss the key issues noted above and the options to resolve these with the EPA Chief Executive Officer as soon as possible. Please contact Ben Eastwood, EnergyAustralia Environment Leader on ben.eastwood@energyaustralia.com.au or 0478 420 887 to arrange a suitable date and time.

Yours sincerely,



Steve Marshall
Head of Mt Piper Power Station
EnergyAustralia NSW Pty Ltd