

Loy Yang B Power Station

6 August 2018

Bellville Leshoele,
Senior Project Manager - Licence Reviews
Development Assessments
Environment Protection Authority Victoria
200 Victoria Street, Carlton VIC 3053

Dear Bellville,

Power station licence review - response to community consultation

Please find attached the Loy Yang B response addressing stakeholder questions and concerns provided by EPA Victoria.

We appreciate the community's interest in the local power industry and feel our response illustrates that our organisation has listened and subsequently better understands the communities concerns.

The team at Loy Yang B looks forward to hearing stakeholder feedback firsthand at the upcoming 20B conference.

Regards,



Tony Hicks
General Manager, Loy Yang B

Loy Yang B Power Station

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Summary of issues raised by community groups: Power Station Licence Review, Loy Yang B Power Station Response

PART 1 – COMMUNITY CONSULTATION

EPA Requirements:

Issues generally related with EPA licensing regime

1. **Best practice management of dust emissions from the mines using prescriptive licence conditions.**

RESPONSE:

EPA Victoria should continue to work closely with each affected licence holder with respect to any change regarding management of dust emissions using prescriptive licence conditions.

Loy Yang B does not operate a mine or maintain coal stockpiles at its facility.

2. **Best practice management of land, surface water and groundwater contamination from ash ponds.**

RESPONSE:

EPA Victoria should continue to work closely with each affected licence holder with respect to any change regarding management of land, surface and groundwater contamination from ash ponds.

Loy Yang B does not operate an ash pond at its facility.

3. **Best practice management of waste water discharges from mines and power stations to maintain river health and protect human health.**

RESPONSE:

EPA Victoria should continue to work closely with each affected licence holder with respect to any change regarding management of wastewater discharges from mines and power stations to maintain river health and protect human health.

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- Loy Yang B does not discharge wastewater to the environment (Traralgon Creek).
- Loy Yang B has no wastewater discharge elements in its EPA operating licence #3987. Wastewater from LYB is discharged into the AGL settlement pond, where it is combined with AGL's wastewater before being discharged into the environment via the AGL Loy Yang operating licence.

Loy Yang B applies best practice management principals with respect to minimising the volumes of wastewater discharged offsite as well as having a monitoring regime in place to ensure the wastewater quality satisfies contract requirements.

4. Changes to licences should only go ahead after careful analysis – in consultation with impacted businesses – cost of complying with the changes and their environmental gains.

RESPONSE:

We agree with this statement.

Loy Yang B and the other generators make a significant economic contribution in the region through employment, community investment and supplier and contractor relationships.

Establishing a clear evidence base and conducting analysis of potential impacts is essential, and must be commensurate to any benefits that may be achieved.

Adding additional regulatory requirements has the potential to significantly increase costs to generators. In turn, this could potentially make energy less affordable while failing to deliver benefits.

5. Collaboration between the Latrobe Valley Air Monitoring Network (LVAMN) and other EPA monitoring to release information in real time on EPA's AirWatch.

RESPONSE:

The [Latrobe Valley Air Monitoring Network Incorporated](#) (LVAMN Inc) provides 24 hour chart updates each day. Annual summary reports are also available.

LVAMN Inc is currently working with EPA Victoria to provide direct access to monitoring results from its two locations, to be displayed on the EPA AirWatch website.

6. Consider climate and set limits for greenhouse gases.

RESPONSE:

We support the efforts of the Federal government's Energy Security Board in establishing a National Energy Guarantee.

We believe the National Energy Guarantee will be the most effective way to regulate greenhouse gas emissions moving forward. As a result, inclusion of greenhouse gas emission limits in state-based environmental licences is not required.

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7. Continuous improvement to reduce emissions in line with best available techniques.

RESPONSE:

Loy Yang B continues to investigate opportunities to improve power station operations and performance, including a reduction in emissions. Improvements are routinely implemented at Loy Yang B power station in order to positively impact performance and efficiency, including projects to reduce in-house electrical load requirements.

The air quality modelling recently completed by GHD, on behalf of the three Latrobe Valley generators, confirms that current plant design and operations is reflective of best practice for this type of facility operating in Australia.

It is not appropriate to make comparisons with overseas emission criteria for coal fired power stations with Latrobe Valley power stations.

Establishing clear evidence for why any reductions in emissions are required must be commensurate to any benefits that may be achieved.

The Latrobe Valley region typically has sufficient prevailing winds (air dispersion characteristics) combined with scattered emissions sources that ambient air policy objectives are regularly attained.

8. Continuous monitoring of oxides of nitrogen (NO_x), sulphur dioxide (SO₂), carbon monoxide (CO), mercury (Hg) (new), coarse particles (PM₁₀) and fine particles (PM_{2.5}) (currently just total particles).

RESPONSE:

Loy Yang B has continuous emissions monitoring (CEMS) systems in place for NO_x, SO₂, CO, CO₂, moisture and oxygen. This upgraded system was installed in December 2017.

Prior to December 2017 Loy Yang B has operated continuous emissions monitoring equipment for SO₂ and total particulates since beginning operations in 1994.

No commercial continuous monitoring systems exist for in-stack measurement of PM₁₀ and PM_{2.5}

Loy Yang B continues to perform annual stack testing for parameters listed in our EPA licence. This is undertaken by an independent accredited stack emission tester. This stack testing also includes other parameters which are not in our licence:

- PM₁₀
- PM_{2.5}
- Mercury.

Trace metal analysis that includes mercury content is routinely undertaken on coal composite samples to support NPI reporting and to monitor any progressive changes to mercury in coal concentrations. Loy Yang B has recently increased (2018) the frequency of testing for trace metals, including mercury in composite coal samples.

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Loy Yang B will consider all stakeholder feedback regarding our current monitoring program. Our monitoring program is reviewed regularly in order to continue to better understand our emissions profile.

9. Dust particle characterisation study to better understand sources of particle pollution in the Latrobe Valley.

RESPONSE:

As part of this EPA Victoria Licence review, air dispersion modelling was undertaken by air quality experts (GHD/Jacobs) based on:

- power station emissions and licence limits
- ambient air monitoring data
- Latrobe Valley meteorology.

Monitoring and modelling evidence indicates that power station emissions are an insignificant contributor to ground level measurements of PM₁₀ and PM_{2.5}.

EPA annual summary reports for the Latrobe Valley airshed identify that the main contributor to PM₁₀ and PM_{2.5} are from urban, agriculture, prescribed burns and bushfire sources. [See EPA Victoria report.](#)

We would support and participate in a particle characterisation study being performed to determine the significant contributors to the origins of PM₁₀ and PM_{2.5} in the Latrobe Valley airshed, however we do not believe that the coal fired power station businesses should lead and or fund such a study, as power stations are not a significant contributor

10. Monitoring and ending the release of mercury into the environment.

RESPONSE:

Loy Yang B has measured the concentration of mercury in its coal supply for over ten years with the results used for annual National Pollutant Inventory (NPI) reporting. In addition, mercury emissions to air are conducted annually by an independent accredited stack emissions tester.

A report conducted by CSIRO in 2015 found that the total mercury concentration from the four power stations stacks contribute less than 1% of 'all sources' (power stations plus other man made sources, as well as contributions from vegetation, soil and water).

The Department of Health and Human Services (DHHS) also carried out an assessment into mercury levels in 2015 within the Gippsland Lakes aquatic species. This assessment found that fish in the Gippsland lakes continue to have low levels of mercury and are safe to eat in accordance with nationally set dietary advice.

New modelling undertaken re-confirms that ambient air concentrations of mercury in the Latrobe Valley airshed are significantly below established policy criteria. This is consistent with information published on the EPA Victoria website.

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11. Move away from waste oil/black coal used during startups with natural gas to reduce emissions.

RESPONSE:

This question is not relevant as Loy Yang B has utilised natural gas as an auxiliary fuel for unit start up and shut down since 2002/2003.

12. Move to load based licensing scheme to encourage investment in emissions reduction technologies.

RESPONSE:

Loy Yang B does not support changes that increase EPA Victoria licensing fees. They are not required as emissions do not impact on current policy objectives.

Changes without sufficient evidence have the potential to significantly increase costs to generators. In turn, this could potentially make energy less affordable while failing to deliver benefits.

Future changes in environment policy should be determined by EPA Victoria in consultation with industry and community stakeholders to achieve the best outcomes for the environment.

13. Public release of emission data in real time in a public friendly format.

RESPONSE:

Loy Yang B has commenced a feasibility assessment to determine the best approach to providing validated, timely and relevant air emission data. Our approach aims to ensure openness and transparency while contributing to an informed and thorough understanding of our operations in the context of EPA licence requirements.

The final format, frequency and method of dissemination will be informed by stakeholder feedback, along with consideration of the technical and logistical requirements for validating and publishing data for public viewing, while simultaneously ensuring it provides a meaningful representation of emissions.

14. The need for health assessments of current impacts and ongoing risks from existing coal projects in the Latrobe Valley.

RESPONSE:

Historical modelling, ambient monitoring and new modelling undertaken for this licence review has confirmed that emissions from the Latrobe Valley Power Stations meet the requirements of the State Environment Protection Policy Ambient Air Quality (AAQ) and Air Quality Management (AQM).

Ambient air limits provided in State Environment Protection Policy are set in order to prevent population health impacts due to emissions.

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- 15. Distinction between current licences and other approvals used in the rehabilitation or remediation phase of the mines and power stations, for clarity and consideration of sufficiency of bonds / assurances.**

RESPONSE:

EPA should continue to work closely with each affected licence holder regarding any changes to rehabilitation or remediation bonds of the mines and power stations.

Loy Yang B does not have operational control of mines or ash ponds.

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PART 2 – COMMUNITY CONSULTATION

1. **Do you have any comments on this list of pollutants, including any additional pollutants that should require monitoring?**
 - a. **Mercury, lead (& heavy metals)**
 - b. **Greenhouse gas, methane and carbon dioxide**
 - c. **All pollutants**
 - d. **Carbon monoxide**
 - e. **Dust and particles (PM₁, PM_{2.5}, PM₁₀)**

RESPONSE:

Greenhouse and energy parameters are routinely measured and collated by Loy Yang B.

Greenhouse reporting is a requirement under the National Greenhouse and Energy Reporting (NGER) framework. Before October 31 each year Loy Yang B submits all required information to the Clean Energy Regulator (CER) - www.cleanenergyregulator.gov.au. This data is subject to an external audit process annually. The data is freely available from the CER website.

Loy Yang B's current EPA Victoria licence includes:

- o total particulates
- o sulphur dioxide
- o nitrogen oxides
- o carbon monoxide
- o acid halides.

New parameters that may be included in the Loy Yang B EPA licence following this current review include:

- Mercury
- PM₁₀
- PM_{2.5}

To determine compliance with the EPA Victoria licence, Loy Yang B has had continuous monitoring instruments in place for total particulates and sulphur dioxide since 1994. A recent improvement at Loy Yang B, implemented in December 2017, has included new continuous emissions monitoring equipment for carbon dioxide, nitrogen oxides and carbon monoxide. Other parameters listed in the licence that are not continuously monitored are tested for annually (by an independent accredited stack tester).

Performance against all parameters listed in the EPA operating licence is reported annually via the Annual Performance Statement (APS) (<https://www.epa.vic.gov.au/our-work/licences-and-approvals/search-licence>).

A range of other substances are emitted from the combustion of brown coal. These are not specified in the current review, nor are they proposed to be included in the current review as assessments have determined that their impact on the receiving environment is negligible.

These additional substances are reported annually in accordance with the National Pollutant Inventory (NPI) framework (<http://www.npi.gov.au/npi-data/search-npi-data>). This data is freely available from the website. EPA has conducted compliance audits on 2016/2017 and 2017/2018 reporting periods.

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2. How do you think monitoring information should be made available to the public?
 - a. Website with real-time, continuous data (downloadable historic reports and verified datasets)
 - b. Monthly reports with independently verified/audited data
 - c. Simple, plain language, graphs and tables, historic trends, comparisons to climate targets/best practice standards or equivalent power plants

RESPONSE:

Information specific to Loy Yang B operations has always been freely available at the following government agency websites:

- o [Greenhouse & Energy \(NGER\)](#)
- o [EPA Victoria licence compliance, Annual Performance Statements \(APS\)](#)
- o [National Pollutant Inventory \(NPI\)](#)

Ambient air monitoring equipment is positioned at a range of locations across the Latrobe Valley. Some are operated by the EPA while major Latrobe Valley industries conduct operations of other sites. The industry operated network has been in continuous operation in various forms since the time of the State Electricity Commission of Victoria (SECV). An accredited contractor is engaged by current Latrobe Valley industries to operate and maintain these facilities. This information is freely available on the website of the Latrobe Valley Air Monitoring Network (LVAMN) with accompanying annual report summaries:

- o <https://www.epa.vic.gov.au/our-work/monitoring-the-environment/epa-airwatch>
- o <http://www.lvamninc.com.au/graphs.php>

Loy Yang B has commenced a feasibility assessment to determine the best approach to providing validated, timely and relevant air emission data. Our approach aims to ensure openness and transparency while contributing to an informed and thorough understanding of our operations in the context of EPA Victoria licence requirements. The final format, frequency and method of dissemination will be informed by stakeholder feedback along with consideration of the technical and logistical requirements for validating and publishing data for public viewing, while simultaneously ensuring it provides a meaningful representation of emissions.

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3. What other licensing issues do you think EPA should consider and also ask the power stations to respond to as part of this review process?
- Increase transparency and enforcement, including increased penalties and accountabilities for corporate office holders
 - Compliance with international best practice standards and climate targets
 - Annual improvement / reduction of emissions / retrofits or upgrades of equipment
 - Health impacts
 - Transition to closure planning to include determining extent of groundwater and soil contamination for rehabilitation / remediation

RESPONSE:

The public is able to review Loy Yang B's historic operating performance against their EPA licence via <https://www.epa.vic.gov.au/our-work/licences-and-approvals/search-licence>.

At Loy Yang B we take our compliance and reporting obligations seriously, investing significant resources into monitoring and reporting. Loy Yang B is externally certified to ISO 14001:2016 Environmental Management Systems. This ensures an environmental annual 'surveillance' audit and a standard renewal audit are conducted every three years.

Loy Yang B's EPA licence limits are based on achieving Victorian government State Environment Protection Policies (SEPP) for ambient air quality (AAQ) and air quality management (AQM). This is validated by assessment of ambient air monitoring data by EPA and summarised in EPA Victoria's annual reporting. Ambient air criteria set in the SEPP are based on Commonwealth National Environment Pollution Measure (NEPM) ambient air quality guidelines, established to protect human health.

The Loy Yang B site and operations **excludes** operational control of:

- an open cut mine
- overburden systems
- ash pond systems
- wastewater treatment and discharge systems.

These services are provided contractually by our neighbour AGL at the Loy Yang A Power Station and Loy Yang Mine facility. The Loy Yang B site is predominantly hard stand (concrete) and the risk of soil and groundwater contamination is low.

Loy Yang B and the other generators make a significant economic contribution in the region through employment, community investment and supplier and contractor relationships. Adding additional regulatory requirements in the absence of clear evidence has the potential to significantly increase costs to generators. In turn this could potentially make energy less affordable while failing to deliver benefits. Therefore establishing a clear evidence base and conducting analysis of potential impacts is essential.

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