

Victorian EPA Power Station Licence Review Report to the Community



EnergyAustralia
LIGHT THE WAY

EnergyAustralia Yallourn

Response to Community Submissions

Victorian EPA Licence Review of Coal-Fired Power Stations

About us

EnergyAustralia welcomes the opportunity to respond to community concerns raised through the Victorian Environment Protection Authority's (**EPA**) Brown Coal-Fired Power Stations Licence Review (**Licence Review**).

This Response to Community Submissions will provide some background to the EnergyAustralia operations at Yallourn in respect of its Power Plant and Mine, as well as some further information about its environmental and community responsibilities and initiatives.

By way of introduction, EnergyAustralia is one of Australia's leading energy companies, providing gas and electricity to 2.6 million household and business customer accounts in New South Wales, Victoria, Queensland, South Australia and the Australian Capital Territory.

EnergyAustralia's energy portfolio has a mix of coal, gas, solar and wind representing around 5000 megawatts of capacity, and we have a modern energy portfolio underpinned by coal and gas power plants and complemented by newer energy sources like wind, solar and batteries.

Recently we completed a \$1.5 billion program to underpin development of new wind and solar projects on Australia's east coast. This takes our total investment in renewable generation to more than \$3 billion and 1000MW of capacity. Our renewable energy investments deliver energy to power 200,000 homes annually.

EnergyAustralia has the rights to more than 500 megawatts of electricity generated by wind farms in New South Wales, Victoria and South Australia. Through these long-term agreements, we underpin 12% of the large-scale wind projects in the National Electricity Market (**NEM**).

In Victoria, EnergyAustralia owns and operates multiple power generation assets in the Latrobe Valley and Melbourne areas, namely the Yallourn Power Station and adjacent brown coal mine, as well as the gas-fired Jeeralang and Newport Power Stations. The Yallourn Mine and Power Station are owned and operated by EnergyAustralia Yallourn Pty Ltd (**EAY**). Yallourn alone provides over 20% of Victoria's essential energy needs and is a major regional employer with nearly 550 staff. We welcomed the Victorian Government's decision on 1 June 2018 to extend Yallourn's mining licence by an additional 25 years. This will enable Yallourn to continue to provide low cost, reliable baseload power to the State.

Environmental integrity is essential to our operations

EnergyAustralia supports the intent of the EPA's review, which aims to ensure Victoria has clear and relevant standards regarding brown coal generator emissions. We will always support the existence of appropriate standards, which are independently monitored and enforced by the regulatory authorities. Public confidence in the safe and stable operation of our assets is paramount and EnergyAustralia is proud of our strong record of compliance with the environmental requirements associated with our power generation and mining licenses.

Since acquiring Yallourn in 1996, the parent company of EnergyAustralia – CLP Group (**CLP**) - has embarked on a major modernisation program that has delivered significant power station efficiency and integrity improvements. For example, a \$60 million turbine efficiency upgrade in 2015 has enabled Yallourn to power 100,000 extra homes without using additional coal.

EAY continues to be fully compliant with our progressive rehabilitation plans which are reviewed, approved and audited by Victoria's independent Earth Resources Regulation (ERR). We are also fully compliant with the Victorian Government's rehabilitation bond policy and our current bond is lodged with ERR for \$148 million. We have also embraced advances in mine rehabilitation and fire preparedness which demonstrates our commitment to the value we place on the community and our social licence to operate. Since acquiring the site, EAY has progressively rehabilitated more than 85% of the area once disturbed by mining - around 2,744 hectares – and we continue to rehabilitate more land than we disturb.

EnergyAustralia's environmental discharges are regulated in accordance with licences issued by the EPA, and compliance is strictly enforced. EAY has developed and implements an environmental management system for the control of environmental risks that are independently certified to the internationally recognised standard ISO14001.

Operating significantly below emission limits ensures minimal air quality effects in the surrounding region and protection of the health and wellbeing of the community. There are, however, times when various factors cause the Yallourn Power Station to produce emissions which approach (and on very rare occasions, exceed) its licence limits. There are many factors which can lead to this, both due to operational matters and demand or external factors such as weather.

Similarly the parent company of EAY, CLP, has a strong record of leading action on environmental issues and climate change. In 2017 CLP reviewed its Climate Vision 2050, and in 2018 announced it would be underpinned by a commitment to strengthened Energy Transition Targets and Clean Energy Targets to 2050, and a focus on four key priorities 'Climate Action', 'Affordable and Clean Energy', 'Decent Work and Economic Growth' and 'Industry, Innovation and Infrastructure'. Information on CLP's approach to sustainability can be found at <https://sustainability.clpgroup.com/en/Sustainability-at-CLP>.

Yallourn plays a critical role in Victoria's economy

EAY recognises the importance of maintaining Yallourn Power Station as a safe, stable and reliable asset. Yallourn Power Station is registered as 'Critical Infrastructure' pursuant to the *Emergency Management Act 2013* (Vic) given its essential role in meeting 20% the State's energy demands in tight supply conditions. Yallourn's importance is perhaps most clearly demonstrated by its performance on high demand days, which are typically characterised by hot, dry weather and limited wind resources. On the 10 days when demand was at its highest over summer 2017/18, Yallourn had 98% availability.

In order to maintain appropriate system resilience, EAY regularly participates in emergency management activities in coordination with Victorian and Federal Government agencies, as well as the energy market bodies. We also conduct a strict schedule of maintenance and planned outages at the power station so that we can best ensure it is available when it is needed most. Each year on average, EAY spends around \$150 million to keep Yallourn Power Station and Mine operating.

In addition, major outages at Yallourn are performed once every six years on each of the units, with smaller integrity outages at the four year mark, on each unit. Major outages have a base cost of around \$25-30 million in equipment and staffing, plus additional works up to \$30 million. Our next major outages are scheduled for 2020 and 2021.

Importantly for the Latrobe Valley, a major outage typically involves bringing in 400-500 additional workers to help perform the extensive maintenance, delivering further income to the region. Since the closure of Hazelwood Power Station and Mine in March 2017, EAY has employed an additional 27 people full-time, 17 of which previously worked at Hazelwood. We have also provided the opportunity for early retirement to 43 of EAY's workers through the Latrobe Valley Worker Transfer Scheme and are continuing to recruit to replace those positions, with priority given to ex-Hazelwood power station

employees and suitably qualified residents of the Latrobe Valley. In addition, late last year, EAY employed a further 28 ex-Hazelwood employees to assist with a 70-day major outage at Yallourn.

Amongst the ongoing upgrades and maintenance works, it must also be noted that the ageing nature of Yallourn Power Station can place constraints on the types of upgrades that are technically possible. New equipment retrofits can be challenging, and in some cases impossible. For example, EAY has previously assessed the potential for installing fabric filters on each of the emissions stacks. However, the extended shutdown timeframes for installation were found to be prohibitive and delivered limited environmental benefit due to the prevailing air shed conditions. We will happily consider new investments to improve our assets, but they must be supported by evidence and balance the joint priorities of providing cleaner energy, affordable baseload power, and system security.

It should also be noted that wherever possible, EAY strives to release information publicly in a timely manner and in a form that is easy to understand. However, there are aspects of EAY's operations which cannot be disclosed for infrastructure safety as well as commercial sensitivity reasons. We will continue to work with the EPA and all relevant regulatory authorities across the State and Federal Governments to ensure we strike the right balance between transparency and system security.

We rely on community partnership

The Yallourn Power Station and Mine is located in the Latrobe Valley on a site covering 5500 hectares. It is bounded by the townships of Yallourn North, Morwell, Newborough and Moe.

The Yallourn Power Station and Mine is the centre of a broad community that includes EAY's employees and contractors, the Latrobe Valley community, EAY's shareholders and its alliances, business partners, customers and suppliers. Social responsibility is a core element of EAY's business plan, and it is committed to working in partnership with the regional community in respect of the Yallourn Power Station and Mine.

The partnership between the EAY and the respective segments of its community has developed significantly with time. EAY has worked towards an open, productive engagement with the community, which is yielding important, reciprocal benefits. A growing spirit of co-operation and a willingness to listen and adapt have been strongly evident in the interactivity surrounding consideration and approval of the EnergyAustralia Morwell River Diversion Development Project especially with respect to the heightened focus on improved safety, health and environmental performance.

The outcomes of EAY's continued focus on social responsibility have been extremely positive and have improved avenues for employee consultation and input, as well as improved community consultation.

Listening to the community

EAY has established close working relationships with a range of organisations, including:

- Latrobe City Council;
- Latrobe Valley Authority;
- Gippsland Water;
- West Gippsland Catchment Management Authority (**WGCMA**);
- Latrobe Valley Field Naturalists;
- Advance Morwell;
- the Gunai-Kurnai people; and
- Federation University.

EAY is also a member of the following organisations:

- Committee for Gippsland;
- Australian Energy Council;
- Minerals Council of Australia (Victorian Division); and
- Latrobe Valley Air Monitoring Network Inc.

EAY utilises a range of systems and processes to proactively monitor awareness of community and stakeholder expectations and views relevant to the Yallourn Power Station and Mine, as well as the industry sector in general. These include:

- **(Public inquiries and complaints procedure)** to receive, respond and evaluate inquiries from neighbours and residents, either by phone, in writing or via [email](#);
- **(Regular Environmental Review Committee meetings)** EAY holds quarterly Environmental Review Committee (**ERC**) meetings. Meetings are held at Yallourn and recently in nearby Moe open to the public. The members include elected local community representatives as well as representatives from the Latrobe City Council, Southern Rural Water, WGCMA, the Gunai-Kurnai people, Advance Morwell community group, the Victorian EPA, the Victorian Department of Environment, Land, Water and Planning (**DELWP**), the Victorian Department of Economic Development, Jobs, Transport and Resources (**DEDJTR**), the Victorian Department of Health and Human Services and EAY staff from the Yallourn Power Station and Mine. The meeting is independently chaired by Dr Geoff Sutherland, Professor of Civil and Environmental Engineering, Melbourne University. The ERC annually undertakes a site inspection of the Yallourn Mine to review rehabilitation and conservation management progress;
- **(Public information events)** to provide comprehensive information on proposed new developments, such as EPA and mine works approvals processes, and proposed developments in alternative coal products. These are open to the public either onsite at Yallourn or in the neighbouring towns;
- **(Web updates)** regular updates to dedicated Yallourn Power Station and Mine [web pages](#);
- **(Community and stakeholder engagement plans)** annual community and stakeholder engagement plans developed, implemented and reviewed;
- **(Government briefings)** state government and statutory agency briefings;
- **(Media reviews)** review of daily media alerts including national, state and local television, radio, newspaper and social media covering topics specific to EAY or relevant to the energy sector;
- **(Community engagement surveys)** regular community engagement surveys are carried out within the Latrobe Valley region to understand the community's views of the Yallourn Power Station and Mine. This provides a mechanism by which EAY can identify issues of community concern;
- **(Attendance at regulator events)** attendance of staff at EPA briefings, conferences and seminars covering a broad range of environmental issues; and
- **(Social and environmental reporting)** undertaking and publishing an annual Social and Environmental Performance Summary.

EAY Yallourn Power Station and Mine and the Environment

EAY strives to improve its environmental impacts by creating and entering into various voluntary environmentally-focused initiatives.

To this end, EAY was the first Australian energy company to commit to a climate change strategy in 2007. As part of this strategy, EAY allocated significant resources to improving the efficiency of the Power Station and to reduce the intensity of its carbon emissions. These improvements include replacement of the high and intermediate turbines on all four units of the Power Station. This, along with other refurbishments, has provided a station thermal efficiency improvement of around 3%, with a similar reduction in carbon intensity.

In 2012, EAY submitted a variation to its Mine Work Plan to reduce future environmental exposure of Morwell residents from potential fugitive windblown dust and noise emissions from mining operations at the Maryvale Mine. The variation was approved.

EAY has demonstrated long term and ongoing support to the local community through a range of sponsorships including community environmental initiatives. These include the sponsoring of tree planting initiatives, community space enhancements, promotion of awareness of regional flora and fauna and other environmental activities. Primary sponsorship has been through funding of the Latrobe Region Landcare Network, Conservation Volunteers Australia and WGCMA.

A major EAY initiative at the Yallourn Power Station and Mine is the creation of a wetlands precinct on the Morwell River. While the wetland is developing, this initiative is not open to the general public, but it is envisaged that public access will be facilitated in the future.

The Morwell West Drain Diversion was developed by EAY to provide for future mine development. Following construction, there were revegetation and tree planting initiatives which took place as well as the establishment of lakes and a walking track. The area was opened for public access in 2014 which was launched by a tree planting activity.

Following the Hazelwood mine fire in February and March of 2014, the Hazelwood Mine Fire Inquiry included two recommendations (18 and 19) which were aimed at the Latrobe Valley mine operators.

Recommendation 18 has been met, being the development of a '10 Year Integrated Mine Research Program'. The three Latrobe Valley mines are actively implementing this Program which will also be reviewed every three years.

Recommendation 19 was to increase the rate of progressive rehabilitation in the Yallourn Mine. So far, EAY is meeting this obligation with around 1,335 hectares of rehabilitation completed to date. This includes more than 15,000 tube stock plantings each year, over 25,000 Strzelecki Gums planted to date and the protection of greater than 600 hectares of conservation areas on EAY land.

Air emissions

The Yallourn Power Station and Mine are located within the 'Latrobe Valley Air Quality Control Region' under the 'State Environment Protection Policy (Air Quality Management)' (**SEPP (AQM)**) and the State Environment Protection Policy (Ambient Air Quality) (**SEPP (AAQ)**). These are the key regulatory tools which set air quality objectives and goals in Victoria, and adopts the requirements of the National Environment Protection Council's 'National Environment Protection Measure (Ambient Air Quality)' (**NEPM (AAQ)**) made under section 20 of the *National Environment Protection Council Act 1994* (Cth) and the *National Environment Protection Council (Victoria) Act 1995* (Vic).

EAY is a member of the Latrobe Valley Air Monitoring Network (**LVAM Network**). The LVAM Network operates and maintains a network of ambient air monitoring stations at

Jeeralang Hill and Rosedale South and its members include other air emission generators and industry from the Latrobe Valley region.

The LVAM Network works cooperatively with the Victorian EPA to ensure that the beneficial uses of the air are maintained in accordance with the SEPP (AAQ). Reports of air quality data from the LVAM Network monitoring stations are provided to the community on the LVAM Network website (<http://www.lvamninc.com.au>) and through its Annual Reports.

Wastewater

Treated wastewater from the Yallourn Power Station and Mine is discharged in strict accordance with licence conditions under EPA Licence 10961 (**EPA Licence**) to the Morwell River, which is a tributary of the region's main waterway, the Latrobe River. The Latrobe River flows to the east before converging with Lake Wellington and the Gippsland Lakes system, near Sale.

The EPA Licence was first issued on 19 June 1996. The company maintains a Health, Safety, Security and Environmental (**HSSE**) Policy endorsed by senior management underpinned by a comprehensive HSSE Management System that is certified to both ISO 14001:2015 Environmental Management Systems and BS OHSAS 18001:2007 Safety Management Systems.

Routine monitoring of waste discharges to air, water, land and waste management processes is conducted to ensure adherence with the EPA Licence and Mining Licence requirements, and to review performance improvement trends over time.

All public complaints received either directly or via the EPA are recorded and investigated. EPA are notified of any complaints received by the company. Complaints are recorded and investigated and the results of investigations reported to the complainant (if possible), the EPA and the Environment Review Committee.

It is against the above background that EAY welcomes the opportunity to respond to the issues raised by the community in the context of the EPA Licence Review process.

Response to Community Submissions

The EPA have identified 15 'themes' which are considered representative of the targeted submissions to the Review. A further three themes provided by EPA, arising from broader community consultation submissions, are also addressed by EAY in its response to the 15 themes.

EnergyAustralia provides its response to each of these themes below.

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

EnergyAustralia supports a best practice approach to dust emissions management, however we do not consider this is best achieved through prescriptive licence conditions. A far more suitable and effective approach is through performance based measures, as outlined below.

The SEPP (AQM) provides the overarching framework and requirements for the management of emissions of pollutants to air in Victoria. There is a general requirement of all EPA licence holders to conform with the SEPP (AQM), including in relation to emissions of PM₁₀ and PM_{2.5}.

EAY must also comply with a framework of other requirements and obligations in relation to dust emissions emanating from the Yallourn Mine. They include statutory requirements and protocols as well as the strict licence conditions imposed under its EPA Licence.

The EPA Licence has a standard Licence Amenity condition LI_A3 which states:

You must ensure that nuisance dust and/or nuisance airborne particles are not discharged or emitted beyond the boundaries of the premises, except as permitted by this licence.

The emission of dust from mines has historically been regulated through mining licences granted under the *Mineral Resources (Sustainable Development) Act 1990* (Vic) (**MRSD Act**).

The Yallourn Mine is subject to Mining Licence 5003 (**MIN 5003**). Relevantly, MIN 5003 provides that:

14. *Airborne Emissions*

14.1 *Control measures must be in place to minimise airborne emissions so that:*

- *detriment is not caused to surrounding areas and residents, and;*
- *any discharge complies with State Environment Protection Policy.*

14.2 *Dust resulting from all operations including mining , loading, transport, crushing, stockpiling and rehabilitation works shall be controlled to the satisfaction of the Inspector. Such measures may include the use of water sprays and/or dust extraction systems or other appropriate measures wherever necessary. The revegetation of waste dumps and other bare areas shall be undertaken as soon as possible to minimise the generation of dust.*

14.3 *Where required by the Inspector, a water tanker of appropriate size shall be maintained on-site in operable condition for the purposes of suppressing dust on internal roads, work areas and Council roads as required.*

14.4 *The increase in dust deposition (measured in accordance with AS 3580.10.1) as a result of mining or related activities must not exceed 2g/m²/month at sites determined by EPA in consultation with DNRE. Notwithstanding the foregoing, no increase in dust deposition resulting in total levels greater than 4g/m²/month are permitted.*

14.5 *When windy conditions are forecast, water or other dust suppressants shall be applied on areas susceptible to wind erosion.*

14.6 *Airborne dust emissions of size fraction with a mean aerodynamic diameter less than or equal to 10 microns(PM10) from all sources shall be limited in accordance with specific requirements for the mining and extractive industries provided for under the State Environment Protection Policy (Air Quality Management) and state protocols for environmental management for mining.*

Additionally, the 'Protocol for Environmental Management- SEPP (AQM) -Mining and Extractive Industries' dated December 2007 specifies requirements for management of environmental risks including PM₁₀ and PM_{2.5} emissions.

Dust deposition monitoring is undertaken at six locations around the Yallourn Mine. This allows trends to be assessed and enables resources to be focussed on further improvements as necessary.

Emissions of PM₁₀ from the Yallourn Mine are reported annually in the National Pollutant Inventory (**NPI**) pursuant to the '*National Environment Protection (National Pollutant Inventory) Measure*' which is implemented in Victoria by the Industrial Waste Management Policies (**WMPs**) under the EP Act and are also taken into account in regional air quality assessments conducted by the LVAM Network.

EAY have also been progressively rehabilitating the Yallourn Mine, with over 750 hectares of rehabilitation completed since 2005. EAY continues to rehabilitate more area than it disturbs, which helps to reduce the risk of dust emissions arising from the Yallourn Mine.

It is acknowledged that, despite all of the efforts by EAY to manage its dust emissions, under extreme weather such as dry, high wind speed ahead of cold fronts, there may be occasions when visible dust can be seen from the Yallourn Mine. EAY is actively working to minimise this occurrence through such measures as suspension of operations, rehabilitation of exposed coal batter surfaces, watering trucks and water spray systems. EAY also has mining buffer zones and procedures in place to manage emissions of dust from our mining activities.

In response to a recent dust audit in February 2018 from DEDJTR, EAY has created and is implementing an improved 'Trigger Response Action Plan' for dust. This procedure outlines how EAY responds to various environmental conditions (e.g. wind speed and temperature) to mitigate dust emissions from the site.

In relation to the use of prescriptive licence conditions reflecting best practice management measures, EAY submits that this is not the best approach, and that performance based conditions are evidently more suitable.

Prescriptive conditions do not pay sufficient regard to the particular circumstances of each mine. Specifically, they do not adequately respond to significant variables, such as:

- the geological characteristics of the relevant site and surrounding areas;
- surrounding land uses;
- the size of the particles which may cause dust emissions;
- the location of the relevant site from sensitive receptors;
- the measures which will assist with dust suppression in the particular circumstances (for example, water is not always an appropriate to use as a dust suppressant on coal as it can cause the coal to break down into smaller parts which are more likely to become dust);
- the composition of the matter which is at risk of causing dust emissions;
- meteorological conditions; and
- the chemical composition of the coal, or any other material which is at risk of becoming airborne.

Furthermore, prescriptive conditions are much less nimble, and are not capable of responding to changing circumstances in a dynamic and constantly evolving environment.

By contrast, performance-based conditions are much more appropriate. They are capable of responding to the range of variables noted above, while at the same time imposing on operators such as EAY a clear regulatory obligation to ensure

that fugitive dust emissions are properly managed and the desired environmental outcome is achieved.

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

EnergyAustralia supports, where it can, a best practice approach to management of land, surface water and groundwater contamination from ash ponds. However, we do not consider this is best achieved through prescriptive licence conditions. A far more suitable and effective approach is through performance based measures, as outlined below.

For context, Yallourn has two polyethylene lined ash ponds that collect ash water slurry from the Power Station. The water is drained from the ash in the pond and the solid ash excavated and disposed of in an adjacent on-site landfill.

The ash landfill is managed by EAY in accordance with the relevant requirements under the EP Act and the *'Best Practice Environment Management for Siting, Design, Operation and Rehabilitation of Landfills'*, EPA Publication 788.3 dated August 2015. The *'Licence Management Guidelines'*, EPA Publication 1322 dated 29 December 2017 also specifies requirements to demonstrate compliance and monitoring for landfill operations.

This monitoring program comprises regular sampling and testing of a network of 40 groundwater wells, surface water sites and periodic dust monitoring points and noise.

This monitoring program is further subject to regular periodic environmental audits conducted by an independent EPA Auditor in accordance with section 53V of the EP Act (**s53V Audit**). The results of the audit are provided to the EPA. The most recent s53V Audit was undertaken in 2017 and concluded that the period between audits be extended from 2 to 3 years.

In 2017, EAY provided the EPA with a proposal for establishing appropriate financial assurance for the operation, closure and aftercare of the ash and other on-site landfills at Yallourn. EAY are continuing to respond to the EPA's requests.

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

EAY's approach to water resource management aims to reduce the use of water resources through recycling and re-use where possible. Water required to cool the Yallourn Power Station is drawn from the Latrobe River into the circulating water system and cooling towers in the Power Station, for efficient operation of the turbines and other cooling systems. The water is then recycled through the cooling towers a number of times, to minimise the need to use additional water from the Latrobe River. Water from the Power Station then flows to the Yallourn Mine for re-use in fire and dust suppression systems and for general purposes.

To maintain safe operating conditions in the Yallourn Mine, excess wastewater is treated and discharged to the Morwell River at a single location under strict EPA Licence conditions.

Water discharged to the Morwell River is treated for removal of suspended solids and turbidity prior to discharge, and the water quality is continuously monitored for pH and turbidity and tested weekly, monthly and quarterly for a range of water quality indicators. This testing is carried out by an independent, National Association of Testing Authorities certified, water testing laboratory to ensure it meets the EPA Licence condition requirements in respect of the discharge water

quality. In the event the water quality is trending towards licence limits, the discharge system automatically shuts down.

The quality of the Morwell River is continuously monitored and tested weekly, monthly and quarterly for a range of water quality indicators both upstream and downstream of the discharge area to assess any effects of wastewater discharges on the Morwell River and to the downstream Latrobe River. This also ensures that the obligations set out in the State Environment Protection Policy (Waters of Victoria) are met at all times.

Around 50% of the water volume drawn from the Latrobe River is discharged back to the Morwell River, which provides downstream users with water for other important beneficial uses.

In 2013, EAY sought a Works Approval from the EPA to increase the discharge volume limit in the EPA Licence to account for the increasing size of the Yallourn Mine catchment area. Community consultation including a public meeting, was held at Yallourn North in relation to this proposal to ensure the views of all stakeholders were heard. The Works Approval was subsequently granted and, in turn, the EPA Licence was amended with the revised discharge volume rate limit.

EAY's long term monitoring program indicates that water quality in the Morwell River is generally improved downstream of the discharge from the Yallourn Power Station, with the exception of salinity, which at times is at higher levels than the Morwell River upstream of the discharge.

The results of the water discharge monitoring and compliance assessments carried out by EAY are presented to the EnergyAustralia Yallourn Environment Review Committee at their quarterly meetings.

EAY acknowledges that despite our best intentions and endeavours, sometimes accidents and adverse events happen, and we are committed to learning from these experiences and taking positive action to prevent their re-occurrence.

To this end, EAY has invested over \$120 million to restore the Morwell River Diversion following its collapse and subsequent flooding of the Yallourn Mine in June 2012.

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

EAY is committed to providing environmental leadership and stewardship in the energy sector. EAY welcomes the EPA policy to undertake reviews of its EPA Licence once every five years, but remains of the view that changes to licence conditions should be very carefully considered against the relevant regulatory framework. Potential impacts upon customer outcomes, particularly in relation to issues such as energy reliability, affordability, and security must also be carefully considered.

The EPA Licence applies limits to air discharge rates at the Yallourn Power Station. Factors taken into account in determining these limits include the design and output of the Power Station, the quality of the coal used, the rate and temperature of boiler gas discharges and the final design height of the stacks. These criteria are carefully assessed to ensure the design features of the Power Station will not, under any weather conditions, exceed the 'design criteria' standards for the region set out under the SEPP (AAQ).

Operations which impact air emissions are closely monitored by the EPA, and are currently compliant with the EPA Licence.

The EPA Licence contains conditions that limit emissions of the following indicators:

- particles;
- sulfur dioxide (SO₂);
- oxides of nitrogen (NO_x);
- carbon monoxide (CO);
- fluorine compounds (F1);
- chlorine compounds (Cl₂); and
- sulfur trioxide (SO₃).

On occasion, emission rates for particles and carbon monoxide substances can approach the maximum respective limits of the EPA Licence. In the case of emissions of particles, a reduction to generation can allow particle levels to remain within the limits of the EPA Licence.

With respect to sulfur dioxide, oxides of nitrogen, fluorine compounds, chlorine compounds and sulfur trioxide emissions, these indicators tend to remain within the EPA Licence limits. The impact of reducing limits under the current EPA Licence, particularly for emissions of particles, sulfur dioxide, oxides of nitrogen and carbon monoxide, would mean that the Yallourn Power Station would have to either reduce generation to remain compliant, or alternatively be required to retrofit new capture technologies at the Yallourn Power Station. Both of these options would lead to significant reductions in output for the Yallourn Power Station, the magnitude of which would depend on the level of the new EPA Licence limits. The EPA is examining including mercury and PM₁₀/PM_{2.5} in the licences of the Latrobe Valley coal fired power stations.

The dispersion modelling that the subject power stations have sought in relation to this Licence Review has been summarised in a report (**Modelling Report**). The Modelling Report shows that the Latrobe Valley air quality meets the SEPP (AAQ) objectives for PM₁₀ and PM_{2.5} for the vast majority of time and always for mercury. In fact, the contribution that Latrobe Valley power stations make to mercury levels in ambient air is vastly less than the standard. Specifically, CSIRO found that mercury from power stations contributed less than 1% of air mercury levels from all sources in the Latrobe Valley. When objectives for PM₁₀ and PM_{2.5} are not met in the region, this is due to other factors such as natural causes, or vegetation burn offs.

EAY submits that any decision to impose new or reduce current licence limits in respect of power stations in order to drive a reduction in current emission loads would need to be justified on the grounds of new health evidence or environmental risks, which would then need to be reflected in the SEPP (AAQ) and SEPP (AQM).

If the SEPP (AAQ) and SEPP (AQM) were amended to lower the permissible air quality criteria, or indeed if it were proposed to amend the EPA Licence to impose higher or more rigorous standards in relation to any emission limits, EAY agrees that this should only occur following consultation with impacted business. It must also only occur after a robust assessment of the net environmental gains that will result from the amendment or variation, weighted against other relevant factors such as the cost of implementing measures to achieve the mandated outcomes and the practicability (particularly technical) of doing so.

5. **Collaboration between the LVAM Network and other EPA monitoring to release information in real time on EPA's AirWatch.**

EAY submits that there are already high levels of collaboration between the LVAM Network and other EPA monitoring, and that this is set to continue. Indeed, the 2018 Victorian Auditor General's office report into the State's air quality found the Latrobe Valley to be one of only two regions to have adequate and appropriate air monitoring by the EPA.

The LVAM Network is an industry association funded by EAY, AGL (Loy Yang), EnergyAustralia (Ecogen), Alinta Energy (Loy Yang B), Australian Paper and Engie (Hazelwood).

The LVAM Network currently operates air monitoring stations at Jeeralang Hill and Rosedale South. These stations record information in relation to the following substances and matters:

- nitrogen dioxide;
- sulfur dioxide;
- coarse particulate matter;
- fine particulate matter;
- ozone; and
- local visual distance.

The [LVAM Network website](#) provides 24 hour trend updates as well as the daily and monthly trends of air quality data from air monitoring stations at Rosedale South and Jeeralang (**LVAM Network Air Monitoring Stations**). Additionally, Annual Summary Reports which relate to the data collected from the Rosedale South and Jeeralang Air Monitoring Stations are also publicly available on the LVAM Network website. The LVAM Network has routinely provided its monthly monitoring data on a public basis since monitoring commenced in 1990's under the then State Electricity Commission of Victoria. The LVAM Network website also contains links to and from the EPA AirWatch website.

The LVAM Network is working cooperatively with the EPA to provide data from the LVAM Network Air Monitoring Stations to the EPA which can then be accessible on the EPA AirWatch website. It is understood that this will allow the relevant air quality data to be viewed in one place.

The EPA is also consulting with the Latrobe Valley Air Quality Co-Design Panel over the siting of new air monitoring stations in the Latrobe Valley. LVAM Network is actively involved in this initiative and working cooperatively with EPA on the implementation of their recommendations.

Air quality monitoring reports indicate that for the period 2010 to 2016, in the parts of the Port Phillip and Latrobe Valley regions that EPA monitors, air quality met ozone and particulate matter NEPM (AAQ) standards for all seven years, except in 2015 for PM₁₀. The EPA's 2015 air quality monitoring report states that possible causes for the PM₁₀ exceedances include localised or regional dust storms, smoke from bushfires, planned or agricultural burning, motor vehicles or domestic wood heaters.

6. **Consider climate and set limits for greenhouse gases.**

EAY believes all Australians should have access to reliable, affordable and clean energy. We support a transition to a cleaner energy generation mix, and have

invested over \$1 billion in new renewable energy projects throughout the NEM including wind, solar, large scale batteries, and investigating pumped hydro.

That said, the transition must be well managed to avoid the types of system disruptions and price shocks seen in recent years. Reliability and affordability for households and businesses is essential, as well as a transition for localised workforces affected by changes to the energy mix. As such, EAY strongly opposes the introduction of inflexible licence limits for greenhouse gas emissions. This would cause great uncertainty in relation to EAY's operations. Such interventions will invariably create distortions in the competitive national energy market and will increase power prices and impacts on energy supply reliability for all Victorians. Rather, EAY supports the development and introduction of a national policy that promotes energy reliability, affordability and a smooth transition to lower greenhouse gases from the energy sector in Australia. Accordingly, we support the National Energy Guarantee to place a cap on emissions in the electricity sector. We support the role of the Commonwealth Government in setting climate change targets for Australia.

EAY strives to reduce its emissions intensity by enabling our customers to offset their carbon emissions, and invests in renewable energy and energy management products for homes and businesses. In 2017 our Go Carbon Neutral program offset 173, 000 tonnes of carbon emissions. Our aim is to have one million Australian homes opt-in for carbon neutral electricity by 2019 at no additional cost to them.

The Yallourn Power Station has coal reserves and a current mining licence that will enable it to continue operating until 2032. Once these reserves are depleted, EAY will begin final rehabilitation. In the meantime, EAY remains committed to optimising Yallourn Power Station's efficient operation where feasible, and into the future. Yallourn Power Station currently operates at a level of thermal efficiency that meets the expected standard for its design, fuel type and age. The high moisture content of Victorian brown coal is a major reason for emissions of greenhouse gases relative to other power generation technologies.

EAY has investigated and implemented many improvements at the Yallourn Power Station to increase the efficiency of its operations. This has primarily been facilitated through active participation in the Commonwealth Government's 'Greenhouse Challenge' and 'Generator Efficiency Standards' programs, as well as Victorian Government programs such as 'Energy Smart Leaders' and the Environment and Energy Resources Program aimed at water, waste and energy efficiency improvements. Involvement in such programs has resulted in the following improvements being implemented at the Yallourn Power Station:

- turbine upgrades on all units;
- improved condenser tube replacements;
- improved rotary air heaters packs;
- boiler combustion performance enhancements; and
- lighting and other in-house energy use reductions.

EAY has also funded many research and development initiatives into such things as coal drying technologies, variable speed drives for large pumps and improved heat exchangers. These each aim to reduce the environmental impacts of the EnergyAustralia Yallourn Power Station.

The above actions have resulted in a reduction of Yallourn's carbon intensity by 6.5% over the last 20 years.

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

As a general observation, EAY is committed to a program of continuous improvement and is always examining ways to improve its environmental performance.

EAY's [2017 Environmental Policy](#) includes a commitment to minimise adverse impacts of our operations on the environment and community, including the prevention of pollution. To this end, EAY have established key performance measures that track performance trends over time so to better understand its impacts. Furthermore, EAY's management systems and processes are examined by external auditors and the EPA for compliance with best available and best practice approaches. EAY's Environmental Policy is reviewed every two years to maintain relevance and deliver continuous improvement.

In respect of meeting best practice targets, EAY refers to the 'Guideline - Demonstrating Best Practice', EPA Publication 1517.1. This Guideline outlines how best practice can be demonstrated, and how the EPA assesses best practice, in respect of compliance with the State Environment Protection Policies including the SEPP (AQM). The following elements of best practice are relevant to the operations of EAY:

- **(site selection and management systems)** being that the assessment of environmental impact needs to consider the sensitivity of the receiving environment and is therefore site-specific;
- **(preventative)** in that it ensures that the proposed environmental impact is prevented, or minimised, as far as practicable;
- **(undertaking all practicable measures)** so that decisions when assessing best practice have regard to technical, logistical and financial considerations; and
- **(may be internationally demonstrated and locally available)** and may involve an examination of practices used elsewhere in the world where it is reasonably available and achievable in Australia, under local operating conditions.

Against the above, the Yallourn Power Station and Mine produces the emissions that it does in part due to its location in the Latrobe Valley where there is access to vast brown coal reserves. Victorian brown coal contains some of the highest moisture content (~65%) and one of the lowest mineral or incombustible fractions (~1.5%) in the world. The Yallourn Power Station and Mine, which was designed and built by the Victorian Government, was well designed and constructed for the purpose of producing electricity from the available coal resource.

The Yallourn Power Station and Mine has implemented a number of projects to improve the efficiency of the Power Station and, in doing so, optimises the amount of coal needed for production. Improving and maintaining the operation efficiency of the Yallourn Power Station helps to optimise the coal resource and minimises emissions. This is a practicable measure that EAY continues to implement in order to improve its environmental performance.

Investment decisions on major capital improvements, including those aimed at achieving continuous improvement, must be evaluated against multiple factors including:

- capital and operating costs;
- expected business operating life spans;

- realised health and environmental benefits; and
- flow on effects to customers including electricity costs and energy security.

EAY has investigated a number of technologies used to reduce pollutant levels from coal fired power stations in other countries. These technologies include Selective Catalytic Reactors for nitrogen oxide control and Flue Gas Desulfurisation for sulfur dioxide control. This technology is not practicable in the circumstances given the particular design and orientation of Latrobe Valley power stations and prevalent wind conditions near population centres, the standard of Australian coal quality, local prevalent atmospheric conditions and the generally high standard of ambient air quality. Other technology such as Electrostatic Precipitators (**ESP**) and Fabric Filter Baghouses technologies (**FFB Technology**) are utilised in Australian power stations and overseas for capture of total particles.

ESP technology is installed at the Yallourn Power Station. Such technology is traditionally approved by regulators and deployed on brown coal/lignite plants internationally in relation to specific characteristics of the power station combustion process and resulting properties of the boiler gases and entrained ash particles. Technology allowing for the capture of mercury in stack gases, such as Activated Carbon Injection, has been recently utilised in some overseas countries, but has not been required by regulators for deployment in Australia due to the relatively low levels of mercury in Australian coal. This evidence-based approach takes into account the potential health risk posed in the community and applies standards appropriately.

While EAY is aware of technologies which may improve the quality of its air emissions, there are significant technical and commercial challenges to retrofit of such technologies at Yallourn Power Station which must be considered in respect of a prescriptive approach to a 'best practice' framework. To take an example, the challenges which relate specifically to particles are discussed below.

Particles

EAY has been investigating options for improvement to the ESP collection efficiency, and the potential for retrofit of FFB technology as ways to reduce emissions of particles being released into the air shed. These options pose significant technical challenges and risks to the performance of the Yallourn Power Station and its commercial viability.

To this end, such technology is estimated to cost well over \$285 million to install at Yallourn Power Station, and would result in a 12 megawatt decrease in net power station output and considerable ongoing operational costs. It is also likely that the existing large induced draft fans would need replacement and bypass duct work installed at extra cost. Several years of lead time and considerable length of unit shut downtime (most likely months) would be needed to remove the existing ESPs and install the FFB technology. The capital cost per tonne of particles removed is estimated to be greater than \$24.35 per tonne. Such an investment would need to be weighed against the likely incremental improvement in ambient airborne particulate concentrations in the Latrobe Valley. At present, the air modelling assessment has shown for the period 2012-2017, the air quality meets daily and annual standards for PM₁₀ and the annual standard for PM_{2.5} at Traralgon's EPA air monitoring station. The daily standard for PM_{2.5} is exceeded 3% of the time, for reasons not attributed to power station emissions.

EAY continue to explore new and practicable emissions reduction technologies, whilst continuing to maintain and improve the efficiency of the Power Station as part of its continued effort to demonstrate best practice.

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).

The Yallourn Power Station has continuous emission monitors (CEMS) fitted for in-stack measurement of total particle matter (PM) emissions, oxygen percentage and flowrate as well as a process continuous monitoring approach (PEMS) approved by EPA for monitoring emissions of nitrous oxide (NO_x), sulfur dioxide (SO₂), carbon monoxide, hydrogen fluoride, chlorine and sulfur trioxide.

The Yallourn Power Station has on-line monitoring of carbon monoxide for combustion process control, but this is not a requirement of the EPA Licence.

Currently Yallourn Power Station uses independent, specialist National Association of Testing Authorities certified testers to undertake continuous monitoring for NO_x, SO₂ and CO over a 7 day period on each discharge point, twice a year. These tests are carried out on the three stack discharges, during normal operations and at typical, high production output. Coal samples are routinely taken to assess levels of substances such as sulfur and nitrogen at the time of the tests and on an ongoing basis. These tests allow for assessment of the combustion process, and assist in ensuring that emissions are not exceeding the limits of the EPA Licence. In 2017, EAY's monitoring methodology of NO_x, SO₂ and CO was reviewed by the EPA and subsequently approved.

With respect to coarse (PM₁₀) and fine (PM_{2.5}) particle monitoring, commercially available continuous monitoring systems for in-stack measurements are not readily available for coal-fired power stations and are not, to EAY's knowledge, otherwise used for environmental licence monitoring of power stations in Australia or overseas.

Rather, power plants around the world (including Yallourn Power Station) continuously monitor and control emissions of total particles including, as a subset, the size PM₁₀ and PM_{2.5} particles. Periodic in-stack tests are conducted to assess the make-up of the total particles in emissions and the fractions of PM₁₀ and PM_{2.5}. The periodic tests conducted by EAY show the fractions of PM₁₀ and PM_{2.5} in total particles are highly variable and substantial more sampling and testing is necessary to understand the complexities in their formation and control.

There are ambient air monitoring systems for PM₁₀ and PM_{2.5} that are commercially available that measure these size particles in air. This data for Latrobe Valley air is publicly available on the EPA Airwatch website and the number of monitoring sites have been expanded by EPA to enable data to be available from within all major towns in the Latrobe Valley.

The results of a 2016 Latrobe Valley air quality assessment conducted by LVAMN Inc.¹ for the period 2014 to 2015, found the maximum contribution of Yallourn Power Station's emissions to measured 24-hour average PM₁₀ concentrations was 2 ug/m³, or 4% of the SEPP (AAQ) daily maximum for PM₁₀ of 50 ug/m³. This outcome was consistent with earlier reported findings of air assessments for 2011/12 and 2012/13.

Whilst there are CEMS systems for monitoring of stack emissions of mercury in use overseas, they have not been required in Australia due, amongst other reasons, to the chemical composition of Australian coal, particularly when compared with overseas coal.

¹ Latrobe Valley Air Quality Control Region 2014-2015, Air Quality Assessment -Yallourn W Power Station, Jacobs, 2016

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

As noted above, EAY, in conjunction with other key Latrobe Valley generators, has commissioned air emission modelling in respect of the Yallourn Power Station in relation to this Licence Review to obtain a greater understanding of the coarse and fine particle emissions it creates for its own information. This will be also be for the benefit of the EPA and greater community.

The Modelling Report was prepared by air quality experts, and was based on emissions from the Yallourn Power Station, other Latrobe Valley coal-fired power stations as well as other ambient air monitoring and meteorological data. The Modelling Report demonstrates the Latrobe Valley air complies, at most times, with the requirements of the SEPP (AAQ) for coarse particles PM₁₀ and fine particles PM_{2.5} which are helpful indicators in respect of dust particle emissions.

The Modelling Report has found that the highest daily average for PM₁₀ in the Latrobe Valley, at Traralgon was 98.4% of the standard and the highest annual average for PM₁₀ was 56% of the SEPP (AAQ) standard. It also found that the highest daily average for PM_{2.5} was 103% of the standard and the highest annual average for PM_{2.5} was 97.5% for the SEPP (AAQ) standard.

The EPA's annual Air Monitoring Report from 2017 (**2017 Report**) which assesses air quality results in Victoria against the NEPM (AAQ) criteria, indicates that the air quality standards for PM₁₀ were met in the Latrobe Valley Air Control Region. The PM_{2.5} air quality standards however were not met at any air monitoring station during 2017. The 2017 Report also indicates that more than half of the source of PM_{2.5} emissions in Victoria are from urban wood fired heater smoke on cold, still days. Another cause of exceedances is related to hazard reduction burns and other unplanned burns.

Current air quality and dispersion modelling and reporting processes provide transparency and confidence in the monitoring of air emissions in the Latrobe Valley. EAY would nevertheless support an initiative involving more specialised particle characterisation which could be undertaken by the EPA, health and scientific experts. EAY is of the view that this would provide valuable information about sources and pathways of particles generated in in the Latrobe Valley region. EAY understands that similar studies have been undertaken in the Lower Hunter area which allowed for specific sources of fine and coarse particles to be determined in the region.

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

In response to a global concern in relation to the adverse effects of mercury on human health and the environment, Australia signed the Minamata Convention on Mercury on 10 October 2013.

Despite Australia not yet ratifying the Minamata Convention, it recognises the importance and significance of the issue on a local, national and global level.

The SEPP (AQM) lists mercury as a 'Class 2' indicator, which is a "hazardous substance that may threaten the beneficial uses of the air environment by virtue of their toxicity, bio-accumulation or odorous characteristics". It is not considered to be an "extremely" hazardous substance for the purposes of the SEPP (AQM), classified "Class 3" indicators.

EAY has measured the concentration of mercury in its Yallourn coal supply for over 15 years with the results used for annual NPI reporting. There is limited data on mercury in stack emissions however, the limited test data that is

available shows that some of the mercury in the coal is retained as ash while the rest is released. The Modelling Report has found that the mercury levels in Latrobe Valley air from power station emissions are well below the standard contained in the Victorian SEPP (AAQ).

The concentration of mercury in Victorian brown coal is relatively low when compared to coals from parts of Europe, China and the United States of America. Testing and preliminary assessments show that annual emissions of mercury from Yallourn are already comparable to annual standards being introduced in Germany.

As alluded to above, a 2015 modelling study² of atmospheric mercury emissions from Latrobe Valley power stations and other sources reported that mercury emissions from the power industry accounted for less than 1% of the total mercury from all sources modelled in the Latrobe Valley. A 2017 report³ into mercury levels in fish also concludes that blackbream and dusky flathead fish populations in Gippsland Lakes do not show signs of uptake of unsafe levels of mercury.

Modelling has shown that emissions of mercury from power stations comply with the relevant 'design criteria' set out under the SEPP (AQM) for inorganic mercury, being 0.0033 mg/m³ with a 3 minute averaging time.

Despite EAY being of the view that the Victorian regulatory requirements regarding mercury levels in the Latrobe Valley air shed are currently being met, we continue to explore options to minimise mercury emissions. Key considerations include the technical challenges, environmental benefit, risks to plant performance and commercial viability.

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

Yallourn Power Station uses a waste recycled oil product as a start-up fuel and to stabilise boiler combustion. The quantity of fuel used for this purpose is minor and represents less than 0.3% of the energy consumed at the Power Station each year. A full range of quality constituents in the recycled oil product are routinely tested and emissions to air from the combustion of this fuel source are included in the annual reports to the NPI. The use of recycled oil at the Yallourn Power Station is an important waste reuse opportunity and is consistent with the WMPs.

Alternatively, access to a natural gas pipeline which could otherwise provide start up fuel is a number of kilometres away from Yallourn and would require disturbance to private and buffer land subject to conservation zones, and would further need to cross the Latrobe River. EAY is of the view that these environmental considerations outweigh any perceived improvements that may be achieved in respect of Yallourn Power Station's stack emissions.

Further, utilising gas rather than recycled oil product as a start-up fuel would result in increasing consumption of this resource across Victoria, which may place additional strain on the gas availability in the market.

² Emmerson, KM; Cope, ME; Lee, S; Hibberd, MF and Torre, P. Modelling atmospheric mercury from power stations in the Latrobe Valley, Victoria [online]. Air Quality and Climate Change, Vol. 49, No. 1, Mar 2015: 33-37. Availability: < <https://search.informit.com.au/documentSummary;dn=350061761443534;res=IELENG> > ISSN: 1836-5876. [cited 02 Aug 18].

³ <https://www2.health.vic.gov.au/public-health/environmental-health/environmental-health-in-the-community/mercury-in-fish/gippsland-lakes-study>.

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

According to the EPA's 'Future Air Quality in Victoria -Final Report' dated July 2013, Victoria's air quality is generally good by world standards and air quality in regional Victoria is better than metropolitan Melbourne's air quality. This is, in part, due to the development of State monitoring and regulatory requirements aimed at understanding and improving air quality in Victoria. An important regulatory requirement that EAY is required to comply with is the air emissions conditions of its EPA Licence.

It is important that environmental protection regulation is proportionate and appropriately targeted, as this allows for sustainable improvement to be achieved. To this end, a shift to a "load based licensing scheme" (**LBS**) introduces an entirely new regime to air quality regulation in Victoria which would require extensive resources to be allocated in order to determine whether the introduction of such a scheme will produce net improvements to air quality in Victoria. EAY considers that the current environmental licensing scheme continues to be an effective and robust tool to manage and drive continuous improvement in relation to air emissions in Victoria.

The introduction of a LBS in Victoria has the potential to significantly increase capital and operational cost for Victorian generators, which could lead to flow on price increases to the national electricity market. This is due to the significant resources that would need to be dedicated to the implementation of new monitoring and operations infrastructure to maintain compliance with an LBS requirements.

EAY is of the view however that an LBS 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 such as EAY.

For EAY, the introduction of a LBS would impose unnecessary cost and would not incentivise action to reduce emissions, as the Yallourn Power Station and Mine is already subject to the EPA Licence which requires it to comply with air emissions criteria. The Yallourn Power Station and Mine otherwise continues to operate at an optimum efficiency for its technology design, fuel and age.

Further, a scheme such as LBS may have the potential to divert scarce resources away from environment improvements given the costs that need to be allocated to meeting compliance with new obligations. EAY proposes that investment in emissions reduction technologies can be encouraged, not only by the introduction of a LBS, but by affording efficient generators opportunities to invest in environmental offsets to achieve equivalent (or greater) environmental outcomes.

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

EAY supports the principle of transparency in regard to environmental data and information.

EAY already releases emission reports to the public in an accessible manner and format which is accompanied with contextual and explanatory information.

The public reports can be accessed from EnergyAustralia's [website](#).

Information and data on the air quality in the Latrobe Valley is also publicly available on EPA's AirWatch website and from the LVAM Network website.

EAY understands the community's interest in being able to obtain more frequent information on Yallourn Power Station and Mine's emissions data and is supportive of providing public monthly data on its website in respect of its EPA Licence parameters within 14 days after the end of each calendar month. This approach is consistent with NSW EPA regulations.

We believe that all emissions data provided on a public basis should be verified and accurate, so that it has integrity and can be relied upon by the community. As a result of the auditing processes involved to ensure this accuracy we are unable to release it in real time. We will continue to work with the EPA to provide timely data where real-time information would be of benefit to the community. EAY will also soon be trialling a Twitter alert system that will be activated when the conditions are such that elevated dust emissions may occur.

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

EAY places the safety, health and wellbeing of its employees, contractors and the communities in which it operates above all else. Everyone has the right to clean air and water.

The monitoring and assessment of air quality in the Latrobe Valley has been ongoing for the last 30 years and has demonstrated that for the majority of time, the air in the Latrobe Valley is rated as very good.

Air dispersion modelling undertaken by air quality experts based on actual power station emissions, ambient air monitoring data and Latrobe Valley meteorology demonstrates compliance with the requirements of the SEPP (AAQ). These policies are in place to preserve and protect human health.

EAY is not aware of any health studies that provide evidence of a risk to health arising from emissions to air from the power stations in the Latrobe Valley.

The Modelling Report has found that modelled levels of mercury in the Latrobe Valley air is well below the respective standard set out under the SEPP (AAQ). The standards are set to protect the beneficial uses of the ambient air environment which includes the life, health and wellbeing of Victorians. The air modelling report provides further information in relation to mercury in Latrobe Valley air.

EAY would be pleased to support any health assessment studies the Victorian Government would like to undertake in relation to this issue.

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.

EAY is committed to the full remediation and rehabilitation of the Yallourn Power Station and Mine at the end of its operating life in accordance with all applicable regulatory requirements. Mine rehabilitation is regulated through the Mining Licence and an approved Work Plan granted under the MRSD Act.

EAY has a mine rehabilitation bond in place pursuant to section 80 of the MRSD Act and in accordance with the State Government requirements. The value of the

bond is currently \$148 million, following a recent rehabilitation bond review that was undertaken following the 2014 Hazelwood Mine Fire Inquiry.

Additionally, EAY is in discussions with the EPA about providing financial assurance pursuant to the EP Act for the operation, rehabilitation and aftercare of the private landfills on the Yallourn site.

EAY remains of the view that the above financial securities ensure that adequate provision is available to the Victorian Government to offset the risk to the State. EAY has also committed to provide the Victorian Government with five years' advance notification in the event that Yallourn's scheduled 2032 closure date needs to be brought forward.



More Information

For more information please visit www.energyaustralia.com.au
or call (03) 5128 2000