



EnergyAustralia Yallourn
**Social and Environmental
Performance Summary 2021**



A Message from the Head of Yallourn

The following report provides the detail to the Social and Environmental performance of EnergyAustralia Yallourn operations for 2021. 2021 has been a busy year for all of us in the Latrobe Valley community, and a busy year for the Yallourn Power Station and Mine operation, particularly in light of the announcement of planned closure of the station no earlier than July 2028, dealing with CoVid in the community and at work, and recovering from extreme weather events that impacted the operation of the mine with a stability incident of the Morwell River Diversion.

In spite of all the abnormal things that have happened EnergyAustralia Yallourn remained in service and was able to maintain the high standards of Social and Environmental responsibilities as well as continuing to provide energy into Victoria and beyond.

Investment in both the Power Station and the Mine has continued with the completion of a major outage and overhaul on Yallourn Unit W2 – which engaged up to 1000 people on site to complete the \$100m worth of work, whilst at the same time keeping people safe, and in particular remaining free of any significant impact by the pandemic. Over \$85m has been invested in understanding and rectifying the stability of the Morwell River Diversion, and this has been done in a manner that will see continued work in 2022 to ensure that the structure will continue to remain stable for the balance of life, meet the requirements and expectations of the business, the community and the regulators.

Progressive rehabilitation of the mine has continued and future plans developing to support the activity required for the mine to be ready for final rehabilitation when mining ceases in line with the closure of Yallourn. This has included establishing a new work stream within our organisational structure to manage the future rehabilitation of the site, to create value for the community and future generations. At Yallourn we continue to employ new roles and maintain our current workforce.

Health, Wellbeing and Safety remain our primary focus for supporting our workers, their families, our contractors and visitors, with a multitude of improvements recognised and implemented over the year. A CoVid Safe plan that enabled our people to still come to work in a safe environment, including the introduction of Rapid Antigen Testing, segregation of shifts, extra lunchrooms and a high degree of vigilance and support to not only comply with Government directions, but to have in place a best practice CoVid Safe worksite.

Our Community Grants and Sponsorship program continued to support many good causes throughout the district and our Workplace Giving program realised significant funding for Interchange Gippsland and the Peoples Kitchen during 2021. We also provided support for numerous clubs and events during the year and continue to do so now and into the future.

I trust that the full information on these activities and others that is contained in this report will continue to provide you with insight into our business, our management of our environmental obligations, and our continued support of the community and our workforce. All of which makes a positive impact, given the dedication and diligence of the team at EnergyAustralia to assure a responsible transition to the future.



Greg McIntyre
Head of Yallourn



Our Performance at a Glance

In 2021, our safety and environment systems performance at a glance shows:

DESCRIPTION	RATING	COMMENTS	MEASURED AGAINST
How we do business			
All Planned Audits Completed	★★★	Target not achieved	Internal
External Environmental Management System Audit	★★★★★	Certification maintained to ISO 14001	External
External Safety Management System Audit	★★★★★	Certification maintained for OHSAS 18001	External
Safety Health Environment Plans	★★★★	100% completion rate achieved	Internal
Our Operations			
Coal Rate	★★★★	Target achieved	Internal
Coal Supply Reliability	★★★★★	Target achieved	Internal
Electricity Sent Out	★★★	Target not achieved	Internal
Our Employees			
Training – Safety, Health and Environment	★★★	>90% Target not achieved	Internal
Employee Availability	★★★	Target achieved	Internal
Our Safety and Health			
Prosecutions Safety	★★★★	No prosecutions received for safety	External
Prosecutions Environment	★★★★	No prosecutions received for environment	External
Emergency Response Exercises	★★★★★	100% completion to plan	Internal
Safe Work Observations	★★★★★	Target exceeded	Internal
Hazardous Material and Storage Assessments	★★★	>80% Target not achieved	Internal
Lost Time Injuries	★★★★	Zero target not achieved	Internal
Total Injury Frequency Rate	★★	Target not achieved	Internal
WorkSafe Improvement Notice (PIN)	★★	21 WorkSafe improvement notices received	External
Our Environment			
Wastewater Volume and Quality Discharge	★★★★★	Exceeded target and met EPA licence	External
Net Water Consumed	★★★★★	Met internal performance target	Internal
Land Rehabilitated	★★★★	Met internal performance target	Internal
Topsoil Stockpiled	★★★★	Met internal performance target	Internal
Greenhouse Gas Emissions Intensity	★★★★	Met internal performance target	Internal
Sulphur Dioxide Emissions To Air	★★★★	Improved performance trend	External
Oxides of Nitrogen Emissions To Air	★★★★	Improved performance trend	External
Carbon Monoxide Emissions To Air	★★★★	Improved performance trend	External
PM<10um Dust Emissions To Air	★★★★	Improved performance trend	Internal
EPA Licence Breach	★	1 Licence Breach	External
Public Enquiries	★★★★	5 enquiries received	Internal

- ★★★★★ Exceed Internal Performance Indicator or Improved Performance
- ★★★★ Achieved Internal Performance Indicator or Improving Performance Trend
- ★★★ Met External Requirements or Worsening Performance Trend
- ★★ Not Met External Requirements or Internal Performance Indicator
- ★ Infringement Notice, Prosecution, Penalty or Contractual Breach



Sustainable Business Operation

Production

- Yallourn production met target but was impacted by the Unit 2 Major Outage and other outages to complete essential maintenance and market related offloading.

Water

- Wastewater quality was fully compliant with EPA Licence conditions (including: suspended solids, colour, total dissolved solids, electrical conductivity, turbidity and pH).
- Wastewater discharges to Morwell River at an average daily rate of 39 ML/day over the financial year were below the licence limits of an annual daily mean of 80.5 ML/day and maximum daily rate of 150 ML/day whilst meeting all required water quality standards for discharge.
- Efficiency in water use meant that Latrobe River water consumption of 22,688 ML is only 62% of the annual Bulk Water Entitlement of 36,500 ML.
- Treated wastewater discharge (due to reuse and evaporation) of 11,848 ML, was 40% of the EPA Licence wastewater volume limit of 29,383 ML.
- The water consumption rate was 2.59 megalitres/giga watt hour (ML/GWh) generated, was well below the internal business target for water use of <2.7 (ML/GWh).
- Rainfall across the region in 2021 (816.3 mm) slightly decreased by 2.6% from 2020 levels.

Land

- Completed 35.3 hectares of mine rehabilitation, exceeding the planned rate of 35 hectares for the year.
- Achieved target to rehabilitate more land than disturbed by mining.
- Over 2021 the active exposed coal face was reduced for the sixth consecutive year to reduce the risk of dust and fires occurring.

Air

- Average particle emissions of 0.08 g/m³ had slightly increased since 2020. It remains below the annual business target of 0.1 g/m³ and well below the EPA licence limit of 0.22 g/m³.

EPA Licence Compliance

- EPA annual performance statement (APS) on the Environment Protection Licence 10961 compliance together with the Licence 10961 are publicly available on the EPA website. The EPA APS for 2020/21 financial year was submitted to EPA in September 2021.
- On October 29th mine fugitive dust, due to adverse weather conditions impacted on Latrobe Rd properties. This resulted in an Environment Protection licence non-compliance.

Community Engagement

- The Environmental Review Committee (Agencies and Community stakeholder group) met two times, in February and November, to review environmental performance. Planned meetings in May and August were cancelled due to COVID-19 restrictions, with information on environmental performance sent to all ERC members.
- Sponsorship was provided to Latrobe Landcare Network for community-based conservation projects. These involved rehabilitation works across the Latrobe Catchment Landcare Network, including the Gippsland Plains Rail Trail, along the Blue Rock Lake walking track and local school grounds.
- The continuation of support for National Tree Day events across Traralgon, Willow Grove, Churchill, Glengarry and Toongabbie.



Common Frog on a leaf

Power Station Asset Program 2021

Each of the four Yallourn operating units has a planned major outage every 4 years.

There was one major outage on Unit 2 planned for calendar year 2021, and essential maintenance was conducted during a number of minor outages on all units.

Key works completed:

- Rotary Air Heater Pack, plate replacement and seal replacement;
- Expansion joint replacement;
- Boiler door replacement;
- Condenser expansion joint replacement;
- Super Heater and Reheater sprayer valves replacement;
- Fabrication of boiler tubes and replacement program;
- Burner rebuilds;
- Condenser Vacuum improvements;
- Primary Economiser replacement with a more efficient finned design;
- Generator Transformer replacements.

2021 Unit Outages

An outage or plant shutdown is an opportunity to carry out inspections, repairs and modifications to the operating units that cannot be done under normal operating conditions.

During normal operation much of the plant associated with running the units is operating continuously 24 hours per day, seven days per week and, as would be expected, these plant items slowly wear or degrade. This can mean, for example, steel ductwork through an erosion process becomes thinner to the point where holes can appear. Mechanical rotating items wear, causing clearances between components to become larger, potentially reducing the efficiency of these machines. Heat exchangers can become less efficient due to a build-up of solids on the heat conducting surfaces. During a major outage many of

these issues are addressed. Outages also present an opportunity for modification or retrofitting works that can further increase the performance and efficiency of the plant beyond the original design levels.

Work carried out during the 2021 Unit 2 major outage included:

- Rectifying air ingress issues into the condenser so that the turbine efficiency was improved;
- Rectifying many leaks in ducts associated with the main firing plant so that the combustion process would be improved and Induced Draft fans could operate at a lower load, saving electricity used in the power station;
- On many pumps, the clearances between rotating parts were brought back to design values making these pumps operate more efficiently;
- Turbine blades and diaphragms checked and replaced where necessary to ensure that clearances were correct to provide optimum efficient operation;
- Electrostatic Dust Precipitators (EDP) were checked to ensure that the electrodes and collecting plates were correctly aligned to help ensure optimum efficiency;
- Many different types of heat exchangers were inspected, cleaned and tested to ensure they would operate at the required efficiency;
- Insulation and cladding was replaced in places to minimise heat loss;
- Many valves were either repaired or replaced to ensure that process fluids were controlled correctly, avoiding wasting energy and cost in replacing lost fluids;
- The boiler and associated tubes were inspected and where necessary sections were repaired or replaced;
- The boiler was thoroughly cleaned to ensure heat exchange processes would occur as required, maximising efficiency.

Turbine Rotor Installation after refurbishment



EPA Power Station Environment Licence Review

Environment Protection Authority (EPA) launched the brown coal fired power station licence review in early 2018. The EPA Power Station Licence Review is a routine program by EPA of reviewing licences by industry sector once every five years. The review considers:

- Monitoring and reporting requirements;
- Air and water discharge limits;
- Land and groundwater protection conditions; and
- Waste management conditions.

EPA was provided by EnergyAustralia with information to support the review. This included modelling reports and community and stakeholder consultations. Due to community interest in the review, EPA held a community conference (under section 20B of the EP Act) in August 2018 to discuss views raised in submissions lodged by community and external stakeholders. Overall stakeholder input is considered by the EPA regarding any licence amendments, modified or new conditions and/or new discharge limits.

On March 5th 2021 EnergyAustralia Yallourn received an amended Environment Protection licence which included new conditions and requirements to be implemented over the next 12 month period. Such changes are described below.

Changes to the Licenced Discharge water performance limits:

- Water performance limits were reduced for turbidity and colour;
- Water performance limits were introduced for Electrical Conductivity;
- Total dissolved solids and suspended solids limits were removed.

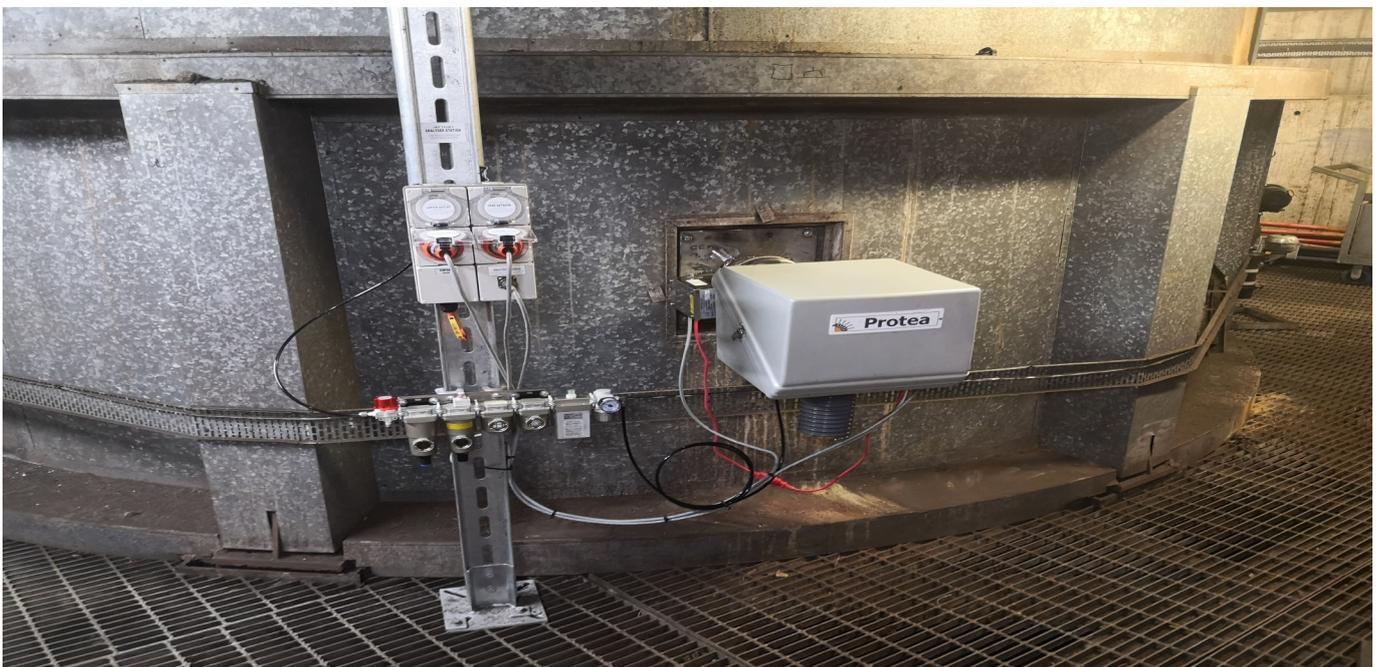
New conditions related to Air Emissions as follows:

- Continuous Emissions Monitoring (CEMs) required for stage 2 (units 3&4) for carbon monoxide, sulfur dioxide and oxides of nitrogen by 1st January 2022;
- Yallourn must maintain a publicly accessible website which includes daily updates on compliance for air emissions and monthly reports summarizing the data outlined in the licence for the preceding month;
- Yallourn must establish and implement a 12-month monitoring program to monitor the discharge to air for range of relevant class 3 indicators as listed in the State Environment Protection Policy (Air Quality Management) and for PM10 & PM2.5 to establish a 90th percentile annual frequency distribution. Public reports are to be made available by 31st March 2022 on the EA website.

Environmental Protection Act 2017 commenced on July 1st 2021 with broad changes to the management of environmental obligations and duties for EnergyAustralia Yallourn. Key changes were the introduction of a General Environmental Duty which imposes a positive duty to eliminate or minimize harm to the environment and human health so far as reasonably practicable. New supporting Environmental Regulations 2021 and Victorian Environmental Reference Standards were also introduced. The State Environmental Protection Policies were rescinded from 1st July 2021.

Additional changes to the licence occurred on 1st July 2021 due to the introduction of the Environmental Protection Act 2017. This included revised waste management obligations and changes to waste codes for the Reportable Priority Waste accepted and disposed onsite.

Continuous Emissions Monitoring (CEMs)



Climate Change

The Yallourn Power Station generates enough electricity every day to supply 2 million Australian homes. More than 500 people work at the plant and it spends millions of dollars every year with local businesses.

We're working hard to make Yallourn more efficient. We successfully completed Unit 2 major outage in 2021, improving its efficiency and ensuring its reliability into the future. The Yallourn Power Station's efficiency is the highest recorded for the last ten years and annual greenhouse gas emissions are the lowest on record since 1990.

We have committed to Australia's transition to net zero emissions with cleaner, reliable and affordable energy for our customers. On 23rd September 2021 EnergyAustralia launched an update to our Climate Change Statement with three main targets:

- To reach net zero greenhouse gas emissions by 2050;
- To reduce our direct carbon dioxide emissions by over 60% on 2019-2020 levels in 2028-2029; and
- To transition out of coal assets by 2040.

In March 2021 EnergyAustralia announced early closure of Yallourn Power Station in 2028, bringing forward the closure date by 4 years. A transition program is being developed and will be launched in the second half of 2022. We continue to talk to stakeholders, including our workers

and the community, to support opportunities and plan for the transition already underway in the Latrobe Valley. And we're investing to modernise Australia's energy system with new, cleaner power generation.

Clean Energy opportunities will be developed by EnergyAustralia in the Latrobe Valley at our Jeeralang Power Station. We announced the construction of a 350 MW, four-hour storage battery called 'Wooreen', which is to be completed in 2026. This project will support the reliability of power supply in Victoria once Yallourn closes, providing new job opportunities to a whole new generation. Latrobe Valley has an unrivalled competitive advantage in power generation in this state. The Latrobe Valley sites offer the following benefits:

- Existing transmission infrastructure;
- Existing gas pipeline to the region, minimal extension/upgrade to site required;
- Existing access to fresh water for cooling that could be reallocated to a new station on the site;
- Vacant land available; and
- Talented pool of highly-trained and skilled power industry workers.

Future opportunities will require the support of government.

Mine Development

Development of Yallourn Mine continued in a south-easterly direction into Maryvale Field for all coal operations and overburden removal activities. Coal supply to the power station was maintained via the two-level coal system, with two feeder breakers operating on each coal level.

Overburden operations have continued via Dredger 13 and the fixed overburden system, supported by the overheight truck and shovel operation during the summer period. Approximately 2.4 million cubic meters was removed by the truck and shovel operation and 5.6 million cubic meters removed by dredger in 2021 with the majority being conveyed to the East Field Overburden Dump and Maryvale Field Floor. A significant amount of overburden is used annually to support the mine's geotechnical stability and environmental programs for activities including buttressing and weight balance, coal coverage for fire prevention and dust control, and progressive rehabilitation in accordance with the approved the Rehabilitation and Closure Plan.



Overheight material being placed on the floor of Maryvale Field for increased geotechnical stability, fire and dust protection

Mine Closure & Rehabilitation Planning

Best practice internationally and nationally for mine closure, is to undertake closure planning and progressive implementation during mine operations. As such, Yallourn is actively reviewing its mine closure planning and implementation throughout its operational mine life.

The development of a conceptual Rehabilitation and Closure Plan (RCP) was completed in 2018. It presented a flooded mine concept as the preferred final landform. The RCP was submitted and approved by Earth Resources Regulation (ERR), as part of the 2018 Work Plan Variation.

In 2021, Yallourn progressed a number of technical studies in order to demonstrate that the mine will be “safe, stable, non-polluting and sustainable” in the long term, and provide information to enable the development of defensible closure designs. These include:

Preliminary closure water balance study, to assist in understanding water flows, storages and deficits over the long term.

Geotechnical batter stability under a variety of end land conditions:

- Empty void;
- Partial pit lake;
- Full pit lake.

Hydrogeological Modelling to provide an understanding of:

- Floor heave/ weight balance over the long term;
- Long term groundwater flow conditions;
- Inputs into the batter stability project;
- Inputs into lake quality studies.

Investigation into the geochemical qualities of material placed within Township Field Northern Overburden Dump, which will provide an understanding of:

- Inputs into the lake quality studies;
- Define the requirement, or not, for an engineered cover for the material in the Township Field Dump.

Commencement of the Pit Lake Water Quality Conceptual Model, that is the first part of the series of studies required for determining the pit water quality over the long term.

Commencement of the Surface Water Management Plan, which assists in joining operational and closure planning for surface water on the site together.

Throughout 2021, Yallourn will continue to work closely with the Latrobe Valley Regional Rehabilitation Strategy (LVRRS), the Rehabilitation Commissioner and the other Latrobe Valley Coal Mines with regard to Mine Closure and Rehabilitation Planning.

The Declared Mine Rehabilitation Plan will be reviewed and updated in accordance with the new Declared Mine Regulations. It is expected that the new Declared Mines Regulation will be released by 30th June 2021.

Mine Progressive Rehabilitation

The progressive rehabilitation program continued in compliance with the Mineral Resources Sustainable Development Act 1990, Work Plan, Risk Assessment Management Plan and internal business requirements, completing 35.3 hectares of new rehabilitation against a disturbance of 18.4 hectares. This is the 17th consecutive year in which the Yallourn Mine has rehabilitated more land than the annual disturbance. Refer to the figure on page 11 for the historical annual disturbance and rehabilitation trends.

Progressive rehabilitation is an environmental key performance indicator as works primarily reduce the coal footprint, limiting exposure to fire and dust. Once coal is covered by site overburden material, vegetation is essential to protect the cover from washing or eroding away. Vegetation profiles differ depending on where the rehabilitation is taking place. In some cases, normally on steep areas, we spread topsoil to allow successful vegetation growth. However, on flatter areas native vegetation or grassy profiles can be established directly on overburden. The sum of progressive rehabilitation environmental benefits includes lower fire risk, reduced dust emissions, improved water quality, increased habitat area, and a more visually appealing landform.

We are continually exploring ways to integrate the operational mine development with the final rehabilitation flooded lake plan. During 2021, further progressive rehabilitation improvements were made to the mine design and operation with strategic overburden dumping for mine stability and coal coverage the major focus.

Summaries of the individual progressive rehabilitation projects completed during 2021 are found on page 9.

Mine Progressive Rehabilitation Continued

Interim stabilization of the East Field Overburden Dump

The East Field Overburden Dump (EFOB) Dump is a storage for the largely sandy material which is mined out above the coal. The EFOB Dump provides approximately 32 metres of vertical coal coverage and is growing at approximately 30 hectares of surface area each year. This significantly lowers risk from coal fire and, if planned correctly, can make the post mining landform more stable. During 2021, progressive rehabilitation of the EFOB Dump included a 12.6 hectare section of native habitat and 18 hectares of grass seeding. This vegetation provides the erosion protection needed to control dust emissions whilst also providing water quality benefits by primarily limiting erosion.



North East Pond Development

A new pond in the north-east corner of East Field was formed by the EFOB Dump blocking the natural drainage pathway on the floor of the mine in 2020. Both the overburden and water in the pond give significant additional coal coverage. Rehabilitation works in 2021 included the stabilization of 1.4 hectares of shoreline and sloping ground with native vegetation which has been successful in reducing erosion.



Mine Progressive Rehabilitation Continued

East Field Extension Southern batter

There is a large Truck and Shovel overheight dump located in the Southeast corner of East Field Extension which has been built up over the last four years. A sloping section to the South of this dump has previously shown erosion due to its sandy soil composition. In 2021, 3.3 hectares was shaped and rehabilitated with grass which has successfully stopped this landform from eroding. As more overheight dump becomes available in future years it can be progressively rehabilitated and stabilized.



Southern Batter Before and After

Landscape Function Analysis (LFA) surveys continued this year with surveys conducted across 10 transects within rehabilitated and undisturbed areas of the mine. Additionally, 16 existing LFA transects were monitored along the Morwell River Diversion to observe Landscape Orientation and two new transects were installed on a newly rehabilitated batter.

The assessed transects in the established rehabilitated batters of the Old Yallourn North Batters, Township Northern Batters and the Township Western Batters show that these transects have remained as full patches with improvements observed in landscape function. These landscape function improvements have generally been observed as significant increases to the infiltration and nutrient cycling indices with the re-establishment of litter cover and progression of litter incorporation.

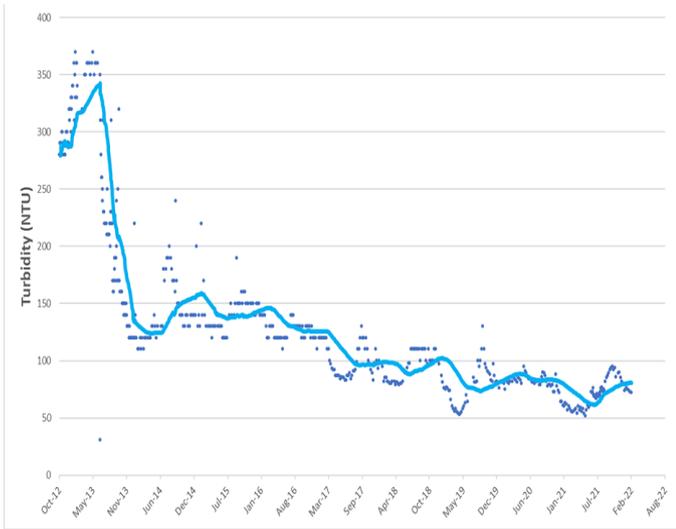
The Southern Overburden Dump direct seeding transects continue to record pleasing results with stability and nutrient cycling results comparable to the results observed for the Northern Overburden Dump direct seeding transects at the same point in time. The landscape function results for the entire site have recorded improvements on last years with the proportion of rehabilitated land to disturbed land increasing to 92.6%. The average weighted soil surface assessment results for rehabilitated land have increased slightly and the results have now surpassed the peaks achieved in 2015-2016.

Shown on page 11 is a Geographical Information System (GIS) representation of the key Yallourn Mine rehabilitation and disturbance areas including:

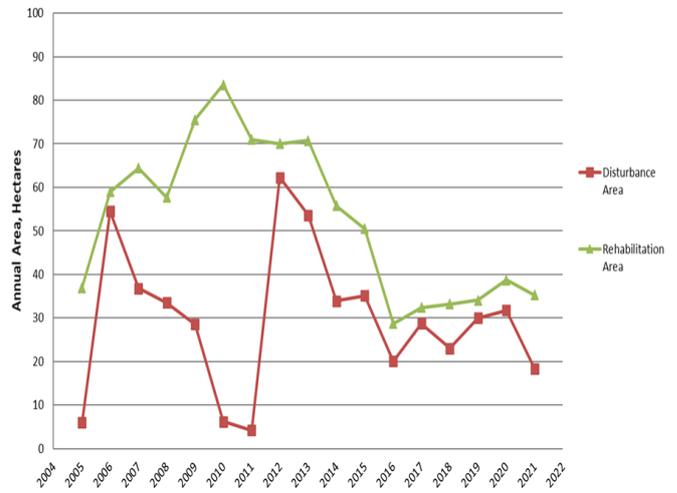
- Total Area Worked;
- Total Area Rehabilitated;
- Annual Rehabilitation for 2021;
- Total Area Water Bodies.

Environmental conditions within the mine are vastly improved through the progressive rehabilitation program. The program has continually diminished the coal footprint which assists in reducing key environmental risks such as dust and fire.

Mine Progressive Rehabilitation Continued

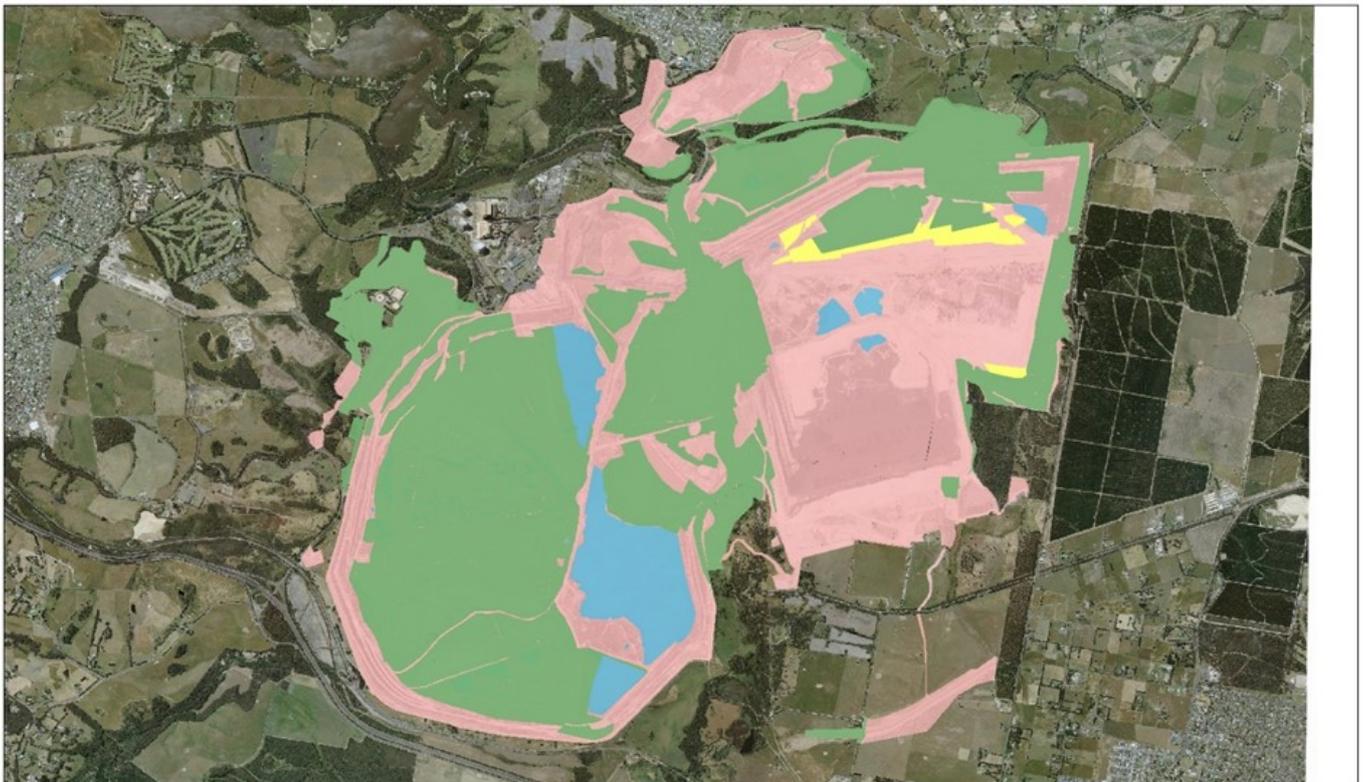


Fire Services Pond—Turbidity



Yallourn Mine Annual Rehabilitation and Disturbance

Further to minimizing the area of exposed coal, stabilizing areas disturbed by mining prevents erosion and sediment from entering the drainage network and storage ponds. Through progressive rehabilitation, the quality of runoff water has significantly improved. Turbidity, a measure of water cloudiness, has continually decreased at the main water collection point of Yallourn Mine, the Fire Service Pond. This shows the water quality benefits of progressive rehabilitation.



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Yallourn Mine Rehabilitation and Disturbance 2021



- 2021 Annual Areas
- Total Area Rehabilitated
- Total Area Water
- Total Area Worked



Surrounding Lands

Morwell West Drain Diversion Walking Track

In 2012, the Morwell West Drain Diversion was constructed to divert Morwell's West Catchment surface waters to the Morwell River. During this construction a 1.9km walking track was installed to join Latrobe Road to Toners Lane. Additionally in 2018 this walking track was extended by 2km to bring access closer to Morwell, travelling further south along the old Briquette Railway line onto the beginning of Toners Lane. EnergyAustralia has been progressively planting out this walking track with much success. The first section between Latrobe Road and Toners Lane are offset commitments associated with mining and were planted out in 2012. Similar plantings have since been extended through the drain and along the newest section of walking track with the vision of creating wildlife corridors around the Mine from the Wetlands.



2012 Planting — August 2016



2012 Planting—January 2022

Surrounding Lands Continued



2020 Planting — January 2021



2020 Planting — January 2022

Morwell Gun Club

Due to the progression of Maryvale Field Mine to the South, the Morwell Gun Club has been undertaking a relocation from Old Melbourne Road to a new home to the Southeast of the Mine off Marretts Road. EnergyAustralia has been working closely with the club to help facilitate its relocation. Construction is set to begin in 2022 once final planning permits have been secured.

Farming Lessee

In 2021 EnergyAustralia Yallourn awarded the lease of its surrounding 1500Ha (approx.) of agricultural land to Rural Operations Group (ROG), a locally owned and operated business. The new lease seeks to focus on improving the visual amenity and functioning of these farmlands to achieve better environmental outcomes for these lands and neighboring lands. Work over the period of the lease will focus on weed management, pasture improvements, fence repair and replacement together with the construction of permanent stock watching facilities to service each location.

Yallourn Morwell River Diversion—(YMRD)

The Yallourn Mine Morwell River Diversion (YMRD) suffered damage and cracking following a significant flood event on 9 June 2021. The YMRD Recovery Project was then commenced to construct water diversions to enable the mitigation of risks of any further floods and investigation and repair of the YMRD. Since July 2021, the project has progressed approval and construction of a total of 9.5GL/d of flood diversion capacity including a 3GL/d upstream diversion at Engie Hazelwood mine. The key diversion at Yallourn is a cofferdam and pumps and pipes with the capability to pump the normal flow of the Morwell River bypassing the YMRD to the Latrobe River. In mid January 2022, dewatering of the YMRD was achieved for geotechnical inspection and commencement of necessary repairs. The diversions will remain in-situ until repairs are completed and, subject to government approval, may be maintained to enable future periodic de-watering and maintenance of the YMRD if required.

Investigation of the 9th June 2021 event continues under consultants Pells Sullivan Meynink (PSM). PSM's early analysis has identified the June 2021 event as a stability incident, and have advised that the risk of further stability incidents during high water events can be reduced through a continuing program of proactive ground water management, periodic flow channel inspection and maintenance and adjustment of the Maryvale Field mining work plan. PSM also recommended a program of YMRD low flow and high flow channel re-lining and re-compaction works. The project is working closely with PSM to implement the recommended repairs which are in progress in Q1 2022 and will be completed by winter.

With completion of the repair works within the YMRD, the risk of further stability incidents is anticipated to be significantly reduced. After the completion the normal river flows are expected to be returned to the YMRD with the overall risk situation significantly improved compared to that prior to the 9th June 2021 incident.



West Pipe North End



Southern Coffer Low Flow Channel



YMRD West Bypass

Ash Management

Ash is a solid by-product of the coal combustion process in which Yallourn typically produces over 200,000 cubic metres of material each year. This ash material is mixed with water and pumped from the Yallourn Power Station to the Twin Ash Pond storage facility where it is drained, excavated and placed in the Yallourn Ash Landfill. The Yallourn Ash Landfill, Twin Ash Ponds and Return water basin are all located within the previously mined void of the Yallourn North Open Cut. Ash activities can pose environmental risk if mismanaged, therefore ashing activities are subject to strict EPA regulation, licence conditions and external environmental audit requirements.

The Twin Ash Ponds are ash storage facilities that allow wet ash to drain, dry, and ultimately be removed through mobile plant excavation and haulage. Due to groundwater contamination risks, the Twin Ash Ponds are fully lined with HDPE plastic, a layer of sand and various operational controls to maintain liner integrity.

The Yallourn Ash Landfill receives dry ash from the Twin Ash Ponds. If unmanaged, environmental hazards from the Ash Landfill may include dust and contamination of surface and groundwater. Interim capping, rehabilitation and revegetation works minimize the dust footprint, whilst a sophisticated network of groundwater bores allow monitoring and control of any water contamination.

During 2021, 156,475 cubic metres of ash material was managed without licence breach or increased environmental risk.

As required by the EPA Licence, EPA appointed external auditors have reviewed the ash facility management since 2011. The latest audit was completed in October 2020, with the overall environmental risk deemed low and eight recommendations for improvement made by the EPA appointed auditor. During 2021, six of these recommendations were completed with two remaining recommendations to be completed in future.

Once operations cease at the Yallourn Power Station, ash will no longer be produced and the site will be rehabilitated to minimize ongoing environmental risk. EnergyAustralia Yallourn submitted an Ash Landfill Rehabilitation and Closure Plan to the EPA in December 2021 to demonstrate how short and long-term environmental risks will be controlled.

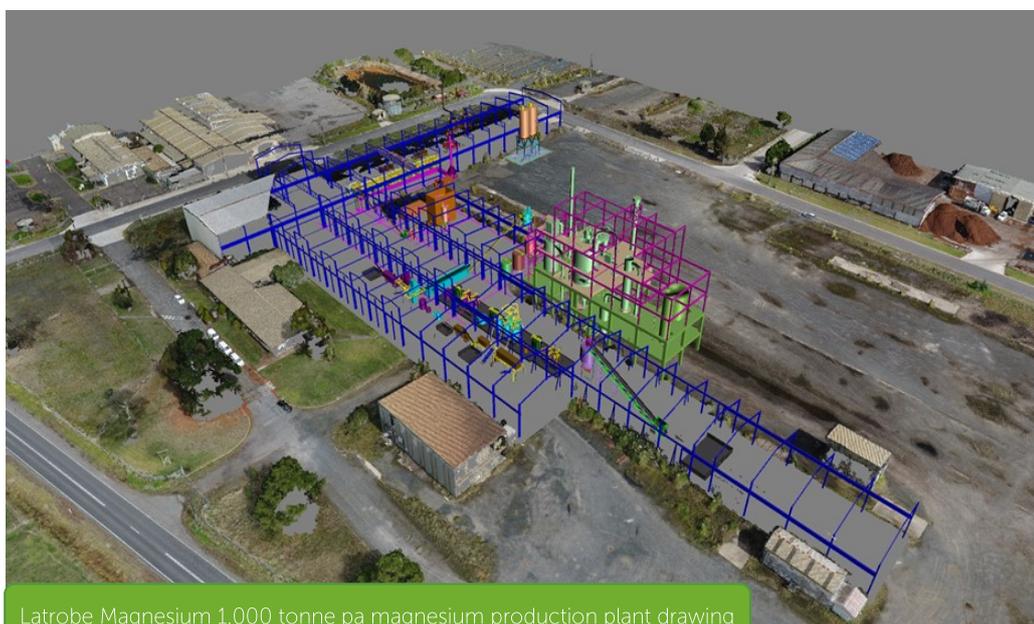
Brown Coal and Ash Developments

The Latrobe Valley, including Yallourn Power Station and Mine, is home to a very large resource of brown coal. While high in moisture, brown coal is well suited to a variety of non-power station uses, for example, the manufacture of fuels and chemicals, including hydrogen. In addition, a by-product of coal-fired power generation is ash, which in the case of Yallourn is high in minerals such as magnesium and iron and has the potential to produce high value products.

EnergyAustralia continues to work with a number of companies that are investigating these non-power station uses of brown coal and ash, using efficient technologies that have the potential to deliver environmentally sustainable projects that would underpin significant investment and jobs for the Latrobe Valley.

EnergyAustralia is supporting a project being developed by Latrobe Magnesium to recycle fly ash from Yallourn to initially manufacture 1000 tonnes per annum of magnesium plus other saleable by-products such as a supplementary cementitious material (SCM), with plans to substantially increase production to 10,000 tonnes of magnesium following the successful operation of the initial plant.

Magnesium is a light and strong metal that has a variety of applications, including use in the car industry to make cars lighter and more fuel efficient, thereby reducing carbon emissions.



Latrobe Magnesium 1,000 tonne pa magnesium production plant drawing

Latrobe Magnesium is expected to commence construction of the initial \$40 million plant by mid-2022 that would create up to 50 on-going direct jobs.

In addition, EnergyAustralia will commence coal supply to Environmental Clean Technologies' (ECT) demonstration drying plant (Coldry) in 2022. ECT has developed and is developing a number of technologies for low-energy, net zero emissions drying of coal and subsequent processing into high value products, including hydrogen.

Conservation Management

The Yallourn Conservation Management Plan (CMP) incorporates the offsetting of native vegetation losses caused by mining and protection of native vegetation within the Mining Licence area. There are three major approvals within the CMP which include the:

- Yallourn Mine Conservation Management Plan (2005);
- Offset Plan – Yallourn Coal Field Development Maryvale Field Eastern Extension (2009); and
- Environment Protection and Biodiversity Conservation Act (EPBC) Approval 2008/4454 and accompanying Offset Management Plan (2011).

As a subset of the EPBC approval, EnergyAustralia Yallourn gained various additional approvals including three Land Owner Agreements and one Crown Land Licence with the Department of Environment, Land, Water and Planning (DELWP). These approvals allow protected Strzelecki Gum habitat to be managed in accordance with Federal and State native vegetation requirements.

Whilst the CMP encompasses various approvals and licences, the primary aim is to improve the quality and size of native vegetation by protection, revegetation and enhanced management. Furthermore, the 2021 program included significant campaigns of weed control maintenance and improvement and Pest Management.

Yallourn Mine planted a total of 15,785 seedlings in 2021 of which the majority were placed within offset conservation zones and habitat improvement areas. 750 plantings were placed adjacent to the Morwell West Drain Walking Track to enhance the vegetation corridor between the Yallourn Morwell River Wetlands and existing Morwell West Drain plantings which continue through to Latrobe Road at the eastern extent.

Yallourn Mine Conservation Plantings completed for 2021

BOTANICAL NAME	COMMON NAME	TOTALS	BOTANICAL NAME	COMMON NAME	TOTALS
<i>Acacia dealbata</i>	Silver Wattle	130	<i>Eucalyptus strzeleckii</i>	Strzelecki Gum	125
<i>Acacia melanoxylon</i>	Blackwood	155	<i>Eucalyptus viminalis</i>	Manna Gum	85
<i>Acacia pycnantha</i>	Golden Wattle	250	<i>Goodenia ovata</i>	Hop Goodenia	230
<i>Acacia stricta</i>	Hop Wattle	270	<i>Gynatrix pulchella</i>	Hemp Bush	550
<i>Acacia verticillata</i>	Prickly Moses	1295	<i>Indigofera australis</i>	Austral Indigo	100
<i>Allocasuarina littoralis</i>	Black Sheoke	45	<i>Juncus gregiflorus</i>	Green Rush	1200
<i>Allocasuarina verticillate</i>	Drioooping Sheoak	25	<i>Juncus pallidus</i>	Pale Rush	1240
<i>Bulbine bulbosa</i>	Bulbine Lily	15	<i>Kunzea ericoides</i>	Burgan	830
<i>Bursaria spinosa</i>	Sweet Bursaria	1655	<i>Leptospermum continentale</i>	Prickly Tea-tree	1970
<i>Carex appressa</i>	Tall Sedge	1360	<i>Lomandralongifolia</i>	Spiny-headed Mat-rush	400
<i>Cassinia aculeata</i>	Common Cassinia	895	<i>Melaleuca ericifolia</i>	Swamp Paperbark	280
<i>Cassinia longifolia</i>	Shiny Cassinia	1510	<i>Olearia lirata</i>	Snowy Daisy-bush	305
<i>Daviesia latifolia</i>	Hop Bitter-pea	420	<i>Ozothamnus ferrugineus</i>	Tree Everlasting	1145
<i>Dianellatasmanica</i>	TasmanFlax-lily	760	<i>Poa labillardierei</i>	Common Tussock	140
<i>Eucalyptus obliqua</i>	Messmate	90	<i>Rytidosperma caespitosum</i>	Common Wallaby-grass	10
<i>Eucalyptus radiata</i>	Narrow-leaf Peppermint	20			
Total					15,785

On the 10th June 2021, a sudden and significant high-flow event impacted EA's Morwell River Diversion (YMRD). Investigations were subsequently carried out whereby cracking in the MRD was discovered. Following a geotechnical investigation assessing the scope of the damage, EA proposed a temporary coffer dam upstream of the Morwell River and connection of pipeline to divert water flows around this short, damaged section of the MRD so that the repairs could be affected. These works are known as the MRD Onsite Diversion project.

The works are planned to occur within areas that were providing offsets for an EPBC Act approval. Because of this impact, a revision to the approved EPBC Offset Plan has been completed. This revision is approved by the Department of Agriculture Water and the Environment which ensure no net loss of EPBC listed species.

Fauna Monitoring

Fauna monitoring programs continued throughout 2021 with vertebrate surveys, bird surveys and aquatic surveys all completed across the mine and perimeter areas.

Land survey

A survey of vertebrates was completed in conservation zone 41 and 47 which is situated to the north west of the Yallourn Mine. Seventy-eight vertebrate species were recorded comprising 19 mammals, 53 birds, three reptiles and three amphibians. A majority of the species had been discovered in previous surveys although a Krefft's Glider (formerly known as Sugar Glider), Lowland Copperhead, Red-bellied Black Snake, Agile Antechinus and several species of birds and insectivorous bats were recorded for these areas for the first time.

Bird survey

The Yallourn Morwell River Wetlands were constructed in the early 2000's. The project consisted of over 100,000 plantings which have revegetated the area from grazing land to a quality habitat site. The Latrobe Valley Field Naturalists (LVFN) conducted four bird surveys of the

wetlands during 2021. The LVFN recorded 86 different bird species with almost 1,000 individual birds recorded. In total, over 160 bird species have been spotted at the Wetlands which accounts for over 70% of the local area within Mt Baw Baw, Holey Plains State Park, Mt Worth State Park and Mirboo North. The Victorian Flora and Fauna Guarantee Act 1988 listed Blue-billed Duck was again sighted during 2021, with the species being consistently sighted since 2018.

Aquatic survey

An assessment of aquatic fauna, river health and erosion were completed on the Yallourn Morwell River Diversion and Morwell River in autumn of 2021. The assessment included electrofishing, dip-netting, fyke nets and bait trapping of aquatic fauna and macroinvertebrate species. In comparison to the spring 2020 survey results, the average number of individuals and number of families across all four sites were significantly higher during the autumn 2021 round of sampling. Follow up surveys will be completed to create a baseline of information prior to the rehabilitation phase.

Pobblebonk



Little Forest Bat



Water Dragon



Mine Water Management

Water management was a key focus in 2021, due to the flooding of the Morwell River in June. The EPA granted a 530A Emergency Discharge Licence for up to 232 ML per day to be discharged to the Latrobe River as a result of the damage caused to the Morwell River Diversion (MRD). The emergency discharge allowed the Mine to continue regular daily dewatering operations whilst ensuring flows were not sent to the Morwell River upstream of the damaged MRD. The emergency discharge system also allowed excess flood waters to be pumped out of the Mine in the event that the Morwell River flows exceed the river diversion systems (installed to investigate and repair the MRD) and are subsequently diverted into the Mine. The emergency discharge licence was utilised in June through to August, averaging 67ML/day across 30 operating days, until water storages were reduced to an appropriate level.

An update to the EPA Licence was issued on 5th March, 2021. The key changes included tightening of water quality limits for discharge to the Morwell River as shown below:

- Colour (Annual Median) reduced to 44 Pt-Co (Previously 50 Pt-Co);
- Replacement of Total Dissolved Solids with Electrical Conductivity;
- Turbidity (Annual Median) reduced to 24 NTU (Previously 25 NTU);
- Turbidity (Maximum) reduced to 53 NTU (Previously 60 NTU).

A summary of the EPA Licence water discharge compliance limits and actual performance results are shown in the table below.

INDICATOR	LIMIT TYPE	UNIT	LICENCE LIMIT	RESULTS FOR 2021 CALENDAR YEAR
<i>Flow Rate</i>	Mean Daily Flow	ML/day	80.5	32.5
<i>Colour</i>	Annual Median	Pt-Co	44	25
	Maximum	Pt-Co	70	50
<i>Electrical conductivity</i>	Annual Median	uS/cm	790	730
	Maximum	uS/cm	940	830
<i>Turbidity</i>	Annual Median	NTU	24	12
	Maximum	NTU	53	27
<i>pH</i>	Maximum	pH	8.5	7.8
	Minimum	pH	6	6.4

EnergyAustralia Environmental Community

EnergyAustralia stands behind our community and is proud to have continued support of the Latrobe Landcare Network (LCLN) for community-based conservation projects in 2021.

EnergyAustralia sponsor programs run by LCLN involving our community members, private land owners, primary schools, high schools and other organisations such as the Rail Trial Networks. Programs serve to educate land owners and community, as well as to work actively on the ground to manage and remediate land.

Annually, EnergyAustralia provides funding for National Tree Day activities, with the following programs rolled out for 2021.

- St Paul's Primary school planted 500 trees in their school grounds;
- Glengarry Primary School planted 800 trees in the Gippsland Plains Rail Trail Site;
- Flexible Learning Option School planted 200 trees in Mathison Park;
- 2,400 trees were re-directed to local landcare groups for planting in Boolarra, Blue Rock dam and the Gippsland Plains rail trail.



Flexible Learning Option School planted 200 trees in Matherson Park.

Community Partnership and Engagement

During February, a tree was planted commemorating 100 years since the first sod of soil was turned and the commencement of what was to become the Yallourn project and the Latrobe Valley's electricity industry.

EnergyAustralia regularly attended meetings of community groups to provide updates and seek feedback on our operations.

Unfortunately, during 2021, COVID continued to affect our sponsorship activities, including the ability of employees to undertake volunteering activities. However, we did manage to squeeze in some volunteering work with the breakfast program at Albert Street Primary School in Moe before schools were locked down and to organize the donation of Easter eggs and the packing of 400 Easter bags for distribution to children in the care of Quantum Support Services. The packing of the Easter bags was a fun activity for our people to participate in, and only one or two eggs may have been eaten along the way!

Two of our major sponsorship events – the EnergyAustralia Classic Singles lawn bowls event at Newborough Bowling Club and the Moe Dance Eisteddfod – were also still able to take place and both again were very successful.

While applications for our smaller sponsorships (up to \$1,000) continued to be down on previous years, we still managed to support a good mix of community groups including:

- Rotary Club of Moe;
- Mt Baw Baw District Scouts;
- Latrobe Valley Beekeepers Association;
- Monash Soccer Club;
- Tanjil Valley Art Show;
- Latrobe Community Concert Band;
- Moartz;
- Elizabeth Street Primary School (Moe);
- Moe Art Society;
- Moe Bowls Club.

Applications for our grant program were also down slightly, but we still received a significant number of applications over the two rounds held throughout the year. Grants were allocated to the following organisations:

- Thorpdale Kindergarten - \$7,500 – to revamp the kindergarten yard to help teach the children about water management, native flora and fauna and convert front paved area into a bush tucker garden with shade tree;
- Moe Rainbow Toy Library - \$4,500 – to refresh the toy library with a selection of new equipment, toys and storage solutions as well as a reusable environmentally friendly party kit;
- Latrobe Special Developmental School - \$1,339.97 – creation of a vegetable garden with traditional and bush tucker foods to allow students to learn about where food comes from and participate in providing fresh food for their school based homecrafts program;

- 1st Newborough Scout Group - \$4,000 – to purchase a trailer so the group can transport equipment to scout camps;
- Yallourn North Bowling Club - \$10,000 – to purchase new tables and chairs for the club rooms, which are used by a number of local community groups (including EA);
- Moe Old Gippsdown Men's Shed - \$4,880 – to purchase a METALCRAFT kit to enable the group to expand to also offer metal art to encourage an increase in participation which will hopefully lead to extra days the shed is open;
- Asbestos Council of Victoria (GARDS) - \$2,000 – for a webinar to present "Speaker Stories" during Asbestos Awareness week to educate on asbestos and the issues facing our community and beyond;
- Moe Yallourn Rail Trail - \$3,220 – towards the revegetation of cleared banks along the trail at Sullivan's Bridge;
- Newborough East Primary School - \$10,000 – towards the purchase of 28 iPads to incorporate into the instruction of STEM at the school, which will assist all 345 students participating in the STEM program;
- PowerWorks - \$1,714 – purchase of a dedicated laptop to be used by the PowerWorks Board Secretary;
- Thorpdale Primary School - \$8,000 – towards the purchase of a new shade sail to cover most of their basketball court. Their existing sail was damaged during a severe storm. The sail provides shade in the summer months, but also protects from drizzle and light showers, allowing the students to use the area nearly all year round.

We also continued our support of the annual Gippsland Motorcyclists Toy Run, which was once again well supported by our workforce, helping to bring some Christmas cheer and ease the burden for a number of local families in need.

Although we were unable to get out and about as much as we would have liked, we continued to use the EnergyAustralia Yallourn Facebook page to keep the local community up to date with what was happening at Yallourn. Our posts continue to be well received and our following continues to grow.



2021 Toy Run Mine Maintenance Team

Safety

The health and safety performance for Yallourn during 2021 continued as a challenge due to the ongoing control of COVID-19.

The continued challenges of the pandemic and conducting the Unit 2 Major Outage required extensive COVID-19 management for cases detected on site that were not experienced in the outage in 2020 at Yallourn Power Station. The total amount of manhours and exposure hours on W241 outage that was undertaken was very significant. The total amount of hours worked was around 268,000-man hours. The outage had a more heavy amount of outsourced contracting hours working with a cross section of our experienced people and external consultants to establish our key hazards and critically review site processes and systems to ensure we had a high level of controls in place to manage these hazards.

In total, the site worked 1.71 million hours during 2021, which was second only to the previous years worked at site.

Some of the COVID-19 related issues which presented challenges to the site required the introduction of controls which included:

- The site COVID Safety Plan which included the requirement for personnel to be Rapid Antigen Tested at site and at home with employees to remain at home if unwell or waiting for test results—upwards of 800 employees and immediate family members were tested throughout the year;
- The introduction of Rapid Antigen testing early in 2021 allowed for better control of COVID at site which was unique in industry as EA Yallourn was one of the very first Industries in Victoria through the site Nurse to adopt Rapid Antigen testing as a form of employee screening for COVID-19 positive cases.

Some other controls that remained as a part of the COVID-19 Outage Plan:

- Segregated shifts and work groups;
- Extra brew rooms;
- Construction of an Alimak (personal access lift) and a plan for use of our normal passenger lifts;
- Separate control rooms for Operation's personnel.

In 2021 there were four Lost Time Injuries (LTI) which was an increase on 2020. The historical record of Total Injury Frequency Rate (TIFR) is tabled below, and the rate is below 5.85 that the Yallourn site had traditionally measured as the target established over time.

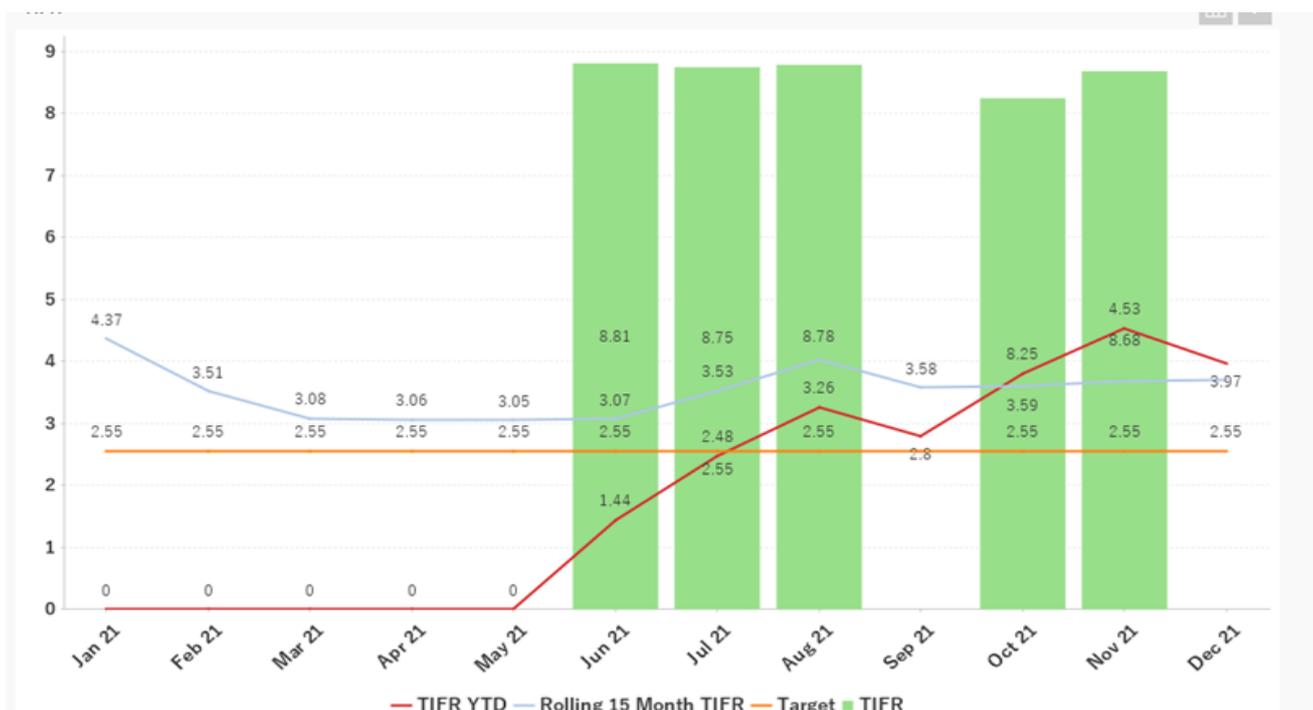
The positive indicator targets have changed with the introduction of the software 'Integrum', which measures positive indicators such as safe work observations, leadership walks and manager walkdowns.

One of the key initiatives has been the 'Safe System of Work' program including the operation of high voltage and low voltage circuit breakers and earthing devices. This program has included a comprehensive technical and operation review on the operation and maintenance of the high voltage and low voltage circuit breakers used throughout the station to establish a robust safe system of work.



800 cupcakes were provided for a safety pause during our major outage

Total Injury Frequency Rate



Fire Preparedness

Fire preparedness activities have continued to be a key focus for Yallourn Mine to manage the risk of an external fire entering the mine or of a fire igniting within the mine boundary and travelling offsite. A key aspect of the fire preparedness program is the Bushfire Mitigation Committee which includes representatives of Fire Rescue Victoria, Latrobe City Council, DELWP and other external agencies. The committee meet monthly and consider such items as long term weather forecasts with respect to fire conditions, surrounding vegetation and fuel hazards including roadside slashing and fire response capabilities.

For 2021, the Yallourn Mine Fire Service network has been extended in the Maryvale Field operating area inline with mine progress and a further 2km's of 300mm sprayline has been constructed in township field. The mine rehabilitation program has further reduced the area of exposed coal which in turn continues to reduce the inherent fire risk.

A new agricultural lessee began in November 2021. Yallourn mine personnel worked closely with the lessee to manage the transition and ensure all fire breaks, slashing and grazing activities were managed during the transition.

Health and Wellbeing

Good health benefits everyone. By implementing robust health programs and strengthening employee engagement EnergyAustralia will create a happier workforce which, in turn, will lead to increased productivity and potentially decrease employee absences.

At EnergyAustralia, we appreciate that the individual needs of employees require a broad range of health and wellbeing initiatives.

People have different requirements in terms of their health and wellbeing at various stages and phases of life, changing day-to-day.

We appreciate that with the diversity of people at our site, we need to try to facilitate as many activities as possible and provide resources to help improve their health and wellbeing.

EnergyAustralia takes an integrated approach to health combined with occupational safety and injury prevention, all encompassed in our health and wellbeing initiatives to enhance worker health and prevent work-related injuries and illness.

This year was another challenging year largely due to the ongoing and ever evolving threat COVID-19 places on employee's, employers, and the overall business. 2021 brought with it many new challenges for health teams within businesses, including lock downs, school closures, mandated vaccinations, and increased case numbers. We had to change the way we did many things this year, while maintaining the high standard of care given at the Occupational Health Centre and throughout the entire site.

Achievement Program

EnergyAustralia Yallourn has committed to the ongoing health and wellbeing of its employees by joining the Achievement Program—a Cancer Council Australia and Victorian Government initiative which encourages participating companies to create healthier workplaces and achieve best practice health and wellbeing benchmarks.

The program focuses on five areas of health and wellbeing:

- Smoking;
- Alcohol and Other Drug Use;
- Mental Health and Wellbeing;
- Physical Activity – achievement met;
- Healthy Eating- achievement met for catering.

Whilst we did make progress, the constant restrictions limited what we could achieve. However, we did meet the health eating benchmark for our catering menu and anticipate achieving the overall Healthy Eating achievement in 2022. The canteen was originally assessed by a

nutritionist from LCHS in 2019 and they found the canteen had 47% of items in the red category, 37% in the amber category and 16% in the green category. The aim is to get to 50% of the foods and drinks available at the canteen into the green category, no more than 20% of the foods and drinks available in the red category. In October 2021 we had our catering menu reassessed and were deemed to have successfully completed the healthy eating benchmark for our catering menu. The reassessment showed that 52% of the catering menu options are now in the green category, 44% in the amber and only 4 percent in the red category.

We had also started the Mental Health and Wellbeing Benchmark, with three two-day Mental Health First Aid Workshops with Lifeline Gippsland planned for 2021. Unfortunately, due to ongoing COVID-19 restrictions these workshops have been postponed and will be rescheduled in 2022.

Wellbeing Events

In July, EnergyAustralia participated in Dry July to help raise funds for people affected by cancer. Collectively we raised \$2162.65 and individually everyone who participated gained the health benefits that come with giving up alcohol for a month. Unfortunately, for the second year in a row many of our planned wellbeing events have had to be either cancelled or postponed.

Targeted Programs

The influenza vaccination program was again conducted with 400 employees immunised in 2021 using a 'walk through' vaccination program. Given the success of this program, it has been adopted for future years.

Health awareness topics covered this year were Cardiovascular disease, Women's Mental Health, Diabetes, the effects of alcohol, Arthritis, Breast Cancer and COVID-19.

In February 2021, we introduced Rapid Antigen Tests (RAT) on-site to screen employees and prevent COVID-19 entering our site. Whilst testing processes have changed and evolved extensively over the past 11 months, we are still receiving very positive feedback regarding our RAT program, and it is proving to be a valuable asset in our ongoing management of COVID-19.

In 2020, the Occupational Health Centre purchased a new spirometer so the nursing staff could provide all staff with the opportunity to have a basic lung function test performed on site. All the site nurses have now completed their spirometry training, however, due to the nature of COVID-19 and lung function tests requiring participants to expel air with force (potentially spreading increased respiratory particles) we have not been able to offer these tests to employees yet. It will remain a focus for 2022.

Occupation Health Centre

2021 saw a total of 268 presentations to the Occupational Health Centre, a 10% increase in overall visits when compared to 2020, however our presentations were still down by approximately 30% when compared to pre COVID-19 years. Due to COVID, people weren't presenting for their regular blood pressure checks and hearing tests were suspended for a significant portion of the year. There was an increase in new occupational health injuries at work by 9.3% which may have been a result of the extra staff on site during the major outage we had this year.

Foreign bodies in eyes continue to be the most common presentation to the Occupational Health Centre with 69 presentations in 2021, a small decrease (4.5%) from 2020. This was followed by sprains and strains with 23 presentations; cuts, bruises and abrasions with 15 presentations; and struck by objects with 8 presentations.

31 employees were referred off site for further treatment to various facilities such as the emergency departments of local hospitals, GP clinics and optometrists. There was a slight increase of 6.4% in 2020.

The nurses who have completed the Immunisation Course can give immunisations for pre overseas holidays. Other services are removal of sutures, wound management and education for surgical wounds or wounds obtained at home, diabetic management and blood sugar testing, non-fasting cholesterol checks, CO monitoring, spirometry testing, blood pressure checks and a variety of other preventative health measures.

There was an increase in overall visits for the year, which would largely be contributed to the brief period in 2021 when the site was not under substantial COVID-19 restriction and the hearing test program was resumed. There was also a minor increase in the number of work-related injuries in 2021. This small increase was most likely due to the Yallourn site undertaking a major outage on Unit 2 which saw hundreds of extra staff on site during this time. There was a decrease in presentations for home injuries or non-work-related injuries for the second year in a row, with presentations for home injuries decreasing by 25%. Again, this is likely due to the COVID-19 pandemic, as 2021 saw many non-site essential employees continue to work from home, effectively reducing the number of employees on-site.

With the exception of the past two years, and the pandemic's impact on Occupational Health Centre presentations, we had previously been seeing a steady increase in the number of home injury presentations at the Occupational Health Centre. This was indicative of employees becoming more aware of the services available at that the Occupational Health Centre. To ensure presentations for non-work related injuries (home injuries) continue at pre-pandemic levels, one of the Yallourn Health and Wellbeing Team's core goals for 2022 will be to provide increased education to work groups across the site, promoting the capabilities and services offered to all employees by the Occupational Health nurses.

We hope to see a decrease in work related injuries and a further increase in the number of preventative health attendances in 2022, as the Occupational Health Team strive to be proactive in the promotion and education of preventive health and to maintain the mental and physical health of all employees in the coming year.

Yallourn Transition

2021 was a significant year for Yallourn. In March EnergyAustralia announced the Yallourn power station would retire in mid-2028 and that an agreement had been reached with the Victorian Government to deliver an orderly exit of the power station.

Under the agreement, EnergyAustralia will retire Yallourn in mid-2028 and build new storage capacity at Jeeralang, through a 350 MW, four-hour, utility-scale battery project that will be completed by 2026, named "Wooreen". "Wooreen" is a Gunaikurnai language name meaning 'light'. EnergyAustralia was gifted this name by Aunty Doris Paton and the Gunaikurnai Land and Waters Aboriginal Corporation. Importantly, this energy storage will be built to firm increased renewable energy in Victoria before Yallourn exits the system.

As part of the transition at Yallourn, there is a focus on providing the workforce time and guidance to prepare for their future. The workforce will be supported through a multimillion-dollar package to help them plan, reskill or retrain for their future.

Since this announcement, the dedicated Transition team have been laying the groundwork for the transition to closure and beyond. A focus of this planning phase has been identifying the future needs of the workforce and preparing to launch a Transition Support Program that will commence in 2022. To support these efforts EnergyAustralia has appointed Directioneering as our Transition Service Partner. Their role will be to understand the needs and aspirations of the Yallourn workforce and to tailor a program to help our workforce determine what it wants to do next.

Work has also begun on determining the future uses of the Yallourn site. Yallourn rests on a large 5,500ha site that presents opportunities to provide sources of commerce, recreation, environment services and employment to the region.

EnergyAustralia is seeking to identify the potential opportunities for the future use of the Yallourn site and a discussion with the community will start in 2022 about the site's potential.

EnergyAustralia is determined to demonstrate that coal-fired power can exit the market in a way that supports our people and ensures customers continue to receive reliable energy.

Transitional Services Timeline



Regular program updates via newsletters, pre-starts and All Hands briefings

EnergyAustralia Environment Review Committee (ERC) Report of Independent Chairman 2021 Year

The EnergyAustralia Yallourn Environment Review Committee had an interrupted 2021 with the impact of COVID and the change of leadership with the resignation in July of Chair Dr. Geoff Sutherland. Geoff served as the ERC Chair for over 2 decades and has been acknowledged by EnergyAustralia who will install a plaque at the Yallourn Mine Avenue of Honour.

EnergyAustralia Yallourn recruited and appointed Ms Susan Lloyd as the new incoming ERC Chair. Susan is a life-long Gippslander and is currently Deputy Chair (previous Chair) of the Latrobe Valley Mine Rehabilitation Advisory Committee.

Mr Greg McIntyre was recruited as the new head of EnergyAustralia's Yallourn operations. Greg has worked in the energy and mining industry for 12 years and he has a wide range of experience across many industries.

EnergyAustralia approached the Victorian Government to discuss the transition of Yallourn with the plan including a replacement of assets and capacity to be available before the retirement of Yallourn and respect and support for workers. Yallourn will be closing all units in mid 2028. Before its closure, EnergyAustralia will construct a new 350MW battery (Woreen Battery) at Jeeralang Power Station site by 2026. There is a \$10 million transition package for EnergyAustralia Yallourn employees. After the station stops operating, the next steps include decommissioning, deconstruction and rehabilitation. Energy Australia are developing a new Mine plan for a shorter mining period, which will be followed by final rehabilitation of the Mine.

In March 2021, EnergyAustralia Yallourn appointed Lisa Gooding as the EnergyAustralia Yallourn Transition Lead. The transition is focused on instilling a sense of pride at Yallourn until the EnergyAustralia Yallourn closure and into decommissioning phase leaving a positive legacy from the dedicated staff. EnergyAustralia will ensure there is a safe and reliable output until closure and will plan and prepare the workforce for their future.

The announcement of the early closure of the mine has resulted in a change to the proposed footprint of the mine. The mine is to be left in a safe, stable and sustainable landform for all the land within the licence boundary. Part of this process is engagement with stakeholders, obtaining relevant Government approvals and achieving compliance throughout the rehabilitation process.

During 2021, there was one EPA notifiable incident relating to an onsite oil spill with only 5 public complaints received for dust, noise and odour. All types of complaints were investigated with the odour deemed not coming from EnergyAustralia, however two of the dust reports were as a result of a high wind event where all dust mitigation controls were in place.

Mine Rehabilitation performance exceeded annual targets with topsoil stockpiling and the rehabilitation of 35.3 hectares YTD including trials for improvements in grass coverage, stabilisation works and successful native seeding to reduce erosion.

The Environment Improvement Plan listed items including the Unit 2 major outage as an efficiency upgrade improvement to reduce CO2 emissions and other environmental discharges.

EnergyAustralia suffered a Morwell River flood event in June resulting in a Victorian Government Energy emergency declaration and an emergency discharge request to EPA to allow the Mine to discharge from the Fire Service Pond to the Latrobe River. The flooding river near the diversion interacted with mining operation, with cracking appearing on operating interfaces. As water levels rose and for safety reasons the mine was evacuated.

Regarding the Morwell River Diversion project, EnergyAustralia is collaborating with authorities to determine a risk reduction process that could be applied to manage further flooding.

With changes to the Environment Protection Act coming into effect in July, the new EPA Licence that was varied in March 2021, then transitioned to an Environment Protection Operating Licence with the same conditions. There was a DJPR rehabilitation audit in April and a joint audit between DJPR and EPA on groundwater in October. The Audits had no recommendations for EA.

EnergyAustralia Yallourn as engaged with the community through a series of projects including:

- Gunaikurnai project – Acknowledgement of Country plaque and cultural awareness sessions, TAFE Gippsland project artwork and driver education;
- Latrobe City Council installed solar panels on the new aquatic centre in Traralgon with EA contributing \$50K towards installation;
- Volunteering - Albert Street Primary Breakfast Club and food bank;
- Moe Rail Trail – assisting the committee in repairing damage from the mid-year rain event causing some erosion.

The EnergyAustralia Yallourn Environment Review Committee has membership from key stakeholders including; EPA, Latrobe City, West Gippsland Catchment Management Authority, Gunaikurnai GLaWAC, Earth Resources Regulation, Latrobe Landcare Network, DELWP, Southern Rural Water, DHHS and community members. The ERC Terms of Reference have been reviewed in September and reflect the regulation requirements as well as how the committee will effectively operate.

The COVID pandemic has had a massive impact on all the community as well as the EnergyAustralia worksite. The company had COVID risk requirements on site where they reassure all contractors, casuals and visitors that as a business, we are committed to ensuring the health and safety of all workers on the Yallourn site. As part of this commitment EnergyAustralia actively took steps to minimise the potential impacts of the Coronavirus to the workforce as well as the operations.

Celebrating the Centenary of Power Generation at Yallourn has been limited in 2021 to EnergyAustralia planting a tree in the Yallourn Mine Avenue of honour. With 2022 the EnergyAustralia Yallourn ERC looks forward to meeting in person, if COVID permits and considering the social and environmental performance of the company.



Susan Lloyd FAICD, MOrgLeadership, BAppSci, GradDipEd
Chair EnergyAustralia Yallourn Environment Review Committee



Brown Tree Frog

EnergyAustralia Yallourn Performance

- Brown coal-fired power station and captive mine
- 1,480MW (2 x 360MW, 2 x 380MW)
- Plant commissioned between 1974 and 1982
- Shareholding of 100% acquired in 2003 with operational control by CLP

PARAMETER	UNIT	2021	2020	2019
1. Operation				
Electricity sent out ⁽¹⁾	GWh	7,969	8,378	8,954
Coal consumed	TJ	118,275	124,417	135,096
Oil consumed	TJ	464	444	517
Thermal efficiency	%	24.4	24.1	24.0
Equivalent availability factor (EAF) ⁽²⁾	%	73.8	72.00	74.56
2. Air Emissions				
CO ₂ e (Scopes 1 & 2)	kT	11,246	11,799	12,763
SO ₂ ⁽³⁾	kT	14.7	15.5	15.6
NO _x ⁽³⁾	kT	10.1	11.4	12.1
Particulate (Total) ⁽⁵⁾	kT	5.3	5.5	5.9
3. Water				
Water Withdrawal	Mm ³	25.8	25.6	28.6
from marine water resources	Mm ³	0	0	0
from freshwater resources	Mm ³	24.45	24.436	27.3
from municipal sources	Mm ³	1.34	1.245	1.276
Water Discharged	Mm ³	13,707	14,991	15,971
treated wastewater discharged to sea	Mm ³	0	0	0
treated wastewater discharged to freshwater bodies	Mm ³	11,848	13,525	14,344
wastewater discharged to sewerage	Mm ³	1.86	1.5	1.6
Water Reused / Recycled	Mm ³	0.2	0.5	0.0
4. Environmental Compliance				
Regulatory non-compliance resulting in fines or prosecutions	No.	0	0	0
Licence limit exceedance & other non-compliance	No.	1	0	0
5. By-products & Waste Management				
Ash produced	kT	223	229	244
Ash recycled / sold	kT	0	0	0
Hazardous waste ⁽⁶⁾				
produced	T (solid) / kl (liquid)	417 / 214	645 / 196	359 / 214
recycled	T (solid) / kl (liquid)	1 / 204	1 / 192	1 / 198
disposed	T (solid) / kl (liquid)	415 / 10	644 / 3	358 / 17
Non-hazardous waste ⁽⁶⁾				
produced	T (solid) / kl (liquid)	3729 / 0	4441 / 1	5257 / 0
recycled	T (solid) / kl (liquid)	1554 / 0	1803 / 1	2914 / 0
disposed	T (solid) / kl (liquid)	2175 / 0	2638 / 0	2342 / 0
6. Safety				
Employee - Fatalities	No.	0	0	0
Employee - Days lost / charged	No.	0	46	0
Employee - Lost Time Injuries	No.	0	4	0
Employee - Total Work Hours	No.	469022	792145	523334
Contractor - Fatalities	No.	0	0	0
Contractor - Lost time Injuries	No.	3	0	1
Contractor - Total Work Hours	No.	1246347	1140778	963863
7. Employee Development				
Employees ⁽⁷⁾	No.	228	216	210
Safety, health and environment training ⁽⁸⁾	Hours	4989	5966	11,522

Notes:

- (1) Sent out, with mine.
(2) Data aligned with local regulatory reporting requirements.
(3) SO₂ and NO_x data estimated using emission factors derived from plant emissions monitoring conducted every six months.
(5) Particulate emissions from power generation and mine sources from 2014. Prior to this from Power Station only.

- (6) Waste categorised in accordance with local regulations. Contractor waste has been included.
(7) Full time equivalent.
(8) Includes employees and contractors safety, health and environment training.

Data has been independently verified by V&C Environment Consultants Pty Limited. Verification statement is available upon written request.



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