

EnergyAustralia Yallourn
**Social and Environmental
Performance Summary 2019**



Amazing artwork by: Newborough East Primary School

A Message from the Head of Yallourn

The following report, covering 2019, provides information relating to the EnergyAustralia Yallourn social and environmental performance.

In reviewing this report, it's great to see the diversity of the environmental work done across the site to improve the visual amenity, provide habitat for fauna and increase the flora footprint.

As you will see in reading the document, a large amount of effort has been put in over 2019 by many at EnergyAustralia Yallourn and their efforts and achievements are visible to our community.

The tribute garden to Graeme Edwards, who was tragically killed while at work in 2018, was developed with his close workmates and opened in 2019 with Graeme's family present. It represents an area where everyone can enjoy the garden and also consider the importance of working to improve the safety of our workplace.

As Yallourn moves closer to the site closure, an ever-increasing focus is placed on rehabilitation planning and execution. This report outlines activity being undertaken in the rehabilitation field.

From a personal view, it's very pleasing to be part of a team that takes its environmental and social responsibility very seriously and the commitment to "do the right thing" is a fundamental in the development and execution of our plans to manage our impacts on the surrounding community.

Yallourn has taken steps to engage further with the community in various ways and the implementation of the new Facebook page, as noted in the report, is a new initiative for us.

When we commenced 2019 we were determined to make the year a successful one and a year in which we made a difference.

I believe the team at Yallourn has achieved that objective and we now work towards building on that for 2020.

I trust the information in the report is useful to you and provides you with a better insight into both the workings at Yallourn in relation to managing the environmental impacts and community engagement, and the commitment of the people at EnergyAustralia Yallourn to make a positive difference.



Mark Pearson
Head of Yallourn



Our Performance at a Glance

In 2019, our safety and environment systems performance at a glance shows:

DESCRIPTION	RATING	COMMENTS	MEASURED AGAINST
How we do business			
All Planned Audits Completed	★★★★★	Target 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	★★★★★	% 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	★★★★	Target 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	★★★★★	Target achieved	Internal
Lost Time Injuries	★★★★	Zero target not achieved	Internal
Total Injury Frequency Rate	★★★★★	Target achieved	Internal
WorkSafe Improvement Notice (PIN)	★★	9 WorkSafe improvement notices received	External
Our Environment			
Wastewater Volume and Quality Discharge	★★★★★	Exceeded target and met EPA licence	External
Net Water Consumed	★★★★★	Exceeded target	Internal
Land Rehabilitated	★★★★★	Exceeded target	Internal
Topsoil Stockpiled	★★★★★	Improved Performance	Internal
Greenhouse Gas Emissions Intensity	★★★	Met target	Internal
Sulphur Dioxide Emissions To Air	★★★★	Improved Performance	External
Oxides of Nitrogen Emissions To Air	★★★★	Improved Performance	External
Carbon Monoxide Emissions To Air	★★★★	Improved performance trend	External
PM<10um Dust Emissions To Air	★★★★	Improved performance trend	Internal
EPA Licence Breach	★★★★★	Zero licence breaches target achieved	External
Public Enquiries	★★★★	3 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

Hop Goodenia in flower at the Yallourn Morwell River Wetlands (photo J. Gorwell)



Sustainable Business Operation

Production

- Yallourn production was below target, due to a number of planned outages and offloading to complete essential maintenance.

Water

- Waste water quality was fully compliant with EPA licence conditions (including: suspended solids, colour, total dissolved solids, turbidity and pH).
- Wastewater discharges to Morwell River were below the licence limits of an annual daily mean of 80.5 ML/d and maximum daily rate of 150 ML/d whilst meeting all required water quality standards for discharge.
- Efficiency in water use meant that water consumption of 26,022 ML is only 72% of the annual Bulk Water Entitlement of 36,500 ML.
- Water discharge (due to reuse and evaporation) of 14,334 ML, was 49% of the EPA Licence wastewater volume limit of 29,383 ML.
- The water consumption rate was 2.67 megalitres/giga watt hour (ML/GWh) generated, below the internal business target for water use of <2.7 (ML/GWh).
- Rainfall across the region in 2019 (765 mm) increased by 31% from 2018 levels.

Land

- Completed 34.1 hectares of Mine rehabilitation.
- Achieved target to rehabilitate more land than disturbed by mining.
- Reduced coal footprint for the 5th consecutive year to reduce risk of dust and fire. Total area reduced to 305 hectares.

Air

- Average particle emissions of 0.078 g/m³ was below the annual business target of 0.1 g/m³ and well below the EPA licence limit of 0.22 g/m³.
- Upgrade of char collectors on six Unit 1 and six Unit 2 electrostatic precipitators to improve particle emissions to air was finalised, with the final three completed in 2019.
- Annual performance statement (APS) on the Environment Protection Licence 10961 compliance together with the Licence 10961 are publicly available on the EPA website. The APS for 2019 financial year was submitted to EPA in September 2019.

Community Engagement

- The Environmental Review Committee (Agencies and Community stakeholder group) met four times to review environmental performance.
 - Sponsorship was provided to Latrobe Landcare Network for community-based conservation projects. These involved rehabilitation works across the Latrobe Catchment Landcare Network, including the Moe Rail Trail, 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 Newborough, Willow Grove, Churchill, Glengarry and Toongabbie.
- Successful launch of the EnergyAustralia Yallourn Facebook page - facebook.com/EnergyAustraliaYallourn.
- Stakeholder and regular meetings with community.

Power Station Asset Program 2019

Each of the four Yallourn operating units has a planned Major Outage every 6 years.

Whilst there were no Major Outages planned for calendar year 2019, essential maintenance was conducted during a number of minor outages on all Units.

Key works completed:

- Completion of the char collector replacement program across Units 1 and 2,
- Completion of relining and improved drainage for the twin ash ponds,
- Majority of works completed for the relocation of the ash storage area,
- Placement of orders for new rotary air heater packs for Unit 1, ready for the major outage in 2020, for efficiency improvement,
- Placement of orders for new boiler tubing for Unit 1, ready for the major outage in 2020, for reliability improvement.

Supporting Regional Development

To support regional development of Latrobe Valley, EnergyAustralia Yallourn has leased 29.31 hectares of land within the mine licence buffer zone to Gippsland Mountain Trail Bike Inc (GMTB). GMTB added this land to a parcel of land they already lease, to enable the construction of a world class mountain bike track, located just outside of Moe.

Brown Coal 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.

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

In addition, EnergyAustralia is supporting a project being developed by Latrobe Magnesium to utilise ash from Yallourn to manufacture 3000 tonnes per annum of

magnesium plus a cement substitute material. 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 CO₂ emissions.

Latrobe Magnesium is seeking to reach an investment decision for the \$56 million project in early 2020 that would create up to 54 on-going direct jobs. If the project is successful, EnergyAustralia and Latrobe Magnesium will consider an expansion of the project to increase magnesium production to 40,000 tonnes per annum.

EnergyAustralia also continues to support related R&D activities, partnering with research institutions such as Federation University, CSIRO and Monash University.

2019 Unit Outages

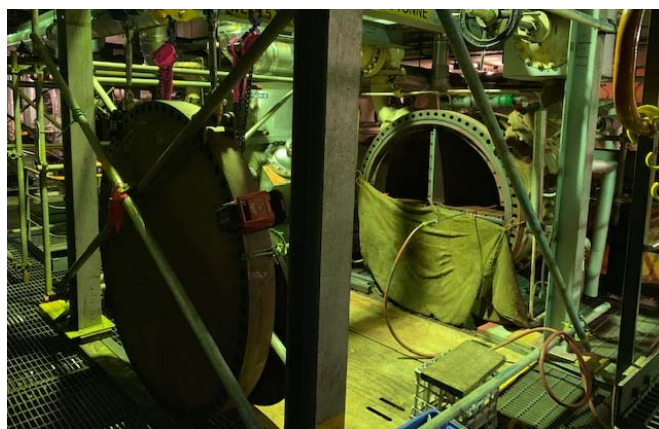
An outage or plant shutdown is an opportunity to carry out inspections, repairs and modifications to the operating units that cannot be done under normal operating conditions.

During normal operation much of the plant associated with running the units is operating continuously 24hrs 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 bigger, 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, to bring the performance and efficiency levels back as close as possible to design values.

Some of the works carried out during 2019 were:

- Rectifying some air ingress issues into the condenser so that the turbine efficiency was improved;
- Rectifying many leaks in air ducts so that the combustion process would be improved and Induced Draft fans could operate at a lower load, saving electricity used in house;
- On many pumps, the clearances between rotating parts were brought back to design values making these pumps operate more efficiently;
- 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, in many places was replaced to minimise heat loss and therefore improve unit performance;
- 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 thoroughly cleaned to ensure heat exchange processes would occur as required, maximising efficiency;
- Large quantities of asbestos containing materials have been removed from plant during the year and taken to the licenced landfill. This slowly reduces the risk of asbestos contamination occurring within the plant;
- Significant improvements have been made to the site high voltage system to provide a higher level of personnel and plant protection.



Pictured is cleaning the hundreds of tubes in the low pressure heaters

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 has been provided with information to support the review. This included modelling reports and community/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 will be considered by the EPA regarding any licence amendments, modified or new conditions and/or new discharge limits.

Emissions to air and water performance data for the previous seven years was provided to EPA in Feb 2019 as part of the review.

The review is ongoing with EPA consolidating all information to assess any amendments required, following the commencement of the new Environment Amendment Act in July 2020.

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.

At the same time, 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.

Australia's shrinking capacity to generate reliable energy has been a major cause of rising household power prices.

Losing Yallourn's electricity supply would, without careful planning, compound the problem and impact the local community.

Our plans are to run the plant to 2032 or for as long as policy and regulation permit, and there's not a substantial change in the market.

We have promised our workers and the local community that, should things change, and circumstances remain within our control, we will give at least five years' notice before closing Yallourn.

EnergyAustralia are committed to delivering new economic opportunities to the communities we are part of.

Generation opportunities could be developed within the Latrobe Valley and wider Gippsland region, 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,
- Talented pool of highly-trained and skilled power industry workers.

Future opportunities will require the support of government.



Short-beaked Echidna browsing through an East Field Rehabilitation Area

EnergyAustralia Landfill Financial Assurance

EPA approved EnergyAustralia's proposal for landfill financial assurance on 20 December, 2018, with effect from 9 January 2019, for the three operational landfills (ash landfill, hard waste landfill and an asbestos landfill). The financial assurance is intended to fund costs in the event the Victorian Government becomes the caretaker of the landfills. This provides a guarantee that the costs of remediation, site closure and post-closure liabilities are not borne by the community.

Calculations for operational financial assurance sections were undertaken using the formula provided in the EPA Publication 1596 'Calculation of financial assurance of landfills, Prescribed Industrial Waste managements (PIW)

and container washing' and through a quantitative risk assessment method.

The closure and aftercare financial assurance section was completed in accordance with EPA Publications 1596. The calculations were based on closure and aftercare documentation, landfill capping and aftercare management of the landfills.

Financial assurance is reviewed at least every five years or with future change in EPA calculation method and in conjunction with any future licence amendments relating to activities that may impact financial assurance.

Waste Water

Full compliance with the EPA licence was maintained for wastewater discharges to Morwell River in 2019.



Indicator	Limit Type	Unit	Discharge Limit	2019 Financial Year
Flow Rate	Mean Daily Flow	ML/day	80.5	31.6
Flow Rate	Maximum Discharge	ML/day	150	81
Colour	Annual Median	Pt-Co	50	30
	Maximum	Pt-Co	70	60
Suspended Solids	Annual Median	mg/L	20	12
	Maximum	mg/L	50	22
Total Dissolved Solids	Annual Median	mg/L	450	420
	Maximum	mg/L	700	470
Turbidity	Annual Median	NTU	25	14
	Maximum	NTU	60	35
pH	Maximum	pH	8.5	7.4
	Minimum	pH	6	6.9

Wastewater discharges to Morwell River

Batter Stability Research Project

In response to a recommendation to the then Department of Economic Development, Jobs, Transport and Resources (DEDJTR) from the Technical Advisory Group (TAG), a 'Batter Stability Project' was conducted at the Yallourn Mine to undertake further geotechnical studies to establish a robust technical platform to manage geotechnical risks in the Victorian brown coal mines.

Department of Jobs, Precincts and Regions (DJPR) has funded the project and has engaged the Geotechnical and Hydrogeological Engineering Research Group (GHERG)

from Federation University to undertake the research and provide specifications for the field work.

Yallourn Mine personnel continue to support the project with management of the bore hole samples in the cold storage facility.

The TAG, comprising an independent Chair and representatives from Loy Yang Mine, Hazelwood Mine, Yallourn Mine and DJPR, was established to provide advice to the project as required.

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 5.5 million cubic meters of overburden was excavated in 2019 with the majority being conveyed to the

East Field overburden dump. A significant amount of overburden is used annually to support the mine's geotechnical stability and environmental programs for activities including buttressing, coal coverage for fire prevention and dust control, and progressive rehabilitation as per the Rehabilitation and Closure Plan.

A mining licence extension was approved by Earth Resources Regulation to allow continued coal production to 31 December 2032 and provision for mine rehabilitation works to 2051.

Mine Closure & Rehabilitation Planning

Yallourn's current operational plan is to continue coal mining until 2032. However 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.

Throughout 2019 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 & Rehabilitation Planning.

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 2019, Yallourn commenced a number of technical studies required 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.

The RCP will be reviewed and updated once the recommendations of the LVRRS are published in 2020.

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 34.1 hectares of new rehabilitation against a disturbance of 31 hectares. This is the 15th 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.

The largest progressive rehabilitation project for 2019 was on the East Field Overburden (EFOB) Dump with 14 hectares of grass and one hectare of native seed sown. Vegetation provides surface stabilisation which limits erosion, leading to improved water quality in our internal water storages and enhanced visual amenity, whilst ensuring dust is minimised.



Interim stabilisation of grassland on the East Field Overburden Dump.

The EFOB Dump rehabilitation, a 10 hectare section of capped batter and bench was successfully direct seeded to grass. Topsoil would typically be imported to allow successful rehabilitation on batter slopes however, the early results show that clayey material may be an appropriate soil medium for allowing successful rehabilitation, especially on interim stabilisation areas. Some sandy materials show signs of erosion; however this is relatively confined and has minimal impact.



Coal coverage and grassing north of East Field Extension.

A 6 hectare section above the East Field Northern Batters was successfully stabilised through earthworks, before spreading topsoil and seeding to grass. The area was a former overburden dump with variable material properties, experiencing some erosion, therefore being inadequate for rehabilitation to a final landform standard.



Rehabilitated site on the northern extent of East Field with Yallourn Power Station in the background.

Another section of final landform rehabilitation was completed west of Maryvale Field on a geotechnical surcharge. 240,000 cubic metres of fill material was imported and placed above this batter to increase the overall geotechnical stability in 2018 with topsoil spreading and grass seeding completed in 2019.



Rehabilitated site above the western extent of Maryvale Field.

In addition to the new rehabilitation works, many improvement projects were completed on areas previously rehabilitated. The largest improvement project was on the Southern Overburden Dump where over 8 hectares of land was reshaped to an undulating surface and seeded with native seed collected from the local area. This plot will be monitored to understand if it meets a final landform habitat standard.



Rehabilitation improvement site in the Southern Overburden Dump.

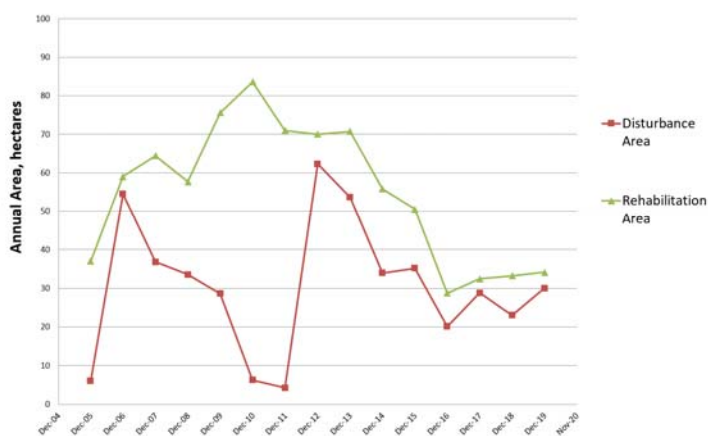
Improvement works were also completed on the Northern Overburden Dump where 8 hectares of overburden characterised as acid sulphate soil was treated with an alkaline soil conditioner. This technique has been used in the past to allow native vegetation to generate on the otherwise difficult acidic soils.

A 1 hectare trial began above the East Field Extension Southern Batters aiming to create a native vegetation landscape from a rehabilitated grassland. Native vegetation landscapes and biodiversity corridors form a large part of the Mine Rehabilitation and Closure Plan with many of the current topsoil and grass slopes better suited to being native habitat spaces. Native seed was sown through the trial area in June, with weed control and monitoring to continue in 2020 and beyond.

Landscape Function Analysis (LFA) surveys continued this year with surveys conducted across 17 transects within the Northern Overburden Dump and Southern Overburden Dump areas.

The majority of the assessed transects have either improved in patch size or remain unchanged. The increases in patch size are contributing toward improvements in landscape function with increases in soil cover, litter cover and cryptogam cover observed.

Vegetation assessments were carried out on several rehabilitated woodland areas. The assessments show an



Yallourn Mine Annual Rehabilitation and Disturbance

increase in canopy density and cover with middle story density increasing and cover diminishing. This indicates that middle story species such as acacia are dying off which is expected due to their age. It is expected that these species will regeminate and demonstrate a self-sustaining landscape in a few years.



Landscape Function Analysis Transect through the Northern Overburden Dump, 2006 to 2019.

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

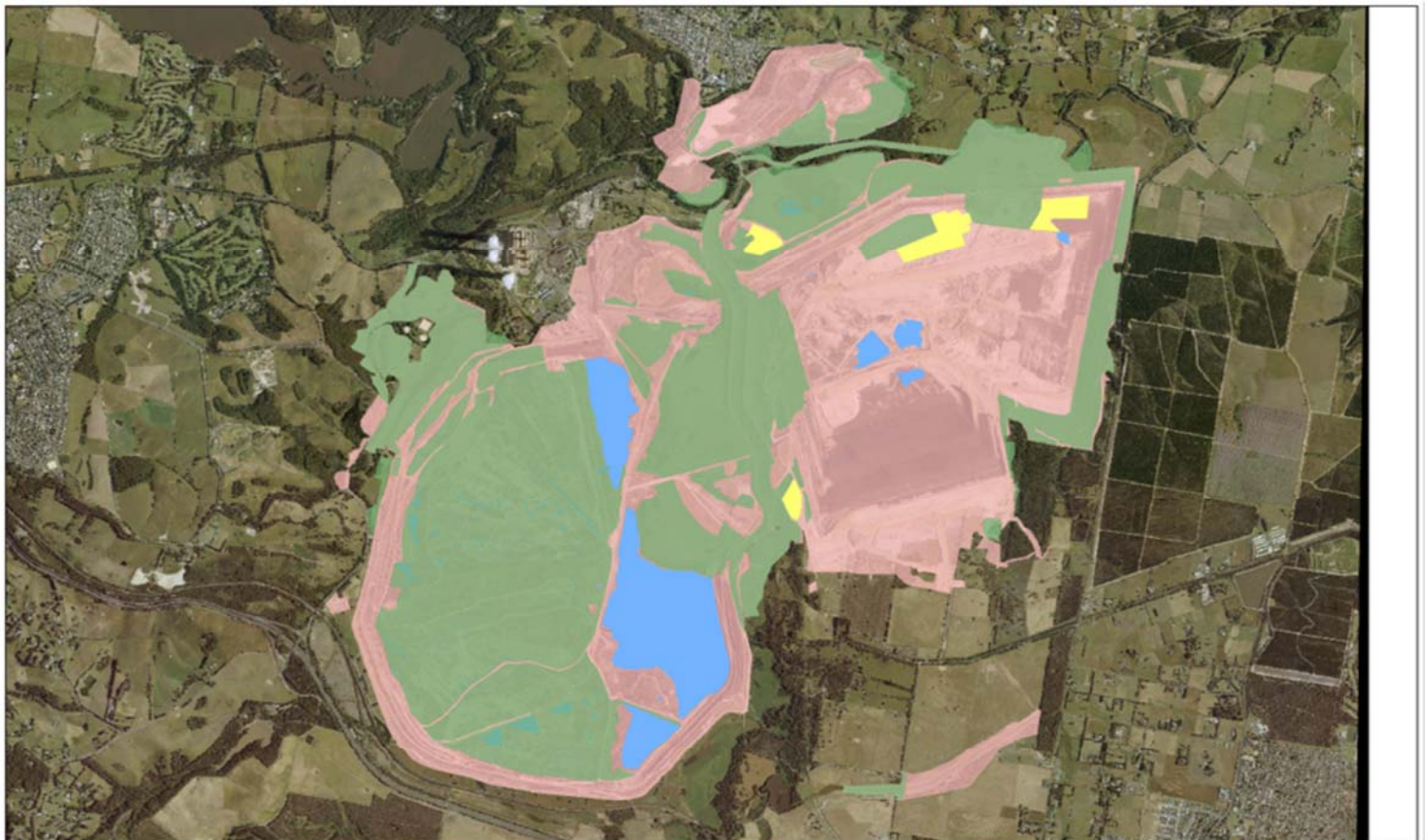
- Total Area Worked,
- Total Area Rehabilitated,
- Annual Rehabilitation for 2019,
- Total Area Water Bodies.

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.

Further to minimizing the area of exposed coal, stabilizing areas disturbed by mining, primarily through vegetation, 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 bottom of Yallourn Mine, showing the benefits of progressive rehabilitation.

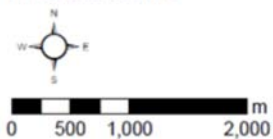


Turtle near Morwell River Diversion



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Yallourn Mine Rehabilitation and Disturbance 2019



- | | |
|--|--|
| 2019 Annual Areas | Total Area Water |
| Total Area Rehabilitated | Total Area Worked |



Yallourn Mine Rehabilitation and Disturbance Areas

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. The 2019 program focussed on meeting the DELWP Land Owner Agreement planting targets with 7,891 plantings completed within Strzelecki Gum habitat zones. In addition, the 2019 program included significant campaigns of weed control maintenance and improvement, fencing and fence repairs. The Pest Control Program was also successfully implemented during 2019.

Tree Planting

Yallourn Mine planted 9,491 seedlings in 2019 of which the majority were placed within offset conservation zones. 1,600 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 2019

SCIENTIFIC NAME	COMMON NAME	2019 CMP PLANTINGS
Acacia brownii	Heath Wattle	195
Acacia dealbata	Silver Wattle	1025
Acacia mearnsii	Black Wattle	200
Acacia melanoxylon	Blackwood	200
Acacia stricta	Hop Wattle	295
Acacia verticillata	Prickly Moses	575
Allocasuarina littoralis	Black Sheoke	120
Carex appressa	Tall Sedge	1215
Carex fascicularis	Tassel Sedge	145
Eucalyptus angophoroides	Apple-topped Box	100
Eucalyptus consideniana	Yertchuk	100
Eucalyptus fulgens	Green Scentbark	100
Eucalyptus obliqua	Messmate	120
Eucalyptus radiata	Narrow-leaf Peppermint	80
Eucalyptus strzeleckii	Strzelecki Gum	1500
Eucalyptus viminalis	Manna Gum	485
Goodenia ovata	Hop Goodenia	295
Juncus pallidus	Tall Rush	80
Kunzea ericoides	Burgan	290
Leptospermum continentale	Prickly Tea-tree	295
Olearia lirata	Snowy Daisy-bush	285
Ozothamnus ferrugineus	Tree Everlasting	285
Poa labillardierei	Common Tussock	1136
Pomaderris aspera	Hazel Pomaderris	370
Total		9491

Biolink Support

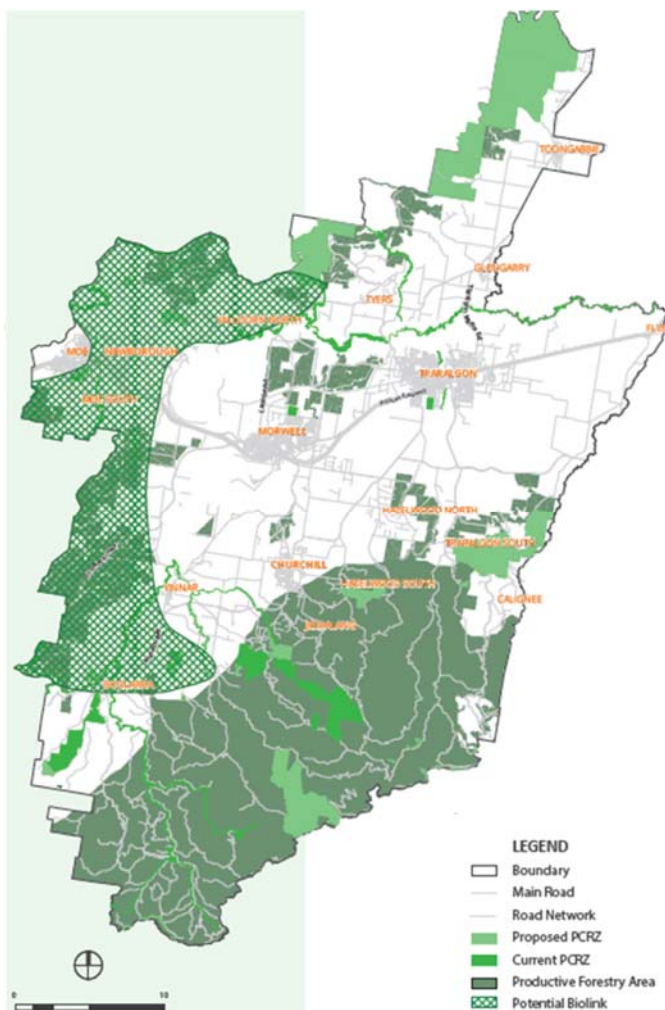


EnergyAustralia Yallourn is working with Latrobe City Council to plan and assist in the creation of a Biolink that seeks to enhance important habitat corridors extending from the Strzelecki Ranges in the south to the Baw Baw Alpine ranges in the north. The flagstaff species the Biolink aims to help is the Strzelecki Koala. Studies have found that a population in the Strzelecki Ranges south of Churchill is one of the most genetically diverse, and therefore genetically resilient, koala populations remaining in south-eastern Australia. To ensure the survival of the species, populations need to spread from the Strzeleckis in the South to the Alpine region to the north to lessen the risk of the population being wiped out by damaging events such as fire or disease.

The Strzelecki-Alpine Bio-link working group was formed through a recommendation of the 2017 Rural Land Use Strategy. The first stage of this recommendation involved a feasibility project that worked with stakeholders through the Biolink area to assess current passage ways used by species in the area. Additionally, the project included a biodiversity study through the Biolink which identified key endangered, vulnerable and rare species in the area in which the Biolink could assist.

The project is facilitated through the Latrobe City Council's Strategic Planners with the inclusion of key stakeholders including Engie (Hazelwood Mine), EnergyAustralia Yallourn, HVP and Landcare to name a few. There is also consultation with Baw Baw Shire Council and South Gippsland Shire Council since the Biolink extends across all three municipalities.

With the Yallourn Mine existing as a large land holder within the proposed Biolink, rehabilitation activities will be targeted to create vegetation corridors around the mine. The short- and long-term benefits of the Biolink are not only great for biodiversity in Latrobe City they will also have the potential to improve farming productivity and general human wellbeing through enhancing air, water and soil quality.



Map showing the position of the Biolink within the Latrobe Valley

Yallourn's rehabilitation of the Morwell River wetlands provides a significant link in the Morwell River vegetation corridor



Fauna Monitoring

The Yallourn Morwell River Wetlands were constructed in the early 2000s. The project consisted of over 100,000 plantings which have revegetated the area from grazing land to a quality habitat site. Bird surveys were conducted by the Latrobe Valley Field Naturalists periodically throughout the year with 68 bird species and over 1,000 birds recorded over three visits in 2019. 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 sighted 10 times during the 2019 bird surveys, demonstrating the success of this revegetation area.

Wildlife surveys were conducted in Conservation Zone 34 adjacent to Hernes Oak and Driffield. In the assessment, 59 vertebrate species were recorded which included 19 mammals, 35 birds, 3 reptiles and 2 amphibians. 8 of these species were recorded for the first time with the area showing good signs of recovery from the 2014 bushfire which burnt approximately 80% of the habitat. Significant sightings of vulnerable species during the survey included the Grey-headed Flying-fox and Lewin's Rail.



Dusky Antechinus in Hernes Oak Conservation Zone (photo C. Boase)



Common Blue-tongue Lizard in Morwell River Conservation Zone (photo J. Gorwell)

EnergyAustralia Environmental Community Projects

EnergyAustralia stands behind our community and is proud to have continued support of the Latrobe Landcare Network (LCLC) for community-based conservation projects in 2019.

EnergyAustralia sponsor programs run by LCLN involving our community members, private land owners, primary schools, high schools and other organisations such as the Rail Trail 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 for twenty two groups including fourteen schools, seven Landcare Groups, and Burnet Park Girl Guides, to undertake rehabilitation and revegetation works and planting over 10,000 trees. Projects covered twenty different locations, including Moe Rail Trail Network, Gippsland Plains Rail Trail, and along Blue Rock Lake walking Track.

The active participation of the school children is translated into real-time learning for these future caretakers of the land. EnergyAustralia funding also helped run the 'Wild Action Zoo', which is used as mobile educational learning. The mobile travels around schools presenting their wildlife show to the local primary school children. These wildlife displays are a great way to help students understand the benefits of their tree planting efforts in providing habitat and shelter for birds and small native animals.

2019 snap shot:

- 10,000 tree's planted,
- Over 800 volunteers including school students (primary and secondary), Landcare members, and local community members,
- 20 different planting sites, and
- 14 Schools involved.

Community Lead

During 2019 the former People Leader for Yallourn, David Burt assumed the position of Community Lead for the Latrobe Valley. David has more than 35 years experience in the Victorian Power Industry and will focus on building and maintaining quality relationships with the community and key stakeholders.

Key outcomes for 2019 included:

- Aboriginal Employment Program,

- GROW Gippsland Compact Membership,
- Graeme Edwards Memorial Park,
- Facebook Page Launch,
- Community & Stakeholder Engagement Survey Project,
- Stakeholder Engagement meetings.

Finalist - Aboriginal Education Association's Wurreker Awards

EnergyAustralia's Yallourn Power Station was recognised for its work with the Latrobe Council Aboriginal Employment Officer to increase Aboriginal and Torres Strait Islander recruitment.

Named as a finalist in the Victorian Aboriginal Education Association's Wurreker Awards, Yallourn recruited three Aboriginal and Torres Strait Islander apprentices and one trainee.

When EnergyAustralia launched its first Reconciliation Action Plan in 2016, we committed to grow the level of Aboriginal and Torres Strait Islander participation in our business.

The eventual winner in the private sector employer category of this year's Wurreker Awards was Rail Infrastructure Alliance.



EnergyAustralia were named as a finalist in the Victorian Aboriginal Education Association's Wurreker Awards

Facebook Page Goes Live

In November, Yallourn's Facebook Page was launched.

The purpose of the Facebook Page is to use social media as a further communication channel to engage with our community. Content will include:

- Community interest stories,
- Incident notification,
- Employment opportunities,
- Seeking community feedback.

The page is administered by the Community Relations Lead and relies on the creation of content ideas from everyone working on the site, and our local community. The intention is to post content on a weekly basis, with an initial content wave focusing on Yallourn's contribution to the local community and regional economy.

As at 31 December 2019, we have 800 people following our page.

Our most popular posts were for employment opportunities and Christmas celebrations.



EnergyAustralia Yallourn launched a facebook page

Webpage Refresh

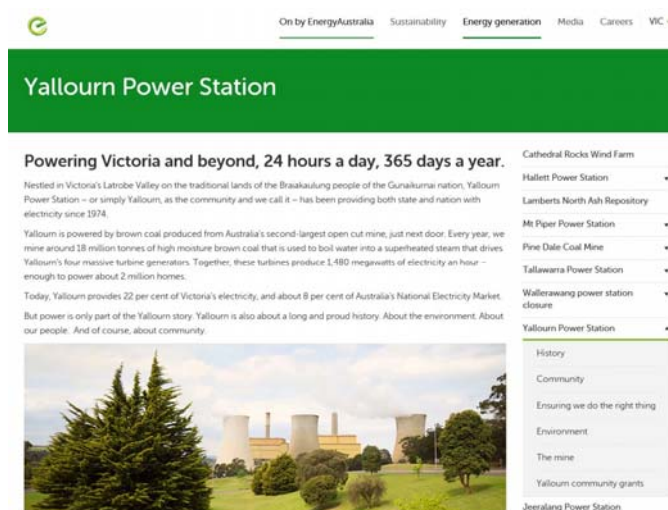
In May of 2019, we undertook a major review of the EnergyAustralia Yallourn webpage to ensure that the information provided is relevant for the community and other interested parties, with information and photos checked for accuracy.

The webpage has a focus on our history, the present day and looking towards the future, with 6 new sub sections created for the new refreshed content. These are:

- History,
- Community,
- Ensuring We Do the Right Thing,
- Environment,
- The Mine,
- Community Grants.

The Yallourn webpage can be found at:

www.energyaustralia.com.au/about-us/energy-generation/yallourn-power-station



The Yallourn Section of the EnergyAustralia website was refreshed during 2019

Graeme Edwards Memorial Park

In November 2018, our Yallourn colleague Graeme Edwards suffered fatal injuries whilst operating a high voltage circuit breaker. To remember Graeme and honour his contribution to the Yallourn Power Station, Graeme's workmates worked together to create the Graeme Edwards Memorial Park, including a planting day when 45 of Graeme's family, workmates and EnergyAustralia staff came together to plant a range of native trees and shrubs. The park features landscaping works, updated outdoor seating and other amenities for the community to use. The park is located at the existing Power Station Viewing Area and is at the Yallourn end of the Moe-Yallourn Rail Trail.



Community Partnership and Engagement

A range of community organisations benefited from funding from EnergyAustralia Yallourn's grant and sponsorship programs during 2019. In line with the broader EnergyAustralia business, our priority areas for funding remained the same as in 2018 – Education and Social Inclusion.

At the commencement of 2019 we appointed a new external community representative who has continued to provide additional community knowledge and advice during our grant/sponsorship selection process. This position was advertised and the appointment made after the tenure for our previous representatives finished at the end of 2018.

Grants were allocated to the following organisations:

- Willowgrove Primary School - \$10,000 – to purchase iPads to ensure that Grade Prep/1/2 students at the school have the technology to connect to the world as 21st century learners.
- Yallourn North Primary School - \$6,000 – contribution towards the purchase of new and engaging reading resources which will ensure students are excited about reading and establish a strong reading community at the school.
- Yallourn North Fire Brigade - \$3,000 – towards the construction of a female change room at the Yallourn North Fire Brigade.
- Moe Old Gipps town Men's Shed - \$8,500 – participants are building their own shed at Old Gipps town, and this funding will help with the electrical work required to operate their machinery.
- Newborough East Primary School - \$10,000 – funding to enable the purchase of STEM equipment that will provide students with the opportunity to cultivate the skills of problem solving, creative thinking and collaboration which are critical for future education and employment.

- Moe Yallourn Rail Trail - \$10,000 – funding for the Sustainable Signage Way-finding Project which will facilitate the installation of signage along the trail to provide guidance to all users. The trail is isolated and separate from the surrounding area, and the successful completion of this project will improve accessibility, safety and navigation.
- Yallourn North Kindergarten - \$5,000 – to install an All Abilities Cubby Fort in the kindergarten's outside play area which every child, regardless of physical capabilities or any other limitations, can access and use safely.

Smaller sponsorships (up to \$1,000) were also awarded to a number of schools, clubs and community organisations, including the following:

- Baw Baw Latrobe Local Learning & Employment Network – support for the 2019 Job Skills Expo which has participation from Year 10 students from schools across Latrobe, Baw Baw, South Gippsland and Bass Coast.
- Hill End & Grove Rovers Junior Football Club – assistance with the purchase of a new fridge for the recreation reserve canteen which is used by many user groups within the town.
- Baringa School – sponsorship of the Friendship Games soccer tournament, which provides students with intellectual disabilities with the opportunity to compete in a soccer tournament that is safe, inclusive and fun.
- Latrobe Valley Beekeepers Association – contribution to assist the Association to complete their "The Value of Bees" educational trailer which will be used to raise awareness of the importance of the beekeeping industry with schools and the broader community.
- Lowanna College – sponsorship of end of year student awards, including academic, sporting and community service achievements.



Performers from the Moe Dance Eisteddfod Senior (13 & Over) Classical Championship Solo Open with adjudicator Hilary Hazledine and EnergyAustralia's Meredith Bowden.



Quiet time for mentor Andrew Dibble and student Dustin during the SPARK reading program at Yallourn North Primary School.

- PowerWorks – contribution towards the installation of energy efficient lighting at PowerWorks energy education centre.

Our three biggest sponsorship events for the year were:

- EnergyAustralia Classic Singles lawn bowls tournament – held over four days each January at the Newborough Bowling Club, this event attracts a field of 96 bowlers all competing for top honours. In 2019 competitors included Commonwealth Games star Barrie Lester (who won the event for a record sixth time), former Australian Open singles Champion Aaron Wilson and Australian international representative and dual Commonwealth Games gold medallist Carla Krizanac.
- Moe Dance Eisteddfod – this annual event attracted junior competitors from 37 dance schools across the state, performing across a range of genres including Classical, Character, Modern, Song & Dance, Tap, Contemporary and Musical Comedy.
- Gippsland Motorcyclists Toy Run – the annual Christmas toy run collects toys to be distributed to needy families in our local community, and is one of the most strongly supported events by personnel at our Yallourn site.

Personnel from Yallourn also provided support to our local community, particularly schools, through our volunteering efforts. Throughout the year we participated in:

- The SPARK reading program at Yallourn North Primary School – providing assistance to students who required a little more support to improve their reading skills.
- The breakfast program at Albert Street Primary School in Moe – serving breakfast to students each Wednesday to

give them a good start to their day.

- The “Friends of NEPS” community group at Newborough East Primary School – joining with other interested community members to see how we could work together to help students at the school.
- Packing food at Foodbank in Melbourne – two teams headed to Melbourne to assist with food packing as part of EnergyAustralia’s volunteering program with this organisation.

We also supported Wear it Purple Day (WIPD) across the EnergyAustralia business. LGBTI+ workplace inclusion is a key focus area of our diversity and inclusion strategy, and our Prism network has been working to increase awareness and generate conversations to ensure everyone feels confident about who they are, and can feel safe to be themselves in the workplace. WIPD is one opportunity for us to show our support in a visible way, and in 2019 we invited guest speakers from Latrobe Youth Space to join us for morning tea to share their experiences.

Our community engagement also increased with the introduction of a regular segment “Behind the Fence” in the Yallourn North Action Group Newsletter, keeping readers up to date with some of the activities taking place at Yallourn, as well as the launch of the EnergyAustralia Yallourn Facebook page.

We also held a public information session at the Moe Town Hall in October. Day and evening sessions were available for interested members of the public to come along and view our displays, and talk to staff about a range of topics.



Yallourn employees and Latrobe Youth Space guests at Wear It Purple Day – supporting diversity and inclusion, particularly for young LGBTI+ people and their families.

Health and Wellbeing

Good health benefits everyone by strengthening engagement at work, having happier employees, which in turn makes a happier workplace with increased productivity. At EnergyAustralia we appreciate that the individual needs of employees require a broad range of health and wellbeing initiatives.

People need different things at different stages of their life and work. They have different requirements in their personal life, and overall, they 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 and provide resources to help improve their health and well-being.

EnergyAustralia takes an integrated approach to work 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.

Targeted Programs

The influenza vaccination program was again conducted with 250 employees immunised in 2019, and we are expecting even more in 2020 as people are becoming more aware of the importance and benefit of being vaccinated each year.

40 articles for Yallourn's on-site newsletter and 9 specific Occupational Health & Wellbeing newsletters were generated and distributed throughout the year to all staff by the Occupational Health & Wellbeing Coordinator, covering Men's Health Issues in Australia, Diabetes, Prostate

Cancer, Treatment of Eye Injuries and Depression, just to list a few of the topics covered.

As an industrial site, hearing protection is very important. There was a 26.3% increase in the number of hearing tests in 2019.

The data base for hearing tests has been updated and we hope to see a further increase in the number of tests in 2020.

Wellbeing Events

We again participated in the Latrobe 10,000 Steps Challenge with six teams (59 employees) entered from EnergyAustralia Yallourn. This competition is designed to encourage people to improve their overall fitness while having a bit of fun. One of Yallourn's team was placed 5th overall out of 112 teams with over four million steps—a great effort!

Healthy morning teas were held to coincide with Men's Health Week and Women's Health Week to help promote awareness of men's and women's health issues. The Occupational Health & Wellbeing Coordinator and an Emergency Service Officer were available to check blood pressure and blood glucose levels at these sessions and to hand out health information. These were well attended with recommendations for further programs offered by staff.

2019 also saw the roll out of the Spark Program, promoting health and wellbeing at EnergyAustralia. Each site has "Sparkies" - voluntary health and wellbeing champions throughout the business who coordinate events and messages, provide insight into health and wellbeing needs and who are passionate and qualified to run workshops and events.

On site massages were very popular with a good number of staff utilising this service. We are looking at continuing with the service in 2020.



LeeAnn and John getting ready to participate in the 10,000 Steps Challenge

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:

1. Smoking.
2. Alcohol and Other Drug Use.
3. Mental Health and Wellbeing.
4. Physical Activity.
5. Healthy Eating.

In 2019 we reached our benchmark in the Foundations and Physical Activity Modules of the program, receiving recognition from the State Government for this achievement. We hope to finalise the Healthy Eating in the Workplace Benchmark in 2020, and we will be starting work on Promoting a Smoke Free Workplace in 2021.



Presentation of the certificate for reaching Foundations and Physical Activity Benchmarks in the Achievement Program by Laura Duff from Latrobe Community Health Services (LCHS)

Occupation Health Centre

2019 saw a total of 448 presentations to the Occupational Health Centre, which is a 30.97% decrease in overall visits over the year from 2018. The number of new injuries/illness visits also decreased by 39.4% from 203 to 123. There was a marked decrease of 82.3% in blood pressure checks from 159 to 28 in 2019, largely due to employees who were getting their blood pressure checked regularly being transferred to the Melbourne office and retiring.

Foreign bodies in eyes continue to be the most common presentation to the Occupational Health Centre with 48 presentations in 2019, a marked decrease of 50% on 2018. This was followed by cuts, bruises and abrasions with 22 presentations, struck by objects 20 presentations and sprains and strains 18 presentations.

28 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 46% decrease on 2018 in overall employees sent off site either via ambulance or company vehicle.

Even though the primary role of the Occupational Health Centre is for initial response to injury and illness of employees, we are aiming to increase the use of the Occupational Health Centre for proactive and preventative health measures by making staff more aware of what is available at the Occupational Health Centre.

At the beginning of 2019 legislation was passed enabling Emergency Service Officers (ESO's) to give Penthrane Analgesic, so all registered nurses and ESO's completed the PUAEME005A Provide Pain Management Course to obtain accreditation to administer Penthrane for severe pain management. This has been required and successfully used on employees twice this year.

A new spirometry machine was purchased at the end of 2019, and a teaching and competency program is currently being sourced.

A new CAT Combat Application Tourniquet for use if a patient is suspected of having a pelvic fracture was purchased in 2019 and training in its use completed.

Two new casual registered nurses were employed during 2019. We now have a casual nurse bank of four nurses and, as our primary registered nurse is now on an 8-day fortnight, the other two shifts are regularly covered by the casual nurses who have formed a cohesive, effective and proactive team.

There was a marked decrease in the number of work-related injuries in 2019, which was pleasing to see as it indicates that employees are taking more care in how they undertake their daily tasks. However there was a slight increase in the number of employees attending for non-work related illnesses or injuries. This is indicative of employees becoming more aware that the Occupational Health Centre is available to all personnel for illnesses and injuries that aren't work related.

We hope to see another decrease in work related injuries and a further increase in the number of preventative health attendances again in 2020 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.

Safety

The health and safety performance for 2019 was well above the previous year's performance and there was, in comparison with the expected standard overall, a significant improvement in the general safety performance from 2018.

During the year there was a large focus on strategic key areas of health and safety at the Yallourn site. We commenced a process safety journey, and have been 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 the operation has a high level of controls to manage these hazards.

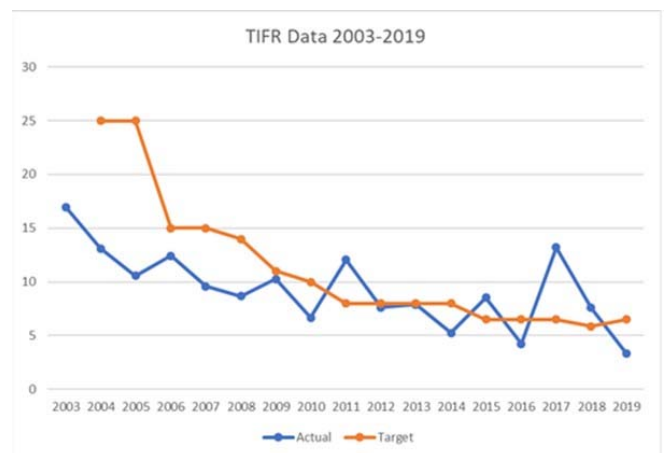
In 2019 there was one Lost Time Injury (LTI) which was less than the previous year, and the best record in the last 15 years. The historical record of Total Injury Frequency Rate (TIFR) is tabled below and the rate is below 5.85 and continues over time. The positive indicator targets have changed with 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 been a comprehensive technical and operations review that has been carried out 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.

The analysis involved a combination of an experienced cross section of key site people and specialised external consultants, ensuring the site clearly identified hazards, how these hazards will be controlled and implementing the changes. One of the key features of the Safe System of Work has been the introduction of remote racking equipment, that removes the operator from the potential risk areas. This has significantly reduced the level of risk exposure to our people. New levels of electrical protection have also been installed to protect people from electrical incidents.

The Safe System of Work has also focused on implementing new strong engineering controls.



Yallourn TIFR Performance

Mines Rescue Competition

The 2019 Minerals Council of Australia Victorian Division's annual mines rescue competition was held at the Yallourn site over three days in October. Nine emergency response teams from Victoria, New South Wales and Queensland competed in a range of exercises designed to test their core disciplines in First Aid, Firefighting, Rope Rescue, Team Skills, Search and Rescue, Breathing Apparatus Practical and Theory.

As the host site, Yallourn provided nine challenging and realistic events for the competition. Estate Services, our onsite contractor, again represented EnergyAustralia and were successful in achieving the following:

- 1st in Fire Fighting;
- 1st in First Aid;
- 1st in Skills;
- 5th in Breathing Apparatus;
- 5th in Theory;
- 6th in Search and Rescue;

- 7th in Rope Rescue; and
- Russell Masters the team captain came 5th in the Captain's judging.



Estate Services crew returning to meet point after Fire fighting exercise.

Eastern Basin Development

The bulk earthworks for the new Eastern Basin (now known as the Saline Basin) were successfully completed in July 2017. Since then, the grass on the embankments is well established, groundwater management bores and subsurface drainage is performing as designed and regular site surveillance shows that the overall performance and ground movement is within the design specification.

The Saline Pump Station, which pumps water back to the Power Station and any excess water via the Saline Waste Outfall Pipeline to Firmins Lane, is in the process of being commissioned. Water has been successfully delivered to the Power Station on several occasions during commissioning tests with the pump system performing in accordance with the design specification.



Saline Basin Pump Station

Fire Preparedness

Yallourn Mine has continued to manage the fire prevention program in close consultation with CFA, Latrobe City Council and other external parties. The key achievements for 2019 include:

- Review and update of the Yallourn Mine fire hazards risk assessment;
- Completion of capital projects totaling in excess of \$1M to extend the coverage of the fire service network into Maryvale field;
- Construction of an extension to the existing fire service spray lines for the protection of the fire service batters and Raw Coal Bunker batters;
- Completion of slashing and vegetation management activities;
- Trial and installation of new style water cannon spray to provide improved consistency of water coverage to exposed coal areas; and
- Procurement and setup of high flow long range ground monitors to provide additional coverage to coal batters. These monitors have been setup in trailers to enable quick deployment and setup within the mine. The monitors can also be used for the application of foam retardant.

Maryvale Field operating benches being wet down on a high fire danger day



EnergyAustralia Environment Review Committee (ERC)

Report of Independent Chairman 2019 Year

In the score or so years in which the Yallourn Power Station and Coal Mine set out on a second phase of its development, it is now nearing another phase in its contribution to the local community and its surrounds.

In its long but fruitful journey it has met the highest levels of respectful treatment of its environment by observing the need for setting the appropriate standards of regard for the mutual dependence which must exist in the process of the use of technical, engineering and human resources to convert elements of coal, water and energy to meet the industrial and domestic needs of a modern community.

The judicious employment of human resources ranging from the utilisation of the technological skills of a structural engineer and military leader in John Monash, tailored to be respected as a leader of a civilian work force capable of adaptation of their broad skills to dozer driving, the sensitivity of high pressure steam and a thriving blend of native flora and fauna set the standard soon recognised by workers and ecological protectors alike as being for the common good.

The latent dangers of flood, dust and its 'PM10' together with the risk of impacting flora and fauna and even fish have tested the need for team-work between professional naturalists and the men with their mighty machines, but somehow mutual respect has seen common sense to be the winner.

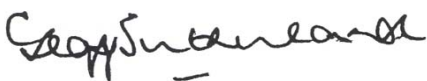
As the finishing line begins to appear it is all the more important to ensure that wisdom, experience and balanced argument between the new experts and those who have tried most and learned to debate responsibly, can bring Yallourn to a fitting and worthy next stage. This year's successful resolution of reported community concerns is a tacit model for all who seek to use our national natural resources with care and concern.

It is important to recognise that the original and enduring reasons for the establishment of the Yallourn operation was to develop and utilise the coal resource to produce and deliver electricity to public, industrial and private consumers in a timely, safe, reliable and economical manner as and when required to service their needs in cooperation with other suppliers as part of a national grid. Each of these requires careful management, planning and performance in respect of the financial, technological and human resources, tools and user requirements and adaptation to address newly identified and evolutionary risks and changing scientific and public knowledge and opinion including our possible impacts on the climate.

The principle key matters addressed and reviewed by the ERC were:

- No EPA Licence exceedances;
- The Mining Licence was extended to 2051 by the Victorian Government to allow for final rehabilitation of the Yallourn Coal mine, following closure of the Power Station in 2032;
- The Mine Work Plan Variation was also approved in March;
- The LV Mine Rehabilitation Commissioner briefed the ERC on progress of broad consultation and technical reviews on the Latrobe Regional Rehabilitation Strategy and matters that will affect the final rehabilitation of the site;
- ERC was briefed on EA Yallourn proposed closure plan, for example, creation of a mine lake and progressive rehabilitation and conservation work being undertaken on this;
- EA Yallourn released its Facebook page to improve consultation and transparency with the local community on matters Yallourn related;
- Completion of the Yallourn Power Station Stage 1 Char Collector Upgrade program in 2019 ahead of original scheduled completion in 2022;
- Progress on implementing the Conservation Management Plan;
- Proposal for reuse of Yallourn coal ash for development of a magnesium production plant in the Latrobe Valley.

All of this calls for an ongoing awareness and preparedness by the Board, executives and individual team members, in cooperation with regulating authorities, to ensure this challenge is met. It is my view as chair of the ERC that a commendable performance was achieved by all links of the chain.'



(Dr) Geoff Sutherland OAM
(Independent Chair ERC)

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	2019	2018	2017
1. Operation				
Electricity sent out ⁽¹⁾	GWh	8,954	9,371	9,946
Coal consumed	TJ	135,096	144,351	152,901
Oil consumed	TJ	517	353	365
Thermal efficiency	%	24.0	23.5	23.5
Equivalent availability factor (EAF) ⁽²⁾	%	74.56	77.24	83.00
2. Air Emissions				
CO ₂ e (Scopes 1 & 2)	kT	12,763	13,731	14,412
SO ₂ ⁽³⁾	kT	15.6	16.7	18.2
NO _x ⁽³⁾	kT	12.1	14.3	14.5
Particulate (Total) ⁽⁵⁾	kT	5.9	6.6	5.9
3. Water				
Water Withdrawal	Mm ³	28.6	29.7	29.3
from marine water resources	Mm ³	0	0	0
from freshwater resources	Mm ³	27.3	28.4	28.0
from municipal sources	Mm ³	1.276	1.298	1.288
Water Discharged	Mm ³	15.971	14.146	14.225
treated wastewater discharged to sea	Mm ³	0	0	0
treated wastewater discharged to freshwater bodies	Mm ³	14.344	12.327	12.306
wastewater discharged to sewerage	Mm ³	1.6	1.8	1.9
Water Reused / Recycled	Mm ³	0.0	0.0	0.0
4. Environmental Compliance				
Regulatory non-compliance resulting in fines or prosecutions	No.	0	0	0
Licence limit exceedance & other non-compliance	No.	0	1	0
5. By-products & Waste Management				
Ash produced	kT	244	251	275
Ash recycled / sold	kT	0	0	0
Hazardous waste ⁽⁶⁾				
produced	T (solid) / kl (liquid)	359 / 214	227 / 176	130 / 177
recycled	T (solid) / kl (liquid)	1 / 198	1.1 / 174	0.2 / 177
disposed	T (solid) / kl (liquid)	358 / 17	226 / 2.1	129 / 0.1
Non-hazardous waste ⁽⁶⁾				
produced	T (solid) / kl (liquid)	5257 / 0	4880 / 0	3239 / 0
recycled	T (solid) / kl (liquid)	2914 / 0	1424 / 0	1318 / 0
disposed	T (solid) / kl (liquid)	2342 / 0	3456 / 0	1922 / 0
6. Safety				
Employee - Fatalities	No.	0	1	0
Employee - Days lost / charged	No.	0	20	47
Employee - Lost Time Injuries	No.	0	2	6
Employee - Total Work Hours	No.	523334	621185	569081
Contractor - Fatalities	No.	0	0	0
Contractor - Lost time Injuries	No.	1	2	3
Contractor - Total Work Hours	No.	963863	955034.5	866593
7. Employee Development				
Employees ⁽⁷⁾	No.	210	196	204
Safety, health and environment training ⁽⁸⁾	Hours	11,522	14,863	11,476

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.



More Information

For more information on EnergyAustralia's Social and Environmental principles and practices please visit www.energyaustralia.com.au or call (03) 5128 2000

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