



EnergyAustralia

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Dear Sir/Madam,

Regarding the Latrobe Valley Regional Rehabilitation Strategy Overview

Thank you for the opportunity to comment on the Latrobe Valley Regional Rehabilitation Strategy Overview (the LVRRSO) and to highlight elements of the submission we made on 1 November in response to the Draft Preliminary Land Use Vision.

We again commend the Victorian Government in progressing planning of such material significance to the region and to stakeholders with a broad range of interests, including our own. EnergyAustralia owns and operates the Yallourn Mine and Power Station in the Latrobe Valley. The mine, which covers 5595 hectares, provides brown coal to fuel the 1,480MW power station which produces approximately 22% of Victoria's electricity. Yallourn employs around 500 people.

Following the eventual closure of the Yallourn Power Station and associated mining activities, EnergyAustralia is committed to delivering a safe, stable and sustainable landform. The Yallourn mine is in the path of two diverted rivers and it sits atop a water table that we expect will rise as other mine pits are filled. With this siting, we believe that the most stable rehabilitation solution will be the relatively fast flooding of the mine. We also acknowledge the need to protect Gippsland's river systems and consider that any solution to mine rehabilitation needs to adequately balance the economic, environmental and social interests of the region. To achieve this, government leadership and coordination will be necessary. To this end, we ask the Government to develop a holistic strategy and bring key stakeholders together.

We agree on some important assertions

The LVRRSO broaches a highly complex topic and makes an important start in bringing together disparate constraints and objectives.

We agree with the LVRRSO authors that, "Passive controls that avoid the need for ongoing action in managing risks from... ground movements and coal ignition are identified as the preferred option for rehabilitation"¹. By extension, we seek a rehabilitation solution that will

¹ The Department of Jobs, Precincts and Regions, LVRRSO paper p.5

come to an end with very minimal ongoing maintenance.

Naturally we seek to satisfy our own remediation obligations efficiently, but we seek also to deliver a rehabilitated landform which relies primarily on passive controls that manage geotechnical stability and coal ignition risks, while avoiding inefficient, unnecessary and wasteful expenditure of public and private funds

We also concur that, "the potential to utilise materials other than water to rehabilitate the mines is not considered feasible at this point in time, due to the vast volumes required"². For this reason, our expectation is that filling the mine pit with water, along with complementary earth works to assist in stabilisation, remains the most responsible course of action. The Regional Geotechnical Study endorsed the pit lake solution as achieving a "safe, stable and sustainable landform through a largely passive control"³.

The LVRRSO draws several troubling conclusions

The authors of the LVRRSO conclude that we will see "Extended fill times arising from limited water availability⁴, and "Under these conditions it may take decades to fill each mine void"⁵. They concede that such delays "present stability challenges and fire risks (due to the extended period of exposed coal)"⁶. We agree that this would be the inevitable result of restricted water supply.

It is for this reason that we consider that all avenues to ensure high volume water access must be exhaustively investigated. We seek Government leadership with the active involvement and engagement of key stakeholders, including mine operators and water agencies.

Exploration of water sources should include more distant sources that could be used in faster-flowing volumes such as treated water originating from the Eastern Treatment Plant or ocean. The LVRRSO claims that "Currently, there are no alternative sources of water that would significantly hasten the filling of the mine voids... [other than] pumped groundwater and surface water from the Latrobe River system when available"⁷. This assertion should be thoroughly tested against decades-long fill scenarios.

The LVRRSO also asserts that "Mine operators will need to assess alternative rehabilitation options including... ones that use alternative water sources". Mine operators alone are unlikely to be able to afford the best solution for the region, particularly if that solution requires them to be sole financiers of water sourced from alternative reserves in the State. Such sources could be misread as expensive when compared to current bulk entitlement water rates and weighed against the needs of only one stakeholder. In solving for multiple interests simultaneously, however, the economic case may be stronger.

The high initial cost of alternative water sources could possibly be justified if viewed holistically through the lens of the local community if it provides an accelerated answer to site rehabilitation. A slow-fill or dry solution that required decades to achieve stability, if such stability can be achieved, would necessitate tracts of land being fenced off in

² *Ibid.*, p.5

³ The Department of Jobs, Precincts and Regions, LVRRS Regional Geotechnical Study, p.4

⁴ *Ibid.*, p.6

⁵ *Ibid.*, p.7

⁶ *Ibid.*, p.6

⁷ *Ibid.*,

perpetuity, limiting the economic and social potential of the region. As we wrote in our earlier submission, "It would be unacceptable for the local community, for the asset owners and for the future business potential of the region if the transition of these areas to their new use were delayed for the decades implied".

With several stakeholders united in their need for prompt and low-risk site rehabilitation, we see a key role for Government, in concert with mine operators, coordinating this outcome. It is a missed opportunity to suggest that the Government's "role in mine rehabilitation should be limited to setting legislation, regulation, policy and guidance"⁸ when leadership and collaboration are required to develop the most efficient and productive path for all. Only the Government can explore what other State-building opportunities may exist for these pits, with opportunities spanning landfill sites and downstream flood or drought mitigation services associated with a pit lake solution. Only Government can bring all three mine operators to the table, overcoming different closure time horizons and competitive priorities, to define the lowest total cost response to rehabilitation. A coordinated approach is a public good and should be treated as such.

The LVRRSO makes some unreasonable demands of mine operators

The LVRRSO makes initial demands that "mine operators will need to demonstrate how water levels are to be achieved and maintained in perpetuity, accounting for evaporative loss"⁹. A requirement to maintain water levels in perpetuity may be very difficult to guarantee without the support necessary to secure reliable access to ongoing water resources, particularly in light of the increasing prevalence of drought conditions associated with climate change.

When the Yallourn Power Station and mine was acquired from the Victorian Government in the 1990s, it was accompanied by a master rehabilitation plan inclusive of the planned pit lake rehabilitation solution. It would be very difficult for mine operators to achieve a safe, stable, and passive final landform without the planned access to water, exposing operators to risks that bear no resemblance to those foreshadowed in the acquisition of the asset. It's unclear how Government would work to ameliorate this shift in risk profile.

Further, the current LVRRSO wording places a heavy burden of proof on mine operators to demonstrate the "essential need for water to achieve a safe, stable, and sustainable final landform"¹⁰. Timely access to water will be beneficial, not solely in terms of technical stability but in the limitation of ongoing maintenance obligations and the realisation of an asset of value to the community.

The LVRRSO references an "amount to be paid into the post closure fund"⁹. Any funds held for this purpose would be unavailable for progressive rehabilitation or to invest in bringing much needed new replacement generation capacity to market.

Provisions for a dry solution are unequivocally more expensive than a water-based solution, both in terms of rehabilitation works and ongoing maintenance, further exacerbating the tie up of funds in activity that does not return the productive capital to the economy that investment in new generation would. Further, a change in the cost profile of the rehabilitation of these mines associated with delivering a dry solution or stabilising the pit through slow and uncertain filling would have implications beyond the physical resolution

⁸ *Ibid.*, p.10

⁹ *Ibid.*,

¹⁰ *Ibid.*,

of rehabilitation and will have a bearing on the life of the facility.

The Yallourn mine pit is different to others in the region and will flood

Over time, and even with regular maintenance, experience has shown that the force of nature exerts pressure reconnect the Yallourn mine with the Morwell River, the Latrobe River or both. From the information accumulated to date, a so-called 'dry solution' is untenable in the Yallourn mine's case in the long term.

As noted in our earlier submission, Yallourn, like the other Latrobe Valley mines, must install and maintain horizontal bores to drain water from the coal. While materially less deep than the other mines, Yallourn must pump groundwater, although to a lesser extent, in order to maintain stability at the site. A significant amount of active management and maintenance is required to keep the mine stable and the surface and groundwater out of the Yallourn mine. Even with these management systems in place, small lakes are present in the base of the mine pits. These points are made to underscore that the Yallourn mine is unlikely to be suited to dry remediation.

Conclusion

We are concerned that the LVRRSO has marked out a path that is physically unrealistic and sub-optimal for the community, with obligations left solely to mine operators. This approach will likely deny or delay flooding of the Yallourn mine and force intolerable risks, costs and delays upon all the community, government and mine operators.

In contrast, a cooperative solution between the government and all Latrobe Valley mine operators would present lower costs, greater security of outcome for the state and a more expeditious path to secure the region's ongoing prosperity.

We again ask that the Government take a more active, consultative and collaborative approach with EnergyAustralia and the region's other mine operators, so that it is possible to consider the detailed options for our mines, and how associated development could be encouraged and facilitated. We ask that the Government remove uncertainty by confirming, not just that our pit lake Master Rehabilitation Plan remains supported, but that the Government will work to ensure the supply of the water necessary to achieve it. We are looking to the Government to develop a strategy that will enable us to achieve full, passive and timely mine rehabilitation to create a positive outcome for the State and the Gippsland region.

We have enclosed the body of our earlier submission so that it might be considered in support of the comments made here.

Best regards,



Liz Westcott

Energy Executive

Extract from the EnergyAustralia submission made on 1 November:

Continuing operation of the Yallourn Mine and Power Station

As referenced in our recent submission to the Victorian Government's consultation on emissions targets following the release of the Expert Panel recommendations, our plan remains to operate Yallourn to the end of its life, currently 2032, or for so long as government policy and market conditions allow.

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.

Our concern is that any closure of Yallourn, or any other power station, should be made without the risk of power outages, while ensuring electricity remains affordable to Victorian homes and businesses. The closure of Yallourn should only occur where careful planning ensures there is replacement capacity and impacted employees and the community are given appropriate consideration. In support of the region's future, the Yallourn grounds should be returned to a condition in which they are safe and stable without undue delay.

We are in favour of proactive and comprehensive preparations for the closure of brown coal-fired power stations in the Latrobe Valley

A transition of the size confronting the Latrobe Valley requires detailed planning. Following the closure of Hazelwood, the closure of the remaining brown-coal mines and power stations is not expected for some time. We should, however, not let the time still available to us be a reason to defer preparatory works. The more strategic and assiduous our planning, and the more it identifies the optimal path within the needs of all stakeholders, the more likely the ultimate transition will succeed. We hope that the Draft Vision and consultation process will be followed by Government commitment to deepen and accelerate planning efforts.

EnergyAustralia has supported Victorian Government representatives engaged in developing the LVRRS's studies through the provision of information, access to the Yallourn mine site and personnel. We will continue to support the progression of these and related studies, with the aim of achieving the best possible outcome for the Latrobe Valley and Victoria.

Mine remediation must underpin a thriving region

EnergyAustralia remains committed to working with the Victorian Government to ensure that the Yallourn Mine and Power Station site is remediated and stable after the cessation of electricity generation operations.

The remediation of German lignite mines provides excellent examples of how the mining industry, in collaboration with Government, community and business, can provide safe, stable and sustainable landforms that support a range of land uses and resilient, thriving communities. The rehabilitation of sites allows for new industries to enter, whether making use of lakes or green zones, and investment is made in the region that helps the local community through the economic impact of the associated closure.

The Regional Water Study and Geotechnical Study synopses revealed competing aspects of the Government's technical projects, particularly in relation to water as central to mine

stability but constrained by scarcity. To further develop, assess and undertake works necessary ahead of Yallourn's eventual closure and rehabilitation, EnergyAustralia will need these discrepancies resolved. Divergent positions must be integrated into coherent Government plans and policies. For example, the potential for the region's access to lakes should be reconciled with the pit filling delays mentioned in the Regional Water Study synopsis. We hope a consultative approach allows us to contribute to the joint problem-solving effort.

Our mine characteristics

As your technical experts have noted, the Yallourn site is quite different to Hazelwood and Loy Yang.

Most notably, the Yallourn Mine adjoins waterways on multiple sides. The Morwell River currently runs in an open channel through the centre of the mine with a mine pit either side and the north boundary of the mine runs close to the Latrobe River. In addition, Yallourn has a number of continually flowing creeks which are diverted around the operational area of the mine, in a system of open drains, pipes, pumps and dams. The proximity of these waterways creates unique long-term management, technical and planning constraints and, over many decades, might be expected to see the organic inundation and reclamation of the mine.

In or about late 1983, the SECV began work to divert the Morwell River through a three-metre diameter pipe for 3.7 kilometres, commencing in an area to the south of the Yallourn Mine. The 1983 Diversion, which took approximately four years to complete, was undertaken to access the low strip ratio coal reserves in the Morwell River flood plain located to the east of the Yallourn Township Field. The SECV named this area the East Field.

As coal was depleted in older fields, new mining areas were required. In order to access new fields, EnergyAustralia diverted the Morwell River along an aqueduct, comprised mainly of overburden from the Yallourn Mine. Over a period spanning 2001 to mid-2005, EnergyAustralia constructed an aqueduct 3.5 kilometres long and up to a maximum 35 metres high in some areas. Completion of the Morwell River Diversion opened access to both the Maryvale Field and the East Field Extension.

In November 2007, a failure occurred in the northern batters of the East Field, the result of which saw these batters slip and the Latrobe River breach the area. In response, works were completed to divert the Latrobe River further north of its then location, thereby providing a greater buffer between the Latrobe River and the Yallourn Mine in this area. In 2012 a failure took place at a section of the Morwell River Diversion (MRD) which resulted in both the Morwell River and the Latrobe River flowing into the mine area. Both events are indicative that if nature is allowed to take its course without human intervention, flooding of these voids would be the result. Ongoing and significant intervention will be required if the mine is not flooded and connected to the river system, and our best efforts may still see history repeated.

In another mark of difference, the Yallourn mine is materially shallower than both neighbouring mines, at approximately 95 metres below ground level at its lowest point. It is approximately eight kilometres wide at its widest point and about 26 kilometres around the top perimeter and is predicted to be roughly 13% larger in volume than Hazelwood, with just half the volume of the Loy Yang void at the time of closure.

Yallourn, like the other Latrobe Valley mines, must install and maintain horizontal bores to drain water from the coal. While materially less deep than the other mines, Yallourn must pump groundwater, although to a lesser extent, in order to maintain stability at the site.

A significant amount of active management and maintenance is required to keep the mine stable and the surface and groundwater out of the Yallourn mine. Even with these management systems in place, small lakes are present in the base of the mine pits. These points are made to underscore that the Yallourn Mine is unlikely to be well suited to dry remediation.

We endorse plans for pit lake remediation

We endorse the findings of the Regional Geotechnical Study that "The pit lake rehabilitation option can achieve a safe, stable and sustainable landform through a largely passive control"¹¹. The presence of a lake at Yallourn Mine has the potential to deliver positive long-term socio-economic and environmental benefits for the Latrobe Valley community.

EnergyAustralia's overarching rehabilitation strategy for the Yallourn Mine is set out in its Mine Rehabilitation Master Plan dated December 2001. The Rehabilitation Master Plan, along with the 2002 Work Plan Variation, was approved by the delegate to the Department Head on 18 January 2002. On 24 January 2002, it was registered by the Mining Registrar against each mine field; MIN 5003, MIN 5216 and MIN 5304.

The Rehabilitation Master Plan envisages that the Yallourn Mine will be rehabilitated at the end of its life into a fully-flooded lake up to the level of the Latrobe River and interconnected with the Latrobe River and Morwell River, potentially contributing waterway flood mitigation benefits.

The underlying objectives of the rehabilitation strategy outlined in the Rehabilitation Master Plan are to achieve a final landform that:

- (a) protects the safety and health of the public by ensuring mining hazards and residual environmental impacts are minimised;
- (b) is compatible with the surrounding altered and natural landscape;
- (c) is sustainable and requires minimal ongoing maintenance;
- (d) expresses, where practical, the land uses and ecological vegetation classes that existed prior to mining;
- (e) supports future beneficial uses; and
- (f) provides a diversity of landform, vegetation and wildlife values.

¹¹ Regional Geotechnical Study synopsis p.4

Since its approval and registration by the Department, EnergyAustralia has undertaken various progressive rehabilitation measures with the dual purposes of:

- (a) ensuring the Yallourn Mine is safe and otherwise achieving necessary environmental outcomes; and
- (b) achieving the fully flooded lake solution.

As EnergyAustralia is undertaking these activities during the mine life, as opposed to waiting until the Yallourn Mine closes, this means that significant work towards the final flooded lake solution is occurring while mining operations continue. A key element of this is a focus on moving overburden at the time of initial disturbance to locations that will assist with the delivery of the final flooded lake.

EnergyAustralia commenced a thorough review of the Rehabilitation Master Plan in accordance with Condition Seven of its 2011 Work Plan Variation. EnergyAustralia subsequently wrote to the Department enclosing a copy of a report dated 5 June 2012 titled "Review of the Yallourn Mine Rehabilitation Master Plan". The Plan considered the following different scenarios for the rehabilitation of the Yallourn Mine at the conclusion of its life:

- (a) full flooding of the Yallourn Mine;
- (b) flooding of the Yallourn Mine to RL20 (Yallourn Township Field only), with a transition of the Yallourn Mine void into a lake; and
- (c) an un-flooded solution.

The 2012 Rehabilitation Master Plan Review confirmed that the fully-flooded lake solution (being the solution contained in the registered Rehabilitation Master Plan) was the most suitable for the Yallourn Mine.

It identified the following benefits associated with the fully-flooded lake solution:

- (a) flood control for the Latrobe River;
- (b) water source for future industry;
- (c) best visual solution for the rehabilitated Yallourn Mine;
- (d) least ongoing maintenance option;
- (e) significant source of water for fire suppression; and
- (f) potential conservation and recreational benefits.

EnergyAustralia's continuing closure planning, studies and activities are aimed at supplementing the technical evidence to support a full pit lake to provide the lowest long-term maintenance and a safe stable and sustainable landform. We ask that the LVRSS emphasise the importance of providing ultimate mine stability through flooding as the lowest ongoing, post-completion cost and the most responsible option.

Anticipating an increased probability of future drought, our focus turns naturally to the availability and allocation of water resources to enable the filling of the mine void without prolonged delay. We stress that any form of filling delay works against the contribution that the site can make to the community in terms of economic and enjoyment potential. Long-term persistence of fenced-off areas would be an unacceptable drag on the region. Delays in reaching a stable lake solution would also exacerbate local risks associated with land

instability and would of course increase mine owner reliance on costly earthworks and batter reinforcement which would be expected to flow through to less affordable energy outcomes for the State.

Our belief is that the flooding of the Yallourn mine would yield the best possible asset for the region. As Yallourn is a relatively shallow mine, we could work towards a fully-filled lake that could, after satisfying water quality and stability preconditions, be accessed and enjoyed by the local community. Further, the realisation of the planned lake will support materially higher quality surrounding grounds, with native vegetation and planting zones to prosper and a level of site stability achieved to allow for site use.

We look forward to providing supplementary information over time as we add detail to our site remediation plans and complete associated technical studies.

Inundation of the Hazelwood and Loy Yang voids will likely necessitate filling the Yallourn mine pit

The Water Study Synopsis itself lends some weight to the logic that the Yallourn Mine must be remediated through inundation on account of water table changes should the neighbouring mines also be filled. As neighbouring mines fill and reduce pumping or cease pumping extraction from the M1 aquifer, we expect that the pressures in the M1 aquifer under the Yallourn mine to increase. This may cause mine floor heaving, contributing to instability and possibly allowing groundwater to accumulate in the void in a manner that would also add instability. Once neighbouring voids are inundated, and groundwater pressures begin to return to pre-mining levels, any technical case for a long-term dry solution at Yallourn will be undermined, unless pumping is maintained in perpetuity.

Changes to the water table may also increase the risk of block slide, where water gets behind a block of coal and causes it to move forward into the pit as occurred with the Latrobe River Batter failure. Completion of the full pit lake will provide the level of site stability expected by the community by providing a long-term force on the pit walls that will keep them in place.

Time matters

The water study synopsis calculates that Hazelwood would take 15 to 20 years to fill if there were no interruption in water supply resulting from drought. Further, it calculates that Yallourn might take 20 to 25 years to fill without interruption¹². We might interpret that filling times from local water sources impacted by climate change could be untenably delayed. It would be unacceptable for the local community, for the asset owners and for the future business potential of the region if the transition of these areas to their new use were delayed for the decades implied within the Regional Water Study Synopsis. It may be in the interests of the community, owners and Government to find a way to secure more water sooner.

The Draft Vision, taken in combination with the Regional Water Study and Geotechnical synopses, envisages a strategy for the mine voids that is starkly at odds with the local community's expectation of a lake they can access and enjoy (subject to arrangements being made for the transition of remediated areas from current private to public ownership). It instead confirms that "It may take several decades for these activities to emerge, once

¹² Regional Water Study synopsis p.4

a safe, stable and achievable milestones are achieved”¹³.

In addition to impacts to the community caused by unduly protracted site isolation and remediation, slow water entry will result in less stable mine structures during the filling period, much more extensive investment in earth works to counter this, and higher ongoing costs after completion. As noted in the Regional Geotechnical Study synopsis:

*“Extended fill periods or not filling to a level that provides the required counterweight for lateral pressures present stability challenges, both during the fill period and for the final landform design. This may necessitate significant changes to the mine batters (e.g. major earth moving to create buttresses) and long-term active management of ground and water movements.”*¹⁴

Water sources

In the interest of speed and safety, we stress the importance of making use of all available water resources. The LVRRS Regional Water Study synopsis states that “currently there are no alternative water sources that are considered more feasible than existing water sources.”¹⁵

While some water sources outside of the local system of waterways appear to have been considered, for example, piping and treating water from the Eastern Water Treatment Plant, these were discounted with reference to cost. The costs and the associated assumptions have not been made available to EnergyAustralia.

Such other potential sources of water should not be excluded from consideration so early in the development of planning and policy options for the Latrobe Valley. Rather, impacted mine owners should be granted the opportunity to review and assess the merits of alternative solutions in concert with Government. A wholistic assessment of the risks and land management costs to be borne by the mine operators, potentially over decades, coupled with the broader interests of Government and the local interests of regional stakeholders may provide the potential for seemingly costly projects to become feasible.

To this end, EnergyAustralia requests that the full set of LVRRS reports, including water source analysis, be made available to us, and collaborative and transparent dialogue be initiated.

Fairness in water allocation

The SECV corporatised and then privatised the Hazelwood, Yallourn and Loy Yang power stations and mines through the 1990s, with Yallourn sold to a consortium in 1996. Before privatisation and since privatisation, a full pit lake has always been the plan for site remediation. The assets now held by EnergyAustralia were sold with a full lake as the ultimate closure solution, and this closure vision has been consistently reflected within all subsequent regulatory documentation.

Through privatisation, all mines in the Latrobe Valley were sold with equal prospects for water availability. It is our expectation that no subsequent business should be subject to a liability disproportionate to the others as a result of unequal access to water. The principle

¹³ Draft Vision p. 11

¹⁴ Regional Geotechnical Study synopsis p.9

¹⁵ Regional Water Study synopsis p.5

of fairness should be carried through as it relates to water volumes and immediacy of access to water. It will be inadequate if EnergyAustralia is required to wait until the Hazelwood mine void is filled before we can access additional surface water to speed up our filling process, as suggested in the Regional Water Study synopsis, or if the ultimate cost of the water we access is higher.

At this time, we might expect that remediation of each of the region's three mine pits will occur spread out over time. The reality, however, is that there is some probability that mine flooding works will need to coincide. The delay in starting to fill the Hazelwood mine and the possibility of policy shifts contributing to early power station closures would be contributing factors. A water access solution must be developed that does not allow one or even two mine pits to sit void awaiting water while the first is filled.

It is critical that we have support from the Victorian Government to ensure that the Yallourn pit is filled and stabilised using water. As a minimum, our continuing bulk water entitlement must be preserved in the event that water sources beyond the local system of waterways, such as treated water from the Eastern Treatment Plant, are truly unsupported and inaccessible.

Maintaining a full lake at Yallourn Mine

The LVRRS reports broadly acknowledge the importance of maintaining pit water levels after the lakes are formed to ensure the long-term stability and reduction of fire risk of the remediated sites. The Regional Water Study synopsis discusses this in the terms of top up water, with an estimated requirement of between 4-6GL per year for the Yallourn site. Water quality of the initial lakes was described as largely dependent on the fill water quality, and therefore water quality within the lakes was considered to not be a risk. The Regional Water Study synopsis did not yet consider the potential interconnection of the pit lake to the Morwell River.

EnergyAustralia concurs with the LVRRS initial findings, and as our studies progress, we look to add detail relating to stability, water quality, and ongoing top-up water requirements. We believe there is a missed opportunity in not considering, in the current LVRRS studies, the benefits and risks of Yallourn lake being interconnection to the Morwell River.

It is widely understood within the mine closure planning discipline, that with the interconnection of pit lakes to river systems, there is the potential to provide greater environmental and socio-economic benefit through the maintenance of water quality.

As EnergyAustralia progresses with closure planning and technical studies, due to Yallourn's unique layout, we are likely to pursue interconnection with the Morwell River and the other creeks and drains currently moving water around the mine pit. In addition to the potential environmental benefits, the interconnection of the Morwell River, drains

and creeks with the lake may assist in;

- semi-passively maintaining full lake levels, and
- flood mitigation from the expected increased frequency of high intensity rainfall events associated with climate change.

At this stage in our planning the interconnection of the river is likely to be the lowest maintenance, lowest cost and lowest risk option on an ongoing basis. Keeping distinct water features out of the mine would be technically difficult and will require significant ongoing maintenance over the long term.

Interconnection could also provide a solution for flood mitigation that may become more valuable as we see higher incidence of floods. Preparation of the connected lake to provide for water system flood mitigation, or water harvesting, would need to be approached in concert with Government as it would require structures to manage the water flows, in and out of the pit lake, and add extra cost over a passive lake.

Ultimate site stability, water quality and site access

We understand the reservations expressed within the Draft Vision, that even if we assume that the mine voids are stabilised through inundation, we can't yet know that they will be stable and safe for access, that the water quality will be sufficient to permit recreational use or how we might navigate the current private ownership and the conditions applicable to any handover.

As EnergyAustralia's closure planning and studies progress, confidence will increase in the understanding around long-term stability, water quality and site access. Should any studies indicate potential issues, we will alter our plans and investigate ways of addressing them to achieve a safe, stable, non-polluting and sustainable landform.

Uncertainty regarding water allocation during filling and top up

Whilst the Regional Water Study synopsis makes initial inroads to mapping water availability for lake filling and top up, it raises the possibility of water access being restricted in answer to the requirements of other regional water users and the unpredictable extent of drought. EnergyAustralia understands the need to be flexible in the interests of river and wetland system health, however the extent of the uncertainty implied raises the possibility of acute financial and technical challenges. We request clarification of the following;

- Is the Government proposing that we will be prevented from using water consistent with our Bulk Water Entitlement while the Hazelwood pit is filling? Are the impacted Government agencies jointly proposing that our access could be curtailed after the cessation of electricity generation at Yallourn?
- How is a drought year to be defined, and how will it impact water access at different volume thresholds?
- What would define the end of a drought to allow water access to resume?
- Will extreme flood events be considered as a mechanism for top up and fill?
- What water allocation will be continuous/ unchanged by outside influences?
- Can contractual arrangements made with external water providers be supported, or will all water (and water access infrastructure) be allocated centrally?
- What approaches is the Government considering in relation to the potential for the transition of the remediated land forms from private to public ownership, and how does that impact on planning for remediation?

The Draft Vision should prioritise replacement generation

As emphasised in our submission to the Victorian Government's consultation on emissions targets following the release of the Expert Panel's recommendations, we see that the Latrobe Valley should continue its proud history of in-region electricity generation. The Draft Vision should underscore this opportunity.

EnergyAustralia is exploring a range of pumped-hydro and gas-fired power station options that we could develop within Victoria. The gas-fired opportunities could be developed within the Latrobe Valley as we look to deliver new economic opportunities to the communities that we are part of.

The Latrobe Valley's competitive advantage in power generation in the State is unrivalled.

It makes economic sense to utilise the existing high voltage transmission power lines to brownfield sites in the region. The Latrobe Valley is also well positioned to leverage gas transmission that links existing Bass Strait gas supplies, underground storage at Iona and linkages to LNG imports.

Equally, it makes sense to leverage the highly-skilled and technically-trained power generation workforce within the region.

The Latrobe Valley, and wider Gippsland region, could be the beacon of future low emission dispatchable power generation for the State, providing alternative job opportunities to a whole new generation. These ambitions however will not be realised without the support of Government.

Regional opportunity diversification will be critical

While pursuit of replacement in-region electricity generation will be critical, it will not provide the employment levels afforded through the lignite power industry. Technologies such as gas fired power stations run at lower staffing levels. It will be critical to broaden the economic opportunities available to those in the region.

The people of the Latrobe Valley understand electricity and industry and have much to contribute. Recognising the base of electricity literacy and associated skills within the region, we reflect that the Latrobe Valley could, with Government support, become a centre of excellence in energy. For example, the American state of California provides some inspiration, boasting over 320,000 jobs in the area of energy efficiency¹⁶. More broadly, we applaud all steps taken to bolster small and medium businesses across sectors in the region.

There are several ambitions expressed in the Draft Vision that we would not negate. To realise many of these, however, it will be critical to solve for the timely remediation of the local mines as they close. We hope to see more concrete plans, including steps that can be taken almost immediately to build the economic potential and resilience of the region.

For our part, as we approach transition planning for Yallourn, we look forward to open and collaborative joint-planning with the Government and continuing support for a lake solution will be critical.

¹⁶ <https://www.e2.org/reports/clean-jobs-california-2019/>